

December 1, 2011

Mr. David Reuland Superfund Management Unit Response & Remediation Program Land Protection Branch 2 Martin Luther King Jr. Drive SE, Suite 1462 Atlanta, Georgia 30334

Re: Application for Voluntary Remediation Program Welcome Years, Inc.—HSI #10637
Atlanta, Fulton County, Georgia
AEM Project No. 1396-1103

Dear Mr. Reuland:

On behalf of VLP 2, LLC, Atlanta Environmental Management, Inc. (AEM) is submitting the attached Voluntary Remediation Program (VRP) Application for the subject property, including a check for the application fee of \$5,000.

If you have any questions or comments, please call us at (404) 329-9006.

Sincerely,

Atlanta Environmental Management, Inc.

Leona Miles, CHMM Senior Project Manager

Janet/T. Hart President

/krf

c: Ed Rondeau (VLP 2, LLC) Leah J. Knowlton (Miller & Martin PLLC) Steven Hart (AEM)

Attachment

Voluntary Remediation Program Application

Welcome Years, Inc. Atlanta, Georgia HSI # 10637

AEM Project No. 1396-1103

November 30, 2011

Prepared For:

VLP 2, LLC 221 Uncle Heinie Way, NW Lyman Hall, Room 213 Atlanta, Georgia 30332

Prepared By:



Environmental Consulting, Engineering, Hydrogeologic Services 2580 Northeast Expressway • Atlanta, Georgia 30345 Office (404) 329-9006 • Fax (404) 329-2057

TABLE OF CONTENTS

Grou	undwa	ater Sci	entist Statement	ii
1.0	Intro	duction	l	1-1
	1.1	Applic	ation and Qualifications	1-1
	1.2	Prope	rty Description	1-2
2.0	Prev	ious In	vestigations	2-1
	2.1	Previo	ous Subject Property Investigations	2-1
		2.1.1	Howell Mill Parcel	2-1
		2.1.2	Ethel Street Parcel	2-2
		2.1.3	14th Street Parcels	2-2
		2.1.4	Combined Parcel Investigations	2-3
	2.2	Previo	ous Off-Property Investigations	2-3
3.0	Con	ceptual	Site Model	3-1
	3.1	Hydro	geologic Setting	3-1
	3.2	Relea	ses	3-2
		3.2.1	Black Fill Material	3-2
		3.2.2	USTs on Howell Mill Parcel	3-3
		3.2.3	Suspected Chlorinated VOC Release(s) to Groundwater	3-3
		3.2.4	USTs and Other Possible Releases at the City of Atlanta Waterworks	3-4
		3.2.5	White Provisions Property	3-4
	3.3	Soil C	onditions	3-5
		3.3.1	Constituents of Concern	3-5
		3.3.2	Maximum Concentrations and Extent of Contamination	3-5
	3.4	Groun	dwater Conditions	3-6
	3.5	Soil V	apor Intrusion	3-8
	3.6	Expos	sure Pathways and Potential Receptors	3-10
4.0	Volu	ıntary Ir	nvestigation and Remediation Plan (VIRP)	4-1
	4.1	Groun	ndwater	4-1
	4.2	Soil		4-1
		4.2.1	Cleanup Goals and RRS	
		4.2.2	Delineation of COCs in Soil	
		4.2.3	Corrective Actions	4-2
5.0	Mile	stone S	Schedule	5-1
6.0	Refe	erences		6-1

LIST OF TABLES

TABLE

1a	Summary of Constituents of Concern in Soil Samples at the 1115 Howell Mill Road Parcel
1b	Summary of Constituents of Concern in Soil Samples at the Ethel Street Parcel
2a	Summary of Constituents of Concern in Groundwater Samples—VOCs
2b	Summary of Constituents of Concern in Groundwater—Metals
3	Summary of Near-Slab Soil Vapor Data Collected on June 29, 2011
4	Summary of Exposure Pathways

LIST OF FIGURES

FIGURE

1	Location Map
2	Site Plan
3	Potentiometric Surface Map, July 2011
4	Extent of COCs in Soil
5	Extent of PCE in Groundwater, July 2011
6	Exposure Pathways
7	Proposed Engineering Controls
8	Milestone Schedule

LIST OF ATTACHMENTS

ATTACHMENT

Α	VRP Application Form
В	Warranty Deed and Tax Plat
С	Risk Reduction Standards
D	Soil Vapor Sampling Report



GROUNDWATER SCIENTIST STATEMENT

I certify under penalty of law that this report and all attachments were prepared by me or under my direct supervision in accordance with the Voluntary Remediation Program Act (O.C.G.A. Section 12-8-101, et seq.). I am a professional engineer/professional geologist who is registered with the Georgia State Board of Registration for Professional Engineers and Land Surveyors/Georgia State Board of Registration for Professional Geologists and I have the necessary experience and am in charge of the investigation and remediation of this release of regulated substances.

Furthermore, to document my direct oversight of the Voluntary Remediation Plan development, implementation of corrective action, and long term monitoring, I have attached a monthly summary of hours invoiced and description of services provided by me to the Voluntary Remediation Program participant since the previous submittal to the Georgia Environmental Protection Division.

The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Steven W. Hart, P.G.

Registration No. 660

Nov. 30, 2011

Date

Job Bill

Page 1 System Date: 10-12-11 System Time: 2:53 pm

For Time Through:

				For Time Through:						
Tran Date	Staff/Ve	endor			# of Units	Hours Worked	Cost	Billing Rate	Debit	Date Invoiced
1396-1103 VL	P2-VRP App	o-Welcome Years								
05-09-2011	1 000095	VLP2-VRP App-Welcome Years Steven Hart	Time & Materials	VLP2, LLC		2.00	101	125.00	250.00	
05-16-2011	000095	Steven Hart				5.00	101	125.00	625.00	
05-17-2011	000095	Steven Hart				2.00	101	125.00	250.00	
05-18-2011	000095	Steven Hart				3.00	101	125.00	375.00	
05-19-2011	000095	Steven Hart				4.00	101	125.00	500.00	
05-20-2011	000095	Steven Hart				4.00	101	125.00	500.00	
05-25-2011	000095	Steven Hart	×			1.00	101	125.00	125.00	
05-26-2011	000095	Steven Hart				2.00	101	125.00	250.00	
05-27-2011	000095	Steven Hart				2.00	101	125.00	250.00	
05-31-2011	000095	Steven Hart				3.00	101	125.00	375.00	
06-01-2011	000095	Steven Hart				3.00	101	125.00	375.00	
06-02-2011	000095	Steven Hart				2.00	101	125.00	250.00	
06-03-2011	000095	Steven Hart				1.00	101	125.00	125.00	
06-13-2011	000095	Steven Hart				.50	101	125.00	62.50	
06-15-2011	000095	Steven Hart				2.00	101	125.00	250.00	
08-05-2011	000095	Steven Hart	Review Analytical	Results		1.00	101	125.00	125.00	
09-13-2011	000095	Steven Hart				2.00	101	125.00	250.00	
09-14-2011	000095	Steven Hart	Meeting with EPD			4.00	101	125.00	500.00	
09-15-2011	000095	Steven Hart	VRP Application			7.00		125.00	875.00	
09-16-2011	000095	Steven Hart	VRP Application			7.00		125.00	875.00	
09-19-2011	000095	Steven Hart				4.00		125.00	500.00	
09-20-2011	000095	Steven Hart				2.00	101	125.00	250.00	
09-21-2011	000095	Steven Hart				3.00		125.00	375.00	
09-22-2011		Steven Hart				4.00	101	125.00	500.00 750.00	
09-23-2011		Steven Hart				6.00		125.00	500.00	
09-27-2011		Steven Hart	Edit Tables, Text			4.00			500.00	
09-28-2013	000095	Steven Hart	Edit Tables, Text	& Figures		4.00	101	125.00	500.00	

Atlanta Environmental Mgmt., Inc.

Job Bill

Page 2 System Date: 10-12-11 System Time: 2:53 pm

For Time Through:

Tran Staff/V Date 1396-1103 VLP2-VRP Ap		FOL TIME INLOUGH:	# of Units	Hours Worked	Cost Code	Billing Rate	Debit	Date Invoiced
1 09-29-2011 000095	VLP2-VRP App-Welcome Years Steven Hart	Edit Tables, Text & Figures		1.00	101	125.00	125.00	
09-30-2011 000095	Steven Hart	Respond to In-House Comments		6.00	101	125.00	750.00	
		Total Actual:	.00*	91.50*			11,437.50*	
		Including CV Carry Over Less Labor Cost Gross Markup		182.00			19,737.87 8,066.83 11,671.04 =	1.45
		Billing Total: Less Labor Cost Net Markup (Billings)		***********	*******		8,066.83 8,066.83-=	1.00-

SECTION 1.0 INTRODUCTION

1.1 APPLICATION AND QUALIFICATIONS

VLP 2, LLC, is the current owner of property located at 1115 Howell Mill Road, 673 Ethel Street, and at "0" and 720 14th Street in Atlanta, Fulton County, Georgia (hereafter collectively referred to as "the property" or "the subject property"). The subject property owned by VLP2, LLC, is part of a larger Hazardous Site Inventory (HSI) site consisting of additional properties not owned by VLP2, LLC (hereinafter, the "Welcome Years Site"). VLP 2, LLC, is submitting this Voluntary Remediation Program (VRP) Application for the subject property under the Georgia Voluntary Remediation Program Act pursuant to O.C.G.A. § 12-8-100, et seq. The VRP Application Form is attached (Attachment A) and a check for the \$5,000 Application Fee is included.

According to O.C.G.A. § 12-8-105, in order to be considered a "qualifying property" a property must be listed on the Hazardous Site Inventory (HSI), meet the criteria of the Georgia Hazardous Site Reuse and Redevelopment Act (also known as the Brownfields Act), or have a release of regulated substances to the environment. On September 18, 2000, the 1115 Howell Mill Road parcel was listed on the HSI as Welcome Years, Inc., and was assigned HSI Number 10637. The other parcels (673 Ethel Street and "0" and 72 14th Street) were subsequently sublisted by the Georgia Environmental Protection Division (EPD) as part of HSI Number 10637. Under O.C.G.A. § 12-8-105, the property shall not:

- (1) Be listed on the federal National Priorities List;
- (2) Be currently undergoing response activities required by an Order of the Regional Administration of the U.S. Environmental Protection Agency (EPA);
- (3) Be a facility required to have a permit under the Georgia Hazardous Waste Management Act;
- (4) Violate the terms and conditions under which Georgia EPD operates and administers remedial programs by delegation or similar authorization from the U.S. EPA; and
- (5) Have any lien filed under the Hazardous Waste Management Act or the Georgia Underground Storage Tank Management Act.

None of the criteria listed in items 1 through 5 above apply. Therefore, the subject property is a "qualifying property" under the VRP.

¹ The additional properties are the Iron Works International facility located at 1085 Howell Mill Road, Master Marketing Sunlow, Inc., located at 1071 Howell Mill Road, and SpaceMax located at 680 14th Street. Other properties overlying the groundwater plume are subject to future sublisting by Georgia EPD.

According to O.C.G.A. § 12-8-106, the following criteria must be met in order for the Applicant to meet the qualifications of the VRP:

- (1) The Applicant must be the owner of the property or have express permission to enter another's property to perform corrective action including, to the extent applicable, implementing controls for the Site pursuant to written lease, license, order, or indenture;
- (2) The Applicant must not be in violation of any order, judgment, statute, rule, or regulation subject to the enforcement authority of the Director; and
- (3) The Applicant must meet other such criteria as may be established by the Georgia Department of Natural Resources (DNR) Board.

As the Applicant meets all of the criteria stated above, the Applicant is "qualified" under the VRP.

The contact for the Applicant and the owner of the subject property is as follows:

VLP 2, LLC c/o John Majeroni Vice President, Real Estate Development 221 Uncle Heinie Way, NW Lyman Hall, Room 305 Atlanta, Georgia 30332-0207

Attachment B contains the warranty deed(s), merger information, and tax plat for the qualifying properties.

1.2 PROPERTY DESCRIPTION

A location map for the subject property is provided as Figure 1. The subject property consists of four parcels located southeast of the intersection of 14th Street NW and Howell Mill Road in Land Lot 150, 17th District, in the City of Atlanta, Fulton County, Georgia. These parcels are located at the following addresses:

- 1115 Howell Mill Road ("the Howell Mill parcel")
- 673 Ethel Street ("the Ethel Street parcel")
- "0" and 720 14th Street ("the 14th Street parcels")

The subject property is approximately 8.8 acres in size and is bordered on the north by 14th Street, on the west by Howell Mill Road, on the south by Iron Works International, Inc. (1085 Howell Mill Road) and other commercial properties along Howell Mill and 11th Street, and on the east by the Ben Massell Dental office (700 14th Street), Applied Research Services (663 Ethel Street), and a warehouse building (654 Ethel Street). A site plan depicting locations of on-site and off-site structures, utilities, and groundwater monitoring wells is included as Figure 2.

All four parcels are currently owned by VLP 2, LLC. We understand that the Howell Mill Road parcel was formerly occupied by Welcome Years, Inc., and is currently leased to United

Rentals, Inc. The 14th Street parcels are occupied by Barking Hound Village Westside, and the Ethel Street parcel is currently occupied by Trendco-Vick Wholesale. We understand that operations at the Trendco-Vick Wholesale facility are currently on a month-to-month lease basis and that another tenant may occupy the Ethel Street parcel in the near future.

SECTION 2.0 PREVIOUS INVESTIGATIONS

2.1 PREVIOUS SUBJECT PROPERTY INVESTIGATIONS

Multiple Phase I and Phase II Environmental Site Assessments (ESAs) and other investigations have been performed by others at the subject property. These investigations, and the associated regulatory compliance activities, are discussed in the following sections.

2.1.1 Howell Mill Parcel

During a 1988 investigation of the Howell Mill parcel associated with a real-estate transaction, lead and barium were detected in soil at levels exceeding the HSRA Notification Concentrations. Additionally, naphthalene and several other petroleum-related volatile organic compounds (VOCs) were detected in groundwater at concentrations exceeding background (assumed to be laboratory detection limits); however, only benzene exceeded the drinking-water Maximum Contaminant Level (MCL). An initial Release Notification was submitted by Welcome Years, Inc., the former owners of the Howell Mill parcel, to Georgia EPD on March 28, 2000. The analytical results of additional soil analyses were submitted in May 2000 as a supplement to the initial Release Notification. Georgia EPD conducted a site inspection of the Howell Mill parcel on May 24, 2000, and collected two soil samples of exposed dark-colored fill material along the southeastern property fence line. The results of the Georgia EPD sampling confirmed that lead and barium concentrations in soil exceeded the HSRA Notification Concentrations.

Georgia EPD used the Reportable Quantity Screening Method (RQSM) to consider listing the Howell Mill parcel on the HSI. As no drinking water wells were identified within a one-mile radius of the parcel, the Groundwater Pathway score under RQSM (6.5) was less than the threshold value of 10. As lead and barium in soil exceeded the Notification Concentration, a known release was assumed for the On-Site Exposure Pathway, and the property was assumed to have limited access ["less than 24-hour surveillance system and no complete (all around perimeter) barrier, or a fence that is partially open"]. Considering the distance to the nearest resident individual (301 to 1,000 feet) and the containment (depth and cover) of the release, the On-Site Exposure Pathway score under RQSM (26.8) was greater than the threshold value of 20. Therefore, on September 18, 2000, Georgia EPD listed the Howell Mill parcel on the HSI as the Welcome Years, Inc., Site (HSI Number 10637) for releases of lead and barium to soil.

A Compliance Status Report (CSR) was prepared for the Howell Mill parcel and was submitted by Welcome Years, Inc., to Georgia EPD on March 3, 2003. In addition to the metals previously detected in soil, aromatic hydrocarbons were also detected in soil and groundwater during the CSR investigation, and tetrachloroethene (PCE) was detected in groundwater. Some of these contaminants, primarily the PCE in groundwater, were also detected at the adjacent 14th Street parcels (see Section 2.1.3).

Ethel Street Associates changed its name to VLP2, LLC, in June 2004 and became the owner of the Howell Mill parcel. The merger documents reflecting the merger of 650 Ethel

Street LLC and Ethel Street Associates, LLC, pursuant to which the name of the newly merged company was changed to VLP 2, LLC, are provided in Attachment B.

2.1.2 Ethel Street Parcel

A separate environmental assessment was conducted in 1988 for the Ethel Street parcel. Concentrations of PCE and chlorobenzene were detected in a soil sample from the Ethel Street parcel at concentrations below the HSRA Notification Concentrations. Additionally, concentrations of several VOCs were detected in groundwater samples collected in the vicinity of a below-grade wastewater holding tank. Although the concentrations of VOCs in groundwater were below the drinking-water MCLs, they were greater than background concentrations (assumed to be the laboratory detection limits). In response to these findings, the owners of the property, Ethel Street Associates, LLC, submitted a Release Notification to Georgia EPD on August 28, 1998, identifying the release of VOCs to groundwater.

Based on the submitted Release Notification, and using the RQSM, Georgia EPD considered listing the Ethel Street parcel on the HSI. As no drinking water wells were identified within a one-mile radius of the Ethel Street parcel, the Groundwater Pathway score under RQSM (3.3) was less than the threshold value of 10. The On-Site Exposure Pathway was conservatively scored as a suspect release to soil, as VOCs were detected in soil at concentrations below the Notification Standards. Considering the limited access to the Ethel Street parcel, the distance to the nearest resident individual (301 to 1,000 feet), and an assumed depth of 24 inches to the soil release, the On-Site Exposure Pathway score under RQSM (6.7) was less than the threshold value of 20. Therefore, Georgia EPD informed the property owner on October 19, 1998, that a release exceeding a reportable quantity had not occurred, and the property was not listed on the HSI at that time.

However, Georgia EPD informed Ethel Street Associates in August 2002 that, based on the information provided by Welcome Years, Inc., for the Howell Mill parcel, soil on the Ethel Street parcel likely also contained elevated concentrations of lead and barium. Therefore, the Ethel Street parcel was sublisted as a part of the Welcome Years, Inc., Site by Georgia EPD and a separate CSR was requested for the property. Ethel Street Associates submitted the requested CSR to Georgia EPD on March 3, 2003.

Ethel Street Associates changed its name to VLP 2, LLC, in June 2004.

2.1.3 14th Street Parcels

On June 24, 2002, Ethel Street Associates purchased the 14th Street parcels. Because of the presence of PCE detected in groundwater beneath the 14th Street parcels during the CSR investigation of the Howell Mill parcel, the 14th Street parcels were also eventually sublisted as a part of the Welcome Years, Inc., Site.

2.1.4 Combined Parcel Investigations

On September 16, 2005, Georgia EPD issued two Notices of Deficiency on the separate CSRs for the Ethel Street and Howell Mill parcels. Revised CSRs were required to be submitted by December 16, 2005. In April 2006, a letter on behalf of VLP 2, LLC, was submitted to Georgia EPD indicating that a revised CSR would be submitted concurrently for both parcels. On September 10, 2010, Georgia EPD issued an Administrative Order (EPD-HSR-557) to VLP 2, LLC, requiring, among other things, submittal of the revised CSR by January 14, 2011. In accordance with a request for an extension of the deadline, the revised CSR was submitted to Georgia EPD on February 14, 2011. The revised CSR certified that soil and groundwater at the subject property did not meet risk reduction standards (RRS) for certain regulated substances, primarily lead in soil and VOCs in groundwater. Therefore, a Corrective Action Plan (CAP) was submitted on April 15, 2011.

2.2 PREVIOUS OFF-PROPERTY INVESTIGATIONS

Iron Works International operates a facility located at 1085 Howell Mill Road, south of the Howell Mill parcel and west of the Ethel Street parcel. In July 2002, the Iron Works International property was sublisted as part of the Welcome Years, Inc., Site because of the presence of lead and barium in soil. As a result, a third separate CSR was prepared for the Iron Works property. In March 2006, Georgia EPD concurred with the CSR's certification that soil at the Iron Works facility did not meet RRSs pursuant to HSRA and requested that Iron Works prepare a CAP. The CAP was submitted in July 2006 and a CAP Addendum was submitted in August 2008 as a result of EPD comments. Georgia EPD subsequently approved the CAP in February 2010 and the corrective action (concrete cap) was completed in June 2010.

In April 2003, Georgia EPD sublisted Master Marketing Sunlow, Inc. (Sunlow), located at 1071 Howell Mill Road, as part of the Welcome Years, Inc., Site because of the presence of metals in soil at the adjacent Iron Works International facility, as well as at the Howell Mill and Ethel Street parcels. Georgia EPD requested a CSR for the Sunlow property, which was submitted in September 2006. A revised CSR was submitted in December 2006. Lead and arsenic exceeded the applicable RRS in the subsurface soils at the Sunlow property, while cadmium, chromium, and barium in the property soil complied with Type 3 RRSs. Groundwater was not impacted.

In June 2007, a Release Notification was submitted for 680 14th Street NW (SpaceMax), a nearby parcel to the east. The Release Notification was for PCE in groundwater at concentrations above the MCL reportedly from the Welcome Years, Inc., Site. Although the RQSM scores for the Groundwater and On-Site Exposure Pathways did not exceed the applicable thresholds, Georgia EPD sublisted the SpaceMax parcel as part of the Welcome Years, Inc., Site because of the presence of PCE in groundwater.

SECTION 3.0 CONCEPTUAL SITE MODEL

3.1 HYDROGEOLOGIC SETTING

Based on topography provided by the City of Atlanta Geographical Information System (GIS), the highest point on the subject property, approximately 966 feet above mean sea level (msl), is in the southwest corner of the Howell Mill parcel. The property slopes toward the northeast, with the lowest elevations in the northeast corner of the 14th Street parcels and the northeast corner of the Ethel Street parcel at 940 feet msl.

Storm water drainage on the property flows to the northeast. Where not intercepted by catch basins, storm drains, or other controls, drainage is toward an east-flowing tributary to a storm water retention basin in the Atlantic Station development, located approximately 3,200 feet northeast of the property. Before being impounded during the development of Atlantic Station, the basin was part of the Tanyard Creek drainage basin. Tanyard Creek is a north-flowing tributary to Peachtree Creek, which itself is a west-flowing tributary to the Chattahoochee River. Water in the Chattahoochee River ultimately discharges to the Gulf of Mexico.

Because of the intense development in the area, soil at the subject property has been classified as Urban land (USDA, 2008). Urban land consists of areas that have been altered by cutting, filling, and shaping. Schools, parking lots, streets, commercial buildings, and residential dwellings are typically located in these areas. A review of historical aerial photographs and topographic maps by others indicated that fill material was previously used to grade the property. The Howell Mill parcel was originally part of a ridge that sloped to the north, east, and A 1929 topographic map depicts an east-northeast-trending creek in a ravine approximately 40 feet deep to the south of the property. Based on the reviews of the historical maps, fill was apparently emplaced between 1938 and 1968 on both the Howell Mill and Ethel Street parcels. As further discussed in Section 3.2.1, some of this fill may have been foundry sand and debris.

The subject property is located in the Gainesville Ridges District of the Piedmont Physiographic Province (Clark and Zisa, 1976). The Gainesville Ridges District is characterized by a series of northeast-trending, low, linear, parallel ridges separated by narrow valleys. The District is drained by the Chattahoochee River and its tributaries, the courses of which are strongly controlled by the ridges.

Bedrock beneath the subject property consists of the Clairmont Formation of possible Middle Ordovician to Late Proterozoic Age (Higgins et al., 2003). The Clairmont is a graniticappearing, light-gray to bluish-gray, medium- to coarse-grained gneiss containing fragments, chips, blocks, and slabs of other rocks. The formation has been interpreted to be a granitized tectonic mélange deformed at high metamorphic grade (Higgins et al., 2003). The Clairmont Formation was included in the Atlanta Group by Higgins and Atkins (1981) and by McConnell

and Abrams (1984), although the term "Atlanta Group" was subsequently abandoned by Higgins et al. (1988).

Groundwater occupies joints, fractures, and other secondary openings in the underlying bedrock, as well as pore spaces in the overlying residual mantle of saprolite and soil (Cressler, Thurmond, and Hester, 1983). Water recharges the underground openings in bedrock by the seeping of precipitation through the saprolite and soil or by flowing directly into openings in exposed rock. The metamorphic rocks of the Georgia Piedmont are generally not considered good producers of groundwater, except where secondary porosity occurs in the form of fractures, faults, and joints. Cressler et al. (1983) included the area around the subject property in "water-bearing unit D" of their classification. Well yields in unit D averaged 56 gallons per minute (gpm) and ranged from 20 to 351 gpm; wells range in depth from 82 to 710 feet, averaging 270 feet. Groundwater is generally most abundant within unit D near small-scale structures that localize drainage development, contacts between rocks of contrasting character, fault zones, and stress-relief fractures, as well as areas with favorable topographic settings and soil thicknesses (Cressler et al., 1983).

On July 11, 2011, depth to groundwater was measured and recorded at 36 monitoring wells (21 on the subject property and 15 off site). The elevation of the groundwater surface in each monitoring well was calculated and was used to characterize groundwater flow across the property. The resulting potentiometric map is provided as Figure 3 and indicates a groundwater flow direction toward the east-northeast. This groundwater flow direction is consistent with that measured historically across the property and at surrounding properties assessed by others.

3.2 RELEASES

Based on the previous investigations performed by others at the subject property and surrounding sites, regulated substances detected in soil and groundwater may be the result of numerous suspected sources as discussed herein. Although specific information regarding these possible sources and the chronology of these releases is not known, the following provides information for suspected sources.

3.2.1 Black Fill Material

Based on the available information at this time, soil contamination by metals at the property and at off-site locations in the vicinity appears to be the result of historical filling of low-lying areas during the early to middle 1900s. The parties responsible for placement of the fill have not been determined, but the placement was performed prior to the purchase of the properties by VLP 2, LLC.

During the prior investigations, the fill material was encountered as an extensive layer of black to dark gray sand of variable thickness, presumed to be foundry sand, beneath a surficial layer of relatively clean fill. Layered within the "black fill" material was debris, containing some slag, glass, metal, paper, and wood fragments. Foundry sand and slag materials are waste products commonly associated with the manufacturing of metals, such as from smelting,

foundries, or refining operations. Several such companies were formerly present in the vicinity of the subject property, including National Smelting of New Jersey, Inc., The National Smelting and Refining Company, Inc., and Atlanta Steel Corporation. Foundry sands, slag, debris, and steel-process waste materials were commonly used as fill materials in the early to middle 1900s in this area.

The February 2011 CSR documents concentrations of lead within the black fill material of up to 11,000 milligrams per kilogram (mg/kg). One anomalous lead concentration of 59,900 mg/kg was dismissed as not being representative of site conditions. The February 2011 CSR demonstrates that the black fill is non-hazardous based on test results using the Synthetic Precipitation Leaching Procedure (SPLP).

The black fill reportedly encompasses approximately 7.5 acres, extending from the Star Iron & Metal Company property (1041 Howell Mill Road) northward to the Howell Mill parcel and eastward across the Ethel Street parcel to a facility located at 605 Ethel Street. The general extent of fill material is depicted in Figure 4.

Petroleum hydrocarbons were detected in soil and groundwater at various on-site and off-site locations during previous assessments by others. These constituents are possibly from the use of cutting oils and lubricants associated with the black fill material.

3.2.2 USTs on Howell Mill Parcel

During a prior real estate transaction due diligence review performed by others, underground storage tanks (USTs) were identified on the Howell Mill parcel. The USTs were apparently installed between 1966 and 1974 and were located in a common tank pit, now identified by an area of concrete and gravel on the north side of the Howell Mill parcel. According to tank registration records, six of the USTs reportedly stored gasoline and diesel fuel. These six USTs were removed in 1999. An oil—water separator was also removed during these closure activities. A closure report for the USTs was submitted to Georgia EPD, resulting in a *No Further Action* (NFA) letter in April 2000.

A seventh reported UST, listed as a 1,000-gallon used oil tank, was never located and therefore was not removed. An attempt was made by others to locate the reported used-oil UST in November 2010 using surface geophysical equipment; however, it was reported that no obvious anomalies were identified that were indicative of a buried UST.

3.2.3 Suspected Chlorinated VOC Release(s) to Groundwater

PCE and other solvent-related VOCs have been detected in groundwater. However, no specific information is available regarding a release at the subject property or adjacent sites, and the source of groundwater contamination at the property is not known.

Historical information suggests that an auto garage and repair shop operated on the Howell Mill parcel between the 1930s and 1950s and that a truck service facility operated at the same location in the 1970s through the 1990s. Sanborn maps from 1932 and 1950 indicate that

the subject property housed a private garage and repair shop. A Sanborn map from 1978 depicts a transport terminal and a truck service at the property. A city directory published by Haines and Company, Inc., indicates that a UPS Truck Leasing business operated at the location during the 1990s. In 2000, UPS Truck Leasing was acquired by Rollins Truck Leasing Corporation, which was acquired by Penske Truck Leasing Company LP in 2001.

A structure located at the southeast corner of Howell Mill Road and 14th Street is suspected to be a former retail gasoline and service station.

According to city directories, a Sherwin-Williams Automotive Finishes business operated at 720 14th Street from the 1980s to the early to middle 1990s. In the mid-1970s, the Summers Electric Company was listed as the operator at this location. Directories also indicate that the Bradley Ewing Equipment Company, a heavy machinery company, operated at 700 14th Street from the 1960s through the 1980s.

3.2.4 USTs and Other Possible Releases at the City of Atlanta Waterworks

The City of Atlanta (COA) Department of Watershed Management operates the Atlanta Waterworks facility at 667 14th Street. This facility reportedly operated as Swift Adhesives & Coatings prior to acquisition by the COA. In the 1980s, the facility operated as United Resin Adhesives of Georgia. Certain VOCs not detected on the Welcome Years site, including 1,1,1-trichloroethane (1,1,1-TCA), 1,1-dichloroethane (1,1-DCA), 1,2-dichloroethane (1,2-DCA), and chloroethane, were detected in groundwater samples obtained from off-site monitoring wells on the Waterworks property.

Additionally, nine USTs were formerly located on the Waterworks property. The tanks were reportedly installed in the middle 1950s and early 1960s and were reportedly used to store gasoline, diesel fuel, and waste oil. The tanks were located under a concrete-covered parking area on the east side of an "L-shaped" building at 667 14th Street. An initial release was reported for two of the tanks on July 9, 1990. The tanks were removed in May 1993 and a Closure Report was submitted to Georgia EPD on June 1, 1999. A No Further Action (NFA) letter was issued by Georgia EPD on April 25, 2007.

3.2.5 White Provisions Property

The White Provisions property, located immediately upgradient of the Howell Mill parcel, formerly operated as Estes-Simmons Silverplating between 1968 and 1988. Additionally, two printing businesses reportedly operated on the White Provisions property during the 1980s, and a neon sign business, a welding company, and U-Haul operated on the property in the 1990s. These business operations typically use and store various solvents. A Phase I ESA performed by others documented the use and storage of petroleum fuels on the property.

A subsequent Phase II ESA completed by others in 2005 did not encounter petroleum hydrocarbons, chlorinated VOCs, or chlorinated herbicides in groundwater on the White Provisions property. However, chloroform and a low concentration of cyanide were detected in groundwater. Additionally, low concentrations of several metals, specifically lead, chromium,

and barium, and trace amounts of VOCs were detected in soil. Based on these findings, White Provisions submitted a Release Notification to EPD on October 11, 2006, pursuant to HSRA, but was not listed on the HSI. Additionally, in February 2011, Soils and Materials Engineers. Inc. (S&ME) installed two monitoring wells on the White Provisions property to investigate the potential presence of VOCs in groundwater. Results of the investigation indicated that no VOCs were detected in groundwater at these locations.

Historical Sanborn maps depict a former retail gasoline service station on the White Provisions property across Howell Mill Road from the Howell Mill parcel. The White Provisions property is now improved with a restaurant and retail shops.

3.3 **SOIL CONDITIONS**

3.3.1 **Constituents of Concern**

Regulated substances detected in soil at the property consist of VOCs and metals. VOCs detected in soil are limited to acetone, cyclohexane, and ten petroleum hydrocarbons (benzene, toluene, ethylbenzene, m,p-xylenes, o-xylene, chlorobenzene, isopropylbenzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, and 1,4-dichlorobenzene). The detected metals are arsenic, barium, cadmium, chromium, lead, mercury, and silver. These regulated substances are constituents of concern (COCs) for the soil at the subject property.

3.3.2 **Maximum Concentrations and Extent of Contamination**

AEM calculated Type 1 RRSs for the soil COCs (see Attachment C). As summarized in Tables 1a and 1b, the concentrations of VOCs in soil were generally below the Type 1 RRS for soil, with the exceptions of benzene and chlorobenzene in a single soil sample (STB-5, 16–20') on the Ethel Street parcel (see Table 1b). Type 2 RRSs were calculated for benzene and chlorobenzene (see Attachment C); however, the calculated Type 2 RRSs were lower than the Type 1 RRS. The extent of VOCs in soil at concentrations exceeding the Type 1 RRS is limited to the location of STB-5 (see Figure 4).

Arsenic and barium each exceeded the Type 1 RRS in single soil samples (STB-11 and T-3, respectively) on the Howell Mill parcel (see Table 1a). The remaining soil samples (90 samples for arsenic and 116 samples for barium) were both below the detection limit and/or the Type 1 RRS. Type 2 RRSs were calculated for arsenic and barium (see Attachment C); although the calculated Type 2 RRSs for arsenic were lower than the Type 1 RRS, the calculated Type 2 RRS for barium (2,578 mg/kg) was greater than the concentration at T-3 (1,050 mg/kg). The extent of arsenic in soil at concentrations exceeding the Type 1 RRS is limited to the location of STB-11 (see Figure 4). The lateral extent of the arsenic and barium in soil is delineated by the soil concentrations below the Type 1 RRS (default residential cleanup standard).

Lead exceeded the Type 1 RRS for soil (75 mg/kg) in numerous soil samples analyzed for the metal (see Tables 1a and 1b). The Type 2 RRS for lead (418 µg/kg) was calculated

using the Integrated Exposure Uptake Biokinetic (IEUBK) model in accordance with § 391-3-19-.07(7)(c)4 of the HSRA Rules. The lateral extent of soil exceeding the Type 2 RRS is approximated by the extent of black fill material as shown in Figure 4. The lateral extent of the lead in soil is delineated by the soil concentrations below the Type 1 RRS (default residential cleanup standard) (see Figure 4).

Other metals (cadmium, chromium, mercury, and silver) also exceeded the Type 1 RRS in one or more soil samples within the area of the black fill material. Type 2 RRSs were calculated for these metals (see Attachment C). As shown in Table 1, concentrations of chromium and mercury in soil were less than the calculated Type 2 RRS; the Type 2 RRS was exceeded for cadmium at sample locations T-14, T-17, and STB-5 and for silver at sample location STB-11. Although some soil samples obtained within the area of black fill were less than the Type 1 or Type 2 RRS, the extent of the heterogeneous fill approximates the area exceeding the RRS for metals. The lateral extent of the cadmium, chromium, mercury, and silver in soil is delineated by the soil concentrations below the Type 1 RRS (default residential cleanup standard).

In summary, concentrations of benzene, chlorobenzene, lead, arsenic, barium, and cadmium have been detected in one or more soil samples at concentrations exceeding the greater of Type 1 or Type 2 RRS. Although the occurrence of benzene and chlorobenzene exceeding the RRS is limited to a single soil sample on the Ethel Street parcel and the occurrences of arsenic at a concentration exceeding the RRS are limited to individual locations on the Howell Mill parcel, the extent of lead, and to a lesser extent cadmium, exceeding the RRS approximates the larger area of black fill shown in Figure 4. The lateral extent of metals in soil is delineated by the soil concentrations below the Type 1 RRS (default residential cleanup standard).

3.4 **GROUNDWATER CONDITIONS**

Regulated substances detected in groundwater at the property and at nearby off-site properties include chlorinated and aromatic VOCs. On the week of July 11, 2011, AEM obtained groundwater samples from 34 monitoring wells. Two monitoring wells (MW-27 and MW-28) were dry and could not be sampled. Field sampling sheets, a summary of field sampling parameters, and laboratory analytical reports will be provided in the CSR to be completed at a later date in the VRP process (see Section 5.0); however, a tabulated summary of the analytical results is provided as Table 2a.

Both chlorinated VOCs and petroleum hydrocarbons were detected in groundwater. As summarized in Table 2, detected chlorinated hydrocarbons were primarily PCE (and, far less frequently, its degradation products trichloroethene [TCE] and cis-1,2-dichloroethene [cis-1,2-DCE]). Vinyl chloride was not detected in groundwater during the 2011 groundwater sampling. The lateral extent of PCE in groundwater is shown in Figure 5. The maximum PCE concentrations (greater than 1,000 µg/L) occur in an area near the northeast corner of the

Howell Mill parcel. The dissolved-phase VOC plume follows the groundwater flow direction and extends from the subject property to the downgradient properties.

According to § 391-3-19-.07(6)(b), the default residential clean-up standard (Type 1) for PCE in groundwater (5 µg/L) is listed in Table 1 of Appendix III of the HSRA Rules. As shown on Figure 5, the extent of the PCE in groundwater has been delineated to the default residential cleanup standard consistent with § 12-8-108(1)(E) of the VRP statute.

Petroleum-related aromatic hydrocarbons have been detected in scattered groundwater samples (see Table 2). In July 2011, xylenes (m,p- and o-) and isopropylbenzene were detected on the Howell Mill parcel in the groundwater sample from monitoring well MW-10, located near the former UST (see Section 3.2.2). Aromatic hydrocarbons were not detected in groundwater from monitoring wells located downgradient of monitoring well MW-10 (e.g., MW-1, -3R, -11, and -14D). The aromatic hydrocarbons benzene, ethylbenzene, isopropylbenzene, toluene, m,p-xylene, and o-xylene were detected in groundwater from monitoring well MW-29 located north of 14th Street on City of Atlanta property. The cycloalkane compounds cyclohexane and methylcyclohexane were also detected in the MW-29 groundwater sample.

Chlorobenzene was detected in the 2011 groundwater samples from monitoring wells MW-15 and MW-17 on the Ethel Street parcel and from MW-26 immediately downgradient of the Ethel Street parcel. Chlorobenzene was the only COC detected in the groundwater samples from MW-15 and MW-17; PCE and 1.2.4-trichlorobenzene were additionally detected in the MW-26 sample. Chlorobenzene and/or 1,2-, 1,3-, and 1,4-dichlorobenzene were detected in the groundwater samples from monitoring wells MW-37 and MW-38 east of the subject property on the Progressive Lighting site; groundwater from these monitoring wells also contained concentrations of PCE (and/or TCE) and cis-1,2-DCE.

Chloroform was detected in the groundwater samples from monitoring wells MW-8, -9, -21, -24, -29, -33, and -41. Monitoring wells MW-21, -24, -29, and -41 are located proximal to 14th Street, and the chloroform detected in the groundwater samples at these and the other locations may be a residual effect from disinfection of the potable water lines along the street.

Four other chlorinated VOCs were detected in groundwater from off-site monitoring well MW-39 on the City of Atlanta property north of 14th Street during the 2011 sampling. The unique chlorinated constituents consisted primarily of 1,1,1-TCA. Lower concentrations of 1,1-DCA, 1,2-DCA, and chloroethane, probable degradation products of 1,1,1-TCA, were also detected. The compounds 1,1,1-TCA and 1,1-DCA were also detected in the groundwater sample from monitoring well MW-40 on the City of Atlanta property. PCE, the predominant contaminant in groundwater from the Welcome Years, Inc., HSRA Site, was not detected in groundwater from these two off-site wells (MW-39 and MW-40), and 1,1,1-TCA, 1,1-DCA, 1,2-DCA, and chloroethane are not present in groundwater at the subject property². Therefore,

² In 2006, 1,1,1-TCA was reported in a blind duplicate sample from monitoring well MW-14D on the Howell Mill parcel, but it was not reportedly present in the original groundwater sample or in any subsequent groundwater samples collected from the well. Based on the foregoing, and based on the

the 1,1,1-TCA, 1,1-DCA, 1,2-DCA, and chloroethane are not related to the Welcome Years, Inc., HSRA Site.

Groundwater at the subject property has been analyzed for eight RCRA metals (arsenic. barium, cadmium, chromium, mercury, lead, silver, and selenium). Select groundwater samples were analyzed for both total (unfiltered) and dissolved (filtered) metals (see Table 2b). Concentrations of total lead in groundwater exceeded the Type 1 standard (0.015 mg/L) at six locations (MW-9, -11, -15, -16, -17, and -29). However, three of these samples were also analyzed for dissolved lead (MW-15, -16, and -17) and the dissolved concentrations were below the Type 1 standard, suggesting that the presence of total lead and other metals results from suspended particulate sediment in groundwater samples and not from the leaching of lead from lead-contaminated black fill. Therefore, metals are not considered a COC for groundwater, and the July 2011 groundwater monitoring did not include sampling of groundwater for metals.

To summarize, the COCs for groundwater at the Welcome Years site include PCE, TCE, cis-1,2-DCE, isopropylbenzene, benzene, ethylbenzene, toluene, xylenes, chlorobenzene, 1,2,4-trichlorobenzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, cyclohexane, methylcyclohexane, and chloroform.

3.5 **SOIL VAPOR INTRUSION**

Based on the groundwater concentrations detected under the Barking Hounds Village building on the 14th Street parcels, AEM investigated the potential for vapors containing PCE to potentially be emanating from the groundwater and intruding through the floor slab of the Barking Hounds Village building. Sub-slab soil vapor sampling was performed beneath the Barking Hounds Village building. A report documenting these activities and summarizing the results is provided in Attachment D.

During the investigation, PCE was detected in an ambient air sample obtained inside the Barking Hounds Village building at a concentration (530 µg/m³) well below the OSHA limit of 678,000 µg/m³ (100 ppm). However, the average sub-slab soil vapor concentrations were at lower concentrations than the indoor air concentration and did not suggest that the source of the PCE detected in the air samples was groundwater or soil vapor beneath the building.

Dr. Blayne Hartman of Hartman Environmental Geoscience (Solana Beach, California), a nationally recognized expert on soil vapor sampling, soil vapor analysis, and vapor intrusion, was consulted regarding the soil gas and indoor air data. Dr. Hartman's opinion is included in the report provided in Attachment D. According to Dr. Hartman, the results are "not indicative of vapor intrusion into the building from below the slab," and "the indoor air is the likely cause of the PCE and hydrocarbons detected under the building slab." As an additional line of evidence,

distance and the sidegradient location relative to the detections on the City of Atlanta Property, AEM concludes that this 2006 sample is an anomaly and/or is not representative of site conditions on the subject property.

Dr. Hartman suggested collecting soil gas samples at various depths near the building to develop a vertical profile of soil vapor concentrations. If the sub-slab soil vapor concentrations were emanating from groundwater, the concentrations would be expected to increase with greater depth (i.e., proximity to the water table).

As suggested, AEM conducted near-slab soil-vapor sampling on June 29, 2011, to develop vertical soil-gas profiles near the Barking Hounds Village building as another line of evidence to evaluate the potential for soil vapor intrusion. AEM advanced three soil borings (DPT-1, -2, and -3) to a depth of 20 feet below ground surface (bgs) on the Howell Mill parcel adjacent to the property boundary with the Barking Hounds Village building. At each location, soil vapor samples were obtained at depths of 5, 12, and 20 feet bgs. The samples were analyzed for VOCs using Method 8260B.

As shown in Table 3, VOCs were not detected in any of the DPT-2 samples. PCE was the only VOC detected in the DPT-1 and DPT-3 samples and was only detected in the vapor samples collected at a depth of 12 feet. Neither PCE nor any other VOC was detected in the samples collected from a depth of 20 feet, closest to the water table, suggesting limited partitioning of PCE from groundwater to soil gas. The absence of VOCs at the 5-foot depth interval suggests an incomplete exposure pathway for the PCE detected in vapor at a depth of 12 feet.

Based on several lines of evidence gathered during the vapor studies, AEM concludes that the PCE and other VOCs detected in indoor air and sub-slab vapors at Barking Hounds Village are not emanating from groundwater. These lines of evidence include the following:

- The detections of PCE in the near-slab vapor samples did not increase in concentration between 12 and 20 feet at the two locations where PCE was detected. The absence of an increasing concentration gradient with depth as the water table is approached is inconsistent with groundwater as a source.
- The concentrations of PCE detected at a depth of 12 feet in the near-slab vapor samples at United Rentals, and of VOCs detected in the sub-slab soil vapor at Barking Hounds Village, were all below the sub-slab screening levels described in Attachment D. Further investigation is only recommended when concentrations exceed screening levels.
- VOCs other than PCE were also detected in the sub-slab soil vapor and indoor air at Barking Hounds Village but have not been detected in nearby groundwater or
- PCE was detected in indoor air at Barking Hounds Village at a concentration higher than the average of the four sub-slab vapor samples.
- The comparison of concentrations of VOCs above and below the floor slab of the Barking Hounds Village building is not consistent with a subsurface source, as the concentrations in indoor air would be expected to be lower than concentrations from a subsurface source by the intervening floor.
- AEM concludes that VOCs detected in sub-slab vapors are emanating from the indoor air at Barking Hounds Village. The likely positive pressure (i.e., greater than

atmospheric air pressure) inside the Barking Hounds Village building—the result of the robust ventilation system that is in place to control pet odors—could be expected to minimize the presence of vapors in the building.

3.6 **EXPOSURE PATHWAYS AND POTENTIAL RECEPTORS**

An evaluation of potential exposure pathways and receptors was conducted for the subject property. A conceptual sketch of the exposure pathways is provided in Figure 6. A schematic summary of complete, incomplete, and potential pathways is provided in Table 4.

The exposure pathways evaluated include the potential exposure of COC in the following media:

- Soil
- Groundwater
- Surface water and sediment
- Vapors from affected soil and groundwater

The receptors potentially exposed to these pathways are as follows:

- Current and future on-site workers (employees)
- Current and future off-site workers (employees)
- Future on-site construction workers
- Current and future off-site construction workers
- Current and future on- and off-site utility workers
- Current and future trespassers onto the property
- Current and future off-site residents
- Future on-site residents

There is currently no residential use of the subject property, nor ongoing construction activities; therefore, current on-site residents and construction workers are not present. However, utility workers may occasionally be present on site to service the existing businesses.

Based on the discussions in the previous sections, it is concluded that the following exposure pathway is complete:

> Exposure to COCs in soil is a complete exposure pathway for all current and future on- and off-site receptors.

Based on the discussions in the previous sections, it is concluded that the following exposure pathways are incomplete:

> • Exposure to COCs in groundwater is incomplete for all current receptors as there are no water-supply wells or other known points of exposure to groundwater within the area affected by COCs, the water table is beyond the depths typically occupied by utility workers, and there are no ongoing off-site construction activities within the area of groundwater affected by COCs.

- Exposure to COCs in surface water and sediment is incomplete for all receptors as there are no affected streams or other surface water bodies in the vicinity of the site.
- Exposure to COCs from vapors is considered to be incomplete for all receptors as the sub-slab vapor sampling and near-slab vapor profiling have not demonstrated partitioning of COCs from groundwater to soil vapor, and COCs in soil vapor due to limited partitioning from soil do not reach the ground surface.

It has been conservatively determined that the following exposure pathways have the potential to become complete in specific circumstances in the future:

- Exposure to COCs in soil by future off-site receptors if soil covers are removed.
- Exposure to COCs in groundwater via dermal contact, incidental ingestion, and inhalation by future construction workers. However, the water table is beyond the depths likely to be occupied by future utility workers or construction workers.
- Exposure to COCs in groundwater by future workers (employees), residents, and trespassers on the subject property if groundwater is used for irrigation or potable water supply within the boundaries of the groundwater plume.

With regard to the subject property, in order to mitigate both the current and future onsite exposures to affected soil, the soil covers will be improved with engineering controls, and institutional controls will be implemented to maintain the integrity of the engineering controls. The institutional controls will also mitigate the potential for off-site receptors to become exposed to affected soil. Institutional controls will also be implemented with regard to the subject property to prohibit the on-site use of groundwater in order to mitigate potential future on-site exposure to affected groundwater.

SECTION 4.0 VOLUNTARY INVESTIGATION AND REMEDIATION PLAN (VIRP)

4.1 GROUNDWATER

The results of the recent (July 2011) groundwater sampling are provided in Table 2. These data indicate that PCE and its degradation product cis -1,2-DCE are present in groundwater at concentrations exceeding the drinking-water standards (Maximum Contaminant Levels).

As previously noted (Section 2.1), the reported release to groundwater (RQSM score of 9.1) did not exceed a Reportable Quantity pursuant to HSRA. During their RQSM evaluation of the 1994 Release Notification, Georgia EPD determined that there were no water-supply wells within a two-mile radius of the site, and the site was not listed on the HSI for a release exceeding a Reportable Quantity to groundwater. No water-supply wells have been subsequently identified within a two-mile radius. Although recent sampling and analyses have shown that regulated substances in groundwater continue to exceed drinking-water MCLs, no human exposure is suspected. Therefore, the RQSM score does not change but is still below the threshold value of 10, and a release to groundwater exceeding a Reportable Quantity does not exist at the subject property at the time of enrollment in the VRP. In accordance with §12-8-107(g)(2) of the VRP, corrective action for groundwater is not required, nor is certification of compliance required for groundwater. Therefore, no additional activities related to groundwater are proposed.

4.2 **SOIL**

The following sections discuss the cleanup goals for soil and the strategy for achieving the goals.

4.2.1 Cleanup Goals and RRS

AEM calculated Type 1 and Type 2 RRSs for the soil COCs (see Attachment C). The detected COCs for soil are listed in Tables 1a and 1b, along with their associated Type 1 RRS; where COC concentrations exceeded the Type 1 RRS, the Type 2 standard is also listed. Concentrations of benzene, chlorobenzene, lead, arsenic, barium, cadmium, and silver have been detected in one or more soil samples at concentrations exceeding the greater of Type 1 or Type 2 RRS. Although the occurrences of benzene, chlorobenzene, arsenic, barium, and silver at concentrations exceeding the RRS are limited to single locations, the extent of lead (and, to a lesser extent, cadmium) exceeding the RRS is over the larger area, approximated by the extent of black fill shown in Figure 4. As the corrective actions described in the following section consist of engineering and institutional controls (capping the non-compliant soil), a Type 5 RRS will apply to the affected portions of the subject property.

4.2.2 Delineation of COCs in Soil

The VRP rules allow the Applicant to select from among several concentration criteria to demonstrate delineation of the extent of impacted soil. The lateral and vertical extent of impacted soil has been delineated based on the default residential cleanup standards (i.e., Type 1 RRS). Therefore, the delineation standards for the specific COCs are as follows:

Constituent	Delineation Standard (mg/kg)
Benzene	0.5
Chlorobenzene	10
Arsenic	20
Barium	1,000
Cadmium	2
Chromium	100
Lead	75
Mercury	0.5
Silver	2

The lateral extent of the isolated occurrences of soil affected by benzene, chlorobenzene, arsenic, barium, chromium, mercury, and silver has been delineated by the surrounding soil samples with detections of these regulated substances at concentrations below the Delineation Standards. The on-site extent of lead and cadmium in soil has also been delineated by soil samples with detections of these regulated substances at concentrations below the Delineation Standards (see Figure 4). The off-site extent of lead and cadmium in soil has been delineated on the Iron Works International and Sunlow properties south and west of the Howell Mill and Ethel Street parcels in the CSRs prepared by the respective Responsible Parties for these properties.

4.2.3 Corrective Actions

With regard to the subject property, in order to mitigate both the current and future onsite exposures to affected soil, the existing soil covers will be improved with engineering controls, and institutional controls will be implemented to maintain the integrity of the engineering controls. The institutional controls will also mitigate the potential for off-site receptors to become exposed to affected soil. Institutional controls will also be implemented with regard to the subject property to prohibit use of groundwater in order to mitigate potential future on-site exposure to affected groundwater.

Future land-use plans for the subject property may include mixed-use development, with retail at the ground level and institutional and residential use above. The footprints of the buildings will provide effective cover for the affected soil. However, given the current uncertainties of the real estate and development market, the timing of construction cannot be determined at this time. Therefore, in the interim, effective cover will be provided and maintained by pavement and/or clean fill with a vegetated surface.

The proposed interim soil covers are shown in Figure 7. The proposed interim soil covers will be generally consistent with current land use and cover, such as additional paving (asphalt or concrete) over paved areas, and clean fill with vegetated cover over unpaved areas. Steep embankments with exposed soil will be stabilized with geotechnical fabric. These covers will prevent direct exposure to affected soil and will maintain the soil cover that is currently preventing soil from migrating off site as the result of wind or run-off. The proposed soil covers shown in Figure 7 are preliminary, and additional study and engineering will be performed to develop a final Interim Soil Cover Plan. VLP 2, LLC, will keep Georgia EPD informed of the studies by way of semiannual progress reports and will submit the final Interim Soil Cover Plan to Georgia EPD for review and comment. VLP 2, LLC, will implement the interim covers upon Georgia EPD's approval of the Final Soil Cover Plan.

Maintenance and knowledge of the existence of these engineering controls will be supported through institutional controls, specifically deed notices, permanent markers, and covenants consistent with the Georgia Uniform Environmental Covenants Act (§ 44-16-1). The specific wording in the covenant will be based on Georgia EPD's model environmental covenant and will reflect the final Interim Soil Cover Plan when approved by Georgia EPD. Additionally, the covenant at the subject property will prohibit use of groundwater in order to mitigate potential future on-site exposure to affected groundwater.

Although the interim soil covers are expected to fully meet the corrective action goal of rendering incomplete the exposure pathways of contact, ingestion, and inhalation of soil, the subject property may eventually be developed into a mixed-use development as previously mentioned. The timing of the development is contingent upon multiple market factors and cannot be determined at this time. However, the building foundations of the planned development will ultimately serve as the final covers for the impacted soil and will replace the interim soil covers. Construction of the development and buildings will require disturbance of the interim soil covers.

VLP 2, LLC, while owning of the subject property, will keep Georgia EPD informed of the anticipated construction plans and schedule through the semiannual progress reports, and the environmental covenant will have the flexibility to allow disturbance of the interim soil cover under this condition. The covenant will specify that, before any land-disturbing construction activity commences, Georgia EPD is to be informed of the plans, a Soil Management Plan is to be developed to account for proper disposal of impacted soil and to control erosion and sedimentation, and both a Worker Protection Plan and a Hazard Communication Plan are to be developed and implemented.

SECTION 5.0 MILESTONE SCHEDULE

The schedule for implementation of the VIRP is presented in Figure 7. Status Reports will be submitted to Georgia EPD every six months during the implementation period until the final VRP CSR is submitted. The Status Reports will include updates of the Conceptual Site Model, the final Interim Soil Cover Plan when completed, and the schedule, details, and plans for the anticipated mixed-use development.

The required milestones under the VRP are as follows:

- Horizontal Delineation of Release On Site—As discussed in Section 4.2.2. horizontal delineation of the on-site release to soil has been completed.
- Horizontal Delineation of Release Off Site—As discussed in Section 4.2.2, horizontal delineation of the off-site release to soil has been completed.
- Vertical Delineation of Release On and Off Site—The delineation of the vertical extent of remaining affected soil to the water table has been completed. Therefore, additional activities are not anticipated.
- Finalization of Remediation Plan—VLP 2 anticipates finalization of the Interim Soil Cover Plan within the 30-month period allowed by the VRP.
- Submittal of the VRP CSR—VLP 2 anticipates submittal of the final CSR certifying compliance with the applicable RRSs within the 60-month period allowed by the VRP.

SECTION 6.0 REFERENCES

- Clark, W. Z., and Zisa, A. C. 1976. Physiographic Map of Georgia. Georgia Geological Survey.
- Cressler, C. W., Thurmond, C. J., and Hester, W. G. 1983. *Ground Water in the Greater Atlanta Region, Georgia.* Georgia Geologic Survey Information Circular 63.
- Higgins, M. W., and Adkins, R. L. 1981. The Stratigraphy of the Piedmont Southeast of the Brevard Zone in the Atlanta, Georgia, Area. In Wigley, P. B., ed., *Latest Thinking on the Stratigraphy of Selected Areas in Georgia*. Georgia Geologic Survey Information Circular 54.
- Higgins, M. W., Adkins, R. L., Crawford, T. J., Crawford, R. E., Brooks, R., and Cook, R. B. 1988. The Structure, Stratigraphy, Tectonostratigraphy, and Evolution of the Southernmost Part of the Appalachian Orogen. U.S. Geological Survey Professional Paper 1475.
- Higgins, M. W., Crawford, T. J., Adkins, R. L., and Crawford, R. F. 2003. Geologic Map of the Atlanta 30' x 60' Quadrangle, Georgia. U.S. Geological Survey Geologic Investigations Series Map I-2602.
- McConnell, K. I., and Abrams, C. E. 1984. Geology of the Greater Atlanta Region. Georgia Geologic Survey Bulletin 96.
- S&ME. 2011. Compliance Status Report, Welcome Years, Inc., HSI Site #10637; prepared for VLP 2, LLC, February 2011.
- USDA. 2008. Soil Survey of Fulton County, Georgia. National Resources Conservation Service, in cooperation with the University of Georgia, College of Agricultural and Environmental Sciences, Agricultural Extension Services.

TABLES



			Depth Date	T-1 E (UST) 15-18' 6/15/1999	T-1 W (UST) 15-16' 6/15/1999	T-2 N (UST) 16' 6/15/1999	T-2 S (UST) 16' 6/15/1999	T-3 N (UST) 16' 6/15/1999	T-3 S (UST) 16' 6/15/1999	T-4 N (UST) 15' 6/15/1999	T-4 S (UST) 15' 6/15/1999	T-5 N (UST) 15' 6/15/1999	T-5 S (UST) 15' 6/15/1999
Volatile Organic Compounds, mg/kg	Type 1 RRS ¹	Type 2 RRS ¹											
Acetone	400			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	0.055		<0.25	<0.25	0.008	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	100			<0.25	<0.25	0.068	<0.005	<0.005	<0.005	<0.005	<0.005	0.015	<0.005
Ethylbenzene	70			0.57	0.4	0.011	0.029	<0.005	<0.005	<0.005	2.06	<0.005	<0.005
m,p-xylenes	1,000			<0.25	<0.25	0.041	0.025	<0.005	<0.005	<0.005	0.47	0.045	<0.005
o,xylenes	1,000			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	20			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	10	4.21		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	21.9			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	60			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	60			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	7.5			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals, mg/kg													
Arsenic	20	5.84		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	1,000	2,578		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	2	11.8		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	117,321		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	75	418		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.5	4.90		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	2	13		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

¹Risk Reduction Standard (RRSs) calculations are provided in Attachment C.

NA- Not Analyzed

				T-6 N (UST)	T-6 S (UST)	DISP (UST)	TF-1 (UST)	TF-2(E) (UST)	SP	-1	T-2A
			Depth	15'	15'	3-3.5'	Backfill	Backfill	4'	7-8'	2-3'
			Date	6/15/1999	6/15/1999	6/15/1999	6/15/1999	6/15/1999	9/28/	/1999	11/9/1999
Volatile Organic Compounds, mg/kg	Type 1 RRS ¹	Type 2 RRS ¹									
Acetone	400			NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	0.055		<0.005	<0.005	<0.13	<0.005	<0.005	NA	NA	NA
Toluene	100			<0.005	<0.005	0.27	0.013	<0.005	NA	NA	NA
Ethylbenzene	70			<0.005	<0.005	1.44	<0.005	0.013	NA	NA	NA
m,p-xylenes	1,000			<0.005	<0.005	0.37	<0.005	0.122	NA	NA	NA
o,xylenes	1,000			NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	20			NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	10	4.21		NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	21.9			NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	60			NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	60			NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	7.5			NA	NA	NA	NA	NA	NA	NA	NA
Metals, mg/kg											
Arsenic	20	5.84		NA	NA	NA	NA	NA	NA	NA	NA
Barium	1,000	2,578		NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	2	11.8		NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	117,321		NA	NA	NA	NA	NA	NA	NA	NA
Lead	75	418		NA	NA	NA	NA	NA	1,238	5.43	360
Mercury	0.5	4.90		NA	NA	NA	NA	NA	NA	NA	NA
Silver	2	13		NA	NA	NA	NA	NA	NA	NA	NA

Notes:

¹Risk Reduction Standard (RRSs) calculations are provided in Attachment C.

NA- Not Analyzed

		T-3 T-9		-9			T-	-23				
			Depth	3.2-3.6'	4'	9'	3-3.8'	6.5-7'	10.5-11'	13.5-14'	15'	15.5-17'
			Date	7/21/1999	7/21	/1999			10/7	/1999		
Volatile Organic Compounds, mg/kg	Type 1 RRS ¹	Type 2 RRS ¹										
Acetone	400			NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	0.055		NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	100			NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	70			NA	NA	NA	NA	NA	NA	NA	NA	NA
m,p-xylenes	1,000			NA	NA	NA	NA	NA	NA	NA	NA	NA
o,xylenes	1,000			NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	20			NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	10	4.21		NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	21.9			NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	60			NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	60			NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	7.5			NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals, mg/kg												
Arsenic	20	5.84		12.5	16.8	18.1	NA	NA	NA	NA	NA	NA
Barium	1,000	2,578		1,050	29.2	341	NA	NA	NA	NA	NA	NA
Cadmium	2	11.8		<5	<5	9.07	NA	NA	NA	NA	NA	NA
Chromium	100	117,321		29.7	39.3	21.8	NA	NA	NA	NA	NA	NA
Lead	75	418		245	4,730	1,920	1,250	355	5,610	1,360	10,500	54.8
Mercury	0.5	4.90		0.59	<0.5	<0.5	NA	NA	NA	NA	NA	NA
Silver	2	13		<10	<10	<10	NA	NA	NA	NA	NA	NA

Notes:

 $^1\mbox{Risk}$ Reduction Standard (RRSs) calculations are provided in Attachment C.

NA- Not Analyzed

								T-24				
			Depth Date	2-3'	9-9.5'	11.5-12'	14'	15-15.5' 10/7/1999	17'	19'	20'	23'
Volatile Organic Compounds, mg/kg	Type 1 RRS ¹	Type 2 RRS ¹										
Acetone	400			NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	0.055		NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	100			NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	70			NA	NA	NA	NA	NA	NA	NA	NA	NA
m,p-xylenes	1,000			NA	NA	NA	NA	NA	NA	NA	NA	NA
o,xylenes	1,000			NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	20			NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	10	4.21		NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	21.9			NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	60			NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	60			NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	7.5			NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals, mg/kg												
Arsenic	20	5.84		NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	1,000	2,578		NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	2	11.8		NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	117,321		NA	NA	NA	NA	NA	NA	NA	NA	NA
_ead	75	418		116	329	165	201	15.7	17.6	471	107	1,460
Mercury	0.5	4.90		NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	2	13		NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

 1 Risk Reduction Standard (RRSs) calculations are provided in Attachment C.

NA- Not Analyzed

T-28		-27	T-			26	T-			T-25			•		
1.5-2' 4.5'	11'	8.5-9'	5.5-6'	3-3.5'	14-14.5'	12.5-13'	8.5-9'	3.5-4'	8-8.5'	6'	1-1.5	Depth			
10/7/1999		/1999	10/7			/1999	10/7		/1999	10/7,	11/9/1999	Date			
													Type 2 RRS ¹	Type 1 RRS ¹	Volatile Organic Compounds, mg/kg
NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			400	Acetone
NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		0.055	0.5	Benzene
NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			100	Toluene
NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			70	Ethylbenzene
NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			1,000	m,p-xylenes
NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			1,000	o,xylenes
NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			20	Cyclohexane
NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		4.21	10	Chlorobenzene
NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			21.9	Isopropylbenzene
NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			60	1,2-Dichlorobenzene
NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			60	1,3-Dichlorobenzene
NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			7.5	1,4-Dichlorobenzene
															Metals, mg/kg
NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		5.84	20	Arsenic
NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		2,578	1,000	Barium
NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		11.8	2	Cadmium
NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		117,321	100	Chromium
5,980 259	610	2,170	909	4,640	23.5	716	405	380	53.2	1,070	536		418	75	Lead
NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		4.90	0.5	Mercury
NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		13	2	Silver
L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		4.90	0.5	Mercury

Notes:

 $^{1}\!\text{Risk}$ Reduction Standard (RRSs) calculations are provided in Attachment C.

NA- Not Analyzed

			T-29						T-30				
			Depth	2-3'	4-5'	6.5-7'	9.5-10'	11.5-12'	3-4'	4-5'	5.5-6'	6.5-7'	7-7.5'
		Date	10/7/1999					10/7/1999					
Volatile Organic Compounds, mg/kg	Type 1 RRS ¹	Type 2 RRS ¹											
Acetone	400			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	0.055		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	100			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	70			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
m,p-xylenes	1,000			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o,xylenes	1,000			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	20			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	10	4.21		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	21.9			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	60			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	60			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	7.5			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals, mg/kg													
Arsenic	20	5.84		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	1,000	2,578		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	2	11.8		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	117,321		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	75	418		6,890	146	429	778	523	305	806	7,380	557	667
Mercury	0.5	4.90		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	2	13		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury Silver	0.5	4.90		NA	NA	NA	NA	NA	NA	NA	NA	NA	

Notes:

¹Risk Reduction Standard (RRSs) calculations are provided in Attachment C.

NA- Not Analyzed

					T-31			T-32		T-21A	T-33	T-34	T-	35
			Depth	11'	12-12.5'	18'	11'	12-12.5'	18'	2-3'	1-2'	1-2'	1.1-1.2'	2.5-3.5
			Date		10/7/1999			10/7/1999		11/9/1999	11/9/1999	11/9/1999	11/9,	/1999
Volatile Organic Compounds, mg/kg	Type 1 RRS ¹	Type 2 RRS ¹												
Acetone	400			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	0.055		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	100			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	70			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
m,p-xylenes	1,000			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o,xylenes	1,000			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	20			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	10	4.21		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	21.9			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	60			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	60			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	7.5			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals, mg/kg														
Arsenic	20	5.84		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	1,000	2,578		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	2	11.8		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	117,321		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	75	418		1,330	336	314	1,170	905	592	265	968	152	1,500	338
Mercury	0.5	4.90		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	2	13		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

 $^{1}\!\text{Risk}$ Reduction Standard (RRSs) calculations are provided in Attachment C.

NA- Not Analyzed

		[T-36	T-	-37	T-	-38		T-38N		T-39	T-40	T-	-41
			Depth	2-2.5'	2.5-3'	3.5-4.5'	5-6.5'	8.5-9'	10-10.5'	14'	16'	4-5'	3.5-5'	2.2'	5-6'
			Date	11/9/1999	11/9	/1999	11/9	/1999		11/9/1999		11/9/1999	11/9/1999	11/9	/1999
Volatile Organic Compounds, mg/kg	Type 1 RRS ¹	Type 2 RRS ¹													
Acetone	400			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	0.055		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	100			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	70			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
m,p-xylenes	1,000			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o,xylenes	1,000			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	20			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	10	4.21		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	21.9			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	60			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	60			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	7.5			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals, mg/kg															
Arsenic	20	5.84		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	1,000	2,578		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	2	11.8		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	117,321		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	75	418		681	1,300	972	600	464	403	534	418	462	38.5	777	1,330
Mercury	0.5	4.90		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	2	13		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

 $^{1}\!\text{Risk}$ Reduction Standard (RRSs) calculations are provided in Attachment C.

NA- Not Analyzed

				T-	-42	T-43		T-44		T-45	T-4	16	EPD-1	EPD-2
			Depth	1.6-2'	3.5-5'	5-5.5'	1-1.3'	2-3'	4'	1-1.3'	1.7-2.1'	2.3-3.5'	1-2'	1-2'
			Date	11/9	/1999	11/9/1999		11/9/1999		11/9/1999	11/9/	1999	5/24/2000	5/24/2000
Volatile Organic Compounds, mg/kg	Type 1 RRS ¹	Type 2 RRS ¹												
Acetone	400			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	0.055		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	100			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	70			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
m,p-xylenes	1,000			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o,xylenes	1,000			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	20			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	10	4.21		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	21.9			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	60			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	60			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	7.5			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals, mg/kg														
Arsenic	20	5.84		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	1,000	2,578		NA	NA	NA	NA	NA	NA	NA	NA	NA	170	900
Cadmium	2	11.8		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	117,321		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	75	418		33.9	437	110	887	1,200	86.9	34.6	2,460	333	400	1,300
Mercury	0.5	4.90		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	2	13		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

 1 Risk Reduction Standard (RRSs) calculations are provided in Attachment C.

NA- Not Analyzed

			SB-1	SB-2	SB-3	SB-4	SI	B-5	SB-6	SB-7	S	B-8	SB-9	SB-10
		Depth	1-2'	1-2'	1-2'	1-2'	1-2'	2-3'	1-2'	4-4.5'	4-6'	4-6' (Dup)	4-6'	6-8'
		Date	4/17/2002	4/17/2002	4/17/2002	4/17/2002	4/18	/2002	4/18/2002	4/18/2002	4/18	/2002	4/18/2002	4/18/2002
Volatile Organic Compounds, mg/kg	Type 1 RRS ¹	Type 2 RRS ¹												
Acetone	400		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	0.055	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	100		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	70		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
m,p-xylenes	1,000		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o,xylenes	1,000		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	20		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	10	4.21	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	21.9		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	60		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	60		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	7.5		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals, mg/kg														
Arsenic	20	5.84	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	1,000	2,578	98.8	66.9	114	36.7	66	88	95.9	71.1	48.3	53	24.3	57.8
Cadmium	2	11.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	117,321	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	75	418	31	14	30	18	36	22	22	23	19	22	16.6	23.9
Mercury	0.5	4.90	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	2	13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

 1 Risk Reduction Standard (RRSs) calculations are provided in Attachment C.

NA- Not Analyzed

				SE	3-11		SB	-12			SB-13		SB-14	SB-15	SB-16
			Depth	18-20'	20-22'	12-14'	12-14' (Dup)	20-22'	20-22' (Dup)	2-4'	18-20'	32-34'	16-20'	16-20'	16-20'
			Date	4/17	/2002		4/17,	/2002			4/16/2002		4/16/2002	4/18/2002	4/18/2002
Volatile Organic Compounds, mg/kg	Type 1 RRS ¹	Type 2 RRS ¹													
Acetone	400			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	0.055		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	100			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	70			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
m,p-xylenes	1,000			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o,xylenes	1,000			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	20			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	10	4.21		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	21.9			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	60			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	60			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	7.5			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals, mg/kg															
Arsenic	20	5.84		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	1,000	2,578		112	97.1	112	112	45	55.1	27.6	152	22.7	445	73.4	85.4
Cadmium	2	11.8		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	117,321		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	75	418		110	41	81	82	49	66	9,310	360	18	11,000	15.5	20.8
Mercury	0.5	4.90		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	2	13		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

 1 Risk Reduction Standard (RRSs) calculations are provided in Attachment C.

NA- Not Analyzed

				MV	V-1	MW	/-2	MW-3	MW-10	G	P-3	GI	P-4	GP-5	GP-6	GP-7
			Depth	5-6'	10-11'	4-5'	14-15'	9-10'	9-10'	3-4'	7-8'	4-5'	8-9'	13-14'	6-7'	2-3'
			Date	3/8/	2006	3/8/2	2006	3/14/2006	7/26/2006	3/13	/2006	3/9/	2006	3/9/2006	3/9/2006	3/9/2006
Volatile Organic Compounds, mg/kg	Type 1 RRS ¹	Type 2 RRS ¹														
Acetone	400			<0.084	<0.089	<0.074	<0.089	<0.075	<0.110	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	0.055		< 0.0042	< 0.0044	<0.0037	< 0.0044	< 0.0037	<0.0054	NA	NA	NA	NA	NA	NA	NA
Toluene	100			< 0.0042	< 0.0044	<0.0037	< 0.0044	< 0.0037	<0.0054	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	70			< 0.0042	< 0.0044	<0.0037	< 0.0044	< 0.0037	<0.0054	NA	NA	NA	NA	NA	NA	NA
m,p-xylenes	1,000			<0.0084	< 0.0089	<0.0074	< 0.0089	<0.0075	<0.011	NA	NA	NA	NA	NA	NA	NA
o,xylenes	1,000			< 0.0042	< 0.0044	<0.0037	< 0.0044	< 0.0037	<0.0054	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	20			<0.0042	< 0.0044	<0.0037	<0.0044	<0.0037	<0.0054	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	10	4.21		< 0.0042	< 0.0044	<0.0037	< 0.0044	< 0.0037	<0.0054	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	21.9			< 0.0042	< 0.0044	<0.0037	< 0.0044	< 0.0037	<0.0054	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	60			< 0.0042	< 0.0044	<0.0037	< 0.0044	< 0.0037	<0.0054	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	60			< 0.0042	< 0.0044	< 0.0037	< 0.0044	< 0.0037	< 0.0054	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	7.5			<0.0042	<0.0044	<0.0037	<0.0044	<0.0037	<0.0054	NA	NA	NA	NA	NA	NA	NA
Metals, mg/kg																
Arsenic	20	5.84		NA	NA	NA	NA	NA	NA	<4.52	<4.07	<4.28	<4.09	<4.18	<3.6	<4.75
Barium	1,000	2,578		NA	NA	NA	NA	NA	NA	83.5	96.9	65	100	70.3	91.9	129
Cadmium	2	11.8		NA	NA	NA	NA	NA	NA	<2.26	<2.03	<2.14	<2.04	<2.09	<1.80	<2.38
Chromium	100	117,321		NA	NA	NA	NA	NA	NA	38.5	9.77	11.5	7.38	25.3	13.4	30.4
Lead	75	418		NA	NA	NA	NA	NA	NA	12.9	10.5	11.4	14.7	11.9	12.3	11.5
Mercury	0.5	4.90		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	2	13		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

 $^{1}\mbox{Risk}$ Reduction Standard (RRSs) calculations are provided in Attachment C.

NA- Not Analyzed

			Depth Date	GF 3-4' 3/9/	3-4' (Dup)	GP-9 2-3' 3/9/2006	GP-11 9-10' 5/23/2006	GP-12 9-10' 5/23/2006	GP-13 9-10' 5/23/2006	GP-14 9-10' 5/23/2006	GP-15 19-20' 5/23/2006	GP-16 9-10' 5/23/2006	GP-22 9-10' 5/23/2006	GP-25 9-10' 5/23/2006	GP-26 7-8' 7/25/2006
Volatile Organic Compounds, mg/kg	Type 1 RRS ¹	Type 2 RRS ¹													
Acetone	400			NA	NA	NA	<0.087	<0.100	<0.100	<0.093	<0.110	<0.110	<0.100	<0.100	<0.096
Benzene	0.5	0.055		NA	NA	NA	<0.0044	<0.0051	<0.0051	<0.0047	<0.0053	<0.0054	<0.0052	<0.0050	<0.0048
Toluene	100			NA	NA	NA	<0.0044	<0.0051	<0.0051	< 0.0047	< 0.0053	<0.0054	<0.0052	<0.0050	<0.0048
Ethylbenzene	70			NA	NA	NA	<0.0044	<0.0051	<0.0051	<0.0047	<0.0053	<0.0054	<0.0052	<0.0050	<0.0048
m,p-xylenes	1,000			NA	NA	NA	<0.0087	<0.010	<0.010	<0.0093	<0.011	<0.011	<0.010	<0.010	<0.0096
o,xylenes	1,000			NA	NA	NA	<0.0044	<0.0051	<0.0051	<0.0047	<0.0053	<0.0054	<0.0052	<0.0050	<0.0048
Cyclohexane	20			NA	NA	NA	<0.0044	<0.0051	<0.0051	<0.0047	< 0.0053	<0.0054	<0.0052	<0.0050	<0.0048
Chlorobenzene	10	4.21		NA	NA	NA	<0.0044	<0.0051	<0.0051	<0.0047	< 0.0053	<0.0054	<0.0052	<0.0050	<0.0048
Isopropylbenzene	21.9			NA	NA	NA	<0.0044	<0.0051	<0.0051	<0.0047	< 0.0053	<0.0054	<0.0052	<0.0050	<0.0048
1,2-Dichlorobenzene	60			NA	NA	NA	<0.0044	<0.0051	<0.0051	<0.0047	< 0.0053	<0.0054	<0.0052	<0.0050	<0.0048
1,3-Dichlorobenzene	60			NA	NA	NA	<0.0044	<0.0051	<0.0051	<0.0047	<0.0053	<0.0054	<0.0052	<0.0050	<0.0048
1,4-Dichlorobenzene	7.5			NA	NA	NA	<0.0044	<0.0051	<0.0051	<0.0047	<0.0053	<0.0054	<0.0052	<0.0050	<0.0048
Metals, mg/kg															
Arsenic	20	5.84		<3.98	<4.04	<2.98	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	1,000	2,578		65.4	80.3	125	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	2	11.8		<1.99	<2.02	<1.49	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	117,321		15.4	24.1	12.1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	75	418		11.7	11.7	9.38	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.5	4.90		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	2	13		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

¹Risk Reduction Standard (RRSs) calculations are provided in Attachment C.

NA- Not Analyzed

				GP-27	GP-28	ST	B-8		STB-9			STB-10	
			Depth	3-4'	7-8'	4-8'	20-23'	0-4'	8-12'	16-20'	0-4'	20-24'	28-31.5'
			Date	7/25/2006	7/25/2006	8/4/	2010		8/4/2010			8/4/2010	
Volatile Organic Compounds, mg/kg	Type 1 RRS ¹	Type 2 RRS ¹											
Acetone	400			<0.093	<0.094	<0.076	<0.078	<0.069	<0.087	<0.079	<0.082	<0.41	<0.085
Benzene	0.5	0.055		<0.0047	<0.0047	<0.0038	< 0.0039	<0.0035	< 0.0043	< 0.0039	<0.0041	< 0.021	< 0.0042
Toluene	100			<0.0047	<0.0047	<0.0038	< 0.0039	<0.0035	< 0.0043	< 0.0039	<0.0041	< 0.021	< 0.0042
Ethylbenzene	70			<0.0047	<0.0047	<0.0038	<0.0039	<0.0035	< 0.0043	< 0.0039	<0.0041	<0.021	< 0.0042
m,p-xylenes	1,000			<0.0093	<0.0094	<0.0076	<0.0078	<0.0069	< 0.0087	< 0.0079	<0.0082	< 0.041	<0.0085
o,xylenes	1,000			<0.0047	<0.0047	<0.0038	< 0.0039	<0.0035	< 0.0043	< 0.0039	<0.0041	< 0.021	< 0.0042
Cyclohexane	20			<0.0047	<0.0047	<0.0038	< 0.0039	<0.0035	< 0.0043	< 0.0039	<0.0041	< 0.021	< 0.0042
Chlorobenzene	10	4.21		<0.0047	<0.0047	<0.0038	< 0.0039	< 0.0035	< 0.0043	< 0.0039	<0.0041	< 0.021	< 0.0042
Isopropylbenzene	21.9			<0.0047	<0.0047	<0.0038	< 0.0039	< 0.0035	< 0.0043	< 0.0039	<0.0041	< 0.021	< 0.0042
1,2-Dichlorobenzene	60			<0.0047	<0.0047	<0.0038	< 0.0039	< 0.0035	< 0.0043	< 0.0039	<0.0041	< 0.021	< 0.0042
1,3-Dichlorobenzene	60			<0.0047	<0.0047	<0.0038	< 0.0039	<0.0035	< 0.0043	< 0.0039	<0.0041	< 0.021	< 0.0042
1,4-Dichlorobenzene	7.5			<0.0047	<0.0047	<0.0038	<0.0039	<0.0035	<0.0043	<0.0039	<0.0041	<0.021	<0.0042
Metals, mg/kg													
Arsenic	20	5.84		NA	NA	<5.48	<5.15	<5.7	<5.71	<5.37	<5.37	<8.65	<6.49
Barium	1,000	2,578		NA	NA	68	111	156	160	102	133	10.3	104
Cadmium	2	11.8		NA	NA	<2.74	<2.57	<2.85	<2.85	<2.69	9.91	<4.33	<3.25
Chromium	100	117,321		NA	NA	8.41	6.73	30.8	32	21.3	29.1	<4.33	12.5
Lead	75	418		NA	NA	16.3	7.48	65.8	22.7	10.1	280	18	7.09
Mercury	0.5	4.90		NA	NA	<0.114	< 0.112	<0.117	<0.118	< 0.112	0.223	<0.172	<0.129
Silver	2	13		NA	NA	<2.74	<2.57	<2.85	<2.85	<2.69	<2.69	<4.33	<3.25

Notes:

 $^{1}\mbox{Risk}$ Reduction Standard (RRSs) calculations are provided in Attachment C.

NA- Not Analyzed

		•		MW	/-3R	MW	/-32	MW	/-31	STB	3-11
			Depth	2'	12'	6'	12'	6'	14'	4-8'	28-31'
			Date	8/30/	2010	8/30,	/2010	9/1/	2010	9/30/	/2010
Volatile Organic Compounds, mg/kg	Type 1 RRS ¹	Type 2 RRS ¹									
Acetone	400			<0.073	<0.082	<0.084	<0.090	<0.076	<0.082	<0.081	<0.078
Benzene	0.5	0.055		<0.0036	< 0.0041	<0.0042	<0.0045	<0.0038	< 0.0041	<0.0040	< 0.0039
Toluene	100			<0.0036	< 0.0041	< 0.0042	< 0.0045	<0.0038	< 0.0041	< 0.0040	< 0.0039
Ethylbenzene	70			<0.0036	<0.0041	<0.0042	< 0.0045	<0.0038	< 0.0041	<0.0040	<0.0039
m,p-xylenes	1,000			<0.0073	<0.0082	<0.0084	<0.0090	<0.0076	<0.0082	<0.0081	<0.0078
o,xylenes	1,000			<0.0036	< 0.0041	<0.0042	<0.0045	<0.0038	<0.0041	<0.0040	<0.0039
Cyclohexane	20			<0.0036	< 0.0041	<0.0042	<0.0045	<0.0038	<0.0041	<0.0040	<0.0039
Chlorobenzene	10	4.21		<0.0036	< 0.0041	<0.0042	<0.0045	<0.0038	<0.0041	<0.0040	<0.0039
Isopropylbenzene	21.9			<0.0036	< 0.0041	<0.0042	<0.0045	<0.0038	<0.0041	<0.0040	<0.0039
1,2-Dichlorobenzene	60			<0.0036	<0.0041	< 0.0042	< 0.0045	<0.0038	< 0.0041	< 0.0040	< 0.0039
1,3-Dichlorobenzene	60			<0.0036	<0.0041	<0.0042	< 0.0045	<0.0038	< 0.0041	<0.0040	<0.0039
1,4-Dichlorobenzene	7.5			<0.0036	<0.0041	<0.0042	<0.0045	<0.0038	< 0.0041	<0.0040	<0.0039
Metals, mg/kg											
Arsenic	20	5.84		<5.3	<5.75	<5.71	<4.39	<5.47	<5.66	30.1	<5.95
Barium	1,000	2,578		99.6	115	108	118	77.6	107	300	126
Cadmium	2	11.8		<2.65	<2.87	<2.86	<2.20	<2.73	<2.83	<3.14	<2.98
Chromium	100	117,321		28.9	17.7	20.9	12.3	40.5	25.6	41.5	15.1
Lead	75	418		52	20.5	11	7.17	10.8	8.03	6,460	6.46
Mercury	0.5	4.90		<0.125	<0.116	<0.116	<0.111	<0.113	<0.119	0.454	<0.123
Silver	2	13		<2.65	<2.87	<2.86	<2.20	<2.73	<2.83	21.3	<2.98

Notes:

 $^{1}\mbox{Risk}$ Reduction Standard (RRSs) calculations are provided in Attachment C.

NA- Not Analyzed

				T-2-E4	T	T-4		T-6			T-7			T-8		Т.	12	т.	-14	T-16
			Depth	4' 11'	5'	6.5'	5'	1-0 7'	11-12'	6-8'	8-12'	12-14'	4.5'	6.5'	14'	2-3'	4-5'	4.5'	-14 Q'	3,
			Date	7/24/2002		4/2002		7/24/2002		0.0	7/24/2002		4.5	7/24/2002	14	_	/2002	_	/2002	7/25/2002
Volatile Organic Compounds, mg/kg	Type 1 RRS ¹	Type 2 RRS ¹																		
Acetone	400			NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	0.055		NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	100			NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	70			NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
m,p-xylenes	1,000			NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o,xylenes	1,000			NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	20			NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	10	4.21		NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	21.9			NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	60			NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	60			NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	7.5			NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals, mg/kg																				
Arsenic	20	5.84		12.8 NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<20	NA	NA	NA	<5	<20	NA
Barium	1,000	2,578		577 NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	348	NA	NA	NA	251	304	NA
Cadmium	2	11.8	!	5.38 NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<10	NA	NA	<2	<2.5	122	<2
Chomium	100	117,321		52.6 NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	40.7	NA	NA	21.3	15.8	300	<5
Lead	75	418		945 11.1	251	8.95	37.7	396	9.89	28.6	188	14.8	7.34	2,450	307	790	17.4	646	5,780	22.3
Mercury	0.5	4.90		NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	2	13		<10 NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<40	NA	NA	NA	<10	<40	NA

Notes:

 $^{1}\mbox{Risk}$ Reduction Standard (RRSs) calculations are provided in Attachment C.

NA- Not Analyzed

		Г		T-:	17	T-1	10	T-20	T-22	т.	-23			T-24			T-25
			Depth	1-3'	7-8'	9'	12'	2-4'	18-18.5'	5'	13'	6'	10'	13'	17.5'	19'	15'
			Date	7/25/		7/25/		7/25/2002	7/25/2002	•	/2002		10	7/24/2002	17.5	13	7/24/2002
	1	1	Date	1/23/	2002	7/23/	2002	7/23/2002	7/23/2002	1/23	/2002			7/24/2002			7/24/2002
Volatile Organic Compounds, mg/kg	Type 1 RRS ¹	Type 2 RRS ¹															
Acetone	400			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	0.055		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	100			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	70			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
m,p-xylenes	1,000			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o,xylenes	1,000			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	20			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	10	4.21		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	21.9			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	60			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	60			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	7.5			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals, mg/kg																	
Arsenic	20	5.84		NA	<5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5	NA
Barium	1,000	2,578		NA	173	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	97.6	NA
Cadmium	2	11.8		17.3	<2	<2	NA	4.88	NA	NA	4.3	NA	NA	NA	NA	<2	NA
Chomium	100	117,321		63.1	11.6	35.8	NA	12.9	NA	NA	31	NA	NA	NA	NA	11.7	NA
Lead	75	418		843	22	550	261	263	12.2	8.2	360	11	245	65.1	101	9.92	678
Mercury	0.5	4.90		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	2	13		NA	<2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<10	NA

Notes:

 $^{1}\mbox{Risk}$ Reduction Standard (RRSs) calculations are provided in Attachment C.

NA- Not Analyzed

		Г		MW-	17 (f.k.a. N	IW-1)	MW-16	6 (f.k.a. MW-3)	Gi	P-1	GI	P-2	G	P-3		G	P-5	
			Depth Date	12.5-13'	15-16' 12/2/2002	18-19'	7-8'	11-12' 2/3/2002	2-3'	3-4' /2002	6.5-7'	9-9.5' /2002	1-2'	2-2.5' /2002	6.5-7.5'	11-12'	15-16' /2002	17-18'
Volatile Organic Compounds, mg/kg	Type 1 RRS ¹	Type 2 RRS ¹																
Acetone	400			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	0.055		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	100			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	70			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
m,p-xylenes	1,000			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o,xylenes	1,000			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	20			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	10	4.21		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	21.9			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	60			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	60			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	7.5			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals, mg/kg																		
Arsenic	20	5.84		NA	NA	<5	9.75	<5	NA	<5	NA	NA	NA	<5	NA	NA	NA	NA
Barium	1,000	2,578		NA	NA	38.8	455	50.2	NA	177	NA	NA	NA	192	NA	NA	NA	NA
Cadmium	2	11.8		<2	NA	<2	3.35	<2	NA	<2	NA	NA	NA	<2	NA	NA	2.46	NA
Chomium	100	117,321		26.3	NA	12.1	30.9	15.8	NA	16.2	NA	NA	NA	23.2	NA	NA	17.1	NA
Lead	75	418		217	150	12.1	1,290	15	55.5	19.7	15.2	30.2	59.1	13.4	16.2	19.5	321	13.4
Mercury	0.5	4.90		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	2	13		NA	NA	<2	<2	<2	NA	<2	NA	NA	NA	<2	NA	NA	NA	NA

Notes:

 $^{1}\!\text{Risk}$ Reduction Standard (RRSs) calculations are provided in Attachment C.

NA- Not Analyzed

	GP-6	G	P-7		G	P-10		GP-11	GP	-12	GP	-14	GP-	16
	Depth 5-6'	-	.0' (Dup) 22-23'	9-12'	15-16'	21-23'	24-25'	2-4'	10-11'	-12 13-14'	5-6.5'	7-8'	2-2.5'	7-8'
	Date 12/3/2002		/2002	3 12		/2002	24 23	12/4/2002		/2002		2002	12/4/	_
Volatile Organic Compounds, mg/kg Type 1 RRS ¹ Type 2 RR		12,5	, 2002		,	, 2002		12/ 1/2002	, .,					
Acetone 400	NA	NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene 0.5 0.055	NA	NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene 100	NA	NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene 70	NA	NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
m,p-xylenes 1,000	NA	NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o,xylenes 1,000	NA	NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane 20	NA	NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene 10 4.21	NA	NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene 21.9	NA	NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene 60	NA	NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene 60	NA	NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene 7.5	NA	NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals, mg/kg														
Arsenic 20 5.84	NA	12.3	NA <5	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA
Barium 1,000 2,578	NA	109	NA 34	NA	NA	NA	NA	209	NA	NA	NA	NA	NA	NA
Cadmium 2 11.8	NA	3.63	NA <2	NA	NA	<2	NA	<2	NA	NA	NA	NA	NA	NA
Chomium 100 117,321	NA	53.3	NA 11.7	NA	NA	27.6	NA	29.5	NA	NA	NA	NA	NA	NA
Lead 75 418	18.4	59,900 7	7,100 23.1	20	140	173	12.6	15.4	32.4	12.5	10.1	12.2	51.5	15.7
Mercury 0.5 4.90	NA	,	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver 2 13	NA	<2	NA <2	NA	NA	NA	NA	<2	NA	NA	NA	NA	NA	NA

Notes:

 $^{1}\!\text{Risk}$ Reduction Standard (RRSs) calculations are provided in Attachment C.

NA- Not Analyzed

		1		GP-17	GD	-18		GP-20		GP	-21	GP-22	6	P-23	GP-24	GP	-25
			Depth	4-5'	2-3'	6-7'	9-10'	14-16'	18-20'	3-5'	7-8'	4-5'		2.5-3.5 (Dup)	3-4'	2-3'	5-6'
			Date	3/10/2006		/2006	9-10	3/10/2006	16-20	3/10/		3/10/2006		3/2006	3/13/2006	_	/2006
		1	Date	3/10/2000	3/10/	2000		3/10/2000		3/10/	2000	3/10/2000	3/1.	5/2000	3/13/2000	3/13/	2000
Volatile Organic Compounds, mg/kg	Type 1 RRS	Type 2 RRS ¹															
Acetone	400			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	0.055		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	100			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	70			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
m,p-xylenes	1,000			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o,xylenes	1,000			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	20			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	10	4.21		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	21.9			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	60			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	60			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	7.5			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals, mg/kg																	
Arsenic	20	5.84		<4.98	<4.76	<4.97	<3.76	5.87	<4.7	10.7	<3.97	<4.98	<4.57	<4.01	<4.35	4.68	<4.68
Barium	1,000	2,578		99.3	242	189	106	189	66.9	214	40.7	99.3	71.2	76.3	118	188	80.4
Cadmium	2	11.8		<2.45	<2.38	<2.48	<1.88	<2.26	<2.35	<2.1	<1.99	<2.45	<2.29	<2	<2.17	<2.07	<2.34
Chomium	100	117,321		7.27	28	26.5	17.5	37.3	19.4	31.9	14.9	7.27	5.86	5.2	10.9	76.7	5.56
Lead	75	418		<4.98	<4.76	<4.97	19.5	428	11.8	792	12.7	<4.98	<4.57	<4.01	5.47	217	7.87
Mercury	0.5	4.90		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	2	13		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

 $^{1}\!\text{Risk}$ Reduction Standard (RRSs) calculations are provided in Attachment C.

NA- Not Analyzed

				HA-1	HA-2	HA-3	HA-4		STB-1			STI	B-2		STI	3-3
			Depth	1-1.5'	3.5-4'	2-2.5'	2.5-3'	0-4'	12-16'	28-32'	0-2'	4-8'	8-12'	28-31'	0-4'	16-20'
			Date	3/10/2006	3/10/2006	3/10/2006	3/10/2006		8/3/2010			9/30/	2010		8/3/	2010
Volatile Organic Compounds, mg/kg	Type 1 RRS ¹	Type 2 RRS ¹														
Acetone	400			NA	NA	NA	NA	<0.075	<0.13	<0.079	<0.076	<0.086	<0.083	<0.069	<0.077	<0.077
Benzene	0.5	0.055		NA	NA	NA	NA	<0.0038	<0.0066	<0.0039	<0.0038	0.03	< 0.0042	<0.0034	< 0.0039	<0.0038
Toluene	100			NA	NA	NA	NA	<0.0038	0.02	<0.0039	<0.0038	0.0046	< 0.0042	<0.0034	< 0.0039	<0.0038
Ethylbenzene	70			NA	NA	NA	NA	<0.0038	0.034	<0.0039	<0.0038	< 0.0043	< 0.0042	<0.0034	< 0.0039	<0.0038
m,p-xylenes	1,000			NA	NA	NA	NA	< 0.0075	0.16	<0.0079	< 0.0076	<0.0086	<0.0083	<0.0069	< 0.0077	<0.0077
o,xylenes	1,000			NA	NA	NA	NA	<0.0038	0.0051	<0.0039	<0.0038	<0.0043	< 0.0042	<0.0034	< 0.0039	<0.0038
Cyclohexane	20			NA	NA	NA	NA	<0.0038	0.0071	<0.0039	<0.0038	< 0.0043	< 0.0042	<0.0034	< 0.0039	<0.0038
Chlorobenzene	10	4.21		NA	NA	NA	NA	<0.0038	0.015	<0.0039	<0.0038	< 0.0043	< 0.0042	<0.0034	< 0.0039	<0.0038
Isopropylbenzene	21.9			NA	NA	NA	NA	<0.0038	0.033	<0.0039	<0.0038	< 0.0043	< 0.0042	<0.0034	< 0.0039	<0.0038
1,2-Dichlorobenzene	60			NA	NA	NA	NA	<0.0038	<0.0066	<0.0039	<0.0038	< 0.0043	< 0.0042	<0.0034	< 0.0039	<0.0038
1,3-Dichlorobenzene	60			NA	NA	NA	NA	<0.0038	<0.0066	<0.0039	<0.0038	< 0.0043	< 0.0042	<0.0034	< 0.0039	<0.0038
1,4-Dichlorobenzene	7.5			NA	NA	NA	NA	<0.0038	0.027	<0.0039	<0.0038	<0.0043	<0.0042	<0.0034	< 0.0039	<0.0038
Metals, mg/kg																
Arsenic	20	5.84		<4.87	<3.97	<3.27	<4.50	<5.98	<8.4	<6.08	<0.536	11.9	<6.00	<5.76	<5.06	<5.49
Barium	1,000	2,578		103	53.6	46.9	18.8	107	304	104	138	345	98	122	115	108
Cadmium	2	11.8		<2.43	<1.98	<1.64	<2.25	<2.99	8.0	<3.04	<0.268	3.14	<3.00	<2.88	<2.53	<2.75
Chomium	100	117,321		76.8	22.8	6.68	2.26	31.2	146	14.3	17.3	27.3	15.3	16.7	8.22	8.11
Lead	75	418		10.4	<3.97	9.51	4.84	33	2,790	14.3	458	1,750	10.7	<5.76	41.7	14.10
Mercury	0.5	4.90		NA	NA	NA	NA	<0.122	0.494	<0.126	< 0.109	<0.121	< 0.119	<0.119	< 0.107	<0.117
Silver	2	13		NA	NA	NA	NA	<2.99	4.69	<3.04	<2.68	<3.01	<3.00	<2.88	<2.53	<2.75

Notes:

 $^{1}\mbox{Risk}$ Reduction Standard (RRSs) calculations are provided in Attachment C.

NA- Not Analyzed

				ST	B-4		STB-5		STB-6			STB-7		
			Depth	0-4'	12-16'	4-8'	16-20'	20-23'	8-10'	0-4'	8-12'	16-20'	16-20' (Dup)	28-31.5'
			Date	8/3/	2010		8/3/2010		8/3/2010			8/4/2010	D	
Volatile Organic Compounds, mg/kg	Type 1 RRS ¹	Type 2 RRS ¹												
Acetone	400			<0.076	<0.076	<0.098	<6.4	<0.065	<0.075	0.27	<0.075	<0.075	<0.12	<0.073
Benzene	0.5	0.055		<0.0039	<0.0038	< 0.0049	3.2	< 0.0032	< 0.0037	<0.0038	< 0.0037	< 0.0037	0.034	<0.0036
Toluene	100			<0.0039	<0.0038	< 0.0049	< 0.32	< 0.0032	<0.0037	<0.0038	< 0.0037	< 0.0037	< 0.0060	<0.0036
Ethylbenzene	70			<0.0039	<0.0038	< 0.0049	< 0.32	< 0.0032	<0.0037	<0.0038	< 0.0037	< 0.0037	< 0.0060	<0.0036
m,p-xylenes	1,000			<0.0076	<0.0076	<0.0098	< 0.64	<0.0065	<0.0075	< 0.0076	<0.0075	<0.0075	< 0.012	<0.0073
o,xylenes	1,000			<0.0039	<0.0038	< 0.0049	< 0.32	<0.0032	<0.0037	<0.0038	< 0.0037	< 0.0037	<0.0060	<0.0036
Cyclohexane	20			<0.0039	<0.0038	< 0.0049	< 0.32	< 0.0032	<0.0037	<0.0038	< 0.0037	< 0.0037	< 0.0060	<0.0036
Chlorobenzene	10	4.21		<0.0039	<0.0038	< 0.0049	110	0.0049	< 0.0037	<0.0038	< 0.0037	< 0.0037	0.79	<0.0036
Isopropylbenzene	21.9			<0.0039	<0.0038	< 0.0049	0.53	< 0.0032	<0.0037	<0.0038	< 0.0037	< 0.0037	0.38	<0.0036
1,2-Dichlorobenzene	60			<0.0039	<0.0038	< 0.0049	< 0.32	< 0.0032	< 0.0037	<0.0038	< 0.0037	< 0.0037	0.007	<0.0036
1,3-Dichlorobenzene	60			<0.0039	<0.0038	< 0.0049	1.1	< 0.0032	< 0.0037	<0.0038	< 0.0037	< 0.0037	0.0096	<0.0036
1,4-Dichlorobenzene	7.5			<0.0039	<0.0038	<0.0049	5.8	<0.0032	<0.0037	<0.0038	<0.0037	<0.0037	0.10	<0.0036
Metals, mg/kg														
Arsenic	20	5.84		<5.42	<6.18	8.41	<6.25	<5.94	<5.28	<5.08	<5.37	<7.78	7.16	<5.92
Barium	1,000	2,578		141	89.8	277	127	110	81.4	126	417	390	385	101
Cadmium	2	11.8		<2.71	<3.09	7.28	21.3	<2.97	<2.64	<2.54	<2.68	6.56	5.64	<2.96
Chomium	100	117,321		7.48	4.59	30.3	585	7.15	10.5	12.6	19.2	76.2	203	12.2
Lead	75	418		30.3	7.16	723	2,640	<5.94	15	39.3	321	792	1,180	6.13
Mercury	0.5	4.90		<0.109	<0.128	<0.123	0.751	<0.120	<0.107	< 0.107	< 0.113	0.929	0.309	<0.125
Silver	2	13		<2.71	<3.09	9.17	<3.13	<2.97	<2.64	<2.54	<2.68	16.6	6.1	<2.96

Notes:

 $^{1}\!\text{Risk}$ Reduction Standard (RRSs) calculations are provided in Attachment C.

NA- Not Analyzed

	GP-11	GP-12	GP-15	GP-16	GP-17	GP-22	GP-23	GP-24	GP-25	GP-26	GP-27	GP-28			MW-1		
Groundwater Parameters	5/23/2006	5/23/2006	5/23/2006	5/23/2006	5/24/2006	5/24/2006	5/24/2006	5/25/2006	5/25/2006	5/25/2006	5/25/2006	5/25/2006	3/9/2006	3/22/2006	8/24/2006	9/8/2010	07/14/11
Chlorinated Solvents																	
Tetrachloroethene, ug/L	<5.0	470	110	<5.0	42	120	6.30	770	120	34	18	70	210	240	150	230	190
Trichloroethene, μg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	7.60	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	1.22
cis-1,2-Dichloroethene, μg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00
trans-1,2-Dichloroethene, µg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00
1,1-Dichloroethene, µg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00
Vinyl Chloride, µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.00
1,1,1-Trichloroethane, µg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00
1,1,2-Trichloroethane, µg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00
1.1-Dichloroethane, ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00
1,2-Dichloroethane, µg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00
Chloroethane, μg/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<1.00
Total Solvents, μg/l	BDL	470	110	BDL	42	120	6.30	788	120	34	18	70	210	240	150	230	191
Aromatic Hydrocarbons											1						
Benzene, µg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00
Chlorobenzene, µg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00
1,2-Dichlorobenzene, µg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00
1,3-Dichlorobenzene, μg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00
1,4-Dichlorobenzene, µg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00
Ethylbenzene, μg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00
Isoproplybenzene, μg/L	<5.0	<5.0	5.30	<5.0	<5.0	<5.0	<5.0	<5.0	8.20	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00
Toluene, μg/L	6.70	7.10	10	10	<5.0	8.20	6.30	<5.0	<5.0	<5.0	11	11	<5.0	<5.0	<5.0	<5.0	<1.00
1,2,3-Trichlorobenzene, µg/L	NA	NA	NA	NA	NA	<1.00											
1,2,4-Trichlorobenzene, μg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00
m,p-Xylene, μg/L	<10	<10	<10	<10	<10	<10	<10	<10	17	<10	<10	<10	<10	<10	<10	<10	<2.00
o-Xylene, μg/L	<5.0	<5.0	6.50	<5.0	<5.0	<5.0	<5.0	<5.0	26	<5.0	8.40	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00
Total Aromatics, µg/l	6.70	7.10	22	10	BDL	8.20	6.30	BDL	51	BDL	19	11	BDL	BDL	BDL	BDL	BDL
Other VOCs																	
Acetone, μg/L	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<10.0
Chloroform, µg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00
MTBE, μg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<2.00
Cyclohexane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5.90	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00
Methlycyclohexane, μg/L	<5.0	<5.0	10	<5.0	<5.0	<5.0	<5.0	<5.0	10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00
1,1,2-Trichloro-1,2,2-trifluoroethane, μg/L	NA	NA	NA	NA	NA	<1.00											
- Total VOCs, μg/l	6.70	477	142	10	42	128	13	788	187	34	37	81	210	240	150	230	191

Notes:

*Abandoned monitoring well installed by MACTEC on SpaceMax Property
µg/L - Micrograms per Liter

				MW-2					MW-3/MW-3R				MW-4			MV	N-5	
Groundwater Parameters		3/9/2006	3/22/2006	9/8/2010	12/20/2010	07/15/11	3/22/2006	8/24/2006	9/9/2010	9/9/2010 DUP	07/13/11	11/9/2006	9/8/2010	07/15/11	5/25/2006	6/23/2006	9/10/2010	07/14/11
Chlorinated Solvents																		
Tetrachloroethene, µg/L		<5.0	<5.0	<5.0	<5.0	<1.00	2,200	1,900	1,600	1,300	1,380	58	9.90	73	470	290	58	98
Trichloroethene, µg/L		<5.0	<5.0	<5.0	<5.0	<1.00	7.00	<5.0	<5.0	<5.0	1.79	<5.0	<5.0	3.32	<5.0	<5.0	<5.0	<1.00
cis-1,2-Dichloroethene, µg/L		<5.0	<5.0	<5.0	<5.0	<1.00	5.20	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	1.72	<5.0	<5.0	<5.0	<1.00
trans-1,2-Dichloroethene, µg/L		<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<1.00
1,1-Dichloroethene, µg/L		<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<1.00
Vinyl Chloride, µg/L		<2.0	<2.0	<2.0	<2.0	<1.00	<2.0	<2.0	<2.0	<2.0	<1.00	<2.0	<2.0	<1.00	<2.0	<2.0	<2.0	<1.00
1,1,1-Trichloroethane, µg/L		<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<1.00
1,1,2-Trichloroethane, µg/L		<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<1.00
1,1-Dichloroethane, µg/L		<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<1.00
1,2-Dichloroethane, µg/L		<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	< 5.0	<1.00	<5.0	<5.0	<5.0	<1.00
Chloroethane, µg/L		<10	<10	<10	<10	<1.00	<10	<10	<10	<10	<1.00	<10	<10	<1.00	<10	<10	<10	<1.00
	Total Solvents, μg/L	BDL	BDL	BDL	BDL	BDL	2,212	1,900	1,600	1,300	1,382	58	10	78	470	290	58	98
Aromatic Hydrocarbons																		
Benzene, µg/L		<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<1.00
Chlorobenzene, µg/L		<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<1.00
1,2-Dichlorobenzene, µg/L		<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<1.00
1,3-Dichlorobenzene, µg/L		<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<1.00
1,4-Dichlorobenzene, µg/L		<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	< 5.0	<1.00	<5.0	<5.0	<5.0	<1.00
Ethylbenzene, µg/L		<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<1.00
Isoproplybenzene, μg/L		<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<1.00
Toluene, μg/L		<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<1.00
1,2,3-Trichlorobenzene, µg/L		NA	NA	NA	NA	<1.00	NA	NA	NA	NA	<1.00	NA	NA	<1.00	NA	NA	NA	<1.00
1,2,4-Trichlorobenzene, µg/L		<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<1.00
m,p-Xylene, μg/L		<10	<10	<10	<10	<2.00	<10	<10	<10	<10	<2.00	<10	<10	<2.00	<10	<10	<10	<2.00
o-Xylene, μg/L		<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<1.00
	Total Aromatics, µg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Other VOCs							İ											
Acetone, µg/L		<50	<50	<50	<50	<10.0	<50	<50	<50	<50	<10.0	<50	<50	<10.0	<50	<50	<50	<10.0
Chloroform, µg/L		<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<1.00
MTBE, µg/L		15	5.40	9.20	<5.0	<2.00	<5.0	<5.0	<5.0	<5.0	<2.00	<5.0	<5.0	<2.00	<5.0	<5.0	<5.0	<2.00
Cyclohexane		<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<1.00
Methlycyclohexane, µg/L		<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<1.00
1,1,2-Trichloro-1,2,2-trifluoroethane, μg/L		<5.0	<5.0	<5.0	<5.0	<1.00	NA	NA	NA	NA	<1.00	NA	NA	<1.00	NA	NA	NA	<1.00
	Total VOCs, µg/L	15	5.40	9.20	BDL	BDL	2,212	1,900	1,600	1,300	1,382	58	10	78	470	290	58	98

*Abandoned monitoring well installed by MACTEC on SpaceMax Property µg/L - Micrograms per Liter

			MW	-6				MW-7				MW-8			MW-9			MW-10	
Groundwater Parameters		5/25/2006	6/23/2006	9/9/2010	07/14/11	5/25/2006	6/23/2006	9/10/2010	9/10/2010	07/14/11	8/24/2006	9/9/2010	07/14/11	8/24/2006	9/9/2010	07/14/11	8/24/2006	9/8/2010	07/13/11
Chlorinated Solvents																			
Tetrachloroethene, µg/L		900	520	130	101	31	28	77	81	71	52	220	87	150	790	646	290	860	777
Trichloroethene, µg/L		<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	7.20	4.30	<5.0	<5.0	1.73
cis-1,2-Dichloroethene, µg/L		14	11	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	5.70	5.63	<5.0	<5.0	<1.00
trans-1,2-Dichloroethene, µg/L		<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00
1.1-Dichloroethene, µg/L		<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00
Vinyl Chloride, µg/L		<2.0	<2.0	<2.0	<1.00	<2.0	<2.0	<2.0	<2.0	<2.00	<2.0	<2.0	<1.00	<2.0	<2.0	<1.00	<2.0	<2.0	<1.00
1,1,1-Trichloroethane, µg/L		<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00
1.1.2-Trichloroethane, ug/L		<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00
1.1-Dichloroethane, ug/L		<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00
1,2-Dichloroethane, µg/L		<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00
Chloroethane, µg/L		<10	<10	<10	<1.00	<10	<10	<10	<10	<1.00	<10	<10	<1.00	<10	<10	<1.00	<10	<10	<1.00
	Total Solvents, μg/L	914	531	130	101	31	28	77	81	71	52	220	87	150	803	656	290	860	779
Aromatic Hydrocarbons											+								
Benzene, µg/L		<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00
Chlorobenzene, µg/L		<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00
1.2-Dichlorobenzene. µa/L		<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00
1.3-Dichlorobenzene, µg/L		<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00
1,4-Dichlorobenzene, µg/L		<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00
Ethylbenzene, µg/L		<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00
Isoproplybenzene, µg/L		<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	5.60	<5.0	3.80
Toluene, ug/L		<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00
1,2,3-Trichlorobenzene, µg/L		NA	NA	NA	<1.00	NA	NA	NA	NA	<1.00	NA	NA	<1.00	NA	NA	<1.00	NA	NA	<1.00
1,2,4-Trichlorobenzene, µg/L		<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00
m,p-Xylene, µg/L		<10	<10	<10	<2.00	<10	<10	<10	<10	<2.00	<10	<10	<2.00	<10	<10	<2.00	<10	<10	2.35
o-Xylene, µg/L		<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	8.60	<5.0	4.98
	Total Aromatics, µg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	14	BDL	11.13
Other VOCs																			
Acetone, µg/L		<50	<50	<50	<10.0	<50	<50	<50	<50	<10.0	<50	<50	<10.0	<50	<50	<10.0	<50	<50	<10.0
Chloroform, µg/L		<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	1.31	<5.0	<5.0	5.55	<5.0	<5.0	<1.0
MTBE, µq/L		<5.0	<5.0	<5.0	<2.00	<5.0	<5.0	<5.0	<5.0	<2.00	<5.0	<5.0	<2.00	<5.0	<5.0	<2.00	<5.0	<5.0	<2.00
Cyclohexane		<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00
Methlycyclohexane, µg/L		<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00
1,1,2-Trichloro-1,2,2-trifluoroethane, μg/L		NA	NA	NA	<1.00	NA	NA	NA	NA	<1.00	NA	NA	<1.00	NA	NA	<1.00	NA	NA	NA
	Total VOCs, µg/L	914	531	130	101	31	28	77	81	71	52	220	88	150	803	661	304	860	790

Notes:
*Abandoned monitoring well installed by MACTEC on SpaceMax Property
µg/L - Micrograms per Liter

VOC- Volatile Organic Compounds

			MW-11			MW-12			MW-13					MW-14D				
Groundwater Parameters		8/24/2006	9/8/2010	07/14/11	8/24/2006	9/8/2010	07/15/11	8/24/2006	9/9/2010	07/15/11	11/9/2006	11/9/2006	3/2/2007	3/2/2007	09/08/10	09/08/10	7/15/2011	7/15/2011 DUP
Chlorinated Solvents																		
Tetrachloroethene, µg/L		1,100	230	585	<5.0	36	8.29	15	14	4.24	340	340	67	71	160	160	121	123
Trichloroethene, µg/L		<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	2.95	<5.0	<5.0	<5.0	<5.0	1.22	<5.0	1.95	2.28
cis-1,2-Dichloroethene, μg/L		<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00	1.72
trans-1,2-Dichloroethene, µg/L		<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00
1,1-Dichloroethene, µg/L		<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00
Vinyl Chloride, µg/L		<2.0	<2.0	<1.00	<2.0	<2.0	<1.00	<2.0	<2.0	<1.00	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.00	<1.00
1,1,1-Trichloroethane, µg/L		<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00
1,1,2-Trichloroethane, µg/L		<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	8.20	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00
1,1-Dichloroethane, µg/L		<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00
1,2-Dichloroethane, µg/L		<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00
Chloroethane, µg/L		<10	<10	<1.00	<10	<10	<1.00	<10	<10	<1.00	<10	<10	<10	<10	<10	<10	<1.00	<1.00
7	Total Solvents, μg/L	1,100	230	585	BDL	36	8.29	15	14	7.19	340	348	67	71	161	160	123	127
Aromatic Hydrocarbons																		
Benzene, µg/L		<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00
Chlorobenzene, µg/L		<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00
1,2-Dichlorobenzene, µg/L		<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00
1,3-Dichlorobenzene, µg/L		<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00
1,4-Dichlorobenzene, µg/L		<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00
Ethylbenzene, μg/L		<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00
Isoproplybenzene, μg/L		<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00
Toluene, μg/L		<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00
1,2,3-Trichlorobenzene, µg/L		NA	NA	<1.00	NA	NA	<1.00	NA	NA	<1.00	NA	NA	NA	NA	NA	NA	<1.00	<1.00
1,2,4-Trichlorobenzene, µg/L		<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00
m,p-Xylene, μg/L		<10	<10	<2.00	<10	<10	<2.00	<10	<10	<2.00	<10	<10	<10	<10	<10	<10	<2.00	<2.00
o-Xylene, μg/L		<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00
To	otal Aromatics, µg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Other VOCs																		
Acetone, µg/L		<50	<50	<10.0	<50	<50	<10.0	<50	<50	<10.0	<50	<50	<50	<50	<50	<50	<10.0	<10.0
Chloroform, µg/L		<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00
MTBE, μg/L		<5.0	<5.0	<2.00	<5.0	<5.0	<2.00	<5.0	<5.0	<2.00	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<2.00	<2.00
Cyclohexane		<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00
Methlycyclohexane, μg/L		<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00
1,1,2-Trichloro-1,2,2-trifluoroethane, µg/L		NA	NA	<1.00	NA	NA	<1.00	NA	NA	<1.00	NA	NA	NA	NA	NA	NA	<1.00	<1.00
	Total VOCs, µg/L	1,100	230	585	BDL	36	8.29	15	14	7.19	340	348	67	71	161	160	123	127

Notes:
*Abandoned monitoring well installed by MACTEC on SpaceMax Property

µg/L - Micrograms per Liter

				MW-15 (former	ly MW-2 Ethel S	treet Property)					MW-16 (f	ormerly MW-3 E	thel Street Prop	erty)		
Groundwater Parameters		12/5/2002	12/31/2006	3/23/2006	3/23/2006	3/2/2007	09/10/10	7/12/2011	12/5/2002	12/31/2002	6/23/2006	6/23/2006	11/9/2006	09/10/10	12/21/10	7/12/201
Chlorinated Solvents																
Tetrachloroethene, µg/L		NA	NA	NA	NA	<5.0	<5.0	<1.00	NA	NA	NA	NA	<5.0	<5.0	<5.0	<1.00
Trichloroethene, µg/L		NA	NA	NA	NA	<5.0	<5.0	<1.00	NA	NA	NA	NA	<5.0	<5.0	<5.0	<1.00
cis-1,2-Dichloroethene, µg/L		NA	NA	NA	NA	<5.0	<5.0	<1.00	NA	NA	NA	NA	<5.0	<5.0	<5.0	<1.00
trans-1,2-Dichloroethene, µg/L		NA	NA	NA	NA	<5.0	<5.0	<1.00	NA	NA	NA	NA	<5.0	<5.0	<5.0	<1.00
1,1-Dichloroethene, µg/L		NA	NA	NA	NA	<5.0	<5.0	<1.00	NA	NA	NA	NA	<5.0	<5.0	<5.0	<1.0
Vinyl Chloride, μg/L		NA	NA	NA	NA	<2.0	<2.0	<1.00	NA	NA	NA	NA	<2.0	<2.0	<2.0	<1.0
1,1,1-Trichloroethane, µg/L		NA	NA	NA	NA	<5.0	<5.0	<1.00	NA	NA	NA	NA	<5.0	<5.0	<5.0	<1.0
1,1,2-Trichloroethane, µg/L		NA	NA	NA	NA	<5.0	<5.0	<1.00	NA	NA	NA	NA	<5.0	<5.0	<5.0	<1.0
1,1-Dichloroethane, µg/L		NA	NA	NA	NA	<5.0	<5.0	<1.00	NA	NA	NA	NA	<5.0	<5.0	<5.0	<1.0
1,2-Dichloroethane, µg/L		NA	NA	NA	NA	<5.0	<5.0	<1.00	NA	NA	NA	NA	<5.0	<5.0	<5.0	<1.0
Chloroethane, µg/L		NA	NA	NA	NA	<10	<10	<1.00	NA	NA	NA	NA	<10	<10	<10	<1.0
	Total Solvents, µg/L	NA	NA	NA	NA	BDL	BDL	BDL	NA	NA	NA	NA	BDL	BDL	BDL	BDL
romatic Hydrocarbons																
Benzene, µg/L		NA	NA	NA	NA	<5.0	<5.0	<1.00	NA	NA	NA	NA	<5.0	<5.0	<5.0	<1.0
Chlorobenzene, µg/L		NA	NA	NA	NA	<5.0	<5.0	1.01	NA	NA	NA	NA	<5.0	<5.0	<5.0	<1.0
1,2-Dichlorobenzene, µg/L		NA	NA	NA	NA	<5.0	<5.0	<1.00	NA	NA	NA	NA	<5.0	<5.0	<5.0	<1.0
1,3-Dichlorobenzene, µg/L		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
1,4-Dichlorobenzene, µg/L		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
Ethylbenzene, µg/L		NA	NA	NA	NA	<5.0	<5.0	<1.00	NA	NA	NA	NA	<5.0	< 5.0	< 5.0	<1.0
Isoproplybenzene, μg/L		NA	NA	NA	NA	<5.0	<5.0	<1.00	NA	NA	NA	NA	<5.0	<5.0	<5.0	<1.0
Toluene, µg/L		NA	NA	NA	NA	<5.0	<5.0	<1.00	NA	NA	NA	NA	<5.0	<5.0	<5.0	<1.0
1,2,3-Trichlorobenzene, µg/L		NA	NA	NA	NA	NA	NA	<1.00	NA	NA	NA	NA	NA	NA	NA	<1.0
1,2,4-Trichlorobenzene, µg/L		<5.00	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00	<5.0	<5.0	<5.0	<5.0	<5.0	< 5.0	<5.0	<1.0
m,p-Xylene, μg/L		NA	NA	NA	NA	<10	<10	<2.00	NA	NA	NA	NA	<10	<10	<10	<2.0
o-Xylene, µg/L		NA	NA	NA	NA	<5.0	<5.0	<1.00	NA	NA	NA	NA	<5.0	<5.0	<5.0	<1.0
	Total Aromatics, µg/L	BDL	BDL	BDL	BDL	BDL	BDL	1.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
ther VOCs																
Acetone, µg/L		NA	NA	NA	NA	<50	<50	<10.0	NA	NA	NA	NA	<50	<50	<50	<10.
Chloroform, µg/L		NA	NA	NA	NA	<5.0	<5.0	<1.00	NA	NA	NA	NA	<5.0	<5.0	<5.0	<1.0
MTBE, μg/L		NA	NA	NA	NA	<5.0	<5.0	<2.00	NA	NA	NA	NA	<5.0	<5.0	<5.0	<2.0
Cyclohexane		NA	NA	NA	NA	<5.0	<5.0	<1.00	NA	NA	NA	NA	<5.0	<5.0	<5.0	<1.0
Methlycyclohexane, μg/L		NA	NA	NA	NA	<5.0	<5.0	<1.00	NA	NA	NA	NA	<5.0	<5.0	<5.0	<1.0
1,1,2-Trichloro-1,2,2-trifluoroethane, µg/L		NA	NA	NA	NA	NA	NA	<1.00	NA	NA	NA	NA	NA	NA	NA	<1.0
	Total VOCs, µg/L	BDL	BDL	BDL	BDL	BDL	BDL	1.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Notes:

*Abandoned monitoring well installed by MACTEC on SpaceMax Property

µg/L - Micrograms per Liter

				MW-17 (f	ormerly MW-1	Ethel Street Pro	operty)			MW-18*	MW-19*	MW-20*		MW-21		MW-22*		MW-23	
Groundwater Parameters		12/5/2002	12/31/2006	3/23/2006	10/2/2006	11/9/2006	09/09/10	12/21/10	7/12/2011	4/20/2007	4/20/2007	4/20/2007	4/20/2007	12/20/2010	07/14/11	4/20/2007	9/10/2010	12/20/2010	07/14/11
Chlorinated Solvents																			
Tetrachloroethene, µg/L		NA	NA	NA	5.60	9.00	<5.0	6.0	1.46	93	240	<5.00	190	790	978	<5.00	<5.0	<5.0	1.68
Trichloroethene, µg/L		NA	NA	NA	<5.0	<5.0	<5.0	<5.0	5.46	<5.00	<5.00	<5.00	<5.0	5.70	6.32	<5.00	<5.0	<5.0	<1.00
cis-1,2-Dichloroethene, µg/L		NA	NA	NA	<5.0	<5.0	< 5.0	<5.0	4.76	<5.00	<5.00	<5.00	<5.0	<5.0	6.39	<5.00	<5.0	<5.0	<1.00
trans-1,2-Dichloroethene, µg/L		NA	NA	NA	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00	<1.00	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00
1,1-Dichloroethene, µg/L		NA	NA	NA	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00	<1.00	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00
Vinyl Chloride, µg/L		NA	NA	NA	<2.0	<2.0	<2.0	<2.0	<1.00	<1.00	<1.00	<1.00	<2.0	<2.0	<1.00	<1.00	<2.0	<2.0	<1.00
1,1,1-Trichloroethane, µg/L		NA	NA	NA	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00	<1.00	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00
1,1,2-Trichloroethane, µg/L		NA	NA	NA	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00	<1.00	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00
1,1-Dichloroethane, µg/L		NA	NA	NA	<5.0	<5.0	<5.0	<5.0	5.64	<5.00	<5.00	<5.00	<5.0	<5.0	<1.00	<5.00	<5.0	<5.0	<1.00
1,2-Dichloroethane, µg/L		NA	NA	NA	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00	<1.00	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00
Chloroethane, μg/L		NA	NA	NA	<10	<10	<10	<10	<1.00	<1.00	<1.00	<1.00	<10	<10	<1.00	<1.00	<10	<10	<1.00
	Total Solvents, µg/L	NA	NA	NA	5.60	9.00	BDL	6.0	17	93	240	BDL	190	796	991	BDL	BDL	BDL	1.68
Aromatic Hydrocarbons																			
Benzene, µg/L		NA	NA	NA	<5.0	<5.0	< 5.0	<5.0	<1.00	<1.00	<1.00	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00
Chlorobenzene, µg/L		NA	NA	NA	28	8.50	34	17	11	<5.00	<5.00	<5.00	<5.0	<5.0	<1.00	<5.00	<5.0	<5.0	<1.00
1,2-Dichlorobenzene, µg/L		NA	NA	NA	<5.0	<5.0	< 5.0	<5.0	<1.00	<1.00	<1.00	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00
1,3-Dichlorobenzene, µg/L		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00	<1.00	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00
1,4-Dichlorobenzene, µg/L		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00	<1.00	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00
Ethylbenzene, µg/L		NA	NA	NA	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00	<1.00	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00
Isoproplybenzene, μg/L		NA	NA	NA	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00	<1.00	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00
Toluene, μg/L		NA	NA	NA	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00	<1.00	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00
1,2,3-Trichlorobenzene, µg/L		NA	NA	NA	NA	NA	NA	NA	<1.00	<1.00	<1.00	<1.00	NA	NA	<1.00	<1.00	NA	NA	<1.00
1,2,4-Trichlorobenzene, µg/L		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00	<1.00	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00
m,p-Xylene, μg/L		NA	NA	NA	<10	<10	<10	<10	<2.00	<2.00	<2.00	<2.00	<10	<10	<2.00	<2.00	<10	<10	<2.00
o-Xylene, µg/L		NA	NA	NA	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00	<1.00	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00
	Total Aromatics, µg/L	BDL	BDL	BDL	28	8.50	34	17	11	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Other VOCs																			
Acetone, µg/L		NA	NA	NA	<50	<50	<50	<50	<10.0	<10.0	<10.0	<10.0	<50	<50	<10.0	<10.0	<50	<50	<10.0
Chloroform, µg/L		NA	NA	NA	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00	<1.00	<1.00	<5.0	<5.0	3.13	<1.00	<5.0	<5.0	<1.00
MTBE, μg/L		NA	NA	NA	<5.0	<5.0	<5.0	<5.0	<2.00	<2.00	<2.00	<2.00	<5.0	<5.0	<2.00	<2.00	<5.0	<5.0	<2.00
Cyclohexane		NA	NA	NA	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00	<1.00	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00
Methlycyclohexane, μg/L		NA	NA	NA	<5.0	<5.0	<5.0	<5.0	<1.00	<1.00	<1.00	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00
1,1,2-Trichloro-1,2,2-trifluoroethane, µg/L		NA	NA	NA	NA	NA	NA	NA	<1.00	<1.00	<1.00	<1.00	NA	NA	<1.00	<1.00	NA	NA	<1.00
	Total VOCs, µg/L	BDL	BDL	BDL	33.6	18	34	23	29	93	240	BDL	190	796	994	BDL	BDL	BDL	2

Notes:

*Abandoned monitoring well installed by MACTEC on SpaceMax Property

µg/L - Micrograms per Liter

VOC- Volatile Organic Compounds

		MV	V-24		MV	V-25D		MW	-26	MV	V-27	MW	/-28	MW-	28D	MW	V-29
Groundwater Parameters		9/13/2010	07/12/11	12/21/2010	12/21/2010	07/15/11	7/15/2011 DUP	9/13/2010	07/14/11	9/13/2010	07/14/11	12/10/2010	07/14/11	12/21/2010	07/13/11	9/13/2010	07/13/11
Chlorinated Solvents																	
Tetrachloroethene, µg/L		170	937	39	37	3.08	2.63	8.70	1.53	16	Dry	Dry	Dry	750	1,220	11	7.91
Trichloroethene, µg/L		<5.0	5.54	<5.0	<5.0	<1.00	<1.00	<5.0	<1.00	<5.0	Dry	Dry	Dry	<5.0	2.45	<5.0	1.84
cis-1,2-Dichloroethene, µg/L		<5.0	4.85	<5.0	<5.0	<1.00	<1.00	<5.0	<1.00	<5.0	Drv	Drv	Drv	<5.0	1.22	34	36
trans-1,2-Dichloroethene, µg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<1.00	<5.0	Dry	Dry	Dry	<5.0	<1.00	< 5.0	<1.00
1,1-Dichloroethene, µg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<1.00	<5.0	Dry	Dry	Dry	<5.0	<1.00	<5.0	<1.00
Vinyl Chloride, µg/L		<2.0	<1.00	<2.0	<2.0	<1.00	<1.00	<2.0	<1.00	<2.0	Dry	Dry	Dry	<2.0	<1.00	2.9	<1.00
1,1,1-Trichloroethane, µg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<1.00	<5.0	Dry	Dry	Dry	<5.0	<1.00	<5.0	<1.00
1,1,2-Trichloroethane, µg/L		<5.0	17	<5.0	<5.0	<1.00	<1.00	<5.0	<1.00	<5.0	Dry	Dry	Dry	<5.0	<1.00	<5.0	<1.00
1,1-Dichloroethane, µg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<1.00	<5.0	Drv	Drv	Drv	<5.0	<1.00	<5.0	<1.00
1,2-Dichloroethane, µg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<1.00	<5.0	Dry	Dry	Dry	<5.0	<1.00	<5.0	<1.00
Chloroethane, µg/L		<10	<1.00	<10	<10	<1.00	<1.00	<10	<1.00	<10	Dry	Dry	Dry	<10	<1.00	<10	<1.00
	Total Solvents, µg/L	170	965	39	37	3.08	2.63	8.70	1.53	16	NA	NA	NA	750	1,224	47.9	45.9
Aromatic Hydrocarbons																	
Benzene, µg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<1.00	<5.0	Dry	Dry	Dry	<5.0	<1.00	<5.0	2.98
Chlorobenzene, µg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	2.10	<5.0	Dry	Dry	Drv	<5.0	<1.00	<5.0	<1.00
1,2-Dichlorobenzene, µg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<1.00	<5.0	Dry	Dry	Dry	<5.0	<1.00	<5.0	<1.00
1,3-Dichlorobenzene, µg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<1.00	<5.0	Dry	Dry	Dry	<5.0	<1.00	<5.0	<1.00
1,4-Dichlorobenzene, µg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<1.00	<5.0	Dry	Dry	Dry	<5.0	<1.00	<5.0	<1.00
Ethylbenzene, µg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<1.00	<5.0	Dry	Dry	Dry	<5.0	<1.00	500	109
Isoproplybenzene, µg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<1.00	<5.0	Dry	Dry	Dry	<5.0	<1.00	44	19
Toluene, μg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<1.00	<5.0	Dry	Dry	Dry	<5.0	<1.00	9.5	4.39
1,2,3-Trichlorobenzene, µg/L		NA	<1.00	NA	NA	<1.00	<1.00	NA	<1.00	NA	Dry	Dry	Dry	NA	<1.00	NA	<1.00
1,2,4-Trichlorobenzene, µg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	1.80	<5.0	Dry	Dry	Dry	<5.0	<1.00	<5.0	<1.00
m,p-Xylene, μg/L		<10	<2.00	<10	<10	<2.00	<2.00	<10	<2.00	<10	Dry	Dry	Dry	<10	<2.00	250	9.86
o-Xylene, µg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<1.00	<5.0	Dry	Dry	Dry	<5.0	<1.00	18	1.37
	Total Aromatics, µg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	3.90	BDL	NA	NA	NA	BDL	BDL	822	146
Other VOCs																	
Acetone, µg/L		<50	<10.0	<50	<50	<10.0	<10.0	<50	<10.0	<50	Dry	Dry	Dry	<50	<10.0	<50	43.1
Chloroform, µg/L		5.00	4.34	<5.0	<5.0	<1.00	<1.00	<5.0	<1.00	<5.0	Dry	Dry	Dry	<5.0	<1.00	<5.0	<10.0
MTBE, μg/L		<5.0	<2.00	<5.0	<5.0	<2.00	<2.00	<5.0	<2.00	<5.0	Dry	Dry	Dry	<5.0	<2.00	<5.0	<2.00
Cyclohexane		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<1.00	<5.0	Dry	Dry	Dry	<5.0	<1.00	160	40
Methlycyclohexane, μg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00	<5.0	<1.00	<5.0	Dry	Dry	Dry	<5.0	<1.00	310	64
1,1,2-Trichloro-1,2,2-trifluoroethane, μg/L		NA	<1.00	NA	NA	<1.00	<1.00	NA	<1.00	NA	Dry	Dry	Dry	NA	<1.00	NA	<1.00
	Total VOCs, µg/L	175	969	39	37	3.08	2.63	8.70	7.23	16	NA	NA	NA	750	1,224	869	235

Notes: *Abandoned monitoring well installed by MACTEC on SpaceMax Property $\mu g/L$ - Micrograms per Liter

		MV	V-30	MW	'-31	MV	V-32	MW	-33	MW-34D	MW-35	MW-	-36	MW	'-37	MW	-38	MV	V-39
Groundwater Parameters		9/10/2010	07/13/11	9/10/2010	07/14/11	9/9/2010	07/14/11	12/15/2010	07/14/11	12/21/10	12/14/10	12/15/2010	07/12/11	12/17/2010	07/12/11	12/15/2010	07/12/11	12/20/2010	07/12
Chlorinated Solvents																			
Tetrachloroethene, µg/L		55	48	760	256	540	756	5.20	10	13	<5.0	<5.0	<1.00	<5.0	1.13	6.90	1.82	<5.0	2.5
Trichloroethene, µg/L		<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00	<5.0	<1.00	<5.0	2.16	<5.0	2.4
cis-1,2-Dichloroethene, ug/L		<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00	<5.0	<1.00	<5.0	1.75	<5.0	<1.
trans-1.2-Dichloroethene, ug/L		<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1
1,1-Dichloroethene, µg/L		<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	890	2,9
Vinyl Chloride, μg/L		<2.0	<1.00	<2.0	<1.00	<2.0	<1.00	<2.0	<1.00	<1.00	<2.0	<2.0	<1.00	<2.0	<1.00	<2.0	<1.00	2.80	<1
1,1,1-Trichloroethane, µg/L		<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	1,400	9,6
1,1,2-Trichloroethane, µg/L		<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	7.40	<1
1,1-Dichloroethane, µg/L		<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00	<5.0	<1.00	<5.0	2.09	830	1,4
1,2-Dichloroethane, µg/L		<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	95	1
Chloroethane, µg/L		<10	<1.00	<10	<1.00	<10	<1.00	<10	<1.00	<1.00	<10	<10	<1.00	<10	<1.00	<10	<1.00	26	(
	Total Solvents, μg/L	55	48	760	256	540	756	5.20	10	13	BDL	BDL	BDL	BDL	1.13	6.90	7.82	3,251	14
Aromatic Hydrocarbons																			
Benzene, µg/L		< 5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<
Chlorobenzene, µg/L		< 5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	12	<5.0	<5.0	<1.00	60	59	340	396	<5.0	<
1,2-Dichlorobenzene, µg/L		< 5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00	<5.0	<1.00	<5.0	7.95	<5.0	<
1,3-Dichlorobenzene, µg/L		<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00	<5.0	<1.00	67	432	<5.0	<
1,4-Dichlorobenzene, µg/L		<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00	<5.0	3.21	38	111	<5.0	<
Ethylbenzene, μg/L		<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<′
Isoproplybenzene, µg/L		<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1
Toluene, μg/L		<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<
1,2,3-Trichlorobenzene, µg/L		NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00	<1.00	NA	NA	<1.00	NA	<1.00	NA	3.09	NA	<1
1,2,4-Trichlorobenzene, µg/L		<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	9.2	<5.0	<5.0	<1.00	<5.0	<1.00	49	117	<5.0	<1
m,p-Xylene, μg/L		<10	<2.00	<10	<2.00	<10	<2.00	<10	<2.00	<2.00	<10	<10	<2.00	<10	<2.00	<10	<2.00	<10	<2
o-Xylene, µg/L		<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1
	Total Aromatics, μg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	21	BDL	BDL	BDL	60	62	543	1,067	BDL	В
Other VOCs																			
Acetone, µg/L		<50	<10.0	<50	<10.0	<50	<10.0	<50	<10.0	<10.0	<50	<50	<10.0	<50	<10.0	<50	<10.0	<50	<
Chloroform, µg/L		<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	1.12	1.12	<5.0	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<
MTBE, μg/L		<5.0	<1.00	<5.0	<2.00	<5.0	<2.00	<5.0	<2.00	<2.00	<5.0	<5.0	<2.00	<5.0	<2.00	<5.0	<2.00	<5.0	<
Cyclohexane		<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1
Methlycyclohexane, µg/L		<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<1.00	<5.0	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<′
1,1,2-Trichloro-1,2,2-trifluoroethane, µg/L		NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00	<1.00	NA	NA	<1.00	NA	<1.00	NA	<1.00	NA	8
	Total VOCs, µg/L	55	48	760	256	540	756	5.20	12	35	BDL	BDL	BDL	60	63	599	1,192	3,251	14

Notes:
*Abandoned monitoring well installed by MACTEC on SpaceMax Property
µg/L - Micrograms per Liter

		MW	-40			MW-41	
Groundwater Parameters		12/16/2010	07/13/11	12/17/2010	12/17/2010 DUP	07/13/11	7/13/2011 DUI
Chlorinated Solvents							
Tetrachloroethene, µg/L		<5.0	1.18	<5.0	<5.0	1.82	2.21
Trichloroethene, µg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00
cis-1,2-Dichloroethene, µg/L		<5.0	<1.00	<5.0	< 5.0	<1.00	<1.00
trans-1,2-Dichloroethene, µg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00
1,1-Dichloroethene, µg/L		190	473	<5.0	<5.0	<1.00	<1.00
Vinyl Chloride, µg/L		<2.0	<1.00	<2.0	<2.0	<1.00	<1.00
1,1,1-Trichloroethane, µg/L		28	35	<5.0	<5.0	<1.00	<1.00
1,1,2-Trichloroethane, µg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00
1,1-Dichloroethane, µg/L		670	1,640	<5.0	<5.0	1.74	1.91
1,2-Dichloroethane, µg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00
Chloroethane, µg/L		<10	<1.00	<10	<10	<1.00	<1.00
	Total Solvents, μg/L	888	2,149	BDL	BDL	3.56	4.12
Aromatic Hydrocarbons							
Benzene, µg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00
Chlorobenzene, µg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00
1,2-Dichlorobenzene, µg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00
1,3-Dichlorobenzene, µg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00
1,4-Dichlorobenzene, µg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00
Ethylbenzene, µg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00
Isoproplybenzene, µg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00
Toluene, μg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00
1,2,3-Trichlorobenzene, µg/L		NA	<1.00	NA	NA	<1.00	<1.00
1,2,4-Trichlorobenzene, µg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00
m,p-Xylene, μg/L		<10	<2.00	<10	<10	<2.00	<2.00
o-Xylene, μg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00
	Total Aromatics, µg/L	BDL	BDL	BDL	BDL	BDL	BDL
Other VOCs							
Acetone, µg/L		<50	<10.0	<50	<50	<10.0	<10.0
Chloroform, µg/L		<5.0	<1.00	<5.0	<5.0	1.09	1.14
MTBE, μg/L		<5.0	2.20	<5.0	<5.0	<2.00	<2.00
Cyclohexane		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00
Methlycyclohexane, μg/L		<5.0	<1.00	<5.0	<5.0	<1.00	<1.00
1,1,2-Trichloro-1,2,2-trifluoroethane, µg/L		NA	<1.00	NA	NA	<1.00	<1.00
	Total VOCs, µg/L	888	2,151	BDL	BDL	4.65	5.26

Notes:

*Abandoned monitoring well installed by MACTEC on SpaceMax Property μg/L - Micrograms per Liter

	MW-1	M	W-2	MW-3	3/MW-3R	MW	1-4	MW-5	MW-6	N	/W-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13
Groundwater Parameters	9/8/2010	9/8/2010	12/20/2010	9/9/2010	9/9/2010 DUP	3/22/2006	9/8/2010	9/10/2010	9/9/2010	9/10/2010	9/10/2010 DUP	9/9/2010	9/9/2010	9/8/2010	9/8/2010	9/8/2010	9/9/2010
Metals, mg/L																	
Total Arsenic	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.050	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500
Dissolved Arsenic	NA	NA	< 0.0500	< 0.0500	< 0.0500	NA	< 0.0500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Barium	0.0476	<0.0200	<0.0200	0.0273	0.0271	0.0865	0.0541	0.0387	0.0326	0.0374	0.0371	0.0392	0.175	0.0232	0.0953	0.113	0.128
Dissolved Barium	NA	NA	<0.0200	0.0245	0.0250	NA	0.0468	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Cadmium	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Dissolved Cadmium	NA	NA	<0.0500	<0.0500	<0.0500	NA	<0.0500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Chromium	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	0.0285	< 0.0100	0.0255	0.0339	0.0313
Dissolved Chromium	NA	NA	< 0.0100	< 0.0100	< 0.0100	NA	< 0.0100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Mercury	< 0.00020	<0.00020	< 0.00020	<0.00020	<0.00020	NA	< 0.00020	< 0.00020	<0.00020	<0.00020	< 0.00020	<0.00020	<0.00020	< 0.00020	<0.00020	<0.00020	<0.00020
Dissolved Mercury	NA	NA	<0.00020	<0.00020	<0.00020	NA	<0.00020	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Lead	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	0.011	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	0.0785	< 0.0100	0.0442	< 0.0100	< 0.0100
Dissolved Lead	NA	NA	< 0.0100	< 0.0100	< 0.0100	NA	< 0.0100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Silver	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	NA	< 0.0100	< 0.0100	< 0.0100	<0.0100	<0.0100	<0.0100	< 0.0100	< 0.0100	<0.0100	< 0.0100	< 0.0100
Dissolved Silver	NA	NA	< 0.0100	<0.0100	< 0.0100	NA	< 0.0100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Selenium	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	NA	< 0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200
Dissolved Selenium	NA	NA	<0.0200	<0.0200	<0.0200	NA	<0.0200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
*Abandoned monitoring well installed by MACTEC on SpaceMax Property

mg/L- milligrams per liter

	N	IW-14D		MW-15 (form	erly MW-2 Ethe	Street Property)			MW-16	(formerly MW-	3 Ethel Street Prope	rty)			MW-17 (formerly MW-1 Ethel Street Property)				
Groundwater Parameters	09/08/10	9/8/2010 DUP	12/5/2002	12/31/2006	3/23/2006	3/23/2006 DUP	09/10/10	12/5/2002	12/31/2002	6/23/2006	6/23/2006 DUP	09/10/10	12/21/10	12/5/2002	12/31/2006	3/23/2006	09/09/10	12/21/10	
Metals, mg/L																			
Total Arsenic	< 0.0500	< 0.0500	NA	NA	< 0.0500	< 0.0500	< 0.0500	NA	NA	< 0.0500	< 0.0500	< 0.0500	< 0.0500	NA	NA	< 0.0500	< 0.0500	< 0.0500	
Dissolved Arsenic	< 0.0500	< 0.0500	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0500	< 0.0500	NA	NA	NA	< 0.0500	< 0.0500	
Total Barium	0.0461	0.0415	NA	NA	< 0.0200	< 0.0200	< 0.0200	NA	NA	0.321	0.313	0.449	0.425	NA	NA	0.0557	0.0604	0.0530	
Dissolved Barium	0.0340	0.0330	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.3740	0.3500	NA	NA	NA	0.0532	0.0432	
Total Cadmium	< 0.0050	< 0.0050	NA	NA	< 0.0050	< 0.0050	< 0.0050	NA	NA	< 0.0050	< 0.0050	< 0.0050	< 0.0050	NA	NA	< 0.0050	< 0.0050	< 0.0050	
Dissolved Cadmium	< 0.0500	< 0.0500	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.0500	<0.0500	NA	NA	NA	<0.0500	<0.0500	
Total Chromium	<0.0100	< 0.0100	NA	NA	< 0.0100	<0.0100	< 0.0100	NA	NA	< 0.010	<0.010	< 0.0100	< 0.0100	NA	NA	< 0.010	< 0.0100	< 0.0100	
Dissolved Chromium	< 0.0100	< 0.0100	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0100	< 0.0100	NA	NA	NA	< 0.0100	< 0.0100	
Total Mercury	< 0.00020	< 0.00020	NA	NA	NA	NA	< 0.00020	NA	NA	NA	NA	< 0.00020	< 0.00020	NA	NA	NA	< 0.00020	< 0.00020	
Dissolved Mercury	<0.00020	<0.00020	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.00020	<0.00020	NA	NA	NA	<0.00020	<0.00020	
Total Lead	< 0.0100	< 0.0100	0.024	< 0.010	< 0.0100	< 0.0100	< 0.0100	0.238	< 0.010	< 0.0100	< 0.0100	< 0.0100	< 0.0100	0.022	< 0.010	< 0.0100	< 0.0100	< 0.0100	
Dissolved Lead	< 0.0100	< 0.0100	< 0.0050	NA	NA	NA	NA	< 0.0050	< 0.010	NA	NA	< 0.0100	< 0.0100	< 0.0050	NA	NA	< 0.0100	< 0.0100	
Total Silver	< 0.0100	< 0.0100	NA	NA	NA	NA	< 0.0100	NA	NA	NA	NA	< 0.0100	< 0.0100	NA	NA	NA	< 0.0100	< 0.0100	
Dissolved Silver	< 0.0100	< 0.0100	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0100	< 0.0100	NA	NA	NA	< 0.0100	< 0.0100	
Total Selenium	< 0.0200	< 0.0200	NA	NA	NA	NA	< 0.0200	NA	NA	NA	NA	< 0.0200	< 0.0200	NA	NA	NA	< 0.0200	< 0.0200	
Dissolved Selenium	< 0.0200	< 0.0200	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0200	< 0.0200	NA	NA	NA	< 0.0200	< 0.0200	

Notes:
*Abandoned monitoring well installed by MACTEC on SpaceMax Property
mg/L- milligrams per liter

	MW-18*	MW-19*	MW-20*	MW-21	MW-22*	MV	/-23	MW-24	MV	W-25D	MW-26	MW-27	MW-28D	MW-29	MW-30	MW-31	MW-32
Groundwater Parameters	4/20/2007	4/20/2007	4/20/2007	4/20/2007	4/20/2007	9/10/2010	12/20/2010	9/13/2010	12/21/2010	12/21/2010 DUP	9/13/2010	9/13/2010	12/21/2010	9/13/2010	9/10/2010	9/10/2010	9/9/2010
Metals, mg/L																	
Total Arsenic	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500
Dissolved Arsenic	NA	NA	NA	NA	NA	NA	< 0.0500	NA	< 0.0500	< 0.0500	NA	NA	< 0.0500	NA	NA	< 0.0500	NA
Total Barium	0.0578	0.0500	0.0688	0.0464	0.0763	0.041	0.0354	0.0527	0.0341	0.0357	0.538	0.247	0.0544	1.51	0.0682	0.0292	0.0502
Dissolved Barium	NA	NA	NA	NA	NA	NA	0.0356	NA	0.0298	0.0301	NA	NA	0.0525	NA	NA	0.0293	NA
Total Cadmium	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	< 0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Dissolved Cadmium	NA	NA	NA	NA	NA	NA	<0.0500	NA	<0.0500	<0.0500	NA	NA	<0.0050	NA	NA	<0.0500	NA
Total Chromium	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	0.0909	< 0.0100	0.202	< 0.0100	< 0.0100	< 0.0100
Dissolved Chromium	NA	NA	NA	NA	NA	NA	< 0.0100	NA	< 0.0100	< 0.0100	NA	NA	< 0.0100	NA	NA	< 0.0100	NA
Total Mercury	< 0.00020	< 0.00020	< 0.00020	< 0.00020	<0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Dissolved Mercury	NA	NA	NA	NA	NA	NA	<0.00020	NA	<0.00020	<0.00020	NA	NA	<0.00020	NA	NA	<0.00020	NA
Total Lead	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	0.0811	< 0.0100	0.221	< 0.0100	< 0.0100	< 0.0100
Dissolved Lead	NA	NA	NA	NA	NA	NA	< 0.0100	NA	< 0.0100	< 0.0100	NA	NA	< 0.0100	NA	NA	< 0.0100	NA
Total Silver	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	<0.0100	< 0.0100	< 0.0100	<0.0100	< 0.0100	< 0.0100	<0.0100	< 0.0100	<0.0100	<0.0100
Dissolved Silver	NA	NA	NA	NA	NA	NA	< 0.0100	NA	< 0.0100	< 0.0100	NA	NA	< 0.0100	NA	NA	< 0.0100	NA
Total Selenium	< 0.0200	< 0.0200	< 0.0200	<0.0200	<0.0200	< 0.0200	< 0.0200	<0.0200	< 0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200
Dissolved Selenium	NA	NA	NA	NA	NA	NA	<0.0200	NA	<0.0200	<0.0200	NA	NA	<0.0200	NA	NA	<0.0200	NA

Notes:

*Abandoned monitoring well installed by MACTEC on SpaceMax Property
mg/L- milligrams per liter

	MW-33	MW-34D	MW-35	MW-36	MW-37	MW-38	MW-39	MW-40		MW-41
Groundwater Parameters	12/15/2010	12/21/10	12/14/10	12/15/2010	12/17/2010	12/15/2010	12/20/2010	12/16/2010	12/17/2010	12/17/2010 DUP
Metals, mg/L										
Total Arsenic	<0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500
Dissolved Arsenic	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500
Total Barium	<0.0200	0.0494	0.0742	0.0323	0.0906	0.0536	0.0814	0.0494	0.0325	0.0324
Dissolved Barium	<0.0200	0.0414	0.0625	0.0305	0.0916	0.0462	0.0761	0.0464	0.0321	0.0315
Total Cadmium	<0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Dissolved Cadmium	< 0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
Total Chromium	<0.0100	< 0.0100	< 0.0100	< 0.0100	<0.0100	< 0.0100	< 0.0100	<0.0100	<0.0100	<0.0100
Dissolved Chromium	<0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100
Total Mercury	<0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Dissolved Mercury	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Total Lead	<0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	<0.0100
Dissolved Lead	<0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100
Total Silver	<0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	<0.0100
Dissolved Silver	<0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	<0.0100
Total Selenium	<0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200
Dissolved Selenium	<0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200

Dissolved Selenium

Notes:
*Abandoned monitoring well installed by MACTEC on SpaceMax Property mg/L- milligrams per liter

Table 3. Summary of Near-Slab Soil Vapor Data
June 29, 2011
Welcome Years HSRA Site
AEM Project No. 1396-1104-2

PCE Sub-Slab Vapor

	i ce sub siub vupoi		
Boring	Screening Level	Sample	PCE
Location	(μg/m3)	Depth	(μg/m³)
		5 Feet	<100
DPT-1	1,050	12 Feet	490
		20 Feet	<100
		5 Feet	<100
DPT-2	1,050	12 Feet	<100
_		20 Feet	<100
- -		5 Feet	<100
DPT-3	1,050	12 Feet	470
		20 Feet	<100

Notes:

PCE-Tetrachloroethene

μg/m3- micrograms per cubic meter

Table 4. Summary of Exposure Pathways Welcome Years, Inc. Site, HSI No. 10637 Atlanta, Fulton County, Georgia

	Receptors	
Location	Time	Туре
		Workers (Employees)
	Current	Utility Workers
		Trespassers
On-Site Receptors		Workers (Employees)
		Utility Workers
	Future	Construction Workers
		Trespassers
		Residents
		Workers (Employees)
		Utility Workers
	Current	Construction Workers
		Residents
Off-Site Receptors		
		Workers (Employees)
	Future	Utility Workers
	Future	Construction Workers
		Residents

		Surface Water	
Soil	Groundwater	& Sediment	Soil Vapor
Yes	No	No	No
Yes	No	No	No
Yes	No	No	No
Yes	Potential	No	No
Yes	No	No	No
Yes	Potential	No	No
Yes	Potential	No	No
Yes	Potential	No	No
Yes	No	No	No
Yes	No	No	No
Yes	No	No	No
Yes	No	No	No
Yes	Potential	No	No
Yes	Potential	No	No
Yes	Potential	No	No
Yes	Potential	No	No

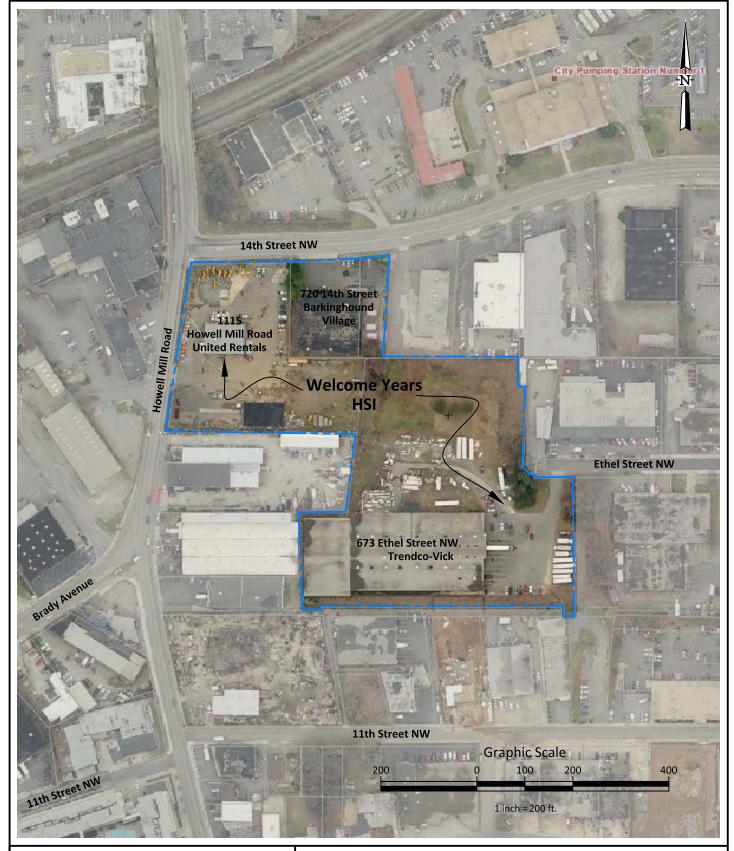
[&]quot;Yes" indicates a complete exposure pathway for the receptor (row) to the medium (column).

[&]quot;No" indicates an incomplete exposure pathway for the receptor (row) to the medium (column).

[&]quot;Potential" indicates a currently incomplete but possible future exposure pathway for the receptor (row) to the medium (column).

FIGURES







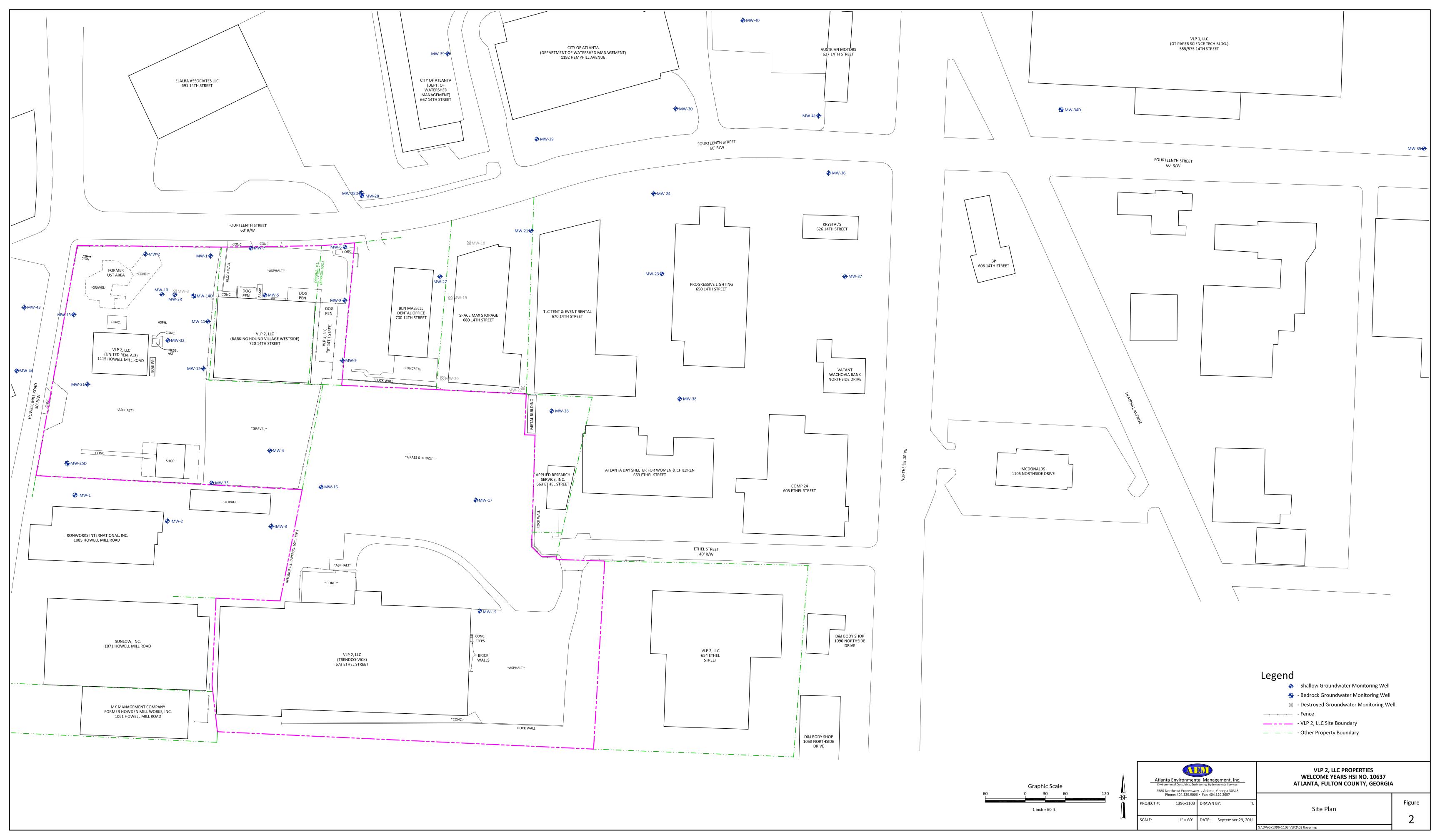
Atlanta Environmental Management, Inc. Environmental Consulting, Engineering, Hydrogeologic Services

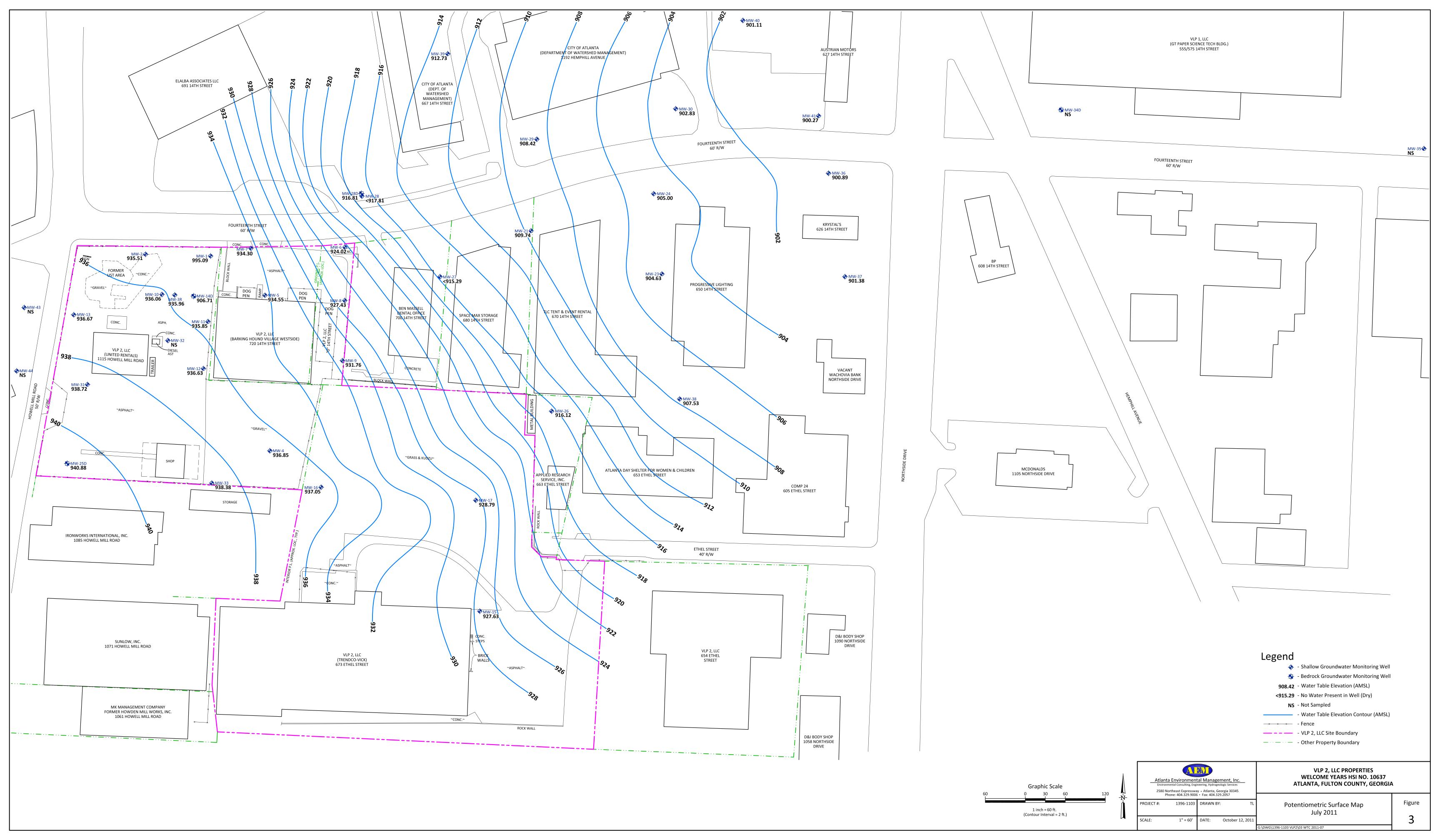
2580 Northeast Expressway • Atlanta, Georgia 30345 Phone: 404.329.9006 • Fax: 404.329.2057

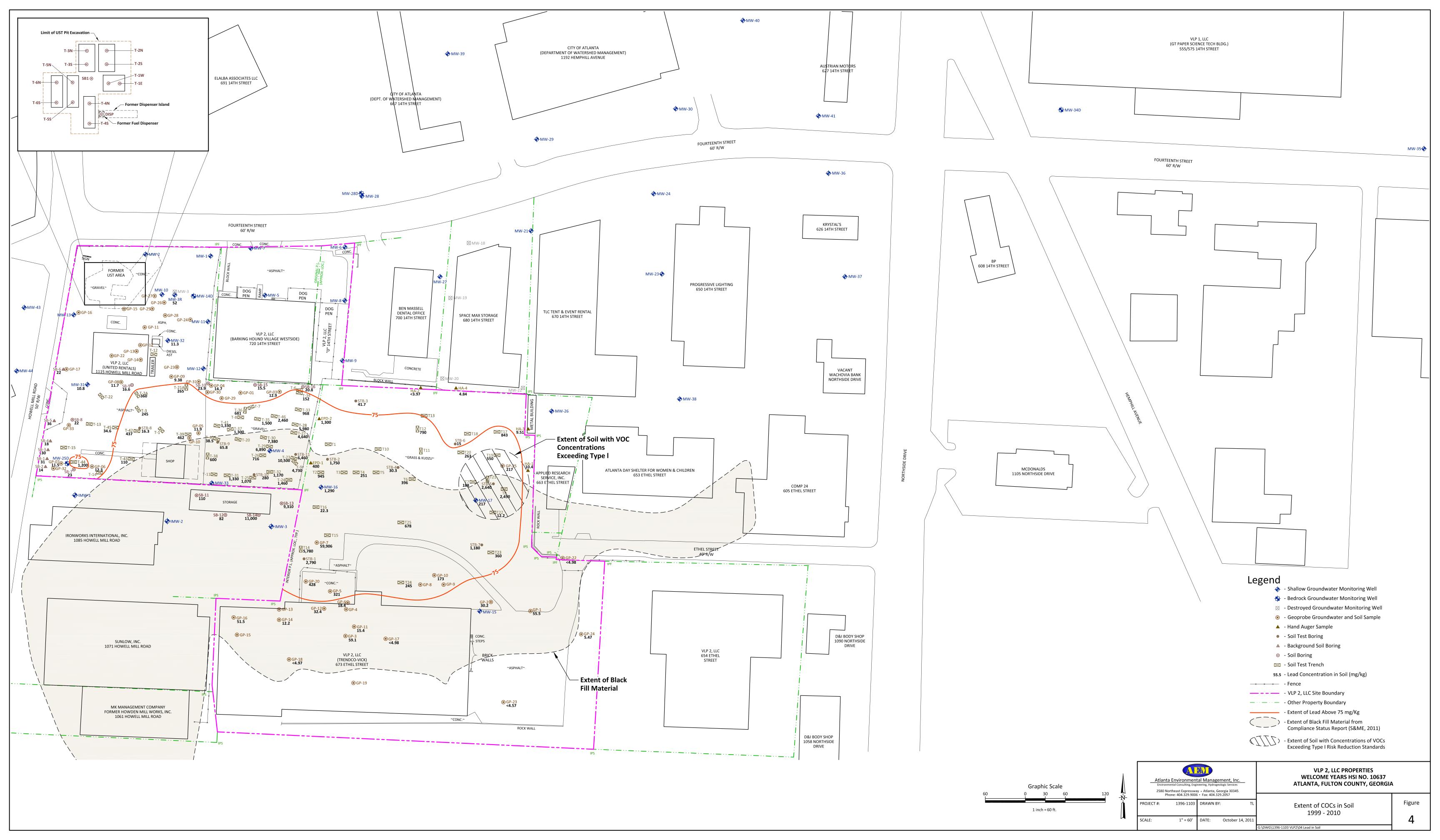
PROJECT #: 1396-1103 DRAWN BY: SCALE: 1"=200' DATE: September 29, 2011

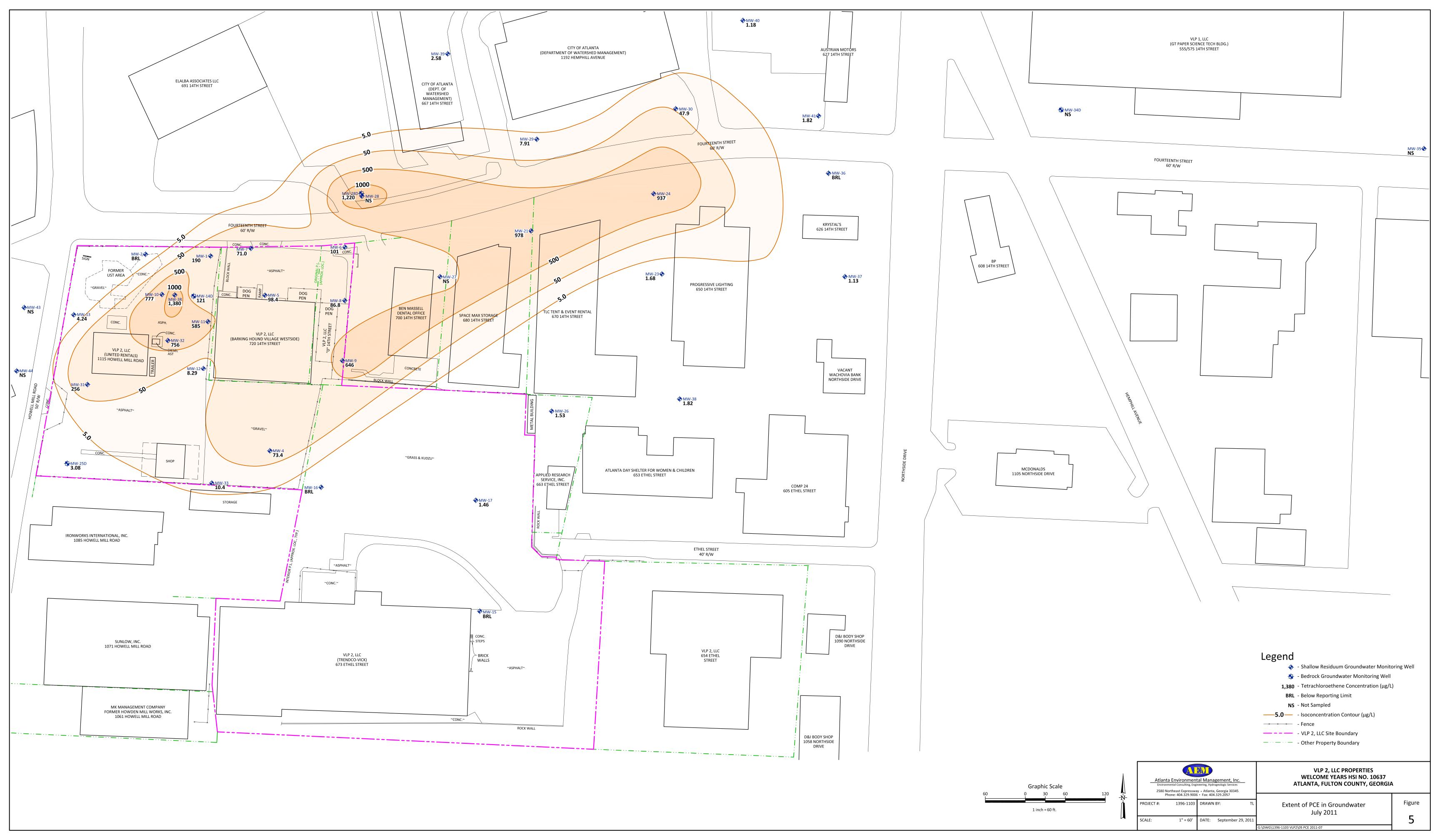
VLP 2, LLC PROPERTIES WELCOME YEARS HSI NO. 10637 ATLANTA, FULTON COUNTY, GEORGIA

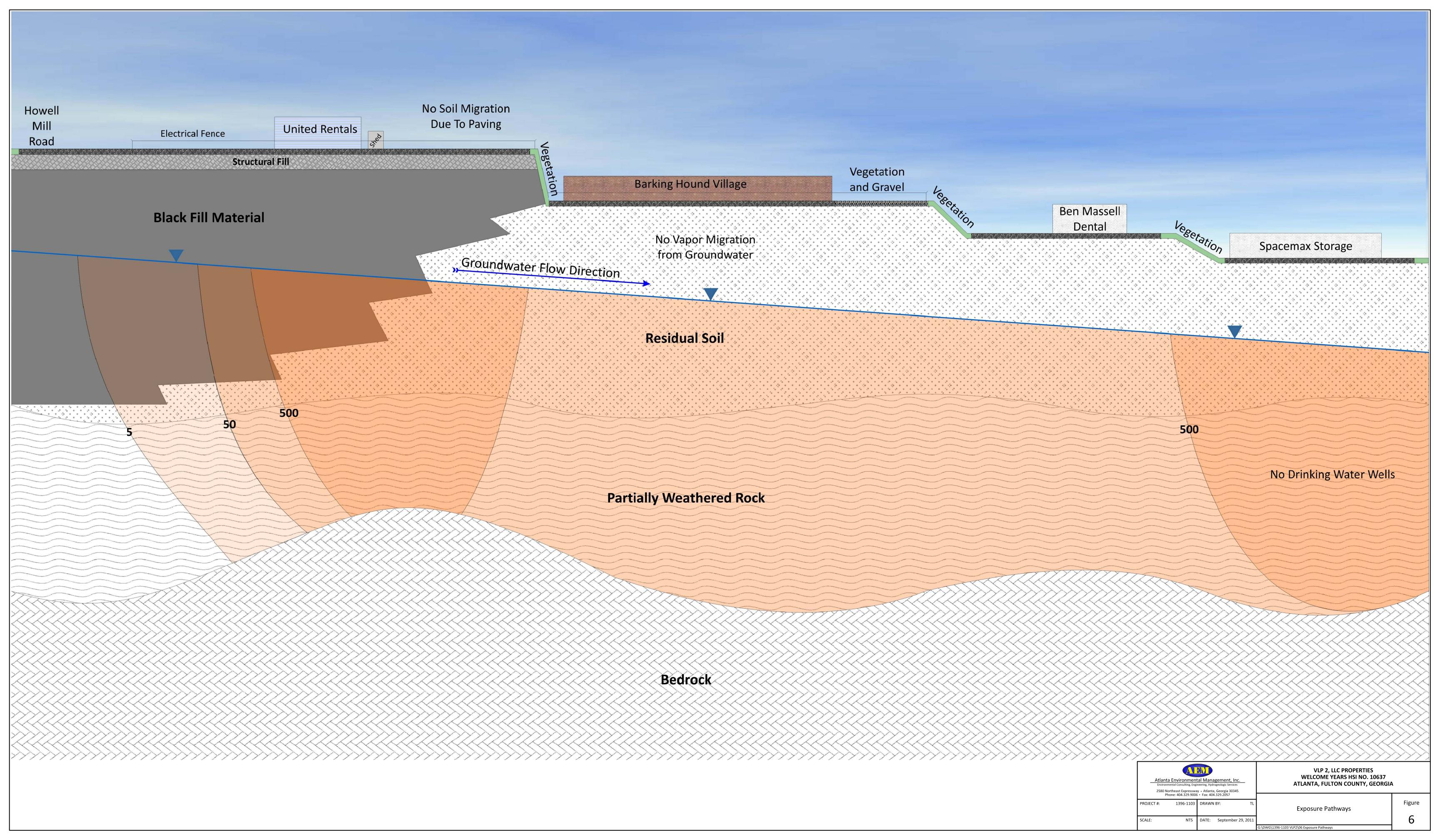
Site Location	Figure
	1
:\DWG\1396-1103 VLP2\01 Property Map	



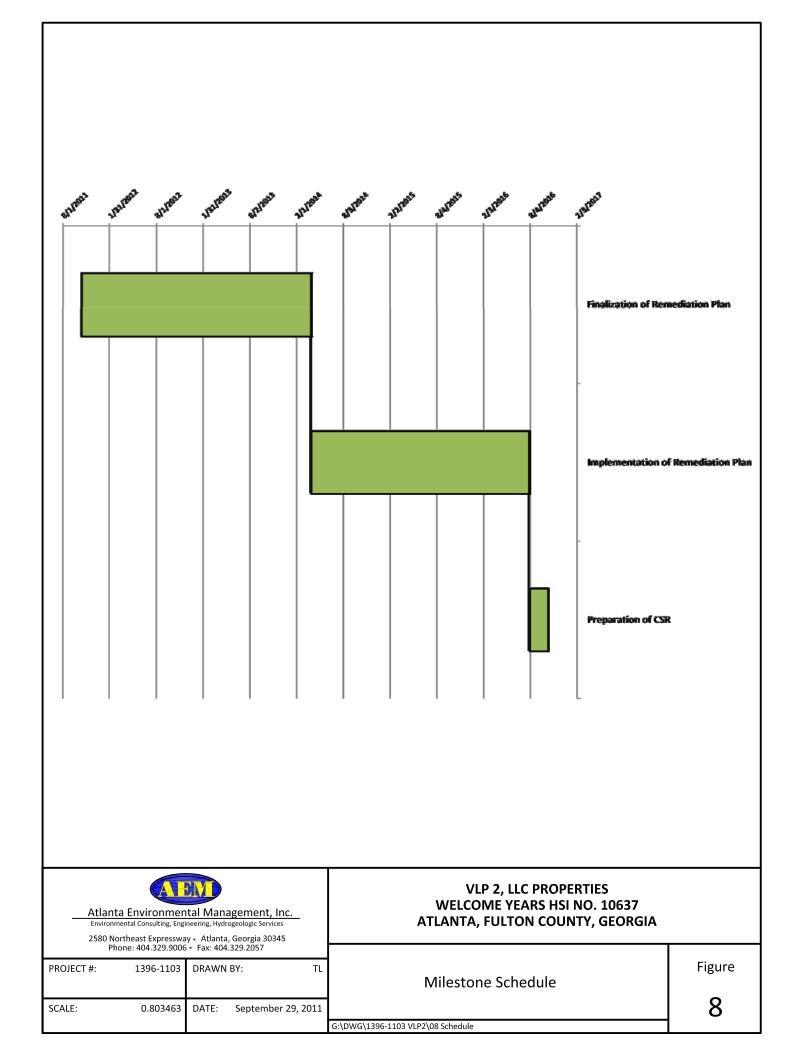












ATTACHMENT A VRP Application Form



Voluntary Investigation and Remediation Plan Application Form and Checklist

		Ed Rondeau, Real Esta	ite General Manag	er				
		Ed Rondeau, Real Esta	ite General Manag	er				
221 Uncle Heinie Way	NIMA Lumpan		•	John Majeroni, Vice President, and Ed Rondeau, Real Estate General Manager				
	, NVV, Lyman	221 Uncle Heinie Way, NW; Lyman Hall Room 213, Atlanta, Georgia 30332						
(404) 385-7012 FAX (404) 894-2699 E-MAIL ed.rondeau@realestate.gatech.edu				ondeau@realestate.gatech.edu				
	PROFESSIO	NAL GEOLOGIST OR			OVERSEEING CLEANUP 660			
	Management	, Inc.						
2580 Northeast Expressway, Atlanta, Georgia 30345								
(404) 329-9006	FAX	(404) 329-2057	E-MAIL	Ste	ven-Hart@aem-net.com			
S A	EORGIA CERTIFIED Steven W. Hart Atlanta Environmental	EORGIA CERTIFIED PROFESSION Steven W. Hart Atlanta Environmental Management 2580 Northeast Expressway, Atlanta	Steven W. Hart Atlanta Environmental Management, Inc. 2580 Northeast Expressway, Atlanta, Georgia 30345 404) 329-9006 FAX (404) 329-2057	EORGIA CERTIFIED PROFESSIONAL GEOLOGIST OR PROFESSIONAL Steven W. Hart Atlanta Environmental Management, Inc. 2580 Northeast Expressway, Atlanta, Georgia 30345	EORGIA CERTIFIED PROFESSIONAL GEOLOGIST OR PROFESSIONAL ENGINEER Steven W. Hart Atlanta Environmental Management, Inc. 2580 Northeast Expressway, Atlanta, Georgia 30345 404) 329-9006 FAX (404) 329-2057 E-MAIL Stevensor			

In order to be considered a qualifying property for the VRP:

- (1) The property must have a release of regulated substances into the environment;
- (2) The property shall not be:
 - (A) Listed on the federal National Priorities List pursuant to the federal Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. Section 9601.
 - (B) Currently undergoing response activities required by an order of the regional administrator of the federal Environmental Protection Agency; or
 - (C) A facility required to have a permit under Code Section 12-8-66.
- (3) Qualifying the property under this part would not violate the terms and conditions under which the division operates and administers remedial programs by delegation or similar authorization from the United States Environmental Protection Agency.
- (4) Any lien filed under subsection (e) of Code Section 12-8-96 or subsection (b) of Code Section 12-13-12 against the property shall be satisfied or settled and released by the director pursuant to Code Section 12-8-94 or Code Section 12-13-6.

In order to be considered a participant under the VRP:

- (1) The participant must be the property owner of the voluntary remediation property or have express permission to enter another's property to perform corrective
- (2) The participant must not be in violation of any order, judgment, statute, rule, or regulation subject to the enforcement authority of the director.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also certify that this property is eligible for the Voluntary Remediation Program (VRP) as defined in Code Section 12-8-105 and I am eligible as a participant as defined in Code Section 12-8-106.

APPLICANT'S SIGNATURE	· Survivo		
APPLICANT'S NAME/TITLE (PRINT)	John E. Majerotti, Vice President	DATE 1/30/2011	

QUALIFYII	NG PROPERTY INFORMATION (For additional	qualifying properties, please refer to	the last page of applica	ation form)
		ENTORY INFORMATION (if applicable		•
HSI Number	10637	Date HSI Site listed	September 18	3, 2000
HSI Facility Name	Welcome Years	NAICS CODE		
	PROPI	ERTY INFORMATION		
TAX PARCEL ID	17-0150-0009-064-9	PROPERTY SIZE (ACRES)	0.4591	
PROPERTY ADDRESS	1115 Howell Mill Road			
CITY	Atlanta	Fulton		
STATE	Georgia	ZIPCODE 30318		
LATITUDE (decimal format)	33°47′6″ N	LONGITUDE (decimal format)	84°24'38" W	
		OWNER INFORMATION		
PROPERTY OWNER(S)	VLP TWO, LLC	PHONE #	(404) 385-70	12
MAILING ADDRESS	221 Uncle Heinie Way, NW; Lyman Ha		_	
CITY	Atlanta	STATE/ZIPCODE	Georgia, 303	
ITEM #	DESCRIPTION OF REQUIREMEN	Location in VRP (i.e. pg., Table #, Figure #, etc.)	For EPD Comment Only (Leave Blank)	
1.	\$5,000 APPLICATION FEE IN THE FORM OF GEORGIA DEPARTMENT OF NATURAL RESC (PLEASE LIST CHECK DATE AND CHECK N	Check #1559		
	"LOCATION IN VRP." PLEASE DO NOT INCLI IN ELECTRONIC COPY OF APPLICATION.)	Date: 11/22/2011		
2 .	WARRANTY DEED(S) FOR QUALIFYING PRO	Attachment B		
3.	TAX PLAT OR OTHER FIGURE INCLUDING OBOUNDARIES, ABUTTING PROPERTIES, AND NUMBER(S).	Attachment B		
4.		ONE (1) PAPER COPY AND TWO (2) COMPACT DISC (CD) COPIES OF THE VOLUNTARY REMEDIATION PLAN IN A SEARCHABLE PORTABLE DOCUMENT		
5.	The VRP participant's initial plan a all reasonably available current information application, a graphic three-dimensional pro (CSM) including a preliminary remediation standards, brief supporting text, charts, and total) that illustrates the site's surface and suspected source(s) of contamination, how the environment, the potential human healt the complete or incomplete exposure paths preliminary CSM must be updated as the ir progresses and an up-to-date CSM must be status report submitted to the director by the MILESTONE SCHEDULE for investigation after enrollment as a participant, must update annual status report to the director describit	Voluntary Remediation Program Application		

		·
	during the preceding period. A Gantt chart format is preferred for the milestone schedule.	
	The following four (4) generic milestones are required in all initial plans with the results reported in the participant's next applicable semi-annual reports to the director. The director may extend the time for or waive these or other milestones in the participant's plan where the director determines, based on a showing by the participant, that a longer time period is reasonably necessary:	
5.a.	Within the first 12 months after enrollment, the participant must complete horizontal delineation of the release and associated constituents of concern on property where access is available at the time of enrollment;	Section 4.0 & Figure 8
5.b.	Within the first 24 months after enrollment, the participant must complete horizontal delineation of the release and associated constituents of concern extending onto property for which access was not available at the time of enrollment;	Section 4.0 & Figure 8
5.c.	Within 30 months after enrollment, the participant must update the site CSM to include vertical delineation, finalize the remediation plan and provide a preliminary cost estimate for implementation of remediation and associated continuing actions; and	Section 4.0 & Figure 8
5.d.	Within 60 months after enrollment, the participant must submit the compliance status report required under the VRP, including the requisite certifications.	Section 4.0 & Figure 8
6.	SIGNED AND SEALED PE/PG CERTIFICATION AND SUPPORTING DOCUMENTATION: ""I certify under penalty of law that this report and all attachments were prepared by me or under my direct supervision in accordance with the Voluntary Remediation Program Act (O.C.G.A. Section 12-8-101, et seq.). I am a professional engineer/professional geologist who is registered with the Georgia State Board of Registration for Professional Engineers and Land Surveyors/Georgia State Board of Registration for Professional Geologists and I have the necessary experience and am in charge of the investigation and remediation of this release of regulated substances. Furthermore, to document my direct oversight of the Voluntary Remediation Plan development, implementation of corrective action, and long term monitoring, I have attached a monthly summary of hours invoiced and description of services provided by me to the Voluntary Remediation Program participant since the previous submittal to the Georgia Environmental Protection Division. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." Printed Name and GA PE/PG Number Date	Page iii

ADDITIONAL QUALIFYING PROPERTIES (COPY THIS PAGE AS NEEDED)

PROPERTY INFORMATION					
TAX PARCEL ID	17-0150-0009-076-3	PROPERTY SIZE (ACRES)	5.29		
PROPERTY ADDRESS	673 Ethel Street				
CITY	Atlanta	COUNTY	Fulton		
STATE	Georgia	ZIPCODE	30318		
LATITUDE (decimal format)	33°47'6" N	LONGITUDE (decimal format)	84°24'38" W		
	PROPEI	RTY OWNER INFORMATION			
PROPERTY OWNER(S)	VLP TWO, LLC	PHONE #	(404) 385-7012		
MAILING ADDRESS	221 Uncle Heinie Way, NW; Lyman Hall Room 213				
CITY	Atlanta	STATE/ZIPCODE	Georgia, 30332		

PROPERTY INFORMATION						
TAX PARCEL ID	17-0150-0009-062-3	PROPERTY SIZE (ACRES)	0.7025			
PROPERTY ADDRESS	720 Fourteenth Street	720 Fourteenth Street				
CITY	Atlanta	Atlanta COUNTY Fulton				
STATE	Georgia	ZIPCODE	30318			
LATITUDE (decimal format)	33°47'6" N	LONGITUDE (decimal format)	84°24'38" W			
	PRC	PERTY OWNER INFORMATION				
PROPERTY OWNER(S)	VLP TWO, LLC	PHONE #	(404) 385-7012			
MAILING ADDRESS	221 Uncle Heinie Way, NW; Lyman Hall Room 213					
CITY	Atlanta	STATE/ZIPCODE	Georgia, 30332			

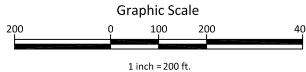
PROPERTY INFORMATION					
TAX PARCEL ID	17-0150-0009-061-5	PROPERTY SIZE (ACRES)	0.2445		
PROPERTY ADDRESS	"0" Fourteenth Street				
CITY	Atlanta	COUNTY	Fulton		
STATE	Georgia	ZIPCODE	30318		
LATITUDE (decimal format)	33°47'6" N	LONGITUDE (decimal format)	84°24'38" W		
	PROPE	ERTY OWNER INFORMATION			
PROPERTY OWNER(S)	VLP TWO, LLC	PHONE #	(404) 385-7012		
MAILING ADDRESS	221 Uncle Heinie Way, NW; Lyman Hall Room 213				
CITY	Atlanta	STATE/ZIPCODE	Georgia, 30332		

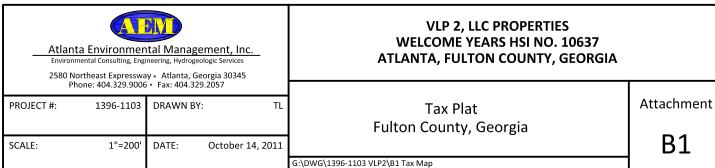
ATTACHMENT B Warranty Deed and Tax Plat





MAP ID	Parcel Number	Owner	Property Address	Operational Use
1	17 -0150-0009-064-9	VLP Two LLC	1115 HOWELL MILL RD NW	United Rentals
2	17 -0150-0009-062-3	VLP Two LLC	720 FOURTEENTH ST NW	Doggie Daycare
3	17 -0150-0009-061-5	VLP Two LLC	0 FOURTEENTH ST NW	Doggie Daycare
4	17 -0150-0009-076-3	VLP Two LLC	673 ETHEL ST NW	Trendco-Vick
5	17 -0150-0010-019-0	KAPLAN ALAN & GLENDA	691 FOURTEENTH ST NW	Cheyenne Grill
6	17 -0150-0010-017-4	CITY OF ATLANTA	667 FOURTEENTH ST NW	City of Atlanta
7	17 -0150-0010-012-5	CITY OF ATLANTA	1192 HEMPHILL AVE NW	City of Atlanta
8	17 -0150-0009-051-6	L & S INVESTMENTS L L C	700 FOURTEENTH ST NW	Ben Macsel Dental
9	17 -0150-0009-071-4	ADLER INC	680 FOURTEENTH ST NW	Space Max Storage
10	17 -0150-0009-072-2	SUNDERLAND WILLIAM I SR	670 FOURTEENTH ST NW	TLC Rents
11	17 -0150-0009-075-5	MEREDITH TAMARA S &	0 ETHEL ST NW	Comp 24 LLC
12	17 -0150-0009-026-8	METROPOLITAN FOUNDATION OF	653 ETHEL ST NW	Atlanta Day Shelter
13	17 -0150-0009-073-0	SIX FIFTY ETHEL STREET L L C	654 ETHEL ST NW	Warehouse
14	17 -0150-0007-149-0	MARKS JAMES E	0 ELEVENTH ST NW	Professional Auto Resource
15	17 -0150-0007-148-2	MARKS JAMES E	663 ELEVENTH ST NW	Professional Auto Resource
16	17 -0150-0007-141-7	TOWER ASSET SUB INC	679 ELEVENTH ST NW	CC Dickenson Co.
17	17 -0150-0007-114-4	SIX EIGHT FIVE ELEVENTH STREET	685 ELEVENTH ST NW	Six Feet Under
18	17 -0150-0007-160-7	MC KENZIE REAL ESTATE PROP LLC	689 ELEVENTH ST NW	Atlanta Plagie Out
19	17 -0150-0007-152-4	STARSCRAP METAL INC	1041 HOWELL MILL RD NW	CMT Star Iron & Metal
20	17 -0150-0009-065-6	KUNIANSKY DAVID L ET AL	1061 HOWELL MILL RD NW	Howden Millworks, Inc.
21	17 -0150-0009-014-4	GRAHAM WILLIAM D JR	1071 HOWELL MILL RD NW	Sunlow, Inc.
22	17 -0150-0009-013-6	IRONWORKS INTERNATIONAL INC	1085 HOWELL MILL RD NW	Iron Works
23	17 -0150- LL-035-9	WHITE PROVISION TIC	1168 HOWELL MILL RD NW	White Provisions





Secretary of State

Corporations Division 315 West Tower #2 Martin Luther King, Jr. Dr. Atlanta, Georgia 30334-1530

DOCKET NUMBER : 041610927 CONTROL NUMBER: K839985 EFFECTIVE DATE : 06/02/2004

: 0077 REFERENCE

PRINT DATE : 06/09/2004 FORM NUMBER : 442

POWELL, GOLDSTEIN, FRAZER & MURPHY TIFFANY A. FACKLER 191 PEACHTREE ST, NE, 16TH FLOOR ATLANTA GA 30303

CERTIFICATE OF MERGER AND NAME CHANGE

I, Cathy Cox, the Secretary of State of the Georgia, do hereby issue this certificate pursuant to Title 14 of the Official Code of Georgia annotated certifying that articles or a certificate of merger and fees have been filed regarding the merger of the below entities, effective as of the date shown above. Attached is a true and correct copy of the said filing.

Surviving Entity:

ETHEL STREET ASSOCIATES, LLC, A GEORGIA LIMITED LIABILITY COMPANY

Changing its Name to:

VLP 2, LLC

Nonsurviving Entity/Entities:

650 ETHEL STREET, LLC, A GEORGIA LIMITED LIABILITY COMPANY

SECRETARY OF STATE

ARTICLES OF MERGER OF 650 ETHEL STREET, LLC WITH ETHEL STREET ASSOCIATES, LLC

Pursuant to the provisions of Section 14-11-904 of the Georgia Limited Liability Company Act, Ethel Street Associates, LLC, a limited liability company organized and existing under the laws of the State of Georgia, hereby executes the following Articles of Merger:

- 1. Pursuant to an Agreement and Plan of Merger, dated as of May 27, 2004 (the "Agreement"), effective upon the filing of these Articles of Merger, 650 Ethel Street, LLC, a limited liability company organized and existing under the laws of the State of Georgia, will merge with and into Ethel Street Associates, LLC, a Georgia limited liability company (the "Merger"). Ethel Street Associates, LLC will be the surviving entity in the Merger (the "Survivor").
- 2. The Articles of Organization of Ethel Street Associates, LLC will be the Articles of Organization of the Survivor, except that Article I thereof shall be deleted in its entirety and replaced with the following:

"I.

The name of the limited liability company is VLP 2, LLC (the "Company")."

- 3. The executed Agreement is on file at the principal place of business of the Survivor at 75 Fifth Street, NW, Suite 320, Atlanta, Georgia 30308. A copy of the Agreement will be furnished by the Survivor, on request and without cost, to the members of the constituent entities.
- 4. The Merger was duly approved by the sole member of 650 Ethel Street, LLC on May 27, 2004.
- 5. The Merger was duly approved by the sole member of Ethel Street Associates, LLC on May 27, 2004.

IN WITNESS WHEREOF, the Survivor has caused these Articles of Merger to be executed in its name by its manager as of the 21 day of May 2004.

ETHEL STREET ASSOCIATES, LLC

By: Georgia Advanced Technology Ventures, Inc.

Manager

Robert K. Thompson for Wayne Hodges

President

::ODMA\PCDOC\$\ATL\774525\1

Fulton County Page 1 of 1

PARID: 17 015000090649 1115 HOWELL MILL RD NW VLP TWO LLC Parcel Parcel ID 17 -0150-0009-064-9 1115 HOWELL MILL RD Address City ATL Neighborhood CB01 Class C4 Land Use Code 398-Warehouse (bulk) .4591 Acres Utilities 1-ALL PUBLIC/-/-Tax District Tax Year 2010 Owner(s) Owner Name VLP TWO LLC Owner Name 2 1 of 2 Building Card Description 398 Year Built 1950 Total Under Roof 5063 Number Identical Bldgs **Current Values - 2010** Year 2010 Appraised Land \$450,000 Appraised Building \$227,800 Total Appraised Value \$677,800 Assessed Land \$180,000 Assessed Building \$91,120 \$271,120 Assessed Total **Values History** Tax Year Total Appraised Value Total Assessed Value 677800 2010 271120 2009 677800 271120 2008 677800 271120 Sales Sale Date Sale Price Grantee Grantor 17-JUN-04 VLP TWO LLC WELCOME YEARS INC 17-JUN-04 \$865,000 VLP TWO LLC WELCOME YEARS INC 27-JUN-86 \$458,000 Sale Details 1 of 3 17-JUN-04 Sale Date Sale Price VLP TWO LLC Grantee WELCOME YEARS INC Grantor Book 37853 00374 Page

OBY Card

CP6

PA1

1

1

Year Built

1966

1956

1956

Grade

Width

Length

Area

7,000

1,152

7,000

Deed Book 37853 Pg 374
Filed and Recorded Jun-21-2004 10:54am
2004-0189234
Real Estate Transfer Tax \$0.00
Juanita Hicks
Clerk of Superior Court
Fulton County, Georgia

After Recording, Please Return to:
King & Spalding LLP
191 Peachtree Street
Atlanta, Georgia 30303-1763
Attention: D. Clayton Howell, Esq.

STATE OF GEORGIA

COUNTY OF FULTON

QUITCLAIM DEED

THIS INDENTURE, made this 17th day of June, 2004, by and between WELCOME YEARS, INC., a Georgia corporation, f/k/a Dah Tung Trading Co., Inc. (herein called "Grantor"), and VLP 2, LLC, a Georgia limited liability company (herein called "Grantee") (the words "Grantor" and "Grantee" shall include their respective heirs, successors and assigns where the context requires or permits);

WITNESSETH: That,

FOR AND IN CONSIDERATION of TEN DOLLARS (\$10.00) and other valuable consideration in hand paid by Grantee to Grantor, Grantor has bargained, sold, and does by these presents bargain, sell, remise, release and forever quitclaim to Grantee all the right, title, interest, claim or demand which Grantor has or may have had in and to all of that tract or parcel of land lying and being in Land Lot 150 of the 17th has or may have had in and to all of that tract or particularly described in Exhibit A, attached hereto and Land District of Fulton County, Georgia and more particularly described in Exhibit A, attached hereto and incorporated herein and made a part hereof, TOGETHER WITH all the rights, members and appurtenances in the said described premises in anywise appertaining or belonging (hereinafter called the "Property").

TO HAVE AND TO HOLD the Property unto Grantee, so that neither Grantor, nor any other person or persons claiming under Grantor shall at any time claim or demand any right, title or interest to the aforesaid described premises or its appurtenances, or any rights thereof, but they and each of them shall, by these presents, be excluded and forever barred.

IN WITNESS WHEREOF, Grantor has executed and delivered this Quitclaim Deed under seal, on the day and year first above written.

GRANTOR:

WELCOME YEARS, INC., a Georgia corporation

Mitness

Signed, sealed and delivered

this 10th day of June, 2004,

Inofficial Witness

in the presence of:

Notary Public

My commission

NOTARIA

[CORPORATE SEAL]

CORP

Deed Book 37853 Pg 376
Juanita Hicks
Clerk of Superior Court
Fulton County, Georgia

EXHIBIT A

ALL THAT TRACT OR PARCEL OF LAND lying and being in Land Lot 150 of the 17th District, City of Atlanta, Fulton County, Georgia, and being more particularly described as follows:

BEGINNING at an iron pin found at the intersection formed by the southerly right-of-way of Fourteenth Street (60' R/W) and the easterly right-of-way of Howell Mill Road (50' R/W); running thence South 89 degrees 20 minutes 25 seconds East along the southerly right-of-way of Fourteenth Street, a distance of 216.18 feet to an iron pin found; thence leaving the southerly right-of-way of Fourteenth Street, run thence South 05 degrees 36 minutes 28 seconds West along property now or formerly The Lacy Investment Corporation a distance of 200.37 feet to a point; thence run South 87 degrees 58 minutes 22 seconds East a distance of 150.19 feet to an iron pin found; thence run South 86 degrees 40 minutes 24 seconds East a distance of 21.91 feet to an iron pin found; thence run South 11 degrees 12 minutes 18 seconds West along property now or formerly Ethel Street Associates, LLC, a distance of 160.33 feet to an iron pin found; thence run North 87 degrees 04 minutes 42 seconds West along property now or formerly Ironworks International, Inc., a distance of 399.89 feet to a point on the easterly right-of-way of Howell Mill Road; thence run along the easterly right-of-way of Howell Mill Road North 10 degrees 10 minutes 16 seconds East a distance of 350.89 feet to an iron pin found, which point is the POINT OF BEGINNING.

The above described property contains 106,730 square feet or 2.45 acres and is shown on and described according to that certain ALTA/ACSM Land Title Survey prepared for VLP 2, LLC and Lawyers Title Insurance Corporation dated June 16, 2004, which survey is incorporated herein by this reference and made a part of this legal description.

Fulton County Page 1 of 1

PARID: 17 015000090763 VLP TWO LLC

673 ETHEL ST NW

Parcel

17 -0150-0009-076-3 Parcel ID Address 673 ETHEL ST City ATL Neighborhood C405

Class 393-Warehouse Retail ** Land Use Code

Acres 5.29 1-ALL PUBLIC/-/-Utilities

Tax District 05T 2010 Tax Year

Owner(s)

VLP TWO LLC Owner Name 2

Building

Card Description 398 Year Bullt 1963 Total Under Roof 65753 Number Identical Bldgs

Current Values - 2010

2010 Year Appraised Land Appraised Building \$1,722,700 \$227,300 \$1,950,000 Total Appraised Value \$689,080 Assessed Land Assessed Building \$90,920 Assessed Total \$780,000

Values History

Total Appraised Value Tax Year Total Assessed Value

2010 1950000 780000 780000 2009 1950000 2008 2146800 858720

Sales

Sale Date Sale Price

04-NOV-98 \$1,400,000 ETHEL STREET ASSOCIATES L L C K O L O ENTERPRISES KOLO ENTERPRISES 04-NOV-97 \$0 ETHEL STREET ASSOCIATES L L C

Sale Details 1 of 2

Sale Date 04-NOV-98 Sale Price \$1,400,000

ETHEL STREET ASSOCIATES L L C Grantee

K O L O ENTERPRISES Grantor

25487 Book 00269 Page

OBY

Card Year Built Grade Width Length Area PA1 1963 20,000 1

08732

15

Fulton County, Georgia
Bud Evigle Transfer Tan
Full S 1400,000
Date B-0-58
HUANITA HICKS
Clerk, Superior Count
By: On Mustle

GEORGIA, FULTON COUNTY FILED AND RECORDER 1998 NOV 10 AN II: 43

CLERK, SUPERIOR COURT

After recording, return to:

Piedmont Title Insurance Agency, Inc. 150 East Ponce de Leon Avenue Suite 330, One TownCenter Decatur, Georgia 30030 Attn: Paul M. McLarty, Jr. Esq.

LIMITED WARRANTY DEED

THIS INDENTURE, made this # day of November, 1998, by and between KOLO ENTERPRISES, a Georgia general partnership, as party of the first part (hereinafter called "Grantor"), and ETHEL STREET ASSOCIATES, LLC, a Georgia limited liability company, as party of the second part (hereinafter called "Grantee") (the words "Grantor" and "Grantee" shall include their respective heirs, successors and assigns where the context requires or permits);

WIINESSEIH: THAT,

THE UNDERSIGNED Bob A. London and Herbert S. London represent and warrant that they are the sole general partners of Grantor, and that Alan B. Kolodkin has, prior to the date hereof, received a liquidating distribution of certain of Grantor's assets and has withdrawn from Grantor.

GRANTOR, for and in consideration of the sum of Ten and No/100 Dollars (\$10.00) in hand paid at and before the sealing and delivery of these presents, the receipt whereof is hereby acknowledged, has granted, bargained, sold, aliened, conveyed and confirmed and by these presents does grant, bargain, sell, alien, convey and confirm unto said Grantee, all that tract or parcel of land lying and being in Land Lot 150 of the 17th Land District of Fulton County, Georgia, being more particularly described on Exhibit "A" attached hereto and by this reference made a part hereof, together with any and all plants, trees, timber, shrubbery, improvements, and fixtures located thereon or attached thereto, and all rights, easements, licenses and benefits appurtenant thereto (hereinafter referred to as the "Property") subject to those matters set forth on Exhibit "B", attached hereto and by this reference made a part hereof, TOGETHER WITH all of Grantor's right,

800K 25487 #1269

ATL3-(100454-2 Movember 3, 1986-2) on 19 title and interest in and to that certain easement over across and through that tract or parcel of land described on <u>Exhibit "C"</u> attached hereto and incorporated herein, lying and being in Land Lot 150, 17th District, Fulton County, Georgia, which easement is more particularly described in that certain Quitclaim Deed from Grantor to Alan B. Kolodkin, recorded on October 21, 1998 in Deed Book 25361, Page 64, Fulton County, Georgia records.

TO HAVE AND TO HOLD the Property with all and singular the rights, members and appurtenances thereof, to the same being, belonging, or in anywise appertaining, to the only proper use, benefit and behoof of the Grantee forever in FEE SIMPLE.

AND GRANTOR will warrant and forever defend the right and title to the Property unto Grantee against the claims of all persons claiming by, under, or through Grantor, subject to those matters set forth on Exhibit "B", attached hereto and by this reference made a part hereof.

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed, sealed and delivered the day and year first above written.

SELLER:

Signed, sealed and delivered in the presence of:

Unofficial Witness

Notary Public

INOTARIAL SEAL

Signed, sealed and delivered

Correct of

Notery Public

My commission prints

INOTARIAL SEALAY

KOLO ENTERPRISES, a Georgia general partnership

By: YSin W. Kind

Bob A. London, a General Partner

By: Herbert S. London, a General Partner

-2-

BOOK 25487 44 270

BERIEFE "A"

PARCELS A and B (described as follows):

ALL THAT THACT or parcel of lead lying and being in land Lot 130 of the 17th District, Fulton County, Courgia, and being nors particularly described as follows:

and being more particularly described as follows:

TO FIRD THE POINT OF RECINETING, DICIN said at an iron [yim located at the intersection of the westerly right-ef-way line of Northeide Drive and the southerly right-of-way line of Ribel Street (said street having a 40-feet right-of-way); thence you sorth RE degrees OR minutes OS ascords weet, along said southerly right-of-way line of Ithel Street, a distance of AOO.5 feet to an iron pin which iron pin marks the TOINT OF RICHNING; thence running senth OS degrees 23 minutes 30 seconds west a distance of 222.70 feet to am iron pin; thence running morth 87 degrees 21 minutes 15 seconds west a distance of 544.80 feet to am iron pin; thence running morth OS degrees 29 minutes 15 seconds west a distance of 70.90 feet to am iron pin; thence running morth OS degrees 23 minutes 15 seconds west a distance of 33 minutes 43 seconds seat a distance of 130.00 feet to an iron pin; thence running south 87 degrees 33 minutes 30 seconds seat a distance of 130.00 feet to an iron pin; thence running south 87 degrees 33 minutes 43 seconds seat a distance of 130.01 feet to an iron pin; thence running south 87 degrees 33 minutes 45 seconds seat a distance of 130.02 feet to an iron pin; thence running south 87 degrees 13 minutes and a distance of 17.98 feet to an iron pin; thence running south 87 degrees 13 minutes 10 seconds west a distance of 17.98 feet to an iron pin; thence running south 11 degrees 07 minutes 10 seconds west a distance of 17.79 feet to an iron pin; thence running south 10 degrees 53 minutes 10 seconds west a distance of 107.77 feet to an iron pin; thence running south 10 degrees 53 minutes 10 seconds west a distance of 107.77 feet to an iron pin; thence running south 10 degrees 53 minutes 10 seconds west a distance of 107.77 feet to an iron pin; thence running south 10 degrees 53 minutes 10 seconds west a distance of 127.79 feet to an iron pin; thence running south 10 degrees 53 minutes 10 seconds west a distance of 127.77 feet to an iron pin; thence running south

- . Joing the same property conveyed to the partnership, B.G. Bealty Company, by the following deeds:
 - (a) Werranty Deed from Swift & Company, dated September 23, 1945, recorded in Deed Book 4485, page 327, in the Office of the Clerk of the Superior Court of Twicen County, Georgia;
 - (b) Warranty Deed from Man L. Kumiansky, dated July 31, 1963, recorded in Deed Sock 4097, page 373, aforesald records;
 - (c) Quitclein Deed from Max L. Resistably, dated July 22, 1943, recorded in Deed Book 4094, page 19, aforesaid records;

BOOK 25487 PAGE 271

- (d) Quitclain Deed from Cortin Investment Company, Ltd., dated September, 1966, recorded in Deed Book 4658, page 436, aferenaid resords.
- (a) Quitclain Dood from Wonry Curtis, dated September, 1966, recorded in Dood Book 4658, page 435; aforeseid tecords;

And to Cranter by wirtue of said deeds and the following deeds among the partners of D.C. Realty Company:

- (f) Warranty dead to Paul Dweekin (19.5%), Myron Dweekin (10%), Fathan Dweekin (11.5%), Jean And Feldman (19.5%), Diane Carol Bernstein (19.5%), Betta Eay Eurtsman (10%), and Toby Lee Rosing (10%), dated March 25, 1965, recorded in Dead Book 4807, page 225, aforesaid recordes
- (g) Quitclaim Bood from Trust Company of Georgia, as Executor Under the Will of Oscar Dworkin, decemend, to Myron Dworkin (as to an undivided 10% interest), dated August, 1966, retorded in Deed Book 4440, page 475, aforesaid records.
- (h) Quitclaim Deed from Trust Company of Georgia, as Executor Under the Will of Oster Dwoskin, decessed, to Hyron Dwoskin (as to an undivided 10% interest), dated August, 1966, recorded in Deed Jeck 4640, page 476, aforesaid records;
- (i) Quitclaim deed from Fathan Dwoakin to D.C. Resiry Company, a pertnership composed of Paul Dwoakin, Jean Anna Feldman, Diane Carol Bernstein (formerly Dwoakin), Bette Kay Eurtman, Tuby Lee Roeing and Myron A. Dwoakin, dated Hay 13, 1972, recorded in Deed Book 5380, page 369, aforessid recorde;
- (j) Warranty Dead from Toby Lee Rosing to D.C. Reelty Company, a pertnership composed of Faul Dwoskin, Jean Ama Feldman, Diane Carol Bernstein, Betty Kay Eurtraen and Myron A. Dwoskin, dated September 7, 1972, recorded in Deed Book 3656, page 209, aforesaid recorde; and
 - (h) Deed from Jean Anne Feldman to Martin A. Yeldman, as Trustee for Jean Anne Feldman, dated February 21, 1975, recorded in Deed Book 4335, page 493, eferessid records.

Exhibit A

BOOK 25487 PAGE 272

TOGETHER WITH PARCEL C (described as follows):

ALL THAT TRACT or percel of land lying and being in Land Lot 150 of the 17th District, City of Atlanta, Fulton County, Georgia, and being some particularly described as follows:

To find the true point of beginning, commence at the intersection of the westerly right of way line of Northaids Drive with the southerly right of way line of 14th Street (60-foot right of way) and thence run in as westerly direction a distance of 415.8 feet along the southerly right of way line of 15th Street to a 1/2 inch reter which 1/2 inch reter marks the TAUE POINT OF ENCINNING; thence leaving said southerly right of vay line and running south 05 degrees 16 winutes 15 seconds west a distance of 214.65 feet to a crifer top located at the mortherly property line of the property conveyed to Note Enterprises by D. C. Realty Company in that certain Warrenty beed dated Aggust 31, 1982, and recorded in Deed Mook 2125, page 209, Fulton County, Georgia, records; thence running slong asid property line north 87 degrees 10 minutes 00 seconds west a distance of 27.98 feet to a 1/4 inch pipe; thence said property line and running north 65 degrees 27 minutes 10 seconds west a distance of 19.19 feet to a crimp top; thence running north 05 degrees 27 minutes 30 seconds east a distance of 201.81 feet to a crimp top coated on the southerly right of way line of said 14th Street north 83 degrees 03 minutes 40 seconds east a distance of 49.16 feet to a crimp top located on the southerly right of way line of said 14th Street north 83 degrees 03 minutes 40 seconds east a distance of 49.16 feet to a 1/2 loch rebar which marks the POINT OF ECCIONING; said tract or percel being shown as Parcel 2 containing 10,461 square feet on that Boundary Retracement and Partition Survey for Kolo Enterprises by WTA Associates, Inc., Eley P. Vegnon, Georgie Registered Land Surveyor Ko. 1785, dated June 3, 1988.

LESS AND EXCEPT PARCEL B (described as follows):

ALL THAT TRACT OR PARCEL of land lying and being in Land Lot 150 of the 17th District, Fulton County, Georgia, and being more particularly described as follows:

Exhibit A

-3 -

BOOK 25487 PAGE 273

TO FIND THE TRUE POINT OF BEGINNING begin at a point located on the southern right-of-way line of Ethel Street (40 foor right-of-way) located 400.50 feet westerly as measured along the southern right-of-way line of Ethel Street from the intersection of the southern right-of-way line of Ethel Street and the western right-of-way line of Northside Drive; running thence north 88 degrees 08 minutes 05 seconds west along the southern right-of-way line of Ethel Street 72.84 feet to an iron pin found; running thence north 10 degrees 33 minutes 00 seconds east 3.86 feet to a point and the TRUE POINT OF BEGINNING; running thence north 10 degrees 53 minutes 00 seconds east 36.41 feet along the western terminus of Ethel Street to a point; running thence north 11 degrees 07 minutes 10 seconds east 207.77 feet to a point; running thence north 87 degrees 15 minutes 10 seconds west 92.52 feet to a point; running thence south 02 degrees 15 minutes 12 seconds west 61.02 feet to a point; running thence south 88 degrees 06 minutes 18 seconds east 15.63 feet to a point; running thence south 01 degrees 47 minutes 07 seconds west 167.53 feet to a point; running thence south 45 seconds 21 minutes 18 seconds east 20.46 feet to a point; running thence south 61 degrees 47 minutes 18 seconds east 20.46 feet to a point; running thence south 88 degrees 08 minutes 05 seconds east 22.93 feet to the TRUE POINT OF BEGINNING. Said property is more particularly described as "Parcel-B" containing .339 acre as per survey prepared by A.S. Giometti, Registered Land Surveyor, dated October 2, 1998 and being entitled Survey for Georgia Tech Foundation Real Estate Holding Corporation and Chicago Title Insurance Company.

Exhibit A

4

BOOK 25487-401274

EXHIBIT B

[Permitted Title Exceptions]

- 1. All taxes for the year 1999 and subsequent years thereto;
- Sewer Easement from Karl Levine to City of Atlanta, dated March 28, 1951, recorded in Deed Book 2627, page 185, Fulton County, Georgia, records;
- Permits for Anchors, Guy Poles and Wires in favor of Georgia Power Company, as follow:
 - from Eric E. Nelson, dated October 31, 1951, recorded in Deed Book 2697, page 7, aforesaid records; and
 - (b) from Bradley-Ewing Co., dated September 26, 1972, recorded in Deed Book 5671, page 418, aforesaid records.
- 4. Easements in favor of Georgia Power Company, as follows:
 - (a) From Henry Curtis, dated June 20, 1955, recorded in Deed Book 3018, page 396, aforesaid records;
 - (b) From D.C. Realty Co., dated April 23, 1963, recorded in Deed Book 4192, page 444, aforesaid records; and
 - Ic) From Kolo Enterprises, dated October 5, 1989, recorded in Deed Book 12924, page 307, aforesaid records;
- Agreement by and between Swift & Company and Georgia Power Company, dated September 25, 1963, recorded in Deed Book 4192, page 431, aforesaid records;
- Indemnity Agreement from Kolo Enterprises to City of Atlanta, dated October 31, 1986, recorded in Deed Book 10418, page 483, aforesaid records;
- 7. Rights of tenants, as tenants only, in possession of the Property; and
- All matters shown on that certain ALTA/ACSM Land Title Survey prepared for Ethel Street Associates, LLC and Chicago Title Insurance Company by A.S. Giometti & Associates, dated October 28, 1998.

BOOK 25487 744 275

TLD-MUNICIPALITY IN THE RESERVE TO SERVE THE RESERVE TO SERVE THE RESERVE THE

EMMENT C

ALL THAT TRACT OR PARCEL of land lying and being in Land Lot 150 of the 17th District, Fulton County, Georgia, and being more particularly described as follows:

TO FIND THE TRUE POINT OF BEGINNING begin at a point located on the southern right-of-way line of Ethel Street (40 foot right-of-way) located 400.50 feet westerly as measured along the southern right-of-way line of Ethel Street from the intersection of the southern right-of-way line of Ethel Street and the western right-of-way line of Northside Drive; running thence north 88 degrees 08 minutes 05 seconds west along the southern right-of-way line of Ethel Street 72.84 feet to an iron pin found; running thence north 10 degrees 53 minutes 00 seconds east 3.86 feet to a point and the TRUE POINT OF BEGINNING; running thence north 10 degrees 53 minutes 00 seconds east 36.41 feet along the western terminus of Ethel Street to a point; running thence north 87 degrees 15 minutes 10 seconds west 92.52 feet to a point; running thence south 87 degrees 15 minutes 10 seconds west 92.52 feet to a point; running thence south 88 degrees 06 minutes 18 seconds east 15.63 feet to a point; running thence south 01 degrees 47 minutes 07 seconds west 167.53 feet to a point; running thence south 01 degrees 47 minutes 18 seconds west 167.53 feet to a point; running thence south 45 seconds 21 minutes 18 seconds east 20.46 feet to a point; running thence south 88 degrees 08 minutes 05 seconds east 22.93 feet to the TRUE POINT OF BEGINNING. Said property is more particularly described as "Parcel B" containing .339 acre as per survey prepared by A.S. Giometti, Registered Land Surveyor, dated October 2, 1998 and being entitled Survey for Georgia Tech Foundation Real Estate Holding Corporation and Chicago Title Insurance Company.

Fulton County Page 1 of 1

PARID: 17 015000090623 VLP TWO LLC

720 FOURTEENTH ST NW

17 -0150-0009-062-3

720 FOURTEENTH ST

393-Warehouse Retail **

ATL

CB01

.7025 1-ALL PUBLIC/-/-

VLP TWO LLC

05T 2010

398

1965

17346

Parcel

Parcel ID Address

Neighborhood Class

Land Use Code Acres Utilities

Tax District Tax Year

Owner(s)

Owner Name Owner Name 2

Building Card Description

Year Built Total Under Roof Number Identical Bldgs

Current Values - 2010

Year Appraised Land Appraised Building Total Appraised Value Assessed Land

Assessed Building Assessed Total

Values History

Tax Year 2010 2009 2008

Sales

Sale Date 24-JUN-02 16-DEC-86

Sale Details

Sale Date

Sale Price

Grantee

Grantor

Book

Sale Price

\$750,000 \$340,000

ETHEL STREET ASSOC LLC

24-JUN-02

\$750,000 ETHEL STREET ASSOC LLC LACY INVESTMENT CORP THE

32630 00171

Page OBY

Card 1

PA1

Year Built 1965

Total Appraised Value

694400

694400

694400

Grade

Width

Total Assessed Value

277760

277760

277760

Length

LACY INVESTMENT CORP THE

Area 8,000

2010 \$550,800 \$143,600 \$694,400 \$220,320

\$277,760

1 of 2

Deed Book 32630 Pg 171
Filed and Recorded Jun-25-2002 10:10an
2002-0191416
Real Estate Transfer Tax \$750.00
Juanita Hicks
Clerk of Superior Court
Fulton County, Georgia

After recording, return to:
D. Clayton Howell, Esq.
King & Spalding
191 Peachtree Street
Suite 4800
Atlanta, Georgia 30303-1763

STATE OF GEORGIA

COUNTY OF FULTON

LIMITED WARRANTY DEED

THIS INDENTURE, made this of June, 2002, by and between THE LACY INVESTMENT CORPORATION, a Georgia corporation (herein called "Grantor"), and ETHEL STREET ASSOCIATES, LLC, a Georgia limited liability company (herein called "Grantee") (the words "Grantor" and "Grantee" shall include their respective heirs, successors and assigns where the context requires or permits);

WITNESSETH: THAT,

GRANTOR, for and in consideration of the sum of Ten and No/100 Dollars (\$10.00) in hand paid at and before the sealing and delivery of these presents, the receipt whereof is hereby acknowledged, has granted, bargained, sold, aliened, conveyed and confirmed and by these presents does grant, bargain, sell, alien, convey and confirm unto said Grantee, all that tract or parcel of land lying and being in Land Lot 150 of the 17th District of Fulton County, Georgia and being more particularly described on Exhibit "A", attached hereto and by this reference made a part hereof, together with any and all plants, trees, timber, shrubbery, improvements, and fixtures located thereon or attached thereto, and all rights, easements, licenses and benefits appurtenant thereto (hereinafter referred to as the "Property") subject to those matters set forth on Exhibit "B", attached hereto and by this reference made a part hereof.

AT1 32083420v1

Deed Book 32630 Pg 172

TO HAVE AND TO HOLD the Property with all and singular the rights, members and appurtenances thereof, to the same being, belonging, or in anywise appertaining, to the only proper use, benefit and behoof of the Grantee forever in FEE SIMPLE.

AND GRANTOR will warrant and forever defend the right and title to the Property unto Grantee against the claims of all persons claiming by, under, or through Grantor.

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed and sealed the day and year first above written.

SELLER:

THE LACY INVESTMENT CORPORATION,

a Georgia corporation

By:

Name:

[CORPORATE SEAL]

Signed, sealed and delivered this ____ day of June, 2002, in the presence of:

Unofficial Witness

Notary Public

My commission expires:

Motory Rubito, Cherokee County, Georgia My commission Expires June 12, 2003

[NOTARIAL SEAL]

. ...

PALHIT

EXHIBIT A

ALL THAT TRACT OF PARCEL OF LAND lying and being in Land Lot 150 of the 17th District of Fulton County, Georgia, and being more particularly described as follows:

BEGINNING at a point on the southern right-of-way line of Fourteenth Street eight hundred sixty-six and one tenth (866.1) feet westerly, southwesterly and westerly, as measured along the southern, southeastern and southern side of Fourteenth Street from the southwest corner of Fourteenth Street and Northside Drive (the west side of Northside Drive being at this point thirteen and five tenths (13.5) feet East of the original west line of Old Grove street), said point of beginning being at the northwest corner of property conveyed by to Bradley-Ewing Equipment Company by Warranty Deed dated April 7, 1965, and recorded in Deed Book 4395, page 570, Fulton County, Georgia Records; running thence westerly along the southern right-of-way line of Fourteenth Street one hundred fifty (150) feet to an iron pin; thence running south two hundred (200) feet to an iron pin; thence running East one hundred forty-eight and eight tenths (148.8) feet to a point at the southwest corner of above-mentioned Bradley-Ewing Equipment Company Property; thence running north along the west line of said property two hundred eight and six tenths (208.6) feet, more or less, to Fourteenth Street at the point of beginning.

Deed Book 32630 Pg 174 Juanita Hicks Clerk of Superior Court Fulton County, Georgia

EXHIBIT B

[Permitted Title Exceptions]

- 1. All taxes for the year 2002 and subsequent years thereto;
- 2. Permit for Anchors, Guy Poles and Wires from Eric E. Nelson to Georgia Power Company, dated October 13, 1951, and recorded in Deed Book 2697, page 7, Fulton County, Georgia Records.
- 3. Rights of tenants, as tenants only, in possession of the Property.
- 4. The following matters shown on that certain Survey prepared for Georgia Tech Foundation Real Estate Holding Corporation by Keck & Wood, Inc. dated April 2, 2002:
 - (a) fence and building encroachments; and
 - (b) light pole.

PARID: 17 015000090615

O FOURTEENTH ST NW **VLP TWO LLC**

Parcel

Address

Parcel ID City

Neighborhood Class Land Use Code

Acres Utilities Tax District Tax Year

17 -0150-0009-061-5 O FOURTEENTH ST

ATL **CB01** C3

2010

339-Parking Lot (Paved)** .2445

1-ALL PUBLIC/-/-05T

Owner(s)

Owner Name Owner Name 2

VLP TWO LLC

Current Values - 2010

Year Appraised Land Appraised Building Total Appraised Value Assessed Land Assessed Building Assessed Total

2010 \$149,100 \$6,200 \$155,300 \$59,640 \$2,480

Values History

Tax Year 2010

2009

2008

Total Appraised Value

155300 155300

155300

Total Assessed Value

62120 62120 62120

Sales

Sale Date

Sale Price

Grantee

Grantor

18-SEP-98 \$0 KOLO ENTERPRISES KOLODKIN ALAN B 28-AUG-98 \$800,000 KOLODKIN ALAN B KOLO ENTERPRISES

20-JUN-88 \$0

Sale Details

Sale Date Sale Price

Grantee Grantor Book

18-SEP-98

KOLO ENTERPRISES KOLODKIN ALAN B

25228 00026 Page

OBY

Card 1

Desc PA1

Year Built 1965

Grade

Width

Length

Area 5,000 \$62,120

1 of 3

GEORGIA. FULTON COUNTY FILED AND RECORDED

98 SFP 30 AM 8: 30

JUANITA HICKS CLERK, SUPERIOR COURT

Pelton County, Georgia Real Estem Transfer Tax Paid 5 Don 10-98 JUANITA HICKS Clerk, Superior Clerk

[Space Above This Line For Recording Data]

RETURN DOCUMENT TO: CANONIC GREENFIELD, BOST & KLIROS, P.C. 999 Hammond Drive, Suite 650
Atlanta, Georgia 30328

OUITCLAIM DEED

STATE OF GEORGIA COUNTY OF FULTON

THIS INDENTURE, made as of the left day of September, 1998, between ALAN B. KOLODKIN, a Georgia resident, as party or parties of the first part, (hereinafter called the "Grantor"), and KOLO ENTERPRISES, a Georgia general partnership, having Bob A. London, Alan B. Kolodkin, and Herbert S. London as its only partners, as party or parties of the second part, (hereinafter called "Grantee") (the words, "Grantor" and "Grantee" to include their respective heirs, successors and assigns where the context requires or permits).

witnesseth that: Grantor, for and in consideration of the sum of one dollar (\$1.00) and other valuable considerations in hand paid at and before the sealing and delivery of these presents, the receipt whereof is hereby acknowledged, by these presents does hereby remise, convey and forever QUITCLAIM unto the said Grantee the property more particularly described as follows:

ALL THAT TRACT OR PARCEL OF LAND lying and being in Land Lot 150, 17th District, Fulton County, Georgia, and being more particularly described on the attached Exhibit "A".

This quitclaim deed is given pursuant to a redemption of Grantee's partnership interest in Grantor by a liquidating distribution of assets plan adopted by Grantor.

TO HAVE AND TO HOLD the said described premises to Grantee, so that neither Grantor nor any person or persons claiming under Grantor shall at any time, by any means or ways, have, claim or demand any right or title to said premises or appurtenances, or any rights thereof.

This Quitclaim Deed is given to reconvey property from Grantor to Grantee incorrectly conveyed to Grantor by Quitclaim Deed dated August 28, 1998.

IN WITNESS WHEREOF, Grantor has signed and sealed this deed, the day and year first above written.

Signed, sealed and delivered

in the presence of:

Clan B. TobolinsEA

ALAN B. KOLODKIN

Notary Public

My Commission Expires Notary Public, Fulton County, Georgia

My Commission Expires My Commission Expires July 14, 2002

[NOTARY, SEAL]

800K 25228 MAGE 026

EXHIBIT "A"

ALL THAT TRACT or parcel of land lying and being in Land Lot 150 of the 17th District, City of Atlanta, Fulton County, Georgia, and being more particularly described as follows:

To find the true point of beginning, commence at the intersection of the westerly right of way line of Northside Drive with the southerly right of way line of 14th Street (60-foot right of way) and thence run in an westerly direction a distance of 815.8 feet along the southerly right of way line of 14th Street to a 1/2 inch rebar, which 1/2 inch rebar marks the TRUE POINT OF BEGINNING; thence leaving said southerly right of way line and running south 05 degrees 16 minutes 15 seconds west a distance of 214.65 feet to a crimp top located at the northerly property line of the property conveyed to Kolo Enterprises by D. C. Realty Company in that certain Warrenty Deed dated August 31, 1982, and recorded in Deed Book 8225, page 209, Fulton County, Georgia, records; thence running along said property line north 67 degrees 38 minutes 00 seconds west a distance of 27.98 feet to a 3/4 inch pipe; thence leaving said property line and running north 86 degrees 29 minutes 30 seconds west a distance of 21.91 feet to a crimp top; thence running north 05 degrees 27 minutes 30 seconds east a distance of 207.68 feet to a crimp top located on the southerly right of way line of said 14th Street; thence running along the southerly right of way line of said 14th Street running along the southerly right of way line of said 14th Street north 85 degrees 03 minutes 40 seconds east a distance of 49.96 feet to a 1/2 inch rebar which marks the POINT OF BEGINNING; said tract or parcel being shown as Parcel 2 containing 10,463 square feet on that Boundary Retracement and Partition Survey for Kolo Enterprises by WTA Associates, Inc., Eley P. Wagnon, Georgia Registered Land Surveyor No. 1785, dated June 3, 1988.

100K 25228 PAGE 027

ATTACHMENT C Risk Reduction Standards



Summary: Risk Reduction Standards for Soil

		Type 1 Soil Criteria	Type 2 Soil Criteria
Constituents	CAS Number	(mg/kg)	(mg/kg)
Volatile Organics			
Benzene	71432	0.500	0.055
Toluene	108883	100	
Ethylbenzene	100414	70	
m-xylene	108383	1000	
p-xylene	106423	1000	
o-xylene	95476	1000	
Cyclohexane	110827	20.0	
Chlorobenzene	108907	10.0	0.37
Isopropylbenzene	98828	21.9	
1,2-Dichlorobenzene	95501	60.0	
1,3-Dichlorobenzene	541731	60.0	
1,4-Dichlorobenzene	106467	7.5	
Acetone	67641	400	
Inorganics			
Arsenic	7440382	20.0	5.84
Barium	7440393	1000	2,578
Cadmium	7440439	2.00	11.8
Chromium	7440473	100	117,321
Lead	7439921	75.0	418
Mercury	7439976	0.500	4.90
Silver	7440224	2.00	13

Type 1 Risk Reduction Standards for Soil [Rule 391-3-19-.07(6)(c)]

		Item 1 (i)	Item 1 (ii)	0	Item 2	Item 3	
	Appendix III	Appendix I	Type 1 GW	Greatest of	RAGS (Equ 7)	RAGS (Equ 6)	Type 1 RRS
Constituents (mg/kg)	Table 2 Value	Concentration	Criteria x 100	Item i - iii	Non-Carcinogenic	Carcinogenic	(mg/kg)
Volatile Organics:							
Benzene	na	0.02	0.5	5.00E-01	1.75E+02	1.76E+01	0.500
Toluene	na	14.40	100	1.00E+02	2.22E+04		100
Ethylbenzene	na	20.00	70	7.00E+01	9.08E+03	9.21E+01	70
m-xylene	na	20.00	1000	1.00E+03	6.75E+03		1,000
p-xylene	na	20.00	1000	1.00E+03	6.88E+03		1,000
o-xylene	na	20.00	1000	1.00E+03	7.92E+03		1,000
Cyclohexane	na	20.00	0.5	2.00E+01	6.47E+03		20.0
Chlorobenzene	na	4.18	10	1.00E+01	5.68E+02		10.0
Isopropylbenzene	na	21.9	0.5	2.19E+01	4.35E+03		21.9
1,2-Dichlorobenzene	na	25.00	60	6.00E+01	4.09E+03		60.0
1,3-Dichlorobenzene	na	2.22	60	6.00E+01			60.0
1,4-Dichlorobenzene	na	6.84	7.5	7.50E+00	1.16E+04	4.10E+01	7.5
Acetone	na	2.74	400	4.00E+02	1.92E+05		400
<u>Inorganics</u>							
Arsenic	20	na	na	na	na	na	20
Barium	1,000	na	na	na	na	na	1,000
Cadmium	2	na	na	na	na	na	2
Chromium	100	na	na	na	na	na	100
Lead	75	na	na	na	na	na	75
Mercury	0.5	na	na	na	na	na	0.5
Silver	2	na	na	na	na	na	2

Notes:

¹⁾ Dashes (--) indicate the information was not available for the referenced constituent.

²⁾ na - not applicable for the referenced constituents under Type 1 RRS

³⁾ nc - indicates the factor was not calculated

⁴⁾ numbers in **bold** indicate the Type 1 RRS for the constituent

Type 1 Non-Carcinogenic Evaluation for Soil; Residential Use Scenario (RAGS Equ. 7)

														Type 1	
	THI	BW	ΑT	CF	EF	ED	IR s	CF	Oral RfD	IR a	VF	PEF	Inh. RfD	Soil Std.	
Constituents		(kg)	(yr)	(d/yr)	(d/yr)	(yr)	(mg/d)	(kg/mg)	(mg/kg-d)	(m3/d)	(m3/kg)	(m3/kg)	(mg/kg-d)	(mg/kg)	Remarks
Volatile Organics:															
Benzene	1	70	30	365	350	30	114	1.0E-06	4.00E-03	15	4.52E+03	4.63E+09	8.57E-03	1.75E+02	oral & inh.
Toluene	1	70	30	365	350	30	114	1.0E-06	8.00E-02	15	5.62E+03	4.63E+09	1.43E+00	2.22E+04	oral & inh.
Ethylbenzene	1	70	30	365	350	30	114	1.0E-06	1.00E-01	15	7.61E+03	4.63E+09	2.86E-01	9.08E+03	oral & inh.
m-xylene	1	70	30	365	350	30	114	1.0E-06	2.00E-01	15	7.32E+03	4.63E+09	2.00E-01	6.75E+03	oral & inh.
p-xylene	1	70	30	365	350	30	114	1.0E-06	2.00E-01	15	7.47E+03	4.63E+09	2.00E-01	6.88E+03	oral & inh.
o-xylene	1	70	30	365	350	30	114	1.0E-06	2.00E-01	15	8.68E+03	4.63E+09	2.00E-01	7.92E+03	oral & inh.
Cyclohexane	1	70	30	365	350	30	114	1.0E-06		15	7.75E+02	4.63E+09	1.71E+00	6.47E+03	inh. only
Chlorobenzene	1	70	30	365	350	30	114	1.0E-06	2.00E-02	15	8.56E+03	4.63E+09	1.43E-02	5.68E+02	oral & inh.
Isopropylbenzene	1	70	30	365	350	30	114	1.0E-06	1.00E-01	15	8.40E+03	4.63E+09	1.14E-01	4.35E+03	oral & inh.
1,2-Dichlorobenzene	1	70	30	365	350	30	114	1.0E-06	9.00E-02	15	1.58E+04	4.63E+09	5.71E-02	4.09E+03	oral & inh.
1,3-Dichlorobenzene	1	70	30	365	350	30	114	1.0E-06		15		4.63E+09			no tox factors
1,4-Dichlorobenzene	1	70	30	365	350	30	114	1.0E-06	7.00E-02	15	1.41E+04	4.63E+09	2.29E-01	1.16E+04	oral & inh.
Acetone	1	70	30	365	350	30	114	1.0E-06	9.00E-01	15	6.69E+03	4.63E+09	8.86E+00	1.92E+05	oral only

Values for standard assumptions and exposure parameters (THI, BW, AT, EF, ED, IRs, IRa and PEF) obtained from Table 3 of Appendix I of HSRA Rules Chemical-specific values (Oral RfD and Inh. RfD) obtained from US EPA's Provisional Peer Reviewed Toxicity Values (PPRTV).

Type 1 Carcinogenic Evaluation for Soil; Residential Use Scenario (RAGS Equ. 6)

Constituents	Weight of Evidence	TR	BW (kg)	AT (yr)	CF (d/yr)	EF (d/yr)	ED (yr)	IR s (mg/d)	CF (kg/mg)	Oral SF (mg/kg-d)-1	IR a (m3/d)	VF (m3/kg)	PEF (m3/kg)	Inh. SF (mg/kg-d)-1	Type 1 Soil Std. (mg/kg)	Remarks
Volatile Organics:																
Benzene	Α	1.00E-05	70	70	365	350	30	114	1.0E-06	5.50E-02	15	4.52E+03	4.63E+09	2.73E-02	1.76E+01	oral & inh.
Toluene			70	70	365	350	30	114	1.0E-06		15	5.62E+03	4.63E+09			no tox values
Ethylbenzene	B2	1.00E-05	70	70	365	350	30	114	1.0E-06	1.10E-02	15	7.61E+03	4.63E+09	8.75E-03	9.21E+01	oral & inh.
m-xylene			70	70	365	350	30	114	1.0E-06		15	7.32E+03	4.63E+09			no tox values
p-xylene			70	70	365	350	30	114	1.0E-06		15	7.47E+03	4.63E+09			no tox values
o-xylene			70	70	365	350	30	114	1.0E-06		15	8.68E+03	4.63E+09			no tox values
Cyclohexane			70	70	365	350	30	114	1.0E-06		15	7.75E+02	4.63E+09			no tox values
Chlorobenzene	D		70	70	365	350	30	114	1.0E-06		15	8.56E+03	4.63E+09			no tox values
Isopropylbenzene	D		70	70	365	350	30	114	1.0E-06		15	8.40E+03	4.63E+09			no tox values
1,2-Dichlorobenzene	D		70	70	365	350	30	114	1.0E-06		15	1.58E+04	4.63E+09			no tox values
1,3-Dichlorobenzene			70	70	365	350	30	114	1.0E-06		15		4.63E+09			no tox values
1,4-Dichlorobenzene	B2	1.00E-05	70	70	365	350	30	114	1.0E-06	5.40E-03	15	1.41E+04	4.63E+09	3.85E-02	4.10E+01	oral & inh.
Acetone			70	70	365	350	30	114	1.0E-06		15	6.69E+03	4.63E+09			no tox values

Values for standard assumptions and exposure parameters (TR, BW, AT, EF, ED, IRs, IRa and PEF) obtained from Table 3 of Appendix I of HSRA Rules Chemical-specific values (Oral SF and Inh. SF) obtained from US EPA's Provisional Peer Reviewed Toxicity Values (PPRTV).

Calculation of the Volatilization Factor

Parameter	Default
LS, Length of side of contaminated area (m)	45
V, Wind speed in mixing zone (m/s)	2.25
DH, Diffusion height, m	2
A, Area of contamination (sq. m)	2030
A, Area of contamination (sq. cm)	2.03E+07
E, True soil porosity (unitless)	0.35
ps, true soil density, g/cc	2.65
T, exposure interval, s	7.90E+08
G, fraction of vegetative cover (unitless)	0
OC, Soil organic carbon content (fraction)	0.02

Constituent	Molecular Wt.	Diffusivity (cm²/s)	Henry's Law constant (atm-m³/mol)	Kd (cm³/g)	Koc (cm³/g)	Dei (cm²/s)	Kas (g/cm³)	alpha (cm²/s)	VF (m³/kg)
		,	,	· 07		, ,	(0 /	, ,	, 0,
Volatile Organics:									
Benzene	78.11	0.089538	5.55E-03	2.916	1.46E+02	0.06332	7.80E-02	9.88E-04	4.52E+03
Toluene	92.14	0.0778053	6.64E-03	4.678	2.34E+02	0.05502	5.82E-02	6.43E-04	5.62E+03
Ethylbenzene	106.17	0.0684652	7.88E-03	8.922	4.46E+02	0.04842	3.62E-02	3.54E-04	7.61E+03
m-xylene	106.17	0.0683659	7.18E-03	7.506	3.75E+02	0.04835	3.92E-02	3.82E-04	7.32E+03
p-xylene	106.17	0.0682485	6.90E-03	7.506	3.75E+02	0.04827	3.77E-02	3.67E-04	7.47E+03
o-xylene	106.17	0.0689201	5.18E-03	7.658	3.83E+02	0.04874	2.77E-02	2.73E-04	8.68E+03
Cyclohexane	84.16	0.0799752	1.50E-01	2.916	1.46E+02	0.05656	2.11E+00	1.70E-02	7.75E+02
Chlorobenzene	112.56	0.0721306	3.11E-03	4.678	2.34E+02	0.05101	2.73E-02	2.81E-04	8.56E+03
Isopropylbenzene	120.2	0.0603044	1.15E-02	13.956	6.98E+02	0.04265	3.38E-02	2.91E-04	8.40E+03
1,2-Dichlorobenzene	147	0.0561703	1.92E-03	7.658	3.83E+02	0.03972	1.03E-02	8.28E-05	1.58E+04
1,3-Dichlorobenzene									
1,4-Dichlorobenzene	147	0.0550429	2.41E-03	7.506	3.75E+02	0.03893	1.32E-02	1.04E-04	1.41E+04
Acetone	58.08	0.1059228	3.50E-05	0.04728	2.36E+00	0.07491	3.04E-02	4.59E-04	6.69E+03

Organics that do not meet the criteria for volatilization from soil

		Henry's Law
Constituent	Molecular Wt.	constant
	(g/mol)	(atm-m3/mol)
None		

Default parameters are from Appendix III, Table 3 of the HSRA regulations.

Physical/chemical parameters obtained from U.S. EPA Mid-Atlantic Risk Assessment Regional Screening Tables (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm) unless otherwise noted.

The soil-air concentration relationship is applicable only to constituents with a Henry's Law constant of greater than 1 x 1⁻⁵ atm-m³/mole <u>and</u> a molecular weight of less than 200 g/mole (RAGS Part B, EPA, 1991).

Type 2 Risk Reduction Standards for Soil [Rule 391-3-19-.07(7)(c)]

	Item 1	Iter	m 2	Itei	m 3	Item 4	
	SSL for Migration	RAGS (Equ 7)	RAGS (Equ 7)	RAGS (Equ 6)	RAGS (Equ 6)	IEUBK for	TYPE 2 RRS
Constituents (mg/kg)	to Groundwater	Non-Carc Adult	Non-Carc Child	Carc Adult	Carc Child	Lead	(mg/kg)
Volatile Organics:							
Benzene	0.0554	1.77E+02	3.58E+01	1.77E+01	1.79E+01	na	0.055
Chlorobenzene	0.37	5.72E+02	1.18E+02			na	0.37
<u>Inorganics</u>							
Arsenic	5.84	2.19E+02	2.34E+01	1.14E+01	6.08E+00	na	5.84
Barium	2,578	1.40E+05	1.53E+04			na	2,578
Cadmium	11.76	3.64E+02	3.91E+01	8.35E+04	8.94E+04	na	11.8
Chormium	8.45E+08	1.10E+06	1.17E+05			na	117,321
Lead						4.18E+02	418
Mercury	4.90	2.19E+02	2.35E+01			na	4.90
Silver	13	3.65E+03	3.91E+02			na	13

Notes:

¹⁾ Dashes (--) indicate the information was not available for the referenced constituent.

²⁾ na - not applicable for the referenced constituents under Type 2 RRS3) numbers in **bold** indicate the Type 2 RRS for the constituent

Type 2 Soil Screening Level for Migration to Groundwater

DAF (unitless) 20 20	Kd (L/kg) 2.92E-01 4.68E-01	Koc (L/kg) 1.46E+02	foc* (g/g) 0.002	Ow* (Lwater/ Lsoil)	Oa (Lair/Lsoil)	n (Lpore/Lsoil)	Pb* (kg/L)	Ps* (kg/L)	H' (unitless)	Soil Screening Level (mg/kg)
(unitless)	(L/kg) 2.92E-01	(L/kg)	(g/g)	Lsoil)		7.7				
20	2.92E-01			,	(Lair/Lsoil)	(Lpore/Lsoil)	(kg/L)	(kg/L)	(unitless)	(mg/kg)
_		1.46E+02	0 002							
_		1.46E+02	0.002							
20	4 COT 04		0.002	0.3	0.134	0.434	1.5	2.65	0.2269011	0.055
	4.08⊑-01	2.34E+02	0.002	0.3	0.134	0.434	1.5	2.65	0.1271464	0.4
20	2.90E+01		0.002	0.3	0.134	0.434	1.5	2.65	0.00E+00	5.8
20	4.10E+01		0.002	0.3	0.134	0.434	1.5	2.65	0.00E+00	2,577.9
20	7.50E+01		0.002	0.3	0.134	0.434	1.5	2.65	0.00E+00	11.8
20	1.80E+06		0.002	0.3	0.134	0.434	1.5	2.65	0.00E+00	8.45E+08
20	5.20E+01		0.002	0.3	0.134	0.434	1.5	2.65	4.70E-01	4.9
0.0	8.30E+00		0.002	0.3	0.134	0.434	1.5	2.65	0.00E+00	13.3
	20 20 20	20 4.10E+01 20 7.50E+01 20 1.80E+06 20 5.20E+01	20 4.10E+01 20 7.50E+01 20 1.80E+06 20 5.20E+01	20 4.10E+01 0.002 20 7.50E+01 0.002 20 1.80E+06 0.002 20 5.20E+01 0.002	20 4.10E+01 0.002 0.3 20 7.50E+01 0.002 0.3 20 1.80E+06 0.002 0.3 20 5.20E+01 0.002 0.3	20 4.10E+01 0.002 0.3 0.134 20 7.50E+01 0.002 0.3 0.134 20 1.80E+06 0.002 0.3 0.134 20 5.20E+01 0.002 0.3 0.134	20 4.10E+01 0.002 0.3 0.134 0.434 20 7.50E+01 0.002 0.3 0.134 0.434 20 1.80E+06 0.002 0.3 0.134 0.434 20 5.20E+01 0.002 0.3 0.134 0.434	20 4.10E+01 0.002 0.3 0.134 0.434 1.5 20 7.50E+01 0.002 0.3 0.134 0.434 1.5 20 1.80E+06 0.002 0.3 0.134 0.434 1.5 20 5.20E+01 0.002 0.3 0.134 0.434 1.5	20 4.10E+01 0.002 0.3 0.134 0.434 1.5 2.65 20 7.50E+01 0.002 0.3 0.134 0.434 1.5 2.65 20 1.80E+06 0.002 0.3 0.134 0.434 1.5 2.65 20 5.20E+01 0.002 0.3 0.134 0.434 1.5 2.65	20 4.10E+01 0.002 0.3 0.134 0.434 1.5 2.65 0.00E+00 20 7.50E+01 0.002 0.3 0.134 0.434 1.5 2.65 0.00E+00 20 1.80E+06 0.002 0.3 0.134 0.434 1.5 2.65 0.00E+00 20 5.20E+01 0.002 0.3 0.134 0.434 1.5 2.65 4.70E-01

Notes:

Physical/chemical parameters obtained from U.S. EPA Mid-Atlantic Risk Assessment Regional Screening Tables (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm) unless otherwise noted.

Kd Values for Inorganics obtained from Attachment C of Soil Screening Guidance: User's Guide, based on a pH of 6.8

* Values for foc, Ow, Pb, and Ps obtained from Appendix B (Equation 13) of Supplemental Guidance for Developing Sol Screening Levels for Superfund Sites (EPA, 2002) GW Criteria for silver based on Type 1 RRS

Soil screening level = Cw [Kd + (Ow + Oa*H')/Pb]

Cw=target soil leachate concentration (mg/L)

Cw = groundwater critieria * dilultion attenuation factor (DAF)

Kd = soil-water partition coefficient (L/kg) = Koc x foc

Koc=soil organic carbon-water partition coefficient (L/kg)

foc = fraction organic carbon-water partition coefficient (g/g)

Ow = water-filled soil porosity (Lwater/Lsoil)

Oa = air-filled soil porosity (Lair/Lsoil) = n-Ow

n = soil porosity (Lpore/Lsoil) = 1-(Pb/Ps)

Pb = dry soil bulk density (kg/L)

Ps = soil particle density (kg/L)

H' = dimensionless Henry's Law Constant

Type 2 Non-Carcinogenic Evaluation for Soil; Residential Adult (RAGS Equ. 7)

Constituents	THI	BW (kg)	AT (yr)	CF (d/yr)	EF (d/yr)	ED (yr)	IR s (mg/d)	CF (kg/mg)	Oral RfD (mg/kg-d)	IR a (m3/d)	VF (m3/kg)	PEF (m3/kg)	Inh. RfD (mg/kg-d)	Soil Screening Level (mg/kg)	Remarks
Volatile Organics:															
Benzene	1	70	30	365	350	30	100	1.0E-06	4.00E-03	15	4.52E+03	4.63E+09	8.57E-03	1.77E+02	oral & inh.
Chlorobenzene	1	70	30	365	350	30	100	1.0E-06	2.00E-02	15	8.56E+03	4.63E+09	1.43E-02	5.72E+02	oral & inh.
Inorganics															
Arsenic	1	70	30	365	350	30	100	1.0E-06	3.00E-04	15		4.63E+09	4.29E-06	2.19E+02	oral & inh.
Barium	1	70	30	365	350	30	100	1.0E-06	2.00E-01	15		4.63E+09	1.43E-04	1.40E+05	oral & inh.
Cadmium	1	70	30	365	350	30	100	1.0E-06	5.00E-04	15		4.63E+09	5.71E-06	3.64E+02	oral & inh.
Chormium	1	70	30	365	350	30	100	1.0E-06	1.50E+00	15		4.63E+09		1.10E+06	oral only
Mercury	1	70	30	365	350	30	100	1.0E-06	3.00E-04	15		4.63E+09	8.57E-06	2.19E+02	oral & inh.
Silver	1	70	30	365	350	30	100	1.0E-06	5.00E-03	15		4.63E+09		3.65E+03	oral only

Values for standard assumptions and exposure parameters (THI, BW, AT, EF, ED, IRs, IRa and PEF) obtained from Table 3 of Appendix I of HSRA Rules Chemical-specific values (Oral RfD and Inh. RfD) obtained from US EPA's Provisional Peer Reviewed Toxicity Values (PPRTV).

Type 2 Non-Carcinogenic Evaluation for Soil; Residential Child (RAGS Equ. 7)

														Soil Screening	
	THI	BW	AT	CF	EF	ED	IR s	CF	Oral RfD	IR a	VF	PEF	Inh. RfD	Level	
Constituents		(kg)	(yr)	(d/yr)	(d/yr)	(yr)	(mg/d)	(kg/mg)	(mg/kg-d)	(m3/d)	(m3/kg)	(m3/kg)	(mg/kg-d)	(mg/kg)	Remarks
Volatile Organics:															
Benzene	1	15	6	365	350	6	200	1.0E-06	4.00E-03	15	4.52E+03	4.63E+09	8.57E-03	3.58E+01	oral & inh.
Chlorobenzene	1	15	6	365	350	6	200	1.0E-06	2.00E-02	15	8.56E+03	4.63E+09	1.43E-02	1.18E+02	oral & inh.
Inorganics															
Arsenic	1	15	6	365	350	6	200	1.0E-06	3.00E-04	15		4.63E+09	4.29E-06	2.34E+01	oral & inh.
Barium	1	15	6	365	350	6	200	1.0E-06	2.00E-01	15		4.63E+09	1.43E-04	1.53E+04	oral & inh.
Cadmium	1	15	6	365	350	6	200	1.0E-06	5.00E-04	15		4.63E+09	5.71E-06	3.91E+01	oral & inh.
Chormium	1	15	6	365	350	6	200	1.0E-06	1.50E+00	15		4.63E+09		1.17E+05	oral only
Mercury	1	15	6	365	350	6	200	1.0E-06	3.00E-04	15		4.63E+09	8.57E-06	2.35E+01	oral & inh.
Silver	1	15	6	365	350	6	200	1.0E-06	5.00E-03	15		4.63E+09		3.91E+02	oral only

Values for standard assumptions and exposure parameters (THI, BW, AT, EF, ED, IRw, IRa and K) obtained from EPD (verbal communication, 2011). Chemical-specific values (Oral RfD and Inh. RfD) obtained from US EPA's Provisional Peer Reviewed Toxicity Values (PPRTV).

Type 2 Carcinogenic Evaluation for Soil; Residential Adult (RAGS Equ. 6)

Constituents	Weight of Evidence	TR	BW (kg)	AT (yr)	CF (d/yr)	EF (d/yr)	ED (yr)	IR s (mg/d)	CF (kg/mg)	Oral SF (mg/kg-d)-1	IR a (m3/d)	VF (m3/kg)	PEF (m3/kg)	Inh. SF (mg/kg-d)-1	Soil Screening Level (mg/kg)	Remarks
Volatile Organics:																
Benzene	Α	1.00E-05	70	70	365	350	30	100	1.0E-06	5.50E-02	15	4.52E+03	4.63E+09	2.73E-02	1.77E+01	oral & inh.
Chlorobenzene	D		70	70	365	350	30	100	1.0E-06		15	8.56E+03	4.63E+09			no tox values
Inorganics																
Arsenic	Α	1.00E-05	70	70	365	350	30	100	1.0E-06	1.50E+00	15		4.63E+09	1.51E+01	1.14E+01	oral & inh.
Barium	D		70	70	365	350	30	100	1.0E-06		15		4.63E+09			no tox values
Cadmium	B1	1.00E-05	70	70	365	350	30	100	1.0E-06		15		4.63E+09	6.30E+00	8.35E+04	inh. only
Chormium	D		70	70	365	350	30	100	1.0E-06		15		4.63E+09			no tox values
Mercury	D		70	70	365	350	30	100	1.0E-06		15		4.63E+09			no tox values
Silver	D		70	70	365	350	30	100	1.0E-06		15		4.63E+09			no tox values

Values for standard assumptions and exposure parameters (TR, BW, AT, EF, ED, IRs, IRa and PEF) obtained from Table 3 of Appendix I of HSRA Rules Chemical-specific values (Oral SF and Inh. SF) obtained from US EPA's Provisional Peer Reviewed Toxicity Values (PPRTV).

Type 2 Carcinogenic Evaluation for Soil; Residential Child (RAGS Equ. 6)

Constituents	Weight of Evidence	TR	BW (kg)	AT (yr)	CF (d/yr)	EF (d/yr)	ED (yr)	IR s (mg/d)	CF (kg/mg)	Oral SF (mg/kg-d)-1	IR a (m3/d)	VF (m3/kg)	PEF (m3/kg)	Inh. SF (mg/kg-d)-1	Soil Screening Level (mg/kg)	Remarks
Volatile Organics:																
Benzene	Α	1.00E-05	15	70	365	350	6	200	1.0E-06	5.50E-02	15	4.52E+03	4.63E+09	2.73E-02	1.79E+01	oral & inh.
Chlorobenzene	D		15	70	365	350	6	200	1.0E-06		15	8.56E+03	4.63E+09			no tox values
Inorganics																
Arsenic	Α	1.00E-05	15	70	365	350	6	200	1.0E-06	1.50E+00	15		4.63E+09	1.51E+01	6.08E+00	oral & inh.
Barium	D		15	70	365	350	6	200	1.0E-06		15		4.63E+09			no tox values
Cadmium	B1	1.00E-05	15	70	365	350	6	200	1.0E-06		15		4.63E+09	6.30E+00	8.94E+04	inh. only
Chormium	D		15	70	365	350	6	200	1.0E-06		15		4.63E+09			no tox values
Mercury	D		15	70	365	350	6	200	1.0E-06		15		4.63E+09			no tox values
Silver	D		15	70	365	350	6	200	1.0E-06		15		4.63E+09			no tox values

Values for standard assumptions and exposure parameters (THI, BW, AT, EF, ED, IRw, IRa and K) obtained from EPD (verbal communication, 2011). Chemical-specific values (Oral SF and Inh. SF) obtained from US EPA's Provisional Peer Reviewed Toxicity Values (PPRTV).

Type 2 Risk Reduction Standards for Groundwater[Rule 391-3-19-.07(7)(b)]

	Iter	m 1	Ite	m 2		
	RAGS (Equ 2)	RAGS (Equ 2)	RAGS (Equ 1)	RAGS (Equ 1)	Detection	TYPE 2 RRS
Constituents (mg/L)	Non-Carc Adult	Non-Carc Child	Carc Adult	Carc Child	Limit	(mg/L)
Volatile Organics:						
Benzene	5.31E-02	1.39E-02	5.41E-03	7.03E-03	0.005	0.005
Chlorobenzene	1.17E-01	2.72E-02			0.005	0.027
<u>Inorganics</u>						
Arsenic	1.10E-02	4.69E-03	5.68E-04	1.22E-03	0.010	0.010
Barium	7.30E+00	3.13E+00			0.02	3.13
Cadmium	1.83E-02	7.82E-03			0.005	0.008
Chormium, Total	5.48E+01	2.35E+01			0.01	23.5
Mercury	1.10E-02	4.69E-03			0.0002	0.0047
Silver	1.83E-01	7.82E-02			0.01	0.078

In accordance with 391-3-19-.07(7)(b), the Type 2 RRS for Chromium, Total is based on Table 1 of Appendix III In accordance with 391-3-19-.07(6)(b), all Type 1 RRSs are based on Table 1 of Appendix III

Type 2 Non-Carcinogenic Evaluation for Groundwater; Residential Adult (RAGS Equ. 2)

Constituents	THI	BW (kg)	AT (yr)	CF (d/yr)	EF (d/yr)	ED (yr)	IR w (L/d)	Oral RfD (mg/kg-d)	IR a (m3/d)	K (L/m³)	Inh. RfD (mg/kg-d)	Type 2 GW Stnd (mg/L)	Remarks
Volatile Organics:													
Benzene	1	70	30	365	350	30	2	4.00E-03	15	0.5	8.57E-03	5.31E-02	oral & inh.
Chlorobenzene	1	70	30	365	350	30	2	2.00E-02	15	0.5	1.43E-02	1.17E-01	oral & inh.
<u>Inorganics</u>													
Arsenic	1	70	30	365	350	30	2	3.00E-04	15	0.5	4.29E-06	1.10E-02	oral only
Barium	1	70	30	365	350	30	2	2.00E-01	15	0.5	1.43E-04	7.30E+00	oral only
Cadmium	1	70	30	365	350	30	2	5.00E-04	15	0.5	5.71E-06	1.83E-02	oral only
Chormium, Total	1	70	30	365	350	30	2	1.50E+00	15	0.5		5.48E+01	oral only
Mercury	1	70	30	365	350	30	2	3.00E-04	15	0.5	8.57E-06	1.10E-02	oral only
Silver	1	70	30	365	350	30	2	5.00E-03	15	0.5		1.83E-01	oral only

Values for standard assumptions and exposure parameters (THI, BW, AT, EF, ED, IRw, IRa and K) obtained from Table 3 of Appendix I of HSRA Rules Chemical-specific values (Oral RfD and Inh. RfD) obtained from US EPA's Provisional Peer Reviewed Toxicity Values (PPRTV).

Type 2 Non-Carcinogenic Evaluation for Groundwater; Residential Child (RAGS Equ. 2)

Constituents	THI	BW (kg)	AT (yr)	CF (d/yr)	EF (d/yr)	ED (yr)	IR w (L/d)	Oral RfD (mg/kg-d)	IR a (m3/d)	K (L/m³)	Inh. RfD (mg/kg-d)	Type 2 GW Stnd (mg/L)	Remarks
Volatile Organics:													
Benzene	1	15	6	365	350	6	1	4.00E-03	15	0.5	8.57E-03	1.39E-02	oral & inh.
Chlorobenzene	1	15	6	365	350	6	1	2.00E-02	15	0.5	1.43E-02	2.72E-02	oral & inh.
Inorganics													
Arsenic	1	15	6	365	350	6	1	3.00E-04	15	0.5	4.29E-06	4.69E-03	oral only
Barium	1	15	6	365	350	6	1	2.00E-01	15	0.5	1.43E-04	3.13E+00	oral only
Cadmium	1	15	6	365	350	6	1	5.00E-04	15	0.5	5.71E-06	7.82E-03	oral only
Chormium, Total	1	15	6	365	350	6	1	1.50E+00	15	0.5		2.35E+01	oral only
Mercury	1	15	6	365	350	6	1	3.00E-04	15	0.5	8.57E-06	4.69E-03	oral only
Silver	1	15	6	365	350	6	1	5.00E-03	15	0.5		7.82E-02	oral only

Values for standard assumptions and exposure parameters (THI, BW, AT, EF, ED, IRw, IRa and K) obtained from EPD (verbal communication, 2011). Chemical-specific values (Oral RfD and Inh. RfD) obtained from US EPA's Provisional Peer Reviewed Toxicity Values (PPRTV).

Type 2 Carcinogenic Evaluation for Groundwater; Residential Adult (RAGS Equ. 1)

Constituents	Weight of Evidence	TR	BW (kg)	AT (yr)	CF (d/yr)	EF (d/yr)	ED (yr)	IR w (L/d)	Oral SF (mg/kg-d)-1	IR a (m3/d)	K (L/m³)	Inh. SF (mg/kg-d)-1	Type 2 GW Stnd (mg/L)	Remarks
Volatile Organics:														
Benzene	Α	1.00E-05	70	70	365	350	30	2	5.50E-02	15	0.5	2.73E-02	5.41E-03	oral & inh.
Chlorobenzene	D		70	70	365	350	30	2		15	0.5			no tox factors
<u>Inorganics</u>														
Arsenic	Α	1.00E-05	70	70	365	350	30	2	1.50E+00	15	0.5	1.51E+01	5.68E-04	oral only
Barium	D		70	70	365	350	30	2		15	0.5			no tox factors
Cadmium	B1	1.00E-05	70	70	365	350	30	2		15	0.5	6.30E+00		oral only
Chormium, Total	D		70	70	365	350	30	2		15	0.5			no tox factors
Mercury	D		70	70	365	350	30	2		15	0.5			no tox factors
Silver	D		70	70	365	350	30	2		15	0.5			no tox factors

Values for standard assumptions and exposure parameters (TR, BW, AT, EF, ED, IRw, IRa and K) obtained from Table 3 of Appendix I of HSRA Rules Chemical-specific values (Oral SF and Inh. SF) obtained from US EPA's Provisional Peer Reviewed Toxicity Values (PPRTV).

Nickel Oral RfD and Inhalation RfD based on nickel refinery dust

Type 2 Carcinogenic Evaluation for Groundwater; Residential Child (RAGS Equ. 1)

Constituents	Weight of Evidence	TR	BW (kg)	AT (yr)	CF (d/yr)	EF (d/yr)	ED (yr)	IR w (L/d)	Oral SF (mg/kg-d)-1	IR a (m3/d)	K (L/m³)	Inh. SF (mg/kg-d)-1	Type 2 GW Stnd (mg/L)	Remarks
Volatile Organics:														
Benzene	Α	1.00E-05	15	70	365	350	6	1	5.50E-02	15	0.5	2.73E-02	7.03E-03	oral & inh.
Chlorobenzene	D		15	70	365	350	6	1		15	0.5			no tox factors
<u>Inorganics</u>														
Arsenic	Α	1.00E-05	15	70	365	350	6	1	1.50E+00	15	0.5	1.51E+01	1.22E-03	oral only
Barium	D		15	70	365	350	6	1		15	0.5			no tox factors
Cadmium	B1	1.00E-05	15	70	365	350	6	1		15	0.5	6.30E+00		oral only
Chormium, Total	D		15	70	365	350	6	1		15	0.5			no tox factors
Mercury	D		15	70	365	350	6	1		15	0.5			no tox factors
Silver	D		15	70	365	350	6	1		15	0.5			no tox factors

Values for standard assumptions and exposure parameters (THI, BW, AT, EF, ED, IRw, IRa and K) obtained from EPD (verbal communication, 2011). Chemical-specific values (Oral SF and Inh. SF) obtained from US EPA's Provisional Peer Reviewed Toxicity Values (PPRTV). Nickel Oral RfD and Inhalation RfD based on nickel refinery dust

ATTACHMENT D Soil Vapor Sampling Report



Vapor Intrusion Report

Welcome Years Hazardous Site Response Act (HSRA) Site Atlanta, Georgia

HSI #10637

AEM Project No. 1396-1102

June 15, 2011

Prepared For:

VLP 2, LLC 221 Uncle Heinie Way, NW Lyman Hall Room 213 Atlanta, Georgia 30332

Prepared By:



Environmental Consulting, Engineering, Hydrogeologic Services 2580 Northeast Expressway • Atlanta, Georgia 30345 Office (404) 329-9006 • Fax (404) 329-2057

TABLE OF CONTENTS

1.0	Background	1-1
	1.1 Vapor Intrusion	
	1.2 Screening Levels	
	Work Performed	
3.0	Results	3-1
4.0	References	4-1

LIST OF TABLES

TABLE

- 1 Summary of Volatile Organic Compounds in Groundwater
- 2 Sub-Slab Soil Vapor Data

LIST OF FIGURES

FIGURE

1 Sample Locations

LIST OF ATTACHMENTS

ATTACHMENT

- A Photo Log
- B Leak Detection and Implant Installation Documentation
- C Laboratory Analytical Report
- D Review of Sub-Slab Soil Gas Data—Barking Hounds Village Facility— Hartman Environmental Geoscience



SECTION 1.0 BACKGROUND

The Welcome Years Hazardous Site Response Act (HSRA) site consists of property parcels located at 1115 Howell Mill Road ("the Howell Mill parcel"), 673 Ethel Street ("the Ethel Street parcel"), and two parcels at 720 and "0" 14th Street ("the 14th Street parcels"). The two parcels at 14th Street collectively measure approximately 0.9 acre in cumulative size and are improved with one single-story, 17,350-square-foot, slab-on-grade, brick-veneer/masonry-block building constructed in 1965. The building is currently occupied by Barking Hound Village Westside, a pet grooming and kennel service. A robust interior ventilation system with several high-pressure blowers is located inside the building to mitigate pet odors. The parcels also include fenced-in pet runs and outdoor areas for animals kept at the facility. These parcels slope gently to the north toward 14th Street.

Multiple Phase I and Phase II Environmental Site Assessments (ESAs) and other investigations have been performed by others at the 14th Street parcels, as well as other properties that constitute the Welcome Years HSRA Site. In 2000, the Howell Mill parcel was listed on the Hazardous Site Inventory (HSI) as Site No. 10637 for releases of metals, primarily lead and barium, to soil. In addition to the metals in soil, aromatic hydrocarbons were detected in soil and groundwater, and tetrachloroethene (PCE) was detected in groundwater. Some of these contaminants, primarily the PCE in groundwater, were also detected at adjacent property parcels, and the listing for the Welcome Years HSI Site has been expanded to include the affected adjacent parcels.

Depth to groundwater at the 14th Street parcels ranges from 15 to 25 feet. As shown on Table 1, PCE has been detected in groundwater samples from monitoring wells (MW-5 through MW-9, MW-11, and MW-12) at or adjacent to the parcels, at concentrations ranging from 36 µg/L (MW-12) to 790 µg/L (MW-9). Degradation products of PCE were generally not detected in the groundwater samples, although a relatively low concentration (7.2 µg/L) of trichloroethene (TCE) was detected in a groundwater sample from monitoring well MW-9 that was collected in September 2010.

The monitoring wells around the Barking Hounds Village Westside building are screened across the water table (groundwater/soil interface), and contaminant concentrations in groundwater from these wells are therefore appropriate for evaluating the vapor intrusion Based on these groundwater concentrations and the presence of an overlying building, there is concern that vapors containing PCE may be emanating from the groundwater and intruding through the floor slab of the Barking Hound Village building and into spaces occupied by workers, customers, and pets inside the building.

1.1 **VAPOR INTRUSION**

Assessment of the potential for vapor intrusion into any specific building is more complex than merely sampling air quality inside the building, as there may be multiple sources of

Vapor Intrusion Report VLP 2, LLC Welcome Years HSRA Site—Atlanta, Georgia June 15, 2011

chemicals affecting the air quality inside a building that are not associated with vapor intrusion from the release being investigated. These other sources of chemicals may include building materials, heating/cooling energy sources, residual volatile components of stored items, business and consumer products used in the building, or background contaminants from ambient outdoor air (ITRC, 2007). Because of these other potential sources, there may be a high degree of uncertainty involved with interpreting the results of indoor air sampling. Thus, to limit ambiguities in evaluating the data and to reduce the potential for false identification of vapor intrusion issues, indoor air sampling is generally recommended only if necessary to conclusively identify a complete exposure pathway.

Instead, multiple lines of evidence are typically used to reach decisions based on professional judgment. Example lines of evidence include:

- Groundwater data
- Sub-slab soil gas data
- Groundwater–to–soil gas constituent ratios¹
- Building construction, ventilation rates, and current conditions

It is generally recommended that all available data (e.g., analytical results, building type, and ventilation rates) be used in making a determination about whether vapor intrusion is occurring and whether there are potential health concerns as a result.

Sub-slab soil gas sampling is the preferred approach for further investigation of vapor intrusion when underlying groundwater contamination is present, primarily because of the proximity of the sample location to the receptor and the elimination of background interferences (when proper sampling methods are employed). Sub-slab soil gas sampling involves collecting soil gas from the space immediately under the floor slab or basement of a building. It is distinct from shallow (e.g., 5 feet below ground surface) soil gas samples that are collected outside and either next to (near slab) or some distance from (exterior) a slab.

Sub-slab soil gas concentrations, by themselves, do not necessarily indicate the extent to which vapor intrusion is occurring or, if it is occurring, whether vapor intrusion represents a health risk. However, if sub-slab soil gas concentrations are more than 1,000-10,000 times the indoor air target levels, the probability of unacceptable vapor intrusion is likely sufficient to warrant proactive mitigation without further investigation. Conversely, if the concentrations in the sub-slab soil gas are below sub-slab soil gas screening levels, there may be no further need for assessment of vapor intrusion.

1.2 **SCREENING LEVELS**

Sub-slab soil gas screening levels are derived from available toxicological data and reasonable attenuation factors, such as the U.S. Environmental Protection Agency (EPA) Regional Screening Levels (RSLs). For example, the U.S. EPA RSL for PCE in industrial

¹ Also soil gas-to-indoor air constituent ratios if indoor air data are obtained.

Vapor Intrusion Report VLP 2, LLC Welcome Years HSRA Site—Atlanta, Georgia June 15, 2011

(i.e., non-residential) air is $2.1 \,\mu\text{g/m}^3$, based on a 10^{-6} carcinogenic Target Risk factor. Adjusting the RSL for the 10^{-5} Target Risk for Class A and B carcinogens in the Hazardous Site Response Act (HSRA) yields an indoor air target concentration for PCE of $21 \,\mu\text{g/m}^3$.

The screening level for sub-slab soil gas is the indoor air target concentration divided by an attenuation factor. The following equation is used to calculate sub-slab soil gas screening levels:

 $C_{SS} = C_{IA}/\alpha$

where

C_{SS} = sub-slab soil gas screening concentration, µg/m³

 C_{IA} = target indoor air concentration, $\mu g/m^3$

 α = sub-slab soil gas attenuation factor, dimensionless

The attenuation factor represents the attenuation of vapors as they migrate through the floor slab or from the exterior into the interior of a building. Attenuation factors for sub-slab soil gas are typically based on empirical data and generally range from 0.1 to 0.01 (ITRC, 2007). As part of its ongoing review of the agency's vapor intrusion database, U.S. EPA has determined that its current draft sub-slab attenuation factor of 0.1 may be overly conservative and the agency is reportedly revisiting this number (Dawson, 2004). Therefore, an attenuation factor of 0.02 (i.e., twice the lower limit of the general range) was used for this investigation. Selection of the 0.02 attenuation factor is supported by the visual appearance of the slab-on-grade floor and the high-pressure ventilation system inside the building.

Using the indoor air target concentration for PCE of 21 μ g/m³ and an attenuation factor of 0.02, the sub-slab soil gas screening level is 1,050 μ g/m³. Therefore, if sub-slab soil gas concentrations of PCE beneath the Barking Hounds Village building are below this screening level, the vapor intrusion pathway is likely not a threat to the health of the building occupants. Sub-slab soil gas screening levels for other constituents of concern can be calculated in the same manner.

SECTION 2.0 WORK PERFORMED

On May 12, 2011, AEM performed sub-slab soil gas sampling beneath the Barking Hounds Village building. Drilling and soil gas implant installation was performed by Atlas Geo-Sampling Company of Alpharetta, Georgia.

Soil gas samples were obtained from four locations beneath the building (BV051211-001 through -004). Sample locations are shown in Figure 1. A photographic log of sampling activities is provided as Attachment A.

At each sample location, a small corehole was advanced using a handheld drill. Floor thickness ranged from 4 to 7½ inches, thickening toward the east. A soil gas implant, consisting of 1/8-inch-diameter Nylaflow tubing connected to a 1.5-inch-diameter poly-porous sample tip, was installed in each corehole to collect the sub-slab air samples. The soil gas implants extended 6 to 8 inches below the floor. A sand pack was placed around each implant, extending approximately one inch above the poly-porous tip, and the annulus between the Nylaflow tubing and the corehole wall was sealed with bentonite. Portland cement was placed in the annulus above the bentonite. The implants were completed with a small, flush-mount locking cap and were left in place for future confirmation sampling, if required.

Prior to sampling, helium leak testing was performed on the installed soil gas implants to assess the potential for atmospheric air leaking into the sample. A shroud was placed over each implant and was filled with helium gas; the percentage of helium in the shroud was tested before and after the leak test, using a hand-held helium meter. Air was then drawn from the installed implant using a peristaltic pump and tested for helium with the helium meter. As the concentration of helium in the air drawn from the implants was 10% or less than the concentration in the shroud, the installations were considered to be airtight. A report on the leak detection testing for each soil gas implant is attached (see Attachment B).

The installed soil gas implants were sampled using 400-milliliter (ml) "mini-can" Summa Canisters. The canisters were cleaned by the analytical laboratory prior to shipment to the project site; documentation of the cleaning of a selected canister from the batch shipped to the project site is attached to the laboratory analytical reports (see Attachment C). Each "mini-can" had a 150 ml/minute flow-restricting orifice to control the air flow into the canister, so that unrestricted air flow would theoretically take 2 minutes and 40 seconds to fill each canister; however, because of the low apparent porosity of the sub-slab soil, 12 to 19 minutes was required to fill the canisters.

Following sampling, the "mini-can" samples were shipped under chain-of-custody procedures to the analytical laboratory (H&P Mobile Geochemistry, Inc., of Carlsbad, California) and analyzed for VOCs using U.S. EPA Method TO-15. In addition to the four soil gas implant samples, an equipment blank was obtained inside the building for quality control purposes.

SECTION 3.0 RESULTS

Several VOCs were detected in the vapor samples. The analytical results of the sample analyses are summarized in Table 2; the laboratory analytical reports are provided as Attachment C.

The VOCs that were detected and their associated soil gas target concentrations, based on the U.S. EPA RSL for indoor industrial air (adjusted for the 10⁻⁵ Target Risk for Class A and B carcinogens in HSRA), are provided below:

Detected VOC	Target Indoor Air Concentration (μg/m³)¹
Trichlorofluoromethane	3,100
Acetone	140,000
Carbon disulfide	3,100
Chloroform	5.3
Benzene	16
Toluene	22,000
Dichlorodifluoromethane	440
Tetrachloroethene	21
Ethylbenzene	49
m,p-Xylene	440 ²
o-Xylene	440
Chloromethane	390
4-Ethyltoluene	_
1,3,5-Trimethylbenzene	_
1,2,4-Trimethylbenzene	31

¹ Industrial Air Screening Levels obtained from U.S. EPA Region 3 Regional Screening Level Tables (accessed 5/27/11). Screening Level Target Risk for carcinogens = 10⁻⁵.

VOCs Detected

Generally speaking, each of the VOCs listed above was detected in all four of the subslab soil vapor samples (see Table 2), except where low concentrations near the method detection limits may have prevented them from being detected in all four samples. Of the

Screening Level for m,p-xylene based on Screening Level for individual cogeners.

Vapor Intrusion Report VLP 2, LLC Welcome Years HSRA Site—Atlanta, Georgia June 15, 2011

15 VOCs detected in the sub-slab soil vapors, only PCE has been detected in groundwater from nearby monitoring wells (see Table 1); based on prior Phase I reports prepared by others, none of the VOCs have been detected in soil samples from adjacent parcels. Therefore, it is not apparent that the affected soil and groundwater are the source of the VOCs detected in the sub-slab vapors.

As previously discussed in Section 1.2, sub-slab soil vapor screening levels were derived from the target indoor air concentrations listed above by dividing the target indoor air concentrations by a unitless attenuation factor of 0.02, twice the lower limit of the 0.1–0.01 range of typical values (ITRC, 2007). The concentrations of all VOCs detected in the sub-slab soil vapor samples were below the sub-slab soil vapor screening levels (see Table 2). Therefore, the potential intrusion of vapors into the Barking Hounds Village building does not represent an unacceptable health threat to the building occupants.

With two exceptions (chloroform and PCE), each of the VOCs detected was at concentrations below not only the sub-slab soil vapor screening levels but also below the target indoor air concentrations. Because these concentrations are below the target indoor air concentration, these compounds are not a health threat to indoor receptors, as concentrations inside a building resulting from sub-slab soil gas cannot be higher than the "source" concentrations.

Chloroform was detected in three of the four sub-slab vapor samples at concentrations (5.4 to 15 $\mu g/m^3$) greater than the target indoor air concentration (5.3 $\mu g/m^3$). However, the chloroform concentration was below the sub-slab soil vapor screening level (265 $\mu g/m^3$) in all four of the samples (see Table 2). As the concentrations were below the sub-slab air screening levels, there is no further need for assessment of vapor intrusion for chloroform.

PCE was detected in all four of the sub-slab vapor samples at concentrations (280 to 810 $\mu g/m^3$) greater than the target indoor air concentration (21 $\mu g/m^3$). However, the concentrations were below the sub-slab soil vapor screening level (1,050 $\mu g/m^3$).

Source of PCE

There is evidence that the PCE detected in the sub-slab soil vapor may not be from the affected groundwater. A blank sample was obtained inside the Barking Hounds Village building during the May 12, 2011, sampling event, and 7 of the 15 VOCs detected in the sub-slab vapors were also detected in indoor air, generally at concentrations well below the target indoor air concentrations. However, as shown in Table 2, the indoor air concentration of PCE (530 μ g/m³) was slightly higher than the average concentration of the sub-slab vapor samples (467.5 μ g/m³), as well as higher than the target indoor air concentration (21 μ g/m³).

That the indoor air concentration of PCE was higher than the PCE concentration of three of the four sub-slab soil vapor samples suggests that the source of the PCE in the indoor air is not the sub-slab soil vapors. Statistically, the five samples (four sub-slab soil vapor samples and one indoor air blank) are normally distributed with a correlation coefficient (r) of 0.957,

suggesting they are all of one population, as opposed to belonging to a source population (subslab soil vapors) and a separate receptor population (indoor air).

Finding VOCs in air samples obtained in commercial and residential buildings with concentrations greater than target levels is a common problem. Indoor air often contains measurable concentrations of volatile and semi-volatile compounds from household activities, consumer products, building materials, as well as from outdoor air sources. In some cases, these background contributions exceed health-based target concentrations (ITRC, 2007).

PCE is found in many commercial products. Among the commercial products containing PCE, the U.S. Department of Health and Human Services (National Institute of Health) web site, http://householdproducts.nlm.nih.gov, lists the following:

Brand	Form	Percent
Champion Anti Seize	aerosol	45–50
Sprayway Vandalism Mark and Stain Remover No. 870	aerosol	10
Plumbers Goop Adhesive and Sealant–Old Product	paste	67.5
Sprayway Industrial Cleanup Dry Cleaner No. 732	aerosol	45–55
Sprayway Industrial Fabric Protector No. 980	aerosol	20-30
Hagerty Silversmiths Spray Polish	aerosol	30.5
Champion Spot It Gone	aerosol	20–25

Although these particular products may or may not be used by Barking Hounds Village, the list is provided to illustrate the variety of commercial products that contain PCE.

Finally, although the indoor air concentration of PCE (530 μ g/m³) was higher than the target indoor air concentration (21 μ g/m³) based on the U.S. EPA RSL, the PCE concentration was lower than both the current Occupational Safety & Health Administration (OSHA) time-weighted average Permissible Exposure Level (PEL) of 678,000 μ g/m³ (100 ppm) and the proposed PEL of 170,000 μ g/m³ (25 ppm). For comparison purposes, concentrations greater than 1,017,000 μ g/m³ (150 ppm), or approximately 2,000 times the concentration detected, are considered by OSHA to be immediately dangerous to life and health (IDLH). The U.S. EPA RSL (21 μ g/m³ is equivalent to 0.003 ppm (3 ppb).

Conclusions

In summary, the sub-slab soil vapor sampling results do not suggest intrusion of vapors from groundwater into the Barking Hounds Village building. This conclusion is based on the following lines of evidence:

- The VOCs detected in the sub-slab soil vapor are below sub-slab soil vapor screening levels.
- The VOCs detected in the sub-slab soil vapor are not present in nearby groundwater or soil, with the exception of PCE.

Vapor Intrusion Report VLP 2, LLC Welcome Years HSRA Site—Atlanta, Georgia June 15, 2011

- PCE was detected in an indoor air blank sample at a concentration greater than three of the four sub-slab soil samples and slightly higher than the average of the sub-slab vapor samples.
- The likely positive pressure (greater than atmospheric air pressure) inside the building due to the robust ventilation system in place to control pet odors would be expected to minimize the intrusion of sub-slab vapors into the building, but it may force indoor air into the sub-slab air space.

An additional line of evidence can be obtained by developing soil gas profiles (multiple soil gas samples at varying depths) either beneath or adjacent to the building. If the source of the PCE were the groundwater, concentrations would be expected to increase with depth (i.e., toward the water table). If the source of the PCE were other than groundwater, increasing concentrations with depth would not be expected.

The PCE detected in indoor air inside the Barking Hounds Village building was at a concentration (530 $\mu g/m^3$) below the OSHA limit of 678,000 $\mu g/m^3$ (100 ppm). This concentration exceeds the more conservative indoor air target concentration for PCE of 21 $\mu g/m^3$ (0.003 ppm), based on the EPA RSL for PCE in industrial (i.e., non-residential) air.

The sub-slab soil gas data were reviewed by Dr. Blayne Hartman of Hartman Environmental Geoscience, a nationally recognized expert in soil vapor intrusion. Based on the data obtained, Dr. Hartman concluded, "I suspect the indoor air is likely cause of the PCE and hydrocarbons detected under the building slab," and additionally recommended that soil gas profiling be performed for an additional line of evidence. A copy of Dr. Hartman's opinion is attached (see Attachment D).

Vapor Intrusion Report VLP 2, LLC Welcome Years HSRA Site—Atlanta, Georgia June 15, 2011

SECTION 4.0 REFERENCES

- Dawson, H. 2004. "A Study of Vapor Intrusion Modeling in the Context of EPA's Guidance." Presented at Modeling Vapor Attenuation Workshop, 20th Annual International Conference on Soils, Sediments and Water.
- ITRC (Interstate Technology & Regulatory Council). 2007. Vapor Intrusion Pathway: A Practical Guideline. VI-1. Washington, DC: Interstate Technology & Regulatory Council, Vapor Intrusion Team.

TABLES



Table 1
Summary of Volatile Organic Compounds in Groundwater
720 14th Street
Welcome Years HSRA Site
AEM Project No. 1396-1102

	Location Date	MW-1 Upgradient 9/8/2010	MW-3R Upgradient 9/9/2010	MW-5 On-site 9/10/2010	MW-8 On-site 9/9/2010	MW-9 On-site 9/10/2010	MW-11 Upgradient 9/8/2010	MW-12 Upgradient 9/8/2010	MW-14D Upgradient 9/8/2010
Chlorinated Volatile Organic Compounds, μg/L	Type 1 RRS ¹								
Tetrachloroethene	5	230	1,300	58	220	790	230	36	160
Trichloroethene	5	<5.0	<5.0	<5.0	<5.0	7.2	<5.0	<5.0	<5.0
cis-1,2-dichloroethene	70	<5.0	<5.0	<5.0	<5.0	5.7	<5.0	<5.0	<5.0
1,1-dichloroethene	7	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Vinyl chloride	2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1,1-Trichloroethane	200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,1,2-Trichloroethane	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethane	4,000	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dichloroethane	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chloroethane	10	<10	<10	<10	<10	<10	<10	<10	<10
Chloroform	80	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Petroleum hydrocarbons (VOCs), mg/L									
Toluene	1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
o-xylenes	10	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
m,p-xylenes	10	< 0.005	<0.005	< 0.005	< 0.005	< 0.005	<0.005	<0.005	<0.005
Ethylbenzenes	0.7	< 0.005	<0.005	< 0.005	< 0.005	< 0.005	< 0.005	<0.005	<0.005
Isopropylbenzene	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	<0.005	<0.005
Cyclohexane	0.005	< 0.005	<0.005	<0.005	< 0.005	<0.005	<0.005	<0.005	<0.005
Chlorobenzene	0.1	< 0.005	<0.005	<0.005	< 0.005	<0.005	<0.005	<0.005	<0.005
1,3-Dichlorobenzene	0.6	< 0.005	< 0.005	<0.005	< 0.005	< 0.005	< 0.005	<0.005	< 0.005
1,4-Dichlorobenzene	0.075	< 0.005	<0.005	< 0.005	< 0.005	<0.005	<0.005	<0.005	< 0.005
1,2,4-Trichlorobenzene	0.07	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005

Table 2 Sub-Slab Soil Vapor Data May 12, 2011 720 14th Street Welcome Years HSRA Site AEM Project No. 1396-1102

	Sub-Slab Soil Vapor	BV051211-001	BV051211-002	BV051211-003	BV051211-004	BV051211-Blank
Volatile Organic Compounds (ug/m³)	Screening Level (ug/m³) ¹	5/12/2011 2:35	5/12/2011 3:10	5/12/2011 3:38	5/12/2011 4:05	5/12/2011 4:25
Trichlorofluoromethane (F11)	155,000	7.0	<5.7	<5.7	<11	<11
Acetone	7,000,000	140	140	130	140	130
Carbon disulfide	155,000	<6.3	<6.3	13	<13	<13
Chloroform	265	5.1	8.2	5.4	15	<9.9
Benzene	800	22	16	14	11	<6.5
Toluene	1,100,000	140	180	160	120	140
Dichlorodifluoromethane (F12)	22,000	7.8	<5.0	9.0	11	<10
Tetrachloroethene	1,050	340	440	280	810	530
Ethylbenzene	2,450	21	30	33	20	18
m,p-Xylene	22,000 ²	71	86	87	63	55
o-Xylene	22,000	19	24	26	17	16
Chloromethane	19,500	<2.1	2.3	<2.1	<4.2	<4.2
4-Ethyltoluene		9.9	11	9.4	<10	<10
1,3,5-Trimethylbenzene		9.9	11	10	<10	<10
1,2,4-Trimethylbenzene	1,550	30	33	30	22	22

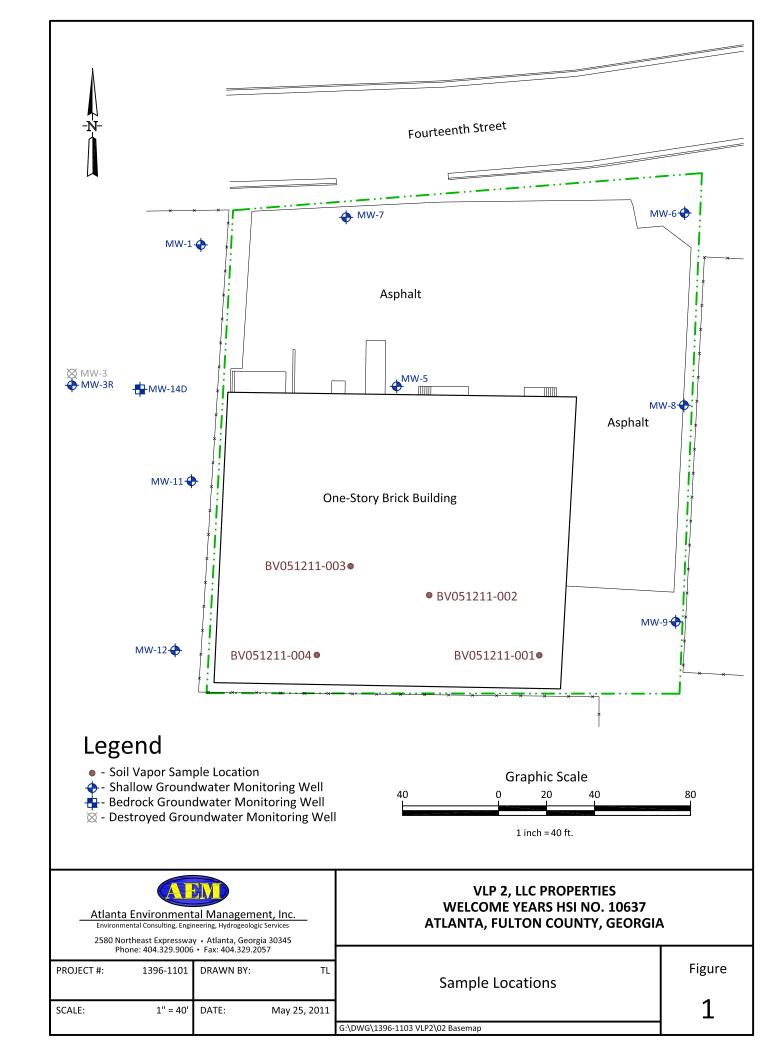
^{1.} Sub-Slab Soil Vapor Screening Level = Industrial Air Screening Level / Attenuation Factor (0.02) . Industrial Air Screening Levels obtained from US EPA Region 3 Regional Screening Level Tables (accessed 5/27/11). Target Risk for carcinogens = 10⁻⁵.

^{2.} Screening Levels for m,p-xylene based on Screening Level for individual cogeners ug/m^3 - Micrograms per cubic meter

[&]quot;--" indicates no data available

FIGURE





ATTACHMENT A Photo Log





Photo 1 - Drilling through floor slab at BV051211-001; May 12, 2011



Photo 2 - Implant detail prior to installation; May 12, 2011



Photo 3 - Completed implant installation, BV051211-001; May 12, 2011



Photo 4 - Installing implant at BV051211-002; May 12, 2011



Photo 5 - Installing implant at BV051211-003; May 12, 2011



Photo 6 - Drilling through floor slab at BV051211-004; May 12, 2011



ATLANTA, FULTON COUNTY, GEORGIA

Photos

VLP 2, LLC PROPERTIES WELCOME YEARS HSI NO. 10637

Attachment

SCALE: None DATE: May 16, 2011

G:\DWG\1396-1102 VLP2\Photos\Photo Log

A



Photo 7 - Drilling through floor slab at BV051211-004 (detail); May 12, 2011



Photo 8 - Implant sampling set-up, BV051211-001; May 12, 2011



Photo 9 - Shroud leak testing at BV051211-001; May 12, 2011



Photo 10 - Purging sample tubing prior to vapor sampling, BV051211-001; May 12, 2011



BV051211-001; May 12, 2011

DATE:

May 16, 2011



Photo 12 - Shroud leak testing at BV051211-002; May 12, 2011



None

SCALE:

VLP 2, LLC PROPERTIES WELCOME YEARS HSI NO. 10637 ATLANTA, FULTON COUNTY, GEORGIA

Photos

G:\DWG\1396-1102 VLP2\Photos\Photo Log

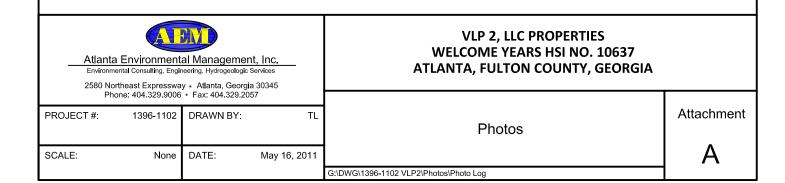
Attachment



Photo 13 - Shroud leak testing at BV051211-003; May 12, 2011



Photo 14 - Blank sampling (ambient air, equipment blank); May 12, 2011



ATTACHMENT B Leak Detection and Implant Installation Documentation



Atlas Geo-Sampling Company 120 Nottaway Lane Alpharetta, GA 30009 June 15, 2011

Steven Hart, P.G. Atlanta Environmental Management, Inc. 2580 Northeast Expressway Atlanta, GA 30345

RE: Helium Leak Test Results for Barking Hound Village Atlanta, GA

Dear Mr. Hart:

Atlas Geo-Sampling appreciates the opportunity to assist Atlanta Environmental Management with the soil vapor intrusion survey that was conducted for the above referenced project. In addition to the installation of the soil vapor sampling points, sample support services, helium leak test were performed on all soil vapor implants. A brief description of the helium leak test procedures is outlined below and the results of the helium leak tests are attached to this letter.

Helium Leak Test Procedures:

- 1. Leak test shroud is placed over the installed soil vapor implant.
- 2. Soil vapor implant is connected to fittings inside the leak test chamber and ported thru the sealed chamber.
- 3. Helium is introduced into the leak test chamber with an initial concentration being measured with a helium detection meter.
- 4. Soil vapor is drawn thru the soil vapor implant using a peristaltic pump (flow rate controlled to approximately 125 ml/min).
- 5. Helium meter is used to monitor the soil vapors coming from the implant (the outflow side of the peristaltic pump).
- 6. The vapors coming thru the peristaltic pump are monitored for approximately 1 minute.
- 7. A final concentration of helium within the shroud is measured to make sure the helium is still present in the chamber in significant concentrations.
- 8. A leak test is considered to have "passed" if the helium concentrations observed in the vapors coming thru the implant are <10% the shroud concentrations are (IRTC guidance document).

If you have any questions concerning the results of the leak test or the procedures used to conduct the leak test, please feel free to contact me. Thanks again for the opportunity to assist Atlanta Environmental Management.

Sincerely,

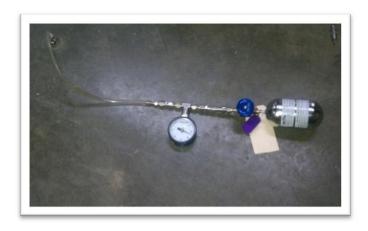
Jim Fineis P.G.

Jem Fires









Helium Leak Test Results for Soil Vapor Implants

		Helium Concentration	Helium Concentration	Helium Concentration	Approximate	
		(%) in Shroud at Start	(%) in Shroud at End	(PPM) Measured in Air	Purge Time	Test Pass
Date	Vapor Implant ID	of Test	of Test	from Vapor Implant	(Minutes)	or Fail
5/12/2011	BV051211-001	6.0%	5.60%	0	1	Pass
5/12/2011	BV051211-002	5.2%	4.50%	75	1	Pass
5/12/2011	BV051211-003	6.9%	5.70%	0	1	Pass
5/12/2011	BV051211-004	7.0%	5.30%	425	1	Pass

^{*} Tests performed by Jim Fineis P.G. - Atlas Geo-Sampling Company

^{**} Air flow rate during all leak test was approximately 125 ml/minuite

^{***} Soil Vapor Implants were installed by Atlas-Geo-Sampling Company

ATTACHMENT C Laboratory Analytical Report





23 May 2011

Mr. Jim Fineis Atlas Geo-Sampling Company 120 Nottaway Lane Alpharetta, GA 30009

H&P Project: AG051611-11

Client Project: AEM BV 1396-1102 / Barking Hound Village

Dear Mr. Jim Fineis:

Enclosed is the analytical report for the above referenced project. The data herein applies to samples as received by H&P Mobile Geochemistry, Inc. on 16-May-11 which were analyzed in accordance with the attached Chain of Custody record(s).

The results for all sample analyses and required QA/QC analyses are presented in the following sections and summarized in the documents:

- · Sample Summary
- Case Narrative (if applicable)
- Sample Results
- Quality Control Summary
- Notes and Definitions / Appendix
- Chain of Custody

Unless otherwise noted, all analyses were performed and reviewed in compliance with our Quality Systems Manual and Standard Operating Procedures. This report shall not be reproduced, except in full, without the written approval of H&P Mobile Geochemistry, Inc.

We at H&P Mobile Geochemistry, Inc. sincerely appreciate the opportunity to provide analytical services to you on this project. If you have any questions or concerns regarding this analytical report, please contact me at your convenience at 760-804-9678.

Sincerely.

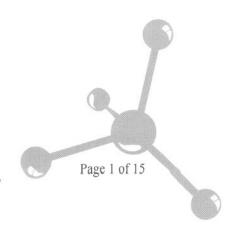
Janis Villarreal Laboratory Director

H&P Mobile Geochemistry, Inc. operates under CA Environmental Lab Accreditation Program Numbers 2579, 2740, 2741, 2742, 2743, 2745 and 2754. National Environmental Laboratory Accreditation Conference (NELAC) Standards Lab #11845

2470 Impala Drive, Carlsbad, California 92010 **F** 760.804.9678 — Fax 760.804.9159 1855 Coronado Avenue, Signal Hill, California 90755

www.HandPmg.com r 1-800-834-9888







2470 Impala Drive Carlsbad, CA 92010 760-804-9678 Phone 760-804-9159 Fax

Atlas Geo-Sampling Company Project: AG051611-11

120 Nottaway LaneProject Number:AEM BV 1396-1102 / Barking Hound VillageReported:Alpharetta, GA 30009Project Manager:Mr. Jim Fineis23-May-11 15:27

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BV051211-001	E105048-01	Vapor	12-May-11	16-May-11
BV051211-002	E105048-02	Vapor	12-May-11	16-May-11
BV051211-003	E105048-03	Vapor	12-May-11	16-May-11
BV051211-004	E105048-04	Vapor	12-May-11	16-May-11
BV051211-Blank	E105048-05	Vapor	12-May-11	16-May-11





120 Nottaway LaneProject Number:AEM BV 1396-1102 / Barking Hound VillageReported:Alpharetta, GA 30009Project Manager:Mr. Jim Fineis23-May-11 15:27

Volatile Organic Compounds by EPA TO-15

ed: 12-May-11 Re 7.8 ND	ceived: 16-M 5.0	ay-11						
ND	5.0							
		ug/m3	1	EE11607	17-May-11	17-May-11	EPA TO-15	
	2.1	"	"	"	"	"	"	
ND	7.1	"	"	"	"	"	"	
ND	2.6	"	"	"	"	"	"	
ND	16	"	"	"	"	"	"	
ND	8.0	"	"	"	"	"	"	
7.0	5.7	"	"	"	"	"	"	
140	24	"	"	"	"	"	"	
ND	4.0	"	"	"	"	"	"	
ND	7.7	"	"	"	"	"	"	
ND	3.5	"	"	"	"	"	"	
ND		"	"	"	"	"	"	
ND	8.0	"	"	"	"	"	"	
	4.1	"	"	"	"	"	"	
ND	30	"	"	"	"	"	"	
ND	4.0	"	"	"	"	"	"	
5.1	5.0	"	"	"	"	"	"	
ND	5.5	"	"	"	"	"	"	
ND		"	"	"	"	"	"	
22	3.2	"	"	"	"	"	"	
ND	6.4	"	"	"	"	"	"	
ND	5.5	"	"	"	"	"	"	
ND	9.4	"	"	"	"	"	"	
ND	6.8	"	"	"	"	"	"	
ND	4.6	"	"	"	"	"	"	
ND	8.3	"	"	"	"	"	"	
ND	4.6	"	"	"	"	"	"	
140	3.8	"	"	"	"	"	"	
ND	5.5	"	"	"	"	"	"	
ND	8.3	"	"	"	"	"	"	
ND	8.6	"	"	"	"	"	"	
340	6.9	"	"	"	"	"	"	
ND	7.8	"	"	"	"	"	"	
ND	7.0	"	"	"	"	"	"	
ND	4.7	"	"	"	"	"	"	
21	4.4	"	"	"	"	"	"	
71	8.8	"	"	"	"	"	"	
ND	4.3	"	"	"	"	"	"	
	ND ND 140 ND	ND 16 ND 8.0 7.0 5.7 140 24 ND 4.0 ND 7.7 ND 3.5 ND 6.3 ND 8.0 ND 4.1 ND 30 ND 4.0 5.1 5.0 ND 5.5 ND 4.1 22 3.2 ND 6.4 ND 5.5 ND 4.1 4.0 5.5 ND 4.1 21 3.8 ND 8.8 ND 4.6 340 6.9 ND 7.0 ND 7.0 ND 7.0 ND 7.0 ND 7.0 ND 4.7 21 4.4 71 8.8	ND 16 " ND 8.0 " 7.0 5.7 " 140 24 " ND 4.0 " ND 7.7 " ND 3.5 " ND 6.3 " ND 8.0 " ND 4.1 " ND 30 " ND 4.0 " 5.1 5.0 " ND 5.5 " ND 4.1 " 22 3.2 " ND 6.4 " ND 5.5 " ND 4.1 " 21 4.4 " 71 8.8 "	ND 16 " " " " " " " " " " " " " " " " " "	ND 16 " " " " " " " " " " " " " " " " " "	ND 16 " " " " " " " " " " " " " " " " " "	ND 16 " " " " " " " " " " " " " " " " " "	ND 16 " " " " " " " " " " " " " " " " " "





Atlas Geo-Sampling Company

Project: AG051611-11

120 Nottaway Lane Alpharetta, GA 30009 Project Number: AEM BV 1396-1102 / Barking Hound Village

Project Manager: Mr. Jim Fineis

Reported: 23-May-11 15:27

Volatile Organic Compounds by EPA TO-15

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
BV051211-001 (E105048-01) Vapor	Sampled: 12-May-11	Received: 16-M	ay-11						
o-Xylene	19	4.4	ug/m3	1	EE11607	17-May-11	17-May-11	EPA TO-15	
Bromoform	ND	10	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	7.0	"	"	"	"	"	"	
4-Ethyltoluene	9.9	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	9.9	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	30	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	7.5	"	"	"	"	"	"	
Hexachlorobutadiene	ND	11	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		103 %	76-1	134	"	"	"	"	
Surrogate: Toluene-d8		104 %	78-		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.7 %	77-		"	"	"	"	
BV051211-002 (E105048-02) Vapor	Sampled: 12-May-11	Received: 16-M	ay-11						
Dichlorodifluoromethane (F12)	ND	5.0	ug/m3	1	EE11607	17-May-11	17-May-11	EPA TO-15	
Chloromethane	2.3	2.1	"	"	"	"	"	"	
Chloromethane Dichlorotetrafluoroethane (F114)	2.3 ND	2.1 7.1	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	7.1	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114) Vinyl chloride	ND ND	7.1 2.6	"	"	"	"	"	11	
Dichlorotetrafluoroethane (F114) Vinyl chloride Bromomethane	ND ND ND	7.1 2.6 16	" "	" "	"	" "	"	11 11	
Dichlorotetrafluoroethane (F114) Vinyl chloride Bromomethane Chloroethane	ND ND ND ND	7.1 2.6 16 8.0	" " "	" "	" " "	" " "	" " "	11 11 11	
Dichlorotetrafluoroethane (F114) Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane (F11)	ND ND ND ND ND	7.1 2.6 16 8.0 5.7	" " " " " " " " " " " " " " " " " " " "	" " " " "	" " " " " " " " " " " " " " " " " " " "	11 11 11	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " " "	
Dichlorotetrafluoroethane (F114) Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane (F11) Acetone	ND ND ND ND ND 140	7.1 2.6 16 8.0 5.7 24	" " " " " " " " " " " " " " " " " " " "	" " " " "	" " " " "	11 11 11	" " " " " " " " " " " " " " " " " " " "	n n n	
Dichlorotetrafluoroethane (F114) Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane (F11) Acetone 1,1-Dichloroethene	ND ND ND ND 140 ND	7.1 2.6 16 8.0 5.7 24 4.0	n n n n	" " " " "	" " " " " " "	11 11 11 11	" " " " " " " " " " " " " " " " " " " "	" " " " " "	
Dichlorotetrafluoroethane (F114) Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane (F11) Acetone 1,1-Dichloroethene 1,1,2-Trichlorotrifluoroethane (F113)	ND ND ND ND 140 ND	7.1 2.6 16 8.0 5.7 24 4.0 7.7	" " " " " " " " " " " " " " " " " " " "	" " " " "	n n n	" " " " " " " " "	" " " " " " " " " " " " " " " " " " " "	" " " " " "	
Dichlorotetrafluoroethane (F114) Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane (F11) Acetone 1,1-Dichloroethene 1,1,2-Trichlorotrifluoroethane (F113) Methylene chloride (Dichloromethane	ND ND ND ND ND 140 ND ND ND ND ND ND	7.1 2.6 16 8.0 5.7 24 4.0 7.7 3.5	" " " " " " " "	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " "	11 11 11 11 11 11	n n n n n n n n n n n n n n n n n n n	" " " " " " " " " " "	
Dichlorotetrafluoroethane (F114) Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane (F11) Acetone 1,1-Dichloroethene 1,1,2-Trichlorotrifluoroethane (F113) Methylene chloride (Dichloromethane) Carbon disulfide	ND ND ND ND 140 ND	7.1 2.6 16 8.0 5.7 24 4.0 7.7 3.5 6.3	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	n n n n	11 11 11 11 11 11 11 11 11 11 11 11 11	n n n n n n n n n n n n n n n n n n n	" " " " " " " " " " "	
Dichlorotetrafluoroethane (F114) Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane (F11) Acetone 1,1-Dichloroethene 1,1,2-Trichlorotrifluoroethane (F113) Methylene chloride (Dichloromethane) Carbon disulfide trans-1,2-Dichloroethene	ND ND ND ND 140 ND	7.1 2.6 16 8.0 5.7 24 4.0 7.7 3.5 6.3 8.0		0		11 11 11 11 11 11 11 11 11 11 11 11 11			
Dichlorotetrafluoroethane (F114) Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane (F11) Acetone 1,1-Dichloroethene 1,1,2-Trichlorotrifluoroethane (F113) Methylene chloride (Dichloromethane Carbon disulfide trans-1,2-Dichloroethene 1,1-Dichloroethane	ND ND ND ND 140 ND	7.1 2.6 16 8.0 5.7 24 4.0 7.7 3.5 6.3 8.0 4.1		" " " " " " " " " " " " " " " " " " "		11 11 11 11 11 11 11 11 11 11 11 11 11			
Dichlorotetrafluoroethane (F114) Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane (F11) Acetone 1,1-Dichloroethene 1,1,2-Trichlorotrifluoroethane (F113) Methylene chloride (Dichloromethane Carbon disulfide trans-1,2-Dichloroethene 1,1-Dichloroethane 2-Butanone (MEK)	ND ND ND ND 140 ND	7.1 2.6 16 8.0 5.7 24 4.0 7.7 3.5 6.3 8.0 4.1							
Dichlorotetrafluoroethane (F114) Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane (F11) Acetone 1,1-Dichloroethene 1,1,2-Trichlorotrifluoroethane (F113) Methylene chloride (Dichloromethane) Carbon disulfide trans-1,2-Dichloroethene 1,1-Dichloroethane 2-Butanone (MEK) cis-1,2-Dichloroethene	ND ND ND ND 140 ND	7.1 2.6 16 8.0 5.7 24 4.0 7.7 3.5 6.3 8.0 4.1 30 4.0 5.0							
Dichlorotetrafluoroethane (F114) Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane (F11) Acetone 1,1-Dichloroethene 1,1,2-Trichlorotrifluoroethane (F113) Methylene chloride (Dichloromethane) Carbon disulfide trans-1,2-Dichloroethene 1,1-Dichloroethane 2-Butanone (MEK) cis-1,2-Dichloroethene Chloroform 1,1,1-Trichloroethane	ND ND ND ND 140 ND ND ND ND ND ND ND ND ND ND	7.1 2.6 16 8.0 5.7 24 4.0 7.7 3.5 6.3 8.0 4.1 30 4.0							
Dichlorotetrafluoroethane (F114) Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane (F11) Acetone 1,1-Dichloroethene 1,1,2-Trichlorotrifluoroethane (F113) Methylene chloride (Dichloromethane) Carbon disulfide trans-1,2-Dichloroethene 1,1-Dichloroethane 2-Butanone (MEK) cis-1,2-Dichloroethene Chloroform	ND ND ND ND 140 ND ND ND ND ND ND ND ND ND ND ND ND ND	7.1 2.6 16 8.0 5.7 24 4.0 7.7 3.5 6.3 8.0 4.1 30 4.0 5.0 5.5							





Atlas Geo-Sampling Company

Project: AG051611-11 Project Number: AEM BV 1396-1102 / Barking Hound Village

120 Nottaway Lane Reported: Alpharetta, GA 30009 Project Manager: Mr. Jim Fineis 23-May-11 15:27

Volatile Organic Compounds by EPA TO-15

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
BV051211-002 (E105048-02) Vapor	Sampled: 12-May-11 R	eceived: 16-M	ay-11						
Trichloroethene	ND	5.5	ug/m3	1	EE11607	17-May-11	17-May-11	EPA TO-15	
1,2-Dichloropropane	ND	9.4	"	"	"	"	"	"	
Bromodichloromethane	ND	6.8	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.6	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	8.3	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	4.6	"	"	"	"	"	"	
Toluene	180	3.8	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.5	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	8.3	"	"	"	"	"	"	
Dibromochloromethane	ND	8.6	"	"	"	"	"	"	
Tetrachloroethene	440	6.9	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	7.8	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	7.0	"	"	"	"	"	"	
Chlorobenzene	ND	4.7	"	"	"	"	"	"	
Ethylbenzene	30	4.4	"	"	"	"	"	"	
m,p-Xylene	86	8.8	"	"	"	"	"	"	
Styrene	ND	4.3	"	"	"	"	"	"	
o-Xylene	24	4.4	"	"	"	"	"	"	
Bromoform	ND	10	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	7.0	"	"	"	"	"	"	
4-Ethyltoluene	11	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	11	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	33	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	7.5	"	"	"	"	"	"	
Hexachlorobutadiene	ND	11	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		97.0 %	76-	-134	"	"	"	"	
Surrogate: Toluene-d8		103 %	78-	-125	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.6 %		-127	"	"	"	"	





120 Nottaway LaneProject Number:AEM BV 1396-1102 / Barking Hound VillageReported:Alpharetta, GA 30009Project Manager:Mr. Jim Fineis23-May-11 15:27

Volatile Organic Compounds by EPA TO-15

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
BV051211-003 (E105048-03) Vapor S	ampled: 12-May-11 Re	ceived: 16-M	ay-11						
Dichlorodifluoromethane (F12)	9.0	5.0	ug/m3	1	EE11607	17-May-11	18-May-11	EPA TO-15	
Chloromethane	ND	2.1	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	7.1	"	"	"	"	"	"	
Vinyl chloride	ND	2.6	"	"	"	"	"	"	
Bromomethane	ND	16	"	"	"	"	"	"	
Chloroethane	ND	8.0	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	5.7	"	"	"	"	"	"	
Acetone	130	24	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.0	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	7.7	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	3.5	"	"	"	"	"	"	
Carbon disulfide	13	6.3	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	8.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.1	"	"	"	"	"	"	
2-Butanone (MEK)	ND	30	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.0	"	"	"	"	"	"	
Chloroform	5.4	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.5	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	4.1	"	"	"	"	"	"	
Benzene	14	3.2	"	"	"	"	"	"	
Carbon tetrachloride	ND	6.4	"	"	"	"	"	"	
Trichloroethene	ND	5.5	"	"	"	"	"	"	
1,2-Dichloropropane	ND	9.4	"	"	"	"	"	"	
Bromodichloromethane	ND	6.8	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.6	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	8.3	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	4.6	"	"	"	"	"	"	
Toluene	160	3.8	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.5	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	8.3	"	"	"	"	"	"	
Dibromochloromethane	ND	8.6	"	"	"	"	"	"	
Tetrachloroethene	280	6.9	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	7.8	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	7.0	"	"	"	"	"	"	
Chlorobenzene	ND	4.7	"	"	"	"	"	"	
Ethylbenzene	33	4.4	"	"	"	"	"	"	
m,p-Xylene	87	8.8	"	"	"	"	"	"	
Styrene	ND	4.3	"	"	"	"	"	"	





Atlas Geo-Sampling Company

Project: AG051611-11

120 Nottaway Lane Alpharetta, GA 30009 Project Number: AEM BV 1396-1102 / Barking Hound Village

Project Manager: Mr. Jim Fineis

Reported:

23-May-11 15:27

Volatile Organic Compounds by EPA TO-15

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
BV051211-003 (E105048-03) Vapor	Sampled: 12-May-11 Re	ceived: 16-M	ay-11			•			
o-Xylene	26	4.4	ug/m3	1	EE11607	17-May-11	18-May-11	EPA TO-15	
Bromoform	ND	10	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	7.0	"	"	"	"	"	"	
4-Ethyltoluene	9.4	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	10	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	30	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	7.5	"	"	"	"	"	"	
Hexachlorobutadiene	ND	11	"	II	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		94.7 %	76-1	134	"	"	"	"	
Surrogate: Toluene-d8		99.6 %	78-1		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.2 %	77-1	127	"	"	"	"	
BV051211-004 (E105048-04) Vapor	Sampled: 12-May-11 Re	ceived: 16-M	ay-11						
Dichlorodifluoromethane (F12)	11	10	ug/m3	2	EE11607	17-May-11	18-May-11	EPA TO-15	
Chloromethane	ND	4.2	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND			"	"	"			
Diemorotettanaoroethane (1 11 1)	ND	14	"	"	"	"	"	"	
Vinyl chloride	ND	14 5.1	"	"	"	"	"	"	
Vinyl chloride	ND	5.1	"		"	"		"	
Vinyl chloride Bromomethane	ND ND	5.1 31	"		"	"	"	"	
Vinyl chloride Bromomethane Chloroethane	ND ND ND	5.1 31 16	"	"	" "	"	"	" "	
Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane (F11)	ND ND ND ND	5.1 31 16 11	" " "	" "	" " "	" " " " " " " " " " " " " " " " " " " "	" " "	" " " " " " " " " " " " " " " " " " " "	
Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane (F11) Acetone	ND ND ND ND 140	5.1 31 16 11 48	" " "	" "	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " " "	
Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane (F11) Acetone 1,1-Dichloroethene	ND ND ND ND 140 ND ND	5.1 31 16 11 48 8.0	" " " " " " " " " " " " " " " " " " " "	" "	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " " "	11 11 11 11	" " " " " " " " " " " " " " " " " " " "	
Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane (F11) Acetone 1,1-Dichloroethene 1,1,2-Trichlorotrifluoroethane (F113)	ND ND ND ND 140 ND ND	5.1 31 16 11 48 8.0 15	" " " " " " " " " " " " " " " " " " " "	" "	11 11 11 11	" " " " " " " " " " " " " " " " " " " "	11 11 11 11	" " " " " " " " " " " " " " " " " " " "	
Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane (F11) Acetone 1,1-Dichloroethene 1,1,2-Trichlorotrifluoroethane (F113) Methylene chloride (Dichloromethane	ND ND ND 140 ND ND ND	5.1 31 16 11 48 8.0 15 7.0	n n n	" " " " " "	n n n n n n n n n n n n n n n n n n n	" " " " " " " "	11 11 11 11 11	n	
Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane (F11) Acetone 1,1-Dichloroethene 1,1,2-Trichlorotrifluoroethane (F113) Methylene chloride (Dichloromethane Carbon disulfide	ND ND ND 140 ND ND ND ND	5.1 31 16 11 48 8.0 15 7.0		" " " " " "	n n n n n n n n n n n n n n n n n n n	"" "" "" "" "" "" "" "" "" "" "" "" ""	11 11 11 11 11	n n n n	
Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane (F11) Acetone 1,1-Dichloroethene 1,1,2-Trichlorotrifluoroethane (F113) Methylene chloride (Dichloromethane Carbon disulfide trans-1,2-Dichloroethene	ND ND ND 140 ND ND ND ND ND	5.1 31 16 11 48 8.0 15 7.0 13		" " " " " "	n n n n n n n n n n n n n n n n n n n	" " " " " " " " " " " "	11 11 11 11 11	n n n n	
Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane (F11) Acetone 1,1-Dichloroethene 1,1,2-Trichlorotrifluoroethane (F113) Methylene chloride (Dichloromethane Carbon disulfide trans-1,2-Dichloroethene 1,1-Dichloroethane	ND ND ND 140 ND ND ND ND ND ND	5.1 31 16 11 48 8.0 15 7.0 13 16 8.2				" " " " " " " " " " " " "		n n n n	
Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane (F11) Acetone 1,1-Dichloroethene 1,1,2-Trichlorotrifluoroethane (F113) Methylene chloride (Dichloromethane Carbon disulfide trans-1,2-Dichloroethene 1,1-Dichloroethane 2-Butanone (MEK)	ND ND ND 140 ND ND ND ND ND ND	5.1 31 16 11 48 8.0 15 7.0 13 16 8.2 60						n n n n	
Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane (F11) Acetone 1,1-Dichloroethene 1,1,2-Trichlorotrifluoroethane (F113) Methylene chloride (Dichloromethane Carbon disulfide trans-1,2-Dichloroethene 1,1-Dichloroethane 2-Butanone (MEK) cis-1,2-Dichloroethene	ND N	5.1 31 16 11 48 8.0 15 7.0 13 16 8.2 60 8.0						n n n n	
Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane (F11) Acetone 1,1-Dichloroethene 1,1,2-Trichlorotrifluoroethane (F113) Methylene chloride (Dichloromethane Carbon disulfide trans-1,2-Dichloroethene 1,1-Dichloroethane 2-Butanone (MEK) cis-1,2-Dichloroethene Chloroform	ND N	5.1 31 16 11 48 8.0 15 7.0 13 16 8.2 60 8.0 9.9						n n n n	
Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane (F11) Acetone 1,1-Dichloroethene 1,1,2-Trichlorotrifluoroethane (F113) Methylene chloride (Dichloromethane Carbon disulfide trans-1,2-Dichloroethene 1,1-Dichloroethane 2-Butanone (MEK) cis-1,2-Dichloroethene Chloroform 1,1,1-Trichloroethane	ND N	5.1 31 16 11 48 8.0 15 7.0 13 16 8.2 60 8.0 9.9						n n n n	





120 Nottaway LaneProject Number:AEM BV 1396-1102 / Barking Hound VillageReported:Alpharetta, GA 30009Project Manager:Mr. Jim Fineis23-May-11 15:27

Volatile Organic Compounds by EPA TO-15

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
BV051211-004 (E105048-04) Vapor	Sampled: 12-May-11 Re	eceived: 16-M	ay-11						
Trichloroethene	ND	11	ug/m3	2	EE11607	17-May-11	18-May-11	EPA TO-15	
1,2-Dichloropropane	ND	19	"	"	"	"	"	"	
Bromodichloromethane	ND	14	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	9.2	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	17	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	9.2	"	"	"	"	"	"	
Toluene	120	7.6	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	11	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	17	"	"	"	"	"	"	
Dibromochloromethane	ND	17	"	"	"	"	"	"	
Tetrachloroethene	810	14	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	16	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	14	"	"	"	"	"	"	
Chlorobenzene	ND	9.3	"	"	"	"	"	"	
Ethylbenzene	20	8.8	"	"	"	"	"	"	
m,p-Xylene	63	18	"	"	"	"	"	"	
Styrene	ND	8.6	"	"	"	"	"	"	
o-Xylene	17	8.8	"	"	"	"	"	"	
Bromoform	ND	21	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	14	"	"	"	"	"	"	
4-Ethyltoluene	ND	10	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	10	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	22	10	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	24	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	24	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	24	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	15	"	"	"	"	"	"	
Hexachlorobutadiene	ND	22	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		94.5 %	76-	134	"	"	"	"	
Surrogate: Toluene-d8		98.1 %	78-		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	77-		"	"	"	"	





120 Nottaway LaneProject Number:AEM BV 1396-1102 / Barking Hound VillageReported:Alpharetta, GA 30009Project Manager:Mr. Jim Fineis23-May-11 15:27

Volatile Organic Compounds by EPA TO-15

Notes





Atlas Geo-Sampling Company

Project: AG051611-11

120 Nottaway Lane Alpharetta, GA 30009 Project Number: AEM BV 1396-1102 / Barking Hound Village

Project Manager: Mr. Jim Fineis

Reported: 23-May-11 15:27

Volatile Organic Compounds by EPA TO-15

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
BV051211-Blank (E105048-05) Vapor	Sampled: 12-May-11	Received: 16-	May-11						
o-Xylene	16	8.8	ug/m3	2	EE11607	17-May-11	18-May-11	EPA TO-15	
Bromoform	ND	21	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	14	"	"	"	"	"	"	
4-Ethyltoluene	ND	10	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	10	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	22	10	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	24	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	24	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	24	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	15	"	"	"	"	"	"	
Hexachlorobutadiene	ND	22	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		97.2 %	76-	-134	"	"	"	"	
Surrogate: Toluene-d8		98.6 %	78-	125	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	77-	127	"	"	"	"	



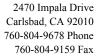


120 Nottaway LaneProject Number:AEM BV 1396-1102 / Barking Hound VillageReported:Alpharetta, GA 30009Project Manager:Mr. Jim Fineis23-May-11 15:27

Volatile Organic Compounds by EPA TO-15 - Quality Control H&P Mobile Geochemistry, Inc.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Blank (EE11607-BLK1)				Prepared & Analyzed: 17-May-11
Dichlorodifluoromethane (F12)	ND	5.0	ug/m3	
Chloromethane	ND	2.1	"	
Dichlorotetrafluoroethane (F114)	ND	7.1	"	
Vinyl chloride	ND	2.6	"	
Bromomethane	ND	16	"	
Chloroethane	ND	8.0	"	
richlorofluoromethane (F11)	ND	5.7	"	
Acetone	ND	24	"	
,1-Dichloroethene	ND	4.0	"	
,1,2-Trichlorotrifluoroethane (F113)	ND	7.7	"	
Methylene chloride (Dichloromethane)	ND	3.5	"	
Carbon disulfide	ND	6.3	"	
rans-1,2-Dichloroethene	ND	8.0	"	
,1-Dichloroethane	ND	4.1	"	
Butanone (MEK)	ND	30	"	
-1,2-Dichloroethene	ND	4.0	"	
hloroform	ND	5.0	"	
,1-Trichloroethane	ND	5.5	"	
-Dichloroethane (EDC)	ND	4.1	"	
nzene	ND	3.2	"	
rbon tetrachloride	ND	6.4	"	
chloroethene	ND	5.5	"	
-Dichloropropane	ND	9.4	"	
omodichloromethane	ND	6.8	"	
-1,3-Dichloropropene	ND	4.6	"	
Methyl-2-pentanone (MIBK)	ND	8.3	"	
nns-1,3-Dichloropropene	ND	4.6	"	
bluene	ND	3.8	"	
1,2-Trichloroethane	ND	5.5	"	
-Hexanone (MBK)	ND	8.3	"	
Dibromochloromethane	ND	8.6	"	
etrachloroethene	ND	6.9	"	
,2-Dibromoethane (EDB)	ND	7.8	"	
,1,1,2-Tetrachloroethane	ND	7.0	"	



RPD

%REC



Atlas Geo-Sampling Company Project: AG051611-11

120 Nottaway LaneProject Number:AEM BV 1396-1102 / Barking Hound VillageReported:Alpharetta, GA 30009Project Manager:Mr. Jim Fineis23-May-11 15:27

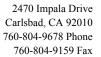
Reporting

Volatile Organic Compounds by EPA TO-15 - Quality Control H&P Mobile Geochemistry, Inc.

Spike

Source

		Reporting		Spike	Source		%KEC		KPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EE11607 - TO-15										
Blank (EE11607-BLK1)				Prepared &	Analyzed:	17-May-11	l			
Chlorobenzene	ND	4.7	ug/m3							
Ethylbenzene	ND	4.4	"							
m,p-Xylene	ND	8.8	"							
Styrene	ND	4.3	"							
o-Xylene	ND	4.4	"							
Bromoform	ND	10	"							
1,1,2,2-Tetrachloroethane	ND	7.0	"							
4-Ethyltoluene	ND	5.0	"							
1,3,5-Trimethylbenzene	ND	5.0	"							
1,2,4-Trimethylbenzene	ND	5.0	"							
1,3-Dichlorobenzene	ND	12	"							
1,4-Dichlorobenzene	ND	12	"							
1,2-Dichlorobenzene	ND	12	"							
1,2,4-Trichlorobenzene	ND	7.5	"							
Hexachlorobutadiene	ND	11	"							
Surrogate: 1,2-Dichloroethane-d4	215		"	214		100	76-134			
Surrogate: Toluene-d8	216		"	207		104	78-125			
Surrogate: 4-Bromofluorobenzene	379		"	365		104	77-127			
LCS (EE11607-BS1)				Prepared &	Analyzed:	17-May-11				
Dichlorodifluoromethane (F12)	9.7	5.0	ug/m3	10.1		96.5	65-135			
Vinyl chloride	4.4	2.6	ug/ms	5.20		84.7	65-135			
Chloroethane	4.8	8.0	"	5.36		88.7	65-135			
Trichlorofluoromethane (F11)	11	5.7	"	11.3		94.9	65-135			
1,1-Dichloroethene	7.5	4.0	"	8.08		92.7	65-135			
1,1,2-Trichlorotrifluoroethane (F113)	14	7.7	"	15.5		92.8	65-135			
Methylene chloride (Dichloromethane)	5.9	3.5	"	7.08		83.1	65-135			
trans-1,2-Dichloroethene	7.6	8.0	"	8.08		93.7	65-135			
1,1-Dichloroethane	7.4	4.1	"	8.24		89.4	65-135			
cis-1,2-Dichloroethene	7.6	4.0	"	8.00		94.8	65-135			
Chloroform	9.2	5.0	"	9.92		93.1	65-135			
1,1,1-Trichloroethane	10	5.5	"	11.1		91.9	65-135			
1,2-Dichloroethane (EDC)	7.6	4.1	"	8.24		92.3	65-135			

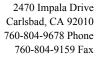




120 Nottaway LaneProject Number:AEM BV 1396-1102 / Barking Hound VillageReported:Alpharetta, GA 30009Project Manager:Mr. Jim Fineis23-May-11 15:27

Volatile Organic Compounds by EPA TO-15 - Quality Control H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EE11607 - TO-15						,				
LCS (EE11607-BS1)				Prepared &	Analyzed:	17-May-11	[
Benzene	6.2	3.2	ug/m3	6.48	<u> </u>	95.0	65-135			
Carbon tetrachloride	12	6.4	"	12.8		94.3	65-135			
Trichloroethene	11	5.5	"	11.0		101	65-135			
Toluene	7.3	3.8	"	7.68		94.5	65-135			
1,1,2-Trichloroethane	10	5.5	"	11.1		90.0	65-135			
Tetrachloroethene	9.9	6.9	"	13.8		71.5	65-135			
1,1,1,2-Tetrachloroethane	13	7.0	"	14.0		93.1	65-135			
Ethylbenzene	9.5	4.4	"	8.84		107	65-135			
m,p-Xylene	21	8.8	"	17.7		117	65-135			
o-Xylene	9.7	4.4	"	8.84		109	65-135			
1,1,2,2-Tetrachloroethane	15	7.0	"	14.0		104	65-135			
Surrogate: 1,2-Dichloroethane-d4	216		"	214		101	76-134			
Surrogate: Toluene-d8	209		"	207		101	78-125			
Surrogate: 4-Bromofluorobenzene	393		"	365		108	77-127			
V CG D (FD44 (0 - DGD4)				Proporad: 1	17-May-11	Analyzad: 1	19 May 11			
LCS Dup (EE11607-BSD1)	40		/ 2		17-iviay-117			4.60	25	
Dichlorodifluoromethane (F12)	10	5.0	ug/m3	10.1		101	65-135	4.69	35	
Vinyl chloride	4.8	2.6	,,	5.20		92.4	65-135	8.72	35	
Chloroethane	5.1	8.0	"	5.36		95.1	65-135	6.90 0.799	35	
Trichlorofluoromethane (F11) 1,1-Dichloroethene	11	5.7	"	11.3		94.2 89.5	65-135	3.50	35 35	
1,1-Dichloroethene 1,1,2-Trichlorotrifluoroethane (F113)	7.2	4.0	"	8.08 15.5		89.5 92.1	65-135 65-135	0.699	35 35	
Methylene chloride (Dichloromethane)	14 5.6	7.7 3.5	"	7.08		79.1	65-135	4.97	35	
trans-1,2-Dichloroethene	7.5	3.5 8.0	"	8.08		92.4	65-135	1.44	35	
1,1-Dichloroethane	7.5 7.2	6.0 4.1	"	8.24		92.4 87.9	65-135	1.74	35	
cis-1,2-Dichloroethene	7.2 8.4	4.1	"	8.00		105	65-135	10.5	35	
Chloroform	9.0	5.0	"	9.92		91.2	65-135	2.00	35	
1,1,1-Trichloroethane	10	5.5	"	11.1		92.4	65-135	0.538	35	
1,2-Dichloroethane (EDC)	7.2	4.1	"	8.24		87.1	65-135	5.78	35	
Benzene	6.2	3.2	"	6.48		95.8	65-135	0.838	35	
Carbon tetrachloride	12	6.4	"	12.8		91.8	65-135	2.62	35	
	11	5.5	"	11.0		96.0	65-135	5.54	35	
Trichloroethene										





Atlas Geo-Sampling Company

Project: AG051611-11

120 Nottaway Lane Alpharetta, GA 30009 Project Number: AEM BV 1396-1102 / Barking Hound Village

Project Manager: Mr. Jim Fineis

Reported:

23-May-11 15:27

Volatile Organic Compounds by EPA TO-15 - Quality Control H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
	Result	Lillit	Omts	Level	Result	70KEC	Limits	KrD	Dillit	rvotes
Batch EE11607 - TO-15										
LCS Dup (EE11607-BSD1)				Prepared: 1	17-May-11	Analyzed: 1	8-May-11			
1,1,2-Trichloroethane	11	5.5	ug/m3	11.1		95.6	65-135	6.04	35	
Tetrachloroethene	10	6.9	"	13.8		75.4	65-135	5.35	35	
1,1,1,2-Tetrachloroethane	13	7.0	"	14.0		91.5	65-135	1.78	35	
Ethylbenzene	9.8	4.4	"	8.84		111	65-135	3.79	35	
m,p-Xylene	21	8.8	"	17.7		117	65-135	0.255	35	
o-Xylene	9.7	4.4	"	8.84		110	65-135	0.591	35	
1,1,2,2-Tetrachloroethane	14	7.0	"	14.0		99.5	65-135	4.07	35	
Surrogate: 1,2-Dichloroethane-d4	208		"	214		97.0	76-134			
Surrogate: Toluene-d8	205		"	207		99.0	78-125			
Surrogate: 4-Bromofluorobenzene	377		"	365		103	77-127			



2470 Impala Drive Carlsbad, CA 92010 760-804-9678 Phone 760-804-9159 Fax

Atlas Geo-Sampling Company Project: AG051611-11

120 Nottaway Lane Project Number: AEM BV 1396-1102 / Barking Hound Village Reported: Alpharetta, GA 30009 Project Manager: Mr. Jim Fineis 23-May-11 15:27

Notes and Definitions

Analyte DETECTED DET

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

Appendix

H&P Mobile Geochemistry, Inc. is approved as an Environmental Laboratory in conformance with the Environmental Laboratory Accreditation Program (CA) for the category of Volatile and Semi-Volatile Organic Chemistry of Hazardous Waste for the following methods

Certificate# 2741, 2743, 2579, 2754 & 2740 approved for EPA 8260 and LUFT GC/MS Certificate# 2742, 2745, & 2741 approved for LUFT Certificate# 2745 & 2742 approved for EPA 418.1

H&P Mobile Geochemistry, Inc. is approved as an Environmental Laboratory in conformance with the National Environmental Accreditation Conference Standards for the category Environmental Analysis Air and Emissions for the following analytes and methods:

1.2.4-Trichlorobenzene by EPA TO-15 & TO-14A Hexachlorobutadiene by EPA TO-15 & TO-14A 1,2,4-Trimethylbenzene by EPA TO -14A 1,2-Dichlorobenzene by EPA TO-15 & TO-14A 1,3,5-Trimethylbenzene by EPA TO -14A 1,4-Dichlorobenzene by EPA TO-15 & TO-14A Benzene by EPA TO-15 & TO-14A Chlorobenzene by EPA TO-15 & TO-14A Ethyl benzene by EPA TO-15 & TO-14A Styrene by EPA TO-15 & TO-14A Toluene by EPA TO-15 & TO-14A Total Xylenes by EPA TO-15 & TO-14A 1,1,1-Trichloroethane by EPA TO-15 & TO-14A 1,1,2,2-Tetrachloroethane by EPA TO-15 & TO-14A 1,1,2-Trichloroethane by EPA TO-15 & TO-14A 1,1-Dichloroethane by EPA TO-15 & TO-14A

1,1-Dichloroethene by EPA TO-15 & TO-14A 1,2-Dichloroethane by EPA TO-15 & TO-14A

1,2-Dichloropropane by EPA TO-15 & TO-14A

Bromoform by EPA TO-15

Bromomethane by EPA TO-15 & TO-14A Carbon tetrachloride by EPA TO-15 & TO-14A

Chloroethane by EPA TO-15 Chloroform by EPA TO-15 & TO-14A Chloromethane by EPA TO-15 & TO-14A

cis-1,2-Dichloroethene by EPA TO-15 cis-1,2-Dichloropropene by EPA TO-15 & TO-14A Methylene chloride by EPA TO -15 & TO-14A

Tetrachloroethane by EPA TO-15 & TO-14A trans-1,2-Dichloroethene by EPA TO-15 trans-1,2-Dichloropropene by EPA TO-15 & TO-14A

Trichloroethene by EPA TO-15 & TO-14A

Vinyl chloride by EPA TO -15 & TO-14A 2-Butanone by EPA TO-15

4-Methyl-2-Pentanone by EPA TO-15

Hexane by EPA TO-15 Methyl tert-butyl ether by EPA TO-15 Vinyl acetate by EPA TO-15

This certification applies to samples analyzed in summa canisters

Mobile Geochemistry Inc.

Chain of Custody Record

2470 Impala Dr., Carlsbad, CA 92010 • ph 760.804.9678 • fax 760.804.9159
 1855 Coronado Ave., Signal Hill, CA 90755 • ph 800.834.9888

Date:	
(AH&P Project #	A605-1611-11
Outside Lab	

Client: Atlas 6e	es Sampling	Com	pany	ent y st	Co	ellector: \mathcal{J}_{j}	mi	Fir	191	5	erevi		201	900	01 10	on an	1257	12.11	P	age:		of		
Client: Atlas 6e Address: 12 0 6e Alphan	Nottawa Ha LA	3000	ne		Cli	ent Project # /	AEI	MI	3V	130	16-	110	2		U.L.	Project	Conta	ct:		entein	IJIA 1	211,111	UC	
Email: Jinfine	s e atlas	- 900.6	-dn			none: 770	88	3 3	37	2	_ Fax	1 50000	100				Turn o	iround	time:	Sh	nd v	M		
Geofracker EDF: Yes No Sample Receipt Intact: Yes No Seal Intact: Yes No Seal Intact: Yes No Cold: Yes No Temperature:					NO N	//A			XY TPH gas	d ext		B X TO-15	☐ 8260B ☐ TO-15	SAM A SAM B	B T0-15	☐T0-15	☐T0-15	☐T0-15	8260B TO-15	□1,1 DFA □ OTHER	si ga	02 🗆 N2	23	
Special Instructions: UPS M & 96# 12 93T TE1 84 4020 619 Send lab report and EDD to Leona Miles					10		rs		☐ BTEX/0XY] 6 []		st 8260B		8260B S	□ 8260B	□ 8260B	□ 8260B	□ 8260B	8.	Compound 1	62	000		
Lab Work Order #E	miles@aen 105048	n-ne-	t. Con)			I # of containers	8260B Full List	8260B	8015M TPH	418.1 TRPH	VOC's: Full List	VOC's: Short List/DTSC	VOC's: SAM, 8	Naphthalene	Oxygenates	TPHv gas	Ketones	Other	Leak Check Co	Methane	Fixed Gases	CANE	VACA
Sample Name	Field Point Name	Purge Vol	Time	Date	Sample Type	Container Type	Total		SOIL	/GW				S	OIL	DIL VAPOR/AIR ANALYSIS								
BV051211-001		60 ml	2:35	5/12/11	56	Summa	1					/											234	-3.4
BV051211-002		ıı	3:10	5/12/11	ч	l r	1					1											166	-3.3
BV051211-003		41	3:38	5/14/1	1	fr	(/											346	-3.4
BV051211-004		11	4:05	5/14/1	1	47	1					V											212	-3.6
BV651711-BLANK		11		5/12/11		"	1					V											239	-3.9
						149																		
Delinquished by (Cianahua)			(company)		Descrived by	: (Signature)								9	(comp)	anu)		Data			To	ma.		
Relinquished by: (Signature) Relinquished by: (Signature)	5-13-11	A	(company)	60	Sm	(Signature)	>							(company) (company)				Date: 5-/16/11 Date:			Time:		50	
Relinquished by: (Signature) *Signature constitutes authorization to proceed			(company)			(Signature)				noeal			1.		(compo	any)		Date:			Ti	me:		

ATTACHMENT D Review of Sub-Slab Soil Gas Data Barking Hounds Village Facility Hartman Environmental Geoscience





June 13, 2011

Mr. Steven W. Hart Atlanta Environmental Management, Inc. 2580 Northeast Expressway Atlanta, GA 30345

SUBJECT: Review of Sub-Slab Soil Gas Data - Barking Hounds Village Facility

Mr. Hart:

I have reviewed the sub-slab soil gas data collected under this building on May 12, 2011 by Atlas Geosampling and analyzed by H&P Mobile Geochemistry on May 17, 2011. I have also spoken with Mr. Jim Fineis, President and owner of Atlas Geosampling regarding the sample collection protocols.

The sub-slab results for the main chemical of concern, perchloroethylene (PCE), are all very similar in concentration at all four locations sampled, ranging from 280 ug/m3 to 810 ug/m3. The equipment blank was also similar in value and surprisingly high, 530 ug/m3. As I understand from Mr. Fineis, the equipment blank sample was collected inside the building with indoor air being drawn through the collection system.

The lack of any significant variation in the sub-slab results is atypical. If the PCE measured in the equipment blank is from the indoor air, this would suggest the indoor air and sub-slab PCE values are nearly the same. This is not indicative of vapor intrusion into the building from below the slab. Further, the sub-slab soil gas also contains some common hydrocarbons which I understand are not in the groundwater. Based upon these lines of evidence, I suspect the indoor air is the likely cause of the PCE and hydrocarbons detected under the building slab.

To determine if the source is from the indoor air or from below, I suggest you collect a vertical profile of the soil gas on your property at the property border closest to the building. Collect samples at 5', 10', and 15' below ground surface (bgs). The measured concentrations, along with the concentration profile with depth, should enable a determination to be made regarding the source of PCE under the building.

Feel free to call me if you have any questions regarding this opinion or recommendation.

Blayne Bartman, Ph.D.