

Environmental Consultants and Contractors



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October 28, 2013

Mr. Max Kirschenbaum
Fundrise
1519 Connecticut Avenue, N.W.
Washington, D.C. 20036

Ref: Phase II Environmental Site Assessment
1300-1302 H Street, N.E. / 813 and 1306 13th Street, N.E.
Washington, D.C. 20002

Dear Mr. Kirschenbaum,

Environmental Consultants and Contractors, Inc., (ECC) is pleased to submit this report describing the Phase II Environmental Site Assessment (Phase II ESA) conducted at the property addressed 1300-1302 H Street, N.E., and 813 and 1306 13th Street, N.E., in Washington D.C., the *Subject Property*. ECC was authorized by Max Kirschenbaum of Fundrise to perform this Phase II ESA by way of ECC's contract dated July 29, 2013.

Background

ECC reviewed two draft Phase I Environmental Site Assessments (ESAs) of portions of the Subject Property both dated May 3, 2005, prepared by ECC, Inc. The draft Phase I ESAs, provided under separate cover, identified the following recognized environmental conditions (RECs):

- » A coal yard and filling station were previously located on the northern portion of the Subject Property. Evidence of a petroleum release was detected in 1994 as part of a soil and groundwater investigation performed by ECC. The investigation of this incident has been closed.
- » A second former filling station was located on the southeast portion of the Subject Property. Soil and groundwater quality in the location of the former gasoline station are not known.
- » A dry cleaner has been present adjacent east of the Subject Property since the 1950's. Chlorinated solvent contamination was detected in groundwater on the Subject Property, and is believed to have originated from the east-adjacent dry cleaner.

Completion of the two draft Phase I ESAs did not identify any additional potential sources besides the east-adjacent dry cleaner for the chlorinated solvent contamination.

Scope

The purpose of this Phase II ESA was to document soil and groundwater quality on the Subject Property, and included installation of six (6) direct-push (Geoprobe) borings to depths ranging up to 28 feet below grade, collection of soil and groundwater samples from the borings, collection of groundwater samples from two existing groundwater monitoring wells installed on the Subject Property in 1994, laboratory analysis of soil and groundwater samples, and preparation of this report.

The investigation specifically included:

- » Permitting of the drilling operation in accordance with District of Columbia Department of Consumer and Regulatory Affairs (DCRA) and District Department of the Environment (DDOE) regulations. Permitting included preparation of a boring installation work plan.
- » Utility clearance of the site by the public utility locator (Miss Utility) and by a private utility locator.
- » Mobilization of a GeoProbe drill rig to the Subject Property, and installation of six GeoProbe borings at the designated locations.
- » Collection of soil samples at five-foot depth intervals from the surface to the termination of each soil boring. Soil samples were screened for volatile organic compound vapors using a PhotoIonization Detector.
- » Selection of soil samples from each boring for laboratory analysis based on field screening results. Select soil samples were submitted for the following laboratory analyses:
 - Total Petroleum Hydrocarbons, Diesel Range Organics (TPH-DRO) by EPA Method 8015C;
 - Total Petroleum Hydrocarbons, Gasoline Range Organics (TPH-GRO) by EPA Method 8015C;
 - Volatile Organic Compounds (VOCs) by EPA Method 8260.
 - Polyaromatic Hydrocarbons (PAHs) by EPA method 8270.
 - Polychlorinated Biphenyls (PCBs) by EPA method 8082.
 - RCRA-8 Metals by EPA method 6020.
- » Four of the six soil borings were completed as groundwater monitoring wells. Groundwater samples were collected from three of the monitoring wells (the fourth well did not produce groundwater) and from two existing monitoring wells installed in 1994. Groundwater samples were submitted for the following laboratory analysis:
 - TPH-DRO by EPA Method 8015C;
 - TPH-GRO by EPA Method 8015C;
 - VOCs by EPA Method 8260.
- » Containerization of all investigation derived waste (IDW).
- » Preparation of this report.

Site Description and Property Use

The Subject Property is located in the northeast quadrant of the intersection of H and 13th Street, in northeast Washington, D.C. The Subject Property is located in ZIP Code area 20002, and is centered at approximately 38° 54' 01" North latitude and 76° 59' 18" West longitude. The Subject Property has approximately 60 feet of frontage on H Street, N.E., the southern property boundary, approximately 140 feet of frontage on 13th Street, N.E., the western property boundary, and approximately 95 feet of frontage on Wylie Court, N.E., the northern property boundary. District of Columbia Property Records show Lots 100 to 103 extending eastward from their west boundaries approximately 95 feet, but a chain link fence has been erected on the eastern portions of these lots (approximately 72 feet from their west boundaries) in order to provide parking and access from Wylie Court for two east-adjacent properties.

The Subject Property consists of seven lots on the southwestern portion of D.C. Square 1026, identified as Lots 97 to 103. Lots 98 and 99 are addressed 1302 and 1300 H Street, N.E., respectively. Lots 101 and 103 are addressed 1306 and 813 13th Street, N.E., respectively. Lots 97, 100, and 102 do not bear unique street addresses. The address listed for Lot 101 does not correspond to the typical street address design used by the District of Columbia; properties addressed along 13th Street, N.E., between H and I (Eye) Streets, N.E., would typically be addressed in the 800 block, and properties addressed along H Street, N.E., between 13th and 14th Streets, N.E., would be addressed in the 1300 block. Note that the address 1306 H Street, N.E., corresponds to D.C. Square 1026, Lot 96, which is occupied by the adjacent dry cleaner.

According to District of Columbia property records, Lots 97 and 98 each occupy 1,368 square feet of land, Lot 99 occupies 1,672 square feet of land, and Lots 100 to 103 each occupy 1,598 square feet of land; the Subject Property occupies a total area of 10,800 square feet (approximately 0.248 acre).

The Subject Property is improved with a D.C. Public Library kiosk, a one-story structure which occupies the southern portion of the Subject Property. The library kiosk was constructed in 1981 as the first of four porta-branch community library structures. The building is a pre-fabricated steel and plexiglass structure designed by Portastructures Industries, Inc. Limited repairs were performed to the structure in 2004, including replacing the plexiglass walls and re-painting the building.

A lawn-covered courtyard which occupies the area immediately north of the library kiosk. A small concrete patio surrounded by three benches and a concrete sidewalk are located on the central portion of the courtyard. The northern portion of the Subject Property consists of open land and was previously occupied by a coal yard and filling station. Remnants of an asphalt parking lot exist on the northernmost portion of the site.

It is ECC's understanding that the existing site structure is planned to be demolished, including removal of the floor slab. The proposed redevelopment of the Subject Property includes a multi-story residential building with a slab on grade foundation.

Phase II ESA

ECC conducted the Phase II ESA to assess soil and groundwater quality on the Subject Property which may have been impacted by historical use of the site (two gas stations and a coal yard were previously located on the site) and use of the east-adjacent property as a dry cleaner. The scope of services performed as part of this Phase II ESA conforms to the *Due Diligence Drilling Work Plan*, dated August 7, 2013, prepared by ECC and approved by the DDOE, except a monitoring well was not installed in one of the six proposed soil borings and an additional (sixth) shallow soil boring was installed.

Miscellaneous Soil Boring Permit number SB1300312 dated August 14, 2013, was issued by the District Department of Consumer and Regulatory Affairs (DCRA) for installation of the soil borings / monitoring wells. Copies of the *Due Diligence Drilling Work Plan* and the Miscellaneous Soil Boring Permit are presented in Attachment C.

Soil Boring Installation and Sampling

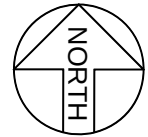
On August 16, 2013, ECC supervised the installation of four direct push soil (Geoprobe®) borings (identified as MW-01 through MW-04) to depths of 20 to 28 feet below grade, and two additional borings (SB-1 and SB-2) to depths of 20 feet and 12 feet below grade, respectively. All equipment was decontaminated prior to entering the Subject Property and between borings. Sampling and field screening activities were conducted in accordance with EPA Region III and DDOE sampling protocols. The boring locations are shown on Figure 1. Soil boring logs are provided in Attachment B.

When ECC arrived on the site on August 16, 2013, the chain-link fence at the northeast corner of the site had been knocked down, apparently by a vehicle which had driven through the fence.

Macrocore soil samples were recovered from each boring at five-foot depth intervals from the surface to the termination depth of each boring. All drilling equipment was decontaminated prior to entering the site; new acetate macrocore liners were used to obtain soil samples for each interval.

Volatile organic compound (VOC) vapor measurements of collected soil samples were obtained using a Photoionization Detector (PID, OVM, Model 580B) for field screening purposes. Each recovered soil sample was split and containerized; one portion was allowed sufficient time to volatilize (a minimum of 15 minutes per sample), after which headspace VOC vapor readings were recorded on boring log sheets. The other portion of each soil sample was retained for potential laboratory analysis. Petroleum odors were detected in boring MW-1 (at a depth of 8 feet), MW-2 (at a depth of 12 feet), and MW-3 (at a depth of 12 feet).

FIGURE 1



Rowhouses

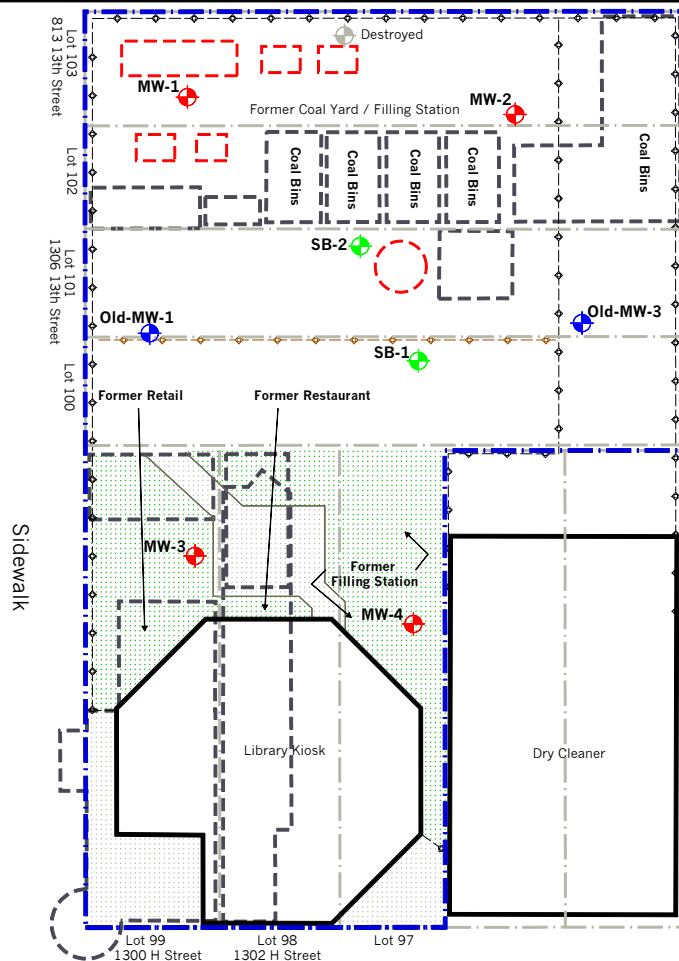
Wylie Court Apartments

Wylie Court, N.E.

Rowhouses

13th Street, N.E.

Restaurant



United Methodist Church

Sidewalk

H Street, N.E.

Church

Dance Studio

Legend

- Property Boundary
- Lot Boundary
- Curb / Roadway
- Chain-Link Fencing
- Wooden Fencing
- Existing Structure
- Former Structure
- Former UST
- Lawn
- Concrete
- Historical Monitoring Well
- Monitoring Well
- Soil Boring

TITLE:
SITE PLAN

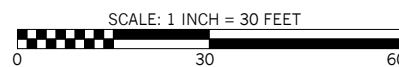
PROJECT:

1300-1302 H Street, N.E., AND 813 AND 1306 13TH STREET, N.E.
WASHINGTON, DISTRICT OF COLUMBIA

DATE:
09/10/13

DRAWN BY:
NRA

APPROVED BY:
TMH



PROJECT NUMBER:
11292

REGULATORY CASE NUMBER:
N / A

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Select soil samples were retained from each boring and submitted under Chain of Custody to Phase Separation Science (PSS), Inc., in Baltimore, Maryland, for the following laboratory analyses:

- » Total Petroleum Hydrocarbons, Diesel Range Organics (TPH-DRO) by EPA method 8015C;
- » Total Petroleum Hydrocarbons, Gasoline Range Organics (TPH-GRO) by EPA method 8015C;
- » Volatile Organic Compounds (VOCs) by EPA method 8260;
- » Polyaromatic Hydrocarbons (PAHs) by EPA method 8270;
- » Polychlorinated Biphenyls (PCBs) by EPA method 8082; and
- » RCRA-8 Metals by EPA method 6020.

According to the USGS *Geologic Map of Washington, D.C., and Vicinity*, the Subject Property is underlain by the Pleistocene-age (1.65 million until 10,000 years ago) Wicomico Formation (mapping unit Qw). The Wicomico Formation consists of gravel, sand, and silt, with local deposits of carbonaceous clay. During installation of the soil borings, black fill material, brick remnants, and other fill, and native silty soils stained black were observed at shallow depths (less than four feet) in most of the borings. The surface layer was underlain by layers of silt, sandy silt, and silty clay.

All drill cuttings were stored on-site in steel 55-gallon drums, pending laboratory analysis.

Groundwater Conditions / Groundwater Sampling

Groundwater in the Coastal Plain sediments is considered to be generally unconfined. Clay units periodically formed in the eastern portion of the terrane act as basal confining layers isolating several lower aquifers. Groundwater is stored in and transported through the semi-consolidated sediments, and the water table generally reflects areal variations in surface topography. As part of ECC's 1994 investigation, the groundwater flow direction was estimated to be toward the east-southeast. Groundwater on the property was encountered at approximately 23 feet below grade.

Four of the soil borings (MW-1 through MW-4) were completed as two-inch monitoring wells constructed of machine-slotted PVC pipe, filter sand pack, bentonite seal, and flush-mounted well covers; shallow soil borings SB-1 and SB-2 did not interface with the groundwater table and monitoring wells were not constructed in these borings. Two of three monitoring wells installed in 1994 were also sampled.

Groundwater was encountered in the monitoring wells installed as part of this investigation and in the two existing monitoring wells at depths ranging from 23.70 to 24.95 below ground surface (bgs).

ECC collected a “grab” groundwater sample from each monitoring well using a clean, disposable bailer. No free-phase petroleum or sheens were observed on the surface of the water in the wells, and no petroleum odors were sensed by ECC personnel during groundwater sampling.

The groundwater samples were submitted to PSS for the following laboratory analyses:

- » Total Petroleum Hydrocarbons, Diesel Range Organics (TPH-DRO) by EPA Method 8015C;
- » Total Petroleum Hydrocarbons, Gasoline Range Organics (TPH-GRO) by EPA Method 8015C; and
- » Volatile Organic Compounds (VOCs) by EPA Method 8260.

Due to the preliminary nature of this investigation, the groundwater monitoring wells were not surveyed during investigative field activities, and a precise groundwater flow direction was not calculated. However, based on relative groundwater depths, generalized groundwater appears to flow toward the east-southeast at a very low gradient, consistent with the 1994 estimated groundwater flow direction. ECC’s 1994 investigation calculated a groundwater flow to the east-southeast with a relatively flat average gradient of 0.0017.

Note that subsurface site conditions include uncontrolled fill material, former excavations, foundations, utility corridors, and other preferential pathways, as well as unconsolidated layers of sedimentary material. Groundwater flow paths may vary considerably from the gradients implied by the relative groundwater depths.

The transport of contaminants through the groundwater is primarily controlled by advection and dispersion. Advection, mass transport due to the flow of groundwater, is generally the primary process by which contaminants are transported through groundwater. However, in instances of relatively flat and low velocity groundwater flows, dispersion (through molecular diffusion, turbulent diffusion, and mechanical dispersion) can become a significant and sometimes predominant transport mechanism. Dispersion can result in radial and/or upgradient migration of dissolved-phase contaminants.

Vapor-Phase Contamination

VOC measurements of soil samples collected from the soil borings were obtained using a PID for field screening purposes. VOC vapors detected in soil samples ranged up to a maximum of 340 parts per million by volume (ppmv) in the sample collected from 12 to 16 feet in boring SB-1. The PID screening results are shown in Table 1.

Table 1- PID Screening Results

Screening Depth	Soil Boring ID and Date Drilled					
	MW-01	MW-02	MW-03	MW-04	SB-1	SB-2
	8/16/13	8/16/13	8/16/13	8/16/13	8/16/13	8/16/13
0.0 - 4.0	0.3	0.7	5.0	0.3	1.1	2.7
4.0 - 8.0	---	0.3	1.1	25.0	11.5	1.5
8.0-12.0	166.0	0.3	2.7	12.0	240.0	7.0
12.0-16.0	135.0	275.0	7.2	3.6	340.0	
16.0-20.0	3.4	312.0	---	6.5	137.0	
20.0 - 24.0	3.4	26.0		23.7		
24.0 -28.0	78.0	7.1		1.1		
Values shown are parts per million by volume (ppmv). --- = Sample not screened (or not recovered).						

Residual-Phase (Soil) Contamination

Laboratory analytical results of soil samples collected during this investigation are presented in Table 2 in Attachment A. Residual-phase TPH and tetrachloroethene (PCE) laboratory results are shown on Figure 2. A copy of the laboratory analytical results is provided in Attachment D. Laboratory analysis of the soil samples revealed the following:

- » Low-level TPH-DRO concentrations were detected in every sample analyzed. The detected TPH-DRO concentrations did not exceed the Tier 1 RBSL.
- » Low TPH-GRO concentrations were detected in most of the soil samples analyzed, except from boring MW-3. The detected TPH-GRO concentrations did not exceed the Tier 1 RBSL, except for the sample from MW-1 at a depth of 28 feet.
- » VOCs were detected in the deepest samples from each soil boring except MW-4 and SB-2. The highest VOC concentrations were detected in MW-1 and MW-2. The only compounds which exceeded Tier 1 RBSLs were naphthalene and ethylbenzene in the soil sample from MW-2 (at a depth of 20 feet).
- » PAHs were detected in every soil sample analyzed; the soil samples were generally collected from shallow depths. Three PAH compounds detected in the soil sample from MW-1, five PAH compounds detected in the soil sample from MW-4, and four PAH compounds detected in the soil sample from SB-2 exceeded the

FIGURE 2



Rowhouses

Wylie Court Apartments

Wylie Court, N.E.

Rowhouses

Restaurant

13th Street, N.E.

Sidewalk

United Methodist Church

Sidewalk

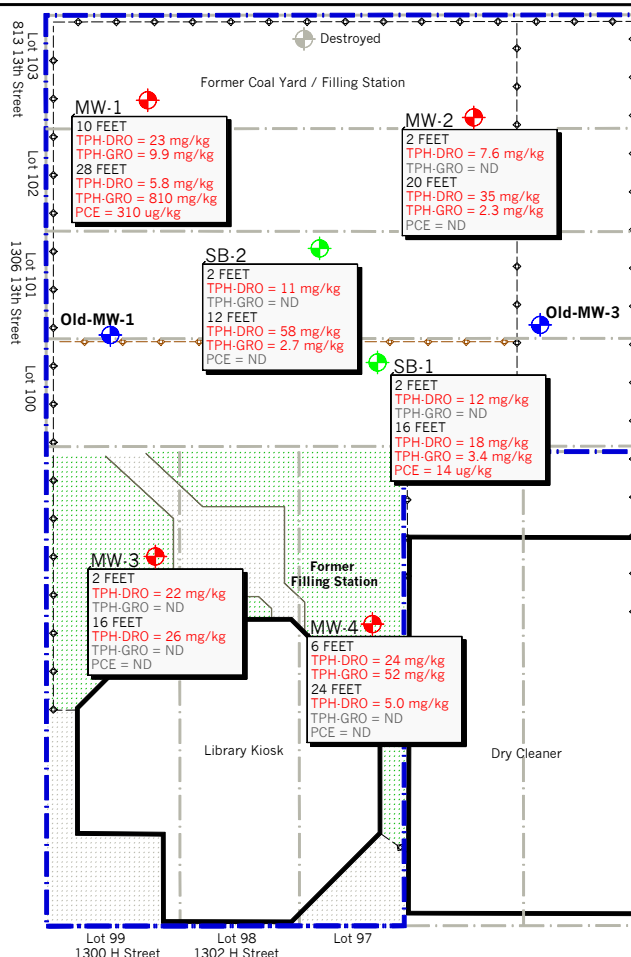
H Street, N.E.

Church

Dance Studio

Legend

- Property Boundary
- Lot Boundary
- Curb / Roadway
- Chain-Link Fencing
- Wooden Fencing
- Existing Structure
- Former Structure
- Former UST
- Lawn
- Concrete
- + Historical Monitoring Well
- + Monitoring Well
- + Soil Boring



TITLE:
RESIDUAL-PHASE TPH AND PCE LABORATORY RESULTS

DATE:
09/10/13

SCALE: 1 INCH = 30 FEET

PROJECT:
1300-1302 H Street, N.E., AND 813 AND 1306 13TH STREET, N.E.
WASHINGTON, DISTRICT OF COLUMBIA

DRAWN BY:
NRA
APPROVED BY:
TMH

PROJECT NUMBER:
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REGULATORY CASE NUMBER:
N / A



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applicable EPA RSLs. None of the detected PAH concentrations exceeded the applicable Tier 1 RBSL.

- » One PCB compound (PCB-1254) was detected in the soil samples from MW-1 and MW-3. The detected PCB concentrations exceeded the EPA RSL for PCB-1254; no Tier 1 RBSL has been assigned.
- » RCRA metals were detected in each soil sample. Arsenic and chromium concentrations detected in each sample exceeded the applicable EPA RSLs, but were generally in the range of naturally-occurring concentrations. The chromium concentration (250 ppm) detected in the soil sample from MW-4 exceeds typical naturally occurring levels; however, laboratory analysis did not speciate chromium and the detected concentration likely represents chromium III. The detected concentration is below the EPA RSL for chromium III. Lead concentrations detected in the samples were below the EPA RSL except for the lead concentration detected in the soil sample from MW-1.

The DDOE Underground Storage Tank program uses a tiered method for evaluating impacted UST sites. Tier 0 screening levels are those below which no further action would be required by the DDOE. Tier 1 Risk Based Screening Levels (RBSLs) are adopted from the Risk Based Corrective Action (RBCA) Guidance 2011. The District of Columbia developed the RBCA process to evaluate leaking underground storage tank (LUST) sites. Tier 1 RBSLs are conservative risk-based levels developed for a number of different human receptors and different pathways. In general, Tier 1 RBSLs represent contaminant concentrations below which affected media would not require corrective action under a specified site use scenario. Tier 1 RBSLs are the most recent and applicable standards for case closure or *No Further Action* (NFA) determination.

Dissolved-Phase (Groundwater) Contamination

Laboratory analysis of the groundwater samples detected low to moderate concentrations of TPH-DRO and TPH-GRO in the groundwater samples, except a TPH-DRO concentration was not detected in the groundwater sample from Old-MW-1. The detected TPH-DRO and TPH-GRO concentrations were below the applicable Tier 1 RBSLs. Low benzene concentrations ranging up to 24 micrograms per liter ($\mu\text{g/L}$, equivalent to parts per billion, ppb) were detected in groundwater samples from MW-4 and Old-MW-3. The detected benzene concentrations were at or above the EPA MCL but below the Tier 1 RBSL.

Chlorinated solvent compound concentrations were detected in each groundwater sample and were generally high. PCE was detected at concentrations ranging from 140 $\mu\text{g/L}$ at MW-2 to 53,000 $\mu\text{g/L}$ at MW-4, located closest to the off-site dry cleaner. PCE concentrations were detected at two orders of magnitude less in the remaining site monitoring wells, compared to MW-4. Trichloroethene (TCE), a degradation compound of PCE, was detected in each groundwater

sample at concentrations ranging from 46 µg/L to 1,500 µg/L (at Old-MW-3). PCE and TCE concentrations exceeded the applicable EPA MCL (both 5 µg/L).

Dissolved-phase laboratory analytical results are presented in Table 3 in Attachment A. A copy of the laboratory analytical report is provided in Attachment D. Dissolved-phase TPH, PCE, and TCE laboratory results with PCE and TCE concentration contours are shown on Figure 3 and Figure 4 (a color legend is provided as Figure 5).

DDOE Tier 0 screening levels and Tier 1 RBSLs for groundwater are also presented in Table 3. Tier 0 screening levels are equivalent to EPA Maximum Contaminant Levels (MCLs) and are legally enforceable maximum permissible levels for contaminants in drinking water delivered to users of public water supply systems. The EPA MCLs are sometimes used as guidance criteria by regulatory officials to determine action levels for groundwater contamination assessments.

Conclusions and Recommendations

Conclusions

This Phase II ESA revealed low-level petroleum contamination, PAH contamination, PCB contamination, and lead contamination in soil at most depth intervals, and moderate VOC contamination in soil at the water table depth. Moderate to high concentrations of chlorinated solvents were detected in groundwater. The highest PCE concentrations were detected in MW-4, located closest to the dry cleaner, suggesting a release of dry cleaning fluid from the adjacent dry cleaner has occurred. Historical site use as two former gas stations and a former coal yard would not suggest the Subject Property is the source of the chlorinated solvents. Low to moderate concentrations of petroleum compounds were detected in groundwater and are likely attributed to past use of the site as a gas station.

The detected contaminant concentrations do not appear to present an unacceptable risk under the proposed residential use scenario. Most of the Subject Property will be redeveloped with a slab-on-grade building, and any soil excavation that may occur will be in accordance with an Impacted Material Management Plan (IMMP). Proper management of impacted soils during excavation and installation of engineering controls (vapor barriers and vapor extraction systems) will mitigate risk of vapor intrusion into the proposed structure.

Redevelopment Recommendations

The Subject Property was previously improved with two gasoline stations and was previously used as a coal yard. It is ECC's opinion that any USTs utilized by the former gasoline station were likely discovered and removed during site work associated with construction of the existing building. However, the potential for orphaned USTs or petroleum-impacted soil to be encountered during redevelopment exists.

FIGURE 3



Rowhouses

Wylie Court Apartments

Wylie Court, N.E.

Rowhouses

Restaurant

13th Street, N.E.

Sidewalk

United Methodist Church

Sidewalk

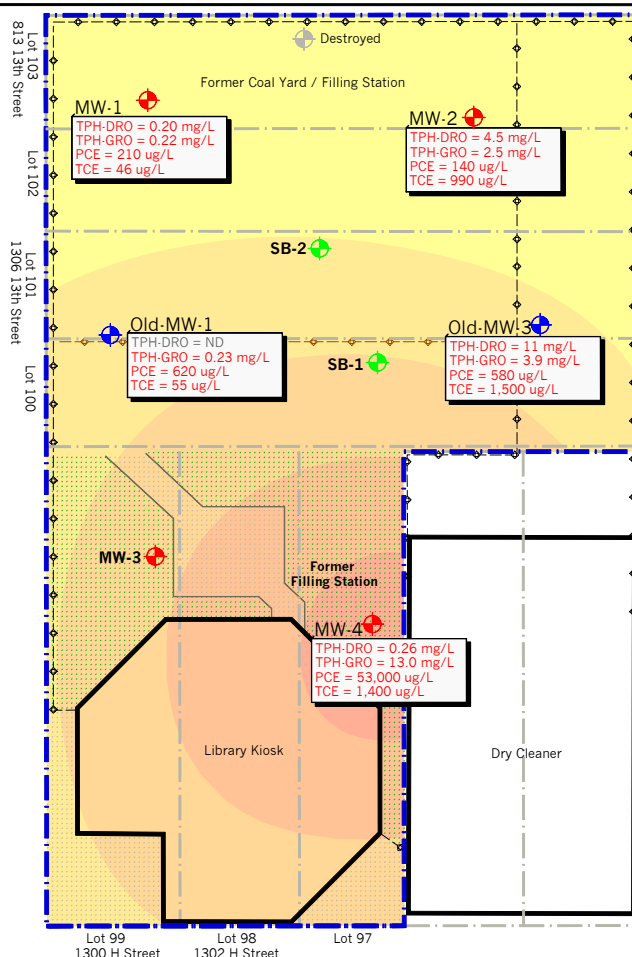
H Street, N.E.

Church

Dance Studio

Legend

- Property Boundary
- Lot Boundary
- Curb / Roadway
- ◆— Chain-Link Fencing
- ◆— Wooden Fencing
- Existing Structure
- Former Structure
- Former UST
- Lawn
- Concrete
- ◆ Historical Monitoring Well
- ◆ Monitoring Well
- ◆ Soil Boring



TITLE:
DISSOLVED-PHASE TETRACHLOROETHENE (PCE) CONTOURS

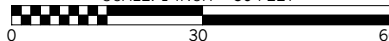
PROJECT:
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DATE:
09/10/13

DRAWN BY:
NRA

APPROVED BY:
TMH

SCALE: 1 INCH = 30 FEET



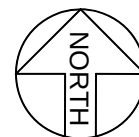
PROJECT NUMBER:
11292

REGULATORY CASE NUMBER:
N / A



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Contractors, Inc.

FIGURE 4



Rowhouses

Wylie Court Apartments

Wylie Court, N.E.

Rowhouses

Restaurant

13th Street, N.E.

Sidewalk

United Methodist Church

Sidewalk

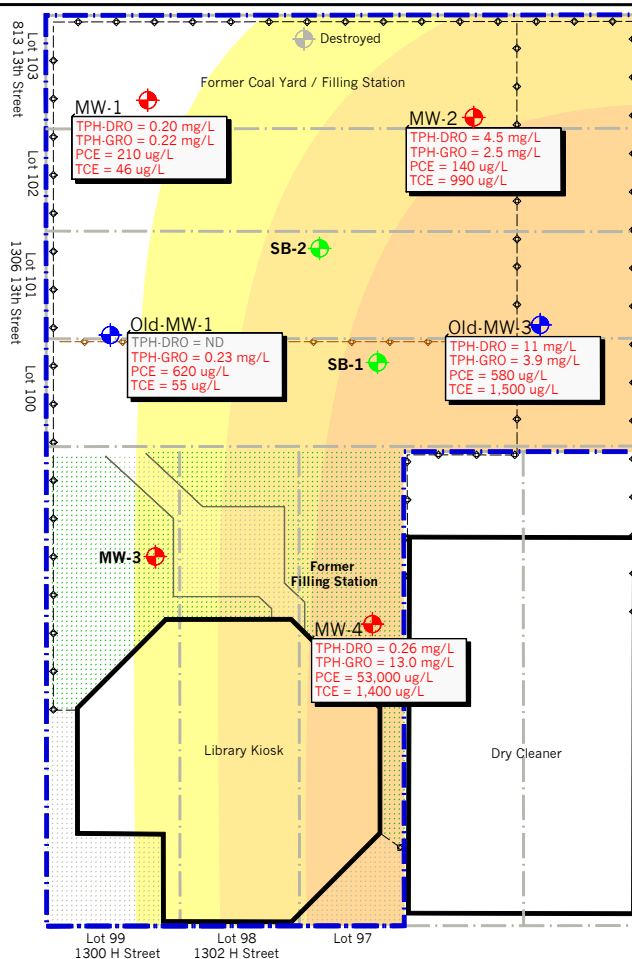
H Street, N.E.

Church

Dance Studio

Legend

- Property Boundary
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- ◇- Chain-Link Fencing
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- Existing Structure
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- Lawn
- Concrete
- ⊕ Historical Monitoring Well
- ⊕ Monitoring Well
- ⊕ Soil Boring



TITLE:
DISSOLVED-PHASE TRICHLOROETHENE (TCE) CONTOURS

DATE:
09/10/13

SCALE: 1 INCH = 30 FEET

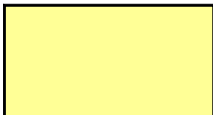
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COLOR LEGEND FOR CONTAMINANT FIGURES

COLOR	DISSOLVED PCE CONCENTRATION (ug/L)
	100 - 1,000
	500 - 1,000
	1,000 - 10,000
	10,000 - 50,000
	50,000 - 250,000
	250,000 - 500,000

TITLE:
COLOR LEGEND FOR CONTAMINANT CONTOURS

DATE:
8/31/12

NO SCALE

PROJECT:
1300-1302 H STREET, N.E., AND 813 & 1306 13TH STREET, N.E.
WASHINGTON, DISTRICT OF COLUMBIA

DRAWN BY:
N. ALLEN

REVIEWED BY:
J. SWEENEY

PROJECT NUMBER:
11292

REGULATORY CASE NUMBER:
N/A


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ECC recommends including a contingency budget for incremental costs which may be associated with disposal of petroleum-impacted and solvent-impacted soil and removal and disposal of orphaned USTs. If USTs or petroleum-impacted soil are discovered during removal of the slab of the existing structure, the extent of contamination can be assessed at that time. Any contaminated soil excavated to construct the planned structure must be handled and disposed of in accordance with DDOE regulations.

An Impacted Material Management Plan (IMMP) should be prepared prior to construction to outline identification, classification, sorting and disposal of contaminated material.

An Environmental Health and Safety Plan (EHASP) should be prepared prior to construction to document and negate risks to worker and area resident health and safety during excavation. The plan should include a description of environmental monitoring and construction oversight activities to be performed during excavation.

Prior to installation of the concrete slab of the proposed structure, ECC recommends installation of a vapor barrier and possibly a sub-slab depressurization / soil vapor extraction system (based on design of the building) to mitigate the potential for vapor intrusion into the proposed structure by the detected contamination in soil and groundwater. Soil samples should be collected prior to installation of the vapor barrier to document soil quality beneath the proposed structure.

Based on the depth to groundwater (23 to 25 feet) and the planned excavation depth to accommodate a multi-story residential building with a slab on grade foundation, dewatering will not be required. If construction dewatering of groundwater or rainwater is necessary for any reason, ECC recommends construction-generated water be evaluated and discharged in accordance with appropriate discharge permitting requirements.

If future geotechnical investigations will be performed at the Subject Property, ECC recommends consideration of collecting additional environmental soil and groundwater samples for laboratory analysis.

Limitations

The opinions and recommendations provided are based upon the type and extent of ECC's assessment. In conducting this investigation, our professional opinions and judgments have been made based upon the information gathered, our experience in the area with similar projects, and in accordance with generally accepted professional environmental practice under similar circumstances. The information presented is based upon the presumption that existing site soil and groundwater conditions do not deviate appreciably from those observed and described during the subsurface sampling performed as part of this investigation. Site soil and groundwater conditions are representative of conditions at the specified location and on the specific dates on which they were observed. Note that the soil borings were installed outside of the footprint of the existing

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1300-1302 H Street, N.E. / 813 and 1306 13th Street, N.E.
October 28, 2013

building, and this investigation does not address soil quality beneath the existing structure. The passage of time may result in changing conditions at the site.

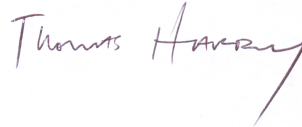
ECC's recommendations are based on the nature of the investigation. Should additional information become available with regard to site history or future planned use, ECC reserves the right to alter its recommendations regarding additional site activities and/or remedial activities.

If you have any questions or comments regarding this information, please feel free to contact this office at 703-327-2900.

Sincerely,
for ECC, Inc.



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attachments