

**REPORT ON  
ASTM PHASE I ENVIRONMENTAL SITE ASSESSMENT  
WITH LIMITED PHASE II SUBSURFACE SAMPLING  
EIN PROPERTY AT SQUARE 0605, LOT 0007  
1712 2<sup>ND</sup> STREET, SWASHINGTON, D.C.**

by

**Haley & Aldrich, Inc.  
McLean, Virginia**

for

**McKissack & McKissack  
Washington, DC**

**File No. 40223-002  
23 October 2013**



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23 October 2014  
File No. 40223-002

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Attention: James Beall  
Senior Project Manager

Subject: ASTM Phase I Environmental Site Assessment and Limited Subsurface Sampling  
Ein Property Parcel at Buzzard Point, Square 0605, Lot 0007  
Washington, D.C.

Ladies and Gentlemen:

The enclosed report presents the results of a Phase I environmental site assessment (Phase I assessment) with limited Phase II subsurface sampling conducted at the above-referenced Ein Property (Square 0605, Lot 0007) in Southwest Washington, D.C. (herein referred to as the "subject site"). A Phase I assessment was conducted by Haley & Aldrich, Inc. (Haley & Aldrich) for seven parcels at Buzzard Point proposed for redevelopment as a professional soccer stadium, in accordance with the subcontract agreement between McKissack & McKissack and Haley & Aldrich, dated 9 July 2013 and executed 22 July 2013 ("Agreement"). This report was prepared in response to a request from Mr. James Beall of McKissack & McKissack to provide a separate stand-alone Phase I assessment for the subject site. The results of limited Phase II subsurface sampling, performed to evaluate the potential impact of "recognized environmental conditions" (RECs), are also included in this report.

Our conclusions regarding the presence and potential impact of RECs on the subject site are intended to help the user evaluate the "business environmental risk" associated with the subject site, as defined in the ASTM E 1527-05 Standard and discussed in Section 1.1 of this report.

Thank you for the opportunity to perform these services for you. Please do not hesitate to contact us if you have any questions or comments.

Sincerely yours,  
HALEY & ALDRICH, INC.

Karin S. Holland  
Senior Technical Specialist

David A. Schoenwolf, P.E.  
Senior Vice President

Enclosures

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**REPORT ON  
ASTM PHASE I ENVIRONMENTAL SITE ASSESSMENT AND LIMITED SUBSURFACE  
SAMPLING  
EIN PARCEL AT BUZZARD POINT, SQUARE 0605, LOT 0007, WASHINGTON, DC**

by

**Haley & Aldrich, Inc.  
McLean, Virginia**

The undersigned declare the following:

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in 40 CFR Part 312, §312.10.

We have the specific qualifications based on education, training, and experience to assess the nature, history, and setting of the subject site and “develop opinions and conclusions regarding conditions indicative of releases or threatened releases.” We have developed and performed the “all appropriate inquiries” (AAI) in conformance with the standards and practices set forth in 40 CFR Part 312.

**Karin Holland  
Senior Technical Specialist**

**David A. Schoenwolf, P.E.  
Senior Vice President**

for

**McKissack & McKissack, Inc.  
Washington, DC**

**File No. 40223-002  
October 2014**

## **EXECUTIVE SUMMARY**

Haley & Aldrich, Inc. (Haley & Aldrich) performed a Phase I environmental site assessment (Phase I assessment) of the Ein parcel at Buzzard Point, Square 0605, Lot 0007 (herein referred to as the “subject site”) in Washington, D.C. The scope of work is described and conditioned by the subcontract agreement between McKissack & McKissack and Haley & Aldrich, dated 9 July 2013 and executed 22 July 2013. As indicated in the Agreement, this Phase I assessment was performed in conformance with the scope and limitations of the American Society for Testing and Materials (ASTM) E 1527-05 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM E 1527-05 Standard) as referenced in 40 Code of Federal Regulations (CFR) Part 312 [the All Appropriate Inquiries (AAI) Rule]. Deviations from this Standard, and/or data gaps and their significance are described in Section 1.5 of this report. Limited Phase II subsurface sampling was also conducted to evaluate issues identified during the Phase I portion of the assessment. Our conclusions are intended to help the user evaluate the “business environmental risk” associated with the subject site, as defined in the ASTM E 1527-05 Standard and discussed in Section 1.1 of this report.

The subject site is used to store and refurbish bicycles for the Capital Bikeshare Program operated by Alta Bicycle Share, Inc.

The objective of a Phase I assessment is to identify known and suspect “recognized environmental conditions” (RECs), historical RECs (HRECs), and *de minimis* conditions associated with the subject site, as defined in the ASTM E 1527-05 Standard and in Section 1.1 of this report. The objective of the limited Phase II subsurface sampling is to provide a preliminary evaluation of RECs identified during the Phase I portion of the assessment, including order of magnitude cost and schedule impacts on the proposed development.

The ASTM E 1527-05 Standard requires an environmental professional’s opinion of the potential impacts of RECs, HRECs, and *de minimis* conditions identified on a site during a Phase I assessment. Our opinion is rendered with respect to a REC’s potential (high, medium, or low) to require remedial response based on prevailing agency requirements and our understanding that the subject site is one of seven parcels being evaluated for potential redevelopment as a professional soccer stadium. Our opinion regarding a REC’s potential impact on the subject site (high, medium, low, or unknown) is based on the scope of our work, the information obtained during the course of our work, the conditions prevailing at the time our work was performed, the applicable regulatory requirements in effect at the time our work was performed, and/or our experience evaluating similar sites, and our understanding of the client’s intended use for the subject site.

No data gaps were identified for this report.

## **RECOGNIZED ENVIRONMENTAL CONDITIONS**

The ASTM E 1527-05 Standard defines a REC as “the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property.” A material threat is defined by the ASTM E 1527-05 Standard as “a physically observable or obvious threat which is reasonably likely to lead to a release that, in the opinion of the environmental professional, is threatening and might result in impact to public health or the environment.”

This Phase I assessment has revealed ten RECs. Details regarding the nature of these RECs and our opinion regarding potential impacts are provided below.

### **KNOWN RECOGNIZED ENVIRONMENTAL CONDITIONS**

Consistent with ASTM E 1527-05 Section 12.5 (Report Format), and for the purposes of this assessment, those RECs identified as being present with respect to the subject site are referred to as Known Recognized Environmental Conditions (KRECs). One KREC has been identified on the subject site based on the limited Phase II subsurface sampling results.

**KREC #1:** Soil and groundwater petroleum impacts assumed to be from off-site source  
**Potential Impact:** High  
**Explanation:** A soil sample obtained from test boring GTW-605-7-2 (see Figure 3) collected by Haley & Aldrich from beneath the eastern portion of the subject site revealed several PAHs above the United States Environmental Protection Agency (EPA) Residential Screening Level (RSL) for residential exposure. Furthermore, arsenic was reported at a concentration of 8.2 milligrams per kilogram (mg/kg) in GTW-605-7-2 at a depth of 29 feet below ground surface (bgs), above the EPA residential RSL of 0.67 mg/kg. In addition, free-phase oil was observed in groundwater in well GTW-605-7-2 from a depth of 7.6 feet bgs to 20.9 feet bgs. Total Petroleum Hydrocarbons-Diesel Range Organics (TPH-DRO) were measured at a concentration of 24.6 milligrams per liter (mg/L) in groundwater at this location, exceeding the DC Tier 1 Surface & Groundwater Standards of 3.57 mg/L.

### **SUSPECT RECOGNIZED ENVIRONMENTAL CONDITIONS**

Consistent with ASTM E 1527-05 Section 12.5 (Report Format), and for the purposes of this assessment, those RECs that have been identified as being likely present with respect to the subject site are referred to as Suspect Recognized Environmental Conditions (SRECs). The Phase I assessment identified six SRECs.

#### **Suspect Recognized Environmental Conditions**

The following SRECs were observed on the Super Salvage property, Square 0605, Lot 0802 adjacent to the east side of the subject site during a site visit by Haley & Aldrich for the comprehensive Phase I assessment of Buzzard Point in August 2013.

**SREC #1:** Potentially unlined/unpaved sump at Square 0605, Lot 0802  
**Potential Impact:** High  
**Explanation:** On-site stormwater and spills are captured and pumped to a sump in the southwestern portion of the lot before being disposed off-site by a licensed contractor. The sump contained large quantities of oily liquid during the subject site visit and it was not possible to ascertain whether the sump was lined and/or confirm the integrity of the lining. A potential therefore exists for hydrocarbons to migrate from the sump to the underlying soil and groundwater.

**SREC #2:** Heavy staining of concrete at Super Salvage Inc., 1711 1<sup>st</sup> Street SW  
**Potential Impact:** Low  
**Explanation:** During the site visit to this property, heavy concrete staining was observed at many locations. The concrete was in moderate to good condition where visible. In other areas, for example the area surrounding the sump's pump, the staining was too thick to confirm the integrity of the concrete. A potential therefore exists for hydrocarbons to migrate to underlying soil and groundwater.

**SREC #3:** Oil layer in secondary containment under aboveground storage tanks (ASTs) at Super Salvage Inc., 1711 1<sup>st</sup> Street SW  
**Potential Impact:** Low  
**Explanation:** A thick layer of oil was observed under the bottom of the AST tanks in the eastern portion of this property. It is understood that the flooring of the containment is paved with concrete. However, the integrity of the concrete could not be confirmed. A potential therefore exists for hydrocarbons to migrate to underlying soil and groundwater.

**SREC #4:** Concrete staining in area of an AST at Super Salvage Inc., 1711 1<sup>st</sup> Street SW  
**Potential Impact:** Low  
**Explanation:** Concrete staining on paving next to an AST was observed in the northern portion of this property. The concrete paving was in relatively good condition. However a large quantity of waste, including wood, metal and tires, had been dumped immediately adjacent to the AST preventing Haley & Aldrich representatives from confirming the condition of the concrete beneath this waste. A potential exists for oil to migrate through the concrete to underlying soil and groundwater.

Two additional SRECs have been identified on the Akridge parcel, Square 0607, Lot 0013, located adjacent to the south side of the subject site, from a limited Phase II subsurface investigation performed by Haley & Aldrich in December 2013.

**SREC #5:** Minor groundwater contamination associated with chlorinated solvents  
**Potential Impact:** Low  
**Explanation:** Advantage Environmental Consultants, LLC (AEC) detected chlorinated solvents (tetrachloroethylene, trichloroethylene [TCE], 1,2-dichloroethane, and vinyl chloride[VC]) in a groundwater sample collected near the southeast corner of the property during a Phase II assessment conducted in 2005 as part of a previous assessment. The source of the chlorinated solvents is not known; however, Geomatrix, Inc. indicated an "asphalt pit" in this area of the subject site, as shown on Figure 3 of their Phase II assessment report completed in 1990. Chlorinated solvents detected in groundwater may also be due to migration from an unknown source upgradient from the property. A groundwater sample collected by Haley & Aldrich in this area of the site confirmed the presence of minor contamination associated with chlorinated solvents, including relatively low concentrations of TCE and VC (43.9 and 38 micrograms per liter [ $\mu\text{g/L}$ ], respectively). The VC concentration exceeds the EPA Region III Risk-Based Screening Level (SL) for residential exposure via ingestion, which may not be applicable to the subject site, since groundwater is not a source of drinking water. The extent of impact is not known, although

volatile organic compounds were reportedly not detected in groundwater samples collected by AEC at several other locations in 2005, suggesting the extent may be limited to the southeast corner of the subject site. However, due to the tidal nature of underlying groundwater, a potential exists for these hydrocarbons to have migrated to the subject site.

**SREC #6:** Heavy staining near floor drains in the on-site storage building  
**Potential Impact:** Low  
**Explanation:** Heavy staining of the concrete floor in the on-site storage building, possibly caused by hydrocarbons was observed immediately surrounding two floor drains, one in the northwestern portion and a second in the southeastern portion of the building. Although no cracks were apparent in the concrete in the areas where staining was observed, it is unknown whether the source of the stains has also migrated into these floor drains or where the floor drains discharge. In addition, the source of the staining could have penetrated the concrete floor. A potential therefore exists for apparent hydrocarbon spills or leaks to have migrated to the underlying soil and groundwater.

### **HISTORICAL RECs**

The ASTM E 1527-05 Standard defines an HREC as an environmental condition “which in the past would have been considered a recognized environmental condition, but which may or may not be considered a recognized environmental condition currently.”

This Phase I assessment has revealed the following three HRECs.

**HREC #2:** LUST case # 92076 at the subject site is associated with a gasoline LUST that historically impacted soil and groundwater under the site. The status of the LUST release is listed as closed. Based on its status, impacts from the LUST do not present a threat to human health or the environment under current conditions and it is unlikely that the LUST will require additional regulatory action.

**HREC #2:** A 20,000 gallon gasoline LUST (case # 93094) at Square 0607, Lot 0013, immediately adjacent to the south of the subject site, historically impacted soil and groundwater and was reported in August 1993. The LUST case received regulatory closure in May 1994. Based on its status, impacts from the LUST do not present a threat to human health or the environment under current conditions and it is unlikely that the LUST will require additional regulatory action.

**HREC #3:** LUST case # 96030 at Square 0605, Lot 0802, immediately adjacent to the east of the subject site, and related to a tank containing gasoline was reported to be impacting soil and was granted regulatory closure. Based on its status and impacts being limited to soil, impacts from the LUST do not present a threat to human health or the environment under current site conditions and it is unlikely that the LUST will require additional regulatory action.

### **DE MINIMIS CONDITIONS**

The ASTM E 1527-05 Standard defines *de minimis* conditions as those conditions which “do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.” The ASTM

E 1527-05 Standard notes that “conditions determined to be *de minimis* are not recognized environmental conditions.”

This Phase I assessment did not reveal any *de minimis* conditions.

## SUMMARY AND RECOMMENDATIONS

In summary, several RECs were identified during the comprehensive Buzzard Point Phase I assessment in August 2013 and subsequent Phase II sampling. Limited Phase II subsurface sampling described in this report did not delineate the extent of petroleum and metal impacts detected in soil or groundwater at the subject site, and based on the concentrations detected, it is our opinion that additional regulatory action may be required under current conditions at the subject site.

If excavation and construction dewatering are necessary for subject site development, then proper handling of soil and groundwater may be required. Groundwater contaminated by diesel and chlorinated solvents detected in the eastern portion of the site may require treatment prior to discharge or off-site disposal. If a deep excavation is required for construction of the proposed stadium (i.e. subsurface parking garage) in this area of the subject site that requires long-term dewatering, then a treatment system may be required, along with appropriate maintenance, permitting, and monitoring.

We recommend developing a site-specific health and safety plan and a soil/groundwater management plan to address proper handling of excavated soil and pumping of groundwater. Excavated soil may require characterization and treatment/off-site disposal. The District Department of the Environment (DDOE) may require submission of a Work Plan to document how the developer will comply with applicable standards.

Schedule impacts on the proposed development associated with the recommended tasks range from 3.5 to 6.5 months, depending upon DDOE review and approval. Potential order of magnitude cost impacts from the identified RECs on the proposed development range from \$250,000 to \$2,125,000 (see Table III for assumptions regarding these order of magnitude costs). **Note that these cost ranges assume additional assessment will be required and the excavation of up to 30,000 tons of soil (we have assumed that up to 15,000 tons will be managed as non-hazardous waste soil at a permitted solid waste management facility) and the operation of a groundwater treatment system for up to 3 months during the proposed development.** We have not included costs for the long term dewatering system. We have assumed the site will be excavated to a depth of 20 feet.

The remainder of this report contains additional information regarding the Phase I assessment, the resulting findings summarized above, and limitations affecting this report.



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## 1. INTRODUCTION

This report presents the results of a Phase I environmental site assessment (Phase I assessment) and limited Phase II subsurface sampling conducted at the Ein parcel at Buzzard Point (Square 0605, Lot 0007) in Washington, D.C. (herein referred to as the “subject site”). A Phase I assessment was conducted by Haley & Aldrich, Inc. (Haley & Aldrich) for seven parcels at Buzzard Point proposed for redevelopment as a professional soccer stadium, in accordance with the subcontract agreement between McKissack & McKissack and Haley & Aldrich, dated 9 July 2013 and executed 22 July 2013 (“Agreement”, Appendix A). This report was prepared in response to a request from Mr. James Beall of McKissack & McKissack to provide a separate stand-alone Phase I assessment for the subject site. Limited Phase II subsurface sampling was also conducted on the subject site in accordance with an agreement dated 28 October 2013 between McKissack & McKissack and Haley & Aldrich and executed 30 October 2013 (“Agreement”, Exhibit 1) to McKissack & McKissack. This Phase I assessment was performed in conformance with the scope and limitations of the American Society of Testing and Materials (ASTM) E 1527-05 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM E 1527-05 Standard) to comply with 40 Code of Federal Regulations (CFR) Part 312 (the All Appropriate Inquiries [AAI] Rule).

### 1.1 Objective

The objective of a Phase I assessment is to identify known and suspect “recognized environmental conditions” (RECs), historical RECs (HRECs), and *de minimis* conditions associated with the subject site by evaluating subject site history, existing observable conditions, current subject site use, and current and former uses of adjoining properties as well as potential releases at surrounding properties that may impact the subject site. RECs are defined in the ASTM E 1527-05 Standard as “the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water at the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.” A material threat is defined by the ASTM E 1527-05 Standard as “a physically observable or obvious threat which is reasonably likely to lead to a release that, in the opinion of the environmental professional, is threatening and might result in impact to public health or the environment.”

Consistent with ASTM E 1527-05 Section 12.5 (Report Format), and for the purposes of this assessment, those RECs identified as being present with respect to the subject site are referred to as Known Recognized Environmental Conditions (KRECs), and those RECs identified as being likely present with respect to the subject site are referred to as Suspect Recognized Environmental Conditions (SRECs). The ASTM E 1527-05 Standard defines HRECs as environmental conditions “which in the past would have been considered a recognized environmental condition, but which may or may not be considered a recognized environmental condition currently.”

The objective of the limited Phase II subsurface sampling was to provide a preliminary evaluation of RECs identified during the Phase I portion of the assessment, including order of magnitude cost and schedule implications on the proposed development. Our conclusions are intended to help the user evaluate the “business environmental risk” associated with the subject site, defined in the

ASTM E 1527-05 Standard as “a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in this practice. Consideration of business environmental risk issues may involve addressing one or more non-scope considerations...”

The completion of this Phase I assessment is only one component of the process required to satisfy the AAI Rule. In addition, the user must adhere to a set of user responsibilities as defined by the ASTM E 1527-05 Standard and the AAI Rule. User responsibilities are discussed in section 5.3 of this report. A user seeking protection from Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) liability as an innocent landowner, bona fide prospective purchaser, or contiguous property owner must complete all components of the AAI process in addition to meeting ongoing obligations. AAI components, CERCLA liability relief, and ongoing obligations are discussed in the AAI Rule and in Appendix XI of the ASTM E 1527-05 Standard.

## **1.2 Site Identification**

The subject site maintains and stores bicycles for the Capital Bikeshare Program. The subject site is bounded on the north by a lot reportedly owned by Akridge and used for truck parking, a salvage yard to the east, S Street SW to the south and 2<sup>nd</sup> street to the west, as shown on Figures 1 and 2.

## **1.3 Scope of Services**

Haley & Aldrich performed the following scopes of service to complete this Phase I assessment. These services were performed either by, or under the direct supervision of, an environmental professional as defined by the AAI Rule.

1. Conducted visual observations of site conditions, and of abutting property use, to evaluate the nature and type of activities that have been or are being conducted at and adjoining to the subject site, in terms of the potential for release or threat of release of hazardous substances or petroleum products.
2. Reviewed federal, state, tribal, and local environmental database information within the ASTM-specified distance from the subject site using a database service to access records. Used 7.5-minute topographic maps to evaluate the subject site’s physical setting.
3. Reviewed District environmental files pertaining to the subject site and nearby sites with the potential to impact the subject site.
4. Reviewed previous reports prepared for the subject site.
5. Reviewed the following sources of historical use information: Sanborn maps, aerial photographs and topographic maps.
6. Contacted District agencies regarding the subject site and surrounding properties and structures.
7. Interviewed the key site manager and property tenant representatives.
8. Performed limited Phase II subsurface sampling and analysis.

9. Interpreted the information and data assembled as a result of the above work tasks, and formulated conclusions regarding the potential presence and impact of RECs, including HRECs.

#### **1.4 Non-Scope Considerations**

The ASTM E 1527-05 Standard includes the following list of “additional issues” that are non-scope considerations outside of the scope of the ASTM Phase I assessment practice: asbestos-containing materials, radon, lead-based paint, lead in drinking water, wetlands, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, bio-agents, and mold. These items were not included in this Phase I assessment of the subject site.

A limited assessment of the presence of polychlorinated biphenyls (PCBs) is included in the ASTM work scope. Accordingly, our assessment of the presence of PCBs is limited to those potential sources specified in the ASTM E 1527-05 Standard as “electrical or hydraulic equipment known or likely to contain PCBs...to the extent visually and or physically observed or identified from the interview or records review.”

#### **1.5 Exceptions and Deviations**

##### **1.5.1 Deviations**

Haley & Aldrich completed this Phase I assessment in substantial conformance with the ASTM E 1527-05 Standard. In our opinion, no additions were made to or deviations and deletions made from the ASTM work scope in completing this Phase I assessment.

##### **1.5.2 Data Gaps**

No data gaps were identified for this report.

##### **1.5.3 Limitations**

Our work for this project was performed in accordance with the standards and practices set forth in 40 CFR Part 312 and is consistent with the ASTM E 1527-05 Standard for Phase I Environmental Site Assessments. Several organizations other than ASTM, such as professional associations ASFE and AGWSE, have also developed guidelines or standards for environmental site assessments. The Phase I assessment presented in this report may vary from the specific guidelines or standards required by other organizations.

This Phase I assessment was prepared pursuant to an Agreement dated 9 July 2013 between McKissack & McKissack and Haley & Aldrich and executed 22 July 2013, which Agreement is attached hereto and is made a part of this report. The limited Phase II subsurface sampling was performed pursuant to an Agreement dated 28 October 2013 between McKissack & McKissack and Haley & Aldrich and executed 30 October 2013. All uses of this report are subject to, and deemed accepting of, the conditions and restrictions contained in these Agreements. The observations and conclusions described in this report are based solely on the Scope of Services provided pursuant to these Agreements. Haley & Aldrich has not performed any additional

observations, investigations, studies, or other testing not specified in these Agreements. Haley & Aldrich shall not be liable for the existence of any condition the discovery of which would have required the performance of services not authorized under these Agreements.

This report is prepared for the exclusive use of McKissack & McKissack and their prime contract holder, the District of Columbia Department of General Services (DGS) in connection with the proposed development of the subject site. There are no intended beneficiaries other than McKissack & McKissack. Haley & Aldrich shall owe no duty whatsoever to any other person or entity on account of the Agreements or the report. Use of this report by any person or entity other than McKissack & McKissack or the DGS for any purpose whatsoever is expressly forbidden unless such other person or entity obtains written authorization from McKissack & McKissack and from Haley & Aldrich. Use of this report by such other person or entity without the written authorization of McKissack & McKissack and Haley & Aldrich shall be at such other person's or entity's sole risk, and shall be without legal exposure or liability to Haley & Aldrich.

Use of this report by any person or entity, including by McKissack & McKissack, for a purpose other than for with the proposed development of the subject site is expressly prohibited unless such person or entity obtains written authorization from Haley & Aldrich indicating that the report is adequate for such other use. Use of this report by any person or entity for such other purpose without written authorization by Haley & Aldrich shall be at such person's or entity's sole risk and shall be without legal exposure or liability to Haley & Aldrich.

This report reflects subject site conditions observed and described by records available to Haley & Aldrich as of the date of report preparation. The passage of time may result in significant changes in subject site conditions, technology, or economic conditions, which could alter the findings and/or recommendations of the report. Accordingly, McKissack & McKissack and any other party to whom the report is provided recognize and agree that Haley & Aldrich shall bear no liability for deviations from observed conditions or available records after the time of report preparation.

Use of this report by any person or entity in violation of the restrictions expressed in this report shall be deemed and accepted by the user as conclusive evidence that such use and the reliance placed on this report, or any portions thereof, is unreasonable, and that the user accepts full and exclusive responsibility and liability for any losses, damages, or other liability which may result.

## **2. SITE DESCRIPTION**

### **2.1 Site Ownership and Location**

#### **2.1.1 Name of Site Owners**

Mark Ein owns the subject site.

#### **2.1.2 Name of Site Operator**

Alta Bicycle Share, Inc. operates at the subject site.

#### **2.1.3 Project Locus Map**

The United States Geologic Survey (USGS) topographic map for the subject site is the Washington West, District of Columbia Quadrangle, dated 1983 (see Figure 1). The USGS topographic map was used as the source for subject site setting information.

### **2.2 Site and Vicinity Description**

Figure 2 is a Site Plan of the subject site and shows relevant features of the subject site and immediately adjoining properties, as described below.

The subject site maintains and stores bicycles for the Capital Bikeshare Program operated by Alta Bicycle Share, Inc.

The area in the vicinity of the subject site is generally characterized as urban industrial and commercial.

- **North:** According to a Super Salvage, Inc. site representative, the lot is owned by Akridge and is used for truck parking. Super Salvage, Inc. has an agreement with the lot owner to store wood on this lot.
- **South:** Akridge, which operates a parking lot and a building used for storing end of life vehicles.
- **West:** National Defense Units
- **East:** Super Salvage, Inc. which operates a salvage yard for diverse metal structures.

### **2.3 Physical Setting**

The subject site geology and hydrology were evaluated based on the results of the limited Phase II sampling (see Section 7 of this report) performed by Haley & Aldrich subsequent to the Phase I assessment, available public information or references, and our experience and understanding of subsurface conditions in the subject site area.

### **2.3.1 Topography**

Topographically, the subject site and its vicinity is relatively flat with a gradual downward slope to the south. The subject site is at an elevation of approximately 21 feet (ft) above sea level [based on the Environmental Data Resources, Inc. (EDR) report].

### **2.3.2 Geology**

According to information obtained during Haley & Aldrich's limited Phase II subsurface sampling and analysis, the subject site is underlain by fill material comprised of clayey sand with varying amounts of gravel. Fill was encountered to a depth of 10 ft below ground surface (bgs). Beneath the fill, clay with varying amounts of sand was encountered. The clay stratum was not penetrated during Haley & Aldrich's exploration program. As such, bedrock beneath the subject site is anticipated at a depth greater than 30 ft bgs. According to information obtained from the EDR report, bedrock beneath the subject site consists of a stratified sequence of Cretaceous-aged sedimentary rock.

### **2.3.3 Hydrology**

Based on surface topography, surface water from the subject site appears to flow in a southerly direction.

Also based on topography and the location of nearest water bodies (the Anacostia River, located approximately 0.3 miles east and 0.3 miles south and the Potomac River located approximately 0.3 miles west of the subject site), regional groundwater flow is anticipated to be tidally influenced. Hydrogeologic investigations were not performed at the subject site during this Phase I assessment; therefore, it is unknown to what extent localized variations in groundwater depth and flow occur on the subject site.

According to the Flood Insurance Rate Map (FIRM) supplied by EDR, the subject site is located within a floodplain. Potable water is supplied to the subject site by the District of Columbia Water and Sewer Authority (DC Water). Pumping wells were not observed on the property. Two groundwater monitoring wells were observed in the courtyard in the northern portion of the subject site during a site visit performed by Haley & Aldrich in July 2014. According to information in historical research, a third monitoring well is also located at the subject site.



### 3. PREVIOUS REPORTS

The following reports previously prepared for the subject site were reviewed for this Phase I assessment. Information contained in these reports is included herein and summarized below. Copies of pertinent sections of these reports are included in Appendix B.

- “Environmental Phase I Assessment of 1714 2nd Street SW, Washington DC,” prepared by CEC Environmental, dated 25 August 2010
- “Phase II Environmental Site Assessment Summary, 1714 2nd Street SW, Washington DC,” prepared by WSP, Dated 31 January 2011
- “Phase I Environmental Site Assessment, 1417 2nd St SW, Washington DC,” prepared by WSP, Dated 1 February 2011
- “Phase I Environmental Site Assessment, Buzzard Point, Squares 609 & 611, 2<sup>nd</sup> Street and V Street, SW, Washington, DC,” prepared by URS for PEPCO Holdings Inc., dated 4 April 2005
- “Phase I Environmental Site Assessment, Buzzard Point, 2<sup>nd</sup> Street and V Street, SW, Washington, DC,” prepared by Advantage Environmental Consultants, LLC (AEC), for The John Akridge Companies, Inc., dated 10 June 2005
- “Phase II Environmental Site Assessment, Buzzard Point, 2<sup>nd</sup> Street and V Street, SW, Washington, DC,” prepared by AEC for The John Akridge Companies, Inc., dated 10 June 2005
- “Assessment of the Buzzard Point Properties,” prepared by Geomatrix, Inc., for Potomac Electric Power Company, dated March 1990

**Subject Site:** The Environmental Phase I Assessment prepared by CEC Environmental in August 2010 revealed one HREC. An underground storage tank (UST) with a capacity of 3,500 gallons and containing gasoline was reportedly historically leaking, resulting in impacts to soil and groundwater. The extent of contamination was not known. The tank was permanently closed and removed and three monitoring wells were installed.

Furthermore, two SRECs were identified at the subject site in the WSP Phase I Environmental Site Assessment prepared in February 2011:

- Two large floor drains were present in the warehouse area of the building in the southern portion of the subject site. These drains flow to an in-ground sump or separator located just south of the building. The presence of this in-ground oil/water separator or sump that may have received oil, antifreeze, or automotive maintenance fluid releases was considered to represent a SREC at the subject site.
- The Super Salvage property has a small storm water pond located immediately adjacent to the east side of the subject property. Portions of the pond were discolored, and the runoff area

between the scrap metal pile and the pond appeared to be oil stained. A potential for soil or groundwater contamination on the subject site was thought to exist due to the presence of this pond.

In addition, the WSP Phase I Environmental Site Assessment report noted the historical LUST case at the subject site had been satisfactorily closed and remediated.

The WSP Phase II report prepared in January 2011 described a field sampling effort at the subject site to characterize potential impacts along the fence line with the Super Salvage property, in the vicinity of the adjacent property storm water pond, and in the vicinity of the sump. Four soil borings were installed. SB-1 was installed at the northeast corner of the building on the subject site, near the storm water pond on the adjacent property. SB-2 was located 40 feet north of SB-1, near the fence with the adjacent property. SB-3 was installed inside of the west entrance at the northwest property boundary. SB-4 was installed at the southeast corner of the building near the property line and approximately 5 feet east of the building drain sump. Groundwater was collected from two pre-existing monitoring wells that were installed in response the historical LUST at the subject site.

The results indicated that soil and, possibly, groundwater quality on the subject property had been adversely affected by the presence of semi-volatiles organic compounds (SVOCs), total petroleum hydrocarbons diesel-range organics (TPH-DRO), and lead above applicable screening levels. In soil borings installed along the eastern property line to the north of the building (SB-1 and SB-2), petroleum staining was observed in the fill soil encountered between 7 and 9 feet bgs, and staining, petroleum-like odors, and a product-like sheen were observed in the fill soil encountered between 9 and 11 feet bgs. Petroleum staining was also observed in fill soil encountered between 7 and 11 feet bgs in soil borings SB-3 and SB-4. Low levels of volatile organic compounds, including methyl tert-butyl ether (MTBE), tetrachloroethene, and xylenes, were detected at or near the laboratory reporting limit in soil samples collected from SB-1, SB-2, and SB-4. Semi-volatile compounds were detected in saturated soil samples from each of the soil borings. TPH-DRO was detected above laboratory reporting limits in samples collected from each of the soil borings. Sample results from SB-1 and SB-4 were above the District Department of the Environment risk-based Tier 1 screening level for commercial workers of 960 mg/kg for TPH-DRO in soil. Lead concentrations were above the Risk Screening Level in a sample collected from SB-1. The analytical results for groundwater samples collected from both wells contained trace concentrations of MTBE. No other volatile organic compound (VOC) or SVOC was detected. Low concentrations of metals were detected. None of these concentrations were above the Tier 1 screening levels for groundwater.

**Akridge property located immediately south of the subject site:** In 1990, Geomatrix collected soil samples for TPH, BTEX, PCBs, and toxicity metals. The site was identified as a gasoline filling station for PEPCO vehicles at the time of the investigation. Soil samples were collected from 0 to 2 feet bgs. Of the thirteen samples collected, ten showed TPH concentrations ranging from 100 to 360 parts per million (ppm). Geomatrix concluded that TPH concentrations were fairly well distributed throughout the site.

At the time of the AEC 2005 Phase I, the site was used as a fenced parking lot with a prefabricated metal storage building and trailers. The site was used for vehicle fueling and storage by PEPCO from the late 1960s until 1993. Three USTs were located on-site:

- 6,000 gallon gasoline UST removed in 1988;
- 6,000 gallon diesel UST removed in 1988; and

- 20,000 gallon gasoline UST removed in 1993 and assigned LUST case # 93094 due to the discovery of petroleum impact to groundwater at the site during removal of the UST. Confirmatory soil samples were not significantly contaminated; however, groundwater samples were above regulatory limits. One monitoring well (MW-13) was later installed in this area. Petroleum concentrations in soil were below action limits at the time, although BTEX (1.77 mg/L) and TPH (3.0 mg/L) were above action limits for groundwater. The LUST case received regulatory closure in May 1994.

In May 2005, AEC advanced borings (B-1 through B-9, B-27, B-29, and B-30) using a Geoprobe rig, screened soils with a photoionization detector, collected soil samples for total TPH-DRO, TPH-GRO, Volatile Organic Compounds (VOCs), and priority pollutant metals, PCBs, metals, and ignitability, installed groundwater monitoring wells, and collected groundwater samples for TPH -DRO, VOCs, and lead. Soil results indicated:

- TPH-DRO/GRO were below detection limits in soil except for DRO detected on the southwest corner of this property at 11 ppm and DRO detected on the southeast corner near the former USTs at 45 ppm.
- VOCs and PCBs were below detection limits.
- Lead was detected across Lot 0013 at concentrations below 170 ppm.

Groundwater samples indicated:

- TPH DRO and lead were below detection limits.
- VOCs detected on the southeast corner of the site near the former USTs included benzene and solvents.

**Super Salvage, Inc. located immediately east of the subject site:** These lots operated as a metal scrap yard since the 1960s. The URS and AEC 2005 Phase I reports identify these lots on the RCRA Small Quantity Generator, LUST, and UST databases. One 2,000 gallon UST was permanently out of use. The LUST case was granted regulatory closure. No additional details were provided.

#### 4. SITE HISTORY

Past usage of the site and/or adjoining properties was assessed through a review of Sanborn maps dated 1928, 1959, 1977, 1984, 1988, 1990, 1991, 1992, 1994, and 1998; a review of aerial photographs dated 1949, 1951, 1957, 1963, 1968, 1970, 1977, 1983, 1988, 1994, 1998, 2000, 2005, 2007, 2008, 2009, 2011 and 2012; and topographic maps dated 1885, 1894, 1947, 1951, 1956, 1965, 1971, 1972, 1983 and 1994 prepared for the subject site (Appendix C).

By 1949, the subject site was developed with residential properties. Razing activities took place on the subject site during the 1950s. A small structure, assumed to be of commercial nature, was developed in the southern portion of the subject site during that time. By the 1980s, the subject site reportedly comprised a garage with associated office and parking facilities. No further changes in land use were identified.

The table below provides a detailed summary of pertinent information from the historical sources reviewed:

Dates	Description of Subject Site	Description of Adjoining Properties	Sources
1949-1951	By 1949, residential structures are identified on the subject site.	<p>North: residential properties are located immediately north of the subject site.</p> <p>South: residential properties were observed.</p> <p>East: small commercial/industrial structures are located on the parcel immediately east of the subject site.</p> <p>West: A commercial/industrial property appears to have been developed, and is identified as a temporary office building owned by the US Government according to the 1959 Sanborn map.</p>	1949, 1951, 1957 and 1963 aerial photos, and 1959 Sanborn map

Dates	Description of Subject Site	Description of Adjoining Properties	Sources
1957-2012	<p>Razing activities have taken place on the subject site by the 1950s. A small structure, assumed to be of commercial nature, has been developed in the southern portion of the subject site. According to the 1984 Sanborn map, the subject site comprised a garage with an associated office and parking facilities. No further changes in land use were identified.</p>	<p>North: The residential properties are no longer present. By 1963, a commercial building has been constructed beyond the razed land. No further changes in land use were observed immediately north of the subject site.</p> <p>South: Razing activities were observed on the former residential properties during the 1950s. By 1970, a small structure is observed in the northern portion of the site. The structure is owned by PEPCO and is identified as a private garage on the 1984 Sanborn Map. The remainder of the property is identified as parking.</p> <p>East: By 1957, a structure formerly located in the central portion of the site is no longer present. This site is identified as a scrap metal yard owned by Onec on the 1984 Sanborn Map.</p> <p>West: By the early 1980s, the northern portion of the commercial/industrial property located immediately east of the subject site is no longer present and the footprint of this structure has been razed. By 1988, the entire commercial/industrial structure is no longer present. By the early 2000s, a parking lot is located west of the subject site. A large commercial/industrial building has been constructed to the south of this parking lot. Another smaller structure is located to the north of the parking lot.</p>	<p>1957, 1963, 1968, 1970, 1977, 1983, 1988, 1994, 1998, 2000, 2005, 2007, 2008, 2009, 2011 and 2012 aerial photos and 1984, 1988, 1990, 1991, 1992, 1994, and 1998 Sanborn maps</p>

**Notes:**

1. Unless otherwise noted above, per the ASTM standard, sources were reviewed dating back to 1940 or first developed use, whichever is earlier, and at five-year intervals if the use of the property has changed within that time period.

Copies of historical references reviewed are included in Appendix B.

## 5. ENVIRONMENTAL RECORDS REVIEW

### 5.1 Standard Environmental Records Review

Haley & Aldrich used the electronic database service EDR to complete the environmental records review. The database search was used to identify properties that may be listed in the referenced agency records, located within the ASTM-specified approximate minimum search distances as shown in the table below. Section 5.1.1 presents a description of each database searched.

Database Searched	Approximate Minimum Search Distance	Subject Site Listed?	Number of Sites within Search Distance
NPL Sites	1 mile	No	1
Delisted NPL Sites	0.5 mile	No	0
CERCLIS Sites	0.5 mile	No	1
CERCLIS-NFRAP Sites	0.5 mile	No	3
Federal ERNS	Site only	No	0
RCRA non-CORRACTS TSD Facilities	0.5 mile	No	0
RCRA CORRACTS TSD Facilities	1 mile	No	1
RCRA Generators	Site & Adjoining	Yes	1
Federal Institutional Controls/Engineering Controls	Site Only	No	0
State and Tribal Equivalent NPL Sites	1 mile	No	0
State and Tribal Equivalent CERCLIS Sites	0.5 mile	No	0
State and Tribal Registered Storage Tanks	Site & Adjoining	No	2
State and Tribal Landfills and Solid Waste Disposal Sites	0.5 mile	No	0
State and Tribal Leaking Storage Tanks	0.5 mile	Yes	33
State and Tribal Institutional Controls/Engineering Controls	Site Only	No	0
State and Tribal Voluntary Cleanup Sites	0.5 mile	No	1
State and Tribal Brownfield Sites	0.5 mile	Yes	13
DC Historical USTs	0.25 mile	Yes	7

The Environmental Data Resources (EDR) report also contains search results of other State environmental databases that are relevant to the subject site.

Haley & Aldrich also searched the Orphan Site List provided in the EDR report for the subject site and sites adjoining the subject site. Orphan sites are those that, due to incorrect or incomplete addresses,

could not be mapped. Neither the subject site nor the adjoining properties were identified on the Orphan Site List. The complete environmental database report is provided in Appendix D.

### 5.1.1 Descriptions of Databases Searched

Numerous regulatory databases were searched during this Phase I assessment. Each database reviewed is described in the EDR report presented in Appendix D. Those databases required by the ASTM E 1527-05 Standard are identified below.

1. **NPL Sites:** The National Priorities List (NPL) is a list of contaminated sites that are considered the highest priority for cleanup by the U.S. Environmental Protection Agency (USEPA).
2. **Delisted NPL Sites:** The Delisted National Priorities List (NPL) is a list of formal NPL sites formerly considered the highest priority for cleanup by the USEPA that met the criteria of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) for deletion from the NPL because a no further response was appropriate.
3. **CERCLIS Sites:** The Comprehensive Environmental Response, Compensation, and Liability Act Information System (CERCLIS) list identifies sites which are suspected to have contamination and require additional investigation to assess whether they should be considered for inclusion on the NPL.
4. **CERCLIS-NFRAP Sites:** CERCLIS-NFRAP status indicates that a site was once on the CERCLIS List but has No Further Response Actions Planned (NFRAP). Sites on the CERCLIS-NFRAP List were removed from the CERCLIS List in February 1995 because, after an initial investigation was performed, no contamination was found, contamination was removed quickly, or the contamination was not significant enough to warrant NPL status.
5. **Federal ERNS:** The Federal Emergency Response Notification System (ERNS) list tracks information on reported releases of oil and hazardous materials.
6. **RCRA non-CORRACTS TSD facilities:** The Resource Conservation and Recovery Act (RCRA) non-CORRACTS TSD Facilities List tracks facilities which treat, store, or dispose of hazardous waste and are not associated with corrective action activity.
7. **RCRA CORRACTS TSD facilities:** The RCRA CORRACTS TSD Facilities list catalogues facilities that treat, store, or dispose of hazardous waste and have been associated with corrective action activity.
8. **RCRA Generators:** The RCRA Generator list is maintained by the USEPA to track facilities that generate hazardous waste.
9. **Federal Institutional Controls/Engineering Controls:** The Federal Institutional Control list and Engineering Control list are maintained by the USEPA. Some Institutional Control and Engineering Control information may not be made publicly available and therefore will not be included on this registry.



10. **State and Tribal Equivalent NPL/CERCLIS Sites:** The (ASTM E 1527-05 Standard) requires searching “State and Tribal Equivalent NPL Sites.” A state equivalent to the Federal NPL list is not maintained in District of Columbia. The subject site is not within tribal jurisdiction.
11. **State and Tribal Equivalent CERCLIS Sites:** The (ASTM E 1527-05 Standard) requires searching “State and Tribal Equivalent CERCLIS Sites.” A state equivalent to the Federal CERCLIS list is not maintained in District of Columbia. The subject site is not within tribal jurisdiction.
12. **State and Tribal Registered Storage Tanks:** The District of Columbia Department of the Environment maintains a list of aboveground and underground storage tanks. The subject site is not within tribal jurisdiction.
13. **State and Tribal Landfills and Solid Waste Disposal Sites:** The District of Columbia Solid Waste Disposal Division is responsible for waste disposal at facilities located in Virginia. The subject site is not within tribal jurisdiction.
14. **State and Tribal Leaking Storage Tanks:** The District of Columbia Department of the Environment maintains an inventory of reported leaking underground storage tank incidents. The subject site is not within tribal jurisdiction.
15. **State and Tribal Voluntary Cleanup Sites:** The District of Columbia Department of Health maintains a list of Voluntary Cleanup sites. The subject site is not within tribal jurisdiction.
16. **State and Tribal Brownfield Sites:** The District of Columbia Department of the Environment maintains a list of Brownfield sites which includes properties where redevelopment or re-use may be compromised by the presence or presumed presence of hazardous materials or petroleum. The subject site is not within tribal jurisdiction.
17. **Other Databases Searched (Historical Cleaners and Auto Stations):** EDR Proprietary Records include Historical Cleaners, a database that consists of potential dry cleaner sites; and Historical Auto Stations, available listings of potential gas station/filling station/service station sites.

### 5.1.2 Detailed Description of Relevant Subject Site Listings

The EDR report identified the following database listings in searched databases (including more databases than listed above) at the subject site.

Attis located at 1714 2<sup>nd</sup> Street, SW (Map ID # A3) is listed on the UST database. The 3,500-gallon tank contained gasoline. The entry is listed as Permanently Out of Use. AT&T is also located at 1714 2<sup>nd</sup> Street, SW (Map ID # A4) and is listed on the LUST (case # 92076) and Brownfield databases. The site owned and operated a 3,500 gallon gasoline UST. A release from the UST was reported in July 1992 and impacted soil and groundwater. The status of the release is listed as closed. Based on its status, impacts from the LUST do not present a threat to human health or the environment under current conditions and it is unlikely that the LUST will require additional regulatory action.

### 5.1.3 Detailed Descriptions of Relevant Nearby Site Listings

The EDR report identified database listings in searched databases (including more databases than listed above) within the prescribed search radii. The majority of the database listings were USTs and LUST sites. Based on the urban area of the site, characterized by subsurface building levels, subway tunnels, and utilities that create barriers to groundwater flow, and based on the assumption that the groundwater under the subject site is tidally influenced, only those sites in the immediate vicinity of the subject site would be anticipated to have the potential to affect the subject site. These sites are listed below.

100 S Street, SW (Map ID #1), adjacent to the east and cross-gradient to the subject site, is listed on the Brownfields database.

Super Salvage, Inc. located at 1711 1<sup>st</sup> Street, SW (Map ID #C9, C10 and C11), immediately to the east and cross-gradient to the subject site, is listed on the LUST (case # 96030), UST and RCRA-CESQC databases. A tank containing gasoline was reported to be leaking in October 1995 and reportedly impacted soil. The status of this release is listed as Closed. A 2,000-gallon gasoline located at the site is listed as Permanently Out of Use. Additionally, this entity is listed as a Conditionally Exempt Small Quantity Generator for storing ignitable hazardous wastes, as well as waste cadmium, lead, benzene, methyl ethyl ketone, tetrachloroethylene, and trichloroethylene. No violations have been reported associated with this listing. Based on its status and impacts being limited to soil, impacts from the LUST do not present a threat to human health or the environment under current site conditions and it is unlikely that the LUST will require additional regulatory action.

An entry located at 1700 1<sup>st</sup> Street, SW (Map ID # C10), adjacent to the east and cross-gradient to the subject site, is listed on the Brownfield database. No additional details are provided.

## 5.2 Additional Environmental Records Review

To supplement the (ASTM E 1527-05 Standard) environmental record sources, we contacted the following state and local government agencies, and/or reviewed the following additional sources:

### **5.2.1 D.C. Department of the Environment**

Additional environmental records were requested for this assessment through a Freedom of Information Act (FOIA) request to the D.C. Department of the Environment (DDOE). To date, no response has been received from the FOIA request. Due to the information obtained through interviews with key subject site personnel, and other record reviews, it does not appear that responses to the FOIA requests should affect our conclusions regarding the site. However, if a response is received that affects our conclusions regarding the subject site, we will provide an addendum to this report.

### **5.2.2 D.C. Fire and EMS Department**

Additional environmental records were requested for this assessment through a FOIA request to the DC Fire and EMS Department (DCFEMS). This department responded to our request on 27 December 2013. According to the files held by this department, operations taking place at the subject site and adjoining properties are unlikely to be impacting the subject site. The response from DCFEMS is included in Appendix D.

## **5.3 User Responsibilities**

The AAI Rule requires that the user of the report consider the following:

- Whether the user has specialized knowledge about previous ownership or uses of the subject site that may be material to identifying RECs;
- Whether the user has determined that the subject site's Title contains environmental liens or other information related to the environmental condition of the property, including engineering and institutional controls and Activity and Use Limitations (AULs), as defined by ASTM;
- Whether the user is aware of commonly known or reasonably ascertainable information about the subject site including whether or not the presence of contamination is likely on the subject site and to what degree it can be detected; and
- Whether the user has prior knowledge that the price of the subject site has been reduced for environmentally related reasons.

We requested such information for inclusion in this report. Though neither the AAI Rule nor the ASTM E 1527-05 Standard requires that this information be provided to the environmental professional(s), failure on the part of the user to obtain such information for their own records, should it be reasonably ascertainable, may invalidate the user's compliance with the AAI Rule for CERCLA liability protection in the future.

## **6. SITE RECONNAISSANCE AND KEY PERSONNEL INTERVIEW(S)**

A site visit to observe site conditions was conducted by Karin Holland of Haley & Aldrich on 21 July 2014. Access to the subject site was provided by Eric Gilliland of Alta Bicycle Share, Inc., the operator of Capital Bikeshare, who was also interviewed during the site visit. Haley & Aldrich observed the interior and exterior portions of the subject site, including the property boundaries, and observed adjoining property conditions from the subject site boundaries and/or public thoroughfares. No weather-related conditions or other conditions that would limit our ability to observe the subject site or adjoining properties occurred during our subject site visit. Site photographs are provided in Appendix E.

ASTM E 1527-05 Standard Section 10.8 requires that, prior to the subject site visit, the current subject site owner or key site manager and user, if different from the current owner or key site manager, be asked if there are any helpful documents that can be made available for review. These consist of environmental site assessment reports, audits, permits, tank registrations, Material Safety Data Sheets, Community Right-to-Know plans, safety plans, hydrogeologic or geotechnical reports, or hazardous waste generator reports. We made such a request and were provided with the following documents:

- “Environmental Phase I Assessment of 1714 2nd Street SW, Washington DC,” prepared by CEC Environmental, dated 25 August 2010
- “Phase II Environmental Site Assessment Summary, 1714 2nd Street SW, Washington DC,” prepared by WSP, Dated 31 January 2011
- “Phase I Environmental Site Assessment, 1417 2nd St SW, Washington DC,” prepared by WSP, Dated 1 February 2011.

These assessments are summarized in Section 3 of this report.

### **6.1 Subject Site Observations**

#### **6.1.1 Current Use of the Property and General Description of Structures**

The subject site maintains and stores bicycles for the Capital Bikeshare Program. The program’s administrative headquarters also occupy the subject site. The current operator (Alta Bicycle Share, Inc.) has been at the subject site since June 2012. According to Mr. Gilliland, the subject site was vacant when the Capital Bikeshare Program moved to the property. According to the WSP Phase I report, the subject site was formerly an AT&T property and had also served as an office and a warehouse for an electrical contracting business. A number of pneumatic tubes were located and observed throughout the building.

A building is located in the southern portion of the subject site. The first floor of the building comprises one main and two auxiliary shops. Office space is located on the second floor. The northern portion of the subject site is used as a courtyard for storing Bikeshare program equipment, for example docking devices for bicycles. The site is surrounded by a concrete wall to the south and west and by metal fencing to the north and east.

### **6.1.2 Potable Water Supply and Sewage Disposal System or Septic Systems**

DC Water supplies potable water to the subject site. The subject site is also connected to the municipal sanitary sewer system. Septic tanks were not observed at the subject site.

### **6.1.3 Use and Storage of Petroleum Products and Hazardous Materials**

Two propane tanks of unknown volume were stored outside the building in the northern portion of the subject site. A bicycle cleaning liquid was also observed to be stored within dedicated secondary containment.

In addition, small quantities of automotive oils and lubricants are located in a designated flame-proof storage cupboard. Over twenty automotive batteries were also observed in the main shop, as well as in the courtyard.

Additionally, a square, razed area was identified within a concrete pad in a room housing generators. It is unknown whether a former tank or other structure was present at this location. Staining of the concrete pad or surrounding floor was not observed.

### **6.1.4 Disposal of Petroleum Products and Hazardous Materials**

The subject site does not generate petroleum products and hazardous materials.

### **6.1.5 Odors**

No odors were detected at the subject site during the site visit.

### **6.1.6 PCBs Associated with Electrical or Hydraulic Equipment**

Due to the age of the building and the nature of activities at the subject site, it is unlikely the PCBs associated with electric or hydraulic equipment are present at the subject site.

### **6.1.7 Unidentified Substance Containers**

Unidentified substance containers were not identified during the site visit.

### **6.1.8 Heating and Cooling System**

The subject site is connected to a heating and cooling system. Heating is operated by natural gas and cooling is electrically operated. PEPCO is the utility provider.

### **6.1.9 Stains or Corrosion on Floors, Walls, or Ceilings**

Stains or corrosion of floors, walls or ceilings were generally not observed in the building with the exception of very minor stains in the main shop. The floors of the main shop are made of concrete. Several cracks in the concrete were observed; some cracks have been repaired.

#### **6.1.10 Floor Drains and Sumps**

Two floor drains were observed in the main shop in the building. The inside of the drain was not visible, however no evidence of spills was observed in proximity to these drains. Minor cracks in concrete were present in proximity to the drains.

#### **6.1.11 Hydraulic Elevators**

No hydraulic elevators were observed or reported at the subject site.

#### **6.1.12 Vehicle Maintenance Lifts**

No hydraulic vehicle maintenance lifts were observed or reported at the subject site.

#### **6.1.13 Emergency Generators and Sprinkler System Pumps**

The building is connected to an emergency sprinkler system.

#### **6.1.14 Catch Basins**

No catch basins were observed or reported at the subject site.

#### **6.1.15 Dry Wells**

Dry wells were not observed or reported at the subject site.

#### **6.1.16 Pits, Ponds, Lagoons, and Pools of Liquid**

Pits, Ponds, Lagoons, and Pools of Liquid were not observed or reported at the subject site.

#### **6.1.17 Stained Soil or Pavement**

Stained soil or vegetation were not observed or reported at the subject site.

#### **6.1.18 Stressed Vegetation**

Evidence of stressed vegetation was not observed at the subject site

#### **6.1.19 Solid Waste and Evidence of Waste Filling**

No evidence of solid waste or waste filling was observed within the gated area of the subject site. Illegal dumping of trash was observed outside the gated area, along the southeastern boundary of the subject site.

#### **6.1.20 Wastewater and Stormwater Discharge**

Wastewater is directed to the sanitary sewer. A storm drain was observed in the northwestern portion of the subject site, in the courtyard. An oily sheen was identified in this storm drain.

The integrity of the storm drain is unknown and therefore there is a potential for hazardous materials to have migrated to the subsurface.

Additionally, two floor drains were observed in the main shop on the first floor of the building. Cracks in concrete were observed in proximity to the drains. The inside of the drains was not visible, however no evidence of spills was observed in proximity to these drains.

#### **6.1.21 Monitoring, Water Supply, or Irrigation Wells**

Two groundwater monitoring wells were observed in the courtyard in the northern portion of the subject site.

#### **6.1.22 Sanitary Sewer and Septic Systems**

Septic systems were not observed or reported at the subject site. Wastewater is directed to the sanitary sewer.

### **6.2 Adjoining Property Observations**

Properties adjoining the subject site were generally observed to be light industrial or commercial in nature.

## **7. SUBSURFACE EXPLORATION**

In order to evaluate subsurface conditions of the subject site and assess whether current and former operation at and adjacent to the subject site are impacting the subject site, Haley & Aldrich conducted Phase II subsurface sampling at the subject site. The approximate locations of explorations are shown on Figure 3.

### **7.1 Geoprobe Sampling and Monitoring Well Installations 26 June through 1 July 2014**

On 19 September 2014, Haley & Aldrich oversaw the advancement of two geoprobe explorations, designated GTW-605-7-1 and GTW-605-7-2 (see Figure 3), at the subject site by Vironex Drilling, Inc.:

- GTW-605-7-1: advanced to a depth of 30 feet, in proximity to closed LUST case and adjacent to oily-water catchment basin on Square 605, Lot 802.
- GTW-605-7-2: advanced to a depth of 30 feet, in proximity to closed LUST case and adjacent to oily-water catchment basin on Square 605, Lot 802.

Both geoprobe explorations were completed as observation wells. Geoprobe reports and observation well installation reports are included in Appendix F.

#### **7.1.1 Soil Sampling**

Soil samples collected during the advancement of the geoprobe explorations were screened for Volatile Organic Compounds by exposing a photoionization detector (PID) to vapors accumulated in the headspace of jar samples. Soil samples were submitted for laboratory analysis of one or more of the following: total petroleum hydrocarbons-diesel range organics (TPH-DRO), TPH-gasoline-range organics (TPH-GRO), benzene, toluene, ethylbenzene and xylenes (BTEX), naphthalene, volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), polychlorinated biphenyls and eight RCRA metals. The soil samples were placed on ice in the field prior to being shipped via overnight courier to Pace Analytical Services, Inc. (Pace) in Huntersville, North Carolina. TPH, BTEX and Naphthalene analyses were performed at the Pace laboratory in Charlotte, North Carolina.

#### **7.1.2 Groundwater Sampling**

Both newly installed monitoring wells were sampled using low-flow sampling techniques on 22 September 2014. The following groundwater quality parameters were monitored and recorded prior to sampling: pH, temperature, conductivity, dissolved oxygen, oxidation-reduction potential, and turbidity. No evidence of free product or sheens were observed in groundwater from the sampled monitoring wells or detected using an electronic oil-water interface probe. Groundwater sampling records are included in Appendix G. Groundwater samples were collected and placed in laboratory prepared containers and stored on ice in the field prior to being submitted for laboratory analysis of one or more of the following: TPH-DRO, TPH-GRO, BTEX, naphthalene, VOCs, SVOCs, and 8 RCRA metals at the Pace laboratory in Charlotte, North Carolina.



## 7.2 Subsurface Findings

Subsurface investigations described in this report were not intended to define the lateral extent of petroleum impacts to soil or groundwater at the subject site. The objective was to explore SRECs and KRECs to evaluate current conditions to assess the general magnitude of potential impacts.

### 7.2.1 Soil Results

Soil analytical results are summarized in Table I, along with regulatory screening levels for comparison. Laboratory analytical reports are included in Appendix H.

Analytical results for a soil sample collected from GTW-605-7-2 from a depth of 29 ft bgs in the eastern portion of the subject site identified concentrations of PAHs greater than the EPA Residential Screening Levels (RSL) for residential soil (including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and indeno(1,2,3-cd)pyrene). Furthermore, arsenic was reported at a concentration of 8.2 milligrams per kilogram (mg/kg) in GTW-605-7-2 at a depth of 29 ft bgs, above the EPA RSL for residential soil of 0.67 mg/kg. Remaining concentrations of contaminants were either below laboratory detection levels or below EPA Region III Risk-Based Screening Levels, where applicable.

Analytical results for a soil sample collected from GTW-605-7-1 from a depth of 28 ft bgs did not identify concentrations of contaminants above laboratory detection limits.

### 7.2.2 Groundwater Results

Groundwater analytical results are summarized in Table II, along with regulatory screening levels for comparison. Laboratory analytical reports are included as Appendix H.

Free-phase oil was observed on groundwater in well GTW-605-7-2 from a depth of 7.6 ft bgs to 20.9 ft bgs. TPH-DRO was measured at a concentration of 24.6 milligrams per liter (mg/L) in groundwater at this location, exceeding the DC Tier 1 Surface & Groundwater Standards of 3.57 mg/L. The remaining contaminants were either not detected above laboratory detection limits or were identified at concentrations below DC Tier 1 Surface & Groundwater Standards, where applicable.

Analytical results for the groundwater sample collected from GTW-605-7-1 did not identify concentrations of contaminants above laboratory detection limits.

## 8. FINDINGS AND CONCLUSIONS

Haley & Aldrich, Inc. (Haley & Aldrich) performed a Phase I environmental site assessment (Phase I assessment) of the Ein parcel at Buzzard Point, Square 0605, Lot 0007 (herein referred to as the “subject site”) in Washington, D.C. The scope of work is described and conditioned by the subcontract agreement between McKissack & McKissack and Haley & Aldrich, dated 9 July 2013 and executed 22 July 2013. As indicated in the Agreement, this Phase I assessment was performed in conformance with the scope and limitations of the American Society for Testing and Materials (ASTM) E 1527-05 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM E 1527-05 Standard) as referenced in 40 Code of Federal Regulations (CFR) Part 312 [the All Appropriate Inquiries (AAI) Rule]. Deviations from this Standard, and/or data gaps and their significance are described in Section 1.5 of this report. Limited Phase II subsurface sampling was also conducted to evaluate issues identified during the Phase I portion of the assessment. Our conclusions are intended to help the user evaluate the “business environmental risk” associated with the subject site, as defined in the ASTM E 1527-05 Standard and discussed in Section 1.1 of this report.

The subject site is used to store and refurbish bicycles for the Capital Bikeshare Program operated by Alta Bicycle Share, Inc.

The objective of a Phase I assessment is to identify known and suspect “recognized environmental conditions” (RECs), historical RECs (HRECs), and *de minimis* conditions associated with the subject site, as defined in the ASTM E 1527-05 Standard and in Section 1.1 of this report. The objective of the limited Phase II subsurface sampling is to provide a preliminary evaluation of RECs identified during the Phase I portion of the assessment, including order of magnitude cost and schedule impacts on the proposed development.

The ASTM E 1527-05 Standard requires an environmental professional’s opinion of the potential impacts of RECs, HRECs, and *de minimis* conditions identified on a site during a Phase I assessment. Our opinion is rendered with respect to a REC’s potential (high, medium, or low) to require remedial response based on prevailing agency requirements and our understanding that the subject site is one of seven parcels being evaluated for potential redevelopment as a professional soccer stadium. Our opinion regarding a REC’s potential impact on the subject site (high, medium, low, or unknown) is based on the scope of our work, the information obtained during the course of our work, the conditions prevailing at the time our work was performed, the applicable regulatory requirements in effect at the time our work was performed, and/or our experience evaluating similar sites, and our understanding of the client’s intended use for the subject site.

No data gaps were identified for this report.

### RECOGNIZED ENVIRONMENTAL CONDITIONS

The ASTM E 1527-05 Standard defines a REC as “the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property.” A material threat is defined by the ASTM E 1527-05 Standard as “a physically observable or obvious threat which is reasonably likely to lead to a release that, in the opinion of the environmental professional, is threatening and might result in impact to public health or the environment.”

This Phase I assessment has revealed ten RECs. Details regarding the nature of these RECs and our opinion regarding potential impacts are provided below.

### **KNOWN RECOGNIZED ENVIRONMENTAL CONDITIONS**

Consistent with ASTM E 1527-05 Section 12.5 (Report Format), and for the purposes of this assessment, those RECs identified as being present with respect to the subject site are referred to as Known Recognized Environmental Conditions (KRECs). One KREC has been identified on the subject site based on the limited Phase II subsurface sampling results.

**KREC #1:** Soil and groundwater petroleum impacts assumed to be from off-site source  
**Potential Impact:** High  
**Explanation:** A soil sample obtained from test boring GTW-605-7-2 (see Figure 3) collected by Haley & Aldrich from beneath the eastern portion of the subject site revealed several PAHs above the United States Environmental Protection Agency (EPA) Residential Screening Level (RSL) for residential exposure. Furthermore, arsenic was reported at a concentration of 8.2 milligrams per kilogram (mg/kg) in GTW-605-7-2 at a depth of 29 feet below ground surface (bgs), above the EPA residential RSL of 0.67 mg/kg. In addition, free-phase oil was observed in groundwater in well GTW-605-7-2 from a depth of 7.6 feet bgs to 20.9 feet bgs. Total Petroleum Hydrocarbons-Diesel Range Organics (TPH-DRO) were measured at a concentration of 24.6 milligrams per liter (mg/L) in groundwater at this location, exceeding the DC Tier 1 Surface & Groundwater Standards of 3.57 mg/L.

### **SUSPECT RECOGNIZED ENVIRONMENTAL CONDITIONS**

Consistent with ASTM E 1527-05 Section 12.5 (Report Format), and for the purposes of this assessment, those RECs that have been identified as being likely present with respect to the subject site are referred to as Suspect Recognized Environmental Conditions (SRECs). The Phase I assessment identified six SRECs.

#### **Suspect Recognized Environmental Conditions**

The following SRECs were observed on the Super Salvage property, Square 0605, Lot 0802 adjacent to the east side of the subject site during a site visit by Haley & Aldrich for the comprehensive Phase I assessment of Buzzard Point in August 2013.

**SREC #1:** Potentially unlined/unpaved sump at Square 0605, Lot 0802  
**Potential Impact:** High  
**Explanation:** On-site stormwater and spills are captured and pumped to a sump in the southwestern portion of the lot before being disposed off-site by a licensed contractor. The sump contained large quantities of oily liquid during the subject site visit and it was not possible to ascertain whether the sump was lined and/or confirm the integrity of the lining. A potential therefore exists for hydrocarbons to migrate from the sump to the underlying soil and groundwater.

**SREC #2:** Heavy staining of concrete at Super Salvage Inc., 1711 1<sup>st</sup> Street SW  
**Potential Impact:** Low  
**Explanation:** During the site visit to this property, heavy concrete staining was observed at many locations. The concrete was in moderate to good condition where visible. In other areas, for example the area surrounding the sump's pump, the staining was too thick to confirm the integrity of the concrete. A potential therefore exists for hydrocarbons to migrate to underlying soil and groundwater.

**SREC #3:** Oil layer in secondary containment under aboveground storage tanks (ASTs) at Super Salvage Inc., 1711 1<sup>st</sup> Street SW  
**Potential Impact:** Low  
**Explanation:** A thick layer of oil was observed under the bottom of the AST tanks in the eastern portion of this property. It is understood that the flooring of the containment is paved with concrete. However, the integrity of the concrete could not be confirmed. A potential therefore exists for hydrocarbons to migrate to underlying soil and groundwater.

**SREC #4:** Concrete staining in area of an AST at Super Salvage Inc., 1711 1<sup>st</sup> Street SW  
**Potential Impact:** Low  
**Explanation:** Concrete staining on paving next to an AST was observed in the northern portion of this property. The concrete paving was in relatively good condition. However a large quantity of waste, including wood, metal and tires, had been dumped immediately adjacent to the AST preventing Haley & Aldrich representatives from confirming the condition of the concrete beneath this waste. A potential exists for oil to migrate through the concrete to underlying soil and groundwater.

Two additional SRECs have been identified on the Akridge parcel, Square 0607, Lot 0013, located adjacent to the south side of the subject site, from a limited Phase II subsurface investigation performed by Haley & Aldrich in December 2013.

**SREC #5:** Minor groundwater contamination associated with chlorinated solvents  
**Potential Impact:** Low  
**Explanation:** Advantage Environmental Consultants, LLC (AEC) detected chlorinated solvents (tetrachloroethylene, trichloroethylene [TCE], 1,2-dichloroethane, and vinyl chloride[VC]) in a groundwater sample collected near the southeast corner of the property during a Phase II assessment conducted in 2005 as part of a previous assessment. The source of the chlorinated solvents is not known; however, Geomatrix, Inc. indicated an "asphalt pit" in this area of the subject site, as shown on Figure 3 of their Phase II assessment report completed in 1990. Chlorinated solvents detected in groundwater may also be due to migration from an unknown source upgradient from the property. A groundwater sample collected by Haley & Aldrich in this area of the site confirmed the presence of minor contamination associated with chlorinated solvents, including relatively low concentrations of TCE and VC (43.9 and 38 micrograms per liter [ $\mu\text{g/L}$ ], respectively). The VC concentration exceeds the EPA Region III Risk-Based Screening Level (SL) for residential exposure via ingestion, which may not be applicable to the subject site, since groundwater is not a source of drinking water. The extent of impact is not known, although

volatile organic compounds were reportedly not detected in groundwater samples collected by AEC at several other locations in 2005, suggesting the extent may be limited to the southeast corner of the subject site. However, due to the tidal nature of underlying groundwater, a potential exists for these hydrocarbons to have migrated to the subject site.

**SREC #6:** Heavy staining near floor drains in the on-site storage building  
**Potential Impact:** Low  
**Explanation:** Heavy staining of the concrete floor in the on-site storage building, possibly caused by hydrocarbons was observed immediately surrounding two floor drains, one in the northwestern portion and a second in the southeastern portion of the building. Although no cracks were apparent in the concrete in the areas where staining was observed, it is unknown whether the source of the stains has also migrated into these floor drains or where the floor drains discharge. In addition, the source of the staining could have penetrated the concrete floor. A potential therefore exists for apparent hydrocarbon spills or leaks to have migrated to the underlying soil and groundwater.

### **HISTORICAL RECs**

The ASTM E 1527-05 Standard defines an HREC as an environmental condition “which in the past would have been considered a recognized environmental condition, but which may or may not be considered a recognized environmental condition currently.”

This Phase I assessment has revealed the following three HRECs.

**HREC #2:** LUST case # 92076 at the subject site is associated with a gasoline LUST that historically impacted soil and groundwater under the site. The status of the LUST release is listed as closed. Based on its status, impacts from the LUST do not present a threat to human health or the environment under current conditions and it is unlikely that the LUST will require additional regulatory action.

**HREC #2:** A 20,000 gallon gasoline LUST (case # 93094) at Square 0607, Lot 0013, immediately adjacent to the south of the subject site, historically impacted soil and groundwater and was reported in August 1993. The LUST case received regulatory closure in May 1994. Based on its status, impacts from the LUST do not present a threat to human health or the environment under current conditions and it is unlikely that the LUST will require additional regulatory action.

**HREC #3:** LUST case # 96030 at Square 0605, Lot 0802, immediately adjacent to the east of the subject site, and related to a tank containing gasoline was reported to be impacting soil and was granted regulatory closure. Based on its status and impacts being limited to soil, impacts from the LUST do not present a threat to human health or the environment under current site conditions and it is unlikely that the LUST will require additional regulatory action.

### **DE MINIMIS CONDITIONS**

The ASTM E 1527-05 Standard defines *de minimis* conditions as those conditions which “do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.” The ASTM

E 1527-05 Standard notes that “conditions determined to be *de minimis* are not recognized environmental conditions.”

This Phase I assessment did not reveal any *de minimis* conditions.

## SUMMARY AND RECOMMENDATIONS

In summary, several RECs were identified during the comprehensive Buzzard Point Phase I assessment in August 2013 and subsequent Phase II sampling. Limited Phase II subsurface sampling described in this report did not delineate the extent of petroleum and metal impacts detected in soil or groundwater at the subject site, and based on the concentrations detected, it is our opinion that additional regulatory action may be required under current conditions at the subject site.

If excavation and construction dewatering are necessary for subject site development, then proper handling of soil and groundwater may be required. Groundwater contaminated by diesel and chlorinated solvents detected in the eastern portion of the site may require treatment prior to discharge or off-site disposal. If a deep excavation is required for construction of the proposed stadium (i.e. subsurface parking garage) in this area of the subject site that requires long-term dewatering, then a treatment system may be required, along with appropriate maintenance, permitting, and monitoring.

We recommend developing a site-specific health and safety plan and a soil/groundwater management plan to address proper handling of excavated soil and pumping of groundwater. Excavated soil may require characterization and treatment/off-site disposal. The District Department of the Environment (DDOE) may require submission of a Work Plan to document how the developer will comply with applicable standards.

Schedule impacts on the proposed development associated with the recommended tasks range from 3.5 to 6.5 months, depending upon DDOE review and approval. Potential order of magnitude cost impacts from the identified RECs on the proposed development range from \$250,000 to \$2,125,000 (see Table III for assumptions regarding these order of magnitude costs). **Note that these cost ranges assume additional assessment will be required and the excavation of up to 30,000 tons of soil (we have assumed that up to 15,000 tons will be managed as non-hazardous waste soil at a permitted solid waste management facility) and the operation of a groundwater treatment system for up to 3 months during the proposed development.** We have not included costs for the long term dewatering system. We have assumed the site will be excavated to a depth of 20 feet.

## **9. CREDENTIALS**

This Phase I assessment report with limited Phase II subsurface sampling was prepared by Karin Holland under the direct supervision of David Schoenwolf, who served as the Officer-in-Charge of this project. Qualification information for the project personnel is provided below.

### **KARIN HOLLAND** **Senior Specialist**

Ms. Holland received a Bachelor of Arts degree in Natural Sciences from the University of Cambridge, United Kingdom in 2002 and a Master of Science degree in Law and Environmental Science from the University of Nottingham, United Kingdom in 2003. Ms. Holland is involved in a variety of projects including environmental site assessments, soil management, and field sampling events. Her responsibilities with Phase I Environmental Site Assessments include site history research, interaction with clients and state regulatory agencies, interpretation and evaluation of environmental conditions, and development of recommendations for future investigations.

### **DAVID SCHOENWOLF** **Principal Consultant | Senior Vice president**

Mr. Schoenwolf has over 36 years of experience in the engineering and environmental consulting practice. Mr. Schoenwolf has been an Officer-in-charge and project manager for geotechnical engineering and environmental evaluations for a broad range of projects. His scope of projects has ranged from preliminary feasibility studies, environmental site assessments, and master plan site development studies to complete design investigations for major projects including preparing geotechnical data and interpretive reports; preparing contract documents, technical specifications, and reviewing contractor submittals; instrumentation monitoring; and construction consulting. He is a registered professional engineer in the District of Columbia.

## REFERENCES

1. Topographic Map, Washington West, District of Columbia Quadrangle, United States Geological Survey 7.5 minute series, dated 1983.
2. Haley & Aldrich, Inc., site visit conducted by Karin Holland on 24 July 2014.
3. Eric Gilliland of Alta Bicycle Share, Inc. interview with Haley & Aldrich, Inc., on 24 July 2014.
4. Environmental Data Resources, Database Report, dated July 2013.
5. "Environmental Phase I Assessment of 1714 2nd Street SW, Washington DC," prepared by CEC Environmental, dated 25 August 2010
6. "Phase II Environmental Site Assessment Summary, 1714 2nd Street SW, Washington DC," prepared by WSP, Dated 31 January 2011
7. "Phase I Environmental Site Assessment, 1417 2nd St SW, Washington DC," prepared by WSP, Dated 1 February 2011.
8. "Phase I Environmental Site Assessment, Buzzard Point, Squares 609 & 611, 2nd Street and V Street, SW, Washington, DC," prepared by URS for PEPCO Holdings Inc., dated 4 April 2005. Note:
9. "Phase I Environmental Site Assessment, Buzzard Point, 2nd Street and V Street, SW, Washington, DC," prepared by Advantage Environmental Consultants, LLC (AEC), for The John Akridge Companies, Inc., dated 10 June 2005. Note:
10. "Phase II Environmental Site Assessment, Buzzard Point, 2nd Street and V Street, SW, Washington, DC," prepared by AEC for The John Akridge Companies, Inc., dated 10 June 2005.
11. "Assessment of the Buzzard Point Properties," prepared by Geomatrix, Inc., for Potomac Electric Power Company, dated March 1990.