

**PHASE I ENVIRONMENTAL
SITE ASSESSMENT REPORT**

**TAX PARCEL 043037 00015
3188 CHELSEA AVENUE
MEMPHIS, TENNESSEE 38108**

**EnSafe Project Number
0888810687/PH15**

Prepared for:

**Wolf River Brownfield Assessment Project
Shelby County Division of Planning and Development
125 North Main Street, Room 450
Memphis, Tennessee 38103-2084**

Prepared by:



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May 25, 2012

EXECUTIVE SUMMARY

EnSafe Inc. conducted a Phase I Environmental Site Assessment (ESA) of Tax Parcel 043037 00015 at 3188 Chelsea Avenue (subject property) in Memphis, Shelby County, Tennessee. The Phase I ESA was conducted in support of the Wolf River Brownfields Assessment Project for the Shelby County Division of Planning and Development and Derwin Pugh, the current property owner who plans to lease the property for commercial purposes with an emphasis on providing valuable community service and assistance. A Phase I ESA is an integral part of all appropriate inquiry (AAI), as codified in Title 40 Code of Federal Regulations Part 312, into the previous ownership and uses of the property consistent with good commercial or customary practice. The ASTM International (ASTM) Standard E 1527-05 is the industry standard used to comply with the AAI requirements.

SIGNIFICANT FINDINGS

Site Location, Description, and Current Uses

The 0.29-acre subject property is a vacant parcel at the northwest corner of Chelsea Avenue and Ash Street, developed with an approximately 1,500-square-foot retail store building surrounded by approximately 6,000 square feet of asphalt and concrete. The north approximately one-quarter of the subject property is a grassy strip that extends the entire length. The property south of the site building (from west to east) is sparsely vegetated with patches of gravel and asphalt transitioning to patched concrete then back to asphalt. Within the concrete-paved portion is a patched area indicative of a former fuel dispenser island. In general, the asphalt and concrete are in poor condition (turtleback cracking, separated seams, etc.), with patches of vegetation growing through.

The property was secured with a 6-foot chain-link fence and the building was inaccessible (locked) during EnSafe's May 1, 2012, site visit, which limited observations of the interior to what could be seen through windows on the south and east sides of the building. A portable wood shed, also locked, was on a concrete pad in the northwest corner of the property. The original concrete floor inside the site building was covered with 12-inch floor tile reportedly installed by Mr. Pugh, who did not recall any staining or evidence of patched areas indicating filled drains, sumps, or pits. In addition, there were no drains or pits in the parking lot and no interior floor drains were observed through the windows of the building.

A set of four 2-inch diameter pipes protrude from the ground at the southwest corner of the building and a set of four 0.5-inch diameter pipes protrude from the ground adjacent to the main entrance. Patched concrete was observed from the smaller-diameter pipes to the former dispenser island area. Another patched strip of concrete and asphalt extended from the utility company's water main cover in the sidewalk along Chelsea Avenue north along the east side of the site building. According to Mr. Pugh, that patched strip is from replacing older water service and drain lines with larger-diameter piping in 2009 for restrooms in the east end of the building. The excavation, which crossed the concrete area near the center of the south property border, remained open for approximately one week. Neither Mr. Pugh nor the employee of Priority First Plumbing & Repair who installed the water line recalled observing stains or petroleum odors in the 18- to 24-inch deep piping excavation.

Site History

City directories dated 1885 to 1923 did not include Ash Street or addresses beyond 2000 Chelsea Avenue. Historical documents indicate that the subject property has had addresses of 3170, 3172, and 3188 Chelsea Avenue and 1509 Ash Street. The earliest known historical use of

the subject property is residential; a 1931 aerial photograph shows the site developed with a structure fronting Ash Street and a 1938 city directory lists a residence at 1509 Ash Street but does not list 3170, 3172, or 3188 Chelsea Avenue. From the early 1940s to the early 1950s, the Ash Street address remained residential and 3170 and 3172 Chelsea Avenue were occupied by a grocery store, beauty shop, and a filling station.

In the early to mid-1950s, the former commercial structure was razed and the present-day commercial building constructed and operated as a Sinclair gas station at 3188 Chelsea Avenue; use of 3170 and 3172 Chelsea Avenue addresses was discontinued. Although the residential structure north of the commercial building remained through the mid-1960s, the 1509 Ash Street address was not listed in city directories for that time period. Gas station operations continued until at least the mid-1970s; from 1978 to 1992, names of businesses (e.g., Nick's Dx Service Station, A-One Auto Service, and Blayde's Auto Service) that occupied the subject property indicated automotive repair and maintenance was conducted but were not definitive as to whether or not fuel was sold. Additional businesses that have occupied the subject property since the late 1980s are Big Dee's Towing and Auto Recovery, Franklin Car Care, Butts & Bones Grocery & Restaurant, and Klassic Kar Korner. A fuel dispenser island remains visible south of the site building through 2010 aerial imagery.

Historical applications of polychlorinated biphenyls (PCBs) included cutting and machining oils, lubricating oils, and hydraulic fluids. EnSafe's limited visual observations did not indicate the presence of hydraulic equipment (such as vehicle lifts) or vehicle service pits inside the building, and Mr. Pugh did not recall any onsite when he purchased the property. Based on the time period during which the subject property was used for automobile servicing, PCB-containing oils may have been generated or accumulated onsite.

Mr. Pugh purchased the property through a Shelby County Government Tax Sale on June 5, 2007. After his purchase, Mr. Pugh initiated operation of a convenience store (Pugh's Express Market & Deli) for a month in early 2009, then leased the property to individuals who anticipated operating various businesses (including a restaurant and hair salon) but the property has essentially remained inactive and unoccupied.

Surrounding Area

The subject property is adjoined on the north, west, and east (across Ash Street) by residential lots, and on the south (across a sidewalk then Chelsea Avenue) by two parcels (a paved parking lot and church buildings at 3205 Chelsea Avenue and 1480 Ash Street). The site is surrounded by single-family residences, vacant residential lots, schools (Douglass Elementary and High School), and church properties within the Hollywood Community area, which contains many brownfields mixed with active commercial and manufacturing industries along the major streets of Warford, Hollywood, and Chelsea within ZIP code 38108. The Hollywood Community is one of four target areas in the Wolf River Community-Wide Brownfields Assessment Grant and is home to several potential brownfields, including the subject property.

EnSafe observed two properties within 500 feet that appeared (based on drive-through canopies with fuel dispenser islands remaining) to have been operated as gas stations historically: 3226 and 3241 Chelsea Avenue. Historical research identified a gas station that operated from the mid-1950s to 1963 and a dry cleaner (Douglass Park Cleaners) that operated in the mid-1950s on what is now a paved parking lot at the southwest corner of Chelsea Avenue and Ash Street. Historical research also lists Douglass Park Cleaners at 3168 Chelsea Avenue, which directly adjoins the subject

property to the west, from the mid-1960s to the early 1980s. None of the sites discussed in this paragraph have environmental records, permits, or registrations with the Tennessee Department of Environment and Conservation (TDEC) or the U.S. Environmental Protection Agency.

Regulatory Research

Standard and additional federal, state, and local environmental records sources were researched for the subject property and surrounding area properties. Regulatory research identified no records of reported releases to the subject property, or subject property addresses or prior occupants on regulatory databases, tracking systems, or environmental/regulatory permits.

Site-specific information for facilities identified on environmental databases, with permits or other environmental records, and/or with reported releases – including de-listed National Priorities List, State Superfund, Voluntary Oversight and Assistance Program, Resource Conservation and Recovery Act Corrective Action, and Leaking Underground Storage Tank sites — within ASTM-defined search distances were researched through city, county, state, and federal sources. Most information was obtained from the files and personnel at TDEC's Divisions of Solid Waste Management, Underground Storage Tanks, and Remediation. Review of available files at the TDEC Memphis Environmental Field Office did not indicate contaminants at those facilities have migrated to the subject property or that the subject property was to be included in future investigations at those sites.

CONCLUSIONS AND ENVIRONMENTAL PROFESSIONAL OPINION

The historical uses of the subject property as a gas station and for automobile service and repair occurred prior to promulgation of environmental regulations that controlled the use, storage, and disposal of hazardous substances and petroleum products, and regulated closure of underground storage tank (UST) systems. The likely presence of hazardous substances and petroleum products on the property under conditions that indicate a past release into the ground and/or groundwater of the property is considered a *recognized environmental condition*¹ in connection with the subject property.

There have been no UST systems registered to the subject property with TDEC, based on EnSafe's regulatory research and an inquiry reportedly made by Mr. Pugh when he purchased the property. Mr. Pugh believed the tanks have been removed, based on the appearance of the asphalt and concrete and from conversations with neighbors, but had no documentation that tanks were emptied, closed, or removed, or that environmental media has been sampled to determine if releases have occurred from former operations on the subject property. The lack of information related to the presence of USTs and/or associated piping that was reasonably ascertainable despite efforts conducted within the scope of the ASTM E 1527-05 standard practice is considered a *data gap*. Additional investigation to detect the presence of a UST system and/or associated hazardous substances or petroleum products is necessary to address the *data gap*; the appropriate investigation would involve geophysics to search for USTs and a subsurface investigation to screen soil and groundwater for potential contaminants of concern (COCs) benzene, toluene, ethylbenzene, and xylene (BTEX), methyl tertiary-butyl ether (MTBE), naphthalene, and total petroleum hydrocarbons (TPH).

¹ ASTM defines a *recognized environmental condition* 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 of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws.

The lack of reasonably ascertainable information regarding Douglass Park Cleaners, which may have operated directly abutting the subject property for approximately 20 years, is also a *data gap* that can be addressed through subsurface investigation in conjunction with the subject property. Potential COCs associated with drycleaning operations include volatile organic compounds (VOCs) and Stoddard Solvent (petroleum hydrocarbons).

Surrounding area properties with reported releases pose a *business environmental risk* because the potential exists for their long-term uses to have impacted subsurface soil and groundwater which could then migrate to the subject property. However, the risk appears to be mitigated in that regulatory research has indicated that groundwater flows away from the subject property from those facilities, they have been or are regulated by a state agency that is aware of environmental-related issues at those sites, and/or the facilities are contaminated with hazardous substances such as those generated from drum reclamation that are not associated with petroleum products used/stored at the subject property.

PHASE II ENVIRONMENTAL SITE ASSESSMENT

The following summarize what specific activities a Phase II ESA of the subject property may entail based on the Phase I ESA findings; corresponding cost estimates and timeframes for conducting the Phase II ESA are included.

Work Plan, Health and Safety Plan, and Quality Assurance Project Plan \$2,500

Geophysics Survey \$8,000

Geophysics will be deployed to search for USTs. The technique will be time domain electromagnetics, which detects metal objects to a depth of approximately 6 feet. The survey will be conducted along a rectangular zone extending from Chelsea Avenue up to the south side of the existing structure. Preliminary results will be available two business days after conclusion of the field work.

Passive Soil-Gas Survey \$9,000

A passive soil-gas survey will be used to screen the site for petroleum hydrocarbon impact from historical use as a gas/service station and VOCs and petroleum hydrocarbons from former drycleaning operations on an adjoining property. The survey will include deploying 10 to 12 samples for analysis of VOCs (which include BTEX, MTBE, and naphthalene) and TPH.



AERIAL DATE: AUGUST 26, 2011

LEGEND

— — SUBJECT PROPERTY

NOT TO SCALE

FIGURE 2
 SITE AND VICINITY MAP
 TAX PARCEL 043037 00015
 3188 CHELSEA AVENUE
 MEMPHIS, TENNESSEE 38108

REQUESTED BY: SARAH T.
 DRAWN BY: BRONSON
 DWG DATE: 05/16/12
 DWG NO: 10687_B008

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 creative thinking.
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