

**PHASE I ENVIRONMENTAL
SITE ASSESSMENT REPORT**

**TAX PARCELS 002125 00001C AND 002124 00004C
272 SOUTH MAIN STREET AND 0 SOUTH SECOND STREET
MEMPHIS, TENNESSEE 38103**

**EnSafe Project Number
0888810687/PH12 and PH13**

Prepared for:

**Wolf River Brownfield Assessment Project
Shelby County Division of Planning and Development
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EXECUTIVE SUMMARY

EnSafe Inc. conducted a Phase I Environmental Site Assessment (ESA) of Tax Parcels 002125 00001C and 002124 00004C (together the 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 Development Services Group, Inc., a potential purchaser who plans to redevelop the subject property into apartments and/or hotel (public) occupancy. 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 2.62-acre subject property at 272 South Main Street in downtown Memphis occupies two city blocks and is bordered on the north by Linden Avenue, on the east by South Second Street, on the south by Pontotoc Avenue, and on the west by South Main Street; the blocks are bisected by Mulberry Street. Parcel 002124 00004C is a 1.08-acre paved parking lot. Parcel 002125 00001C is developed with a 292,138-square-foot, eight-story hotel building and connected four-story office/parking garage annex. These structures have not been occupied since the late 1990s and are heavily deteriorated, with portions exposed to the elements (humidity and rain) causing flooding, rusting, delaminating paint and insulation, and mold.

The hotel has two elevator equipment penthouses, an approximately 4,000-square-foot luxury penthouse, and a basement and sub-basement. The basement — which extends almost the entire hotel building footprint — appears to have housed most of the facility's maintenance, storage, and laundry areas, and equipment associated with various mechanical, electrical, plumbing, water and pool filtration, and fire suppression systems. The associated sub-basement — under the southeast end of the hotel basement — housed boilers, piping, and various control systems. The sub-basement was accessible from one set of stairs in the basement and had street access for deliveries via a platform lift, the entrance to which was paved over with a sidewalk that has the appearance of a sink hole from the Mulberry Street level. The annex has one elevator equipment penthouse.

Site History

Both parcels have been developed commercially and residentially since at least 1888, the date of the earliest standard historical source (Sanborn fire insurance map) obtained for this Phase I ESA. Occupants of the north portion of Parcel 002125 00001C have included Citizens' Street Railroad Company Car House/Hotel & Stable, The Auditorium (play house), and various businesses, offices, and stores. The Hotel Chisca was constructed in 1913 and, through the late 1960s, contained a variety of businesses, including a printing operation. The south portion of the parcel became less residential and increasingly commercial/retail through the early 1960s, when the Chisca Plaza Motor Hotel (now the annex) was constructed. The Chisca Plaza Motor Hotel had 100 motel rooms on four upper floors, with an open deck garage on the ground level. The Church of God in Christ (COGIC) acquired the parcel in 1972 and used the former hotel and annex as its headquarters from the early 1980s to late 1990s.

From 1888 to the late 1960s, Parcel 002124 00004C was residentially developed except for a church in the northwest corner and the Anne Brinkley Home/Women's Christian Association in the southeast corner, behind which was a laundry that operated until circa 1950. The last remaining

residence had been razed by 1969, all structures had been removed by 1971, and the parcel was completely paved and used for parking by 1981.

Site Observations

The subject property was visually assessed on November 7 and 14, 2011. A few containers of paint, lubricant, and water treatment chemicals remain onsite; most of the containers observed onsite — rusted, deteriorated, and/or stained 55-gallon metal drums of unidentified substances — were in the basement/sub-basement. The sides of four drums and the underlying concrete floor and adjacent wall were stained black as were many areas of the basement floor. In other basement and sub-basement areas, the floor and/or base of walls, elevator shafts, and base of pipe chases were rusted and/or stained and the concrete in poor condition. Based on the age of the facility and estimated date equipment was last likely serviced, polychlorinated biphenyl (PCB)-containing oils may remain in elevator, hydraulic, and mechanical equipment onsite. In addition, hydraulic fluids drained or spilled from older onsite equipment may have residual PCBs.

A brick-walled enclosure surrounds what is believed to be a heating oil aboveground storage tank in the basement, on the east side of the hotel near the vehicle/delivery ramp off Mulberry Street. The enclosure has an approximately 3-inch-thick concrete cover from which various pipes protrude. The enclosure adjoins fire sprinkler system equipment and is above boilers in the sub-basement; the boilers are similarly enclosed with brick walls and concrete covers. Information obtained did not indicate the tank size, current (if any) or former contents, installation date, etc. The visible brick, mortar, and concrete enclosing the tank were not stained.

The following types of materials have accumulated and/or been abandoned in the hotel and annex buildings onsite: mechanical system equipment (e.g., tanks, boilers, control panels, chillers, piping); maintenance equipment (e.g., air compressor, tools, ladders, hoses, belts); elevator systems; commercial kitchen equipment; office equipment and paper items; furniture and carpeting pieces; water tanks; drums, and paint and chemical containers; delaminated thermal system insulation (TSI) and chipped paint; and dead animal carcasses and bird waste.

Evidence of drains and pits includes two areas of cut concrete in the basement filled with brick and concrete (the fill material is not flush with the surrounding concrete floor), a 4-foot cylindrical covered feature connected to piping extending through the sub-basement wall, a drain opening in a dry portion of the sub-basement, and what appears to be a de-watering system in the stairwell on the ground floor of the annex. The sub-basement was flooded with up to 1 foot of water; the water was highest in the north (access) end of the sub-basement and water marks and/or staining on the walls suggest the possibility of higher flooding historically. The floor in the mid portion of the sub-basement, west of the brick-enclosed boilers, was covered with a thick white muddy substance believed to be a mixture of water and delaminated asbestos-containing TSI.

A 300-foot well installed in the Memphis Sands aquifer in 1930 for commercial use is registered to the Hotel Chisca on federal and state well databases; none of the resources EnSafe contacted/researched had information related to water quality, sampling, and/or well location (within the hotel). Drinking water in the subject property area is municipally supplied.

Facility Permits and Regulatory History

Standard and additional federal, state, and local environmental records sources were researched for the subject property and surrounding area properties. Site-specific information for facilities identified with environmental records were researched through city (fire department and publicly owned treatment works), county (Memphis and Shelby County Health Department and

Local Emergency Planning Committee), state (Tennessee Department of Environment and Conservation [TDEC] and Tennessee Emergency Management Agency), and federal (U.S. Environmental Protection Agency [USEPA]) sources. Regulatory research identified no records of reported releases to the subject property; activities, conditions, or incidents likely to cause or contribute to releases; or subject property addresses or prior occupants on regulatory databases or tracking systems, or with environmental/regulatory permits.

Surrounding Area Properties

The subject property is surrounded by municipal property (City of Memphis Division of Light Gas & Water administrative headquarters building and parking garage, and Police Department Entertainment District Precinct), the Gibson Guitar Factory, paved parking lots, and (primarily along South Main Street) restaurants, retail stores, and service-oriented businesses, the COGIC bookstore and Housing and Convention Services office, and apartments. The subject property is in a portion of downtown Memphis that has been developed commercially and residentially since at least 1888, with adjoining properties occupied by residential, retail stores, churches, commercial (furniture manufacturing and repair, and automobile sales, service, and repair), hotels, restaurants, beauty/barber shops, and offices. Adjoining and/or nearby parcels occupied by businesses with operations expected to have used and stored hazardous substances and petroleum products include filling stations, guitar manufacturing, and printing and film developing. In addition, Sanborn maps show an underground gas tank in Pontotoc Street near the intersection with South Main Street. Neither the historical filling stations nor the Pontotoc Street tank was registered or listed on environmental databases reviewed. Two adjoining facilities (Gibson Guitar Factory and George Hedge Printing) have records regarding hazardous waste generation, for which no information was available at TDEC or USEPA.

Regulatory research identified facilities on environmental databases, with reported releases, and/or with permits or other environmental records within ASTM-defined search distances. Review of available files at the TDEC Memphis Environmental Field Office did not indicate contaminants at those facilities (primarily from leaking underground storage tanks) have migrated to the subject property; most were issued “no further action” required or “clean closure” letters and/or had groundwater flow direction carrying contaminants away from the subject property.

ENVIRONMENTAL PROFESSIONAL OPINION

This Phase I ESA has identified *recognized environmental conditions*¹ and *business environmental risks*² associated with the subject property, as follows.

The stained floors and walls and corroded drums in the basement and sub-basement are evidence of the presence of hazardous substances and/or petroleum products under conditions that indicate a release of hazardous substances or petroleum products into structures on the property, which is a *recognized environmental condition*.

Although asbestos that is a part of the structure of, and results in exposure within, buildings is specifically excluded from Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) liability, asbestos that is disposed of on a site and is no longer part of the structure of a

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.

² *Business environmental risks* are those that may have a material environmental or environmentally driven impact on the business associated with the current or planned use of a parcel or commercial real estate.

building is subject to CERCLA response actions. Based on the age of the structure, all TSI in the basement and sub-basement is considered presumed asbestos-containing. The deterioration of the TSI in the former hotel basement and sub-basement and the quantities that have delaminated to cover flooring in large areas and/or have been stockpiled onsite are no longer part of the structure and are considered to have been disposed of onsite. In addition, the muddy mixture of what appears to be TSI and water from flooding in the sub-basement constitutes a disposal onsite. The presence of asbestos under existing conditions is considered a *recognized environmental condition*. Future use of the property includes residential and/or public occupancy and redevelopment includes partial demolition of buildings onsite; therefore, the presence of asbestos-containing material is a *business environmental risk* due to the capital costs and potential liability associated with its identification, abatement, encapsulation/removal, and disposal.

The registered well onsite poses a *business environmental risk* because it may provide a conduit to the subsurface, including the Memphis Sands aquifer, for any contaminants released at its location, which could not be determined from interviews or the site reconnaissance, and capital costs may be necessary to properly close/abandon the well. Additional *business environmental risks* associated with the subject property include capital costs and potential liability associated with characterization and proper disposal of contents that may remain in drums and containers, hydraulic equipment (including the freight elevator), mechanical equipment, and the heating oil tank.

Based on their age, the buildings formerly located on Parcel 002124 00004C were likely constructed with asbestos-containing material and lead-based paint (LBP). The buildings were demolished before regulations governing removal and disposal of building materials including asbestos and LBP were promulgated. If demolition debris remains beneath the parking lot parcel, the likelihood that it contains asbestos and/or LBP is considered a *recognized environmental condition*.

DATA GAPS, LIMITATIONS, AND EXCEPTIONS

EnSafe's earliest historical source obtained for this Phase I ESA showed the property to be developed commercially and residentially. The city of Memphis was founded in 1819 and incorporated in 1826. The subject property's central downtown location suggests prior commercial development is possible and prior residential development likely — therefore, a data failure has occurred. Although sufficient information was obtained to identify general past uses of the subject property (e.g., hotel, offices, retail), the data failure is considered a data gap that may have limited EnSafe's ability to identify *recognized environmental conditions* associated with specific uses (such as details regarding printing operations). The following limitations and exceptions encountered during EnSafe's Phase I ESA are also considered data gaps.

- Inability to interview a key site manager or current or former owners, operators, and employees
- The length of time since the facility was operated as a hotel (its main historical use) limited EnSafe's ability to identify specific hazardous substance and petroleum product use, storage, handling, accumulation, and disposal procedures, and where specific operations occurred (such as the hotel laundry and printing operation)
- The condition of the property limited observations for staining or other evidence of releases, especially in the basement and sub-basement that house most of the facility's equipment associated with various maintenance, mechanical, electrical, plumbing, water and pool filtration, and fire suppression systems.

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.

- Asbestos and Lead-Based Paint surveys to determine renovation requirements, abatement and disposal options — \$70,000/30 days (if conducted concurrently)
- Waste Characterization to determine disposal options related to contents of drums, containers, and tank remaining onsite; hydraulic fluid remaining in equipment; and sub-basement water — \$11,500/45 days
- Subsurface Investigation to include a passive-soil gas survey to determine the necessity for engineering controls to address vapor intrusion for residential occupancy, direct-push technology borings for soil and groundwater (if encountered) inside the accessible portions of the hotel and annex, and hollow-stem auger borings on the parking lot parcel to screen for the presence of buried debris and for soil and groundwater sampling to determine if operations on adjoining properties have impacted the subject property — \$44,000/60 days

The waste characterization portion of the Phase II ESA would be conducted to determine disposal options; constituents of concern — based on staining, legible marking, and other observations — include asbestos, lead, petroleum hydrocarbons, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and PCBs. The subsurface investigation would be designed to focus on impact from historical onsite and offsite operations; constituents of concern are petroleum hydrocarbons, VOCs, SVOCs, PCBs, and metals.

EnSafe recommends the Phase II ESA be conducted with the intention of entering into a Brownfields Agreement with the State of Tennessee, which may limit the liability of a party (and certain future parties) who is willing and able to conduct an investigation and remediation of a hazardous substances site or Brownfields Project and who did not generate, transport, or release the contamination that is to be addressed at the subject property.