# Draft

# Analysis of Brownfields Cleanup Alternatives – Preliminary Evaluation for 6122 Lancaster Avenue, Phila, PA 19151

## Prepared for
## JASTECH Development Services Inc.
## Overbrook Environmental Education Center

## I. Introduction & Background

### a. Site Location (*address*)

The site is located at **6122 Lancaster Avenue**, Phila, PA 19151 (herein referred to as "the Site") and accessed through a driveway that extends from Lancaster Avenue past a Laundromat that abuts the property to **6150 Lancaster Avenue** (also, adjoined with this ABCA) at the northwest. The Site is abutted by residential row housing to the east, south and southwest. To the north of the property are commercial adjoining properties which are located off of Lancaster Avenue. Properties include a KFC Restaurant, D.J. Laundromat, and Hunan's Palace Chinese Food Place.

### b. Previous Site Use(s) and any previous cleanup/remediation

A records review of the Site indicates that a filling station had historically been located on the northern part of the property before it became an automotive repair facility. The Site is Parcel No / Tax ID: 070N070095, consisting of 1.0 acres parcel of commercial real estate (6122 Lancaster Avenue, Philadelphia, PA 19151), in a mix-use neighborhood. The property under assessment consists of a one-acre vacant lot with a single one-story vacant garage.

The Site is was the location of a Construction Storage yard that stored trucks, trailers, pumps, drills, front-end loaders and storage containers. The Site was owned by Vincio Tinari Construction from 1998 to 2015. Thereafter, the Site was used as an automotive storage, repair and scrape metal yard, operated between 2016 to 2019 by the Superior Automotive Company of Philadelphia.

According to a July 2009, Environmental Site Assessment conducted by Pennoni Associates Inc., surface soil and floor staining was observed in numerous locations. These stains were associated with motor oil, transmission fluid and oil throughout the property and concluded that "adverse impacts to the surface and subsurface soils and/or groundwater may exist." Pennoni also stated that the presence of the Lancaster Avenue BROWNFIELD site located (6150 Lancaster Avenue) to the north of the Site.

**c. Site Assessment Findings** *(briefly summarize the environmental investigations that have occurred at the Site, including what the Phase I and Phase II assessment reports revealed in terms of contamination present, if applicable*)

At the request of the Overbrook Environmental Education Center, a Phase I Environmental Site Assessment was conducted in April 2019 by West Chester Environmental, Inc. A database search did not identify the Property as known or suspect potentially contaminated source at which the presence of petroleum hydrocarbons and other chemicals of concern will pose potential Vapor Intrusion Condition (pVIC) on the Property.

The database search identified other properties within the area of concern (i.e., the approximate minimum search distances specified by ASTM E 2600-10) as known or suspect potentially contaminated sources (Auto Repair Shops, leaking underground storage tanks, etc.) at which the presence of petroleum hydrocarbons and other chemicals of concern might pose potential Vapor Intrusion Condition (pVIC) on the Site.

In summer 2019, West Chester Environmental conducted Phase II site assessment activities to evaluate the extent of contamination at the Site. Six soil borings were advanced in the area surrounding the vacant garage, and two samples were collected from each boring. Additionally, a geotechnical investigation using ground penetrating radar was undertaken to locate existing utilities and a potential UST. No UST was located.

On May 16, 2019, WCE and its' contractor conducted soil borings in order to determine the type of subsurface materials present, the depth to drilling refusal (such as bedrock) and depth to ground water if present. Six borings were done, SB1 through SB6. The depth to drilling refusal in borings SB1, SB2, SB3, SB4 and SB5 ranged from 5.5 ft. to 7.5 ft. below ground. Boring SB6 ended at approximately 20 ft. below ground. WCE recorded field observations of soil composition, olfactory and visual observations, and photoionization detector (PID) responses to total Volatile Organic Compounds (VOCs) concentrations at approximately six-inch intervals and at horizons of suspected impacts.

Boring samples ranged from 5.5 fbgs (SB-5) to 20 fbgs (SB-6). Breathing space organic vapor background concentrations ranged from zero to 1.5 parts per million (ppm) on the PID. The highest PID readings were detected in soil boring SB-3 (see Figure 1: *Soil Borings Locations*), with a maximum reading of 257 ppm in the zero to four fbgs interval.

Soil samples SB-1 through SB-6 were analyzed for VOCs via USEPA Method 8260B, Semi-volatile Organic Compounds (SVOCs) via USEPA Method 8270D, and for lead via USEPA Method 6010. Six borings were conducted on the Site and two soil samples were collected from each boring. Samples were collected from soil horizons with the greatest likelihood of contamination based on field observations and PID readings.

One sample was collected from the 0-4ft. depth. The second sample from each boring was collected near the bottom of the boring. The soil samples were analyzed by a Pennsylvania-licensed laboratory for volatile organic compounds (VOCS), semi-volatile organic compounds (SVOCs) and lead.

All sample results were compared against the maximum concentration levels (MCLs) established by the Pennsylvania Department of Environmental Protection (PADEP) for direct contact nonresidential soils. No VOCs were detected in any of the twelve soil samples. SVOCs were detected in four of the soil samples, SB2-0-4, SB2-5.5-6.5, SB3-0-4 and SB5-0-4. The SVOCs detected were hydrocarbon-related compounds:

- Benzo[a]anthracene
- Benzo[a]pyrene
- Benzo[b]fluoranthene
- Benzo [g,h,i] perylene Chrysene
- Indeno [1,2,3-cd] pyrene
- Pyrene

**d. Project Goal (*site reuse plan*)**

The planned reuse for the Site is an Environmental Education Center. The Overbrook Community does not have an open-space environmental center in this neighborhood. The Site use will include the demonstration of green stormwater infrastructure practices, urban farm and other outdoor activities and educational facilities. The nature and extent of contamination that may be encountered during the construction of this facility cannot be foreseen. If contaminants are encountered, this will create a delay in the construction of the project and an unforeseen cost for testing, cleanup, and restoration prior to restarting construction.

## II. Applicable Regulations and Cleanup Standards

**a. Cleanup Oversight Responsibility (identify the entity, if any, that will oversee the cleanup, e.g., the state, Licensed Site Professional, other required certified professional).**

The cleanup will be overseen by Overbrook Environmental Education Center, under the oversite of the PA Department of Environmental Protection. In addition, all documents prepared for the Site are submitted to the PA DEP's Office of Land Recycling Program.

**b. Cleanup Standards for major contaminants (*briefly summarize the standard for cleanup e.g., state standards for residential or industrial reuse*)**

The Overbrook Environmental Education Center currently anticipates that the PA State standards for educational use will be used as the cleanup standards. However, it is possible that

risk-based cleanup standards will be generated for compounds of concern, in accordance with state regulations.

**c. Laws & Regulations Applicable to the Cleanup (*briefly summarize any federal, state, and local laws and regulations that apply to the cleanup)***

Laws and regulations that are applicable to this cleanup include the Federal Small Business Liability Relief and Brownfields Revitalization Act, the Federal Davis-Bacon Act, state environmental law including the Pennsylvania Act 2 Land Recycling, Medium-Specific Concentration Statewide Health Standards, and Philadelphia regulations. Federal, state, and local laws regarding procurement of contractors to conduct the cleanup will be followed.

In addition, all appropriate permits (*e.g.*, Pennsylvania (811) One-Call, soil transport/disposal manifests) will be obtained prior to the work commencing.

## III. Evaluation of Cleanup Alternatives

**a. Cleanup Alternatives Considered (*minimum two different alternatives plus No Action*)**

To address contamination at the Site, three different alternatives were considered, including Alternative #1: No Action, Alternative #2: Capping, and Alternatine#3: Excavation with Offsite Disposal.

**b. Cost Estimate of Cleanup Alternatives (*brief discussion of the effectiveness, Implementability and a preliminary cost estimate for each alternative)***

To satisfy EPA requirements, the effectiveness, Implementability, and cost of each alternative must be considered prior to selecting a recommended cleanup alternative.

<u>Effectiveness</u>

- Alternative #1: No Action is not effective in controlling or preventing the exposure of receptors to contamination at the Site and may create a project delay and additional cost that could threaten the construction of the planned Environmental Education Center.

- Alternative #2: Capping is an effective way to prevent recreational receptors from coming in direct contact with contaminated soil in the scrap metal and storage areas, if the cap is maintained. However, capping is not and effective way to control other exposures, such as the direct contact risks for residents and the vapor intrusion risk to the commercial worker from petroleum contamination from the decomposed automobile and tank storage areas. To mitigate the vapor intrusion risk, the capping alternative must include installation of a sub-slab depressurization system within the neighboring storage building. In addition, an institutional control (land use restriction) would need to be recorded on the deed to prevent residential use of the property (to meet the objective of eliminating direct contact pathways for residents).

- Alternative #3: Excavation with offsite is an effective way to eliminate risk at the Site, since contamination will be removed, and the exposure pathways will no longer exist.

Implementability

- Alternative #1: No Action is easy to implement since no actions will be conducted.

- Alternative #2: Although capping is less expensive than excavating soils and disposing of them offsite, Alternative #2 (Capping) would require ongoing monitoring and maintenance of the cap, the installation and maintenance of a sub-slab depressurization system to mitigate vapor intrusion risks, and implementation of land use restrictions hence, making it more difficult to implement than Alternative#3 (Excavation and Offsite Disposal).

- Alternative #3: Excavation with Offsite Disposal is moderately difficult to implement. Coordination (e.g., dusk suppression and monitoring) during cleanup activities and short-term disturbance to the community (e.g., trucks transporting contaminated soils and backfill) are anticipated. However, ongoing monitoring and maintenance will not be required following excavation and offsite disposal.

**c. Recommended Cleanup Alternative**

- The recommended cleanup alternative is Alternative #3: Excavation with Offsite Disposal. Alternative #1: No Action cannot be recommended since it does not address site risks. Alternative #2: Although capping is less expensive than excavating soils and disposing of them offsite, Alternative #2 Capping would require ongoing monitoring and maintenance of the cap, the installation and maintenance of a sub-slab depressurization system to mitigate vapor intrusion risks, and implementation of land use restrictions hence, making it more difficult to implement than Alternative #3 Excavation and Offsite Disposal.