Analysis of Brownfield Cleanup Alternatives

1602 Oren Ave, Flint, Michigan

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1.0 INTRODUCTION

The Genesee County Land Bank Authority (GCLBA) received EPA Multipurpose Grant funding to assist with assessment and cleanup of specific contaminants on properties within the Innovation District in Flint, Michigan. GCLBA received the subject site through involuntary transfer in December 2021. GCLBA's mission is to return formerly tax foreclosed properties to productive use with responsible owned. Since adding the subject site to its inventory, GCLBA has worked with environmental consultants on Asbestos and Hazardous Materials Survey and Phase I (ESA). Conditions of the property, present contaminants, and potential for unknown contaminants below the structure slab pose barriers to reuse of the site. EPA grant funding is available to address hazardous materials such as asbestos and petroleum contamination. The Analysis of Brownfield Cleanup Alternatives (ABCA) is a required element of the United States Environmental Protection Agency (USEPA) USEPA Hazardous Substances Assessment Grant awarded to the GCLBA. In preparing the ABCA, the GCLBA considered environmental factors, various site characteristics, surrounding properties, land use restrictions, potential future uses, and cleanup goals.

2.0 BACKGROUND

The subject property consists of a 0.194-acre parcel located at 1602 Oren Ave, in Flint, Michigan. The property is developed with 1,730 SF single-story warehouse building with associated parking and unkempt landscaping. According to property records, the construction date for the building is 1928.

2.1 Site Location

The site consists of one (1) parcel located at 1602 Oren Ave Road in City of Flint, in Genesee County, Michigan (herein referred to as "the Site").

2.2 Site Ownership

GCLBA is the sole owner of the Property. The Property was acquired involuntarily through tax reversion on December 21, 2021.

2.3 Previous Site Uses

Prior to 1914, the subject property was developed with two residential dwellings on the south portion of the property. By 1916, the two residential dwellings in the south portion of the subject property have been demolished and a new residential dwelling has been developed on the north portion of the subject property. By 1928, the subject property became developed with the current store front building on the south portion. of the property in addition to the residential dwelling on the north portion of the property. In the late 1980s to early 1990s, the residential dwelling on the north portion of the property was demolished.

According to historical information, the subject property operated as a laundry/dry cleaning from at least the late 1950s to the mid-1980s. PSI was unable to confirm if the site was a drop off only and assumes that dry cleaning operations were conducted on the subject property. The potential use of the subject property as a dry-cleaning business is considered to be evidence of a REC in connection with the subject property.

3.0 SITE ASSESSMENT FINDINGS

The following subsections provide a summary of previous environmental investigations, areas of known contamination, an evaluation of exposure pathways, and an evaluation of known or potential exposures at the Subject Property.

3.1 Asbestos-Containing Materials

Asbestos-Containing Materials (ACMs)– an Asbestos & Hazardous Materials Survey (Hazardous Materials Survey) was completed on June 3, 2022, by Professional Service Industries, Inc. (PSI) an Intertek company as a part of the pre-demolition evaluation.

One ACMs (>1% asbestos) was identified through laboratory analysis during this investigation, roof flashing. The following table presents a summary of the materials supporting asbestos greater than 1%, based on the results of the Polarized Light Microscopy (PLM) analyses for asbestos.

Material Description[1]	Material Location[2]	Estimated Quantity	F/NF[3]	EPA NESHAP Category[5]	OSHA Class designation[6]
Roof Flashing (Black)	EA 5	575 LF	NF	Cat 1 NF	Class II

1Homogeneous materials/systems may contain an indefinite/indistinguishable number of layers that may not be visually identified by the inspector at the time of the survey.
2 **EA** = Exterior Area = Generally relating to sides of the principal structure on the site.
FS = Functional Space = A room, group of rooms, or homogeneous area (including crawl spaces or the space between a dropped ceiling, and the floor or roof deck above) designated by a person accredited to prepare
management plans, design asbestos abatement projects, or conduct asbestos response actions.
3 **F** = Friable; **NF** = Non-friable
4 **NAD** = No Asbestos Detected, **Ch** = Chrysotile, **Am** = Amosite, **Tr** = Tremolite, **Cr** = Crocidolite **PT** = Point Count Analysis
5 **NESHAP** Category - Regulated ACM (RACM), **Cat I NF**=Category I Non-Friable ACM, **Cat II NF**= Category II Non-Friable ACM
6 **OSHA/EPA Class Definitions:**
Class I Asbestos work means activities involving the removal of TSI and surfacing ACM and PACM.
Class II Asbestos work means activities involving the removal of ACM which is not thermal system insulation or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.
Class III Asbestos work means repair and maintenance operations, where "ACM", including TSI and surfacing ACM and PACM, is likely to be disturbed.
Class IV Asbestos work means maintenance and custodial activities during which employees contact but do not disturb ACM or PACM and activities to clean up dust, waste and debris resulting from Class I, II,
and III activities.

In addition, the following materials were not sampled and are assumed to be ACM:

Material Description[1]	Material Location[2]	Estimated Quantity
Roofing Material	EA 5	1,750 SF

Note: Roof was inaccessible to sample due to PSI safety protocols.

Regulated ACM (RACM) and Category II Non-Friable ACM must be properly removed by a licensed asbestos abatement contractor prior to demolition that would disturb the material. Federal, State and Local regulations and guidelines should be strictly adhered to when removing the ACM. Category I Non-Friable ACM may often be left in place during demolition if not made friable by cutting, grinding or sanding. If there is a potential for the non-friable materials to be rendered friable by demolition activities, the materials must be removed prior to demolition by a certified asbestos removal contractor utilizing the appropriate engineering controls. If left in place, these materials cannot be recycled or used as clean fill.

HAZMATs

Six suspected HAZMAT categories were observed on the subject property as outlined in the table below which lists the component, container, or equipment that is suspected of containing hazardous or regulated substances, the suspected constituent of concern, and the approximate quantity. The items listed in the hazardous materials table can become hazardous during demolition.

Inspection Item	Constituent of Concern	Size/Quantity	Notes/Location

Fire Extinguishers/ Compressed Gas Cylinders	CFC / HCFC	4	FS 1-5
Light Ballasts	PCB	12	FS 1-5
Miscellaneous items (glue, solvents, cleaners, etc)	Varied	20	FS 1-5
Paint Cans	Lead	15	FS 4
Tires	Varied	4	EA 3
Florescent Light bulbs	Mercury	24	FS 1-5

PSI recommends disposing the hazardous materials identified on the site in accordance with applicable regulations. Any unknown containers present on the site need to be verified through testing followed by proper disposal in accordance with applicable regulations.

3.2 Phase I Environmental Site Assessment

Phase I Environmental Site Assessment - A Phase I Environmental Site Assessment (ESA) was completed on June 25, 2022 by Professional Service Industries, Inc., and Intertek Company. PSI performed the Phase I ESA in conformance with the scope and limitations of ASTM Standard E 1527-13. The assessment revealed one potential REC on-site and the potential for RECs on adjacent properties that could impact the site.

According to historical information, the subject property operated as a laundry/dry cleaning from at least the late 1950s to the mid-1980s. PSI was unable to confirm if the site was a drop off only and assumes that dry cleaning operations were conducted on the subject property. The potential use of the subject property as a dry cleaning business is considered to be evidence of a REC in connection with the subject property.

- Based on a review of historical sources, the west adjoining property operated as a gasoline filling station from the 1920s to the 1950s. These types of businesses routinely use automotive-related hazardous substances and petroleum products. The Sanborn maps depict five gasoline tanks associated with the filling station. No additional information was identified regarding these tanks. Based on the years of operation, unknown tank status, and proximity to the subject property. The former operations on the west adjoining property represent evidence of a REC.

- According to historical information, the south adjoining property (1604 and 1610 Martin Luther King Avenue) operated as a gasoline filling station and/or automotive repair from the 1930s to the 1970s. Martin Luther King Avenue was previously identified as Detroit Avenue. According to the ERIS database, four USTs were removed from the 1610 Martin Luther King Avenue address in 1993, at which time a LUST case was reported. The LUST case obtained closure status on April 5, 1991. Two USTs are reported for the 1604 Martin Luther King Avenue address. The status of the USTs was not provided in the database information. LUST case 0129-20 was reported for the 1604 Martin Luther King Avenue address on July 2, 2020 and is listed as open. The 1604 Martin Luther King Avenue address is also listed in the FED BROWNFIELDS database. According to information on the ERIS report, environmental assessments were conducted on the property in 2019 as part of the Brownfield activities. Based on the documented presence of contamination, open LUST case and proximity to the

subject property, former gasoline filling station operations on the south adjoining property are considered to be evidence of a REC.

Based on the findings, additional site investigation activities in the form of subsurface sampling has been recommended at the Site to verify the absence or presence of environmental impact from the adjacent identified RECs. A Phase II Environmental Assessment is currently being conducted by PSI.

4.0 APPLICABLE REGULATIONS AND CLEANUP STANDARDS

The United States Occupational Safety and Health Administration (OSHA) and the United States Environmental Protection Agency (USEPA) both have regulations that are applicable to this project. The OSHA Construction Industry Standard (29 CFR 1926.1101) covers employees engaged in demolition and construction activities likely to involve asbestos exposure. In Michigan, the Michigan Occupational Safety and Health Administration (MIOSHA) Asbestos Program enforces the federal standards. The EPA regulates asbestos application, removal, and disposal of ACMs, under the National Emission Standards for Hazardous Air Pollutants (NESHAP). The asbestos NESHAP protects the public and environment by minimizing the release of asbestos fibers during renovation and demolition activities. In Michigan the Air Quality Division (AQD) of the Michigan Department of Environment, Great Lakes and Energy (EGLE) has been delegated authority to implement the NESHAP program for asbestos. MIOSHA and EGLE are made aware of and provide oversight of asbestos removal projects by receiving and reviewing the "Notification of Intent to Renovate/Demolish" forms, which are required to be submitted a minimum of 10 working days prior to starting work. Other agencies promulgating regulations on asbestos include the Department of Transportation (DOT) – establishing regulations regarding the transport of asbestos. All cleanup work proposed at the property will comply with the above regulations and notification requirements. The proposed cleanup project will comply with all other applicable local, state, and federal regulations not specifically mentioned.

5.0 CLEANUP OBJECTIVES

1602 Oren is a blighted and abandoned former commercial site, adjacent gasoline and other automotive uses that could impact the site. The locality is fully developed as residential (east, northeast and south, as well as a small business section in an around the intersection of Martin Luther Kin Dr and Welch Streets.

In addition to contaminants listed above, the site regulated ACM (RACM) and Category II Non-Friable ACM. The potential exists that there may be petroleum contamination beneath the slab of the structure. The project goal is to clean up the damaged asbestos, abate the remaining RACMs prior to demolition, remove connected utilities, demolish the buildings, assess the area for sub-slab impacts, remove remaining debris around the buildings and return to grade. This project will rid the area of a public nuisance, remove the slab and test below it, and prepare the Property for future redevelopment.

As this site is part of a small commercial district, it is envisioned that a new or expanded commercial endeavor would occupy the site, removing blight and provide neighborhood-oriented commercial opportunities.

5.1 Cleanup Alternatives

Three alternatives were considered for the Site which include:

- Alternative #1: No Action
- Alternative #2: Remediation of Asbestos-Containing Materials prior to Demolition of Site Structures

5.1.1 Alternative # 1 – No Action Alternative

Effectiveness – The No Action alternative is not effective in controlling or preventing the exposure of ACM contamination at the Site.

Implementation – No Action is easy to implement since no actions will be conducted.

Cost - $0, but a No Action alternative would leave the Site in its existing condition making it undesirable for redevelopment, and difficult to obtain private interest for the redevelopment of the Site. Additionally, there will be costs to secure the building that will continue indefinitely.

Summary - The Site would be left in the current dilapidated state. The ACMs would still pose a health risk to legal and illegal visitors entering the buildings. Transfer of the property to other parties would require notification of the presence of asbestos-containing materials and existing RECs, and controls would be necessary to manage exposure to those entering the buildings. Under the No Action Alternative, if the Site remains unused for an extended period, the Site will continue to deteriorate, creating an attractive nuisance and increasing the risk to those entering the Site Building. It is additionally of note that vacant and abandoned buildings in Flint are often the target of arson. The No Action Alternative increases the risk of further fire damage to identified contaminants.

5.1.2 Alternative #2 – Remediation of Asbestos Containing Materials and Demolition of Site Structures

Effectiveness – Removal of ACMs is an effective method for preventing exposure to and stopping further deterioration and exacerbation.

I*mplementation* - Removal and disposal of ACMs and building demolition are technically feasible and are common actions for reducing or eliminating the human health risks of exposure to hazardous building materials. Services and materials are readily available.

Cost – $108,350.

Summary - The ACM Remediation and Building Demolition alternative will properly manage the hazardous building materials and achieves the project goals of providing a Site ready for redevelopment. This alternative provides the safest environment for demolition due to complete removal of ACMs prior to demolition thereby preventing exposure to workers. The removal of the Site buildings, and marking any subsurface contaminants encountered, will provide the maximum flexibility for site redevelopment.

5.13 4 Recommended Cleanup Alternative

The recommended cleanup alternative is Alternative #2: Remediation of Asbestos Containing Materials and Demolition of Site Structures. Alternative #1: No Action cannot be recommended since it does not address Site risks or project objectives.

Figures

Figure 1 - Topographic Map

Vacant Property
1602 Oren Avenue
Flint, Michigan 48505
Project Number: 0166-1701-4

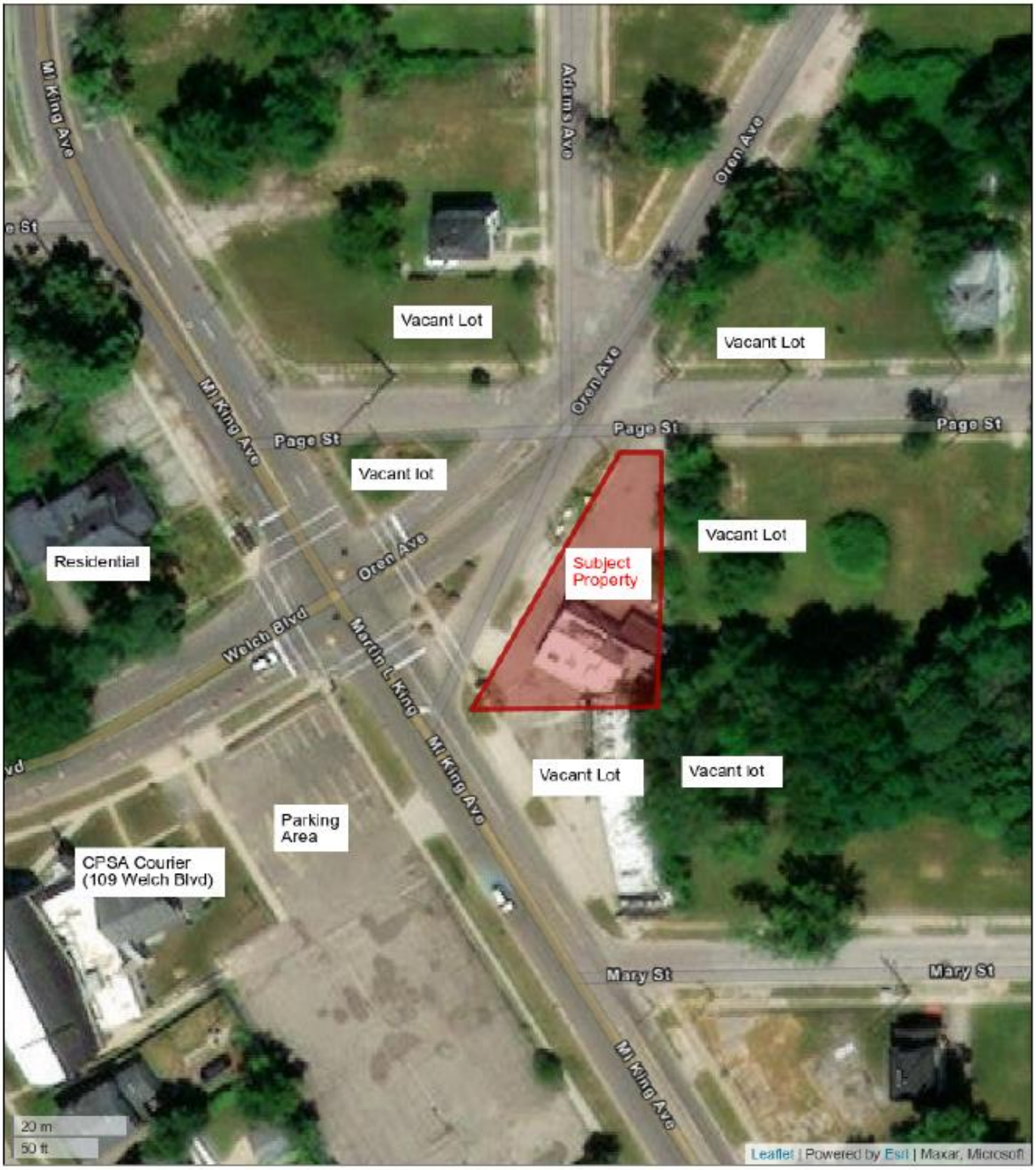

Figure 2 - Site Vicinity Map

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