ANALYSIS OF BROWNFIELD CLEANUP ALTERNATIVES

FORMER H.K. PORTER FRICTION MATERIALS SITE
1849 SABINE STREET, HUNTINGTON, INDIANA

SME Project Number: 095055.00.001
December 3, 2024

Prepared for: The City of Huntington, Cooperative Agreement # BF00E03567-0

11800 Exit 5 Parkway
Suite 106
Fishers, IN 46037

T (317) 876-0200

www.sme-usa.com

December 3, 2024

Mr. Bryn Keplinger
City of Huntington
300 Cherry Street
Huntington, Indiana

RE: Analysis of Brownfield Cleanup Alternatives
Former H.K. Porter Friction Materials
1849 Sabine Street
Huntington, Indiana
SME Project No.: 095055.00.001

Dear Mr. Keplinger:

We have completed this Analysis of Brownfield Cleanup Alternatives (ABCA) for the Former H.K. Porter Friction Materials site located at 1849 Sabine Street, Huntington, Indiana, hereinafter referred to as the Site. The enclosed ABCA submittal presents our interpretation of current Site building conditions, based on our field observations and review of readily available, previous Site assessments and documentation.

This ABCA documents the preliminary evaluation of environmental response action alternatives considered to mitigate potential exposures to related to asbestos-containing materials and dust associated with the remaining Site building. Remediation of environmental impacts is appropriate to prepare this brownfield for redevelopment.

If you have any questions concerning this report, or if additional services are required, please contact us.

Sincerely,

SME

PREPARED BY:

Michael Yergin, CHMM
Project Consultant

REVIEWED BY:

Jason C. Lafayette
Senior Project Consultant

Enclosure: SME Analysis of Brownfield Cleanup Alternatives Dated; December 3, 2024

TABLE OF CONTENTS

1. INTRODUCTION

This Analysis of Brownfield Cleanup Alternatives (ABCA) documents the preliminary evaluation of environmental response action alternatives considered to mitigate potential human exposures to fiber releases from asbestos-containing materials and asbestos-laden dust associated with the remaining, former H.K. Porter Friction Materials building located at 1849 Sabine Street, Huntington, Indiana, hereinafter referred to as the Site. Mitigation of human exposure threats, and remediation of environmental impacts, associated with the previous Site use is appropriate to prepare this brownfield for redevelopment.

2. SITE BACKGROUND AND CONDITIONS

2.1 SITE LOCATION AND DESCRIPTION

The Site is located at 1849 Sabine Street, Huntington, Indiana and lies in the northeast quarter of Section 14, Township 28 North, Range 9 East. The parcel ID number is 35-05-14-100-255.700-005. The site is located at an elevation of 745 feet above mean sea level (msl) and is located on the Huntington, Indiana topographic quadrangle. The geographic coordinates at the center of the Site are 40° 53' 17.49" North latitude and 85° 28' 31.37" West longitude.

The Site consists of an approximately 80,000 square-foot, vacant, manufacturing building; paved drives and parking lots; an open field vegetated in grasses; and an overgrown wooded area. The Site is situated on approximately 11.97 acres of land bound to the north by Sabine Street, beyond which is a residential area and church (formerly Lincoln Elementary School); to the east by a residential area; to the south by an active Norfolk Southern Railroad right-of-way, beyond which is a residential area; and to the west by an unnamed alley, beyond which is a residential area.

2.2 HISTORICAL SITE USE

The Site buildings associated with the former manufacturing facility were constructed from 1919 to the 1930s and consisted of a primary manufacturing building, an office building, a research and development building, a pump house, a finished goods warehouse, metal storage buildings, a guard shack, a mill, a solvent recovery area, and a chemical storage area. The former Site buildings were demolished between 2013 and 2020, save for the 80,000 square-foot, former, manufacturing building, which is the final remaining structure.

According to available historical documentation, the facility was operated by H. K. Porter Company, Inc., Asbestos Manufacturing, Inc., and Rapid Race. The original Site owner produced pivots at the Site beginning in 1912. In 1924, the Site was bought by Asbestos Manufacturing, Inc. Friction Materials later purchased the Site at an unknown date and used it to manufacture asbestos automotive parts (i.e. brake pads and clutch facings). As part of the manufacturing process, the facility utilized asbestos, various oils, fuels, and solvents. Asbestos was originally stored in a warehouse located about three blocks from the main plant building but was later stored in the plant building itself. The asbestos was taken to the mixing area, which made approximately seven to eight batches per day. The mixed materials were placed in covered dumpsters, moved to the operations area, and then to the compress area where all asbestos material became permanently bound to metal plates. Approximately 220 pounds of asbestos and 400 pounds of lead were used per day in the manufacturing process. Since each customer had certain specifications, the products were taken to specific areas within the plant where several operations such as grinding, drilling, and cutting were performed. Waste from these operations was reportedly disposed at the Huntington City Landfill.

2.3 OVERVIEW OF PREVIOUS SITE ENVIRONMENTAL INVESTIGATIONS

We reviewed the following environmental reports related to the Site:

- Tetra Tech's Site Assessment Report dated May 16, 2002;
- IDEM's Pre-CERCLIS Screening Report dated January 17, 2007;
- IDEM's Preliminary Assessment Report dated February 9, 2007;
- SME's Limited Phase II Site Assessment Report dated October 9, 2013,
- SME's Hazardous Materials Assessment Report dated October 16, 2013;
- SME's Phase I Environmental Site Assessment Report dated December 20, 2013;
- SME's Confirmation for Wipe Sampling Services Report dated October 28, 2014;
- SME's Demolition and Hazardous Material Removal Report dated July 9, 2015;
- Tetra Tech's Final Removal Assessment Report dated March 11, 2016;
- SME's Dust Wipe Sampling for Asbestos Content Report dated November 30, 2018;
- SME's Revised Hazardous Materials Assessment Report dated December 4, 2018;
- SME's Asbestos-Laden Dust Related Demolition Air Monitoring Report dated February 10, 2020; and
- SES's Asbestos Survey Report dated July 21, 2022.

The cumulative findings of previous Site assessments indicated the presence of various volatile organic compounds (VOCs), and lead, in soil and groundwater in excess of Indiana Department of Environmental Management (IDEM) standards. In addition to the presence of asbestos-containing materials present within the current Site building, asbestos-laden dust and/or lead-laden dust were identified throughout the building, the ground surface across areas of the Site, and the ground surface of adjoining residential properties.

At the time this ABCA was prepared, the EPA had completed their soil removal activities on the Site and on 11 surrounding residential sites where lead was identified above the EPA RML in surface and subsurface soils. The former USTs had been removed, the Site was in the Petroleum Orphan Sites Initiative (POSI) and quarterly groundwater monitoring was underway. According to IDEM, the No Further Action (NFA) determination associated with the USTs is expected to be issued in 2025. The Indiana Brownfields Program (IBP) has received approval from the EPA to use 2025 funds for further delineation of the hexavalent chromium impacts in the groundwater. The IBP is currently awaiting the Indiana Finance Authority (IFA) board approval.

2.4 PROJECT GOALS AND OBJECTIVES

A public meeting was held on October 25, 2022. Attendees were asked to provide ideas for Site reuse, once the building is removed. One proposed reuse plan is to convert the Site into a community center with outdoor recreation space. Suggestions included a greenhouse, makerspace, and flexible classroom or meeting space where community programs could be offered. The facility would be surrounded by walking paths and natural landscaping and would connect the neighborhood to healthy living amenities nearby such as the trail system, Lake Clare, and the farmers' market. Given the Site's residential surroundings, the City also has an interest in converting a portion of the Site into affordable housing.

In June 2024, a Reuse Advisory Committee was established. The Committee is made up of the appointed Second District City Councilperson, an At-Large City Councilperson and member of the Redevelopment Commission (which holds title to the Site), an appointee from the City Administration, and two citizens from the surrounding neighborhood. The Committee's goal is to advise the Redevelopment Commission, keep neighbors informed and help formalize reuse plans for the Site. The interim and primary objective of the cleanup activities is to mitigate risks to human health and the environment posed by the current state of the Site building. Through removal and/or mitigation of the environmental risks, the Site will be presented as ready for building demolition which will further aid subsurface remediation efforts, if warranted.

3. THREATS TO HUMAN HEALTH AND THE ENVIRONMENT

Previous asbestos assessments of the remaining Site building reported the presence of friable and non-friable asbestos-containing materials (ACMs), as well as asbestos-laden dust, in the building. The friability of an ACM is the ease in which the material may be crumbled and/or turned to dust and become airborne. Friable ACMs are considered a greater threat to human health than nonfriable ACMs due to the increased potential for human exposure via inhalation. The United States Environmental Protection Agency (U.S. EPA) Superfund Technical Assessment and Response Team (START) commissioned the removal of certain friable ACMs from the building. However, the building remains unsealed and unsecured, and the potential remains for unauthorized entry to the building and/or for asbestos fibers to become airborne and migrate from the Site during aggressive wind conditions.

All friable ACMs, and nonfriable ACMs that are likely to become friable during demolition activities, are required by the U.S. EPA National Emissions Standards for Hazardous Air Pollutants (NESHAP) asbestos regulation to be removed from a building prior to demolition; unless the building is determined, by a qualifying professional, to be in a condition unsafe to perform the removal activities. Those ACMs are defined as regulated asbestos-containing materials (RACMs). Factors that can cause nonfriable ACMs to become friable can include weathering, deterioration, and aggressive forces.

The presence of deteriorated RACMs and asbestos-laden dust in the building presents a human exposure threat as well as additional considerations for demolition waste stream handling and disposal. Environmental response activities are necessary to mitigate the threat to human health posed by these asbestos materials and prepare the Site for potential redevelopment. The technical and economic feasibility of the environmental response approaches were evaluated and are presented in Section 5. It should be noted that the proposed environmental response alternatives are applicable to asbestos response activities relevant to razing the remaining Site structure as an initial project objective and do not include response activities related to other subsurface contaminants or surficial impacts from lead and asbestos, onsite or offsite.

4. APPLICABLE REGULATIONS AND CLEANUP STANDARDS

4.1 CLEANUP OVERSIGHT ROLES AND RESPONSIBILITY

The City of Huntington has retained SME (a third-party environmental consultant) to assist with the preparation of project technical specifications, contractor bidding, and technical oversight during the performance of the project. At the time of this ABCA the project technical specifications were already underway. SME will also provide project air monitoring services to evaluate the efficacy of engineering controls utilized during asbestos removal activities to protect workers and the public and monitor work methods comparative to applicable state and federal asbestos work regulatory requirements. Asbestos handling and cleanup activities will be conducted by an asbestos contractor licensed by the State of Indiana, and utilizing staff trained and accredited in accordance with applicable U.S. EPA, and Occupational Safety and Health Administration (OSHA), requirements for the asbestos-related work activities.

4.2 CLEANUP STANDARDS

Cleanup standards for environmental response actions addressing ACMs and asbestos-laden dust associated with the Site building will be in accordance with applicable state and federal asbestos regulations. Applicable or relevant and appropriate regulatory requirements for demolition/asbestos removal and/or decontamination activities are presented in the following section.

4.3 APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS)

Cleanup of the Site is part of a brownfield redevelopment that is consistent with the operational requirements of the 1995 Brownfields Addendum to the Superfund Memorandum of Agreement between the State of Indiana and the U.S. EPA Region 5. In addition to the statutes and rules governing cleanup oversight and standards described above, the following ARARs have been identified for the project:

- Environmental response actions
  - Asbestos removal/demolition
    - 40 CFR 61 National Emissions Standards for Hazardous Air Pollutants
    - 40 CFR 763 Asbestos
    - Indiana Administrative Code 326 IAC 14-10: Indiana Asbestos Work practice standards
    - Indiana Administrative Cone 326 IAC 18-1: Indiana Asbestos Licensing requirements
  - Waste management
    - 40 CFR 260 General Regulations for Hazardous Waste Management
    - Indiana Administrative Code 329 IAC Hazardous and Non-hazardous waste
  - Transportation of wastes
    - 49 CFR 172: Hazardous materials (DOT)
    - 40 CFR 263 Standards Applicable to Transporters of Hazardous Waste
  - Health and safety
    - 29 CFR 1910.120 (HAZWOPER)
    - 29 CFR 1926 (all applicable standards)
    - IC-22-8: Indiana Occupational Safety and Health Act (IOSHA)
- Storm water management
  - Indiana Administrative Code 327 IAC 15

5. ENVIRONMENTAL RESPONSE ACTION ALTERNATIVES

Environmental response activities are necessary to protect human health and the environment as well as to facilitate future redevelopment of the Site. Alternative response and environmental management activities considered for the Site consisted of the following:

- Alternative 1 - No environmental response actions are performed on the Site (the “no action” alternative), the existing asbestos and associated human health hazards remain in-place.
- Alternative 2 – Building stabilization, removal of the remaining ACMs, cleanup of asbestos-laden dust, and decontamination of interior building surfaces to allow for building demolition.
- Alternative 3 – Demolition of the structure with ACMs remaining in place, containment and filtration of demolition dust-suppression water, and disposal of the building debris as friable asbestos waste.

These response action alternatives were evaluated using the following general criteria:

- Effectiveness – 1) the degree to which mobility of and exposure to asbestos is reduced, 2) the degree of protection for public health, safety and welfare and for the environment, and 3) the extent of adverse effects on public health, safety and welfare and on the environment during response action implementation.
- Implementability – 1) technical feasibility, 2) availability of needed technologies, materials, equipment, and services needed to conduct the response action, and 3) administrative and permitting feasibility; presence of endangered species or historical structures; technical feasibility of ancillary functions and issues, such as engineering controls, recycling of materials, waste handling and disposal; and project schedule.
- Cost – 1) direct and indirect capital, labor and services costs, including costs of design and testing and 2) waste stream management.

5.1 ALTERNATIVE 1 - NO-ACTION ALTERNATIVE

The no-action alternative would leave all ACMs and asbestos-laden dust in-place. The current, unsecured and unsealed building would remain standing and continue to represent a public health hazard.

If the Site building remains unsecured, there is the additional risk that the general public could come into direct contact with airborne asbestos fibers associated with damaged ACM and/or asbestos-laden dust during unauthorized entry to the Site building. Existing ACMs would continue to degrade increasing the potential for friability and asbestos fiber releases to the environment. Neighboring properties would continue to be at risk from migration of airborne asbestos fibers associated with degrading ACMs and asbestos-laden dust originating from the unsealed building.

No Action does not have an associated cost, as there are no required actions or technology needed. The “no action” alternative does not allow redevelopment of this brownfield.

This alternative was evaluated against the three key criteria as follows:

- Effectiveness – Low: risks to neighboring residents, unauthorized Site visitors, and the general public are not mitigated or reduced, and could potentially increase. Preparation of the Site for redevelopment is not supported.
- Implementability – High: no action is needed to implement this alternative.
- Cost – Low

Alternative 1 - No Action is the least-cost and most implementable approach of those evaluated, but it is not effective for reducing contaminant levels or existing threats to human health and the environment posed by hazardous substances on the Site. It will not allow for the beneficial reuse of the Site in a manner that is consistent with any redevelopment plan.

5.2 ALTERNATIVE 2 – BUILDING STABILIZATION, REMOVAL OF ACMS, CLEANUP OF ASBESTOS-LADEN DUST AND DEBRIS, AND DECONTAMINATION OF INTERIOR SURFACES OF THE BUILDING, COLLECTION AND FILTRATION OF WATER, ENCAPSULATION OF CLEANED SURFACES, AND BUILDING DEMOLITION.

Alternative 2 consists of the building stabilization, removal of the remaining ACMs, cleanup of asbestos-laden dust, and decontamination of interior building surfaces to allow for building demolition. The City of

Huntington retained Engineering Resources, a structural engineer, to review the structural condition of the building. The results of the structural assessment determined that the building, in its current damaged and dilapidated condition, is unsafe for entry and interior work activities. Therefore, to safely facilitate the removal of ACMs and asbestos-laden dust from the building interior, stabilization and shoring of the building would be required. Subsequent to the stabilization and shoring, abatement personnel would remove the remaining ACM in the building, cleanup residual ACM debris, remove asbestos-laden dust from surfaces of the building, decontaminate the interior surfaces of the building using high-pressured washers, collect and filter the decontamination effluent, and spray encapsulant on the cleaned surfaces.

This alternative would allow for the demolition of the building in accordance with U.S. EPA NESHAP regulation and subsequent recycling of building demolition concrete and steel. The alternative would reduce the costs for waste stream management in comparison to Alternative 3; however, considerable additional costs would be incurred due to additional labor, equipment and materials associated with building stabilization.

The costs associated with Alternative 2 are summarized below:

RESPONSE ACTIVITY	UNIT COST	QUANTITY	COST
Building stabilization/shoring	$210,000 lump sum	1	$210,000
Abatement of ACMs	$30,000 lump sum	1	$30,000
Cleanup of asbestos-laden dust and decontamination of interior surfaces, collection of water and encapsulation	$650,000 lump sum	1	$650,000
Contractor and air monitoring during abatement and cleanup	$1,500/day	50	$75,500
Contractor mobilization, building demolition	$756,100 lump sum	1	$756,100
Disposal of building debris as Construction and demolition debris	$55/ton	3,600	$198,000
TOTAL			**$1,919,600**

Although a precise cost estimate for Alternative 2 would require competitive bidding of the project, the approximate cost for Alternative 2 is approximately $1,919,600, but would likely range between $1,800,000 to $2,000,000 for this phase of the project. This is an order of magnitude estimate that has been generated based on previous projects similar in scope and professional opinion.

This alternative was evaluated against the three key criteria as follows:

- Effectiveness – High: the human exposure hazards associated with ACMs and asbestos-laden dust will be mitigated; however, the public safety hazards associated with the current condition of the building remains. The proposed activities would support the preparation of the Site for future redevelopment.

- Implementability – Low: this alternative was determined to be effective, technically feasible; however, not financially viable.
- Cost
  - Environmental Response Actions – High
  - Future Demolition and Waste Stream Transportation and Disposal – Moderate

Alternative 2 is a high-cost but effective approach. It will achieve the project objectives and allow for the beneficial redevelopment of the Site; however, the tangential costs for dust cleanup and stabilization of the building to perform the interior remediation work will ultimately result in the highest financial investment to meet the ultimate objective of the project.

5.3 ALTERNATIVE 3 – DEMOLITION OF THE STRUCTURE UTILIZING WET METHODS, COLLECTION AND FILTRATION OF WATER, AND DISPOSAL OF BUILDING MATERIALS AS FRIABLE ASBESTOS WASTE.

Alternative 3 consists of demolition of the building without removal of the ACMs or cleanup of asbestos-laden dust. The building would remain wet during demolition using misters, fire hoses or other water sources capable of appropriate dust suppression. Water at the Site would be confined and filtered prior to discharging back into the City's sewer system and the resulting building debris would be transported and disposed as friable asbestos waste.

Because the building was deemed structurally unsound, Alternative 3 can be executed compliant to the NESHAP regulation without need for building stabilization or ACM removal. This alternative would increase the costs for waste stream management; however, this cost would be offset by leaving ACMs and asbestos-laden dust in place during the demolition effort, thus eliminating costs associated with both the building stabilization and ACM/dust removal/decontamination efforts.

The costs associated with Alternative 3 are summarized below:

RESPONSE ACTIVITY	UNIT COST	QUANTITY	COST
Contractor mobilization, building demolition, transportation of debris, water removal setup, clean-up of site	$1,026,000 lump sum	1	$1,026,000
Disposal of building debris as friable ACM	$90/ton	3,600	$324,000
Contractor and air monitoring during building demolition	$1,500/day	35	$52,500
TOTAL			**$1,402,500**

Although a precise cost estimate for Alternative 3 would require competitive bidding of the project, the approximate cost for Alternative 3 is $1,402,500, but would likely range between $1,300,000 to $1,500,000 for this remediation phase of the project and, unlike Alternative 2, includes costs for building demolition and demolition waste transportation and disposal. This is an order of magnitude estimate that has been generated based on previous projects similar in scope and professional opinion.

This alternative was evaluated against the three key criteria as follows:

- Effectiveness – High: the human exposure hazards associated with ACMs and asbestos-laden dust will be mitigated. The public safety hazards associated with the current condition of the building will also be mitigated. The proposed activities also support the preparation of the Site for future redevelopment.
- Implementability – High: this alternative was determined to be effective, technically feasible, and financially viable.
- Cost
    - Environmental Response Actions – Moderate
    - Demolition and Waste Stream Transportation and Disposal – Moderate

Alternative 3 is a moderate-cost but effective and implementable approach. It will achieve the project objectives and allow for the beneficial redevelopment of the Site.

6. RECOMMENDED ALTERNATIVE

Alternative 3 is recommended as the appropriate environmental response action as it addresses the immediate environmental and human health risks associated with the ACMs and asbestos-laden dust in the Site building via the lowest anticipated capital investment. Alternatives 1 and 2 are rejected due to either effectiveness or tangential project costs in comparison to Alternative 3.

Passionate People Building
and Revitalizing our World

SME