

**DRAFT Analysis of Brownfields Cleanup Alternatives (ABCA)
Former Curtis Paper Mill
115 Howland Avenue
Adams, Massachusetts**

I. INTRODUCTION & BACKGROUND

This Draft Analysis of Brownfields Cleanup Alternatives (ABCA) has been prepared to evaluate cleanup alternatives for the former Curtis Paper Mill complex, located at 115 Howland Avenue in Adams, Massachusetts (the Site). The ABCA is a condition of the Town of Adams' United States Environmental Protection Agency (EPA) funded Site-Specific Brownfields Cleanup Grant (BF-00A01134-0).

As identified in the Town of Adams' EPA Brownfields Assessment Grant application, the former complex's ultimate reuse will be a critical part of the Route 8 business corridor. While the former paper mill no longer serves a productive purpose as commercial enterprise, and the remaining buildings are in various stages of despair, remediation of damaged Hazardous Building Materials will be necessary to entice developers to the site for redevelopment.

1. Site Location

The Site is a single 11.8-acre parcel and was developed in the late 1800s. Since 1902, the property has been used as a manufacturing facility for specialty paper by several owners. The Site has been vacant for approximately 20 years and owned by the Town of Adams since November 2023. There are currently five buildings occupying the Site, ranging from one to two stories. The buildings are constructed of brick, wood, steel, and concrete.

Also present on the Site are a cooling water/fire water pond, several small auxiliary buildings and both paved and landscaped areas.

2. Forecasted Extreme Weather Conditions

EPA requires that the ABCA consider potential impacts due to extreme weather events or natural disasters. Specifically, this discussion addresses observed and forecasted changing weather conditions for the area of the project and associated site-specific risk factors. Adams, Massachusetts is located approximately 45 miles northwest of Springfield, Massachusetts. Adams is located within 100 miles of the Atlantic coast and portions of the Town are located along tributaries to the Hoosic River.

The northeastern United States, including Adams, includes warm and often humid summers and cold winters. Rainfall can be severe with summer thunderstorms common and severe weather resulting from regional nor'easter anticyclone storms and/or hurricanes. Winter conditions can also be severe with ice storms and heavy snow. Snowfalls of 2-3 feet in one event are not uncommon. A small portion of the Site is currently located in a Zone AE High Risk flood plain (areas between limits of 100-year flood and 500-year flood). However, the buildings are not in the flood plain.

According to the EPA's Climate Scenarios Projection Map (<https://epa.maps.arcgis.com/apps/MapSeries/index.html?appid=3805293158d54846a29f750d63c6890e>), because of changing weather trends, the northeast region can expect increased temperatures and extreme heat events, increases in average annual precipitation and storm intensity, and increased coastal flooding. The website states

that “temperature increases represent challenges to sustaining water supply, managing water demand, and maintaining water quality” and “increased precipitation may lead to strained reservoirs, overwhelmed treatment infrastructure, and flooded facilities.”

3. Previous Site Use(s) and Any Previous Cleanup / Remediation

The Site operated as a light manufacturing facility (plastics and bicycle parts) from the 1881 to 1899. It then functioned as a specialty paper manufacturer from the early 1900s until 2003. The Site has been mainly vacant since 2003 with limited use of the Warehouse/Building #2 from approximately 2009 to 2018 by a trucking company. The Town of Adams acquired the property in 2023 due to non-payment of taxes.

The Site is associated with two Release Tracking Numbers (RTNs), RTN 1-11144 and RTN 1-18180, assigned by the Massachusetts Department of Environmental Protection (MassDEP) for an isolated petroleum release and for hazardous substances/petroleum products encountered after the paper mill operations ceased at the Site, respectively.

On November 20, 1995, MassDEP assigned RTN 1-11144 to the Site for the release of approximately 40-50 gallons of diesel fuel to paved and unpaved portions of the Site parking area due to human error. An Immediate Response Action (IRA) was performed for this release; immediate cleanup activities included the usage of absorbent materials to contain the spilled fuel on paved surfaces, as well as an adjacent brook, and excavation of impacted soils in unpaved areas. Final post-excavation soil and surface water analytical results indicated that total petroleum hydrocarbons (TPH) concentrations were either not detected above the laboratory reporting limit or detected at levels below the Massachusetts Contingency Plan (MCP) Method 1 standards at the time. A condition of No Significant Risk (NSR) was stated to have been demonstrated relative to this release and a Class A-2 Response Action Outcome (RAO) was recorded for this RTN.

On November 16, 2007, MassDEP conducted an inspection of the Site in response to a reported potential threat of release of unknown chemicals and encountered large quantities of hazardous materials and waste from former Site operations as a paper mill in poor storage conditions (e.g. corroded drums with signs of release to the surrounding area). On April 22, 2009, MassDEP returned to the Site for a second inspection and encountered similar conditions.

In May 2010, the Site was listed as a Superfund Site (EPA ID: MAD050415843). In October 2010, Weston Solutions, Inc., EPA's subcontractor as a part of the Superfund Technical Assistance and Response Team (START), conducted a Removal Program Preliminary Assessment / Site Investigation (PA/SI) for the Site. Site conditions encountered included several above-ground storage tanks (ASTs), unlabeled containers (drums, totes, and pallets) of chemicals, and structurally unsound portions of the building. This PA/SI also involved the collection of 10 grab surface soil samples from the exterior of the eastern side of the building, collection of 7 samples of materials from drums/totes, and collection three surface water samples, including two from the cooling water/fire water pond located to the west of the building, and one from a trench in the basement. Several metals (lead, chromium, nickel) and semi-volatile organic compounds (SVOCs) were detected above the MassDEP Reportable Concentrations S-1 (RC S-1) standards at the time. Due to the 120-day reportable condition, RTN 1-0018180 was assigned to the Site on April 20, 2011.

In August 2019, Weston Solutions Inc. completed another PA/SI for the Site, which involved the collection of 26 samples from various containers on-Site and a hazardous categorization (HAZCAT)

analysis. Analytes detected in the samples included VOCs, SVOCs, pesticides, and metals. Based on these findings, the USEPA concluded in a Site Investigation Closure Memorandum that a time-critical Removal Action was appropriate for the Site. The primary hazardous substances of concern were the various acids, caustics, combustibles, and flammables within storage tanks and various containers at the Site. A removal action conducted from October 2019 through April 2020 removed some containers of hazardous substances from the site, as well as excavation of suspected lead-contaminated soils, and demolition of the smokestack on-Site. Some containers remain at the site and are located throughout the buildings.

In 2021, TRC performed an Environmental Site Investigation at the Site, which involved the advancement of six soil borings and the conversion of all borings to monitoring wells. Analysis of soil and groundwater collected from these locations identified metal concentrations (arsenic, lead, and mercury) exceeding MCP Method 1 S-1 standards in one sample, and metals and an extractable petroleum hydrocarbon (EPH) fraction in several wells exceeding Reportable Concentrations GW-1 (RC GW-1) and MCP GW-1 standards. Based on the results, TRC recommended additional subsurface investigation to delineate the horizontal and/or vertical extents of contaminants exceeding applicable regulatory standards in soil and groundwater at the Site.

Other than response actions conducted for RTN 1-11144, an isolated petroleum release at the Site in 1995, and EPA's removal action of some containers of hazardous substances from the Site building from 2019-2020, no other previous cleanup or remediation has occurred.

II. SITE ASSESSMENT FINDINGS

1. Summary of Historical Site Assessments

As mentioned above, the Site is associated with two RTNs which have either been assigned due to an isolated spill of petroleum products (RTN 1-11144) or due to large quantities of hazardous substances remaining at the Site after paper mill operations (RTN 1-18180). Various assessments have been conducted at the Site by state and federal staff, as well as environmental consultants, since the initial 1995 release was addressed:

- 2000 – Phase I ESA by Earth Tech
- 2005 – Groundwater Investigation by O'Reilly, Talbot, and Okun Associates (OTO),
- 2008 – Phase I ESA (draft) by TRC
- 2010 – PA/SI by Weston Solutions and USEPA
- 2019/2020 – PA/SI, Removal Action by Weston Solutions and USEPA
- 2021 – Environmental Investigation by TRC
- 2023 – Phase I ESA and Updated Phase I ESA by TRC

The most recent November 2023 Phase I ESA by TRC identified several RECs associated with impacted soils and groundwater from previous subsurface investigations by the EPA, OTO, and TRC, the presence of numerous drums/totes of hazardous materials with nearby staining still remaining at the site after EPA's 2019-2020 removal action, and potential impacts from 153 Howland Ave, which adjoins the site to the north and has a history of environmental contamination due to its use as a chemical manufacturer.

2. Limited Structural Inspection

In September 2025, Weston & Sampson prepared a Structural Assessment Report, on behalf of the Town of Adams, which was based on a visual inspection conducted on March 13, 2025. The purpose of the visual inspection was to observe and assess the existing structural conditions to offer opinions on which buildings are economically viable to repair, and which should be demolished based on their conditions. A drone was used to capture the existing conditions of the roof and exterior of the buildings.

The structural inspection identified building conditions that ranged from fair to significantly damaged throughout the mill complex and roof conditions in Buildings 1, 2, 3 and 4 ranged from poor condition to total collapse. The structural inspection concluded that all the buildings have been exposed to water and moisture causing various levels of damage to the structural members. It is Weston & Sampson's professional opinion that Building 1 and the south portion of Building 4 are economically viable to repair, while Buildings 2, 3, and the north portion of Building 4 are not and Building 5 may be able to be repaired.

A figure identifying the building numbers is attached.

3. Hazardous Building Materials Survey Inventory

In November 2025, Weston & Sampson performed a limited Hazardous Building Materials Investigation (HBMI) of accessible areas of the Site buildings on behalf of the Town of Adams. The HBM assessment and limited sampling of building materials was conducted to identify ACMs, lead paint/coatings, PCBs and other hazardous materials (OHMs) at the Site, as well as to support the property redevelopment and reuse and contribute to the economic revitalization of the surrounding area.

Severely degraded sections of the buildings prevented complete access due to safety concerns. The HBMI identified asbestos-containing materials (ACMs) in Buildings 1, 4 and 5. However, additional suspect ACMs were observed in Buildings 2 and 3 that were inaccessible and should be assumed to be ACMs. The investigation also identified lead-based paint (LBP), building components containing polychlorinated biphenyls (PCBs), and various universal wastes inside the buildings. Where detected, concentrations of PCBs in building materials were below the EPA's regulatory standards for PCB bulk product waste as specified in 40 CFR 761 so no special handling is required. However, various paints/coatings applied to masonry, and any other materials containing greater than 2 ppm PCBs, cannot be disposed of in Massachusetts. Massachusetts solid waste regulations prohibit coated masonry disposal in-state already, but the materials must be disposed of at a facility permitted to accept PCB waste in the concentrations present.

III. PROJECT GOAL

Severe deterioration has compromised the structural integrity of the onsite buildings and has prevented access to potentially impacted soils beneath the building footprints that may require remediation. Asbestos, lead-based paints (LBP) and PCB-containing materials within unstable and exposed areas of the building provide a direct pathway for release(s) to the environment. Many of the buildings cannot be restored or reused for any purpose, therefore demolition and bulk removal of the hazardous building materials (HBM) and associated structures is necessary, and the entire waste stream will be disposed of as asbestos waste. In addition to the removal of hazardous building materials, numerous drums,

totes and tanks of hazardous substances located within the building's interior will be removed and disposed of properly.

Hazardous building material abatement will address public safety concerns and decrease the potential release of hazardous substances from the dilapidated structures during the redevelopment process. In addition, demolishing the unsafe buildings, will allow safer conditions for future investigation or remediation of potential subsurface contamination (to be completed under separate additional funding).

The overarching goal for the Site cleanup and redevelopment is to promote the revitalization of the site for commercial and/or mixed use, address the blight and safety hazards posed by structurally unsafe building conditions, and reduce related threats, including those posed by potential exposure to hazardous materials. Remediation and reuse of the site will provide important public health, employment, and fiscal benefits to the community at large, and will stimulate economic development and job creation upon completion of the cleanup activities.

IV. APPLICABLE REGULATIONS AND CLEANUP STANDARDS

1. Cleanup Oversight Responsibility

The Town of Adams, as the current property owner, will undertake responsibility to remediate contaminated building materials prior to Site redevelopment. Abatement and monitoring of hazardous building materials will be conducted under state certified and licensed personnel.

2. Cleanup Standards

The scope of work for this ABCA includes the abatement and proper disposal of hazardous building materials, including ACMs, lead paint, PCB containing material and miscellaneous universal wastes located within the Site buildings. This work will be carried out in accordance with applicable Massachusetts DEP and DLS rules and regulations, as further described below.

3. Laws and Regulations

Abatement of contaminated building materials prior to building renovation and/or demolition must be conducted pursuant to 310 CMR 7.15, 454 CMR 28.00 and 40 CFR Part 61 Subpart M. Off-Site disposal of contaminated media will be conducted pursuant to the aforementioned regulations.

Additional applicable local, state and federal regulatory requirements will also be adhered to, including but not limited to, the Federal Small Business Liability Release and Brownfields Revitalization Act, the Federal Davis-Bacon Act, the Bipartisan Infrastructure Law (BIL) and the Build America Buy America (BABA) Act, as well as town by-laws. Required pre-work notifications for asbestos abatement and other permits will also be completed.

V. EVALUATION OF CLEANUP ALTERNATIVES

1. Cleanup Alternatives Considered

EPA requires that this ABCA includes the evaluation of three (3) remedial alternatives. To address the abatement of hazardous building materials at the Site, the following three (3) alternatives were considered, including:

- Alternative #1: No Action

- Alternative #2: Abatement and Renovation - Abatement of hazardous building materials, selective demolition of non-structural interior building finishes, demolition of accessory site structures, removal of transformers and out-of-service AST, and temporary containment to protect structure to remain would be performed for the structurally sound portion of the existing buildings. The structurally unsafe portion of the building including the roof would be demolished. Building foundations and steel structure to remain.
- Alternative #3: Abatement and Demolition - Complete abatement of all hazardous building materials and complete demolition of Buildings 1, 2, 3 and 4 (Building 5 will remain). Prior to demolition, all remaining drums, totes, and tanks will be properly removed, as well as the electrical transformers. If funding allows, building foundations and slabs will be removed.

2. Cost Estimate of Cleanup Alternatives

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

Effectiveness

- Alternative #1: The "No Action" alternative is ineffective in achieving the cleanup goals and supporting Site redevelopment. It fails to prevent potential exposure to hazardous materials currently located within the Site buildings, does not facilitate future soil remediation that may be needed and does not address the Town's priority of ensuring public safety given the current condition of the buildings.
- Alternative #2: Abatement and disposal of hazardous building materials is an effective option, since the contaminant source is removed, and redevelopment may be accomplished. This alternative also offers long term sustainability and resiliency to climate change by minimizing the likelihood of contaminants mobilizing during future storm events.
- Alternative #3: Abatement, demolition and disposal of hazardous building materials is an effective option since the contaminant source is removed. This alternative also offers long term sustainability and resiliency to climate change by removing the likelihood of contaminants mobilizing during future storm events.

Implementability

- Alternative #1: "No Action" is easy to implement, as no actions will be conducted.
- Alternative #2: This alternative is considered technically feasible; however, it would be difficult to implement. It will require extensive additional engineering design and planning to secure the buildings' superstructures prior to and during future remedial work as well as until future redevelopment plans are finalized. Such stabilization work will be challenging given the poor condition of the buildings and widespread occurrence of assumed ACM in roofing materials and flashing. Additionally, it may be difficult to protect the existing superstructure while demolition of the non-structural finishes is completed.

This alternative requires implementing engineering controls (e.g., dust suppression and monitoring) during cleanup and demolition activities. It will cause a short-term disturbance to the community (e.g., trucks transporting waste). For these reasons, this alternative is considered the most difficult to implement with the highest impact (truck traffic) to the surrounding neighborhood.

- Alternative #3: This alternative is a viable remedial option. Like Alternative #2, it requires maintaining engineering controls (e.g., dust suppression and monitoring) during cleanup and demolition activities, resulting in short-term disturbances to the community. However, the overall duration of these controls and disturbances would be shorter for this alternative, as it does not require the additional effort to reinforce the existing buildings. Instead, areas in poor physical condition would be demolished with hazardous materials in place and bulk-loaded for off-site disposal; a more costly but faster approach to achieving the cleanup goals. For these reasons, this alternative is considered less challenging and less disruptive to the surrounding area compared to Alternative #2. Furthermore, with the buildings fully removed, future soil remediation activities would be easier to implement.

Cost

- Alternative #1: No Action: There are no costs associated with this alternative; however, the Site is not viable for redevelopment until hazardous building materials are abated and contaminated soil removed.
- Alternative #2: Abatement and Renovation: The cost to complete this alternative is estimated to be approximately \$5,490,000. Added costs associated with this alternative are primarily driven by structural repairs/shoring needed to maintain the building. The estimate does not include the additional costs to maintain or support the building to remediate contaminated soil below the building during the subsequent Phase 2 remedial work.
- Alternative #3: Abatement and Demolition: The cost to complete this alternative is estimated to be approximately \$4,480,000. The primary factors affecting the cost for this alternative are related to the handling and disposal of a larger quantity of demolition debris and the assumed bulk loading of hazardous materials.

3. Recommended Cleanup Alternatives

The recommended cleanup alternative for hazardous building materials is Alternative #3: Abatement and Demolition. Alternative #1: No Action is not recommended because it would not meet the overall Project goals. Alternative #2: Abatement and Renovation, while effective at remediating hazardous building materials, comes at an implementation cost over \$1,000,000 more than Alternative #3. While Alternative #2 generates slightly less waste than Alternative #3 by keeping the remaining superstructure, the Town would be unable to redevelop the Site for their desired purpose until soil remediation is also completed. As noted above, Alternative #2 would make future subsequent soil remediation work more difficult and costly.

Based on our cleanup alternatives analysis, Alternative #3: Abatement and Demolition is the most cost-effective option capable of reducing risk and supporting the Town's redevelopment goals. For these reasons, the recommended cleanup alternative is Alternative #3: Abatement and Demolition.

4. Green and Sustainable Remediation Measures for Selected Alternative

To make the selected alternative greener, or more sustainable, several techniques are planned. The most recent Best Management Practices (BMPs) issued under ASTM Standard E-2893: Standard Guide for Greener Cleanups will be used as a reference in this effort. The Town plans to require the cleanup contractor to follow an idle-reduction policy and will encourage the use of heavy equipment with advanced emissions controls operated on ultra-low sulfur diesel and/or fuel-efficient / alternative fuel vehicles and equipment. In addition, and in accordance with the EPA's Principles for Greener Cleanups, the Contractor is encouraged to clean and salvage/reuse/recycle demolition debris and building contents as much as possible.

Other potential measures that will be implemented where applicable, beneficial, or feasible to improve the overall sustainability of the project include:

- Protecting and conserving water.
- Carpooling for Site visits and on-site project meetings.
- Scheduling activities efficiently to minimize travel to and from the Site.
- Maximizing efficiency in the transportation and disposal of impacted materials off-Site.
- Submitting documents in digital format, rather than hard copy, unless otherwise required by EPA, the Town and/or others, to save paper and resources.
- Optimizing the use of electronic and centralized communications for all project related correspondence and outreach to the local community, when feasible.

APPENDIX A: Map of Buildings

