

**Draft Analysis of Brownfields Cleanup Alternatives**  
**Preliminary Evaluation of Remedial Alternatives at Greylock Mill**  
**508 State Road, North Adams, Massachusetts**  
**MassDEP Release Tracking Number 1-13902**  
**Prepared by Greylock Flume, Inc.**

## **I. Introduction & Background**

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

The Greylock Mill site, located at 506 State Road in North Adams, Massachusetts (hereinafter referred to as "the Site"), is divided into three parcels:

Parcel A-1: Approximately 3.5 acres, consisting of the eastern portion of the Site;

Parcel A-2: Approximately 4.2 acres, consisting of the western portion of the Site;

Parcel B: Approximately 0.17 acres, which bisects Parcels A-1 and A-2 and consists of the underground flume.

This Analysis of Brownfields Cleanup Alternatives (ABCA) pertains to Parcel A-2 and Parcel B (North Mill, Gate House, Annex, Main Mill, Engine House and South Wing).

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

The Site is the former location of a cotton mill and aluminum manufacturing operations. The cotton mill operated at the Site beginning in the late 1800s up until approximately the mid-1950s. Between the mid-1950s and the mid-1970s, various aluminum tubing manufacturing operations were performed. These manufacturing operations included forming, cutting and anodizing operations which utilized oils in the tubing forming and cutting operations, and hazardous materials in the tubing anodizing operations. Although tubing manufacturing ceased in the mid-1970s, anodizing operations continued in the southern portion of the site until approximately 2004.

Up until 2015, the Site was occupied by Cariddi Sales, a sporting goods wholesaler and retail shop.

The Site was subject to an EPA Brownfield Cleanup grant in 2016 which facilitated the removal of 195 tons of polychlorinated biphenyls (PCBs) associated with a former transformer area and abatement and removal of two asbestos-containing boilers in the eastern portion of the Site. This area has since been redeveloped and current uses in the weave sheds include multiple event spaces, a restaurant, co-work offices, retail storefronts along a central promenade, a wellness studio for yoga and movement, many fine art studios, a craft cider production space, an artisanal distillery, an incubator kitchen providing specialized equipment for pastry chefs, a culinary lab for food workshops and guest chef dinners, and storage (Butler Building).

The western portion (North Mill, Gate House, Annex, Main Mill, Engine House and South Wing), areas included in Parcels A2 and B is currently under redevelopment for a variety of uses, including loft condominiums and community amenities. The first phase of 24 lofts is nearing completion. A second phase of 25 lofts will commence in 2025. The South Wing is in the planning phase for the *Greylock* Gastronomy Lab, a new cultural destination and retreat for practitioners with expertise in niche food innovations.

### **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)**

Extensive assessment and remedial actions have been completed at the site since 2002. This work has included reports prepared under the Massachusetts Contingency Plan (MCP; 310 CMR 40.0000); these reports are listed below:

- Phase I – Initial Site Investigation (October 2002);
- Phase II – Comprehensive Site Assessment (November 2005);
- Phase III – Evaluation of Remedial Action Alternatives (November 2005);

- Revised Phase III – Evaluation of Remedial Action Alternatives (October 2008);
- Phase IV – Remedy Implementation Plan (October 2008);
- Modified Phase IV – Remedy Implementation Plans (November 2009 and August 2010), Phase IV – As-Built Construction/Final Inspection/Completion Statement report (September 2010);
- various Immediate Response Action Status Reports and Phase V – Operation, Maintenance and Monitoring Reports (2006 through 2012);
- Release Abatement Measure (RAM) Plans, Status, and Completion Reports (2015 through 2022);
- Temporary Solution Statement (TSS) in 2019; and
- Hazardous Building Materials Survey Report in October 2022.

These reports document the assessment and/or remediation of oil and hazardous materials (OHM) at the Site. In 2023, prior to Greylock Flume, Inc. taking title to a portion of Parcel A-2, an All Appropriate Inquiry Phase I Environmental Site Assessment (Phase I ESA) was also performed.

Assessment findings to date related to this ABCA identified asbestos and lead paint in the existing roof of the South Wing building, large portions of which are deteriorating and collapsing. Asbestos was also identified in various other materials inside the dilapidated building including pipe insulation and window caulking. The soils underlying the building are presumed to contain petroleum hydrocarbons, metals, and PCBs, similar to the constituents found in the flume sediments and consistent with former chemicals used by the former aluminum anodizing company.

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

The planned reuse of the South Wing building will be an independent cultural facility providing food system education and curating connections that fortify balanced ecologies as an interpretive science. Programs will engage with regional schools and create new opportunities for diverse creative communities to share hopeful solutions for a resilient world. The *Greylock* Gastronomy Lab (GGL), to be housed within the South Wing, will be a regional hub for research, innovation, and development serving the creation of sustainable food and agriculture systems.

A small-scale pilot production space will allow researchers to synthesize innovative lab discoveries into practical solutions to help food-focused businesses and growers scale production and thrive.

On-site food entrepreneurship incubation space and educational resources will provide ongoing support and mentorship for business owners. A specialty food producer retreat will support research, innovation, and excellence in specialty food production.

Quarterly events centered on growing a healthier population, economy, and environment for regional populations will engage the public through markets and workshops. The South Wing’s courtyard will be transformed into a community garden in partnership with Greylock Elementary School (directly southwest of *Greylock* WORKS) focused on intergenerational programming. GGL’s independent cultural facility programming will feed directly into existing efforts throughout the *Greylock* WORKS campus working to increase access to nutrition, engage multiple generations through convivial interaction around the terroir of the region, and help support a philosophy that values the intellect, the arts, and the natural environment.

**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 performed by Greylock Flume, Inc. who has retained the services of Roux Associates (Roux), a firm employing a Licensed Site Professional (LSP) to direct and oversee the work. The work would be performed under the MCP and under the EPA and the Occupational Safety and Health Administration (OSHA) for cleanup of asbestos-containing materials (ACM) and lead-based paint. The Massachusetts Department of Environmental Protection (MassDEP) may perform an audit of the work

overseen by the LSP to ensure that the clean-up is protective of health, safety, public welfare, and the environment, and complies with the MCP. In addition, all documents prepared for this Site are submitted to MassDEP under Release Tracking Number 1-13902, and are available for viewing on-line at MassDEP's on-line file review system: [http://public.dep.state.ma.us/wsc\\_viewer/main.aspx](http://public.dep.state.ma.us/wsc_viewer/main.aspx) or is available upon request from Greylock Flume, Inc.

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

Greylock Flume, Inc. currently anticipates the state standards for recreational use will be used as the cleanup standards along with abating asbestos and lead previously identified in building materials at or above one percent<sup>1</sup> or 0.5 percent by weight, respectively. However, it is possible that risk-based cleanup standards will be generated for compounds of concern, in accordance with the MCP and MassDEP guidance.

**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, and city by-laws. Federal, state, and local laws regarding procurement of contractors to conduct the cleanup will be followed.

In addition, all appropriate permits (e.g., notify before you dig, hazardous waste manifests and 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 in the South Wing building, three different alternatives were considered, as follows:

Alternative #1: No Action

Alternative #2: Select Building Material and Soil Removal and Off-Site Disposal

Alternative #3: Building Material and Potential Soil Removal and Off-Site Disposal

Additionally, excavating between the former engine house and the boiler house is required to stabilize wall footings. This area is estimated to be approximately 70 feet long, 20 feet wide, and up to 10 feet deep, totaling approximately 520 cubic yards of soil. It is anticipated that this soil will be suitable to reuse at the Site. Suitability for reuse on-site and final excavation dimensions are subject to field observations.

**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.

**Effectiveness**

**Alternative #1:** No Action is not an effective alternative, as it does not reduce site risks or allow for the proposed re-use of the South Wing building.

**Alternative #2:** Select Building Material and Soil Removal and Off-Site Disposal is an effective way to prevent receptors from coming into direct contact with contaminated building materials and soil. However, the South Wing building is currently unsafe for workers to occupy to safely remove the contaminated materials due to portions of the roof already collapsing and large portions of the floors severely damaged. The floors are damaged due to water soaking from the leaking roof and from excessive moisture from the underlying soil. Furthermore, because the contaminants are located in many different types of building materials (e.g., roof, floor, windows, pipe insulation), implementing this alternative would be difficult.

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<sup>1</sup> OSHA and EPA define asbestos-containing materials (ACM) as any material containing greater than or equal to one percent by weight.

**Alternative #3:** Building Material and Potential Soil Removal and Off-Site Disposal is an effective way to prevent receptors from coming into direct contact with contaminated building materials and soil. This alternative assumes that a small portion of the South Wing building roof would be removed to allow heavy equipment to access the remainder of the South wing via the courtyard, and not damage the recently developed areas of the Site.

The contaminated wood flooring and deteriorated decking material would then be removed to allow a safe working base for the heavy equipment, followed by abatement, removal, and replacement of the dilapidated roof, supporting members, and windows.

An average of 1-2 feet of soil underlying the recently-removed floor, equating to approximately 500 – 1,000 cubic yards, will likely be capped onsite. Based on existing information, we anticipate the soil will be suitable to leave on-site and cap; however, should gross contamination in soil be identified during earthwork it will be excavated and disposed of off-site at an out-of-state landfill as non-hazardous material.

Approximately 100 cubic yards of soil (based on an area of approximately 40 feet long by 20 feet wide by 4 feet thick) will be excavated to facilitate the temporary construction of a gravel ramp to the courtyard area. Based on existing information, we anticipate the soil will be suitable to leave on-site and cap under the South Wing floor; however, should gross contamination in soil be identified during earthwork it will be excavated and disposed of off-site at an out-of-state landfill as non-hazardous material.

If the area under the floor is excavated, it will be backfilled with approximately 2-3 feet of clean imported gravel and capped with concrete slab as an effective exposure and moisture barrier which will also serve as structural support for the floor and building.

### **Implementability**

**Alternative #1:** No Action is easy to implement since no actions would need to be conducted.

**Alternative #2:** Select Building Material and Soil Removal and Off-Site Disposal would be difficult to implement. Because the contaminants are located in many different types of building materials (e.g., roof, floor, windows, exterior wall, pipe insulation), implementing this alternative to selectively remove these materials (as opposed to removing everything) would be difficult. Considerably more time would likely be required, there would also likely be increased potential for workplace injury due to unsafe conditions, and the potential to miss hazardous building materials that may be currently hidden is a reasonable possibility (but could be discovered during abatement/removal). Therefore, this alternative is considered the most difficult to implement.

**Alternative #3:** Building Material and Soil Removal and Off-Site Disposal is moderately difficult to implement. After creating access to the South Wing building after constructing a ramp to the courtyard area, the flooring, roof, and windows of the South Wing building will be removed using typical heavy equipment. As mentioned earlier, the contaminated wood flooring and deteriorated decking material would first be removed to allow a safe working base for the heavy equipment, followed by abatement, removal, and replacement of the dilapidated roof, windows, and floor. This work is anticipated to be performed under a Non-Traditional Asbestos Abatement Work Practice Plan.

### **Cost**

**Alternative #1: No Action** – The costs for a no action alternative include on-going reporting costs to MassDEP and MassDEP annual Compliance fees, which we estimate to be approximately \$5,000 – \$10,000 per year.

**Alternative #2: Select Building Material and Soil Removal and Off-Site Disposal** – The costs for removing and disposing select building materials (components of the floor and roof, and 30 windows) is estimated to be approximately \$500,000 to \$800,000 based on a degree of uncertainty regarding the logistics of performing the work safely and potential to locate additional hidden contaminated materials. The cost for removing and disposing of contaminated soils is estimated to be approximately \$330,000 based on removing and disposing of approximately 1,100 cubic yards of contaminated soil. The cost to backfill the area with clean imported gravel and capped with concrete as an effective exposure and moisture barrier is estimated to be \$230,000 for a total

estimated cost of \$1,060,000 to 1,360,000. The work is based on performing the work under a Non-Traditional Asbestos Abatement Work Practice Plan with hazardous waste landfill disposal for the contaminated building materials and out-of-state non-hazardous landfill disposal for the contaminated soil. However, this Alternative is not consistent with the site-reuse plan and may present unsafe working conditions for contractors.

**Alternative #3: Building Material and Soil Removal and Off-Site Disposal** – The costs for removing and disposing of the entire contaminated floor, roof, and 30 windows and replacement is estimated to be approximately \$1,060,000 based on an estimated 14,000 square feet of flooring and roofing to be removed along with the associated deteriorated supporting members.

The cost for capping soil encountered in both the area where the ramp will be built and the soils underlying the removed floor, is estimated to be approximately \$1,290,000 based on the exposed areas totaling approximately 1,100 cubic yards.

However, if the estimated 1,100 cubic yards of soils exhibit evidence of gross contamination, the cost for removing and disposing of these contaminated soils is estimated to be approximately \$330,000.

The cost to backfill the area with clean imported gravel and cap with concrete slab as an effective exposure and moisture barrier and serve as structural support for the floor and building is estimated to be \$230,000 for a total estimated cost of \$1,620,000.

This work is based on performing the work under a Non-Traditional Asbestos Abatement Work Practice Plan with hazardous waste landfill disposal for the contaminated building materials and out-of-state non-hazardous landfill disposal for the contaminated soil.

#### **c. Recommended Cleanup Alternative**

The recommended cleanup alternative is Alternative #3: Building Material and Potential Soil Removal and Off-Site Disposal.

**Alternative #1:** No Action cannot be recommended since it does not address site risks and does not allow for the proposed reuse.

**Alternative #2:** Select Building Material and Soil Removal and Off-Site Disposal is effective in addressing site risk, but would be difficult to implement, would be potentially more dangerous for construction workers, and is not consistent with the site-reuse plan. Therefore, we cannot recommend this remedial alternative.

**Alternative #3:** Building Material and Potential Soil Removal and Off-Site Disposal is an effective way to eliminate unacceptable risk posed by the South Wing building at the Site, is less difficult to implement, would ensure all hazardous building materials are cleaned up and is consistent with the site-reuse plan. For these reasons, **Alternative #3: Building Material and Soil Removal and Off-Site Disposal is the recommended remedial alternative.**