

Brownfield Redevelopment of the Former Blodgett Oven Factory, 44-50 Lakeside Avenue, Burlington, Vermont

STONE
ENVIRONMENTAL
100% EMPLOYEE-OWNED

Services / Expertise

Complex Cleanup of Industrial Site in a Dense Urban Setting on the Shore of Lake Champlain
Environmental Due Diligence
Phase I ESA (ASTM E1527-13)
Phase II ESA (ASTM E1903-11)
Vermont DEC Work Plan
Site-Specific Health and Safety Plan
Soil Gas, Soil, and Building Material Sampling
Supplemental Site Investigation/Phase III ESA
Vapor Intrusion Investigation
Building Material Assessment (PCBs)
High Resolution Site Characterization
Remedial Action Planning – ECAA & CAP
TSCA Self-Implementing, Risk-Based, and Performance-Based Cleanup & Disposal Plans
Preparation of Plans, Specifications, and Engineering Documents
Green & Sustainable Remediation
Soil Management Plan

Markets

Private Developer
Commercial
Site / Property Owner
Regional Planning Commission

Project Location

Burlington, Vermont

Date Completed

2017–2021

Project Owner

Lakeside Ovens, LLC

Project ID#

17-070

Project Team

Lee Rosberg (Project Manager), Daniel Voisin, Katrina Mattice, PE, Laura Rajnak, Barbara Patterson, Branden Martin, PE

Subcontractors

Phoenix Environmental Labs, US Ecology (NRC), Absolute Spill Response, Myers Services, US Ecology, S.D. Ireland, Inc.



Project site seen from Lake Champlain. The rooftop of 50 Lakeside Ave. has been outfitted with solar panels.

IN JUNE 2017, a private developer hired Stone to perform an ASTM E1527-13 Phase I Environmental Site Assessment (ESA) of the former Blodgett Ovens factory on Lakeside Avenue in Burlington, Vermont. Lakeside Ovens, LLC, the bona fide prospective purchaser, redeveloped the lakefront property for a mixed-use commercial development and business incubator in 2019-2020. The site consists of a 16.5-acre parcel with three buildings: one used for offices (32 Lakeside), a former warehouse and office building (44 Lakeside), and the former manufacturing building (50 Lakeside).

The Phase I ESA identified ten recognized environmental conditions (RECs) associated with past property use, as well as evidence of past releases, the presence of polycyclic aromatic hydrocarbons (PAHs) in subsurface soil, the site's proximity to Pine Street Barge Canal Superfund Site, and potential for contaminant migration from adjacent, contaminated sites and surrounding rail operations.

In October 2018, Stone performed a Phase II ESA to evaluate whether the RECs identified in Stone's 2017 Phase I ESA and remaining data gaps following a previous Phase II ESA resulted in contamination of environmental media at the site. The Phase II ESA included assessment of building materials for PCB contamination, a soil quality assessment of soils that would be disturbed during realignment of the access drive, parking lot, utility trenches, and bike path spur, and vapor intrusion pathway assessments for the 44 and 50 Lakeside Avenue buildings.

The Phase II ESA Report identified PCBs in several caulk samples but demonstrated that PCBs had not diffused from window caulk into adjoining masonry or impacted surface soil directly below windows. Stone prepared a removal specification for



Brownfield Redevelopment of the Former Blodgett Oven Factory, 44-50 Lakeside Avenue, Burlington, Vermont

STONE
ENVIRONMENTAL
100% EMPLOYEE-OWNED

abatement contractors to follow that prevented the spread of PCB-contaminated window caulk and protected workers. PCBs were detected in the concrete slab of the 50 Lakeside building at concentrations that required cleanup under the Environmental Protection Agency's (EPA) Toxic Substance Control Act (TSCA). Surface soil in portions of the site contained PAHs at concentrations requiring either off-site disposal or on-site capping. The results of a vapor intrusion assessment ruled out a complete vapor intrusion pathway into the former manufacturing building; therefore, no further assessment or cleanup related to vapor intrusion was recommended.

Stone conducted a Supplemental Phase II ESA between November 2018 and February 2019 to determine the extent of PCB contamination exceeding TSCA criteria in 50 Lakeside Avenue building materials and evaluate soil quality at the property. The Supplemental Phase II ESA identified areas of the wall and slab that were PCB-contaminated due to spills of hydraulic fluids and those coated in PCB-containing paint. PAH-contaminated soil was determined to be limited in extent to the area immediately north of the 50 Lakeside Avenue building.

Based on all previous environmental investigation results, Stone prepared an Evaluation of Corrective Action Alternatives (ECAA) to prevent direct contact with PCB-contaminated building materials and PAH-contaminated soil. Stone also prepared a Self-Implementing/Risk-Based Disposal and Cleanup Plan for approval by the EPA TSCA Enforcement Program. The selected remedial approaches presented in a Corrective Action Plan and Self-Implementing/Risk Based Cleanup Plan included:

- Removal of select PCB-contaminated walls from the 50 Lakeside Avenue building,
- Removal of all slab concrete containing PCBs at concentrations equal to or greater than 10 milligrams per kilogram (mg/Kg) for off-Site disposal,
- Removal and off-Site disposal of PCB-contaminated slab below proposed raised wood floor systems, areas that require structural reinforcement, and other site features such as tree planters, electrical conduit, and a water fountain,
- Encapsulating remaining PCB-contaminated slab with a vapor barrier and six-inch concrete cap,
- Management of PAH-contaminated soil on-Site through regrading and installation of engineered barriers,
- Periodic maintenance and monitoring of the barriers, and
- Implementation of an institutional control on the Site Property deed in the form of a Certificate of Completion under the State of Vermont Brownfields Reuse and Environmental Liability program (BRELLA).

After VT DEC and EPA approved the cleanup plan, Stone oversaw the completion of remedial actions to ensure compliance with cleanup plans throughout the redevelopment of the property from July 2019 through March 2020. Stone has completed additional environmental assessment and cleanup at the former Blodgett Oven Company property as environmental conditions have been discovered during redevelopment. These included a Performance-Based PCB cleanup of a subsurface piping structure that was hydraulically connected to Lake Champlain and associated with former weapons manufacturing on the adjoining property, in-place closure of a former heating fuel underground storage tank, and a release of heating fuel that occurred during removal of the former heating system.

Stone submitted a report summarizing all cleanup activities completed at the property for Vermont DEC and EPA review in April 2020. Following acceptance of the cleanup report by VT DEC, the property received a Certificate of Completion through BRELLA on August 31, 2020.

Stone subsequently prepared a soil management plan to manage soils that will be disturbed during planned renovations to the 32 Lakeside Avenue building that contain low-level PCB contamination due to the weathering of PCB-contaminated window caulk and glazing. The Soil Management Plan has been approved by VT DEC, however, plans to renovate the 32 Lakeside Avenue building are currently paused.

