Jones and Lamson Brownfield Redevelopment, Springfield, Vermont

STONE ENVIRONMENTAL
100% EMPLOYEE-OWNED

Services / Expertise
EPA-Funded Brownfield Redevelopment
Brownfield Economic Revitalization Alliance
Site-Specific Quality Assurance Project Plan
Remedial Site Investigation / Phase III ESA
Corrective Action Plan
Groundwater and Soil Sampling
Asbestos and Building Material Abatement
VTDOH Asbestos Program
Historic Preservation
TSCA & RCRA Compliance
Demolition Oversight
High Resolution Site Characterization
Petroleum Cleanup Fund

Markets
State Government
Local & Regional Planning Commissions

Project Location
Springfield, Vermont

Date Completed
2015–present

Project Owners
Springfield Regional Development Corporation
Vermont DEC
Mount Ascutney Regional Commission

Project ID#
15-049

Project Manager
Dan Voisin

Project Team
Lee Rosberg, Katrina Mattice, PE, Michael Smith, Laura Rajnak, Sarah Rathay

Subconsultants
Cascade Technical Services, Clay Point Associates, Vermont Underground Locators, Gurney Brothers Excavation, Dakota Technologies, NRC Services, Phoenix Laboratories, Con-Test/Pace Analytical, DrillEx, EcoVac, XDD, Weston and Sampson

Drone photography of the Jones & Lamson property, with the Black River at left. Significant deterioration of the rooftop is visible.

IN THE SPRING OF 2015 Stone was awarded a contract to perform site characterization, remedial planning, and implementation at a former machine manufacturing facility in Springfield, Vermont under a US EPA Brownfield Cleanup Grant-funded contract on behalf of the Springfield Regional Development Corporation (SRDC). The Jones & Lamson (J&L) property consisted of a 266,000-square foot vacant and dilapidated former manufacturing facility on 16 acres immediately adjacent to the Black River. Historical uses of the site included over 85 years of machine manufacturing, armament production, and associated processes that resulted in releases of chlorinated solvents, metals, petroleum, and polychlorinated biphenyls (PCBs) to soil and groundwater.

Stone developed a Site-Specific Quality Assurance Project Plan for the Vermont DEC and US EPA Brownfield Approval. The objective of the site characterization was to define the degree, nature, and extent of swarf spoils. Grinding swarf, a byproduct of the machining processes that is commonly contaminated with heavy metals and PCBs, was routinely spoiled along the bank of the adjacent Black River. The site investigation was designed to collect enough soil quality samples to support a Self-Implemented Clean-up Plan under 40 CFR 761.61(a). The Site Characterization involved the advancement of 83 soil borings using Geoprobe and hand-operated methods from

Advancing soil borings along the bank of the Black River.

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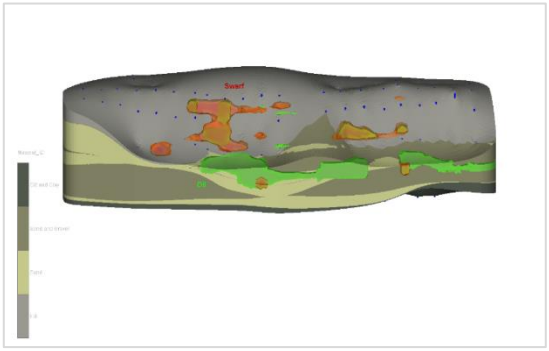
which 265 soil samples were collected. The samples were managed using an agency-approved compositing and archiving schedule to prevent unnecessary analyses, while also providing data to support the remedial planning efforts.



Top: South-North geologic cross section and 3D depiction of swarf and NAPL contaminated soils on western bank of the Black River. Swarf bodies are depicted in orange; NAPL is depicted in green. Below: Demolition activity underway in 2021.

During the summer of 2015, the site owner (SRDC) received word that the Jones and Lamson property was awarded participation in the VTDEC's Brownfield Economic Revitalization Alliance (BERA) program. Through this program, stakeholders from all relevant regulatory agencies (VTDEC Sites Management Section, VT DEC Rivers Program, VTDEC Stormwater Program, US EPA TSCA, USEPA Brownfield, Vermont Historic Preservation, and Vermont Department of Health), the Site owner, the Agency of Commerce and Community Development, the regional planning commission, the local river conservation group, the Town of Springfield, and others are convened to work through regulatory, technical, financial, and development hurdles as they arise. Stone performed a review of all available historic data considering the redevelopment goals for the facility. A data gap report was prepared that identified the need for pre-remedial design investigation of several areas of concern, including trichloroethylene (TCE) source areas, PCB-contaminated bunker oil non-aqueous phase liquid (NAPL) area, PCB contaminated building slab and soil, a co-mingled light non-aqueous phase liquid (LNAPL) release, and naphthalene source area.

In the summer of 2017, US EPA Region I performed a removal action to excavate and remove swarf and swarf-containing soils along the bank of the Black River. A total of 1,200 cubic yards of material was excavated from the Site and disposed at the US Ecology landfill in Wayne Michigan.

In the late summer of 2017, Stone and key Team Member Clay Point Associates oversaw subcontractor Environmental Hazards Management perform asbestos abatement for the former pump house structure and exterior areas under an EPA and VT Department of Health-approved work scope using an EPA Cleanup Grant. Post abatement clearance assessment was performed by Clay Point to ensure that all aspects of the work scope were performed adequately.

On March 29, 2019, Stone's Partial Corrective Action Plan (Partial CAP) was approved by the VT DEC. Remedial elements presented within the CAP intended to stabilize the Site. Stone, with project partners Weston & Sampson Engineers and Clay Point Associates, developed contract documents and oversaw a public bid for demolition of the site buildings through a bulk loadout of co-mingled asbestos and PCB-contaminated building debris and traditional abatement of the remaining boiler house buildings. Demolition began in October, 2021 and continued through mid-January, 2022. With the building removed, Stone is currently tasked with implementing supplemental site investigation of the sub-slab areas of the site to develop a full Site-wide CAP. In response to a petroleum and PCB NAPL area of concern at the site, an Evaluation of Corrective Action Alternatives was prepared following bench-scale pilot testing for bio-solvent/surfactant flushing. Site-scale hydraulic assessment using a strain test was performed in early summer 2022.