

Zoe A. Belcher, LG, LEP

BGTEnvironmental LLC

- > Owner, Managing Member, Licensed Environmental Professional

KEY QUALIFICATIONS

- 20+ years in environmental consulting.
- Project experience in private sector, state funded and federally funded projects.
- Skilled in team management, scheduling, budgeting, client and subcontractor coordination.
- Valuable experience in Brownfields, site characterization, and remediation (including vapor and groundwater extraction systems).

EXPERIENCE

BGTEnvironmental, LLC (2016-present)

Former Industrial Site: Fairfield, Connecticut (2019 – Present)

- (LEP): Historically, the site operated as a rubber manufacturing facility. Manufacturing operations included vulcanization, sandblasting, milling, welding, painting, coating, drying, compounding, and research. Raw materials used in the processes included methyl ethyl ketone (MEK), peroxides, isocyanates, powdered lead, latex cement, toluene, acetone, naphtha, bis(2-ethylhexyl) azelate, mineral spirits, and petroleum. Investigations identified eighteen areas of concern (AOCs). Soil and groundwater impact was identified that exceeded the Significant Environmental Hazards (SEH). Currently serving as the LEP to investigate and close out the SEH conditions. Investigations have included soil, groundwater and soil gas sampling. Also, conducting investigations to balance the Soil Vapor Extraction (SVE) system and an air sparge system. The LEP is working closely with the Connecticut Department of Energy and Environmental Protection (CT DEEP) on this project.

Automotive Dealership: Wallingford, Connecticut (2018 – Present)

- (LEP): Historically, the site operated as an auto body repair facility. The site entered the Property Transfer Program in 2018 with the filing of a Form III and Environmental Condition Assessment Form. Currently serving as the LEP of record to oversee the investigation, remediation and final Verification of the site.

Truck Service Station: Wallingford, Connecticut (2018 – Present)

- (LEP): Auto body repair was historically conducted at the site. The site entered the Property Transfer Program in 2018 with the filing of a Form III and Environmental Condition Assessment Form. Currently serving as the LEP of record to oversee the investigation, remediation and final Verification of the site.

Former Junk Yard, Madison, Connecticut (2000- Present)

- (Consultant/Project Manager): *This former junk yard site is presently under Stipulated Judgment. Contaminants of concern at this site include VOCs and metals. Currently assisting appraiser with valuation of the property for donation to a land trust. Acted as the Project Manager overseeing the following activities when working for previous employer.*
 - *Supervision of site activities including the installation of eight bedrock monitoring (three nested pairs) wells to evaluate groundwater quality and water supply sampling*
 - *Review and evaluation of all site data*
 - *Preparing documentation for local planning and zone board for lot subdivision approval*
 - *Development of comprehensive Conceptual Site Model*
 - *Coordination with CT DEEP, local health officials, and the client to obtain release of the Stipulated Judgment*
 - *2013 CT DEEP Release of Area 3 from Stipulated Judgment*

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EDUCATION

- Bachelor of Science, Geology with a Specialty in Engineering, Radford University, 1998.
- Masters of Science, Environmental and Engineering Geosciences, Radford University, 2001.

CONTINUING EDUCATION

- Various LEP courses. List available upon request.

PROFESSIONAL REGISTRATIONS/ CERTIFICATIONS

- First Registered Brownfield's Professional in CT
- Licensed Environmental Professional
- Licensed Geologist, State of Washington
- OSHA 40-hour certificate and annual 8-hour refreshers (current)
- First Aid & CPR Certified

Food Bag Facilities: Farmington, Meriden, & Old Saybrook, Connecticut (2018 – 2020)

- *(Project Manager): Leaking Underground Storage Tanks (LUST) have resulted in minimal petroleum impact to the subsurface. Conducting groundwater monitoring to demonstrate compliance with the CT Remediation Standard Regulations and close out the LUST status for each site.*

Food Bag Facilities: New Britain & Danbury, Connecticut (2018 – 2021)

- *(Project Manager): Leaking Underground Storage Tanks (LUST) have resulted in petroleum impacts to the subsurface. Soil and groundwater investigations are necessary to close out the LUST. Responsibilities include:*
 - *Subcontractor oversight*
 - *Data interpretation and report preparation*
 - *Correspondence with CT DEEP regarding site closure*

Two Food Bag Facilities: East Hampton, Connecticut (2017 – Present)

- *(LEP): Historically Leaking Underground Storage Tanks (LUST) have resulted in petroleum impacts to the groundwater aquifer that supplies potable water to the surround parcels. Due to the groundwater impact, CT DEEP issued two Consent Orders (pollution abatement and drinking water). The tanks and impacted soil were removed. Long-term potable well monitoring has demonstrated a decrease in impact over time. The client is now seeking closure of the Consent Orders. Responsibilities include:*
 - *Quarterly and Annual CT Department of Public Health (CT DPH) compliant Potable water sampling*
 - *Coordination with potable well treatment system contractor*
 - *Areawide potable well sampling*
 - *Data interpretation and report preparation*
 - *Summary of historical investigations, remediation and monitoring to document compliance with the outstanding Consent Orders*
 - *Correspondence with CT DEEP to close out Consent Orders*

Brownfield Project Supervision: Former Auto Body Shop, North Haven, Connecticut (2016-Present)

- *(Project Manager): Sale of the former auto body shop triggered a CT Transfer Act filing. A minor amount of petroleum contamination was detected in soil directly beneath the building. Impacted soil was removed subsequent to building demolition. Groundwater monitoring is now being conducted to demonstrate compliance with the CT Remediation Standard Regulations. Responsibilities include:*
 - *Subcontractor oversight*
 - *Data interpretation and report preparation*
 - *Correspondence with sells LEP and CT DEEP regarding site closure*
 - *Completion of Investigation Form*
 - *Ultimately final site Verification (anticipated in 2021)*

HRP Associates, Inc.: (2000 – 2015)

Brownfield Project Supervision: Former Manufacturing and Trucking Facility, Bristol, Connecticut (2015)

- *(Project Manager): Project initially began under an EPA Brownfields Assessment Grant as Phase I and II. Contamination was identified at the site; however, development was not initiated until 2015. In 2015, a veteran's organization purchased the property to construct a Vietnam War Memorial. Responsible for the following:*
 - *Member of the War Memorial committee*
 - *Working closely with veterans' group to locate funding sources*
 - *Preparation of environmental information documents for project donors*

PROFESSIONAL ORGANIZATIONS

- Environmental Professional's Organization of CT (EPOC)
- Connecticut Business & Industry Association (CBIA)
- Connecticut Environmental Forum (CEF)
- Environmental Business Council (EBC)
- U.S. Women's Chamber of Commerce
- Sigma Gamma Epsilon
- Phi Kappa Phi
- Professional Women in Construction – Sponsorship Chair 2007-2015, Director 2008-2009, Vice President 2009-2012, President 2012-2013, Immediate Past President 2013-2015
- Association of Environmental and Engineering Geologists

PUBLICATION

- "City of Bristol Turns Brown to Green: Vacant Brownfield Site to Become Entryway to Rockwell Park", New England Real Estate Journal, August 17, 2012.

VOLUNTEER

- Continuing to volunteer time on the SGU National War Memorial Committee as secretary.
- Advisor to the committee regarding funding opportunities.

HONORS

- 2010 Woman on the Rise, Professional Women in Construction – CT Chapter, April 2010.

- Coordination of preliminary construction documents to presentation to City officials
- Preparation and execution of Remedial Action Plan

Brownfield Project Supervision: Former Manufacturer, Bristol, Connecticut (2014-2015)

- *(Project Manager): Historic operation as a bell manufacturer and trucking company have resulted in VOC, metals and petroleum impact to the soil. Site redevelopment will include the National War Memorial for the Special Guerrillas Unit (SGU). Responsible for the following:*
 - Remedial design
 - Coordination with the municipality
 - Fundraising

Brownfield Project Supervision: Former Manufacturing Facility, Torrington, Connecticut (2014)

- *(Project Manager): Assigned a federally funded Brownfield remediation. The EPA has informed the municipality that the loan will be closed on August 1, leaving only 5 months to complete characterization, remedial design, remediation and redevelopment. The former facility, impacted with TPH and metals, will entered into the Voluntary Remediation Program (Section 22a-133x). \$800,000*
 - Preparation of Analysis Brownfield Clean-up Alternative and Quality Assurance Project Plan
 - Oversee site characterization
 - Prepare subcontractor bid documents
 - Assist the municipality in remedial and redevelopment design
 - Oversight of soil excavation and construction of parking lot

Brownfield Project Supervision: Former Threadmill, South Central, Connecticut (2013-2015)

- *(Project Manager): Historical threadmill slated for redevelopment utilizing historic preservation, CHFA and DECD funds. Project is being redeveloped by a private developer under the CT DEEP Voluntary Remediation Program 22a-133y. Responsible for the following:*
 - Oversight of site characterization
 - Preparation of Soil Management Plan
 - Support client during funding source procurement
 - Oversight of removal of 5 USTs and coordination with CT DEEP
 - Project construction began in 2013

Brownfield Project Supervision: Former Mixed-Use Building, Bridgeport, Connecticut (2013-2015)

- *(Project Manager): Historical mixed-use building slated for redevelopment utilizing EPA and DECD funds. Project is being redeveloped by a private developer. Responsible for the following:*
 - Oversight of site characterization
 - Support client during funding source procurement
 - Preparation of ABCA and QAPP
 - Supervision during removal of ASTs and UST
 - Determination of the applicability of the Voluntary Remediation Program

Former Manufacturing Facility, Newington, Connecticut (2012-2015)

- *(Project Manager): Historic operations have resulted in VOC impact to the groundwater table. Impact includes free product on the water table. Four groundwater extraction wells operate on a continual basis. Responsible for the following:*

- Supervision of field and office staff during system operation and maintenance
- Decisions regarding system balancing
- Review of data, quarterly/semi-annual reports, DMRs prepared by staff
- Annual reserves

Brownfield Project Supervision: Former Manufacturing Facility, Vernon, Connecticut (2012-2015)

- (Project Manager): Former manufacturing facility slated for residential redevelopment utilizing historic preservation, CHFA and DECD funding. Site is currently in the CT Property Transfer Program. Site soils are impacted with lead and TPH. Responsible for the following:
 - Preparation of Remedial Cost Estimates
 - Coordination of Hazardous Building Material Survey
 - Support for pre-construction
 - Provide support during funding process with CHFA and DECD

Brownfield Project Supervision: LEP Services, Winchester, Connecticut (2011-2015)

- (Project Manager): Selected by the Town of Winchester to perform a third-party independent review of all project activities conducted under the Brownfield Revolving Loan Fund Program. The number and type of sites will vary over the life of the project.

Manufacturing Facility, Winsted, Connecticut (2011-2015)

- (Project Manager): Site operations were determined to meet the definition of an establishment. Through site investigation it was determined that minor VOC impact was present in the soil. Business and property were sold separately requiring the site to enter the CT Transfer Act Program for each transfer. Responsible for the following:
 - Phases I, II, and III
 - Two Form III and Environmental Condition Assessment Form filing
 - LEP of record for all site work
 - Receptor Survey
 - Application for Alternative Standards
 - Final site verification
 - Letter of No Audit received 2015.

Brownfield Project Supervision: Former Gas Station, Bristol, Connecticut (2010-2013)

- (Project Manager): LEP of record for a remediation project funded under the Brownfield Revolving Loan Fund. The former gas station site, impacted with TPH and PCBs, entered into the Voluntary Remediation Program (Section 22a-133x). \$165,000
 - Preparation of Analysis Brownfield Clean-up Alternative and Environmental Condition Assessment Form
 - Oversight of hazardous material abatement and building demolition
 - Oversight of tank removal and soil excavation
 - Implementation of Environmental Land Use Restriction and post-remediation monitoring
 - Approval for post-remediation groundwater monitoring variance
 - Final site verification
 - Letter of No Audit received June 2014.

Corporate Brownfield's Program (2003-2015)

- (Brownfield's Coordinator): Responsible for the preparation and maintenance for the Corporate Quality Assurance Project Plan, which was initially approved by the EPA in 2009 and again in 2012. Reviewed and approved all QAPPs

prepared under the NYSDEC contract. Preparation of over 15 EPA approved QAPPs for projects in CT and NH.

Former Manufacturing Facility, Western Connecticut (2002-2009)

- (Senior Project Geologist): Large scale groundwater contamination has occurred at the former battery manufacturing facility. Responsibilities included:
 - Oversight of monitoring of a multiphase extraction system (soil vapor extraction, liquid ring pump, groundwater extraction/treatment) – to date over 10,000 pounds of VOCs removed
 - Review of data, monthly/semi-annual reports, monthly client updates prepared by staff
 - Supervision of field and office staff during in-situ chemical oxidation pilot study.
 - Review of pilot study data

Former Electronics Manufacturing Facility, Central Connecticut (2001-2009)

- (Senior Project Geologist) Historical electronic manufacturing operations resulted in VOC and metals impact to the soil and groundwater. A remediation in 1999 removed 15,000 tons of soil. Cadmium concentrations in the groundwater remained elevated after remediation. \$1-Million
 - Supervision of eight years of post-remediation groundwater monitoring
 - Design of subsurface investigation (20 borings, 65 soil samples) – to determine whether residual cadmium remained below water table
 - Review of analytical results (no cadmium by Synthetic Precipitation Leachate Procedure, hazardous levels by Toxicity Characteristic Leachate Procedures)
 - Review of remedial alternatives
 - Design and preparation of Remedial Action Plan - excavation (7,000 tons), ex-situ stabilization (1,000 tons), off-site disposal (4,000 tons), soil reuse (2,500 cubic yards)
 - Removal of soil to eight feet below water table (dewatering)
 - Review confirmation samples for excavation limits
 - Supervision of subcontractors and HRP field staff

Brownfield Project Supervision: Former Railroad Station Soil Remediation, Plainville, Connecticut (2001)

- (Project Geologist): Former underutilized railroad station site contaminated with TPH. Responsible for oversight of the removal and disposal of soil contaminated with metals and TPH. A 25-foot buffer zone using geotextile and clean fill was created around the northern, eastern, and western perimeters of the site. The excavations were subsequently backfilled with clean fill and compacted. A facility housing the local police department was subsequently constructed at the site.

REFERENCES

References are available upon request.