Jason Hnatko, PhD, PE.

Principal Engineer

VINE BROOK ENVIRONMENTAL

Dr. Jason Hnatko, PhD, PE, is an environmental engineer with more than 20 years of experience investigating and remediating sites and solving complex environmental challenges. As a licensed Professional Engineer in Massachusetts, Jason specializes in contaminated site investigation, remediation system design, emerging contaminants, and regulatory strategy, with particular expertise in per- and polyfluoroalkyl substances (PFAS). He has managed projects ranging from Superfund site investigations and groundwater remediation to the evaluation and deployment of innovative treatment technologies, helping industrial, commercial, and public-sector clients navigate technically challenging environmental issues.

Email: jason@vinebrookenv.com

Experience: 20+ years in environmental consulting and bioremediation research

Education:

- Doctor of Philosophy. Civil and Environmental Engineering, Tufts University, USA, 2020
- Master of Science. Civil and Environmental Engineering, Tufts University, USA, 2016
- Bachelor of Science. Biological and Environmental Engineering, Cornell University, USA, 2005

Professional Registrations:

- Registered Professional Engineer, Environmental, Massachusetts License #48676, expired: ME, NH, RI

Areas of Expertise:

- PFAS investigation and delineation
- PFAS remediation technology selection and treatment system design
- Foam Fractionation
- Pilot test design and implementation
- Bioremediation: chlorinated ethenes, 1,4-dioxane, petroleum hydrocarbons
- Treatment evaluation and design, including in situ biological and chemical remedies, pump & treat, and air sparge/soil vapor extraction
- Contaminant fate and transport: PFAS, chlorinated solvent, and metals

Activities and Affiliations:

- Remediation Journal PFAS Environmental Professionals Group
- Lexington, MA Conservation Commission

Professional Experience:

- Allonnia LLC, Boston, MA — March 2024-July 2026
  Engineer Manager – Emerging Contaminants
- Environmental Resources Management (ERM), Boston, MA — June 2020-March 2024
  Senior Associate

- Tufts University, Medford, MA — Aug. 2014-June 2020
  Graduate Student/Research Assistant/Teaching Assistant
- RAMBOLL/ENVIRON International Corporation, Boston, MA — March 2011-Jan. 2016
  Senior Associate
- ARCADIS-US, Inc./Malcolm Pirnie, Inc., Wakefield, MA — June 2005-March 2011
  Project Engineer

Publications:

- Interstate Technology Regulatory Council (ITRC). 2026. Sorption-Based Technologies for Separation and Concentration of PFAS from Water. Team member and lead for Section 18.4: Foam Fractionation. https://pfas-1.itrcweb.org/18-pfas-sorption-based-technologies-guidance/
- DiGuiseppi, W., Newell, C., Carey, G., Kulkarni, P., Xia, Z., Stults, J., Maher, T., Houtz, E., Mora, R., Wice, R., Tomiczek, P., Richardson, S., Xiong, J., Hale, J., **Hnatko, J.P.**, McGregor, R., McDonough, J., Oka, A., Thomas, R., Hatton, J. 2024. Available and emerging liquid treatment technologies for PFASs. Remediation Journal. 34. 10. https://onlinelibrary.wiley.com/doi/abs/10.1002/rem.21782
- **Hnatko, J.P.**, Liu, C., Elsey, J., Dong, S., Fortner, J., Pennell, K. Abriola, L, Cápiro, N. 2023. Microbial reductive dechlorination by a commercially-available dechlorinating consortium is not inhibited by perfluoroalkyl acids (PFAAs) at field-relevant concentrations. Environmental Science and Technology. 57(22) 8301-8312. https://pubs.acs.org/doi/abs/10.1021/acs.est.2c04815
- Yang, L., **Hnatko, J.P.**, Elsey, J., Christ, J., Pennell, K., Cáprio, N., Abriola, L. 2021. Exploration of processes governing microbial reductive dechlorination in a heterogeneous aquifer flow cell. Water Research 193, 116842. https://doi.org/10.1016/j.watres.2021.116842
- **Hnatko, J.P.**, Yang, L., Pennell, K., Abriola, L., and Cápiro, N. 2020. Bioenhanced diffusion and dynamics of *Dehalococcoides mccartyi* strains in heterogeneous porous media. Chemosphere 254, 12682. https://doi.org/10.1016/j.watres.2021.116842
- **Hnatko, J.P.** 2020. Assessment of Dehalococcoides mccartyi Strain Specific Responses to Soil Heterogeneity, Pulsed Electron Donor Delivery, and Per- and Polyfluoroalkyl Substances. Tufts University ProQuest Dissertations & Theses. 27957556. https://www.proquest.com/openview/586c0a2907a77c7b361cf97aeff4967c/1

Conference Presentations – Spoken

- **Hnatko, J.P.,** Hoffman, G. 2026. Managing PFAS in Landfill Leachate. [Platform Presentation-Co-chair]. Fourteenth International Conference on Remediation of Chlorinated and Recalcitrant Compounds. Fort Worth, TX. June.
- Pierce, Z., **Hnatko, J.P.,** Sorenson, K. 2026. PFAS Air Sampling and the Foam Fractionation Process: Practical Applications and Lessons Learned. [Platform Presentation-co-author]. Fourteenth International Conference on Remediation of Chlorinated and Recalcitrant Compounds. Fort Worth, TX. June.
- **Hnatko, J.P.,** Punsoni, A. 2026. PFAS Removal by Foam Fractionation From Varying Landfill Leachates. [Platform Presentation-Presenter]. Federation of NY Solid Waste Conference. Bolton Landing, NY. 2026
- **Hnatko, J.P.,** Schaefer C., Alspach, B., Ozekin, K., Weinrich, L. 2026. Distinguished Panel Session: Translational Research in PFAS Decontamination Technologies – Industry Technology Translation Perspective [Panel Presentation-Panelist]. CTR Workshop on PFAS Decontamination and Management. Newark, NJ. April.

- Punsoni, A., **Hnatko, J.P.,** Pierce, Z. 2026. PFAS Removal by Foam Fractionation in Varying Water Types. [Platform Presentation-co-author]. Northeast Conference on the Science of PFAS: Public Health and the Environment. Worcester, MA. April.
- **Hnatko, J.P.,** Sorenson, K., Rosansky, S. 2025. Closed Loop PFAS Groundwater Treatment: Separation by Foam Fractionation and Destruction with Super Critical Water Oxidation (SCWO). [Platform Presentation-Presenter]. REMTEC & Emerging Contaminants Summit. Westminster, CO. October.
- **Hnatko, J.P.,** Banerjee, A., Saran, D., Sorenson, K. 2025. Perspectives in Bioremediation: Present Results and Future Developments. [Platform Presentation-Presenter]. 41st Annual International Conference on Soils Sediments and Water. Amherst, MA. October. https://www.xcdsystem.com/AEHS/program/WJtUQVP/index.cfm?pgid=5579&sid=53437&abid=331726
- Pierce, Z., Sorenson, K., **Hnatko, J.P.** 2025. Field Demonstration of Biosurfactants to Enhance Foam Frationation Performance and Applicability in Low-Foaming Water. [Platform Presentation-co-author]. Seventh International Symposium on Bioremediation and Environmental Biotechnology. Boston, MA. June.
- Walyczyk, C., **Hnatko, J.P.,** Gillespie, R., Weinrich, L., Alspach, B. 2025. Distinguished Panel Session: Translational Research in PFAS Decontamination Technologies – Industry Technology Translation Perspective [Panel Presentation-Panelist]. CTR Workshop on PFAS Decontamination and Management. Newark, NJ. April.
- **Hnatko, J.P.**, Banerjee, A., Leggieri, P., Pierce, Z., Saran, D., Sorenson, K., Punsoni, A. 2024. Performance Characteristics of 1,4 D-Story Culture for Degradation of 1,4-Dioxane in Groundwater. [Platform Presentation-Presenter]. REMTEC & Emerging Contaminants Summit. Westminster, CO. October.
- Denly, E., Gwinn, R., Sorell, T., **Hnatko, J.P.,** Fenstermacher, J., Hale, J. 2024. PFAS Regulations: Do We Need a Paradigm Shift? National Pollutant Discharge Elimination System (NPDES): PFAS in Permits and Effluent Limitations Guidelines (ELGs). [Panel Presentation-Panelist]. 39th Annual International Conference on Soils Sediments and Water. Amherst, MA. October.
- McDonough, J., **Hnatko, J.P.,** Vanyo, E., Parikh, J., Kwasniak, K. 2024. A Case Study Example of Optimizing an Existing Treatment System to Address PFAS. [Platform Presentation-co-author]. Thirteenth International Conference on the Remediation of Chlorinated and Recalcitrant Compounds. Denver, CO. June.
- **Hnatko, J.P.** 2024. Remove PFAS From Water: Foam Fractionation. [Platform Presentation-presenter]. SWANA NJ Spring Conference. Atlantic City, NJ. April.
- McDonough, J., **Hnatko, J.P.,** Guillet, J., Lang, S., Byrd, J. 2023. Help is on the Way. Emerging Solutions for PFAS-Impacted Liquids. [Platform Presentation-co-author]. Waste Management Symposia. Phoenix, AZ. February. https://inis.iaea.org/records/fdy0z-k4j69
- Cápiro, N.L., **Hnatko, J.P.,** Yang, L., Pennell, K., Abriola, L. 2020. Biologically-Mediated Back Diffusion of Chlorinated Ethenes in Heterogeneous Porous Media due to Dehalococcoides mccartyi Activity. [Platform Presentation-co-author]. American Geophysical Union. Virtual. December. https://ui.adsabs.harvard.edu/abs/2020AGUFMH043...01C/abstract
- Pennell, K., Costanza, J., Lui, C., Arshadi, M., **Hnatko, J.P.,** Abriola, L., Kim, C., Cápiro, N., Fortner, J. 2019. Transport and remediation of per-and polyfluoroalkyl substance (PFAS) in the subsurface. [Platform Presentation-co-author]. 8th International Contaminated Site Remediation Conference. Melbourne, VIC, Australia. September. https://inis.iaea.org/records/g5kje-c1c56

- **Hnatko, J.P.,** Yang, L., Abriola, L., Cápiro, N. 2018. Bioenhanced diffusion and dynamics of Dehalococcoides mccartyi strains in heterogeneous porous media. [Platform Presentation-Presenter]. American Chemistry Society Fall Meeting. Boston, MA. August. https://scimeetings.acs.org/exhibit/Bioenhanced-diffusion-dynamics-Dehalococcoides-mccartyi/2971613
- **Hnatko, J.P.,** O'Brien, S. 2009. EMS Without the Mess: A Simplified but Comprehensive Environmental Management System for the Massachusetts Bay Commuter Railroad [Platform Presentation-Presenter]. Railroad Environmental Conference, Champaign, IL. November.

Conference Presentations – Posters

- **Hnatko, J.P.,** Pierce, Z., Punsoni, A. 2026. PFAS Removal by Foam Fractionation in Varying Water Types. [Poster Presentation-Presenter]. Fourteenth International Conference on Remediation of Chlorinated and Recalcitrant Compounds. Fort Worth, TX. June.
- Lemes, M., **Hnatko, J.P.,** Price, C., Pierce, Z., Sorenson, K., Lewis, K. 2026. Innovation and Compliance: Sustainable PFAS Removal in Drinking Water Using SAFF® Technology in Remote Communities. [Poster Presentation-Co-author]. Fourteenth International Conference on Remediation of Chlorinated and Recalcitrant Compounds. Fort Worth, TX. June.
- **Hnatko, J.P.,** Sorenson, K., Rosansky, S. 2025. Sustainable On-Site Removal and Destruction of PFAS Using Surface Active Foam Fractionation and Supercritical Water Oxidation. [Poster Presentation-Presenter]. DOW Applied Innovation Workshop. Washington, DC. March.
- Punsoni, A., **Hnatko, J.P.,** Pierce, Z. 2025. Optimization of Surface Active Foam Fractionation (SAFF®) for PFAS in Semiconductor Fab Wastewater. [Poster Presentation-Co-author]. Semicon West. Phoenix, AZ. October.
- **Hnatko, J.P.,** Banerjee, A., Gramlich, B., Sorenson, K., Piecowye, K., McCaffery, K., Selisana, J.A. 2025. Transport and degradation kinetics of a metabolic 1,4-dioxane degrading microorganism in column studies. [Poster Presentation-Presenter]. Seventh International Symposium on Bioremediation and Environmental Biotechnology. Boston, MA. June.
- Mahlenkamp, A., Sorenson, K., **Hnatko, J.P.,** Piece, Z., Aaran, D. 2025. Use of Cell Lysate and Biosurfactants to Enhance PFAS Removal During Foam Fractionation. [Poster Presentation-Co-author]. Seventh International Symposium on Bioremediation and Environmental Biotechnology. Boston, MA. June.
- **Hnatko, J.P.,** Elsey, J., Liu, C., Abriola, L., Pennell, K., Fortner, J., Cápiro, N. 2022. Presence of Solid Phase Can Prevent Inhibition of Dehalococcoides mccartyi by terminal PFAS. [Poster Presentation-Presenter]. Twelfth International Conference on the Remediation of Chlorinated and Recalcitrant Compounds. Palm Springs, CA. May.
- Yang, L., **Hnatko, J.P.,** Elsey, J., Christ, J., Pennell, K., Cápiro, N, Abriola, L. 2019. Modeling Microbial Reductive Dechlorination in a Heterogeneous Laboratory Aquifer Cell. [Poster Presentation-Co-author] 35th Annual International Conference on Soils Sediments and Water. Amherst, MA. October.
- **Hnatko, J.P.,** Yang, L., Elsey, J., Tang, T., Arshadi, M., Christ, J., Pennell, K., Cápiro, N., Abriola, L. 2018. Comparison of Chlorinated Solvent Dechlorination Rates Across Batch-, Laboratory-, and Pilot-Scales. [Poster Presentation-Presenter]. 34th Annual International Conference on Soils Sediments and Water. Amherst, MA. October.
- Yang, L., **Hnatko, J.P.,** Elsey, J., Christ, J., Pennell, K., Cápiro, N, Abriola, L. 2018. Modeling Microbial Reductive Dechlorination in a Heterogeneous Laboratory Aquifer Cell. [Poster

Presentation-Co-author]. American Geophysical Union. Washington, DC. December. https://agu.confex.com/agu/fm18/prelim.cgi/Paper/452408

- **Hnatko, J.P.,** Yang, L., Elsey, J., Tang, T., Arshadi, M., Christ, J., Pennell, K., Cápiro, N., Abriola, L. 2018. Comparison of Chlorinated Solvent Dechlorination Rates Across Batch-, Laboratory-, and Pilot-Scales. [Poster Presentation-Presenter]. American Chemistry Society Fall Meeting. Boston, MA. August. https://scimeetings.acs.org/exhibit/Comparison-chlorinated-solvent-dechlorination-rates/2990054

Webinars and Public Meetings

- **Hnatko, J.P.** 2026. SAFF® and Annihilator Demonstration Project Update. [Public Meeting-Presenter]. Wurtsmith Remediation Advisory Board. Oscoda, MI (virtual). May.
- **Hnatko, J.P.,** Evans, R., Harris, A., Haupert, L., Shayan, M. 2026. PFAS Sorption Based Technologies for Separation & Concentration of PFAS From Water Training. [Online Training-Presenter]. Interstate Technology Regulatory Council Training. April. https://www.clu-in.org/conf/itrc/PFAS-sorption-techs_040726/
- Sorenson, K., **Hnatko, J.P.,** Pierce, Z. 2026. Demonstration and Validation of PFAS Treatment Approaches: Closed Loop PFAS Groundwater Treatment: Separation by Surface Active Foam Fractionation (SAFF®) and Destruction by Super Critical Water Oxidation (SCWO). [Webinar-Co-author]. SERDP and ESTCP Webinar. March. https://serdp-estcp.mil/events/details/98697fc6-c3ca-48b2-853d-cbfccc9a0e7c/demonstration-and-validation-of-pfas-treatment-approaches
- **Hnatko, J.P.,** Rappold, R. 2026. PFAS Treatment: Site-Specific Cost Comparison Tool. [Webinar-Presenter]. Allonnia Insights Webinar. January.
- **Hnatko, J.P.,** Rappold, R. 2025. Exploring the Economics of SAFF®: Cost Insights and Field Results. [Webinar-Presenter]. Allonnia Insights Webinar. April. https://www.youtube.com/watch?v=UjIkeeNq9c0
- **Hnatko, J.P.,** Durgotch, E. 2024. ER23-7939: Sustainable On-Site Removal and Destruction of PFAS Using Surface Active Foam Fractionation and Super Critical Water Oxidation. [Public Meeting-Co-presenter]. Wurtsmith Remediation Advisory Board. Oscoda, MI. November.
- **Hnatko, J.P.,** Punsoni A. 2024. Meeting Current and Future EPA PFAS Regulations with SAFF®. [Webinar-Presenter]. Allonnia Insights Webinar. May. https://www.youtube.com/watch?v=8d3nqxuoIVU

Key Project Experience:

Foam Fractionation to Remove PFAS from Water

Managed the engineering team responsible for laboratory studies and field deployments of Surface Active Foam Fractionation (SAFF®) to remove per- and polyfluoroalkyl substances (PFAS) from impacted waters including remediation groundwater, drinking water, industrial process water, reverse osmosis reject water, and landfill leachate. Coordinated and managed 5 permanent SAFF deployments, 20 field-scale pilot tests, and more than 30 laboratory bench scale studies.

Testing and Evaluation of PFAS Destruction Technologies

Partnered with firms to test and evaluate PFAS destruction technologies including Super Critical Water Oxidation, Electrochemical Oxidation, Hydrothermal Alkaline Treatment, UV/Sulfide Reduction, and plasma.

PFAS Sensor and 1,4-Dioxane Bioremediation Developments

Managed development of a sensor to measure PFAS concentration, supported the development of a bioremediation solution for 1,4-dioxane, and served as technical support for research into PFAS biodegradation using fungal strains and bacterial species.

Technical Sales Support

Developed tools to support sales and deployments for a rapidly growing startup including cost calculator and evaluation tools, technical proposal templates, and marketing materials. Developed and presented customer webinars, client presentations to support technical sales, public and regulatory meetings, and conference presentations.

New Jersey PFAS Investigation and Remedy

Project manager and technical expert for the delineation of PFAS impacts and remedy selection for PFAS and carbon tetrachloride in groundwater. Developed and proposed PFAS delineation approach that relies on source signature and PCA to differentiate site impacts from anthropogenic background. Completed conceptual design of hydraulic containment remedy to prevent migration of source. Developed bench and pilot testing work plans for a multi-stage treatment process including dissolved air flotation (DAF), foam fractionation, ion exchange (IEX) resin filtration, and granular activated carbon (GAC) polishing.

New Jersey Superfund PFAS Investigation

Supported an investigation of PFAS in groundwater at a Superfund Site in NJ. Identified different mixtures of PFAS in upgradient, on-site, and downgradient wells to identify locations of potential on-site sources and demonstrate that the existing hydraulic capture system captures most on-site PFAS impacts. Assisted in the optimization of the existing treatment system to reduce the frequency of GAC changeouts before PFAS breakthrough.

PFAS Conceptual Site Model (CSM) Development, Henderson, KY

Contributed to the development of a comprehensive conceptual site model integrating surficial releases, underground releases, air emissions and deposition, groundwater flow, and surface water discharges. Integrating multiple lines of evidence allowed the CSM to identify site-related impacts and potential receptors to support regulatory decision making.

PFAS Regulatory Dashboard

Managed the maintenance of a subscription-based dashboard tracking PFAS regulations and news from around the world. Worked with staff in all global regions to track changes to published and proposed standards for PFAS.

PFAS Hydraulic Containment System Planning

Supported planning, design, and cost estimates for two hydraulic containment systems to prevent migration of PFAS in groundwater. One proposed system is for a former fire training area impacted by aqueous film forming foam (AFFF) and the other is for an active textile manufacturing facility that applied waterproofing materials containing PFAS. Proposed systems consist of groundwater extraction and treatment through granular activated carbon (GAC).

ISCO and PFAS Investigation - Pennsauken, NJ

Project manager and subject matter expert for the planning and implementation of in-situ chemical oxidation (ISCO) of ethylbenzene, toluene, and xylenes using sodium persulfate. Evaluated the remedy with respect to low concentrations of PFAS using total oxidizable precursor (TOP) assay and planned investigation of potential migration of PFAS from off site.

PFAS Use Investigations

Supported numerous clients in review of safety data sheets (SDSs) to assess historical uses of products that may contain PFAS. Reviews have been initiated by state or federal regulators requests for information.

PFAS Site Characterization

Supported assessments of PFAS related data for several sites to assess potential on- and off-site sources, contributions from site activity, and the effect of PFAS on existing remedial actions.

Radium Investigation at Missouri Superfund Site

Served as technical expert evaluating the fate and transport of radionuclides, especially radium isotopes, from both radiologically impacted material (RIM) placed at the site and from naturally-occurring sources. Developed a conceptual site model that integrates multiple lines of evidence, including organic and inorganic analyte distributions, to determine the likely sources of radium and other constituents of potential concern in on- and off-site groundwater. Coordinated management and analyses of large data set, including trend analyses, data visualization, statistical analyses, contaminant of concern screening, and report preparation.

Source Signature Differentiation at Illinois Manufactured Gas Plant (MGP) Site

Part of a multi-disciplinary team that evaluated sources of organic and inorganic contaminants in soil and groundwater at a former manufactured gas plant, including heavy metals (e.g. lead, mercury, and arsenic) and polycyclic aromatic hydrocarbons (PAHs). Used knowledge of contaminant fate and transport to interpret data and output of statistical tools (e.g. principal component analysis [PCA], QQ-plots, and cluster analysis) and identify multiple, non-MGP-related sources including dumping and filling at the site and migration of contaminated groundwater from off-site sources. Analysis allowed reduction of the remedial footprint by approximately 30% resulting in substantial cost savings.

Remedy Selection at California Electrical Substation

Evaluated remedial alternatives for soil, sediment, groundwater, and surface water at an active electrical substation and surrounding pastureland. Remedy selection was driven by the presence of arsenic in all media. Risk assessments and contaminant fate and transport assessments demonstrated that institutional controls and monitoring were effective remedies and that intrusive remediation (e.g. excavation or capping) posed short term risks that offset potential long-term benefits.

Facility Closure Support - Bennington, VT

Project manager supporting the closure of a former manufacturing facility. Tasks included investigation of tetrachloroethene (PCE) and PFAS in groundwater and PCE and mercury in indoor air. Prepared an evaluation of corrective action alternatives recommending long-term monitoring for PCE and PFAS and active vapor mitigation for indoor air. Assisted facility with cleaning former manufacturing areas for potential reuse.

Bioremediation Design and Implementation - Fairfield, NJ

Served as technical expert for the design and implementation of an enhanced *in situ* bioremediation remedy for chlorinated solvent-impacted groundwater at a former manufacturing facility. Remedy included bioaugmentation and injection of amendments including zero valent iron (ZVI) and carbon substrates.

Bioremediation Implementation - Deerfield, MA

Project manager for *in situ* bioremediation project at active railyard. Emulsified vegetable oil and bioaugmentation to treat dissolved PCE plume.

Development of an Integrated Field Test/Modeling Protocol for Efficient In Situ Bioremediation Design and Performance

Conducted experiments of chlorinated solvent biodegradation by *Dehalococcoides mccartyi* using microcosm batch reactors, flowing aquifer cell systems, and an *in situ* pilot test to support numerical modeling and examine the impact of geochemical conditions on reductive dehalogenase genes.

Development of Coupled Physiochemical and Biological Systems for In Situ Remediation of Mixed Perfluorinated Chemical and Chlorinated Solvent Groundwater Plumes

Examined the impact of per- and polyfluoroalkyl substances (PFAS) on microbial reductive dechlorination by *Dehalococcoides mcartyi* using batch reactor and microcosm experiments.

Sediment Capping Implementation – Jersey City, NJ

Construction oversight and monitoring of the installation of a sediment cap to mitigate hexavalent chromium impacts in the Hackensack River.

PCB Sediment Removal - Bridgeport, CT

Supported the ongoing investigation and remediation of a former manufacturing facility with Polychlorinated Biphenyls (PCBs) and lead impacts by preparing a Request for Proposals (RFP), developing a Remedial Action Plan (RAP) and preparing a feasibility study for a solar installation on the soils relocation area.

SPCC Planning – Multiple Sites

Completed and certified Spill Prevention Control and Countermeasures (SPCC) plans for sites in Massachusetts and Pennsylvania and prepared SPCC training materials.

Petroleum Remediation System Design and Upgrades – Multiple Sites

Coordinated the design of bioventing and dual phase extraction remediation systems at a former oil refinery, an international airport, and two bus maintenance garages to address hydrocarbon impacts, primarily those of benzene, toluene, ethylbenzene, and xylenes (BTEX). Improved system reliability through upgrades. Worked with operators and engineers to improve reliability, increase the rate of contaminant recovery, and ensure regulatory compliance at ongoing remediation sites.

Regulatory Compliance and Closure Support – Multiple Sites

Provided regulatory compliance and closure support for on-going remediation at a New Hampshire CERCLA/Superfund site, an active rail yard, two international airports, and a former oil refinery. Ongoing remediation consisted of NAPL extraction, dual-phase extraction, persulfate and sulfate addition, and groundwater monitoring for CVOC, hydrocarbon, and BTEX releases.

MCP Project Support – Multiples Sites

Completed site investigations and Response Action Outcomes (RAOs) at three Massachusetts Contingency Plan (MCP) regulated Chlorinated Volatile Organic Compound (CVOC), hydrocarbon, and heavy metal (chromium, cadmium, and lead) sites including method 3 risk characterizations and activity and use limitations. Supported various MCP regulated site cleanups by conducting field investigations, preparing regulatory filings, and managing site data.

Railroad Environmental Compliance Services

Supported a comprehensive environmental compliance program for a public commuter railroad and a private freight railroad including hazardous waste management, storm water pollution prevention (SWPPP), spill prevention control and countermeasures (SPCC), and on site facility inspections and staff training.

Post-closure Landfill Monitoring
Performed post-closure monitoring activities for a municipal landfill, including leachate and soil vapor monitoring, landfill inspections, and compliance reporting.

Railroad Yard Drainage Improvements
Investigated and upgraded the drainage infrastructure at two facilities by conducting site reconnaissance; studying options to alleviate flooding; designing a storm water infiltration basin; and preparing design drawings and specifications for excavating sediments and cleaning drainage lines.

Renewable Energy Design Services
Provided engineering services for renewable energy installations, including the design, procurement, and installation of a 100kW wind turbine at a railroad layover and a Massachusetts Clean Energy Council feasibility study for a 600 kW wind turbine installation.