Sarah M. Kissell
Project Engineer

Education and Credentials

M.S., Environmental Engineering, Utah State University, Logan, Utah, 2017

B.S., Environmental Engineering, University of New Hampshire, Durham, New Hampshire, 2011

Continuing Education and Training

Hazardous Waste Operations and Emergency Response 40-Hour Certification (2014; refresher 2018)

Hazardous Waste Operations and Emergency Response Site Supervisor 8-Hour Certification (2016)

First Aid/CPR/AED Certified (2018)

Professional Affiliations

Women in Environment (2017)

Society of Environmental Toxicology and Chemistry (2015–2016)

The Water Research Foundation (2018)

Professional Profile

Ms. Sarah Kissell is an environmental engineer with experience in environmental remediation, environmental quality monitoring, and data analysis. Ms. Kissell primarily develops and evaluates remedial alternatives, including cost estimates for environmental remediation. Her work also consists of sampling surface water, stormwater, groundwater, and sediment to assess and mitigate environmental impacts of municipal and industrial processes and evaluate the progress of remedial actions.

Relevant Experience

Remediation

Former Wood Treating CERCLA Facility, Columbus, Mississippi—Prepared engineering cost estimates for feasibility studies for four operable units. Cost estimates compared remedial alternatives for management of contaminated soils and dense, nonaqueous-phase liquid (DNAPL) source material, such as removal, disposal, and beneficial reuse of soils, installation of a DNAPL recovery system, *in situ* stabilization, and soil cover. Prepared remedial action work plan for OU-2 removal action. The OU-2 remedial action report addresses surface soil removal of residential, private, and state-owned properties surrounding the wood treatment facility.

Sediment Remediation and Shoreline Source Control, Lower Duwamish Waterway, Seattle, Washington—Supporting completion of a Model Toxics Control Act (MTCA) RI/FS at an active slip within the Lower Duwamish Waterway, including supporting development of remedial alternative evaluation and cost estimates.

Pearl Harbor Sediment Remediation, Hawaii—Completed permit applications and assisted with design and project management tasks for remediation project addressing TSCA PCB waste associated with the U.S. Navy's planned Superfund cleanup of PCB-impacted sediments in Pearl Harbor. Activities included preparation of Federal Section 401 and Section 404 permit applications and Shoreline Setback Variance application. Supported development of budget and scope for future tasks associated with permitting, design, and implementation of source control actions to mitigate PCB sources to the harbor.

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Lower Passaic River Superfund Site, Newark, New Jersey—Developed sediment cap model for engineering feasibility study for sediment remediation in the Lower Passaic River Superfund site. Evaluated sediment cap materials and required thickness to effectively isolate and prevent migration of constituents over the lifetime of the cap.

Groundwater Remediation Support at a Chemical Distribution Facility, Santa Ana, California—Evaluating ongoing groundwater remediation by analyzing groundwater data and determining constituent removal. Also preparing semiannual groundwater monitoring and remediation reports.

Bioremediation of Trichloroethene (TCE)-Contaminated Aquifer Material, Logan and Ogden, Utah—Completed a column study to analyze the impact of different carbon substrates added during biostimulation and bioaugmentation of TCE-contaminated aquifer material. Monitored groundwater constituents to evaluate TCE removal efficiencies and changes in biogeochemistry associated with each substrate. Collected, processed, and analyzed soil, water, and gas samples from columns for constituents that affect the degradation of TCE.

Stormwater Management

Former Chemical Manufacturing Facility, Portland, Oregon—Responsible for monthly monitoring and stormwater sampling as part of stormwater source control measure to treat metals, semivolatile organic compounds, and DDx prior to discharge to the river. Preparing automated water samplers, and coordinating with onsite personnel during stormwater sampling and routine inspections. Also preparing flow calculations and composite instruction for laboratory, as well as monthly monitoring reports for submittal to the Oregon Department of Environmental Quality.

Stormwater Monitoring and Design, Steel Mill, Portland, Oregon—Collected stormwater samples to assess initial pilot treatment study of end-of-pipe chitosan-enhanced sand filtration system. Assisting with data processing and analysis to develop a hydraulic model and determine treatment efficiency.

Stormwater Management at Steel Storage Yard, Oregon—Assisting project manager with completion of a stormwater source control evaluation at a steel storage yard adjacent to the Portland Harbor Superfund site. Performed stormwater sediment sampling to assess constituent concentrations along stormwater conveyance lines. Characterizing stormwater runoff quality and quantity, addressing and eliminating stormwater run-on from neighboring industrial properties, and determining necessary source control measures to evaluate and improve stormwater management practices.

Environmental Data Collection and Assessment

San Jacinto River Waste Pits Superfund Site Phase 1 Pre-design Investigation, Channelview, Texas—Field lead for fieldwork associated with pre-design investigation at a dioxin/furan sediment Superfund site. Fieldwork included coordinating with project manager, field staff, subcontractors, and laboratories during collection of soil cores to assess environment impacts.

Soil and Groundwater Investigation, Centralia, Washington—Performing groundwater and soil sampling for the management of soil and groundwater investigations in several areas of concern at a former veneer mill. The chemicals of concern are primarily pentachlorophenol (PCP), total petroleum hydrocarbon (TPH), and lead.

Total Maximum Daily Load (TMDL) Development, Salt Lake City, Utah—Worked with the University of Utah and the Utah Department of Environmental Quality during the process of TMDL development. Studied the nutrient dynamics and diurnal patterns of Farmington Bay and the Willard Spur of the Great Salt Lake. Collected and analyzed water column and sediment samples. Analyzed data and summarized results in technical reports.

Bioavailability of PCBs and PAHs in Estuarine Sediments, Durham, New Hampshire—Used passive sampling techniques to evaluate the bioavailability of PCBs and PAHs in sediments. Performed laboratory studies to develop partitioning coefficients between PAHs or PCBs and the passive samplers. Collected and processed field samples to evaluate the remedial effectiveness of active sediment caps.

Litigation/Allocation Support

Deposition, Expert Reports on Remedial Costs and Other Damage Claims, Superior Court of Washington for King County, Confidential Clients—Supported technical expert with data analysis for evaluation of past remedial action effectiveness and defense of claims at a former industrial dry cleaning site undergoing redevelopment (*Washington Builders LLC et al v. 700 Dexter LLC et al.*, Case No. 16-2-30634-9 SEA, Superior Court of Washington for King County). Matter settled.

Publications

Kissell, S.M. 2017. Comparing the effect of carbon sources, lactate and whey, on biological reductive dechlorination of TCE in laboratory flow through columns. Thesis. Utah State University, Logan, UT.