PROFESSIONAL PROFILE

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EDUCATION
BA, Geology, Colgate University, 2008

PROFESSIONAL LICENSES
Licensed Geologist in Pennsylvania #PG005154
New Jersey Licensed Site Remediation Professional #837910

Justin Kowalkoski, PG, LSRP

Principal Hydrogeologist

EXPERIENCE SUMMARY
Fifteen years of experience in environmental science and consulting: Principal Hydrogeologist at Roux; previously Staff, Project, and Senior Hydrogeologist at Roux.

Project Principal/Project Manager for numerous state investigative and remedial projects in New Jersey (LSRP, ISRA, Spill Act, and UST projects) and Pennsylvania (Act 2, HSCA, and Storage Tank programs), as well as federal USEPA CERCLA RI/FS, RCRA RFI/CMS, and TSCA projects.

TECHNICAL SPECIALTIES
Design, implementation, and management of environmental investigation and remediation projects. Extensive experience involving fractured bedrock and unconsolidated formations; Brownfields redevelopment projects; data evaluation, interpretation, and presentation for technical projects; evaluation of the fate and transport of constituents in soil and groundwater; preparation of requests for Classification Exception Areas (CEAs) in New Jersey and Non-Use Aquifer Determinations in Pennsylvania; preparation and presentation of technical reports including Phase I's, Preliminary Assessment Reports, Site Investigations, Remedial Investigations, and Remedial Action Reports; completion and oversight of numerous vapor intrusion investigations and sampling including Risk Assessments under the Site-Specific Standard in Pennsylvania; forensic analysis of DNAPL using Compound Specific Isotope Analysis (CSIA) data; extensive experience in client and regulatory agency interface; and implementation and analysis of groundwater monitored natural attenuation projects.

REPRESENTATIVE PROJECTS
New Jersey (ISRA/SRRA/RCRA)

- Principal Hydrogeologist and LSRP for an ISRA soil and groundwater investigation and remediation project for a former glass manufacturer in Vineland, New Jersey. Metals, Polychlorinated Biphenyls (PCBs), and volatile organic compounds (VOCs) were identified in soil and groundwater at the Site as part of Remedial Investigation (RI) activities. Roux was retained to complete the Pre-Design Investigation (PDI) and subsequent Remedial Action (RA) for the Site. Current activities include completing delineation of metals, PCBs, and VOCs in soil and groundwater, evaluation of remedial alternatives, and implementation of RAs for soil and groundwater. RA is expected to include a combination of institutional (i.e., deed notice and Classification Exception Area (CEA) for soil and groundwater, respectively) and engineering controls (i.e., capping of soil). Monitored natural attenuation (MNA) is the anticipated RA for groundwater. PCBs will be remediated via preparation and implementation of a Self-Implementing Notification (SIN) in accordance with the Toxic Substances Control Act (TSCA). Remediation is anticipated to be completed in 2022.
- Principal Hydrogeologist and LSRP for a site in northern New Jersey currently in a Remedial Action Permit (RAP) for soil with engineering controls, including a cap and deed notice. Site is subject to biennial certifications, cost review, and regulatory submittals as part of the RAP-soil.
- Principal Hydrogeologist for a site with remedial investigation and remedial action activities at a former industrial facility (currently developed as a shopping center). Project Responsibilities include management and coordination of soil and groundwater remediation of chlorinated VOCs. A Remedial Investigation Report was submitted in May 2019. The Remedial Investigation included installation and sampling of bedrock and overburden monitoring wells, implementation and evaluation of an AGI passive soil gas vapor survey, completion of soil sampling/delineation, established a Classification Exception Area for

groundwater, and completed a receptor evaluation in a densely populated residential area. Soil and groundwater remedial actions were initiated in 2020 in accordance with a 2017 Remedial Action Work Plan that includes source area soil excavation and groundwater injections in overburden and fractured bedrock. The Site also includes ongoing monitoring and maintenance associated with a Soil Vapor Extraction system underneath the commercial building following identification of an Immediate Environmental Concern (IEC) for vapor intrusion.

- Principal Hydrogeologist for a site in Cinnaminson, New Jersey with remedial investigation and remedial action activities at a former industrial facility (currently vacant) managed under RCRA, ISRA (traditional oversight) and a Licensed Site Remediation Professional (LSRP). Project Responsibilities include the management and coordination of soil and groundwater investigations to delineate the extent of chlorinated VOCs; oversee remediation of Dense Non-Aqueous Phase Liquid (DNAPL); and Monitoring and Maintenance of a sub-slab depressurization system (SSDS) that was installed to address an Immediate Environmental Concern (IEC) identified at the Site due to the presence of VOCs in soil and groundwater. Investigation activities have included installation and sampling of overburden monitoring wells in multiple aquifers (Potomac-Raritan-Magothy), implementation of remedial injections and post-injection monitoring (under a Permit-By-Rule), completion of soil sampling/delineation, and a stream study for a nearby surface water body. The remedial investigation remains ongoing and remediation activities (injections) began in 2015.
- Principal Hydrogeologist for a site with remedial investigation and remedial action activities at an active industrial facility. Project Responsibilities include management and coordination of soil and groundwater remediation of metals, pH, geochemical parameters, semi-volatile organic compounds (SVOCs), and chlorinated volatile organic compounds (VOCs). A Remedial Investigation Report was submitted in May 2019. The Remedial Investigation included installation and sampling of bedrock and overburden monitoring wells, completion of soil sampling/delineation, completion of pre-design investigation work, and evaluation of remedial options for soil and groundwater. An off-Site source investigation was completed to demonstrate an off-Site source of 1,4-dioxane in groundwater. The investigation included completion of a Preliminary Assessment (PA) and issuance of a Response Action Outcome (RAO) for 1,4-dioxane in groundwater. Soil and groundwater remedial actions will begin in 2020 for individual Areas of Concern (AOCs) in accordance with existing and future Remedial Action Work Plans. Remediation will include several large-scale excavations, storm water design and relocation, background investigation, compliance averaging, and Monitored Natural Attenuation (MNA) of groundwater. Previous remediation activities were completed in 2017 and included the excavation of shallow soils and electrical resistance heating (ERH) to address contaminant mass in soil and dissolved-phase CVOCs in groundwater.
- Principal Hydrogeologist for as ISRA/Brownfields redevelopment project. Primary responsibilities have included management and coordination of the remediation of soil impacted with Polychlorinated Biphenyls (PCBs). Activities have included coordinating site characterization/delineation of PCBs in soil, preparation of Self-Implementing Notifications for USEPA review and approval, and implementation of remedial actions for soil impacted with PCBs. Remedial actions have included excavation and off-Site disposal, relocation within the Site, and capping. Currently pursuing a risk-based cleanup approach for one AOC to significantly reduce costs and retain future redevelopment use as high-occupancy and reduce costs associated with disposal.
- Project Manager and Senior Hydrogeologist for a site with remedial investigation and remedial action activities at a dry-cleaner managed under a Licensed Site Remediation Professional (LSRP). Project Responsibilities included the management and coordination of soil and groundwater investigations to delineate the extent of chlorinated VOCs. Investigation activities have included installation and sampling of overburden and bedrock monitoring wells, completion of soil sampling/delineation, and evaluation of potentially commingled plumes. The remedial investigation remains ongoing.
- Project Manager and Senior Hydrogeologist for a site with remedial investigation and remedial action activities at a former industrial facility (vacant) managed under RCRA with limited NJDEP oversight. Project Responsibilities included the management and coordination of sediment, surface water, soil, and groundwater investigations to delineate the extent of several constituents of concern (COCs), including Volatile Organic Compounds (VOCs), semi-volatile organic compounds (SVOCs), and metals (plus hexavalent chromium). Investigation activities have included installation and sampling of overburden monitoring wells in multiple aquifers, sediment and surface water sampling, installation of test pits, soil sampling/delineation, and a preliminary ecological evaluation for the property. The remedial investigation remains ongoing.

Pennsylvania (Act 2/HSCA)

- Principal Hydrogeologist for a soil and groundwater characterization and remedial investigation and remediation project at an active stainless-steel tubing manufacturing facility located in northeastern Pennsylvania (site is managed under Special Projects in the Environmental Cleanup Program). The

investigation is focused on the vertical and horizontal delineation of chlorinated solvents in overburden and bedrock. Investigation activities have included a combination of "traditional" sampling and innovative techniques resulting in cost savings for the client. Current activities include ongoing monitoring of CVOCs in groundwater through passive diffusion bag (PDB) sampling on a quarterly basis and associated reporting. Previous remediation activities were completed in 2012 and included the excavation of shallow soils and electrical resistance heating (ERH) to address contaminant mass sorbed in the rock matrix and dissolved-phase DNAPL in groundwater.

- Project Manager and Senior Hydrogeologist for a soil and groundwater characterization, remedial investigation, and feasibility study of a former stainless-steel tubing manufacturing facility located in Southeastern Pennsylvania (site is managed under HSCA by the Environmental Cleanup Program and must attain Act 2 compliance). Project responsibilities have included the coordination and management of the vertical and horizontal delineation of chlorinated solvents in soil as well as overburden and bedrock groundwater. Investigation activities have included the installation of shallow overburden and deep nested bedrock monitoring wells. Monitoring wells have been installed using sonic drilling techniques to reduce the amount of investigative derived waste (IDW) generated, which resulted in overall cost savings for the client. Additional activities included a vapor intrusion (VI) cumulative risk assessment for surrounding residential and non-residential properties, a stream study of nearby surface water, on-site soil delineation, groundwater sampling, forensic analysis of DNAPL and dissolved-phase CVOCs via Compound Specific Isotope Analysis (CSIA), fate and transport groundwater modeling, handling and disposal of hazardous IDW, and soil gas sampling. Activities were summarized in a comprehensive remedial investigation report (RIR) covering an investigation period of over 30 years. Supplemental investigation activities were conducted between 2015 and 2019. A supplemental RIR and a Feasibility Study (FS) were both completed in 2019 and the final RIR and FS were submitted in 2021.
- Project Manager and Senior Hydrogeologist for a large UST closure project at a former manufacturing facility in Philadelphia, Pennsylvania. Due to the presence of regulated and unregulated USTs, the PADEP requested the site be entered into the Storage Tank Program rather than the Act 2 program. However, all Act 2 guidance was followed to work toward case closure. USTs were closed at four areas of the site and at one currently operating, multi-UST area. LNAPL associated with a waste oil/waste solvent UST was the primary area of concern prompting LNAPL recovery activities and ground-water monitoring. Fate and transport modeling was conducted to support a request for a non-use aquifer (NUA) determination. Also conducted a vapor intrusion cumulative risk assessment for the Site. The successful application for NUA and site-specific standards for this project substantially reduced remediation efforts and costs. The site was successfully closed under Act 2.
- Project Manager and Senior Hydrogeologist for an Act 2 soil and groundwater remediation project at a Southeastern Pennsylvania rail yard. Constituents of concern (COCs) included free-phase light non-aqueous phase liquid (LNAPL) and volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), and metals in soil and groundwater. Groundwater results and fate and transport modeling conducted by Roux Associates showed that ongoing monitoring (no active remediation) of groundwater was sufficient to demonstrate attainment of Act 2 standards. Releases of Liability for soils and groundwater were received for the site from the PADEP. LNAPL recovery pilot tests were conducted and, based on the pilot test results, an LNAPL remediation plan was prepared. This plan consisted of using high-vacuum, hot-spot LNAPL recovery on a periodic basis, followed by both manual recovery/bailing and a belt skimmer. Once all wells that originally contained LNAPL met the PADEP-approved LNAPL recovery endpoint criteria, a request to terminate remediation monitoring was approved by PADEP and the site was closed.
- Project Manager and Senior Hydrogeologist for an Act 2 soil and groundwater remediation project at a former manufacturing facility that included a lead smelter in southeastern Pennsylvania. Investigation activities were conducted in preparation for redevelopment of the site as a residential condominium. Constituents of concern (COCs) included volatile organic compounds (VOCs) and metals in soil and groundwater. Remediation of lead-impacted soil included source excavation and off-site disposal. Subsequent groundwater monitoring demonstrated attainment of Statewide Health Standards and Releases of Liability for soils and groundwater were received for the site from the PADEP.

PROFESSIONAL TRAININGS

OSHA 40-Hour/HAZWOPER Health and Safety Training