DAVID S. COYNE, M.S., QEP
Principal, Chief Operations Officer

PROFESSIONAL PROFILE

Qualifications Summary

- *Over 32 years of experience in environmental management consulting for land development, private industry, and government.*
- *Managed multi-phase environmental investigations, remedial programs, and monitoring programs for various industrial/commercial clients at over 100 facilities throughout the eastern U.S. and the Caribbean*
- *Managed over 1,000 real estate due diligence and advisory projects for private industrial, commercial and residential developers*
- *Designed and managed water resources projects including stormwater management, sewer planning, wastewater disposal feasibility, open-channel flow and dam breach modeling projects at sites throughout Pennsylvania*
- *Performed ongoing environmental compliance and permitting services for stormwater, industrial pretreatment, wastewater, and contingency planning for industrial clients throughout the eastern United States*
- *Committee Member of ASTM E50 for development of Phase I ESA Standard E1527-13 and related environmental assessment standard practices*
- *Provided expert witness and litigation support services to counsel for contaminant issues associated with land development.*

Fields of Competence

Mr. Coyne has over thirty-two years of managerial and technical project experience in the performance of groundwater and soil assessments, investigations, and remedial programs, as well as water resources and surface water studies for industrial and commercial clients throughout the eastern United States and the Caribbean. Mr. Coyne's professional area of expertise is in real estate environmental advisory services, including complex due diligence evaluations and environmental decision making for industrial or commercial property transactions. Mr. Coyne also has advanced academic and professional experience in water resources engineering, stormwater management, surface water and watershed modeling systems, dam breach flow analyses, and urban stormwater design. He has also authored magazine articles and short publications related to the application of transactional due diligence within the real estate market, emerging regulatory trends and standards development, and the key elements of successful stormwater management for land development projects.

Mr. Coyne is an Adjunct Professor in Villanova University's Department of Geography and The Environment. Mr. Coyne is also the Creator, Host and Writer of the *Environmental Experts Radio* Podcast, and has been a contributor to The Zweig Letter, authoring articles on technical and business operations within the architecture, engineering and construction (AEC) industry. Mr. Coyne is also a contributor to *Hidden City Philadelphia*, authoring stories of lesser-known landmarks significant to the history of the City of Philadelphia.

Credentials

Institute of Professional Environmental Practice (IPEP) Qualified Environmental Professional (QEP)

M.S. Water Resources and Environmental Engineering, Villanova University (2000)

Post-Graduate Certificate, Urban Water Resource Design, Villanova University (2001)

B.A. Earth/Environmental Science, Boston University (1992)

Training and Associations

American Society for Testing and Materials (ASTM) Member, Committee E50 (Environmental Assessments)

Associate Member, American Society of Civil Engineers (ASCE)

Former Board Member, Schuylkill River Greenway Association (SRGA)

OSHA 40-Hour Hazwoper and Worker Supervisory Training

Media

Creator, Host and Writer, *Environmental Experts Radio* Podcast 2018-Present

Writer, *The Zweig Letter* 2017-2020 (www.zweiggroup.com)

Contributing Writer, *Hidden City Philadelphia* (www.hiddencityphila.org)

Key Projects

Real Estate and Transactional Due Diligence

Key client manager and project leader for environmental consulting, advisory and due diligence services for several major eastern US lending institutions, commercial and residential developers, investment trusts, and civil engineering firms. Services include ESAs and other due diligence assessments, soil and groundwater investigations, specialized technical or regulatory reviews, land development feasibility studies, and other advisory services real estate decision making. Performed or managed over 1,000 Phase I assessments, real estate transaction screens, and preliminary assessments at commercial, residential, and industrial facilities, and development tracts throughout the eastern United States.

Hospital Complex Portfolios, Philadelphia, Pennsylvania*:* Managed and supervised the comprehensive environmental assessment process for two separate health care system acquisitions spanning two years, which involved a total of 12 hospital complexes and 35 separate professional health care properties. Subsequent to the environmental assessment tasks, evaluations of site impacts and potential exposure pathways were performed through targeted site investigations. The findings of Liberty's studies were incorporated into a schedule of environmental conditions within an asset purchase agreement totaling over e acquisition agreements, which involved over $100 million in asset transfers.

Former Industrial Protective Wear Manufacturer, Warrington, Pennsylvania: Designed and executed a comprehensive soil and groundwater investigation at the subject property on behalf of a prospective purchaser, to further evaluate a potential on-site source of chlorinated solvent impacts. The work uncovered a previously unidentified on-site source of groundwater impact and a complex soil-to-groundwater transport mechanism below the site. These observations resulted in the seller's agreement to remediate the site to Act 2 Standards as part of the purchase agreement.

Motel Complex, West Reading, Pennsylvania: Managed and performed due diligence ESA and Phase II site investigations at a motel complex slated for redevelopment by the County of Berks. Work included evaluation of options for the demolition of existing structures, asbestos-containing materials management, waste materials characterization and placement of on-site fill material. Outcomes of the project also included considerations of remedial options under Pennsylvania's Act 2 (Land Recycling Program) for various site re-use options.

Mushroom Production Facilities, Temple, Pennsylvania: Managed and performed environmental site assessments and subsequent site investigation activities at seven mushroom production facilities on behalf of a prospective purchaser of the site. The tasks included the removal of several USTs and

associated subsurface assessments, as well as investigative tasks. The findings of the assessments were used to develop various remedial strategies and associated cost estimates.

Former Vacuum Pump Manufacturing Complex, City of Philadelphia, Pennsylvania: Performed a comprehensive series of due diligence evaluations at a vacant, 200,000-square foot former vacuum pump manufacturing complex on behalf of a prospective purchaser, which planned the site for re-use as an industrial assembly facility. The evaluations included standard ASTM-defined Phase I ESA tasks, as well as additional planning and evaluation activities including Act 2 planning and remedial scope reviews.

Farm Dump Investigation and Removal, Coopersburg, Pennsylvania: Planned, coordinated and executed studies of a 600-ton (250-cubic yard) dump site in an abandoned quarry pit at a farm tract proposed for residential development. The investigation of the dump included the evaluation of naturally-occurring, elevated arsenic concentrations in weathered bedrock. The project culminated in the excavation and removal of the deposited debris, which included coordination with DEP and permitted disposal facilities, segregation of materials, and proper disposal of three separate waste steams.

Bank Branch Acquisitions, 84 Sites, Pennsylvania and New Jersey: Managed a series of due diligence assessments and follow-up site investigations at a set of bank properties in ten Pennsylvania and New Jersey counties surrounding Philadelphia. The properties were evaluated on behalf of a prospective purchaser of the sites as a single portfolio, resulting from the merger of two large Eastern US lending institutions. Additional due diligence evaluations subsequent to the initial assessments included asbestos surveys and soil and groundwater investigations.

Planned Golf Course and Residential Development, Lederach, Pennsylvania: Managed due diligence site assessments and site investigation activities for a set of five agricultural parcels totaling approximately 500 acres, which were planned for a golf course and residential development complex. Project tasks included Phase I environmental site assessments with subsequent ESA and parcel add-on assessments as well as soil and groundwater investigations at identified potential areas of concern, including agricultural chemicals application, farm dumps, and underground storage tanks (USTs).

Industrial Waste Landfill, Quakertown, Pennsylvania: Performed a Phase I environmental site assessment that resulted in the identification of a previously-unidentified, large-volume industrial waste landfill within a wooded area on an active farm property. The operation had been suspected and searched for by EPA and DEP officials based on anecdotal evidence in prior years but had not been previously located or investigated. The assessment was performed on behalf of a prospective purchaser, which used the newly discovered information to exercise its termination clause in the agreement of sale. Subsequent studies by the EPA have resulted in the designation of this facility as a National Priority List (NPL) site.

Agricultural Soils Evaluations, Various Counties, Pennsylvania: Designed and performed a cost-effective screening evaluation for the presence of residual concentrations of agricultural chemicals in shallow soils at farm and orchard tracts in several Pennsylvania counties, including Chester, Bucks, Montgomery, Berks, Lancaster, Lehigh, Northampton, Schuylkill, Franklin, and York. The investigations were performed in conjunction with other real estate due diligence activities at farm

tracts planned for residential development. At certain sites, the screening investigations were followed by comprehensive, vertical delineations of specific agricultural contaminants (arsenic, lead, and specific organochlorine pesticides and chlorinated herbicide compounds).

Former Glass Manufacturing Complex, Glassboro, New Jersey: Managed and completed a comprehensive Phase I assessment for a large former glass manufacturing complex undergoing planned industrial redevelopment. Performed additional assessment services pertaining to former and ongoing remedial activities as part of New Jersey's ISRA program requirements.

Development-Phase or Industrial Compliance and Permitting

Wetlands and Stream Mitigation Area Monitoring, Berks Park 78 Project, Bethel Township, Berks County, Pennsylvania: Liberty was retained to perform the mitigation area monitoring tasks for compensatory wetland and stream mitigation tasks required as part of the approved DEP/USACE Joint Permit at the Berks Park 78 development tract. The compensatory and mitigation activities included the restoration of previously-drained wetlands and reconstruction of stream channels had been impounded by farm ponds. Liberty supervised and monitored the mitigation activities during the entire period of construction, and remains responsible for monitoring and DEP/USACE reporting of the mitigation conditions on a semiannual and annual basis. The scope of work has also included the completion of a post-construction as-built report, regular agency correspondence and project updates to DEP and USACE on behalf of the project's general contractor and the county's Industrial Development Authority.

Automobile Manufacturer, Spring Hill, Tennessee: Conducted studies, regulatory reviews, calculations and reports as part of a Combined Wastestream Formula (CWF) Technical Reporting Package at a major automobile manufacturing and assembly plant. The project included the determination of the regulatory applicability for various process-related wastestreams, and the categorical limits defined by 40 CFR Parts 431 though 438. New effluent limits for several permitted wastestreams were established as a result of the CWF calculations.

Office Products Manufacturing Facilities, Southern and Eastern U.S: Reviewed and evaluated environmental management and compliance data for a chain of seven manufacturing facilities located in the southern and eastern United States (Kentucky, Texas, South Carolina, North Carolina and Oklahoma). Reviews included auditing of each facility's complete environmental management systems, record-keeping practices, permit conditions, and compliance status. The audit was used in concert with a series of environmental due diligence projects for the facilities prior to a divestment of assets that included the manufacturing facilities.

Electronics and Precision Machine Manufacturing Facility, Allentown, Pennsylvania: Responsible for industrial wastewater permitting and compliance services for a manufacturer of precision mail sorting machines for four years as an ongoing project. Compliance services have included reviewed and coordination of sanitary sewer pretreatment permit documents, preparation of Spill Prevention and Control Plans and Toxics Management Plans, and other related services (client representation and advocacy) as part of Borough and State industrial permit compliance efforts.

Metal Products Manufacturer, West Chester, Pennsylvania: Responsible for a series of annual industrial compliance auditing and permitting tasks as part of federal and state reporting requirements.

Project tasks include stormwater management, sampling, reporting and permit inspections, and waste generation and materials inventory reporting tasks. Responsibilities have also included ongoing consultative auditing and general industrial permitting oversight.

Multiple Industrial Facilities, Eastern U.S.: Performed environmental compliance audits in concert with Environmental Site Assessments for due diligence purposes at more than 50 industrial facilities throughout the mid-Atlantic and northeastern U.S. Projects typically included a review and evaluation of facility permitting programs; internal environmental management (i.e. communication and training) systems; waste generation, tracking and removal systems; and specific reporting practices as they apply to local, state and federal regulatory requirements for each facility.

Site Investigation and Remediation

Performed comprehensive investigative and remedial services, including Pennsylvania Act 2 and New Jersey ISRA programs, at industrial and commercial properties throughout the Mid-Atlantic region. These included over 150 site investigations and cleanups at sites in connection with property transaction assessments, remedial investigations, and baseline/preliminary assessments throughout the northeastern United States, Puerto Rico, and the U.S. Virgin Islands. Managed multi-phase remedial programs and monitoring programs for a large-scale petrochemical contract involving over 50 facilities in the mid-Atlantic U.S. region.

Gasoline Station and Convenience Market, City of Reading, Pennsylvania: Designed and constructed a high-vacuum, high-volume soil vapor extraction (SVE) system at an active gasoline station with gasoline impacts affecting soils within the unsaturated zone. The treatment system was designed to remediate soils within two discrete zones of impact (shallow and deep), with design elements which allowed for isolated treatment both vertically and horizontally within each zone. The system construction included the required permitting, zoning approvals, electrical and other infrastructure improvements.

PennDOT Bridge Cleanup Site, Upper Saucon Township, Lehigh County, Pennsylvania: As a PennDOT Qualified Consultant and Team Member for a District 5 Services Agreement, prepared a set of specifications for the characterization, removal and off-site disposal of two primary waste streams at an accident site on I-78 that had caused structural damage to a bridge overpass. Project work included detailed guidance for management of diesel fuel-impacted solid wastes and pressure cleaning washwaters in accordance with PennDOT guidance, DEP Waste Management Regulations, and other applicable statues and policies. Liberty's specifications were used to plan and guide repair work performed at the site in July 2015.

Wire Manufacturing Facilities, Plainfield and Piscataway, New Jersey: Conducted Preliminary Assessments (PAs) and Site Investigations (SIs) at two active wire plating facilities as part of planned facility closures, in accordance with New Jersey ISRA program requirements. Projects included identification of areas of concern, subsequent site investigation of potential subsurface chemical impacts, and PA/SI reporting under ISRA.

Former Scrap Metal Recycling Yard, Trenton, New Jersey: Conducted a comprehensive Remedial Investigation and Remedial Action at a former recycling yard planned for redevelopment, under the New Jersey Voluntary Cleanup Program. Project activities included delineation of metals and volatile

organics impact to soils, as well as excavation of areas of impacted material, subsurface piping, and buried demolition debris. Project resulted in the determination of "No Further Action" from the NJDEP, which allowed for the sale of the property.

UST/AST System Projects, Multiple Sites: Managed more than 25 underground and aboveground storage tank (UST and AST) system removal projects, including regulatory compliance monitoring and reporting.

Chlorinated Solvent Impact Site, West Springfield, Massachusetts: Managed remedial system design, construction and operation at a former dry cleaning facility where chlorinated solvent impact to groundwater had occurred. System components included soil vapor extraction of chlorinated solvents in soil and groundwater resulting from prior dry cleaning operations. Also, performed remedial system operations and upgrades, installed deep bedrock wells for expanded groundwater delineation, and provided oversight of indoor air monitoring of nearby structures and risk-based attenuation estimation.

Multiple Development Tracts, Chester, Bucks, Berks and Montgomery Counties, PA: Performed and managed several test pit and soil boring investigations of potential or suspected areas of waste deposition, hydrocarbon impact, chemical storage, and other potential issues of concern at multiple planned development sites. Performed services as part of additional investigation requirements stemming from prior initial Phase I assessments.

Former Aggregate Processing Site, Fort Washington, Pennsylvania: Managed a Pennsylvania Land Recycling Program (Act 2) project for a former industrial site planned for multi-use redevelopment as a regional rail parking facility and commercial complex. The project included the oversight of UST system removals and impact investigations, impacted soil removals, comprehensive soil and groundwater site investigations, and demonstration of attainment under regulatory program guidelines. Project work resulted in the receipt of an Act 2 Release of Liability for the site.

Former Service Station/Retail Gasoline Facility and Adjacent Properties, St. Thomas, U.S. Virgin Islands: Planned and conducted multiple phases of field investigation activities for potentially responsible parties (PRPs) associated with an EPA-mandated regional aquifer investigation involving chlorinated solvent impact to groundwater. Performed bedrock coring and well installation, aquifer testing, comprehensive groundwater monitoring program, UST system removals, and remedial design.

Airport Bulk Fuel Terminal, San Juan, Puerto Rico: Planned and conducted field soil and groundwater impact investigation activities as part of a multi-phase investigation associated with hydrocarbon impact. Installed temporary soil and groundwater monitoring points, and performed soil sampling, field screening, and well-point aquifer testing.

Chemical Manufacturing Lagoon Site, Ambler, Pennsylvania: Managed and conducted a soil and groundwater assessment on a site associated with suspected chemical impact from an adjacent pesticide/herbicide manufacturing plant. Identified potential impact pathways and issues of concern, and conducted a comprehensive soil investigation with analysis for multiple chemical parameters, identified and installed groundwater monitoring wells, and coordinated and communicated with local community organizations.

Former Railcar Manufacturing Complex, Wilmington, Delaware: Managed and completed a comprehensive soil and groundwater investigation and remediation project at a former railcar manufacturing facility located within a waterfront industrial area. Scope of work included expanded Phase I assessments, a comprehensive Phase II soil and groundwater investigation, and subsequent removal of hydrocarbon-impacted soils from the site.

Former Commercial Dairy and Farm Complex, Montgomeryville, PA: Managed and completed a multiple-phase assessment and remedial project at a 180-acre former dairy farm complex planned for commercial and residential development. Performed multiple stages of assessment reporting for lending purposes, identified areas of concern, oversaw removal of UST systems and subsequent soil remediation, groundwater well installation, soil bioremediation, and the removal of a 2,000-cubic yard farm dump.

Stormwater Design and Surface Water Modeling

Golf Course Reservoir, Upper Dublin, Pennsylvania: Conducted an evaluation of the flood flow in the event of a theoretical failure of a 5-acre reservoir located on a golf course, directly upstream of several dozen new residences. The project was completed as part of a hazard evaluation on behalf of the Upper Dublin Township and the PADEP, and involved the modeling of various breach scenarios and the downstream flow effects using numerical and computational methods, including the HEC-1 and HEC-RAS models. The results were presented to the PADEP and used to develop a plan for the removal of the reservoir through a controlled breach and streambank reconstruction.

Scouting Camp Dam Site, Pike County, PA: Conducted a Hazard Potential Evaluation on a 20-acre dammed lake. The project was conducted as part of the structures' permitting requirements under the PADEP Division of Dam Safety, on behalf of a large private institutional owner. The project included the delineation of the drainage area and the development of unit hydrographs to estimate typical and theoretical maximum precipitation inputs to the lake. Development of the watershed hydrological parameters included the use of the HEC-HMS modeling package. Using a series of precipitation events, theoretical breach scenarios were also modeled using the HEC-1 computational model to determine the downstream flooding effects of a dam break or overtopping under a range of conditions. The results were used to plan future dam improvements and management plans under the permitting program requirements.

Stormwater Infiltration Evaluations, Various Counties, Pennsylvania: Designed and managed in-situ, quantitative field testing for stormwater infiltration rates at commercial and residential development tracts in several Pennsylvania counties, including Chester, Montgomery, Berks, Schuylkill, and Delaware. Projects consisted of the measurement of vertical permeability at the location and depth of planned stormwater management features such as infiltration basins and subsurface seepage beds. Testing was performed in accordance with DEP's Stormwater Best Management Practices (BMP) Manual, and were incorporated into stormwater management designs for each facility.

Vacant Farm Tracts, Chester and Bucks Counties, Pennsylvania: Designed and managed field evaluations of soil suitability for wastewater application at several farm tracts in Chester and Bucks counties, planned for residential development. Project work included on-site field screening for general soil suitability, limiting zones, bedrock depth, and water table conditions. Testing was

performed in accordance with DEP's Chapter 73 requirements for on-lot sewage systems, and the results of the evaluations were included in the due diligence planning for sewerage feasibility at each site.

Materials Recycling Facility, Hamburg, Pennsylvania: Managed a sewer connection feasibility evaluation and preliminary design project for a recycling client as part of a plan to phase out an on-site sanitary septic system and to eliminate the need for containerization and off-site disposal of collected wash waters. Project tasks include the evaluation of various public sewer tie-in configurations and associated costs, regulatory reviews and local municipal authority coordination, and the development of preliminary designs for on-site pretreatment and lateral tie-ins with existing infrastructure.

Expert Witness and Litigation Support

Gasoline Impacts, Residential Development Tract, St. Louis County, Missouri: Provided Expert Witness review, evaluation, summary letters and pre-trial testimony on behalf of plaintiff's counsel for a matter involving the discovery of gasoline-contaminated soil at a residential development tract during construction. Work involved evaluation of environmental site assessment procedures and adherence to current industry standards (ASTM Standard Practice E1527-13), and discussions of likely contaminant sources, in support of mediation and/or trial in late 2019.

Arsenic Impacts, Former Commercial Greenhouse, Chester County, Pennsylvania: Performed site characterizations and subsequent litigation support in the form of expert services on behalf of plaintiff and counsel for a matter involving arsenic impacts at a former commercial greenhouse planned for residential development. Work involved reviews of prior environmental investigations, analysis of arsenic impact patterns, evaluation of remedial alternatives and associated costs in preparation for trial action in late 2019.

Publications and Presentations

Media Productions, 2018-2021:

Environmental Experts Radio Podcast (Creator, Host and Writer)
Media Outlets: Apple Podcasts, Spotify, iHeartRadio, Himalaya, All Podcast Aggregator Applications
Libsyn URL: *https://environmentalexpertsradio.libsyn.com*

Web and Printed Publications, 1999-2021:

- Catalyst Magazine, Spring 2015; One Size Doesn't Fit All: Evaluating Alternate Forms of Environmental Due Diligence

Web Articles for Liberty Environmental, Inc. (www.libertyenviro.com):

- Information Overload! Why the Definition of 'Reasonably Ascertainable' is Changing Rapidly in Due Diligence
- Do You Like a Good Story? Tackling the Unknowns in Environmental Assessments
- Digging Up The Past: What Truly Defines a Historical Recognized Environmental Condition?
- Running the Environmental Gauntlet: Can Your Site Emerge from the Government-Guaranteed Lending Review Process?
- Recent City of Philadelphia Contractor Safety Requirements: Can They Affect Environmental Projects?

- The Value of Going It Alone in Assessment Reconnaissance
- Sizing Up The Impacts: Pennsylvania's New Aquatic Resource Compensation Protocol
- Sources of Public Funds for Environmental Assessments and Cleanups
- Environmental Insurance Products vs. Traditional, Professional Due Diligence
- Waste Management Issues and Phase I ESAs
- Phase I Updates As Valuable but Inexpensive Refinancing Tools
- Addressing Agricultural Chemicals in Property Assessments

Web Articles for The Zweig Letter (www.zweiggroup.com):

- February 2019, 'The Business of Burgers: Lessons The AEC Industry Can Learn from Fast Food'
- May 2019, 'Growing Apart Together: How the Future AEC Workspace will be Flexible, but More Connected Than Ever'
- October 2019, 'The Delicate Art of Managing Expectations'

Web Articles in Hidden City Philadelphia (www.hiddencityphila.org):

- January 2018, 'The Vanishing of Northeast Village'
- May 2018, 'Take Me Up to the Ballgame: Rediscovering the Bleacher Houses of North 20th Street'

Courses, Presentations and Lectures, 2016-2023

- *Applied Environmental Science*, Villanova University Department of Geography and The Environment Course GEV 4350-8003; Course Creator and Adjunct Professor; Fall 2022-Present
- *Environmental Project Management*, Villanova University Department of Geography and The Environment Course GEV 4350-7250; Course Creator and Adjunct Professor; Spring 2023-Present
- *Introduction to Environmental Sustainability Studies*, Villanova University Department of Geography and The Environment Course GEV 3001; Adjunct Professor; Fall 2021-Spring 2022
- *PFAS: The History and Environmental Impacts of an Emerging Contaminant Class*; Villanova University Department of Geography and the Environment Colloquium Series, Villanova University, June 2021
- *Integrated Environmental Planning for the New Decade,* Pennsylvania Association of Environmental Professionals (PAEP) 2020 Annual Conference, October 2020
- *Changes in Environmental Assessment for Pennsylvania Chapter 105 Waterways Permitting*, Pennsylvania Association of Environmental Professionals (PAEP) 2018 Annual Conference
- *The Science of Stormwater*, Stormwater Management 2016, American Institute of Architects (AIA) Continuing Education System (CES) Seminar
- *Technical and Professional Writing*, Guest Lecture, Penn State Berks Professional Writing Program 2017-2018
- *Selling in a Knowledge Economy*, Guest Lecture, Drexel University 2016-2017