Kieran J. Purcell, P.E.
Director, Environmental Practice

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Background

Mr. Kieran Purcell is an environmental engineer with extensive experience in the environmental industry. Upon graduating, Mr. Purcell went to work as an engineering assistant and was involved in the remediation of marine oil spills. While with Rimkus, Mr. Purcell has evaluated hundreds of contaminated properties, including manufactured gas plants, refineries, superfund sites, and commercial/industrial spill sites (i.e., service stations, pipeline releases, rail yards, dry cleaners, landfills, etc.).

Mr. Purcell has conducted sampling investigations and laboratory testing, delineated the extent of affected media, specified and designed remedial systems, and evaluated the feasibility of performing alternative remedial strategies, including long-term economic evaluations. He has also provided consulting services to determine cause and origin of property contamination to identify potentially responsible parties (PRPs), to determine pollutant timing (soil and groundwater), and to evaluate Natural Resource Damages (NRD).

In addition to Mr. Purcell's technical experience, he is knowledgeable in federal and state regulations and is proficient with various software packages, including spreadsheets, databases, and groundwater plume modeling. More recently, Mr. Purcell has been involved in the development of an allocation cost model for complex environmental sites.

Professional Engagements

- **Environmental**
  - Environmental Site Assessments and Investigations – Performed Phase I property assessments in accordance with ASTM Standard 1527 for various impacted and potentially impacted sites as part of property transfer transactions. Performed sampling analysis subsequent to Phase I investigations to determine whether recognized environmental conditions exist on the property.
  - Facility Registration and Permitting – Performed registration and permitting for a large university system in Texas, including annual waste reporting, pollution prevention and waste minimization plans, and permit modification (i.e., TCEQ, PI-7) reports.
  - Plant Decommissioning – Performed a decommissioning assessment of a former 300,000-square-foot semiconductor facility prior to property turnover. Assessment included comprehensive chemical inventorying and sampling of air, water, waste streams, and soil throughout the entire complex.

- **Technical Claims Management**
  - Provided clients with full technical services to manage environmental claims across the U.S. and Canada for sites, including dry cleaners, landfills, mining, utilities, refineries, automotive and service stations, railyards, etc. Services included: preparation of an initial technical assessment report to provide preliminary site information to assist in making coverage determinations; site cost estimating to assist with setting reserves; technical review/analysis of the consultants' investigation and remediation proposals, workplans, and reports for efficacy and cost effectiveness; and analysis of the submitted invoices to scope and project budgeting, throughout the claim handling and regulatory process.
  - Emergency Spill Response - Provided consulting services to clients for cases involving chemical releases at facilities, and during transport (highway, rail, maritime, pipeline). Services include directing the chosen response alternative, regulatory coordination, release cause/timing determinations, project budgeting, and analysis of the submitted invoices throughout the response process.

- **Storage Tank Assessments**
  - Performed failure analysis investigations of fueling station and bulk storage facilities, including assessment of system design, release volume calculations, regulatory compliance, inventory control measures, operator training, facility maintenance, and transport/delivery procedures.
  - Performed failure analysis investigations of heating oil systems for both residential and commercial properties. Investigations include an assessment of system design, regulatory compliance, and transport/delivery procedures.
  - Provided management services for tank warranty claims associated with storage tank failures. Services include observations and documentation of the failure location and reporting.

- **Oil and Gas Production and Pipeline**
  - Provided consulting services for property damages associated with oil field operations, including legacy oil field sites and hydraulic fracturing.
  - Provided consulting services for property damages and associated contamination in relation to pipeline releases. Engagements have included historical environmental awareness research, contaminant timing/arrival, and release/source determinations.

- **Water Well Assessments**
  - Performed failure analysis investigations of commercial and residential water well systems. Investigations have included sampling for water quality, in-hole video integrity assessments, evaluation of drilling logs, well system design evaluation, impacts from nearby activities (i.e., quarrying), etc. on the well system.

- **Environmental Cost Modelling**
  - Developed a linear model to determine the expected cost for cleanup for manufactured gas plant (MGP) sites based entirely on available facility site plans. The evaluation included a detailed assessment of impacted media (soil and groundwater) from site structures and features at known contaminated MGP sites. The obtained data was then applied to facilities where investigation and cleanup activities had not been conducted, to estimate the expected extent of impacted media. A determination of the most likely cleanup alternative was then identified for the site. Site cleanup costs were generated based on the expected volume of impacted media using cost data obtained from known contaminated sites or costs from cost data obtained from the RS Means Construction Costs database. Long-term discounting of costs (Net Present Value- NPV) was applied based on expected investigation and remedial scheduling.

- Developed a linear model to determine the expected site investigation and cleanup costs for complex environmental sites (i.e., Mega Sediment sites) based on limited site data. Costs are generated based on several site variables which may include operational period, facility/operational area, distance to sensitive receptors (i.e., surface water body, drinking water wells), and chemicals of concern (COCs). Sensitivity analysis is performed on the generated variables to adjust the analysis as more confirming data is available. The analysis is capable of determining expected onsite costs, offsite costs, and potential Natural Resource Damages (NRD).

- **On-Site Sewage Facilities**
  - Designed and registered residential and commercial sewage treatment systems. Perform investigations and evaluations to determine the cause of system failure.

- **Indoor Air Quality (IAQ) and Damage Assessments**
  - Performed mold and bacteria investigations for commercial buildings and residential homes, including visual inspection, sampling, IAQ assessments (carbon monoxide, temperature, humidity, ozone, etc.), moisture and thermal imaging surveys, and development of remedial protocols.
  - Conducted investigations for presence of various chemicals (e.g., volatile organic compounds) and biological constituents (e.g., Legionella) in both industrial and residential settings.
  - Smoke, soot, and/or ash sampling and assessments of commercial and residential properties and vehicles impacted by wildfires, fires, and explosions.

Professional Experience

- **Rimkus** **1995 – Present**
  - Director, Environmental Practice
    Director for Environmental and Health Services practices. Provides project management and consulting services for properties affected by releases of hazardous waste or toxic substances. Determines the cause, origin, and timing of hazardous releases to the environment. Evaluates the response and remediation at sites where soil, groundwater, and surface water bodies have been impacted by various industry contaminants, including petroleum hydrocarbons (BTEX, MTBE), chlorinated solvents (PCE, TCE), metals, herbicides, pesticides, PCBs, etc. Provides regulatory compliance reporting for industrial facilities, including Pollution Prevention and Annual Waste Reporting.

  - Principal Consultant
    Provided environmental engineering services for cases involving a release of a hazardous waste or toxic substance. Performed sampling of affected media (soil and groundwater), evaluated laboratory data, determined site remedial strategies and alternatives, performed remediation economic evaluations, and analyzed contractor expenditures for appropriateness.

  - Environmental Manager - Austin
    Managed a team of industrial hygienists and engineers for cases concerning indoor air quality (vapor screening), wildfires/fires, and sick building syndrome in both commercial and residential settings. Conducted indoor air quality damage investigations and laboratory testing for contaminants (i.e., hydrocarbons, formaldehyde, fire constituents, mold, particulates, etc.) to determine the extent of contamination, if health concerns were present, and to offer remedial recommendations.

- Senior Consultant
  Provided consulting services for cases concerning indoor air quality (vapor screening) and sick building syndrome in both commercial and residential settings. Conducted indoor air quality damage investigations and laboratory testing for contaminants (i.e., hydrocarbons, formaldehyde, fire constituents, mold, particulates, etc.) to determine the extent of contamination, if health concerns were present, and to offer remedial recommendations.

- Technical Consultant
  Provided technical services for cases involving releases of hazardous substances. Performed Environmental Site Assessments (Phase I), reporting and registration for solid waste generators, sampling of affected media (soil and groundwater), conducted literature research on industry awareness issues, and developed an "in-house" consulting tool used to project the cost to remediate contaminated properties when site-specific data was deficient or unavailable.

- **PCCI Marine and Environmental Engineering** **1994 – 1995**
  - Engineering Assistant
    Provided technical services for the marine industry in relation to environmental spills. Collected engineering field data to determine the market rates for various environmental clean-up equipment (skimmers, booms, oil rigs, boats, barges, etc.). Performed analyses on the collected data to determine the cost benefit and commercial viability for implementing marine equipment. Responsibilities included data collection and database development.

Education and Certifications

- **Environmental Engineering, B.S.:** SUNY College of Environmental Science and Forestry at Syracuse University (1993)
- **Licensed Professional Engineer:** Texas #87025
- **Leadership in Energy and Environmental Design Accredited Professional (LEED® AP):** USGBC
- **NCEES Council Record (multiple jurisdictions):** NCEES #24583
- **OSHA Hazardous Waste Operations and Emergency Response (Hazwoper) Certified**
- **LPST Project Manager:** License #PM0000499
- **Memberships:** Texas Society of Professional Engineers; National Society of Professional Engineers; National Association of Environmental Professionals; National Ground Water Association.

Continuing Education

- **Asbestos Inspector,** 3 Day Asbestos Inspector Course, October 2002
- **Environmental/Property Site Assessments for Commercial Real Estate** (2003)
- **Texas Commission on Environmental Quality,** Air Permitting Seminar, Nov. 2004
- **Environmental Forensics: Methods and Applications,** National Groundwater Association (2006)
- **Contaminated Property Transactions and Vapor Intrusion** – RTM Communications, Inc. (2007)
- **Complying with Texas Pollution Prevention – P2 (2008);** TCEQ Petroleum Storage Tank Seminar Workshop (2010)
- **Railroad Environmental Conference,** October 2012
- **Remediation Technology Summit,** February 2019

Publications and Presentations

- **"Help Your Business By Not Repeating These Incidents."** Worley Conference, February 2008
- **"Hydraulic Fracturing – Frac or Fake: The Natural Gas Drilling Controversy."** National Emerging Environmental Claim Managers Association (EECMA), May 2011
- **"Hydraulic Fracturing – Frac or Fake: The Natural Gas Drilling Controversy."** National Forum for Environmental & Toxic Tort Issues (FETTI), October 2011
- **"A Day in the Life Mock Session Illustrating What Can Go Right and Wrong for Landowners, Drillers, and Brokers."** HB Litigation Conference, December 2011
- **"Mining Your P's and Q's from Peru to Quebec."** National Emerging Environmental Claim Managers Association (EECMA), May 2012
- **"Mining Your P's and Q's from Peru to Quebec."** National Forum for Environmental & Toxic Tort Issues (FETTI), October 2012
- **"Site Remediation Lessons Learned / Challenges Ahead."** National Forum for Environmental & Toxic Tort Issues (FETTI), May 2014
- **"Site Remediation Lessons Learned / Challenges Ahead."** National Forum for Environmental & Toxic Tort Issues (FETTI), October 2014
- **"Environmental Site Investigations and Remediation: Forensic Issues – From Assessment to Zero-Valent Iron."** Claims and Litigation Management Alliance (CLM), November 2015
- **"Characteristics of Mega Superfund Sites and Remediation Challenges."** Mega-Superfund Site Symposium (AIRROC & EECMA), Sept. 2017
- **"Weathering the Storm: Effective Mitigation Tools for Environmental Crisis Management."** Goldberg Segalla – Containing Disasters, January 2018
- **"New Age of Climate Change Regulation"** National Forum for Environmental & Toxic Tort Issues (FETTI), September 2024
- **"Wildfire Risk and Environmental Insurance."** Environmental Risk and PFAS Litigation Conference, June 2025.
- **Routine training seminars for clients on all aspects of environmental contamination and exposure**
- **New hire and staff in-house training, including web seminars**