The Environmental Remediation Group
A Division of CES

Robert D'Anjou

President

Rob is an internationally recognized expert in remediation technology, with 15+ years of professional experience developing, driving, and managing the technical implementation of large-scale and highly complex projects around the world. His expertise focuses strongly on thermal remediation, bioremediation, and combined in situ remediation strategies with a powerful supporting background in organic geochemistry, thermodynamics, microbiology, hydrogeology, environmental engineering, and electrical theory.

Professional History

The Environmental Remediation Group (ERG)

President, December 2023 - Present

- Develop and implement the values, vision and strategy that define the company and its direction.
- Direct the technical and financial aspects of all remediation projects, including remedial system design and strategy, project costs, operational budgets, and financial forecasts.
- Plan, direct, and implement advancements in remediation systems technologies and drive innovation and go-to-market strategies.

GEO Environmental Remediation Company

Technical Program Director, March 2020 – November 2022

- Director of international and domestic environmental and remediation projects, including thermal remediation, heat enhanced bio-recirculation and combined in situ remediation systems.
- Principal interface with internal and external stakeholders, including consultants, clients, authorities, site owners, legal, insurance, and high-level government officials and regulators.

Career Highlights	
Experience	**15 Years**
Education	**Ph.D.** (ABD) - University of Massachusetts Amherst –Biogeochemistry, Microbiology **M.Sc.** - University of Massachusetts Amherst – Biogeochemistry, Paleoclimatology **B.Sc.** - Eckerd College–Marine Geology (Minor: Chemistry)
Career Accolades	✓ World-recognized expert in the environmental remediation field, with unparalleled experience in thermal remediation, enhanced bioremediation & combined remediation strategies. ✓ Directed the successful completion of over 50 remediation projects, including 35+ thermal remediation projects across 4 continents, totaling over $200-Mil in executed project contract value. ✓ Strong relationships with various state and regional regulatory agencies in 42 states, Federal Agencies (USEPA, USACE, ATSDR, DOE, DOD, DOT), and with foreign government agencies (Singapore, Australia, China, and throughout EU). ✓ Significant experience overseeing site characterization using advanced geotechnical tooling, conceptual site model development, and developing project specific coupled hydrogeologic-thermodynamic-physiochemical models, as these efforts relate to remediation system design and implementation.

TerraTherm (Cascade Environmental) – Seattle, WA

Technical Director, Feb 2017 – Feb 2020

- Technical Director of an ~80-person division (TerraTherm) comprised of engineers and scientists.
- Developed project budgets, oversaw technical execution from concept through completion, and responsible for meeting contract requirements on time and under budget.
- Coached and trained engineering staff in various disciplines, including methods for environmental assessments, technical report writing, remediation system design, construction, and field optimization.
- Lead project proposal efforts for federal and private industry increasing win percentage and project backlog.

Global Remediation Solutions, LLC. – Longview, WA

Assistant Technical Director, Senior Scientist, 2014-2017

- Critical employee in the start-up and growth of the company.
- Managed site assessment and evaluation, evaluated and communicated risk to internal and external stakeholders, drove remediation system design, field construction/implementation, and operational strategy.
- Directed and designed projects (scope, conceptual design, scheduling, and preliminary costing).
- Managed technical and engineering teams.
- Developed and drove R&D and bench scale analytical testing and reporting.

University of Massachusetts, Amherst – Amherst, MA

Distinguished Research Fellow and Asst. Biogeochemistry Laboratory Manager, 2010-2014

- PI and lead on numerous research projects, overseeing direction from concept through completion, in the fields of; paleoclimatology, carbon system dynamics, petroleum hydrocarbon degradation, anthropogenic climate impacts, biogeochemistry, and geo-archaeology.

United States Geological Survey (USGS) – St. Petersburg, FL

Research Fellow; Research Scientist – 2006 -2010

- Conducted carbon-system dynamics research using in-situ reef enclosures as a means to analyze effects of ocean acidification in Florida, Hawaii, and Puerto Rico.
- Lead authorship and project management - USGS Open File Report - Gulf of Mexico benthic habitats. Designed an interactive GIS based archival for the FDEP.

Relevant Project Experience

In-situ and Ex-situ Thermal Treatment Design (>35 projects)

Developed remediation end-point specific conceptual site models, remediation system design, and operational strategies that were successfully implemented on over 35 projects using in-situ and ex-situ thermal remediation and combined in situ remediation (low temperature heat enhanced technologies) which successfully met cleanup criteria and collectively removed over **6,000,000**-lbs of VOCs and SVOCs (2014-current). These projects include:

- The largest ever high-temperature (350-500˚C) implementation of ISTR (using GTR-TCH) at an MGP site (2020-present).
- The first successful ISTR projects implemented in Australia (2021) and Singapore (2020-present).
- Thirteen (13) Electrical Resistance Heating (ERH) projects
- Seventeen (17) Thermal Conduction Heating (TCH) project using both electric TCH and gas TCH, including fractured bedrock applications.
- Two (2) ex-situ thermal remediation (ESTR) projects using TCH in batch processed heated piles, totaling over 60,000-cubic yards of treated soils.

- Six (6) highly innovative combined remediation approach projects using a heat enhanced biotic and abiotic degradation alongside ISTR source zone removal.
- Three (3) projects combining multiple heating technologies including ERH-TCH and ERH-SEE

Applicable Skills

Leadership & Project Management

- 10+ years of experience in a directorial role at environmental and remediation companies, overseeing the successful implementation of $5M to $40M in annually executed contract values covering 35+ large scale environmental projects around the world.
- 10+ years of developing, driving, and managing the implementation of technical products across multiple divisions, including Sales, Marketing, Engineering/Technical, Executive Leadership, and Investors.
- 15 years managing high level environmental projects, including the successful development and implementation of various technologies and methods across academia, federal, and private sector industries.

Professional Certifications, Memberships, & Accolades

- California State General Engineering Contractors (Class A) License - # 964300
- International Society of Sustainability Professionals
- 40-hr HAZWOPER certification and Current on 8-hour refresher

Selected Publications & Presentations

(Complete list available upon request)

- **D'Anjou, R. M.**, Kane, J., Combined In Situ Remedies – *ISTR Source Zone Removal and Heat Enhanced Bio-recirculation, Examining a Case Study from Bothell, WA*. (Invited Platform). US EPA Tech Transfer Series. International Workshop on Developments in Contaminated Site Characterization and Remediation. 2021. National Cheng Kung University, Taiwan.
- Chen, **R. D'Anjou**, A. Swift, S. Guan, C. Zhou, and C. Winell. Trial and Error: Lessons Learned from the Largest High-Temperature ISTR Cleanup of MGP Waste in Saturated Zone Conditions. Battelle 2022, Palm Springs, CA.
- Chen, **R. D'Anjou**, A. Swift, S. Guan, C. Zhou, and C. Winell. Spatial and Temporal Staging of Heating and Vapor Treatment Strategies for DNAPL Sites with Highly Volatile Organic Compounds. Battelle 2022, Palm Springs, CA.
- Chen, **R. D'Anjou**, A. Swift, S. Guan, C. Zhou, and C. Winell. Target Temperatures Required for Successful ISTR of Organo-Thiophosphorus Pesticides: A Discussion. Battelle 2022, Palm Springs, CA.
- Chen, **R. D'Anjou**, A. Swift, S. Guan, C. Zhou, and C. Winell. In Situ Treatment of Landfill to Remove 200,000 Pounds of Contaminants in Less Than One Year. Battelle 2022, Palm Springs, CA.
- Chen, **R. D'Anjou**, A. Swift, S. Guan, C. Zhou, and C. Winell. Integrated Thermal Desorption of SVOCs Using Heating Network and Vapor Recycling. Battelle 2022, Palm Springs, CA.
- Kane, J., **D'Anjou, R. M**., Combined Remedial Technologies: Electrical Resistance Heating (ERH) with Bioremediation Injections and Groundwater Extraction and Soil Vapor Extraction (SVE) and Soil Removal. Battelle 2022, Palm Springs, CA.
- Schultz, J. Fairweather, **R. D'Anjou**, I. Cowie, & C. Winell. Not Even Coronavirus Could Thwart Australia's First InSitu Thermal Desorption Cleanup. Battelle 2022, Palm Springs, CA.
- Schultz, J. Fairweather, **R. D'Anjou**, I. Cowie, and C. Winell. Rehydration of an In Situ Thermal treatment Zone following Heating to 100˚C: Safety, Logistics, and Outcomes.. Battelle 2022, Palm Springs, CA.
- **D'Anjou, R. M.**, & Taggart, D. In-Situ Thermal Remediation and Heat Enhanced Biodegradation:

Monitoring and Augmenting a Thermal Project using MBTs Webinar. Microbial Insights Webinar Series. 2017 (https://www.microbe.com/webinars/)

- **D'Anjou, R. M.**, Dodson, M. E., Griepke, S., & Heron, G. Complex Sites and Recalcitrant Compounds: Combining ISTR Technology. Battelle 2018, Palm Springs, CA.
- Taggart, D., & **D'Anjou, R. M.** Monitoring the Impacts and Effectiveness of ERH Combined with Enhanced Bioremediation. Battelle. 2018, Palm Springs, CA.
- **D'Anjou, R. M.**, Balascio, N. L., & Bradley, R. S. Locating cryptotephra in lake sediments using fluid imaging technology. *Journal of Paleolimnology*, *52*(3), 257-264, 2014.
- **D'Anjou, R. M.**, Wei, J. H., Castañeda, I. S., Brigham-Grette, J., Petsch, S. T., & Finkelstein, D. B. High-latitude environmental change during MIS 9 and 11: biogeochemical evidence from Lake El'gygytgyn, Far East Russia, Clim. Past, 9, 567-581, 2013.
- **D'Anjou, R. M.**, Balascio, N. L.; Bradley, R. S., Finkelstein, D. B. Climate impacts on human settlement and agricultural activities in northern Norway. Proceedings of the National Academy of Sciences, 109(50), 20332–20337, 2012.
- **D'Anjou, R. M.**, Wei, J. H., Castañeda, I. S., Brigham-Grette, J., Petsch, S. T., Finkelstein, D. B. High-latitude environmental change during MIS 8 – 12: Biogeochemical evidence from Lake El'gygytgyn NE Russia. Clim. *Past Discuss., 8*, 4745-4777, 2012.
- **D'Anjou, R. M.**, Balascio, N. L.; Bradley, R. S., Finkelstein, D. B., Castañeda, I. S. Biogeochemical insights on Holocene Environmental change. GRC Biogeochemistry, 2012
- Raabe, E. A., **D'Anjou, R. M.**, Pope, D. K., & Robbins, L. L. Habitat Diversity in the Northeastern Gulf of Mexico: Selected Video Clips from the Gulfstream Natural Gas Pipeline Digital Archive, U.S. Geological Survey Open-File Report