

YB TECHNOLOGIES, LLC

Karl W. Yost, Founder/Manager

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CAREER HIGHLIGHTS & ACCOMPLISHMENTS

- Managed and directed over \$200 million in revenues related to the cleanup and remediation of chemically impacted properties and project sites across the United States requiring soil and material excavation, water and solid waste treatment, sediment dredging, capping, landfill and environmental construction including wetland and shoreline mitigation under competitive bid and time/materials contracting mechanisms at voluntary and regulatory enforced remedial actions for private and public sector customers.
- Comprehensive experience with MTCA, RCRA, TSCA, and CERCLA as regulations and statutes affect site remediation, clean-up, waste identification, handling and management, treatment, consolidation and packaging, transportation, and disposal.
- Comprehensive experience with all aspects of environmental remediation including health & safety, ARAR's, remedy design through construction and closure, waste manifesting through T&D coordination.
- Over 40-years' experience with the identification, characterization, sampling/analyses, and classification of waste materials for site health and safety, packaging, and disposal.
- Specialization in development and implementation of treatment technologies for competitive contract awards and their performance in the field.
- Directed and managed project management and personnel for waste handling onsite, and directed field operations for planning, sequencing, and actual material removal for full site remediation contract (and health and safety) objectives. Training program development for field chemists and waste handling technicians in proper methods and procedures for execution of sampling, characterization, removal, transportation and disposal of contaminated materials from remediation project sites, both planned and emergency response.
- Customer and multi-regulatory agency/Stakeholder interface.
- Treatment technology applications; concept R&D innovation through design, fabrication/construction for full-scale installation/commercialization and/or patent issuance process.
- Environmental investigations; permit applications/review; evaluation and planning for protective, containment, and corrective actions, both planned and emergency.
- USEPA Qualified Emergency Response Manager, USEPA Qualified NPDES Compliance Auditor
- Inventor - Treatment and remedial mitigation technologies

EXPERIENCE AND QUALIFICATIONS

YB Technologies, LLC – Anacortes, WA.....2019-current
Founder/Manager
Field applications provider for AMEOX™, MBT, AN™, and In-Mine Closure (IMC™) technologies, equipment, reagents, and services for the treatment of PFAS in soils and solids, spent activated carbon; and acidity and heavy metals in Acid Mine Drainage (AMD) and mine-related materials.

Yost Brothers, LLC – Anacortes, WA.....2013-current
Owner/Sole Proprietor
Develop solutions for treatment of complex wastewater and solid waste materials to various clients. Inventor of the patent-pending Advanced Neutralization™ (AN) water treatment technology for the processing of Acid Mine Drainage and other acidic fluids containing heavy metals and other constituents. Laboratory, engineering, and field pilot treatment trials at Bunker Hill Mine and Mineralogical Complex NPL site in Kellogg, ID; Gold King/American Tunnel/Mogul Mine drainages within the Bonita Peak Mining District NPL Site, Silverton, CO. Provide technical, estimating, proposal, and

field operational support to regional remediation and water treatment contractors. Inventor: AMEOX™ treatment technology for PFAS destruction in water, fluids, and activated carbon; and MBT fixation for leachable heavy metals and PFAS in soils and solids. On-site pilot projects for AMEOX treatment of PFAS in spent GAC and MBT treatment of leachable PFAS in solid waste. (Prineville, OR and Freeland, MI, respectively).

Water Tectonics, Inc. - Everett, WA.....2010 – 2013

Director, Industrial and Technical Applications

Developed treatment technology concepts through commercialization; managed treatability/research laboratory and lead scientific technical teams through treatability to full-scale implementation; advanced the knowledge, capabilities, integrated treatment applications, and understanding of electrocoagulation; responsible for treatment research team and laboratory; complex treatment issue resolution; pilot demonstration projects for full-scale design/implementation; marketing, sales and operational support; solved hydrofracturing polymer flood fluid, solids, and sulfide treatment issues.

Granite Construction Company – NW/Puget Sound & Alaska Regions, Everett, WA.....1997- 2010
(*Wilder Construction Company merged with Granite in 2007*)

Environmental Division Manager

Corporate P&L and asset/resource responsibility for environmental remediation business; expanded geography and services to: mine/mining related remediation; marine/fresh water dredging and material handling; shoreline construction, remote/mountainous site work. Co-inventor of MatCon permeable asphalt for RCRA caps and closures; pioneered use of electrocoagulation water treatment at sediment and remediation projects. Landfill construction, hot spot removals to large mass excavation, transport and haul. Water and soil treatment. Proposal preparation, contract negotiations/management, operations for safe and cost-effective high-quality contract deliverables, multi-year federal delivery/task ordering (USACE, AFCEE, USCG, etc.).

Sevenson Environmental Services, Inc – Niagara Falls, NY & Midwest/Chicago.....1993 – 1997

Director of Treatment Services

Technical aspects of water and waste treatment and special handling systems upon acquisition of MAECORP. Technical direction to the MAECTITE™ technology program team implementation for heavy metals and other waste treatment technologies from marketing/sales support to treatability studies, construction, and contract closeout. Advanced/improved MAECTITE technology to include radionuclides in soil and solid waste. Technical support to field operations for unknown waste characterization and handling methods and procedures.

MAECORP Incorporated – Chicago, IL.....1986–1993
(*acquired by Sevenson Environmental Services in 1993*)

Vice President of Technical Services

Corporate P&L for all treatment/technical projects. Established capabilities for on-site waste treatment, complex material handling methods, mobile laboratories for process control and unknown waste characterization, site investigations for contamination extent surveys. Opportunity pursuit, estimates, negotiations, project execution, budgeting/forecasting, remedial design and construction contracts. Innovative and off-the-shelf technology evaluation and implementation. Reverse osmosis, UV/Peroxidation, S/S, centrifugation, steam stripping, bioremediation, SVE, ISV, others. Inventor: MAECTITE™ Chemical Treatment Process. Managed final transition and closure through sale to Sevenson.

O. H. Materials, Inc. – Findlay, OH & MI Division, Grand Rapids, MI.....1984 – 1986

Manager of Technical Services

Designed, supervised, and managed technical aspects of on-site project specific water and waste treatment systems. Project estimation and proposal preparation. Developed and managed mobile laboratory program to support on-site treatment and large-scale sampling programs, lab-packs, unknown waste site remediation. Site management and supervision of emergency spill responses and treatment during cleanup. Project level P&L.

Northern Michigan Environmental; Swanson Environmental Services, Inc.; and.....1979-1984
Environmental Research Group, Inc. – Petoskey, Farmington Hills, & Ann Arbor, MI

Owner, Field Scientist/Project Chemist, Field Services Manager

Designed, directed and implemented large-scale complex sampling and analytical programs. Certified USEPA NPDES Compliance Auditor.

Manton Consolidated Schools, Manton, MI. &.....1977-1979

Cassidy Lake Technical School, Minimum Risk Prison, Michigan Department of Corrections – Chelsea, MI

Teacher (tenured) – High School Science & History/Middle School Math

Seaway Mechanical Contractors, Inc. - Trenton, MI.....1975–1977

Field Engineer - Refinery turn-around, coal-fired power-house electrostatic precipitator, blast furnace reline, chemical plant process upgrade.

EDUCATION & PROFESSIONAL ENHANCEMENT

- BA, Honors in Biology; Albion College, Albion MI
- Graduate Study in Stream Ecology; Central Michigan University
- 40-Hour OSHA HAZWOPER/8-hr refreshers & MSHA Safety Training
- USEPA Qualified Emergency Response Manager/USEPA NPDES Compliance Auditor
- Author/co-author: Numerous papers for publication in journals, environmental industry proceedings, and for presentation at symposiums, seminars and conferences. Various provisional/non-provisional patent, and trademark applications.
- School Board, Anacortes School District, Anacortes, WA. (2009 – 2019)

PATENTS & PUBLICATIONS

Patents Issued

- 1 10,960,444 Closure Method for Mines
- 2 10,926,308 Method and Reagent System for Treating Mercury-Contaminated Material
- 3 7,404,693 Method and system for a containment system, such as a seamless containment cap for solid waste constructed of polymer-modified asphalt
- 4 7,077,602 Method and system for containment, such as a containment cap for solid waste constructed of modified asphalt
- 5 6,635,796 Reduction of leachability and solubility of radionuclides and radioactive substances in contaminated soils and materials
- 6 6,309,337 Method of forming an insoluble phosphate mineral species
- 7 6,291,736 Reduction of leachability and solubility of radionuclides and radioactive substances in contaminated soils and materials
- 8 6,258,018 Fixation and stabilization of metals in contaminated soils and materials
- 9 6,139,485 Fixation and stabilization of metals in contaminated soils and materials
- 10 5,994,608 Reduction of leachability and solubility of radionuclides and radioactive substances in contaminated soils and materials
- 11 5,916,123 Fixation and stabilization of metals in contaminated soils and materials
- 12 5,732,367 Reduction of leachability and solubility of radionuclides and radioactive substances in contaminated soils and materials
- 13 5,569,155 Fixation and stabilization of metals in contaminated materials
- 14 5,527,982 Fixation and stabilization of metals in contaminated materials
- 15 5,397,478 Fixation and stabilization of chromium in contaminated materials
- 16 5,193,936 Fixation and stabilization of lead in contaminated soil and solid waste

Multiple Non-Provisional Patents-Pending (US and abroad)

- Destruction of PFAS in water, fluids, landfill leachate, and spent activated carbon (AMEOX™)
- Fixation of PFAS and broad-spectrum heavy metals in soils, sediments, sludge, biosolids and other waste (MBT™)
- Acidity treatment and heavy metal removal from water and fluids, including Acid Mine Drainage/landfill leachate
- Tri-axial water/media reaction tumbler for flow-through processing

Publications - Available upon request

Gallup Strength Finder Traits: “Responsibility • Achiever • Arranger • Belief • Strategic”