



Resume

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E X P E R T I S E

- Over 14 years of professional experience with an additional two years experience obtained through an undergraduate co-op program
- Expertise in civil/environmental engineering design for RCRA, CERCLA, infrastructure and mining projects
- Multidisciplinary experience in environmental assessments/impact studies, remedial investigation/feasibility studies, remedial design, permitting and construction management

P R O F E S S I O N A L E X P E R I E N C E

Mine Waste Remediation: Project Manager of remedial design for cement/lime stabilization of approximately 600,000 cubic yards of flue dust containing cadmium, arsenic and lead and for construction of a modified RCRA Subtitle D waste repository at the Anaconda Smelter Superfund Site. Responsible for supervising construction QA/QC including verification sampling/analysis and geotechnical and liner testing for construction of the flue dust and two other mine waste repositories.

Project Manager for design and construction management of remedial action (RA) work around an operating zinc and cadmium smelting facility in Bartlesville, OK. RA includes residential yard removals, alleyway asphalt capping, house dust abatement, occupational area soil capping and stream sediment removal.

Brownfields/Voluntary Cleanup/Land Development: Project Manager of due diligence assessment of former steel manufacturing site on Lake Michigan that was being considered for redevelopment as an electrical generating facility. Work included evaluating the site's compliance with Illinois brownfields clean-up requirements, geotechnical suitability for redevelopment and facility permitting issues.

Mine Closure: Project Manager for site closure design of the Brewer Gold Mine in South Carolina. Design work included preparation of plans, specifications and a bid package for closure of three heap leach piles, a three million cubic yard waste rock dump and three open pits. Site closure addresses storm water management, acid rock drainage, cyanide rinsing, sludge management and ground water protection.

Project Manager for closure design for the Pecos Lead-Zinc Mine in New Mexico. Closure work includes consolidating/capping waste rock piles, reclaiming a stream reach and associated wetlands impacted by ARD and sediment loading, constructing a subsurface flow interception and diversion system, and preparing a site-wide storm water management plan.

Project Manager for reclamation planning and closure cost estimating for an operating coal mine in Washington State. The project included developing a conceptual site closure design for 4 active pits, two partially backfilled pits, 4 coal refuse ponds, over 20 sedimentation ponds, a gravel quarry and other miscellaneous site facilities.

Project Manager for environmental assessment of former mining sites in Montana. Work included assessing environmental liabilities and risks, determining ownership history and estimating closure requirements/costs for over 50 former mining sites.

Remedial Investigations/Feasibility Studies: Project Manager of RI/FSs for Milltown Reservoir and adjacent Clark Fork River Superfund Sites. RI activities include characterizing metals-impacted floodplain and channel bottom sediments, surface water, ground water and terrestrial and aquatic resources along a 120-mile reach of river stretching from Anaconda to Missoula, Montana. FS work includes evaluating removal, in-situ treatment, soil cover, streambank stabilization and improved land management practices alternatives for revegetating the floodplain and reducing metals loading to the stream. The FS also included design, construction and monitoring of several streambank stabilization and tailings in-situ treatment demonstration projects.

Project Manager for the FS at the Anaconda Smelter Superfund Site. The FS evaluated options for reclaiming areas impacted by smelter emissions or by historic waste disposal at the 300 square mile site. The FS included implementation of several demonstration projects that evaluated the ability to revegetate impacted areas using combinations of tilling, lime amendment and soil cover.

Construction Cost Estimating: Project Manager for development of cost/schedule estimates for supplying and delivering approximately 23 million cubic yards of fill material required for expansion of a large operating airport in Western U.S.. The work included evaluating the availability, suitability, cost, and permitting requirements for various fill supply options including: development of on-site borrow pits; development of new, or use of existing, marine-accessible pits; use of existing overland truck-accessible pits; or use of surplus material from other local construction projects. The evaluation also included estimating the cost and schedule differences between various delivery options including conveyor, barge/conveyor, barge/trucking and trucking only.

Environmental Assessments: Project Manager for assessment of environmental liabilities at four automotive parts manufacturing facilities in Ontario, Canada. Work included reviewing records, interviewing employees, performing site inspections and sampling environmental media and waste streams.

Project Engineer for assessment of Texaco's petroleum retail, bulk terminal and refinery facilities in Belgium and Luxembourg. Work included reviewing records, sampling groundwater and surface water and developing and costing remediation plans for the facilities. Texaco used the remediation cost estimates in settlement negotiations with the former owner of the facilities.

Landfill Design: Project Engineer for design of secure landfill cells at a proposed hazardous waste facility in Alabama. Work included design of a dual-containment bottom liner and leachate collection system consistent with RCRA Subtitle C.

Petroleum Hydrocarbon/Chlorinated Solvent Remediation: Project Manager for design and implementation of bioremediation of approximately 10,000 cubic yards of petroleumcontaminated soil and sludges at two operating oil refineries in Canada. Work included treatability testing, process and facility design, bid package preparation, permitting, construction management, O&M and reporting.

Project Manager for design, installation and operation of soil and groundwater treatment at numerous gas stations in Colorado. Soil vapor extraction systems were used to remediate soils at four sites. Groundwater extraction, air stripper treatment, product recovery and air sparging were implemented at three sites to remediate groundwater. Computerized control panels were installed at two sites to regulate remedial system performance and prevent out-of-compliance discharges.

Project Engineer for development of a RCRA Corrective Action Plan at a chemical plant in Mississippi. Work included installation and sampling of groundwater wells and design of a groundwater pump and treat system.

E D U C A T I O N

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| Stanford University; Stanford, CA MS Civil Engineering | 1988 |
| University of Waterloo; Waterloo Canada BS Geological Engineering | 1986 |

P R O F E S S I O N A L D E V E L O P M E N T

REGISTERED PROFESSIONAL ENGINEER (P.E.) – MONTANA; COLORADO; OKLAHOMA;
ARIZONA; NEW MEXICO; IDAHO; ONTARIO, CANADA

SUPERVISOR SAFETY TRAINING FOR HAZARDOUS WASTE OPERATIONS

FIRST AID AND CPR CERTIFICATION

RADIATION SAFETY AND USE OF NUCLEAR DENSITY GAUGES CERTIFICATION

P U B L I C A T I O N S

Booth, D. G., and Flynn, J.M., 1996. Closure of the Brewer Gold Mine – Applying a Pit Backfill Plan. Association of Abandoned Mine Lands Programs 18th Annual Conference, September 15 – 18, 1996, Kalispell, Montana.