



K. Scott King

EDUCATION

B.Sc. (Honours) Earth Sciences, University of Waterloo, 1980
M.Sc. (Hydrogeology) Earth Sciences, University of Waterloo, 1983

AFFILIATIONS

Licensed Geologist and Hydrogeologist, State of Washington (#368)
Professional Geologist, State of Idaho (# 1023)
Professional Geoscientist, Province of British Columbia (P.Geo #22872)
Professional Geoscientist, Province of Ontario (P.Geo #1213)
Member, International Association of Hydrogeologists
Member, Association of Groundwater Scientists and Engineers (NGWA)
Member, Buffalo Association of Professional Geologists
Member, New York State Council of Professional Geologists
Member, Air and Waste Management Association – Niagara Frontier Section

PROFESSIONAL EXPERIENCE

- 1993 - Present ***President, King Groundwater Science, Inc.*** Initially based in Pullman WA (1993-2003), then relocated to Buffalo NY. Provided specialist consulting services in hydrogeology and hydrogeochemistry in United States and Canada. Representative project experience includes expert review, fate and transport modeling, wellhead protection studies, litigation support, conducting training workshops in contaminant hydrogeology and geochemistry, contaminated site characterization, septic suitability study, and research into modeling transport of inorganic species and methods to determine rates of biodegradation of organic contaminants.
- 1990 - 1993 ***Sr. Hydrogeologist, Associate, Office Manager, Golder Associates, Waterloo, Ontario.*** Responsible as Project Manager for several contaminated site characterizations and remediation design studies. Managed a 13 person office with administrative, quality control and business promotion responsibilities. Involved in hydrogeologic investigations for watershed management planning, private water and waste disposal services for rural subdivisions, aquifer protection strategy for a large municipality, hydrogeochemical studies involving field and modeling efforts for the decommissioning and future environmental impact of acid drainage from mine tailings, a groundwater pump and treat containment scheme, Phase 1, 2 and 3 environmental sites assessments at a variety of industrial facilities, modeling of proposed tailings management facilities at two uranium mines in northern Saskatchewan with regard to potential effects on groundwater and surface water.
- 1988 - 1990 ***Project Hydrogeologist, Golder Associates, Vancouver, British Columbia.*** Developed and carried out site characterization and remedial design studies as part of consulting team for the Pacific Place development. The 200 acre waterfront site contained coal gasification plants, railway lands, wood treatment facilities, sawmills, a landfill and numerous industrial activities.
- 1983 - 1988 ***Hydrogeologist, Golder Associates, Mississauga, Ontario.*** Responsible for hydrogeological and hydrogeochemical investigations and assessments related to solid waste landfills, mine tailings, petroleum refineries, and bulk storage facilities.

OTHER TRAINING

Short Courses:

Environmental Forensics: Methods and Applications, 2004
Practical Use of Statistics and Geostatistics to Help Solve Environmental Problems, 1995
Environmental Geochemistry of Sulfide Mine Wastes, 1994
Behavior of Dissolved Organic Contaminants in Groundwater, 1991
DNAPLs in Porous and Fractured Media, 1990 & 1995
Treatment Technology for Contaminated Groundwater, 1990
HAZWOPER Safety Training, 1987

ADVISORY COMMITTEES

Member, Expert Panel to Review Standards in the Contaminated Sites Regulation, Province of British Columbia, Canada, March 1996.

Member, Technical Advisory Committee on Capture of Surface Water by Wells, Washington Department of Ecology, USA, April – September 1998.

Subject Matter Expert, Focus Groups 2 and 3, Hydrogeologist licensing exam preparation, Washington Department of Licensing, February–March 2002.

SELECTED PROJECT EXPERIENCE

Site Characterization and Remediation

Niagara County Dept of Health, NY	Coordinator for Community LOOW Project involving the review and assessment of legacy contamination studies conducted at the Lake Ontario Ordnance Works. Provided technical assistance to water well sampling study and GIS mapping project.
Science Advisory Board, Victoria, BC	Prepared report on hydrogeologic assessment tools to determine the rate of biodegradation for organic contaminants in groundwater.
Science Advisory Board, Victoria, BC	Prepared report on hydrogeologic assessment tools for modeling the transport of metals and inorganic contaminants in groundwater.
Duke, Holzman, Yaeger & Photoiadis, LLP Buffalo, NY	Preparation of opinion concerning hydrocarbon contamination at former auto repair facility.
Confidential Attorney, Vancouver, BC	Review of environmental site assessment and preparation of opinion regarding the appropriateness and adequacy of the investigation and conclusions.
Environment Canada, Pacific Region	Technical review services related to hydrologic issues in support of the National Contaminated Sites Remediation Program at a variety of industrial sites (>40) in British Columbia.
Marten & Brown LLP, Olympia WA	Technical expert concerning well contamination by an agricultural chemical in support of litigation. Prepared opinion regarding time of travel and arrival concentration of a toxic organic compound.

The Boeing Company, Seattle, WA	Performance assessment of remedial action at former landfill and Superfund site.
The Boeing Company, Seattle, WA	Technical review, development of conceptual model framework and opinions regarding TCE fate and transport at several industrial facilities in Washington and California.
WESTON Solutions, Inc, Seattle, WA	Specialist sub-consultant assisting with interpretation of RCRA Facility site characterization data, and development of soil cleanup criteria. Fate and transport modeling in support of new cleanup criteria and RCRA corrective measures study.
CH2M Hill Inc., Spokane, WA	Hydrogeochemical assistance related to investigation of wastewater treatment lagoons at City of Colfax.
University/Industrial Consortium	Comparative analysis of remedial technologies for DNAPL source zone remediation. University of Waterloo Solvents-in-Groundwater Research consortium.
Environmental Technology Center Washington, DC	Use of EPACMTP code to evaluate and review USEPA proposed standards for the disposal of petroleum refining wastes.
WA Department of Ecology	Conducted training workshops in contaminant hydrogeology and geochemistry at five regional offices for Toxics Cleanup Program.
Golder Associates Ltd., BC	Specialist sub-consultant assisting with site investigation and evaluation of lead battery reprocessing plant in interior B. C.
Hillview-Porter site, Palo Alto, CA	Technical review of RI/FS documents for site contaminated with dissolved chlorinated VOCs in groundwater and surface water.
Pacific Place, Vancouver, BC	Site characterization and remedial design of a 200 acre waterfront site on former industrial land. Soil and groundwater sampling and delineation.
Gooderham & Worts, Toronto, ON	Hydrogeologic investigation and soil assessment for the purposes of decommissioning and re-developing a 150 year old distillery site.
Stelco Steel, Hamilton, ON	Investigation and installation of monitoring wells to assess impact from coke ovens on groundwater quality. A pump and treat groundwater control system was designed and installed.
Imperial Oil, Parry Sound, ON	Investigation and remediation of a marine terminal and bulk petroleum storage area. Excavation and disposal of 40,000 m ³ of affected soil.
Imperial Oil, Toronto, ON	Investigation and assessment of contaminated soil and groundwater at a bulk storage area in historic harborfront area.
Texaco, Nanticoke, ON	Investigation and remediation of caustic spill at a petroleum refinery.

Monsanto, Montreal, PQ	Field investigations to assess the presence and extent of soil and groundwater contamination at a chemical plant. Preparation of recommendations for remedial alternatives.
ICI, Cornwall, ON	Soil vapor survey to delineate the likely source areas of contamination by organic solvents at a chemical plant. Utilized on-site gas chromatograph analyses.
ICI, Lambton, ON	Phase 1 and 2 ESA of nitrogen chemical works as part of property transaction.
Sunoco, Toronto, ON	Assessment and delineation of contaminated soil and groundwater following accidental release of product from bulk storage tank area.
Sunoco, Waterloo, ON	Hydrogeological assessment, soil vapor survey, product recovery and remediation by excavation of contaminated materials at a gasoline service station.
Procter & Gamble, Hamilton, ON	Sampling and assessment of soil quality prior to excavation of trench for pipeline installation.
CP Rail, Kitchener, ON	Phase 2 ESA for a former rail yard.
CP Rail, Cambridge, ON	Phase 1 and 2 ESA of a former rail yard and maintenance shop.
CP Rail, Nelson, BC	Site characterization and evaluation of remedial alternatives for a rail yard and refueling depot.
Tibett & Britten, Cambridge, ON	Phase 1 ESA of a large warehouse located in a former manufacturing facility.
Price Waterhouse, Toronto, ON	Phase 1 ESA of animal transport trucking facility where trucks were maintained and cleaned.
ANZ Bank, Toronto, ON	Phase 1 ESA of a particle board manufacturing facility.
Comdev, Cambridge ON	Phase 1 ESA of an electronics manufacturer.

Groundwater Resources and Development Issues

Dawson & Meade, Spokane, WA	Expert opinion in support of litigation concerning water rights and development issues for a rural subdivision in eastern Washington.
Confederated Colville Tribe , WA	Development of a groundwater survey and management plan for the second largest Indian reservation in Washington. Also development of a wellhead protection program for 22 community well systems.
City of Colfax, WA	Development of a wellhead protection program for municipal wellfields.
Golder Associates Ltd., BC	Specialist sub-consultant assisting with septic suitability and wellhead protection study for village in interior B. C.

Region Municipality of Waterloo , ON	Development of a water protection strategy for the largest municipality in Canada dependent on groundwater.
Region Municipality of Waterloo , ON	Review of development proposals for subdivisions using private services. Development of guidelines for hydrogeologic investigations in support of subdivisions using septic tanks and private wells.
Doon Creek Study, Kitchener, ON	Hydrogeologic investigations and assessment as part of development of a sub-watershed management plan.
Blue Springs Cr., Rockwood ON	Evaluation of septic suitability and water supply potential for a proposed 30 acre development in a rural area.
<u>Solid Waste Landfills</u>	
Twp of Woolwich, ON	Plume delineation and monitoring of leachate groundwater plume as part of research program.
City of North Bay, ON	Drilling, monitoring well installation and geochemical sampling of groundwater as part of graduate research program.
Keele Valley Landfill, Toronto	Development and installation of unique instrumentation to monitor the performance of a clay liner, liner leachate compatibility studies, evaluation of monitoring data.
Twp. of Moonbeam , ON	Field investigation to determine impacts on groundwater quality and establish monitoring network.
Town of Cochrane , ON	Field investigation to determine impacts on groundwater and establish monitoring network.
City of Timmins (Deloro), ON	Field investigation to determine impact on groundwater and establish monitoring network
Brock South Landfill, Pickering, ON	Site characterization studies for proposed landfill siting.
Ontario Hydro, Nanticoke, ON	Site characterization for proposed flue gas desulfurization waste on fractured clay till plain.
NENT Landfill, Hong Kong	Site characterization and feasibility study for proposed 60 million tonne landfill in New Territories.
Stelco No. 3 Landfill, Hamilton, ON	Site characterization and impact assessment for groundwater plume from waterfront solid waste disposal site.
Malette Paper, Smooth Rock Falls, ON	Field investigation to determine impact on groundwater and establish monitoring network.
Kimberly-Clark, Terrace Bay, ON	Hydrogeologic studies for siting of 60 ha. stabilization lagoon for treatment of pulp mill effluent.

Mining

Attorney General of New York	Hydrogeologic review concerning impact of brine release following roof collapse of large salt mine.
Key Lake Mine, Saskatchewan	Hydrogeologic modeling studies to assess the impact of proposed uranium tailings management facility in open-pit mine, transport of dissolved metals, and potential impact on surface water.
Cigar Lake Mine, Saskatchewan	Hydrogeologic studies to assess the design, siting and impact of a uranium tailings management facility for a proposed uranium mine.
INCO, Sudbury Basin	Site investigation and decommissioning studies for two abandoned mine sites with acid generating waste rock piles.
Denison Mines, Elliot Lake, ON	Hydrogeologic investigation and modeling to assess decommissioning options for the Denison and Stanrock uranium mine tailings facilities which produced acid mine drainage.
Rio Algom, Elliot Lake, ON	Hydrogeologic modeling study to assess decommissioning options for the Quirke Lake uranium mine tailings facility.
SENES Consultants, Toronto	Hydrogeologic assessment of impact from phosphogypsum tailings stacks at selected mine locations in Canada.
SENES Consultants, Toronto	Development of a probabilistic transport model to simulate the transport of dissolved contaminants from uranium tailings.
ICI, Lambton, ON	Hydrogeologic and geochemical assessment of phosphogypsum stack to determine quality and volume of leachate drainage to be treated.
Eldorado Nuclear, Pt. Granby, ON	Groundwater modeling studies for the assessment of subsurface cavern disposal concept of low-level nuclear waste.