

Mr. Michael Rankin, M.Sc.
Associate, Senior Toxicologist and Risk Assessor

Mr. Rankin is a Senior Toxicologist, specialist in Risk Assessment and Associate at Golder Associates Ltd., currently working in the Vancouver, BC office. He has over seventeen years of experience and training in environmental and human health toxicology. His current responsibilities include: i) design and coordination of toxicological studies; ii) assessment of risks and adverse effects to the environment and human health from exposure to hazardous wastes; iii) integration of environmental issues with risk management and sustainability decisions. His graduate research addressed the aquatic toxicity of inorganic trivalent arsenic. Mr. Rankin is qualified as a third party reviewer of risk assessment reports on behalf of the Government of British Columbia, and the Government of Yukon Territories, Canada.

Mr. Rankin has co-authored guidance and applications manual created for Health Canada describing how to conduct human health risk assessments of contaminated sites. He recently co-authored a risk assessment guidance manual designed to address the specific needs of the mining community, for the Province of British Columbia. Mr. Rankin has conducted environmental risk assessments of proposed, active and closed mines in northern Canada, the Caribbean, and Peru. In addition Mr. Rankin was project manager and senior author of a review on environmental issues/practices of deep sea tailings placement (DSTP) and developed a strategy for scoping and assessing such projects for the Canadian government. He has also assessed environmental factors (e.g., geochemical stability, marine biology, marine bathymetry) and feasibility of DSTP versus terrestrial management of tailings at a proposed nickel laterite mine. He assessed remediation and marine biology issues of historic massive tailings placement on a coastal beach at a large Southern Peru iron mine. Recently, Mr. Rankin has performed as leader risk assessor in the definition of a risk-based corrective action program for a polymetalite smelter operation in a Peruvian community, and is currently involved with PERCAN as leader risk assessor for an arsenical tailings deposit adjacent to Peruvian Andean community, both presenting challenges to human and ecological health.

Mr. Rankin has employed toxicity studies and reviewed toxicological literature to derive site-specific water quality objectives to protect fish water quality, and as well employed human health risk assessment to derive soil standards for human health during closure and redevelopment of gold, copper and zinc mines.

Mr. Rankin has applied human and ecological risk assessment methods as components of Environmental Impact Assessments (EIA) for several multi-billion dollar mine expansions of the Alberta oils sands projects and provided expert witness in hearings. These typically involve assessment of human and ecological health risk from water and air quality impacts, and including multimedia exposure pathways following contaminant deposition to soil and water.