

Intrinsik Environmental Sciences Inc.

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EDUCATION

1990	PhD, Environmental Science, University of British Columbia.
1977	Master of Natural Resources Management, University of Manitoba.
1973	Bachelor of Science in Zoology, University of Manitoba.

EMPLOYMENT HISTORY

1998-Present	Intrinsik Environmental Sciences Inc., (formerly Cantox Environmental Inc.),
	Senior Scientist and Principal
1993-1998	Cantox Inc., Senior Scientist and Director, Western Region
1988-1992	Bovar Environmental Services Manager, Environmental Services Department
1977-1983	Western Research, Manager, Environmental Services Department

PROJECT EXPERIENCE

- Town of Strathmore. Human health risk assessment of effluent from a proposed water treatment plant discharging to the Bow River (2008/2009).
- Jacques Whitford AXYS. Human health risk assessment for the proposed ENMAX Shepard Energy Centre (2008/2009)
- AECOM Earth Tech. Annual ecotoxicological monitoring program in the vicinity of the Swan Hills Waste Treatment Centre (2009).
- Saskatchewan Ministry of the Environment. Peer review in response to a formal RFP issued by the Saskatchewan Ministry of the Environment seeking an independent peer review of the Consumers' Co-operative Refinery Limited (CCRL) HHRA (2008).
- Teck Cominco Ltd. Wide Area Ecological risk assessment for Teck Cominco's Trail operations (2001 to present).
- Earth Tech Inc. Public health risk assessment of wild game meat consumption and evaluation of Swan Hills game meat public health advisory (2006 2007).
- Earth Tech Environmental Inc. Ecotoxicological monitoring program in the vicinity of Swan Hills Waste Treatment Centre. (formerly operated by Bovar Waste Management) (1996 to present).
- Devon Canada. Human health risk assessment of proposed Jackfish 2 SAGD project (2006).
- Petro Canada inc. Human health risk assessment of proposed Sturgeon oil sands upgrader (2006).
- Curtis Environmental Inc. Human health risk assessment of petroleum hydrocarbon contamination resulting from gasoline storage tanks on 17th Avenue SW, Calgary (2006).



- Manchester Properties. Human health risk assessment of arsenic contamination on commercial industrial site in northeast Calgary (2006).
- Bel MK Engineering. Human health risk assessment of contamination associated with former Eau Claire Greyhound Bus maintenance facility in Calgary (2005- 2006).
- Shell Canada Ltd. Human health risk assessment of Carmon Creek SAGD project (2005 2006).
- Shell Canada Ltd. Human health risk assessment of Shell Scotford Expansion project (2005
 – 2006).
- Petro Canada. Human health risk assessment of McKay River II SAGD project (2005).
- North West Upgrader Ltd. Human health risk assessment of proposed North West Upgrader (2005).
- Husky Oil Ltd. Human health risk assessment of Husky Sunrise SAGD project (2005).
- Deer Creek Energy. Human health risk assessment of SAGD project (2005).
- Deer Creek Energy. Human health risk assessment of Deer Creek Mine project (2005).
- MEG Energy. Human health risk assessment for MEG SAGD project (2005).
- Sovereign Castings Ltd. Screening level health and environmental risk assessment associated with metal contamination in surface soils (2005).
- Earth Tech Inc. Annual health and ecological risk assessment based on biomonitoring program data (2004).
- City of Edmonton. Human health risk assessment of PCB release from light capacitors in Commonwealth Stadium (2004).
- Alberta Environment. Preparation of draft Alberta air quality guidelines for five VOCs (2004).
- Imperial Oil. Ecological risk assessment of former oil and gas battery at Whitecourt (2003).
- Husky Oil. Human health risk assessment of proposed Kearl Lake SAGD project (2003).
- • Imperial Oil. Ecological risk assessment of former gas plant site near Battle Lake (2003).
- Husky Oil. Human health risk assessment of proposed Tucker SAGD project (2003).
- Devon Canada. Human health risk assessment of proposed Jackfish SAGD project (2003).
- Inland Cement. Human health risk assessment of Edmonton cement plant fuel conversion project (natural gas to coal) (2002).
- Fording Coal Limited. Human health risk assessment of proposed Brooks coal-fired power plant (2002).
- Shell Canada Ltd. Human and ecological health risk assessment of Shell Canada Lease 13 Site (2002).
- Heritage Partners. Human health risk assessment of a former Cominco fertilizer plant site (2002).



- AMEC Earth and Environmental. Human health risk assessment for the Petro-Canada Lewis SAGD oil sands project (2002).
- TransAlta Corporation. Human health risk assessment for the TransAlta Keephills coal-fired power plant expansion project (2001).
- EPCOR Corporation. Human health risk assessment for the EPCOR Genesee coal-fired power plant expansion project (2001).
- True North Energy. Ecological impact risk assessment and human health impact risk assessment for the Koch Petroleum/True North Fort Hills oil sands expansion project (2001).
- Axys Environmental Consulting Ltd. Screening level human health risk assessment for the Gulf Surmont oil sands project (2001).
- AT Plastics Ltd. Human health/ecological risk assessment of air emissions related to intermittent decomposition incidents at Edmonton polyethylene plant (2000).
- Anderson Exploration Ltd. Human health risk assessment of residual TPH contamination at former oilfield sites (1999).
- Focus Equity/Summit Real Estate. Environmental liability review for purchase of property formerly used for industrial processing (1999).
- Golder Associates. Cumulative effects assessment framework for the Athabasca Oil Sands (1999).
- Petro-Canada Oil and Gas Ltd. Human health risk assessment of air emissions from proposed Fort McKay heavy oil project (1999).
- Parks Canada. Ecological risk assessment of mercury in soils (1999).
- Shell Canada Ltd. Human health risk assessment and preparation and participation at hearing regarding Shell's proposed Ferrier well (1999).
- Three Sisters Resorts. Risk assessment of proposed development options for former coal tar processing site (1999).
- Anderson Exploration Ltd. Human health risk assessment of air emissions from Puskwaskau flare (1998).
- Weyerhaeuser Canada Ltd. Human health risk assessment of air emissions from Slave Lake OSB mill (1998).
- Weyerhaeuser Canada Ltd. Human health risk assessment of air emissions from Prince Albert Pulp Mill (1998).
- Shell Canada Ltd. Human health and livestock risk assessment related to air emissions from proposed Scotford oil sands upgrader (1998).
- Syncrude Canada Ltd. Human health and ecological risk assessment of air emissions from proposed Mildred Lake oil sands upgrader (1998).
- Amoco Canada Ltd. Human health and ecological risk assessment of the Gregoire Lake Oil Sands Research Facility site (1998).
- Amoco Canada Ltd. Human health and livestock risk assessment of Amoco Evansburg (08-08) spill site (1998).



- Wascana Energy Ltd. Human health/ecological risk assessment of the Okotoks sour gas plant site (1998).
- Bovar Waste Management. Accidental release of PCBs, dioxins and furans from the Swan Hills Treatment Centre: Assessment of potential ecological and human health effects (1997).
- Weyerhaeuser Canada Ltd. Human health risk assessment for renewal of Drayton Valley OSB mill/saw mill operating permit under the Alberta Enhancement and Protection Act (1997).
- EBA Engineering Consultants Ltd. Human health risk assessment of a former commercial/industrial property near the Bow River in the City of Calgary (1997).
- Parks Canada. Ecological risk assessment of soil-based chemicals from a former industrial operation within a national park (1997).
- Confidential Client. Ecological risk assessment of mercury in soils at an operating golf course (1997).
- CETAC-West. Air Toxics Risk Management Workshop (1997).
- CXY Chemicals. Preliminary human health risk assessment of a chlorine and caustic plant in Brandon, Manitoba (1997).
- Amerada Hess Canada Ltd. Cattle toxicity assessment associated with survey activities (1996).
- Express Pipeline Ltd. Human health risk assessment of air emissions from a natural gas pipeline terminal and estimation of risks associated with an oil spill (1996).
- Kerr McGee Canada Ltd. Human health/ecological risk assessment of a well site (1996).
- Weyerhaeuser Canada Ltd. Log deck runoff water quality study, Drayton Valley (1996).
- Amerada Hess Canada Ltd. Assessment of potential effects on livestock associated with ingestion of sulphate in drinking water (1995).
- Amoco Canada Ltd. Human health/ecological risk assessment of an abandoned battery site at Ricinis, AB (1995).
- Amoco Canada Ltd. Human health/ecological risk assessment of a well site, Sundre (1995).
- Canadian Occidental Petroleum Ltd. Assessment of produced water spill effects on cattle (1995).
- Weyerhaeuser Canada Ltd. Risk assessment of air emissions from Edson OSB mill for renewal of operating permit under the Alberta Enhancement and Protection Act (1995).
- Weyerhaeuser Canada Ltd. Risk assessment of air emissions from Grande Prairie pulp mill for renewal of operating permit under the Alberta Enhancement and Protection Act (1995).
- Trus Joist MacMillan Ltd. Evaluation of indoor air quality associated with "Timberstrand" manufacturing operations, Deerwood, MN (1994).
- Drayton Valley Power Ltd. Environmental protection plan for a wood waste-fired power plant in Drayton Valley (1994).
- Lafarge Canada Ltd. Human health/environmental risk assessment of air emissions from cement manufacturing operations at Exshaw (1994).

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- Weyerhaeuser Canada Ltd. Human health and occupational health risk assessment of air emissions associated with a proposed oriented strand board facility at Grande Prairie (1994).
- Weyerhaeuser Canada Ltd. Environmental protection plan application for a proposed OSB facility and harvesting operations at Grande Prairie (1994).
- Lafarge Canada Inc. Cement kiln secondary plume formation: sources, potential human health and ecological effects, Exshaw (1994).
- Centech Solutions Inc. Human health risk assessment associated with BTEX air emissions from an oilfield incinerator in Kindersley, Saskatchewan (1994).
- Lafarge Canada Inc. Human health and ecological risk assessment associated with tire test burns at the Exshaw plant (1993).
- Weyerhaeuser Canada Ltd. Environmental site selection study for a proposed oriented strand board plant near Grande Prairie, Alberta (1993).
- Atomic Energy Canada Ltd. Review of EIS on the "Concept for Disposal of Canada's Nuclear Fuel Waste." Assistance with preparation of Executive Summary (1993).
- Dow Chemical Canada Inc. Environmental monitoring of air, water, vegetation, wildlife and noise in the vicinity of Dow's Fort Saskatchewan complex (1993).
- Alberta Environment, Wastes and Chemicals Division. Phase II site investigations and risk assessments of three wood preserving sites (1993).
- Weyerhaeuser Canada Ltd. Environmental protection plan, "Clean Air" and "Clean Water" applications to construct a wood waste-fired electrical generating plant in Drayton Valley (1993).