

GORDON J. JOHNSON, M.Sc., P.Eng. - Curriculum Vitae

Mr. Gordon Johnson, P.Eng., M.Sc., has over 35 years of professional experience in the areas of civil and geotechnical engineering, environmental engineering, water resources, contaminated sites remediation and regulatory services. His waste management related experience includes investigations, designs, permitting, construction supervision, technical reviews and performance monitoring for approximately 50 landfills and containment facilities located throughout North America. The facilities include hazardous waste landfills; cement, lime and coal ash landfills and impoundments; hazardous waste landfills; and municipal solid waste landfills. For the Government of Alberta, Mr. Johnson provided formal technical review of all three hazardous waste landfills in the Province, and provided guidance for Quality Assurance and Quality Control procedures for liners and caps used in landfill construction. He has extensive experience in the assessment and mitigation of contamination associated with old landfill disposal sites.

Mr. Johnson has designed, permitted and/or supervised construction of over 50 HDPE lined impoundment facilities for a variety of applications and was retained by the Province of Alberta to develop liner standards in this regard.

EDUCATION		Years of Experience
1984	Master of Science, Civil Engineering, University of California, Berkeley, California, United States	<ul style="list-style-type: none"> 35 years
1981	Bachelor of Applied Science, Geological Engineering, University of British Columbia, Vancouver, Alberta, Canada	Professional Affiliations
POSITIONS		<ul style="list-style-type: none"> APEGA APEG BC
Present	BURGESS ENVIRONMENTAL President Sole proprietorship, providing professional consulting services in the areas of environmental and geotechnical engineering.	Areas of Expertise
2014 - 2016	SNC-LAVALIN GROUP <i>Environment & Water</i> Managing Director	<ul style="list-style-type: none"> Environmental Geotechnical Site Remediation Mining
2011 - 2014	NORWEST CORPORATION, CALGARY, ALBERTA, CANADA <i>Corporate Development</i> Senior Vice-President	Languages
2009 - 2011	IMPERIAL OIL LIMITED, CALGARY, ALBERTA, CANADA <i>Geotechnical and Water Resources</i> Manager - Mine Technical group	<ul style="list-style-type: none"> English
2006 - 2009	WORLEYPARSONS, CALGARY, ALBERTA, CANADA General Manager/Director	Site Experience
1987 - 2006	KOMEX INTERNATIONAL LTD., CALGARY, ALBERTA, CANADA President of Canadian Operations; Manager (Environmental Services)	<ul style="list-style-type: none"> Canada United States International

GORDON JOHNSON, M.Sc., P.Eng. – Representative Project Experience

Waste and By-Product Facilities

- › *Design, permitting, construction, monitoring and reclamation of 14 industrial landfills owned and operated by Lafarge North America, and located throughout Canada and the United States.*
- › *Design, permitting, construction, monitoring and reclamation of over 10 oilfield waste landfills located throughout western Canada. Landfills were operated both as commercial, third party facilities and as purpose-built landfills for specific oil and gas operations.*
- › *Design and permitting of a buried sulphur disposal facility located in central Wyoming on behalf of Burlington Energy. Primary environmental concerns were associated with sulphur acidification and the related impacts to water and soil.*
- › *Design and permitting of a sulphur forming and shipping facility for CCS Energy Services. This facility was subject to formal objection under the Environmental Protection and Enhancement Act. Primary environmental concerns were associated with sulphur acidification and the related impacts to water and soil, as well as air quality.*
- › *Design and implementation of numerous neutralization, burial and containment systems for acid generating materials associated with mining, oil & gas and industrial operations.*
- › *Design and permitting of a containment system to manage wastes and contaminated soils associated with the former Calgary Used Oil Refinery.*
- › *Containment and reclamation designs and permitting for petroleum coke disposal piles generated by bitumen upgrading operations at Suncor's Base Mine.*
- › *Containment and reclamation designs and permitting for petroleum coke disposal piles generated by bitumen upgrading operations at Syncrude's Mildred Lake Mine.*
- › *Design and permitting of lime waste disposal landfills associated with Graymont's western Canadian lime manufacturing plants.*

Mining and Mine-Related

- › *Mine Technical Manager for Geotechnical and Water Resources in support of the Kearl Oil Sands Project, Kearl Initial Development and Kearl Expansion. Responsibilities included planning and vetting designs for mine tailings management, mine wastes, surface water management and diversions, reclamation planning, groundwater depressurization, and mine pit slope stability.*
- › *Design of the basal sand depressurization infrastructure for the Kearl Mine development and operations.*
- › *Project manager for the design and permitting of the fish habitat compensation lake for Muskeg River Mine Expansion.*
- › *Planning, design and design review for the basal sand depressurization and Pleistocene Channel dewatering systems for Jackpine Mine, including the design of a deep bentonite slurry cut-off wall adjacent to Jackpine Creek.*
- › *Project manager for the rehabilitation of Lower Hazeltine Creek, following the breach of the tailings containment facility associated with the Mount Polley mine.*
- › *Project manager for the maintenance phase of the remedial response to the release of the coal tailings impoundment associated with the Obed Mountain Mine.*
- › *Design and construction QA/QC for the installation of a bentonite slurry containment wall for the sulphur storage area of CNRL's Horizon oil sands mine.*
- › *Preliminary engineering and permitting support for proposed metallurgical coal mines located in the Coal Valley and north of Fernie, British Columbia.*
- › *Hydrologic assessment and reclamation planning for the former mine pit associated with Barkerville Gold's Quesnel river Mine.*
- › *Hydrologic and geotechnical assessment, and reclamation planning for the former underground workings associated with Barkerville Gold's Quesnel River Mine.*
- › *Preliminary design of a groundwater depressurization and hydrogen sulphide mitigation system for the Fort Hills mine.*
- › *Investigation and design of waste rock dumps and mine infrastructure for the Line Creek coal mine located near Sparwood, B.C.*
- › *Assessment and conceptual reclamation planning for waste dumps associated with the Maxine Mine in Alabama and San Miguel's lignite mine near San Antonio.*

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Contaminated Site Assessment and Remediation

- › Design, implementation and permitting of the assessment and remediation of the former Edmonton Used Oil Refinery, which was acquired by Shell Canada as part of the acquisition of Turbo Energy. This remediation project involved identification and off-site disposal of hazardous wastes, on-site containment of contaminated soils, in situ groundwater remediation, stakeholder consultation and regulatory stewardship.
- › Design, remediation and redevelopment of former refinery and highway maintenance yard located in Grande Prairie, Alberta.
- › Project director and client contact for Shell Canada Resources' upstream oil and gas assessment and remediation projects for all of their western Canadian assets. Responsibilities included multi-year assessment and remediation programs for Shell's Waterton Complex, Jumping Pound Complex, Caroline Complex, Peace River Pilot Project, Burnt Timber Gas Plant, Midale Oil Production Complex and numerous oil production sites. Annual expenditures were typically on the order of \$10M.
- › Project Manager for the design, permitting and stakeholder consultation for the former Hub Oil Used Oil Refinery following a fire and series of explosions that destroyed the refinery.
- › Design and implementation of numerous remediation projects for Petro-Canada's Wildcat Hills Gas Plant.
- › Senior project reviewer for the assessment and remediation of the Red Deer River spill response program on behalf of Shell Canada Resources.
- › Review and design optimization for the Rock Bay remediation project completed on behalf of BC Hydro.
- › Design and construction of a bentonite slurry cutoff wall at Shell Canada's Jumping Pound Gas Plant to prevent migration of hydrocarbon contamination into Pile of Bones Creek.

Environmental Impact Assessment and Permitting

- › *Sponsor and Water Resources Discipline Lead for the EIA for Shell's proposed 140,000 bbls/day Carmon Creek heavy oil development project. The project involved steam injection at up to 50 well pads comprising multiple well installations, heavy oil production and treatment, and water production, separation and recycling. Responsibilities included project management and representation, water resource discipline lead, and client interface.*
- › *Project manager and technical lead for the EIA for a sulfur processing and forming facility located near Edmonton, Alberta. Responsibilities included overall coordination and preparation of the EIA report, as well as technical lead for representation of the project in a joint Alberta Environment and Natural Resources Conservation Board hearing.*
- › *Project manager and technical lead for the assessment and permitting for expansion of the Exshaw Cement Plant located near Canmore, Alberta. The project involved the expansion of the cement plant to approximately 2 million tonnes per year. Responsibilities included overall coordination and preparation of the EA report, as well as project representation to local stakeholders and regulators.*
- › *Project manager and technical lead for the EIA for a lime production facility located near Prince George, British Columbia. Responsibilities included overall coordination and preparation of the EIA report, as well as technical representation of the project to Provincial regulators.*
- › *Environmental assessment and permitting lead for the authorization of over 30 waste management facilities and industrial landfills located in jurisdictions throughout North America.*
- › *Environmental assessment and permitting of a frac-sand mining operation located in Peace River, Alberta.*
- › *Formal Environmental Impact Assessment and restoration planning for the lands and water bodies affected by the Mount Polley tailing impoundment facility failure.*
- › *Hydrogeological assessment of the produced, treated water disposal facilities and wells associated with the Khafji Joint Operations facility located in northeast Saudi Arabia.*

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Legal and Regulatory Representation

- › *Represented River Keepers in its litigation against Drummond Corporation related to the closed Maxine Mine geologic overburden pile.*
- › *Represented the Peelers in their litigation against San Miguel related to environmental impacts associated with the San Miguel lignite mine and associated power generating facilities.*
- › *Represented Progress Energy in litigation involving produced water storage and recycling facilities located in northeast British Columbia. The primary issue of concern was contamination associated with acid rock drainage. Progress was seeking compensation from the previous owner related to indemnities included in the sales agreement.*
- › *Represented the owner of the Westbrook Mall in the expropriation of lands required for development of a light rapid transit system. The land owner was seeking fair compensation irrespective of contamination associated with a gasoline retail operation that was located on the expropriated lands.*
- › *Represented a landowner whose land was flooded by the construction of the northeast Ring Road that bypasses the City of Calgary. Mr. Johnson represented the landowner in Provincial actions related to wetlands disturbance and in a lawsuit against the road developer.*
- › *Represented the Keephills landowners associated in the regulatory hearing for the Keephills Expansion proposed by Transalta Utilities. The primary concern of the Association was potential impacts to soil, air and water quality associated with the management of bottom and fly ash produced by thermal coal power generating facilities.*
- › *Testified on behalf of a land developer regarding the presence of a former landfill in a residential development. The land developer was seeking fair compensation and treatment for encumbrances associated with the former landfill.*
- › *Represented ATCO Electric in two separate Land Compensation Board hearings involving compensation for impacts to mining and gravel operations associated with electrical transmission projects in the Province of Alberta.*
- › *Representation and testifying lead for the hearing for the Sulphur Forming and Shipping Facility, located in Bruderheim, Alberta. A landowners association organized to oppose the project, which was subject to formal hearing under the jurisdiction of the Natural Resources Conservation Board.*
- › *Represented Alberta Oil Sands in a Land Compensation Board Hearing associated with lands that were contaminated by historical oil and gas operations.*
- › *Represented numerous landfill operators in environmental hearing processes associated with landfill expansions or initial landfill developments. Representations were related to landfill design, potential impacts to surface and groundwater, and nuisance effects that could impact nearby residents.*
- › *Represented Shell Canada in its response to potential lawsuits and regulatory challenges associated with the assessment and remediation of the former Edmonton Used Oil Refinery. Issues were related to Shell's management of and remedial approach to off-site contamination.*
- › *Represented Hub Oil in its defense of legal challenges related to the fire and explosions that occurred at its former Calgary Used Oil Refinery.*
- › *Represented Shell Canada in numerous lawsuits related to contamination of gasoline retail facilities that had impacted adjacent lands.*