



Ramli A. Halim

Mr. Halim is a Senior Geotechnical Engineer with over 20 years of experience in a broad range of geotechnical practice, including explorations, design and construction management. He has completed WHMIS (Workplace Hazardous Materials Information System), Hazardous Waste Site Worker, H2S Alive and OSHA training programs. Mr. Halim has undertaken numerous site investigations, prepared designs and carried out stability analyses relating to dams, dikes and embankments. He has also undertaken the preparation of tender documents, and supervised quality control and construction on projects located throughout North America, as well as overseas. Typical projects have been related to hydroelectric developments, mine tailing dams, dam safety reviews and rehabilitation work, transmission lines, airports, transportation facilities, environmental engineering and waste treatment facilities.

Education

University of Toronto, Toronto, Ontario

- B.A.Sc. Civil Engineering, 1978

McMaster University, Hamilton, Ontario

- M.Eng. Geotechnical Engineering, 1981

University of Michigan, Ann Arbor, Michigan

- M.B.A. International Business, 1987

Professional Associations

Association of Professional Engineers and Geoscientists of the Province of Manitoba—Member

Professional Engineers of Ontario—Member

Association of Professional Engineers, Geologist and Geophysicists of the Northwest Territories—Licensee Member

State of Minnesota—Registered Professional Engineer

State of North Dakota—Registered Professional Engineer

Experience

Acres International—1987 to Present

1992

Senior Geotechnical Engineer

Project Manager for

- geotechnical study for stabilization methods along the Red River at Emerson, Manitoba for Manitoba Conservation. The work included preparation of technical specifications and construction drawings for installation of a shear key and riprap slope protection along the river bank
- geotechnical investigation and studies of retrogressive landslides occurring along a highway near the town of St. Lazare in western Manitoba. The study included preparation of short- and long-term remediation solutions for Manitoba highways and transportation.

Geotechnical coordinator for the recommitment study of the proposed 1470 MW Conawapa Generating Station in Northern Manitoba for Manitoba Hydro. Responsible for coordinating all geotechnical designs and costs for the earth structures (dams and cofferdams), overburden and rock excavations, grouting and rock supports.



Geotechnical reviews related to dam safety, stability and integrity of tailings dams for a number of mines in Nunavut, for the Nunavut Water Board.

Independent expert in geotechnical and geo-environmental related issues during the public hearings and technical meetings of the Nanisivik Zinc Mine's Closure and Reclamation Plan in Nunavut for Nunavut Water Board.

Supervised geotechnical exploration programs, prepared borehole logs and investigation reports, and undertook designs related to

- three dam sites in Caribou Falls generation station, Ontario for Ontario Power Generation.
- oil refinery's expansion project in Saint John, New Brunswick. The expansion project included preparation for laydown areas and construction of various new refinery units on a 30-acre site
- a feasibility study for potential groundwater resources at Rolling River First Nations, Manitoba
- upgrading of a waste treatment lagoon project at an oil refinery facility in Saint John, New Brunswick. A total of 25 boreholes were drilled, up to 25 m deep each in the dike fills and through the soft foundation containing silt and organic peat deposits
- raising of an existing rock-fill dike at an oil refinery storage facility in Saint John, New Brunswick. The rock-fill dike, which is approximately 30 ft in height and 1000 ft long, was lined with both PVC and clay liners along its upstream slope
- rehabilitation works on a number of rock-fill and earth dikes at an oil refinery site in Saint John, New Brunswick
- concrete coring program at a 60-yr old stop log spillway structure at Winnipeg Hydro's Slave Falls generating station near Pointe du Bois, Manitoba
- a closure plan for fly ash disposal area and designed coal stockpile layouts for Elkem Metal Co., Marietta, Ohio
- Lester B. Pearson International Airport, Terminal 2 extension, Toronto
- a proposed replacement of an existing 20 lattice tower structure for a 115kV transmission line in Fort Erie, Ontario
- various structures for the proposed car house maintenance and repair buildings, and in the subway yard of the Toronto Transit Commission's Greenwood Yard
- the stabilization of the west embankment and wing wall leakage for the Twin Falls generating station in Iroquois Falls, Ontario
- the electrical transmission tower foundations for a 175-km long, 500-kV transmission line project between Lennox and Bowmanville, Ontario
- proposed Highway 416 and CNR subway in Ottawa, Ontario
- Ontario Hydro substation sites in Niagara Falls and Brampton, Ontario
- a proposed service tunnel through a railway embankment at Petro-Canada refinery plant, Oakville, Ontario
- two potential hydroelectric project sites at Nine Mile Rapids and Blacksmith Rapids, northern Ontario
- the Niagara Parks Commission's service center in Niagara Falls, Ontario

- rehabilitation of an overhead crane tracking system at the Shaw Pipe coating plant, Welland, Ontario
- realignment of the Government Road and extension of the sewer system, St. Catharines, Ontario.

Carried out geotechnical designs, analysis, assessment and evaluation of

- a diversion channel and earth dykes for the flood protection at Grande Pointe, Manitoba
- river bank slope stability for the flood protection infrastructure in Riverside, Manitoba
- a rehabilitated dam in Kiskitto, Northern Manitoba
- earth dikes, embankment dams, construction access roads and railway spurline for the proposed Gull Rapids generating station in northern Manitoba
- earth dikes forming the sewage treatment lagoons at Paint Lake Provincial Park near Thompson, Manitoba
- integrity of earth and rockfill dams at seven hydroelectric sites in Northern Ontario for Ontario Power Generation. The study was prepared as part of Ontario Power's dam safety program
- proposed early warning systems at the Grand Rapids and Seven Sisters generating stations to detect and warn local residents of a dam breach occurrence
- a proposed 1400-m long, partially concrete-lined approach channel, a concrete-faced rockfill embankment and construction plugs for the 170MW Keenleyside power plant project design-build proposal
- the reconstruction of Kenogami dam, a 300-m long, 20-m high, zoned rock-fill dam with cement bentonite slurry trench cutoff in JonquiFre, QuTbec, after extensive damage caused by a flood in the Saguenay region in the summer of 1996
- dike stability during a potential wave overtopping event at Grand Rapids generating station, Manitoba. The work was part of the dam safety program conducted for Manitoba Hydro
- long-term performance of soil bentonite slurry trench cutoff walls. The work is related to the Butnau dam's slurry trench wall constructed in 1971 at the Kettle Rapids generating station in northern Manitoba
- the construction of an approximately 1200-m long, 10-m high aerated stabilization basin dike at a paper mill site in Saint John, New Brunswick.

Supervision of construction activities for the following

- field survey work using global positioning system to determine ground control stations along a 128-km long electrical transmission line from Winnipeg to Pointe du Bois for Winnipeg Hydro
- rock drilling and core logging of an approximately 1300-m long pilot hole at the 50-MW Mamquam River hydroelectric project site near Squamish, British Columbia. The pilot hole was used to raise bore an approximate 3.5-m diameter vertical shaft connecting the upper and lower power tunnels
- rehabilitation work on the abutments at the Hollingsworth generating station dam near Wawa, Ontario

- construction of a waste retention dam in Marietta, Ohio, for Elkem Metals Company. The work consisted of placement of approximately 100 000 m³ of fill
- a dry dock cofferdam at the Hibernia oil development project site at Bull Arm, Newfoundland. The cofferdam, which consisted of double rock-fill berms with an impervious till core, was constructed under seawater conditions
- construction of firehall buildings, substations, protective gabion seawall, installation of underground power cables, etc, at various airports in the Caribbean and South America
- a remedial work for railway track and concrete approach slab for weigh scale at B.F. Goodrich plant, Niagara Falls
- rehabilitation of an existing dam at the Long Pond dike, Long Pond, Newfoundland.

Provided supervision and quality control for

- asphalt placement for resurfacing of an airport runway in St. Catharines, Ontario
- asphalt pavement and runway rehabilitation work at a number of airports in the Caribbean, including Vigie airport, St. Lucia, Canouan airstrip, St. Vincent and the Grenadines, Barbuda airport, Antigua-Barbuda, Newcastle airport, Nevis, and Timehri International Airport in Guyana.

Carried out various geotechnical related activities, including

- investigations and stability analyses related to the rupture of Centra Gas natural gas pipeline where it crosses below the La Salle River to the south of Winnipeg
- field inspection for BC Hydro during the compaction grouting of two sinkholes at WAC Bennett Dam, British Columbia. The two sinkholes, encountered in the summer of 1996, were located within the centre and upstream of the dam's core, respectively
- evaluation of earthwork deficiencies and development of remediation measures at Kelsey generating station in northern Manitoba
- prepared final designs, construction documents and construction drawings related to powerhouse excavation, powerhouse and canal construction for the Owen Falls extension project near Jinja, Uganda
- prepared data for tenderers documents, including analysis of laboratory test results, and preparation of more than 300 borehole/test pit records for the Stage I cofferdam contract for the Conawapa generating station in northern Manitoba.

1982–1985

Cansult Ltd./Trow Middle East, Riyadh, Saudi Arabia

1983

Laboratory Manager

Supervised soil, concrete, asphalt, and construction materials laboratory testing at main laboratory in Riyadh, Saudi Arabia, including

- testing on asphalt samples and materials including asphalt mix design for the construction of Riyadh's King Khaled International Airport

- quality control of materials for the construction of 500 houses for the University of Riyadh housing project
- a series of structural plate load tests on collapsing soil behavior of aeolian sand for the Ministry of Housing project in Dammam.

1982

Geotechnical/Materials Engineer

Supervised geotechnical investigations including

- quality control of pavement materials for rehabilitation of existing roads in Riyadh
- geophysical testing to determine earth resistivity for grounding systems of 17 transmission/communication towers in Riyadh, Jeddah, and Taif and a radar installation at Masirah Island military airport, Sultanate of Oman
- exploratory work to determine suitability of borrow materials for the construction of the Port of Jizan
- geotechnical investigation for the proposed bulk oil facilities in Jizan.

1980–1982

Geotechnical Engineer

Acres Consulting Services

Carried out design studies for

- existing embankment dams associated with Atikokan thermal power station, Ontario
- earth-fill dam for Amarti River diversion, Ethiopia
- seepage and infiltration studies associated with the development of a mining project in Brazil
- analyses for heap leach uranium recovery facilities in the Gas Hills area of Wyoming
- various other geotechnical studies including Keating Channel, Toronto; Upper Salmon hydroelectric project, Newfoundland; Lake Tana regulating dam, Ethiopia; and St. Marys redevelopment project, Ontario.

Carried out field geotechnical investigations for

- a feasibility study of a 100-ft high concrete arch dam at Granite Canyon, Yukon, Territory
- a hydroelectric plant rehabilitation at a paper mill site at Espanola, Ontario
- a full-scale load testing of pipe piles at a steel mill site, Hamilton, Ontario
- a 132-kV and 220-kV transmission lines and substation project, Kenya.

Technical Publications

Long-Term Performance of Slurry Trench Cut-off Wall at Butnau Dam

Prepared for the 1st CDA Conference, Halifax, Nova Scotia, October 1998. (Coauthor)

Environmental Constraints on Geotechnical Investigations for Power Transmission Lines

45th Canadian Geotechnical Conference, Toronto, Ontario, Paper No. 80, October 1992. (Coauthor)

Aggregate Surface Texture Influence on Asphaltic Concrete Skid Resistance

M.Eng. Thesis, McMaster University, Hamilton, Ontario, 1981.