



Engage. Innovate. Inspire.



### EDUCATION

Bachelor of Science Mechanical Engineering with Distinction, 1974  
University of Saskatchewan  
Saskatoon, Saskatchewan

### AFFILIATIONS

NAPEG, Former President, Life Member  
ASHRAE Life Member  
APEGS Life Member  
APEY  
ACEC-NWT, Former President

### PROFESSIONAL MEMBERSHIP

NAPEG P.Eng. 1407

### CERTIFICATIONS

Fundamentals of Infection Control during Construction, Renovation or Maintenance of Health Care Facilities

Practical Applications in Infection Control during Construction, Renovation or Maintenance of Health Care Facilities

Indoor Air Quality – The Role of HVAC Systems in Healthcare Facilities

## Brian George, P.Eng., FEC

Mechanical

Brian has over 40 years of specialized experience in mechanical engineering with over 25 years of working in Northern Canada. He has designed mechanical systems for apartments, hospitals, labs, offices, schools, warehouses, office buildings and apartments throughout Yukon, Nunavut and the Northwest Territories.

Brian's experience includes high and low pressure steam systems; central plants; piping stress analysis; direct bury and utilidor type distribution systems; plumbing systems; medical gas systems; fire protection systems; heating systems using radiant ceiling panel, perimeter radiation and slab heating system; site storm, sanitary and water services; water treatment and waste treatment facilities; ventilation and cooling systems of all types; dust collection and exhaust systems; fully computerized DDC controls, pneumatic and electric controls. He has worked on a number of refrigeration systems from liquid ammonia beer cooling systems in a brewery to brine/ammonia systems for hockey and curling arenas.

Except for Yellowknife, Hay River, Inuvik and Norman Wells almost all projects in the North include some work on a fuel system for the building. Brian has worked on fuel systems across the Arctic from small single tank systems feeding housing through to tank farms and dispensing systems serving communities and mine sites.

## RELEVANT PROJECT EXPERIENCE

### AIRPORT FACILITIES

#### Combined Services Building; Yellowknife, NT

Senior Mechanical Engineer for this design & field services project for the vehicle maintenance building at the YK Airport.

#### Airport Fuel Facility; Deline, NT

Senior Mechanical Engineer for the design of a new aviation dispenser system at the Deline Airport.

#### Air Terminal Building; Tuktoyaktuk, NT

Provided peer review of the design and site inspection services for this new terminal building.

#### Air Terminal Building; Norman Wells, NT

Provided construction services for the construction of the new air terminal building.

#### Air Terminal Building; Arviat, NU

Provided a review of ventilation problems of this air terminal building.



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### **Airport Fuel Dispensers; Cambridge Bay, NU**

Conducted a review of the existing airport fuel dispensing systems.

### **Fuel Facility; Hall Beach, NU**

Senior mechanical designer on the upgrade of the fuel facilities and pipelines to the existing dispensing system.

### **Airport Vehicle Maintenance Garage; Resolute Bay, NU**

Senior design engineer for this maintenance garage.

### **Airport Fuel Facility; Resolute Bay, NT**

Senior mechanical designer for the aviation fuel dispensers.

### **Air Terminal Building; Grise Fiord, NT**

Senior Mechanical designer for this new air terminal building.

### **Air Terminal Building; Fort Smith, NT**

Senior Mechanical design engineer for this expansion to the existing air terminal building.

### **Passenger Security Area Upgrade; Yellowknife, NT**

Mechanical designer for the renovations to the passenger security area.

### **Airport Fuel Dispensers; Paulatuk, NT**

Mechanical designer for the addition of new fuel dispensers at this airport.

### **Department of Defense Helicopter Refueling Facility; Kugaaruk, NT**

Senior mechanical designer on this new facility to the airport.

## **POLICE/ CORRECTIONAL FACILITIES**

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### **RCMP Detachment; Inuvik, NT**

Engineer of Record for the design and construction of the new detachment building in Inuvik completed in 2016. Brian did reviews of the project throughout design and provided the majority of field inspections for the mechanical systems. The project included the use of a chilled beam system throughout the office areas of the building.

### **RCMP Headquarters Controls Upgrade; Yellowknife, NT**

Engineer of Record for the design and construction of the controls system upgrade of the existing DDC system. Brian did reviews of the project throughout design and provided progress inspections during construction. This project will be completed in 2018.

### **RCMP Air Conditioning Upgrade; Fort Simpson, NT**



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Engineer of Record for the design and construction of an air conditioning upgrade for this existing detachment building. Construction will be finished in 2018.

**RCMP Cell Retrofit; Deline, NT**

**RCMP Fuel System Upgrades; Yellowknife, NT**

Upgrading the fuel oil systems to meet current codes.

**RCMP Operational Communication Centre Cooling Review; Yellowknife, NT**

Reviewing cooling problems and comfort problem in the OCC area.

**RCMP Detachment Renovations; Yellowknife, NT**

Upgrading the security of the mechanical systems in the cells. Reviewing the location of fire separations and the types of fire stop devices in the building. Review generator and incinerator smoke re-entry problems from the roof. Renovations to various office areas in the building. Review of the propylene glycol conditions in the building.

**RCMP Air Handling Unit Replacement; Yellowknife, NT**

Reviewing the cell air handling unit and how it could be replaced.

**RCMP Cell Retrofit; Aklavik, NT**

**RCMP Cell Retrofit; Lutsel K'e, NT**

**Iqaluit Young Offender's Female Washroom Renovation; Iqaluit, NU**

**Yellowknife Correctional Centre Renovations; Yellowknife, NT**

**Youth Correctional Centre Utility Studies; NT**

**Female Young Offender's Facility; Iqaluit, NU**

**Parole Board Office Renovations; Iqaluit, NU**

**Baffin Correctional Centre Addition; Iqaluit, NU**

**Young Offender's Facility Upgrade; Iqaluit, Nunavut**

**South Mackenzie Correctional Centre AC Upgrade; Hay River, NT**

**Yellowknife Correctional Centre Facility Evaluation; Yellowknife, NT**

**Arctic Bay RCMP Detachment; Arctic Bay, NU**

**Coral Harbour RCMP Detachment; Coral Harbour, NU**

**Grise Fiord RCMP Detachment; Grise Fiord, NU**



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Kimirut RCMP Detachment; Kimirut, NU

Yellowknife RCMP Detachment Modifications; Yellowknife, NT

Paulatuk RCMP Detachment; Paulatuk, NT

RCMP Cell Security Upgrades; Yellowknife, NT

Baffin Correctional Centre Washroom Upgrade; Iqaluit, NU

Baffin Correctional Centre Mechanical Upgrades; Iqaluit, NU

RCMP Housing; NU

RCMP Nunavut Duplex Housing; NU

RCMP Housing; Pangnirtung, NU

### GOVERNMENT

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#### Water Board Offices; Gjoa Haven, NU

Senior mechanical engineer responsible for design and construction inspections for this one-story office building. The building is scheduled to be complete in 2019.

#### Cultural Center; Kugluktuk, NU

Senior mechanical engineer responsible for design and construction inspections for this two-story office/cultural building. The building was constructed in a design-build process and was completed in 2014.

#### Greenstone Government of Canada Building; Yellowknife, NT

Senior mechanical engineer responsible for design and construction inspections for this four storey LEED Gold building.

#### Pangnirtung Three-Bay Fire Hall; Pangnirtung, NU

Senior mechanical engineer responsible for design and construction inspection

#### Taiga Lab HVAC Review; Yellowknife, NT

#### WAM Facility Evaluation Update; Yellowknife, NT

#### Nahendeh Building Renovations; Fort Simpson, NT

#### Indian and Northern Affairs Canada Building Renovations; Fort Simpson, NT

#### Environment Canada Boiler Replacement; Norman Wells, NT



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Parks Canada Renovations; Iqaluit, NU

Stuart M Hodgson Building Ventilation Upgrade; Yellowknife, NT

Mail Processing Plant AC Upgrade; Yellowknife, NT

Arctic Bay Nunavut Housing Corporation Warehouse; Arctic Bay, NU

Bellanca Building Envelope Restoration; Yellowknife, NT

DND Recruitment Relocation; Yellowknife, NT

Stuart M Hodgson Building Generator Upgrade; Yellowknife, NT

Stuart M Hodgson Building Computer Centre Cooling Upgrade; Yellowknife, NT

Profac Boiler Manpower Study; Yellowknife, NT

Hay River Courthouse Technical Upgrades; Hay River, NT

Office Building; Kugluktuk, NU

Office Building; Iqaluit, NU

Office Building; Arviat, NU

Stuart M Hodgson Building Renovations; Yellowknife, NT

Tsiigehtchic Hamlet Office; Tsiigehtchic, NT

Yellowknife City Hall HVAC Upgrade; Yellowknife, NT

Nunavut Legislative Assembly; Iqaluit, NU

Jan Stirling Centre Fit Ups; Yellowknife, NT

RWED Sahtu Regional Office; Norman Wells, NT

North Slave Regional Office Boiler Replacement; Yellowknife, NT

Gogo Cho INAC Offices Evaluation; Yellowknife, NT

RCMP Offices Igluvut Building; Iqaluit, NU

Centre Square Office Renovation; Yellowknife, NT

Trout Lake Community Office; Trout Lake, NT



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Parnaivik Building Housing Corporation Fit Ups; Iqaluit, NU  
Centennial Library Upgrade; Hay River, NT  
Yellowknife Centre 5th Floor Fit Ups; Yellowknife, NT  
Yellowknife INAC Office Fit Ups; Yellowknife, NT  
Fort Smith RWED Office Fit Ups; Fort Smith, NT  
Tulita Hamlet Building; Tulita, NT  
Post Office Renovations; Yellowknife, NT  
Joe Tobie Building Fit Ups; Yellowknife, NT  
Iqaluit Environmental Canada Building; Iqaluit, NU  
Stuart Hodgson Building Ventilation Upgrades; Yellowknife, NT  
Sirmilik National Parks Office Renovation; Pond Inlet, NU  
Fort McPherson RWED Office Renos; Fort McPherson, NT  
Fort Liard Band Office; Fort Liard, NT  
Igloolik Science Centre Upgrades; Igloolik, NU  
Scotia Centre Renovations; Yellowknife, NT  
New Justice Facility Preliminary Design; Yellowknife, NT  
Nahendeh Building Tenant Improvements; Fort Simpson, NT  
Fort Simpson “Bunkhouse” Renovations; Fort Simpson, NT  
Perry Building Repairs; Inuvik, NT  
Fisheries & Ocean Garage Replacement; Yellowknife, NT  
Resolute Bay Garage; Resolute, NU  
Wekweti (Snare Lake) Parking Garage; Snare Lake, NT  
Garage Mechanical Ventilation Upgrade; Fort Providence, NT  
New Maintenance Garage; Inuvik, NT

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Hay River Maintenance Garage Building Envelope; Hay River, NT  
Gjoa Haven 3-Bay Parking Garage; Gjoa Haven, NU  
Maintenance/Parking Garage; Fort Good Hope, NT  
Kugluktuk 3-Bay Parking Garage; Kugluktuk, NT  
Kakisa Garage Two Bay Addition; Kakisa, NT  
Clyde River Firehall; Clyde River, NU  
J & G Garage; Iqaluit, NU  
Trout Lake Parking Garage Addition; Trout Lake, NT  
Parking/Maintenance Garage; Fort Resolution, NT  
Maintenance Garage Condition Report; Tuktoyaktuk, NT

## **FUEL FACILITIES AND TANK FARMS**

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Ft Simpson Rowes Fuel Facility  
Baker Lake Fuel Facility Expansion and Upgrade  
Sachs Harbour Airport Fuel Facility Planning Study  
Whati Fuel Facility, NT  
Lutsel K'e New Fuel Facility, NT  
Cambridge Bay Fuel Facility Regulatory Impact Study, NU  
Cambridge Bay Fuel Facility Gap Analysis, NU  
Giant Mine Tank Farm, Yellowknife, NT  
RTL Fuel System Review, Yellowknife, NT  
RTL Fuel Facility Fire Protection, Yellowknife, NT  
Baker Lake Fuel Dispensing Island, NU  
Nunavut Fuel Facilities Study



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GNWT Petroleum Products Division Fuel Storage Facility Standard Specification Development

Kitikmeot Petroleum Products Division As & When Services, NU

Kugluktuk Fuel Facility, NU

Baker Lake Fuel Facility, NU

Taloyoak Resupply Lines, NU

Paulatuk Fuel Facility, NT

Gjoa Haven Fuel Facility, NU

Taloyoak Fuel Facility, NU

Gjoa Haven Pipeline, NU

Deline Fuel Storage Facility Capacity Expansion, NT

Tuktoyaktuk Gruben Camp Review, NT

Tuktoyaktuk Gruben Fuel Facility Review, NT

Tuktoyaktuk Gruben Airport Fuel Facility, NT

Colville Lake Fuel Facility, NT

Holman Fuel Facility Upgrades, NT

Trout Lake Fuel Facility Diesel Upgrade, NT

Gameti Fuel Storage Upgrade, NT

Hall Beach Fuel Storage Facility Upgrade, NU

Kugaaruk Fuel Facility Expansion Study, NU

Kennady Lake Fuel Facility, NT

BHP Winter Road Fuel Facility Review, NT

WhaTi Fuel Facility, NT





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Tsiigehtchic Fuel Facility Upgrade, NT

Colville Lake Fuel Facility Upgrade, NT

Resolute Bay Rationalization Study, NU

Resolute Bay Fuel Facility Upgrade, NU

Lockhart Lake Fuel Facility, NT

Nunavut Fuel Facilities Insurance Review

Baker Lake Fuel Facility, NU

Tsiigehtchic Fuel Dispenser Building, NT

Kugluktuk Marine Resupply Relocation, NU

Lutsel K'e New Fuel Facility, NT

Paulatuk Airport Fuel Facility, NU

Sachs Harbour Fuel Facility Upgrades, NT

Wekweti Fuel Facility Upgrades, NT

Diavik Fuel Tank Inspections, Yellowknife, NT

Diavik Mobile Fuel Module, NT

Southport Aviation Tank Farm Design, NT

**Airport Fuel Facility;** Deline, NT

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## **MINING**

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**BHP Fuel Facility Review**

**BHP Truck Maintenance Facility**

**BHP Truck Shop Expansion**

**BHP Lube Storage Facility**

**BHP Gym Addition**

**BHP Accommodation Complex Addition**

**BHP Koala Pit Procon Office**