

**Site Specific Health and Safety Plan
Baker Lake Fuel Facility Upgrade
Baker Lake, Nunavut
GN Project No. 10-3017**

Submitted by:

Inukshuk Construction
P.O. Box 654
Rankin Inlet, Nunavut
X0C 0G0

Prepared for:

Government of Nunavut
Public Works and Services
P.O. Box 002
Rankin Inlet, NU
X0C 0G0

Point of Contact for Inukshuk Construction Limited:

David Mosher, P.Eng
Tel: (902) 429-0272
Res: (902) 429-3430
Fax: (902) 429-7762

Email: dave@inukshukconstruction.ca

Table of Contents

1.0	Company Safety Policy	3
1.1	Scope of Work	3
1.2	Safety Orientation	4
1.3	Hazard Assessments	4
1.4	Training Requirements	6
1.5	Personal Protective & Respiratory Equipment	8
1.6	Safety Meetings	9
1.7	Site Control	10
1.8	Confined Space Code of Practice	10
	1.8.1 Planned Work	
	1.8.2 Description of Hazards	
	1.8.3 Training Requirement	
	1.8.4 Entry Permit	
	1.8.5 Work Procedures	
	1.8.6 Required Tools and Equipment	
	1.8.7 Personal Protective Equipment	
	1.8.8 Pre-Entry, Entry and Post Entry Procedures	
	1.8.9 Hot Work Procedures	
	1.8.10 Confined Space Alarm Procedures	
	1.8.11 Confined Space Rescue Procedures	
	1.8.12 Roles and Responsibilities During Tank Work	
1.9	Incident Reports and Accident Reporting	19
1.10	Wildlife Monitors	20
1.11	Emergency Response	21
1.12	Emergency First Aid	22
1.13	Medical Evacuation Plan	23
1.14	Hazardous Material and POL Spills	23
1.15	MSDS Sheets	25
Appendix A	Confined Space Work Permit	
Appendix B	Hot Work Permit	
Appendix C	Spill Contingency Plan	
Appendix D	Confined Space Training Certificate	

1.0 Company Safety Policy

Inukshuk Construction Limited (ICL) and its sub contractors are committed to protecting the health and safety of employees at our job sites. We have a comprehensive safety program in place since 1999 that is recognized by the Nova Scotia Department of Environment and Labour.

Precedence will be given to the safety and health of the site personnel and public, and the protection of the environment, over cost and schedule of the Work.

We intend to fully comply with the project specific health and safety requirements in Division 1 - Section 01705. We also intend to comply with the Canada Labour Code, Nunavut Occupational Health and Safety Regulations, the Northwest Territories and Nunavut Codes of Practice for Confined Spaces and the Workers Compensation Boards of NWT and Nunavut.

This site-specific plan can be revised to incorporate the Government of Nunavut's comments.

1.1 Scope of Work

The work in this contract consists of the following:

- Provide new 3,400 m³ diesel fuel storage tank and convert existing 941 m³ storage tank from diesel fuel to gasoline;
- Perform tank base maintenance on TK-18 and TK-19;
- Cover the exposed liner south of horizontal tank;
- Add kick plates to roof handrails on two tanks;
- Replace missing signs;
- Replace dispenser building and demolish the existing building;
- Replace the flooring, window, and console in the operator shelter;
- Increase the size of connection to TK-19;
- Increase the size of diesel piping to 150 mm;
- Recoat pipelines and horizontal tank. Spot recoat vertical tanks;
- Coat new vertical tank;
- Add emergency and safety valves;
- API 653 inspection on existing tanks;
- Add pipe sleeves to existing berm penetrations;
- New concrete pad;
- New high-level alarm system;

- New wiring and connection to control panel, power and lighting;
- Remove existing grounding and install new grounding;
- Power and control disconnections, wiring and conduit removal;
- Static grounding depth modification; and
- Connect safety valves and level switches.

1.2 Safety Orientation

Upon arrival at Baker Lake, our crew will receive an initial orientation and site regulations briefing from the health and safety coordinator.

We conduct a safety orientation for all new employees, supply appropriate PPE, and ensure that all employees have the required training.

1.3 Hazard Assessments

General

Following the initial orientation, our crew will conduct a site-specific hazard assessment and incorporate the findings into our safety plan. The hazard assessment will be reviewed on a regular basis and revised if conditions at the worksite change, on the introduction of new work processes or when work processes or operations change. They will review all safety procedures for decommissioning fuel lines, handling of petroleum products, gas freeing procedures, confined space entry, and preparation of hot work permits. All members of the crew will be familiar with emergency and fire safety procedures, including near miss reporting, reporting requirements as per Safety Regulations, HAZMAT, and Medevac.

The crew will not perform any work that is unsafe or in an unsafe manner.

Project Specific Hazards Assessment

Some of the project specific hazards on this project include:

Description

Injuries resulting from movement or lifting of heavy equipment or materials

Mitigated By

- Proper packaging
- Steel toed work boots and use of other PPE (hard hat, work gloves, etc.)
- Following proper lifting techniques

Working with fuels / contact with tank sludge	• Use of PPE (appropriate gloves, eye protection, respirators, disposable coveralls, etc.) • Use of absorbent paper • Training, MSDS and use of proper tools and procedures • Care when working with flammable products • Rubbish and waste materials to be removed at end of each day or shift and to ensure oily or greasy rags or materials are deposited and kept in approved receptacle and removed.
Fall Protection	• Use of Fall protection arrest / harnesses • Keep Work space and floors clear and clean
Elevated Piping Installation	• Proper use of ladders and
Pressure Testing	• Use of proper tools and procedures • Maintain tools in good working order • Restricted access to test locations • Use of water for test media
Building Fire Safety	• Fire Safety Plan and fire extinguishers • Use of fire watch while welding • Training and PPE • Ensure smoking in designated only • Storage of flammable liquids in approved safety cans • No transfer of flammable liquids in the vicinity of open flames or any heat-producing devices.
Welding	• Use of fire watch • Use of welding shields to prevent flashes • Maintain tools in good working order • Ensure fire extinguisher is present at location of welding
Severe Cold and Unpredictable Weather	• Use of suitable clothing and layering of clothing • Arctic Survival Gear

Electrical Safety	• Use of proper grounds on hand tools • Ensure tools and cables are in good conditions
Eye Injuries	• Use of appropriate eye protection for grinding and cutting
Confined Space	• Confined space training and PPE to mitigate risks. • Designated tank entry, safety attendant, and additional safety personnel. • Restrict presence of matches, lighters, jewelry, and metallic objects by cleaning crew or other persons within 15 m of tank. • See Section 1.8 below.
Presence of Bears	• Good housekeeping and awareness
Remote Sites	• First aid training and properly stocked first aid kit, regular communication
Unforeseen Hazards	• Follow procedures in the applicable OH&S Acts and Regulations.

During the performance of the Work, should any new hazard or condition become evident that is not already identified for the Work and Site conditions, work will be stopped and the new hazard will be communicated immediately to the Engineer.

1.4 Training Requirements

Inukshuk Construction is responsible for maintaining a healthy and safe workplace with its employees by ensuring equipment and practices incorporate best practices and that employees are provided with appropriate training to perform their duties in a healthy and safe manner.

Supervisors are responsible for developing and maintaining proper attitudes toward Health and Safety in themselves and in those they supervise, and for ensuring that all operations are performed with the utmost regard for the Health and Safety of all personnel involved.

The following supervisors will be responsible for Health and Safety at the project site:

- Sheldon Burry
- Jim Henderson
- Shawn Saunders

They will have the authority on this Project to stop or start work for reasons of health or safety. The Coordinator will also be responsible for health and safety training and ensuring that all crew that are working on the site have the required training to do so. They are also responsible for implementing, enforcing and monitoring this Site Specific Health and Safety Plan on site.

Employees are responsible for wholehearted, genuine co-operation with all aspects of the Health and Safety program, including compliance with all rules and regulations, and for continually practicing safety while performing their duties.

All company personnel must recognize that the workplace may include locations that contain hazards; therefore all personnel must be committed to practices that ensure health and safety throughout the work environment and to regular workplace inspections.

All employees are to refer to the detailed work procedures and policies in Inukshuk Construction's Health and Safety Plan regarding:

- Responsibilities (Pages 3-10)
- Personal protective equipment (Pages 16-26)
- Equipment and tool maintenance (Pages 27-30)
- Training (Pages 32-33, 36-40)
- Health and safety meetings (Page 34 and 66)
- Workplace inspections (Pages 42- 51)
- Investigations (Pages 52 – 57)
- Emergency response and first aid (Pages 58 – 63)
- Hazardous Materials Management (Page 67 – 68).

All applicable health and safety documents, notices, or orders will be posted in a conspicuous location on site. Further, a binder will be maintained at the site with paper copies of MSDS for all WHMIS controlled items. WHMIS controlled items will be handled and used in accordance with the MSDS.

The following training will be provided specific to this Project:

First Aid

We will ensure that three members of the crew have first aid training.

IATA-Approved TDG Packaging Course

Jim Henderson has taken the IATA-approved TDG course several times and will be responsible for packaging and manifesting all TDG.

Confined Space

We will ensure that all crew working inside the tank and as safety watches will have confined space entry training. Further, crew members that work inside the tank will use gas monitors as detailed in Section 1.5 of this Site Specific Health and Safety Plan.

Fall Arrest

We will ensure that all crewmembers will have fall arrest system training.

1.5 Personal Protective & Respiratory Equipment

Personal protective equipment will be used to protect workers against potential hazards. Careful selection, use and care of PPE will protect the respiratory system, skin, eyes, face, hands, feet, head, body and hearing.

All new employees complete a safety orientation and are provided the required PPE, and training in the appropriate use of the PPE. Further information regarding new hire orientation can be found on Page 34 of the Inukshuk Construction Health and Safety Manual.

Recommended PPE for this project includes:

- Photo-ionization detection (PID) and lower explosion limit (LEL) sensor enabled gas meters
- Emergency escape respirator
- Tyvek Coveralls (While handling fuel)
- Steel-toed work boots (CSA approved)
- Hard hats
- Hearing protection
- Protective gloves and welding shields
- Safety glasses/goggles
- Safety harness & tripod retrieval system

Respirators and their use will be monitored and evaluated continuously through the Project to ensure proper fit, use, and to ensure the level of protection matches the hazard level and contaminants identified on site. Should the level of health protection increase during the project, ICL will notify the Engineer. Facial hair must not interfere with proper respirator fit.

Fit test reports will be provided for site personnel.

Additional Site Specific Rules for Baker Lake:

- Prescription eyeglasses must be safety glasses
- No contact lenses can be work on site within work zones
- Footware must be CSA approved steel-toed work boots that are covered by rubber overshoes when entering or working in potentially contaminated work areas
- At the end of each work day, PPE worn on the site must be disposed or decontaminated. Suitable containers will be used to store and protect the PPE. Disposable PPE must be disposed of appropriately in designated containers.
- Reusable PPE must be decontaminated before reissuing.

For further information regarding PPE, please refer to Inukshuk Construction's Health and Safety Manual, Pages 16 to 26.

1.6 Safety Meetings

As part of our company safety program, we conduct daily toolbox meetings, weekly safety meetings, and a monthly safety committee meeting. At our monthly meeting, representatives from each job sites participate in the meeting by teleconference. Minutes of both the weekly and monthly meetings are prepared and distributed by fax to each job site.

The meetings provide the opportunity to refresh site personnel on equipment and safe work procedures, review ongoing safety issues and protocols, and to discuss new site conditions that may arise.

Further information regarding the health and safety meetings can be found on page 34 of the Inukshuk Construction Health and Safety Manual. Monitoring of safety meetings held and attendance can be found on Page 66 of the Manual.

1.7 Site Control

Site control will be used to minimize potential contamination, protect the public, prevent the loss of equipment and tools, and prevent damage to site buildings. A site map will be used to orient the crew, plan work activities, and to establish work zones.

To minimize potential contamination, crew will follow decontamination procedures after each work activity (if necessary) and at the end of each work day.

Camp rules will be reviewed with the crew prior to mobilization. Alcohol and illegal drugs will not be permitted on site. Additional details regarding site security can be found in the Inukshuk Construction Health and Safety Manual Page 8.

The buddy system will be used on site so that each person is able to observe their partner for signs of chemical or heat or cold exposure, and to provide their partner with assistance if needed. Each crew member will be able to notify others or the Supervisor if emergency help is needed for their partner.

Communication is managed by the use of radios. Signals can be used as well since they can help communicate in a noisy environment so long as the signals are agreed to before hand.

The conveyance of emergency information off-site will be to the off-site Emergency Response Coordinator as per Section 1.11 below.

1.8 Confined Space Code of Practice

Following the requirements of the General Safety Regulations for Confined Spaces, ICL has identified all tanks requiring access inside on this Project to be confined spaces since they are fully or partially enclosed, not designed for continuous occupancy and it is possible that an atmospheric hazard could occur in the tanks. Regarding the new tank, a portion of the shell plate will be kept at the ground level while the interior work is completed. Once the access shell plate is installed, the tank will be considered a confined space.

The following tanks have been identified at Baker Lake as confined spaces:

- Tank #2 – existing Gasoline tank, 10.7 m diameter x 7.734 m high, with top and side entry;

- Tank #3 – existing Diesel tank, 12.8 m diameter x 7.4 m high, with top and side entry;
- Tank #4 – existing Diesel tank to be converted to a Gasoline tank, 12.8 m diameter x 7.4 m high, with top and side entry;
- Tank #5 – existing Gasoline tank, 9.126 m diameter x 7.69 high with top and side entry;
- Tank #6 – existing Gasoline tank, 9.144 m diameter x 7.62 m high, with top and side entry;
- Tank #7 – existing Diesel tank, 21.336 m diameter x 7.39 m high, with top and side entry;
- Tank #8 – existing Diesel tank, 24.2 m diameter x 7.4 m high with top and side entry; and
- Tank #9, new diesel tank, 24.2 m diameter x 7.4 m high with top and side entry.

1.8.1 Planned Work

Before entering a tank, the tank will be emptied and the piping to the tank will be carefully drained and disconnected to avoid fuel spills.

Each tank has one inlet and one outlet connection. The connection will be flanged, 150 # ANSI B16.5, 4" ns. A round steel plate with a handle (commonly called a banjo plate) will be installed between the flange connection on the tank and the inlet valve.

All fuel transfers will be completed with an explosion-proof pump. A tarp will be used to protect the ground outside the manhole for sludge transfer operations. The unavailable product that cannot be pumped out of the tank with the site transfer equipment will be pumped into adjacent tanks using the Velcon filter to prevent fuel contamination. All sludge drums will be appropriately labeled using stencils in accordance with the Specification. Further cleaning of the tanks will be conducted with crew according to the confined space entry procedures.

During the confined space work, the tank watchman/attendant will be stationed beside the tank hatch to control access to and from the tank and to ensure no unauthorized access. When the tank is unattended, the hatch cover will be put on to ensure no unauthorized access.

1.8.2 Description of Hazards

The following table outlines the potential confined space hazards that have been identified at this Project.

Atmospheric Hazards	Yes	No	N/A
Explosive atmosphere (gases, vapours, fine dust)	✓		
Oxygen deficiency	✓		
Oxygen enrichment		✓	
Toxic gases or vapours	✓		
Dusts, mists, fumes	✓		
Smoke	✓		
Biological agents			✓
Other			✓
Safety Hazards			
Entry/Exit:			
Small / narrow openings	✓		
Steep openings		✓	
Entry/Exit at Height		✓	
Angled Openings		✓	
Exits into traffic or machinery	✓		
Machinery/mechanical equipment		✓	
Piping and distribution systems	✓		
Residual chemicals or materials			✓
Safety Hazards			
Pressure Systems		✓	
Electrical hazards	✓		
Poor visibility	✓		
Physical obstacles		✓	
Walking/working surfaces	✓		
Temperature extremes: heat/cold	✓		
Humidity		✓	
Noise	✓		
Vibration			✓
Radiation – type?			✓
Other – type?			✓
Work Related Hazards			
Hot work - type?	✓		
Sandblasting		✓	
Bonding operations		✓	
Grinding	✓		
Cutting	✓		
Use of solvents, corrosive chemicals or cleaners	✓		
Use of paint/spray painting		✓	
Repairs	✓		
Installation	✓		
Inspection	✓		
Emergency rescue/first aid	✓		
Human Factors:			
Comments:			

1.8.3 Training Requirements

We will ensure that all crew working inside the tank and as safety watches will have confined space entry training. Confined Space Training Certificates for the crew working in the confined space will be available at the site. Further, crew members that work inside the tank will use gas monitors (meters) as detailed in Section 1.5 of this Site Specific Health and Safety Plan. The supervisor (facilitator) on this project is Sheldon Burry. His Confined Space Training certification is attached in Appendix D. Further, Sheldon has first aid training and will be the 'First Aider' on the site. The First Aid kit is No.2 NS.

1.8.4 Entry Permit

See Inukshuk Construction Limited Confined Space Work Permit in Appendix A.

1.8.5 Work Procedures

Inukshuk Construction will ensure that all tank entry safety requirements are met and that confined space entry procedures are followed. The procedures outlined below are for working directly below the entry hatch as there is no reliable extraction method for working at the back of the tank.

No person will enter a confined space until all requirements of the Confined Space Work Permit have been satisfied, until requirements under the Northwest Territories and Nunavut General Safety Regulations regarding Confined Spaces are met (see below), until the person in charge confirms that it is safe to enter the tank, until deemed by the employer to be qualified for working in a confined space, or while working alone. See Inukshuk Construction Confined Space Work Permit in Appendix A.

As per the Northwest Territories and Nunavut General Safety Regulations regarding Confined Spaces:

1. No person will enter a confined space until Inukshuk Construction has ensured that
 - a. The confined space is ventilated sufficiently to maintain an oxygen content of at least 18% by volume under normal atmospheric pressure and to prevent the accumulation of contaminants;
 - b. Pipes and other supply lines in or leading to the confined space are blanked or blinded off; and
 - c. Mechanical equipment installed in the confined space is disconnected from its power source and locked out.

2. If it is not reasonably practicable to ventilate in accordance with 1a above (oxygen content at least 18% by volume), then air quality tests must be carried out by a competent person before a worker enters a confined space and while a worker is in the confined space (to ensure the confined space is ventilated sufficiently to maintain an oxygen content of at least 18% by volume under normal atmospheric pressure and to prevent the accumulation of contaminants).
3. Equipment used to conduct air quality tests under 2 above must be stored and maintained according to manufacturers instructions.
4. Where it is not reasonably practicable to meet the conditions in 1b above, Inukshuk Construction will develop and implement alternate procedures that will provide equal or greater protection to workers.
5. Inukshuk Construction will ensure that no worker enters or remains in a confined space unless
 - a. The worker is using a body harness, lanyard and lifeline; and
 - b. Electrical equipment that the worker uses or plans to use in the confined space is of a type designed for use in a confined space.
6. Where the atmosphere in a confined space
 - a. Contains contaminants, or
 - b. Has an oxygen content of less than 18% by volume under normal atmospheric pressure, Inukshuk Construction will ensure that no worker enters or remains in the confined space unless:
 - i. The worker wears compliant respiratory protective equipment;
 - ii. The worker is attended by and in communication with another worker stationed at or near the entrance to the confined space;
 - iii. Rescue procedures to enable the removal of the worker who has entered the confined space are in place;
 - iv. The worker is using a body harness, lanyard and lifeline;
 - v. Rescue equipment capable of effecting a rescue is available for immediate use; and
 - vi. A person who is the holder of a standard first aid certificate is in attendance.

1.8.6 Required Tools and Equipment

Eight (8) vertical tanks will be cleaned via side entry. The following items will be used for confined space entry:

- Tripod and winch
- Gas monitor kit (with charged monitor)
- One harness per entrant with D rings at the shoulders for rescue
- Escape respirator
- Ventilation fan kit
- Generator and fuel
- First aid kit
- Communication equipment *see details below
- Fire extinguisher

*Communication between the tank watchman/attendant and the entrant will be by voice. The tank watchman will have a two-way radio and will be able to contact the Supervisor at any time if more help is required. Note that all equipment operators are on the same channel on the two-way radio. Therefore, in the event that the Supervisor does not hear the call, others will hear the message and take action. In Baker Lake, the tank watchman and the Supervisor will have cell phones. Furthermore, during tank cleaning, the Supervisor will not leave the site.

A sign in/out sheet is used at the location of the confined space to ensure that all entrants are documented when they enter the tank and to document when they have exited the tank.

Explosion proof fans and lights will be used in the confined space work.

1.8.7 Required Personal Protective Equipment

See Section 1.5 Personal Protective and Respiratory Equipment.

1.8.8 Pre-Entry, Entry and Post Entry Procedures

The confined space entry procedure is conducted in three phases: Pre-entry, entry, and post entry procedures.

Pre-Entry Procedures

1. Obtain confined space entry permit and ensure it has been authorized by the Supervisor.
2. If hot work is required during the entry, obtain Hot Work Permit (see attached Hot Work Permit form in Appendix B) and ensure it has been authorized by the Supervisor.

3. The Supervisor (also called the person-in-charge and responsible) will conduct a safety briefing for all employees involved in the work and will address the known hazards of the work.
4. The Supervisor, with assistance from the crew if needed, will review equipment and safety equipment to ensure all are present and in good working order.
5. The Supervisor will ensure that personnel are equipped with the appropriate safety PPE and that they have appropriate confined space entry training.
6. The Supervisor will select the attendant to be stationed at the entrance to the confined space. All involved crew will be briefed on their responsibilities.
7. The gas monitor will be zeroed and tested and the tripod system will be installed.
8. The person to enter the confined space will wear a harness and be connected to a winch lifeline.
9. Entrants will use photo-ionization detector (PID) and lower explosion limit (LEL) sensor enabled meters to detect Jet A1 fuel vapor in ppm to measure toxicity. Entrants will have, ready to use, an emergency response respirator. And explosion-proof lighting will be installed to illuminate the tank interior.
10. The attendant will be stationed at the entrance to the tank.
11. A ventilation fan will ensure a flow of fresh air into the confined space. The attendant located outside the tank will monitor the fan. In the event of a shut down, the attendant will ensure that everyone exits the tank.

Entry Procedures

1. The entrant ascends the tank and opens the secondary containment access hatch enough to insert the gas monitoring probe. A sample will be taken 2 to 3 inches inside. If alarms occur, they indicate that the tank is explosive, toxic or oxygen deficient. No one will enter the tank. Procedures are located below in this case.
2. If no alarms are present from the gas monitor, the hatch cover will be removed and another sample will be taken from the top of the space, mid-way to the bottom and at the bottom of the space. If an alarm occurs in any of these three sample points, the tank must not be entered and the procedures below must be followed. Note that the cover must be secured to the tank after removal to prevent from falling off the tank.
3. If no alarms are present in any of these three sample points, then an entry can occur.

4. The gas sample readings are recorded on the Confined Space Entry Permit.
5. The ventilation fan will be used at this point.
6. The entrant ensures that their gas monitor and emergency escape respirator are in place and ready for use.
7. The entrant is lowered into the confined space with all appropriate PPE to perform only the tasks authorized by the Permit. The entrant will follow instructions provided by the safety watch, and report any abnormalities, if they occur.
8. Speedy Dry will be spread on the tank floor to facilitate drying. Tank vapor levels will be constantly monitored.
9. The attendant will: monitor the exhaust fan to ensure flow of fresh air to the confined space, monitor and record the confined space atmosphere and environment, confirm that tools entering the tank are appropriate for the hazards of the confined space, transport required materials and equipment to the entrants from outside the tank, as required.

Post-Entry Procedures

1. Once the work is complete, the entrant leaves the tank and the Supervisor confirms that all personnel have left the confined space; that all tools, equipment and materials have been removed; that the access to the tank has been secured; and that the Permit is closed.

1.8.9 Hot Work Procedures

If the work in the confined space includes hot work, the following additional procedures will be implemented:

1. Compressed cylinders or welding machines will be left outside and ensured they do not block access or egress. Ensure the cylinders are properly secured.
2. Shut down hot work equipment when not in use.
3. When gas welding is stopped for a reasonable length of time, close torch valves, shut off supply at the cylinders, and remove the torch and hoses from the space.
4. If arc welding is stopped for a reasonable length of time, remove all electrodes from their holders, place the holders where accidental contact cannot occur and disconnect the machine from the power source.
5. Never repair or disconnect a torch in the confined space

1.8.10 Confined Space Alarm Procedures

In the event that an **explosive atmosphere is present** where vapors, gases, or dusts are within the lower explosive limits, the following procedure will be used:

1. The confined space and surrounding area will be evacuated immediately;
2. Ensure all sources of ignition are turned off and ensure there is no smoking in the area;
3. Contact the Supervisor to advise that an explosive condition has occurred and provide details;
4. Contact the local Fire authority;
5. If safe to do so, sample upstream and downstream of the confined space to determine the extent and possible source of the hazard;
6. When it is safe to do so, ventilate the confined space with a CSA approved extractor that is explosion proof or with approved ventilation procedure provided there is no source of ignition.

*It is noted that a safe level for an explosive atmosphere is less than 5% of the lower explosive limit.

In the event that a toxic environment is present where gas, vapor, or dust is in a concentration higher than is acceptable or where an oxygen deficient atmosphere or oxygen enriched atmosphere exists, the following procedure will be used:

1. The confined space will be evacuated immediately;
2. Contact the Supervisor to advise that an oxygen deficient, oxygen enriched or toxic atmosphere condition has been discovered and provide details;
3. If safe to do so, sample upstream and downstream for toxic pollutants in the air to determine the source; and
4. If safe to do so, ventilate the confined space with a blower unit.

To ventilate a confined space, place a fresh air hose at the lowest level possible to fill the space with fresh air. If there is a highly explosive atmosphere, a blower alone will not decrease the hazard and purging may be required.

1.8.11 Confined Space Rescue Procedures

In the event of an emergency, the following procedure will be used to rescue personnel from the tank and to report and document the incident.

1. The emergency personnel identified on the Permit will be contacted for assistance.

2. The winch retrieval system will be used to remove the workers from the confined space. All vertical tanks have a side hatch.
3. The crew will assist the emergency response personnel when they arrive, if assistance is required.
4. First aid response will be provided as needed until they are transported to a medical facility.
5. Once the personnel that were in the tank are taken care of, the crew can secure the confined space for inspection. In no instance will anyone enter the tank at this point.
6. The Project Manager and the Government of Nunavut will be advised of the incident and the incident will be documented as soon as possible. Contact information for WSCC toll free incident reporting are: telephone (800) 661-0792 and fax (867) 873-0262.
7. Employees will report all minor or serious injuries immediately to the supervisor/manager/project coordinator.

From that point, it is understood that the supervisor/manager/project coordinator and members of the health and safety committee will investigate all accidents. In the event of a major accident, the Fire and Safety Department will investigate. It is also understood that the Supervisor will report the accident to the Project Representative from the Government of Nunavut immediately.

The tripod must be secured to the tank when not attended to prevent the wind from blowing it down the tank.

1.8.12 Roles and Responsibilities During Tank Work

The person inside the tank will be wearing fresh air gear or a respirator at all times. They will also wear a shoulder D-ring type harness attached to a tripod when inside the horizontal tanks. The workers would be pulled from the horizontal tank.

There will be a safety attendant monitoring the worker inside the tank at all times. There will be another person available to run for help or assist as required.

1.9 Incident Reports and Accident Reporting

Inukshuk Construction requires its employees to report all incidents regardless of how small they may be. Incidents are investigated by management and discussed extensively at monthly safety committee meetings.

An accident of a serious nature is defined as a major structural failure or collapse of a building, bridge, tower, crane, structure, scaffold, temporary construction support system or excavation; an uncontrolled spill or escape of a toxic or hazardous substance; an accidental contact with an energized electrical conductor; a premature or accidental detonation of explosives; a concussion, major blood loss, serious fracture, unconsciousness or amputation; or an incident involving heavy equipment.

In the unlikely event of an “accident of a serious nature”, Inukshuk Construction will:

- a) Immediately report to the Chief Safety Officer an accident resulting in the death of any employee occurring at the place of employment.
- b) Report to the Chief Safety Officer an accident of a serious nature involving any employee occurring at the place of employment, within 24 hours of the accident.

We have conducted an internal review of this procedure and all supervisors and workers understand the importance of this policy. We will submit copies of any incident reports that are generated to Nasittuq.

We have conducted an internal review of this procedure and all supervisors and workers understand the importance of this policy. We will submit copies of any incident reports that are generated to the Project Representative from the Government of Nunavut .

1.10 Wildlife Monitors

Inukshuk Construction is experienced in working in conditions and work sites, which present a risk from wildlife. Inukshuk Construction has had several close encounters with bears on many job sites and we take this threat seriously. Since bear are not a hazard at this site, we will not have a dedicated a bear monitor on site at all times.

The crew will be briefed on the dangers of polar bears and we will ensure there is a means of escape such as having a truck or piece of heavy equipment nearby. The entire crew will be made aware of the dangers posed by bears and the other dangerous animals that are found in the arctic. They will be encouraged to be on the lookout during the initial safety indoctrination. A bear alert signal will be standard and universally understood.

We will ensure that the work site is kept clean and that no foodstuff or refuse is left out. From our experience, this is one of the most important factors in wildlife deterrence and encounter prevention.

1.11 Emergency Response

Although the type of response is dependent on the nature of the emergency, there are some general guidelines that should be considered in any case as follows:

- Stop all work;
- Call for help;
- Check the area to determine if it is safe to enter the emergency situation to help;
- If it is safe to enter the location/scenario of the emergency, then provide first aid or CPR as needed, or if the person has fallen into cold water, take steps to assess and respond to hypothermia, rescue the person if it is safe to do so;
- If possible, transport those injured to nearest care;
- If rescue vehicles will respond, clear the area so it is possible to reach the person directly, if it safe to do so; and
- Identify the site with reflective pylons or flags to warn others.

Provide the following information to the dispatcher:

- Your name and radio frequency
- Type of injuries sustained
- The number of people and their location and any casualties (do not provide the name of those injured or of casualties)
- Equipment and supplies that may be needed

All emergency coordination will be conducted through the Off-site Emergency Response Coordinator. This number will be provided on the list.

As part of our operating practices, we supply a complete list of emergency telephone numbers to our site crews. The emergency number list will be posted near site telephones.

All onsite coordination with regard to emergency conditions will be handled by ICL's supervisor.

Response to Cold and Heat Stress

The following procedures should be followed in response to cold stress or if hypothermia is suspected:

- Reduce heat loss by sheltering the victim from wind and weather, move the person into a warm place if possible, insulate the person from the ground, remove wet clothes, dress the person in warm, dry clothes and windproof, waterproof gear if possible, and wrap in blankets.
- Provide hot non-alcoholic drinks if available and sweets (they are good because they can be turned into heat fast by the body).
- Increase heat gain by inducing exercise, if possible, and apply heat (warm water bottles, heat packs) to neck, armpits, and groin.
- In any case of hypothermia, never give hot or warm baths, alcohol or massage.

If more severe symptoms are present such as disorientation, drowsiness, irregular pulse and no shivering, take the following steps:

- Keep the person awake.
- Call for help.
- Do not handle or move the victim unnecessarily (too much movement can stop a cold heart).
- Place warm water bottles at the sides of chest and in groin. Otherwise strip yourself and victim to the waist and huddle in a sleeping bag or under blankets for warmth.

To avoid excessive heat exposure, crew should drink plenty of water, block out direct sun exposure if possible and other heat sources. Avoid beverages with alcohol or caffeine and wear appropriate but lightweight, light colored and loose fitting clothes. If a worker is affected by heat, notify the supervisor, have someone stay with the worker until help arrives, move the person to a shaded or cooler area, remove outer clothing, and provide cool drinking water.

1.12 Emergency First Aid

- Two workers on site will have emergency first aid training.
- A completely stocked first aid kit will be included with the crew. The kit will be located in an appropriate location and will be maintained through the project.
- The Kit will be appropriate to the size of site personnel and will include an emergency portable eye wash and two ABC type dry chemical fire extinguishers.

1.13 Medical Evacuation Plan

Baker Lake, NU

If a medical emergency were to occur at Baker Lake, depending on the severity, our crew would administer first aid on site. If the injury cannot be treated in Baker Lake, the injured person or persons would be flown to Rankin Inlet or Winnipeg, depending on the severity.

Emergency communication would be by site telephone and to the Off-Site Emergency Response Coordinator.

A detailed Medevac Plan will be submitted prior to mobilization and be posted at the initial safety indoctrination when the crew arrives on site.

The crew will have a fully stocked First Aid kit on site at all times.

1.14 Hazardous Material and POL Spills

A list of all hazardous materials required to complete the project will be submitted. The list will also include the number and volume of containers. A Material Safety Data Sheet (MSDS) will be submitted for each WHMIS regulated item prior to mobilization. All materials (hazardous and non-hazardous) will be labeled to indicate project name and number, contractor name, date, site location, contents, weights, volumes and quantities. Documentation and labeling will be completed prior to shipping TDG regulated items in accordance with the TDG Act, Regs, Technical Instructions for shipment by Air and by Sea as deemed appropriate. Further, a binder will be maintained at the site with paper copies of MSDS for all WHMIS controlled items. WHMIS controlled items will be handled and used in accordance with the MSDS.

Rubbish and waste materials will be kept to a minimum. All rubbish shall be removed by the Contractor from the Work Site at the end of the workday or shift or as directed. Debris and extra materials will be removed from areas of work. No waste will be buried or burned, or disposed of onto the land, into water bodies, or in sinks, toilets or drains. Greasy or oily rags or materials subject to spontaneous combustion will be deposited and kept in an approved receptacle and removed. The crew will have absorbent material on-hand when using hazardous materials that may drip into the environment.

There is the potential on this project for fuel spills. The risk here will be mitigated through the use of proper procedures for handling these materials, and by having on hand clean up supplies (absorbent pads, speedy dry, rags, etc.) in case a spill should occur.

In the highly unlikely event of a spill, work will stop and the occurrence will be reported to the Engineer. The attached Baker Lake Spill Contingency Plan will be followed, as appropriate.

Further, If legacy contaminated soil or hazardous material is encountered at any time, work will be halted and the Engineer will be notified immediately. The NWS Environmental Protection Plan (EPP) will be followed.

Generally speaking, the following hazardous waste may be generated:

- Paint, used applicators, thinners, etc
- End cut treated lumber
- Rinsate (from cleaning tanks)
- Sludge (from cleaning tanks)
- Used hydrophobic absorbent material
- Used rags

All hazardous waste will be packaged in UN-approved packaging for future retrograde, ensuring that hazardous waste types are not mixed together. A unique Equipment Identification Number (EIN) from the site Logistics staff will be obtained for each package of hazardous waste and marked on each package. Other labels will be applied to each package including a North Warning System label, TDG hazard label (if required) and two orientation labels (if liquid). The packages will be overpacked and labeled to prevent damage to the UN spec. packaging.

Jim Henderson is IATA-certified to package hazardous material and prepare shipping documents.

All non-hazardous waste and non-hazardous surplus materials will be collected in wooden crates, pallets and drums and moved to the pre-approved areas as directed by the Engineer for future retrograde. Wooden crates will be used if the packing cans can be damaged from storage outside for additional protection. Equipment Identification Numbers will be obtained from the inspector for each package of waste. The NS waste labels will be applied as required.

The project is expected to generate the following non-hazardous waste:

- Steel Piping and fittings (aged and new)
- Electrical Wire and cabling
- Packing crates (wood)
- Tank pieces (cleaned)

Upon completion of the project, a detailed list of all hazardous waste, non-hazardous waste, and surplus hazardous materials will be provided to the Engineer.

1.15 MSDS Sheets

Copies of applicable MSDS sheets will be on site with the crew.

Appendix A - Confined Space Work Permit

CONFINED SPACE SAFE WORK PERMIT

GENERAL INSTRUCTIONS TO RECEIVER OF THIS CONFINED SPACE PERMIT:

1. The person(s) performing this work must comply with all applicable government regulations and laws.
2. The person(s) performing this work must comply with all applicable safe work procedures and conditions of this permit.
3. The contractor(s) employee(s) or agent(s) doing the work at the site must understand and adhere to all of the conditions of this permit.
4. There must be a copy of this permit at the work site where the work is in progress.
5. Should a worker have concern about the safe conditions of the job, he/she is to stop work immediately and report the concerns to the site supervisor before work can be resumed. A new safe work permit must be issued.

Note: Unauthorized equipment/materials are not to be taken into confined space.

GAS DETECTOR:

MAKE: _____

CALIBRATION DATE: _____

MODEL: _____

SERIAL #: _____

MSDS Available for Chemical: ☐ YES ☐ NO

OXYGEN LEVEL:

1 _____ 2 _____ 3 _____ 4 _____

COMMENTS:

Inukshuk Construction Limited

Industrial Contracting  Project Management

PO Box 654
Rankin Inlet, NU X0C 0G0
T 867.645.4030 F 867.645.4064

EMPLOYEE AUTHORIZED TO ISSUE THIS PERMIT:

NAME (Print): _____

POSITION: _____

SIGNATURE: _____

AGREEMENT:

I understand that no work is permitted except that shown on the permit. I have checked both the permit and the job. I understand the nature of the work and the precautions to be followed in completing the work. I also agree that any other staff, or contract workers who will, or may, work on this job shall have a complete understanding of the conditions of this permit and he/she, or they, will also work under these conditions.

PERMIT RECEIVER:

NAME (Print): _____

POSITION: _____

SIGNATURE: _____

PERMIT WORKERS:

NAME _____ SIGNATURE: _____
(Print)

NAME _____ SIGNATURE: _____
(Print)

NAME _____ SIGNATURE: _____
(Print)

NAME _____ SIGNATURE: _____
(Print)

SERIAL #: _____
(SERIAL # CAN BE OBTAINED FROM CMO SAFETY SUPERVISOR)

☐ **FOR COLD WORK** ☐ **FOR HOT WORK**

Inukshuk Construction Limited

Industrial Contracting  Project Management

PO Box 654
Rankin Inlet, NU X0C 0G0
T 867.645.4030 F 867.645.4064

DATE OF ISSUE

DAY _____ MONTH _____ YEAR _____ TIME _____

DESCRIPTION OF WORK:

SITE:

LOCATION:

DEPARTMENT DOING WORK:

CONTRACTOR:

DURATION OF PERMIT:

DAY _____ MONTH _____ YEAR _____ TIME _____

PREVIOUS DAY PERMIT:

SERIAL #: _____

Inukshuk Construction Limited

Industrial Contracting  Project Management

PO Box 654
Rankin Inlet, NU X0C 0G0
T 867.645.4030 F 867.645.4064

	N/A	Yes	No
1 Have you personally examined equipment and surrounding area of the work site with reference to this permit?	☐	☐	☐
2 Have you discussed the project with the Contractor or employee and has the safe work plan been reviewed and documented?	☐	☐	☐
3 Work to be done will require the following personal protective equipment: Breathing apparatus ☐ , goggles ☐ , special clothing ☐ , gloves ☐ , hearing protection ☐ , special tools ☐ . Specify in comments section below.	☐	☐	☐
4 Will the work location remain free of hazards throughout the duration of the permit?	☐	☐	☐
5 Has confined space been thoroughly ventilated?	☐	☐	☐
6 Has confined space been inspected to ensure that all parts are free from all other potential hazards?	☐	☐	☐
7 Have isolating valves been closed, checked for leaks, and properly tagged?	☐	☐	☐
8 Has equipment been completely isolated and all lines blanked?	☐	☐	☐
9 Have electrical switches been locked out and tagged?	☐	☐	☐
10 Has equipment been grounded?	☐	☐	☐
11 Are you sure that no other work is being done, or will be by anyone within the area that could create a hazard of any kind during this job?	☐	☐	☐
12 Use Fire Inspectors Checklists to check area for fires before hot work permit is released, and after 30 minutes when work is complete.	☐	☐	☐
13 Gas content must not exceed 5% lower explosive limit (LEL). If exceeded, no hot work is to take place.	☐	☐	☐
14 If there is a possibility of molten or hot metal falling to a lower level, plywood is to be laid out.	☐	☐	☐
15 Is fire fighting equipment required ☐ , checked, and in place?	☐	☐	☐
16 Is PPE equipment on hand and inspected?	☐	☐	☐
17 Has the rescue procedures been discussed with the workers?	☐	☐	☐
18 Has the safe work permit procedures and conditions been read, understood and signed by company employees or contract personnel?	☐	☐	☐
19 Have test results been recorded and posted?	☐	☐	☐

COMMENTS:

Appendix B - Hot Work Permit

HOT WORK PERMIT

DATE: _____ BUILDING #: _____
EXPIRY DATE: _____ LOCATION: _____
CUTTING / FIESTA HOT
WELDING: _____ HEATERS: _____ ROOFING: _____

NOTE: PERMIT TO BE POSTED AT ENTRANCE TO WORK AREA.

FIRE WATCH YES ☐ PROVIDED BY YES ☐ SITE PERSONNEL YES ☐
REQUIRED: NO ☐ CONTRACTOR: NO ☐ STANDBY: NO ☐

FIRE SAFETY PRECAUTIONS

1. Before commencing the job, ensure that adequate fire extinguishers are available, and note the location of the nearest fire alarm and telephone.
2. All fire incidents must be reported immediately to the Site Supervisor by one of the following means:
 - a. Activate the nearest fire alarm pull station; or
 - b. Phone the Site Supervisor by two way radio or cell phone (902) 483-6284; or
 - c. Phone the Fire department by calling (867) 925-9999; or
 - d. Report to the main module building informing the nearest duty person that there is a fire.
3. A person initiating and alarm by fire alarm box or telephone shall remain outside the building and direct the fire Brigade members to the scene of the fire.

I have received a briefing from a member of the Fire Brigade and/or copy of the **HOT WORK PERMIT** and **HOT WORK CHECKLIST**. I understand and agree to comply with all requirements. The Site Manager or Supervisor shall be notified immediately of any change affecting the operation authorized by the **HOT WORK PERMIT**. Failure to comply with these safety precautions and pertinent codes may result in you or your company being held responsible for any damages incurred.

PROJECT SUPERVISOR

(Print Name)

(Signature)

COMPANY

(Print Name)

(Signature)

Appendix C – Spill Contingency Plan

**Spill Contingency Plan
Baker Lake Fuel Facility Upgrade
Baker Lake, Nunavut
GN Project No. 10-3017**

Submitted by:

Inukshuk Construction Limited
PO Box 654
Rankin Inlet, Nunavut
X0C 0G0

Prepared for:

Government of Nunavut
Public Works and Services
P.O. Box 002
Rankin Inlet, NU
X0C 0G0

Date Prepared: June 9, 2014

Effective date: June 1st, 2014 to November 30th, 2014

Point of Contact for Inukshuk Construction Limited:

David Mosher, P.Eng
Tel: (902) 429-0272
Res: (902) 429-3430
Fax: (902) 429-7762

Email: dave@inukshukconstruction.ca

Table of Contents

1.0	Introduction	3
1.1	Applicable Regulations	3
1.2	Scope of Work	3
1.3	Hazardous Materials Expected to Be Encountered	3
1.4	Owner Contact Information	4
1.5	Inukshuk Construction Contact Information	4
1.6	Fuel Storage Facility Description	5
1.7	Potential Hazards and Risk Mitigation	5
1.8	Spill Contingency Plan	5
1.9	Training	6
1.10	Other Contacts	6

1.0 Introduction

Inukshuk Construction has been contracted by the Government of Nunavut to upgrade the fuel storage facility in Baker Lake, NU. Our firm will be handling various hazardous materials and there is the potential for a spill.

Inukshuk Construction and its sub contractors are committed to taking precautions to ensure that hazardous materials are not accidentally discharged. However, in the event that a spill does occur, we have prepared the following spill contingency plan to minimize the environmental impact.

An emergency, such as a spill, is a very stressful situation. The following plan will ensure that all personnel are aware of the procedures that must be following in the event of a spill. This plan will ensure that life is protected, injuries minimized, resources are used effectively, environmental impact is kept to a minimum, and that essential reporting is conducted.

1.1 Applicable Regulations

The GN requires that any person or company storing over 20,000 litres of contaminants in an aboveground storage facility must have a spill contingency plan in place.

1.2 Scope of Work

The work in this contract consists of the following:

1. Provide new 3,400 m³ diesel fuel storage tank and convert existing 941 m³ storage tank from diesel fuel to gasoline;
2. Perform tank base maintenance on TK-18 and TK-19;
3. Cover the exposed liner south of horizontal tank;
4. Add kick plates to roof handrails on two tanks;
5. Replace missing signs;
6. Replace dispenser building and demolish the existing building;
7. Replace the flooring, window, and console in the operator shelter;
8. Increase the size of connection to TK-19;
9. Increase the size of diesel piping to 150 mm;
10. Recoat pipelines and horizontal tank. Spot recoat vertical tanks;
11. Coat new vertical tank;
12. API 653 inspection on existing tanks;
13. Add pipe sleeves to existing berm penetrations;
14. Construct a new concrete pad;

15. New high-level alarm system; Add emergency and safety valves;
16. New wiring and connection to control panel, power and lighting;
17. Remove existing grounding and install new grounding;
18. Power and control disconnections, wiring and conduit removal;
19. Static grounding depth modification; and
20. Connect safety valves and level switches.

Hazardous Materials Expected to Be Encountered

During the implementation of this project, the following hazardous materials will likely be encountered:

Hazardous Material	Quantities
Tank Sludge	5,000L (Estimate)
Hydrocarbon Contaminated Soil	Unknown
Hydrotest Water	3,400 cum

1.4 Owner Contact Information

The owner of the facility is the Government of Nunavut, Petroleum Products Division. The contact personnel are as follows:

Project Officer

Anil Kumar Gupta
 A/ Senior Project Officer
 Community & Government Services
 Kvalliq Regional Project Management Office
 PO Bag 002, Projects/O&M Division
 Rankin Inlet, Nunavut X0C 0G0
 Tel (867) 645-8182
 Fax (867) 645-8196
 Email agupta@gov.nu.ca <mailto:jhunter@gov.nu.ca>

Petroleum Products Division

Mr. Todd MacKay
 Government of Nunavut
 Public Works and Services
 P.O. Box 002
 Rankin Inlet, NU
 X0C 1X0
 Tel: (867) 645-5172
 Fax: (867) 645-6806
 Email: TMcKay@GOV.NU.CA

1.5 Inukshuk Construction Limited Contact Personnel

In the event of a spill, the Inukshuk Construction Site Supervisor will be responsible for activating the spill contingency plan.

The 24 hour contact information for our personnel are as follows:

Tony King
Superintendent
Sanavik Coop, Baker Lake: (867) 793-2070
Rankin Inlet #: (867) 645-2231
Fax #: (867) 645-2231
Cell #: (902) 478-4700

Sheldon Burry
Site Supervisor
Baker Lake: (867) 793-2070
Cell: (709) 536-8531

David Mosher, Senior Project Manager
Office: (902) 429-0272
Home: (902) 429-3430
Cell: (902) 483-9677
Fax: (902) 429-7762
E-mail: dave@inukshukconstruction.ca

Marc Losier G.S.C., Project Manager
Office: (902) 429-0272
Cell: (902) 483-4077
Fax: (902) 429-7762
E-mail: marc@inukshukconstruction.ca

1.6 Fuel Storage Facility Description

The existing fuel storage facility consists of storage tanks for gasoline and LSDL in a bermed dyke with impervious HDPE liner. There are seven existing vertical tanks of which two are 2,643 cum diesel tanks, two 941 cum diesel tanks, one 656 cum diesel tank, and two 500 cum gas tanks. There is one spare horizontal tank with 92 cum capacity.

The upgrades include converting one of the 941 cum diesel tanks to a gas tank and construction of a new 3,400 cum diesel tank within the existing berm.

Along with the tank conversion and new tank installation, piping upgrades, electrical, switches and a high-level alarm system will be installed as per the Scope of Work. Tank base maintenance will be completed on TK-18 and TK-19 and the liner south of the horizontal tank will be covered. A new dispenser building will be constructed; the flooring, window, and console will be replaced in the operator shelter; and a new concrete pad will be constructed. There will also be some new signage and kick plates installed.

The existing dispenser system will be used until the new dispenser building is ready to install. To install the new dispenser building, the old dispenser building will be moved to a temporary location. The existing line will be connected to the building in the temporary location. The new building will be moved into place and then connected.

1.7 Potential Hazards & Risk Mitigation

We have considered the various types of spills that can occur during this project and listed them below. The type of spill will affect our response.

Fuel Spill during Decommissioning

While fuel lines and tanks are being decommissioned, there is the potential for a spill. To mitigate this risk, we will use only trained, experienced crew for this work. We will also have on hand half drums for catching fuel, absorbent pads and speedy dry in case of a spill.

If a spill were to occur, we would immediately excavate the contaminated soil and place it in the new contaminated soil storage area.

Tank Sludge

There is the potential for tank sludge to spill on the ground while cleaning tanks.

If this were to occur, we would excavate the contaminated soil and place it in the new contaminated soil storage area.

Refueling of Equipment

There is the potential for a spill while we are refueling equipment. To mitigate this hazard, we use a truck mounted fuel truck with Gasboy dispenser. We only use experienced personnel for this task and the fuel pump will automatically shut off if left unattended.

Paint Spill

There is the potential for a paint spill while the tanks are being painted. This risk is mitigated by the use of tarps for storing paint.

1.8 Spill Contingency Plan

Introduction

In the event of a spill, the site supervisor will immediately be notified by telephone. The site will be secured and steps will be taken to minimize spill impact.

Personnel

Two personnel will complete the hydrostatic testing and both will have two-way radios. Also, there will be up to twelve workers in the tank farm doing other work. In the event of a spill, all crew will be available to help contain and clean the spill under the instruction of the site supervisor.

Reporting

As soon as the site is secure, the site supervisor will notify the owners (Chief Safety Officer) and the Inukshuk Construction project management staff. There will be working activity 24hrs per day during the construction period. There will always be someone with a two way radio who can call the site supervisor and arrange the manpower to contain a spill and proceed with cleanup.

In the unlikely event of an accident of a serious nature, Inukshuk Construction will:

- a) Immediately report to the Chief Safety Officer an accident resulting in the death of any employee occurring at the place of employment.
- b) Report to the Chief Safety Officer an accident of a serious nature involving any employee occurring at the place of employment, within 24 hours of the accident.

Contact the 24-hr Spill Report Line: (867) 920-8130

Contact the INAC's Manager of Field Operations: (867) 975-4295

Cleanup

All the tanks are located in a containment dyke made of gravel and an HDPE Geomembrane. The capacity of the dyke is larger than the capacity of the largest tank. Therefore, if an entire tank would drain out,

there would be no fuel spilled in an un-contained terrain. In the event of small leak, the fuel would be contained using absorbent speedy dry and absorbent pads and disposed in overpack drums. In the event of a large leak, the fuel would be filtered and pumped back into the tank. We also have heavy equipment on site in the event contaminated soil has to be excavated.

Disposal

Any contaminated soil that gets excavated will be stored in the new contaminated soil land farm. Overpack drums containing sludge, and used speedy dry and absorbent pads would be sent to Montreal by sealift and disposed at an approved facility.

Location of MSDS

The MSDS will be stored in the site office.

Content and location of spill kits

Spill kits contain shovels, broom, buckets, hydrophobic pads, and speedy dry for a petroleum leak. The spill kit will be located at the tank farm inside the dyke area. The kit will be easily accessible. A pump and hose in the event of a large hydrostatic test water spill will also be readily available in the tool container at the tank farm.

Map of suitable scale

See attached drawing G1 and G2.

NT/NU Spill Report Form

See attached.

Fuel/hazardous Material Inventory

The following are the tanks' capacities:

Spare Tank # 1: 92 cum

Gas Tank #2: 656 cum

Diesel Tank #3: 941 cum

Diesel Tank #4 to be converted to Gas: 941 cum

Gas Tank #5: 503 cum

Gas Tank #6: 500 cum

Diesel Tank #7: 2,643 cum

Diesel Tank #8: 3,400 cum

New Diesel Tank #9: 3,400 cum

1.9 Training

The members of the crew performing fuel transfers, moving tanks, cleaning tanks, and hydrostatic testing of tanks consist of journeymen fitter/welder, experienced labour in tank cleaning, and certified equipment operators. Workers working inside tanks have confined space entry and fall arrest training up to date. The equipment operators must have a valid equipment operator license. The supervisor must be trained and aware of all applicable health, safety, and environmental regulations.

1.10 Other Contacts

Environment Canada: 867-975-4644

GN – Department of Environment: 867-360-6338

Hamlet of Baker Lake: 867-793-2874

Kivalliq Inuit Association: 867-645-5725

Appendix D – Confined Space Training Certificate



St. John Ambulance Saint-Jean

Newfoundland and Labrador Council

P.O. Box 5489
St. John's, NL A1C 5W4
Telephone : (709) 726-4200
Facsimile : (709) 726-4117

Conseil de Terre-Neuve et du Labrador

C.P. 5489
St-Jean, TN, A1C 5W4
Téléphone : (709) 726-4200
Télécopieur : (709) 726-4117

TO WHOM IT MAY CONCERN:

This is to confirm that Sheldon L Borry (Participant's Name) has successfully completed all required elements of the following St. John Ambulance First Aid

Course.

- ☒ HCP (CPR)
- ☐ Emergency First Aid with Heartstart
- ☐ Emergency First Aid with Child Care
- ☒ Standard First Aid with Heartstart
- ☒ Basic Life Support CPR (Level C)
- ☐ Marine Basic First Aid
- ☐ Marine Advanced First Aid
- ☐ CPR (HCP) Oz, AED

☒ AED
☐ Oxygen

The official St. John Ambulance certificate will follow.

Instructor Name and Instructor #: 28397 Anthony Edison
(Please print)

Anthony Edison
INSTRUCTOR (Signature)

Date:

Apr 14 / 14



This is to certify that: **Sheldon L. Burry**
has completed training in:

Confined Space Entry & Attendant

Instructor: T. Doane

Issue Date: 4/2/2014

Expires On: 4/2/2016

Student Number: 307692

www.hseintegrated.com



This is to certify that: **Sheldon L. Burry**
has completed training in:

Safety Orientation

Instructor: T. Doane

Issue Date: 3/31/2014

Expires On: No Expiry

Student Number: 307692

www.hseintegrated.com

LEADERSHIP FOR
SAFETY EXCELLENCE

Sheldon Burry
Certificate 156433 NL
January 22, 2011

PRINCIPLES OF
LOSS CONTROL

PRINCIPLES OF LOSS
CONTROL AUDIT

WORKPLACE HAZARDOUS
MATERIALS INFORMATION
SYSTEM



This certifies that

Sheldon L. Burry

has successfully completed the training requirements of

Leadership In Occupational Health & Safety

A handwritten signature in black ink, appearing to read "Danner", written over a horizontal line.



Instructor

March 31, 2014

Completion Date



This certifies that

Sheldon L. Burry

has successfully completed the training requirements of

Occupational Health and Safety Committee

A handwritten signature in cursive script, appearing to read 'Dean R.', written over a horizontal line.



Instructor

April 1, 2014

Completion Date



INTEGRATED

1-877-872-4641

Temporary Certificate

THIS IS TO CERTIFY THAT

MATT BERRY

NAME

HAS SUCCESSFULLY COMPLETED

CONFINED SPACE RESCUE

Course

DATE ISSUED: June 3, 2014

COURSE NO. —

INSTRUCTOR: J. ENGLAND

STS. NO.: —

INSTRUCTOR'S SIGNATURE [Signature]

OSSA NO.: —

Certificate valid for 90 Days Past Issue Date

CAN NB
Driver Licence

New Brunswick
CANADA
Pernis de conduire

4d No/N° **1234010**
4b Exp **2015/10/06** 4a Iss/Dél **2011/10/14**
9 Class/Classe 9a End/Mention
5 D
12 Rest/Cond **NONE/AUCUNE**
3 DOB/DDN **1985/10/06** 15 Sex/Sexe **M**
18 Eyes/Yeux **HAZ/NOS** 16 Hgt/Taille **183 CM**
First Licence/Prem Permis **2002/12**
1 **BREWER**
2 **EVAN GORDON**

392 RTE 617 HWY
BURTTS CORNER NB E6L 2S4

5 DD/Réf NB20111014160719851006

1985/10/06

Alberta
Municipal Affairs
and Housing
22067

ABSA
the pressure equipment safety authority

**Grade "B" Pressure Welder's
Certificate of Competency**

This is to certify that **Evan Brewer**
having complied with provisions of the Safety Codes Act, is authorized to engage
in pressure welding in accordance with the prescribed Regulations.

Dated at Edmonton
July 04, 2008



W-27202
File no.

Chief Inspector and Administrator



Welder Qualification

This card is valid only while employed by a CWB certified company
Transferable Welder

Name: **EVAN G. BREWER** Exp Date **Jul 18, 2014**
Employer: **McConnell's Welding Ltd, Upper Durham, NB**
Thickness Range **3mm & above** Material: **Carbon Steel**
Process: **SMAW**
Mode: **MANUAL** Standard: **CSA W47.1**
Classification: **S**
Electrode: **F4**
Class: **FLAT/HORIZONTAL/VERTICAL UP/OVERHEAD**

See Reverse for Conditions

**Technical
Safety Authority
of Saskatchewan**

Welder's Licence

No: **009044**
Class: **M**

This pressure welder's licence authorizes
to weld on pressure equipment within the Province of Saskatchewan and is a record that
the holder has been tested in accordance with ASME Section IX. This licence may be
revoked at any time by the request of the Inspector or if the holder has not welded with
a process during a period of 6 months or more.

Out-of-Province Transfer

ID No.: **63374**

Brian Krasin
Chief Inspector

WELDER'S CERTIFICATE / CERTIFICAT DE SOUDEUR

☐ APPROVED / APPROUVÉ ☒ SPECIAL / SPÉCIAL

☐ QUALIFIED / QUALIFIÉ ☐ CLASS B / CLASSE B

This certificate expires
Le présent certificat expire le **April 2/2013**

Mr./M **Evan Brewer**

has completed welding tests under Section IX, ASME Code and N.B. Boiler & Pressure Vessel
code, and is hereby authorized to weld subject to the Provisions of the New Brunswick Boiler
& Pressure Vessel Code and the limitations of this certificate.

a subi les épreuves de soudure en application de l'article IX du code de l'ASME et du code
d'installation des chaudières et appareils à pression, et est par les présentes autorisé à exercer
le métier de soudeur sous réserve des dispositions du code d'installation des chaudières et
appareils à pression du N.-B. et sous réserve des restrictions mentionnées sur le présent
certificat.

Signature of Welder
Signature du soudeur **Evan Brewer**

New Brunswick

**DEPARTMENT OF PUBLIC SAFETY
INSPECTION SERVICES
MINISTÈRE DE LA SÉCURITÉ PUBLIQUE
SERVICES D'INSPECTION**

Thickness
Épaisseur **.0625 - .75**

Material
Matériel **P8** Filler Rod
Baguette à souder **F5**

Position **6G**

Process
Procédé **SMAW**

Symbol
Symbole **LOF**

Chief Boiler Inspector
Inspecteur en chef des
chaudières **Dale E. Irons**

Conditions Of Use

1. This card remains the property of the CWB and may be recalled and/or cancelled at any time. Fraudulent use of this card can result in loss of qualifications of the individual and/or the certified company employing the individual.
2. This card must be available for inspection by any CWB representative or other designated officials at all times.
3. This qualification may be revoked by the CWB if the individual is not engaged in the process qualified for a period of three months or more.

For any questions regarding this qualification, please contact

1-800-844-6790 | www.cwbgroup.org



CWB
INSTITUTE

Name: **Evan Brewer**

Weld Symbol : **LOF**

Process(es):	SMAW	SMAW	Material P No.:	P1-15F P34,P4x
Filler Metal F No.:	F3	F4	Minimum Pipe O.D.:	25 mm
Max Deposited Weld Metal(mm):	2	19	Positions Qualified:	ALL
Backing Required:	None	Metal	Weld Progression:	Upward
Current Type / Polarity :	ANY	ANY		

SK ID No. : **003163**

Expires On: **20-Jun-2011**



NB Technical Inspection Services
Services d'inspection technique du N.-B.

Welder - Special WP#3136.7

Soudeur spécial WP#3136.7

Lic No. - N° de permis: 75175 Expires-Expire le: 2013/04/03

Signature: Licensee/Detenteur

Chief BPV Inspector
Inspecteur en chef des chaudières

EVAN BREWER
392 ROUTE 617 HWY
BURTTS CORNER NB E6L 2S4

7805
104191

License No./N° de permis
75175

Client ID/Identification de client
104191

Thickness
Epaisseur 3/8

Material
Matériel 3/6

Filler Rod
Baguette à souder 3/32

Position 6G

Process
Procédé SMAW

Symbol
Symbole LOF



NB Technical Inspection Services
Services d'inspection technique du N.-B.

Welder - Special WP#2844.7

Soudeur spécial WP#2844.7

Lic No. - N° de permis: 77660 Expires-Expire le: 2014/04/29

Signature: Licensee/Detenteur

Chief BPV Inspector
Inspecteur en chef des chaudières

EVAN BREWER
392 ROUTE 617 HWY
BURTTS CORNER NB E6L 2S4

7805
104191

License No./N° de permis
77660

Client ID/Identification de client
104191

Thickness
Epaisseur 0.0625 - 0.674

Material
Matériel P8

Filler Rod
Baguette à souder F6

Position 6G

Process
Procédé GTAW

Symbol
Symbole LOF



Boiler and Pressure Equipment Regulations

Tested in accordance with ASME Section IX

NSID : P0072 Pressure Welder Licence

Name : Even Brewer

Certified by : Sunny Corner Enterprises Inc.

Purge	Backing	Process	F-No.	Qual. thk.
R	NR	GTAW	5	0.25"
NR	R	SMAW	5	0.302"

WPS : 14-SCE-88-1-2

Inspector :

Ken M...

TABLE 104191.121

P/S-No.	Max. thk.	Min. thk.	Min. dia.
P1 - 11	0.552"		2 7/8"
Position (s)	1: All	up	
	2:		
Electrode (s)	1: ER, EC, EQXX per F6		
	2: F5 per QW-432/433		
	3:		
Other		Machine controls	
GMAW mode	: n/a	Visual	: n/a
Con. inert	: n/a	Auto volt	: n/a
Fused or ly	: n/a	Auto joint	: n/a



Boiler and Pressure Equipment Regulations

Tested in accordance with ASME Section IX

Pressure Welder Licence

NSID : P0072 Expires : 17 Jun 2015

Name : Even Brewer

Certified by : Sunny Corner Enterprises Inc.

Purge	Backing	Process	F-No.	Qual. thk.
NR	NR	GTAW	6	0.25"
NR	R	SMAW	1 - 4	0.436"

WPS : 44-GTSM-01 :2735

Inspector :

Ken M...

TABLE 104191.121

P/S-No.	Max. thk.	Min. thk.	Min. dia.
P1 - 11	0.686"		1"
Position (s)	1: All	up	
	2:		
Electrode (s)	1: ER, E XXS, C-X per F6		
	2: EXXXX-XX per F1-4		
	3:		
Other		Machine controls	
GMAW mode	: n/a	Visual	: n/a
Con. inert	: n/a	Auto volt	: n/a
Fused only	: n/a	Auto joint	: n/a



NB Technical Inspection Services
Services d'inspection technique du N.-B.

Qualified Welder - F3-F4

Soudeur qualifié F3-F4

Lic No. - N° de permis: 63374 Expires-Expire le: 2014/06/19

Signature: Licensee/Detenteur

Chief BPV Inspector
Inspecteur en chef des chaudières

EVAN BREWER
392 ROUTE 617 HWY
BURTTS CORNER NB E6L 2S4

7805
104191

License No./N° de permis
63374

Client ID/Identification de client
104191

Thickness
Epaisseur 1/16-3/4

Material
Matériel P1-P4

Filler Rod
Baguette à souder F3-F4

Position 6G

Process
Procédé SMAW

Symbol
Symbole LOF



This is to certify that **Evan Brewer**
has completed the:

HSE - Confined Space Entry

Instructor: **Elmer MacWilliams**

Issued On: **November 23, 2011**

Expires On: **November 23, 2013**



This is to certify that **Evan Brewer**
has completed the:

HSE - Fall Protection

Instructor: **Elmer MacWilliams**

Issued On: **November 25, 2011**

Expires On: **November 25, 2013**

CERTIFICATE OF DANGEROUS GOODS TRAINING

Employee Name: Evan Brewer

Employer Name: McGinnell's Welding

Employer Address: Robot 3597 Station B

(Federation) F100 N.B. E3A 5T8

This certifies that the above-named employee has received training in accordance with Part 6 of the TDG Regulations as indicated on the reverse.

Expires On: Nov. 29/2014

Employee Signature: Evan Brewer

Employer Signature: Elmer MacWilliams

Trainer Signature: H. Pickard & Associates



Industrial
Health
Safety
Environment

This is to certify that: **Roger Robichaud**
has completed training in:

Confined Space Entry & Attendant

Instructor: T. Doane
Issue Date: 7/23/2013
Expires On: 7/23/2015
Student Number: 314448

www.hseintegrated.com