North Atlantic Wind to Hydrogen Project Emergency Response Plan (ERP)

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Revision History:

Rev.	Section	Date of Revision	Description

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List of Acronyms and Abbreviations

AAR	After-Action Report
AGELs	Acute Exposure Guidance Levels
CBC	Come By Chance
EAP	Employee Assistance Program
ECC	Emergency Command Center
EPZ	Emergency Planning Zones
ERP	Emergency Response Plan
ERT	Emergency Response Team
ESD	Emergency Shutdown
E2	Environmental Emergency
GPM	Gallons Per Minute
HP	Hydrogenation Plant
HGP	Hydrogen Generation Plant
HR	Human Resources
HSE&S	Health, Safety, Environment, and Sustainability
IC	Incident Commander
ICS	Incident Command System
IR	Infrared
LEL	Lower Explosive Limit
LOHC	Liquid Organic Hydrogen Carrier
MCH	Methylcyclohexane
NA	North Atlantic
NFPA	National Fire Protection Association
NLH	Newfoundland Hydro
OHS	Occupational Health and Safety
PEM	Proton Exchange Membrane
PFAS	Personal Fall Arrest System
PPE	Personnel Protection Equipment
SA	Simple Asphyxiant
SCBA	Self-Contained Breathing Apparatus
SDS	Safety Data Sheet
TOL	Toluene
UV	Ultraviolet

1. Introduction

This document is to be referenced in the event of an environmental or emergency incident related to the North Atlantic Refining Corp. (North Atlantic) Wind to Hydrogen Project (the Project). This document is to be used in conjunction with existing North Atlantic (NA) safety documentation. Details including but not limited to, emergency procedures, site layout, and emergency contact information can be found within this document.

1.1 Scope

The document presents the Emergency Response Plan (ERP) to be followed in the event of an environmental emergency related to wind turbine and hydrogen / Liquid Organic Hydrogen Carrier (LOHC) production operations at the Come By Chance (CBC) and Sunnyside Facilities. The ERP will be incorporated into and utilized with existing safety documentation, and applies to all other personnel, individuals and organizations that may be involved in emergency measures on site, including the North Atlantic Refining Limited (NARL) Logistics Terminal ("the Terminal") and Braya Renewable Fuels.

This ERP provides processes and guidelines for emergencies involving hazardous materials that can occur with equipment in-service, in storage or during transportation for all employees of the Project. These emergencies may include:

- Fires,
- A leak or spill of hazardous liquid,
- The catastrophic failure of a piece of in-service equipment,
- The accidental breech of a tank of hazardous materials.

Existing operations at the CBC Terminal and Braya Refinery are not included in the scope of this document.

1.2 Objectives

The primary purpose of the response plan is to implement a structured program for the prevention of, preparation for, response to and recovery from an environmental emergency or danger to human life or health at the CBC and Sunnyside Facilities.

The ERP has the following objectives:

- To preserve the health and safety of employees, contractors, response personnel and the public.

- To reduce adverse environmental impacts.

- To reduce the risk of damage to property.

- To ensure that emergency response personnel are aware of the risks associated with the facility and its operations.

- To guide response personnel in deciding which measure to take and in implementing them safely, quickly and efficiently.

- To minimize the amount of time and money required to resume to normal operations.

- To inform citizens who may be affected by the event.

- To liaise with the responsible authorities in the context of public safety.

The following priorities shall be considered for the purpose of establishing the order of measures to be taken during a response to an emergency:

- The safety of the facility's personnel.

- The safety of the facility.

- The safety of the communities living adjacent to the facility.

- The prevention of fire and explosion.

- The minimization of the pollution incident.

- The notification and reporting of the pollution incident.

- The environmental impact of the pollution incident.

- The requirements for cleaning up the pollution incident.

1.3 Document Control

A hard copy of this plan will be kept in the North Atlantic Emergency Command Center (ECC) and will be made readily accessible to staff. The electronic master copy will be saved and maintained through the Document Control System.

1.3.1 Records of Change

This document contains information that must be kept accurate and up to date. This ERP will be annually updated as well as, as needed as part of a post-incident critique following response to an actual incident

or exercise. Maintenance and review of this plan is the responsibility of the Terminal Safety Manager. All revisions will be evaluated and distributed to all plan holders by the Terminal Safety Manager to ensure accuracy and is to be issued as a controlled document.

The coordination of updates to the plan is completed on an as required basis and facilitated through the Safety Manager.

2. Legal

This document reflects a commitment by North Atlantic to carry out the actions described and to report on results achieved.

3. Definition and Reference Documents

3.1 Definitions

The following terminology is used throughout the ERP.

Authorized Personnel: A person approved or assigned by the employer to perform specific duties or to be at a specific location or locations at the jobsite.

Assembly Area: A designated area where all North Atlantic, Terminal, Braya personnel, O&M service providers, contractors and site visitors will meet during a Field Based Evacuation Emergency.

Consequence: The outcome of an event or situation expressed qualitatively or quantitatively, being a loss, injury, disadvantage, or gain.

Emergency: a serious, unexpected, and often dangerous situation requiring immediate actions.

Emergency Responders: General term for a group of individuals who have defined skills or responsibilities in an emergency.

Emergency Command Centre (ECC): The ECC is typically activated as part of an Emergency Response Plan during a major incident that has high consequence/severity that requires an organizational structure beyond that of the first responder's on-scene. The ECC is manned by the Command Team which consists primarily of ECC Manager, Operations Chief, Planning Chief, Finance & administration Chief and Logistics Chief. The command structure can expand or retract depending on the needs involved to mitigate the incident.

Fire Warden: an employee who is designated to assist with evacuation by verifying that workspaces are properly evacuated and assist with guiding the occupants to the safe destinations identified for each worksite.

Incident: any unplanned or undesired event that causes harm or has the potential to cause harm to health, environment, or property.

Incident Commander (IC): The person responsible for all decisions relating to the management of the incident. The Incident Commander is in charge of the incident sited.

Incident Command System (ICS): An organized system of roles, responsibilities, and standard operating procedures used to manage and direct emergency operations.

3.2 Reference Documents

Table 3.2-1: Internal Document Reference.

Document Number	Document Title
HSE-FM-007	Incident Form
SOP-HSE-004	PPE Management
SOP-HSE-007	Incident Management
SOP-HSE-009	Emergency Preparedness
SOP-HSE-010	Environmental Management
SOP-HSE-016	Active Shooter Prevent, Prepare and Respond
NARL-S-001-02	Incident Investigation and Reporting
-	Incident Reporting Flow Chart
-	North Atlantic – ERP Field Guideline
-	North Atlantic Wind-to-Hydrogen Hazardous Material Training Plan
-	North Atlantic Wind-to-Hydrogen Waste Management Plan
-	NARL Logistics LP: Environmental Emergency (E2) Plan
-	NARL Logistics LP: Oil Pollution Prevention and Emergency Plan
-	NARL Logistics LP: Waste Management Plan Outline
-	Orientation – Come By Chance Loading Terminal

4. Site Information

4.1 Project Description

North Atlantic Refining Corp. (North Atlantic) is proposing to undertake the development of a Wind to Hydrogen project (the Project) on the Isthmus of Avalon Region in Newfoundland and Labrador (NL). This Project will entail the development, construction, operation and eventual decommissioning of a 324-megawatt (MW) Wind Farm consisting of 45 wind turbines on an undeveloped peninsula situated between Sunnyside and Deer Harbour. The Wind Farm will provide renewable electricity via a 138 kV transmission line to a newly developed Hydrogen Generation Plant (HGP), from where generated hydrogen will be transported to a Hydrogenation Plant (HP) for transformation into a Liquid Organic Hydrogen Carrier (LOHC), which will then be shipped from North Atlantic's port facilities to international markets for use in various decarbonization technologies.

The HGP, HP, Terminal and Braya Refinery, are not open to the public, with a fully fenced compound secured with gates. The existing Terminal is compliant with the current regulatory requirements and is subject to routine inspections by North Atlantic Operators, Transport Canada, and the provincial department of Pollution Prevention. A product inventory control program is maintained daily. All personnel handling regulated substances hold appropriate Records of Training.

Figure 4.1-1 provides an overview of the Project layout at the CBC and Sunnyside locations.

Figure 4.1-1: North Atlantic Wind-to-Hydrogen Project Layout.

4.2 Site Layout

North Atlantic will develop a site layout plan that is specific to the Project that will be posted in each work area and is to be reviewed, in conjunction with the existing document, "Orientation – Come By Chance Loading Termination", during the Site Orientation. This plan will include, but is not limited to:

- Site boundaries,
- Roadways, buildings, and major tanks (labelled and numbered),
- Product loading / unloading areas,
- Normal entrances and exists,
- Emergency access points,
- Grid reference,
- Electrical supply isolation,
- Gas supply isolation valves,
- Town / fire water isolation valves,
- Catch Basins and manholes,
- Stormceptors,
- Process chemical shut-down valves,
- First Aid and Eye Wash Stations,
- Spill Kits,
- Location of all fire extinguishers, fire alarm systems, description of sprinkler system,
- Specific waste bins / hazardous waste area,
- Dangerous goods storage area,
- Personal Protective Equipment (PPE) Storage Location,
- Safety Data Sheet (SDS) Location.

4.3 Chemical Hazards

Additional to the existing chemical hazards on site outlined in "NARL Logistics LP: Environmental Emergency (E2) Plan", the Wind-to-Hydrogen Project introduces three new key chemicals to the site:

- Hydrogen,
- Toluene (TOL),
- Methylcyclohexane (MCH).

4.3.1   Hydrogen Gas Properties and Hazards

Hydrogen will be generated utilizing PEM Electrolyzers. This process utilizes electricity from the renewable source, supplemented by the local grid, to separate purified water into its base components of hydrogen and oxygen by applying an electrical current. The hydrogen will be captured and compressed for distribution, with the oxygen being safely vented to the atmosphere.

The hydrogen will be transported to the HP by appropriate engineered piping. There is potential for a small volume of onsite hydrogen storage to buffer flow between the processes, which will be determined during the detail design stage. The hydrogen would be stored at a gaseous state in stationary aboveground storage and the ERP will be updated to include to required safety procedures if deemed necessary.

4.3.1.1   Characteristics

Hydrogen is a colorless, odorless gas which is highly flammable. Hydrogen is flammable over a wide range of vapour / air concentrations and when ignited, burns with a pale blue, almost invisible flame. Hydrogen is non-toxic but can be a simple asphyxiate (SA) through the displacement of oxygen in the air.

If hydrogen storage containers are exposed to fire, they may vent and release flammable gas through pressure relief devices. Storage containers may explode when heated and the ruptured container may rocket.

Table 4.3-1 provide safety hazards associated with hydrogen.

Table 4.3-1: Hydrogen Safety Hazards.

Hazard	Description
Fire Hazard	Extremely flammable, will be easily ignited by heat, sparks, or flames. Will form explosive mixtures with air.
Health Hazard	Vapours may cause • Dizziness or asphyxiation without warning, especially when in closed or confined areas • Irritation if inhaled at high concentrations When in contact with gas, liquified gas or cryogenic liquids may cause burns, severe injury and/or frostbite. Fire may produce irritating and / or toxic gases

There are no specific exposure limits for Hydrogen. Oxygen levels should be maintained above 19.5%.

4.3.2 Liquid Organic Hydrogen Carriers Properties and Hazards

4.3.2.1 Toluene

Toluene (TOL) will arrive through the jetty and will be stored, in liquid form, on site for use in the Hydrogenation Plant. TOL will be transported from the jetty to the storage tank through loading arms and appropriately engineered piping. Similarly, appropriately engineered piping will be used to transport the stored toluene to the HP for use.

4.3.2.1.1 Characteristics

TOL is a clear, colorless liquid with a characteristic aromatic odor and a flash point of 4.4 ℃, TOL is less dense than water and is insoluble in water. Its vapors are heavier than air, and may be toxic by inhalation, ingestion or skin contact.

Table 4.3-2 provide safety hazards associated with TOL, with Table 4.3-3 provide Acute Exposure Guideline Levels (AEGLs).

Table 4.3-2: Toluene Safety Hazards

Hazard	Description
Fire Hazard	Highly Flammable – TOL vapour is heavier than air and may travel a considerable distance to a source of ignition and flash back.
Health Hazard	Vapors can irritate eyes and upper respiratory tract. Can cause: ▪ Dizziness, ▪ Headaches, ▪ Anesthesia, ▪ Respiratory arrest. Liquid can irritate eyes and cause drying of skin. If aspirated can cause: ▪ Coughing, ▪ Gagging, ▪ Distress, ▪ Rapidly developing pulmonary edema.

Table 4.3-3: Toluene Acute Exposure Guideline Levels (AGELs).

AGELs	Exposure Periods				
	10 minutes	30 minutes	60 minutes	4 hours	8 hours
AEGL-1	67 ppm	67 ppm	67 ppm	67 ppm	67 ppm
AEGL-2	1,400 ppm[1]	760 ppm	560 ppm	310 ppm	250 ppm
AEGL-3	10,000 ppm[2]	5,200 ppm[1]	3,700 ppm[1]	1,800 ppm[1]	1,400 ppm[1]

4.3.2.2   Methylcyclohexane

Methylcyclohexane (MCH) is generated through the chemical reaction between hydrogen and TOL, also known as hydrogenation. MCH will be produced in the HP, where it will be transported to its respective storage tank through appropriately engineered piping. The MCH will then be loaded to a vessel for transportation through the existing jetty and loading arms through appropriately engineered piping.

4.3.2.2.1   Characteristics

MCH is a clear colorless liquid with a petroleum-like odor and has a flash point of -3.8 ℃. MCH is less dense than water and is insoluble in water. Its vapors are heavier than air.

Table 4.3-4 provide safety hazards associated with MCH.

Table 4.3-4: MCH Safety Hazards.

Hazard	Description
Fire Hazard	MCH is highly flammable. Vapours may travel considerable distances to a source of ignition and flashback contain explosion may occur during fire conditions. MCH also forms explosive mixtures in air.
Health Hazard	Harmful if inhaled or swallowed. Vapors or mist are irritating to: • The eyes, • Mucous membrane, • Upper respiratory tract, • Skin. Narcotic effects and dermatitis.

MCH exposure limit based on Canadian Occupation Exposure Limit is 400 ppm.

4.4 Emergency Response Equipment

Braya Renewable Fuels provide emergency response services to NARL Logistics. Both entities were once a common facility, and many synergies continue to exist. In the event of an emergency, Braya has 24-7 response capabilities for fire and medical services.

The North Atlantic and Braya Facilities have full on-site emergency response capabilities to launch a land or water response. Table 4.4-1 provides a list of emergency response equipment on site.

Table 4.4-1: North Atlantic and Braya Emergency Equipment List.

Emergency Equipment	Description

Truck 402 One E-One Pressure Balanced Foam System Fire Truck	▪ 1,500 gallons per minute (gpm) capacity @ 150 psig.
	▪ Twelve 2.5" discharge ports.
	▪ 1,500 gal foam tank capacity.
	▪ Two 6" suction ports.
	▪ 1 hydro-clean deck gun; delivers 1000 gpm of foam solution @ 100 psi as well as 20 lbs per second of dry chemical.
	▪ Two 10" x 2.5" hard suction hoses and 2-0"x6" hard suction hose.
	▪ Pump 407 national foam portable diesel fire water pump rated at 150 psi and 5000 gpm, with the following characteristics:
	    ○ 4 X 6" Suction,
	    ○ 5 X 5" Discharge / 1 x 2" discharge,
	    ○ 1 x 10 discharge high-vol aquaduct hose, 100',
	    ○ 14 hours running capacity without fuel,
	    ○ Dual primary manual primers,
	    ○ Electric primer,
	    ○ Heating block, 120 volts.
	▪ Bunker Gear for seven fire fighters.
	▪ Breathing apparatus.
	▪ Normal Fire Fighting Tools.

Truck 401 Metal Fab Fire Truck	▪ 1,250 gpm pump @ 150 psi. ▪ 1,000 gal water tank. ▪ 30 gal water tank. ▪ Light tower. ▪ 1,250 gpm roof turret. ▪ Eight discharge ports. ▪ Two 6" suction ports. ▪ Tone 2.5" suction port. ▪ Bunker Gear for seven fire fighters. ▪ Breathing apparatus. ▪ Normal Fire Fighting Tools.
Two National Foam Monitors ("Terminators") with Gladiator Nozzles	Nozzles are capable of aspirating (quality foam blank) and non-aspirating (range), and one 3,000 gpm, one 15,000 gpm delivery.
Dry Chemical Inventory	▪ Purple K – 2,500 lbs. ▪ ABC – 2,600 lbs. ▪ BC – 2,000 lbs.
Foam Liquid Inventory	▪ Fire Trucks – 1,500 gal AFFF ATC. ▪ Tank Trailer – 1,650 gal AFFF ATC. ▪ Foam Totes – 5,500 gal AFF ATC. ▪ Jetty Tanks – 6,000 gal FP. ▪ NA Petrel – 3,000 gals.
There are 63 self contained breathing apparatus (Scott packs). 1,000 Fire extinguishers located throughout site and 27 Work Line Packs located at Fire Hall.	
Fire Water Pump House	▪ P-6201 / 3,000 gpm @ 130 psi / 4,500 gpm @ 199 psi design. ▪ P-6202 / 3,000 gpm @ 130 psi / 4,500 gpm @ 199 psi design.
Equipment available at the Jetty	▪ 6,000 gal capacity liquid foam storage tank.

Emergency Equipment	Description
	▪ Two foam pumps of 240 us gpm capacity at 190 psi discharge each. ▪ Two diesel engine driven fire pumps of 220 us gpm capacity at 190 psi discharge. ▪ Three fire hose boxes. ▪ Six above deck foam monitors. ▪ Three bunker suits.
Hazardous Material Response Equipment	▪ Four Class A Entry Suits National Fire Protection Association (NFPA) Aluminized. ▪ Six Class A Entry Suits NFPA. ▪ Two 1-hour Self-Contained Breathing Apparatus (SCBA) Pak Fifty Scoot 4.5 located on Unit 401. ▪ All required decontamination equipment.
On-Water Response Equipment	▪ 36" Solid Floatation Boom. ▪ Line Boat. ▪ Two Tugboats (One with firefighting capabilities). ▪ 21' Aluminum Boat – Full Response Capabilities. ▪ 24' Aluminum Boat – Full Response Capabilities. ▪ 5" and 10" Absorbent Boom. ▪ Pads, socks and Pompoms. ▪ Inflatable buoys. ▪ Towing device.
Response Support Equipment	▪ Cranes (50 ton), Carrie Deck (10 ton). ▪ Boom Truck (25 ton). ▪ Forklift (4WD JCB).

4.4.1   Emergency Washing Facilities

North Atlantic will provide emergency washing facilities in working areas of the Project, where risk of eye or skin exposure to harmful or corrosive material or other material that may burn or irritate is possible. Guidance for any hazardous material will reference the respective SDS.

In cases where a plumbed emergency eyewash is required, only potable water should be utilized. For portable eyewash units, only potable water or an isotonic saline flushing solution is permissible.

4.4.2   Fire Protection

As required by Section 443 of the Newfoundland and Labrador Occupational Health and Safety Regulations, the design and occupancy of any North Atlantic facility, along with the installation of fire alarm, detection, and fire protection equipment, must comply with the Fire Prevention Act, 1991. North Atlantic is committed to ensuring that all work adheres to the applicable provisions of the Fire Protection Service Regulation, 2012 and the National Fire Code.

All fire alarm, detection, and fire protection equipment will be maintained in accordance with the manufacturer's instructions and any other applicable requirements of provincial legislation to ensure optimal functionality and compliance.

4.4.3 Access, Egress and Movement

North Atlantic will ensure that all areas shall have safe and appropriate means of access and egress.

4.4.3.1 Exits and Doors

All designated emergency exits shall be designed and marked to provide quick and unimpeded exit, and periodic emergency drills shall be held to ensure workers' awareness of the availability and location of the exits. All designated emergency exits and doors will comply with NFPA 101, Life Safety Code and Fire Protection Services Regulations, 2012.

In instances where there are any stairways at a facility, a door shall not open directly onto that stairway but shall open onto a floor or a landing with a width that exceeds the swing of the door. Any double-acting swing door, if applicable, shall be designed and installed to permit an adequate view through the door where the door presents a safety hazard.

A transparent glass door or a glass panel that extends less than 30.48 centimeters from the floor, and which could be mistaken for a doorway, shall be constructed of laminated or tempered glass or utilize a safety glazing.

Note: This requirement does not apply where the glass is fitted with bars or other devices or markings that clearly indicate the presence and position of the door or panel.

4.4.4 Emergency Command Centre

The ECC provides a location for the coordination and direction of response efforts during an emergency. There is an existing Emergency Command Centre (ECC) at the Terminal, and an additional ECC will be designated at the Wind Farm site by the Safety Manager. In the event that the primary ECC is unavailable, the Safety Manager can designate a new location.

The primary ECC should be equipped with suitable communication equipment, including but not limited to telephone, radio communication, and teleconferencing. Additionally, three levels of communication should be made available:

- Separate private designated phone land line.

- Cell phone.

- Two-way radio with designated emergency channel.

All emergency phone numbers for the project will be clearly posted in the ECC and updated accordingly, along with an up-to-date list of phone numbers for key personnel, response team members, mutual aid, community leaders and external regulatory agencies.

The ECC will have priority access to all necessary office equipment, such as fax, photocopier, and radio / cell phone battery chargers. Additionally, the ECC will have the necessary tools for organizing response to an emergency, including but not limited to:
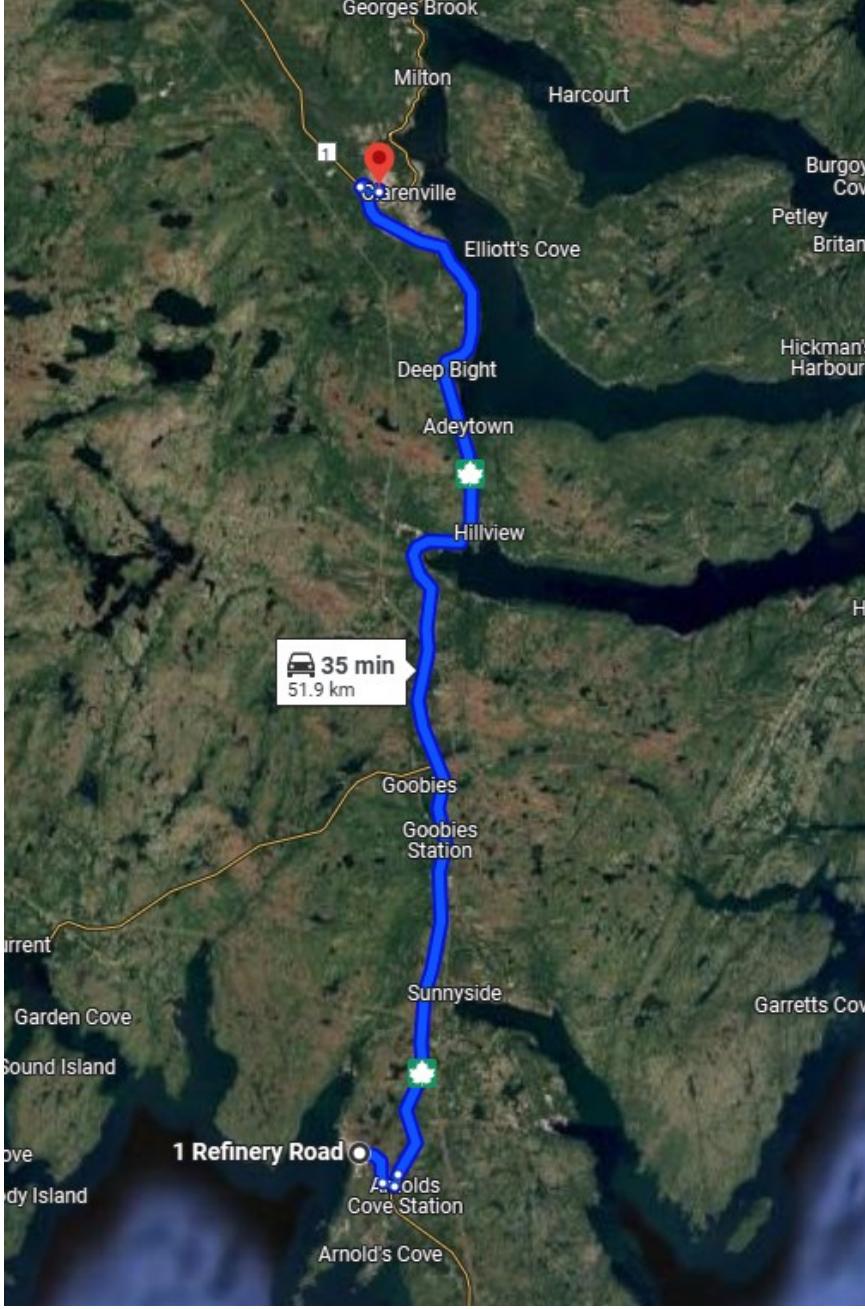
- Flashlights,

- Batteries,

- Copy of the ERP,

- Copy of project Health, Safety, Environment and Sustainability (HSE&S) Manual,

- Logbook,

- Emergency site maps and plans,

- Site resource equipment list,

- Communication recording forms,

- ECC attendance forms,

- 2-way radio communication (base station or handheld),

- Satellite phone system,

- Network connections,

- Laptops,

- Escape Respirators.

4.5 Medical Centres

The existing terminal facility has 24-7 access to the Braya Health Center which is staffed Monday to Friday with an industrial nurse. During evening and weekends, the center is serviced by technicians who have advanced first aid training.

Medical emergencies requiring transportation will be conducted by the local ambulance service through 911. (Additional emergency contact numbers can be found in *Section 7.1.2*). If an injured worker requires transportation to a medical Center / Hospital, please provide the following directions in Table 4.5-1 and 4.5-2, depending on site location:

Table 4.5-1: Direction to medical centres from HGP and HP.

Directions to nearest medical Center – HGP and HP
Dr. G. B. Cross Memorial Hospital 67 Manitoba Dr. Clarenville, NL, A5A 1K3

Telephone: (709) 466-3411
Directions:

- Head east on Refinery Rd for 1.9 km
- Turn Left onto Main Rd
- Follow Main Rd for 600 m
- Turn left onto the ramp to Clarenville

Directions to nearest medical Center – HGP and HP
- Follow Trans-Canada Highway / NL-1 W for 48 km   - Turn Right onto Manitoba Dr / NL-230A N   - Follow Manitoba Dr for 900 m   - Turn Left at 67 Manitoba Dr.
Health Science Centre 300 Prince Phillip Dr, St. John's, NL A1B 3V6 Telephone: (709) 777-6300 Directions: - Head east on Refinery Rd for 1.9 km   - Turn Left onto Main Rd   - Follow Main Rd for 300 m   - Turn right onto the ramp to St. Johns   - Follow Trans – Canada Highway / NL-1 E for 132 km   - Take exit 44 towards Thorburn Rd / NL-50   - Turn right onto Thorburn Rd, and follow for 4.7 km   - Use the left lane to turn left onto Prince Philip Drive   - Follow Prince Philip Drive for 900 m   - Turn Left onto Clinch Crescent   - Follow Clinch Crescent for 230 m   - Turn right onto Mosdell Rd and follow to main entrance
St. Clare's Mercy Hospital 154 Lemarchant Rd, St. John's, NL, A1C 5B8
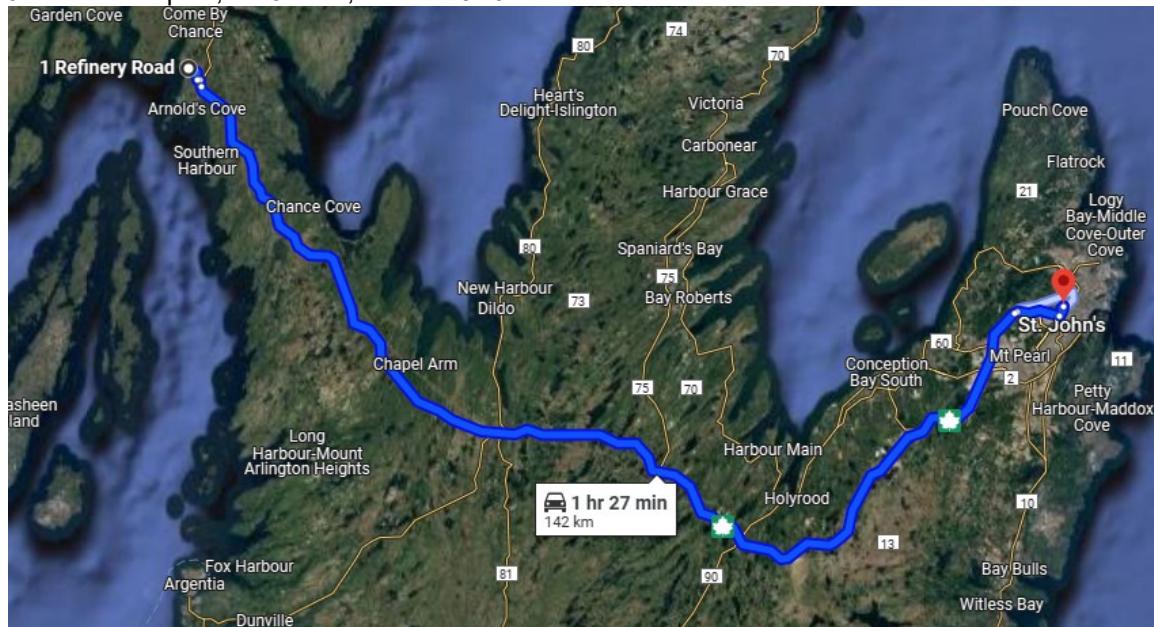
Directions to nearest medical Center – HGP and HP
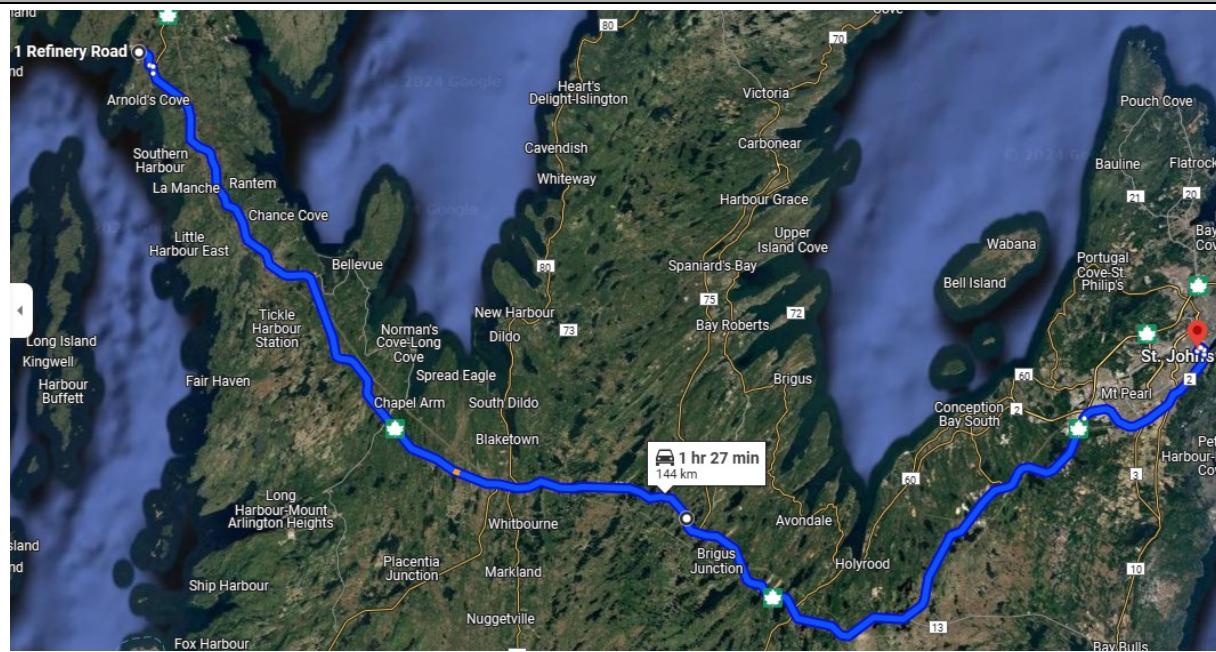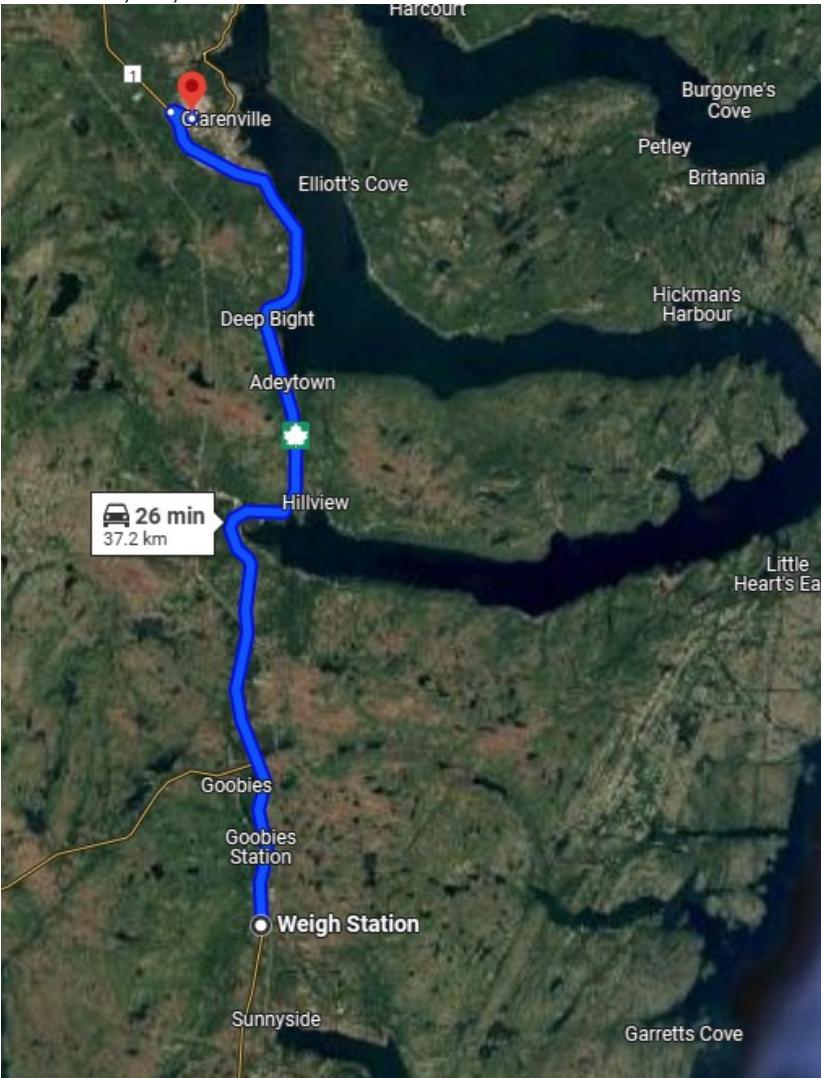
Telephone: 1-709-777-5000

Directions:

- Head east on Refinery Rd for 1.9 km
- Turn Left onto Main Rd
- Follow Main Rd for 300 m
- Turn right onto the ramp to St. Johns
- Follow Trans – Canada Highway / NL-1 E for 125 km
- Take Exit 41A to merge onto NL-2 E towards Mount Pearl / St. John's
- Follow NL-2 for 15.1 km
- Continue onto New Gower Street for 350 m
- Turn left onto Barters Hill, and continue for 580 m
- Turn left onto Ricketts Rd
- Continue for 400 m until destination on the left.

Table 4.5-2: Directions to medical centers from Wind Farm

Directions to nearest medical Center – Wind Farm
Dr. G. B. Cross Memorial Hospital 67 Manitoba Dr. Clarenville, NL, A5A 1K3

Telephone: (709) 466-3411
Directions:
- Follow Trans-Canada Highway / NL-1 W for 36.1 km
- Turn Right onto Manitoba Dr / NL-230A N
- Follow Manitoba Dr for 900 m
- Turn Left at 67 Manitoba Dr.

Health Science Centre
300 Prince Phillip Dr, St. John's, NL A1B 3V6

Directions to nearest medical Center – Wind Farm
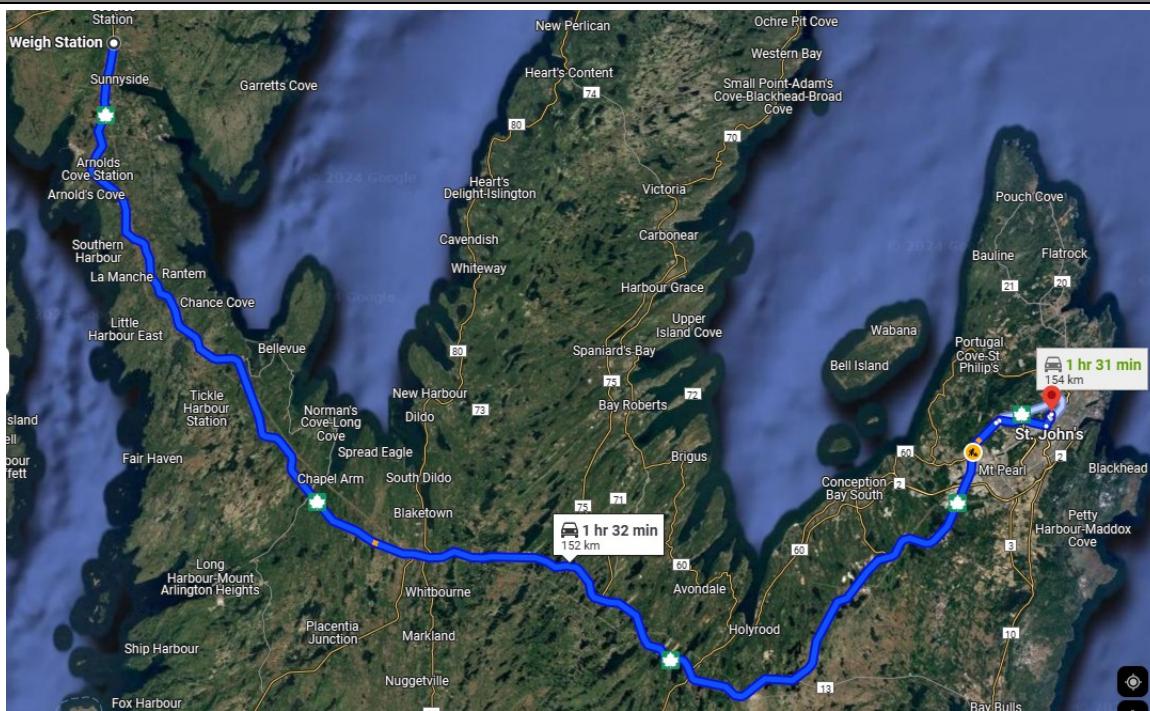
Telephone: (709) 777-6300
Directions:

- Follow Trans-Canada Highway/ NL-1 E for 145 km
- Take exit 44 towards Thorburn Rd / NL-50
- Turn right onto Thorburn Rd, and follow for 4.7 km
- Use the left lane to turn left onto Prince Philip Drive
- Follow Prince Philip Drive for 900 m
- Turn Left onto Clinch Crescent
- Follow Clinch Crescent for 230 m
- Turn right onto Mosdell Rd and follow to main entrance

St. Clare's Mercy Hospital
154 Lemarchant Rd, St. John's, NL, A1C 5B8

Directions to nearest medical Center – Wind Farm

Telephone: 1-709-777-5000

Directions:
- Follow Trans – Canada Highway / NL-1 E for 137 km
- Take Exit 41A to merge onto NL-2 E towards Mount Pearl / St. John's
- Follow NL-2 for 15.1 km
- Continue onto New Gower Street for 350 m
- Turn left onto Barters Hill, and continue for 580 m
- Turn left onto Ricketts Rd
- Continue for 400 m until destination on the left.
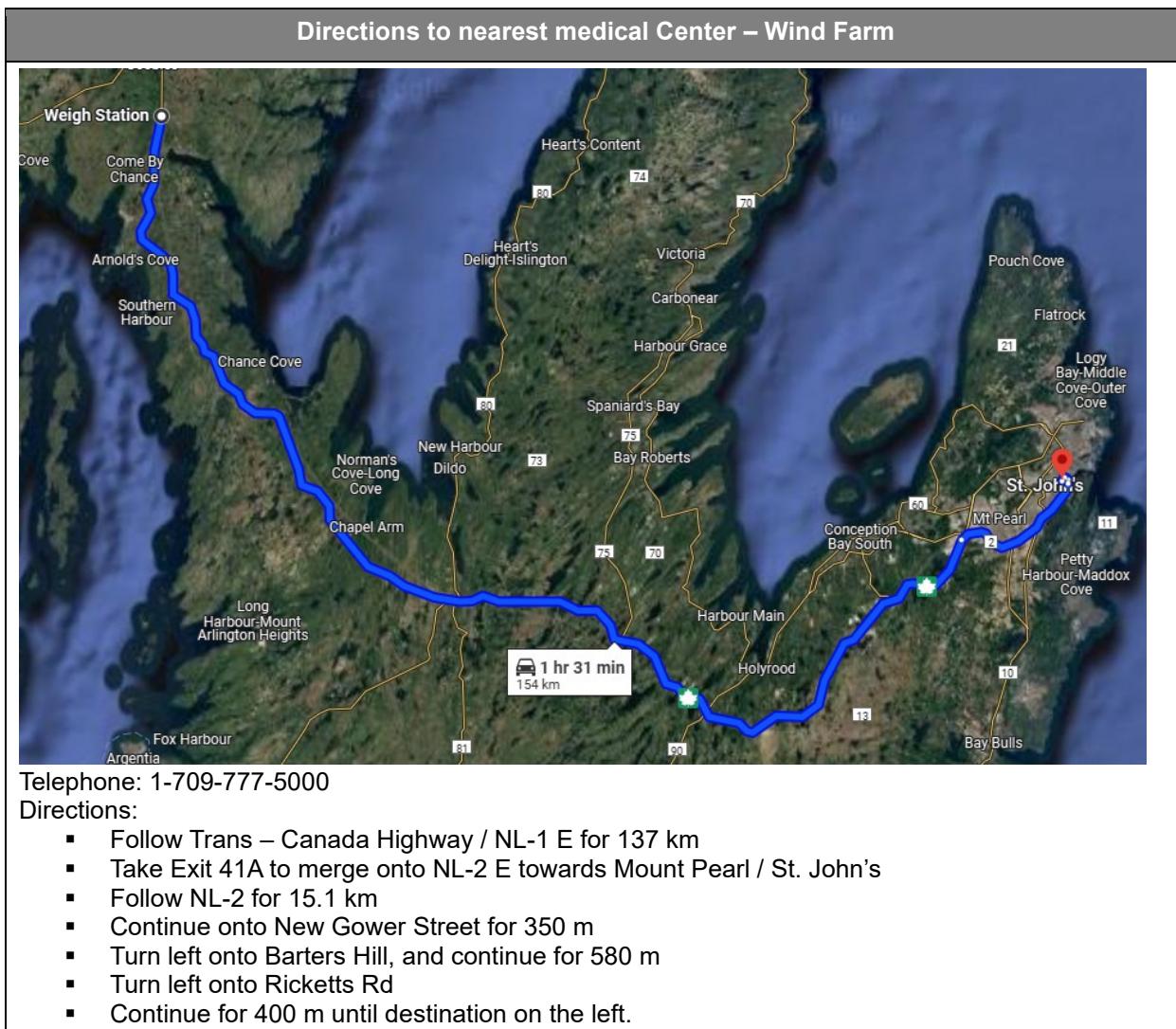
5.   Risk Assessment and Incident Classification

5.1 Hazard Recognition and Risk Assessment

North Atlantic implements a qualitative assessment matrix to assess potential risks at facility by identifying the likelihood and the impact and providing a rating for the potential risk.

5.1.1   HAZID

Table 5.5-1 provides the Impact Rating Scale for the facilities. With Table 5.5-2 and 5.5-3 providing the HAZID Likelihood Matrix and Consequence Table respectively.

Table 5.1-1: Impact Rating Scale.

Category	Description
Health and Safety	The direct negative consequence of the occurrence of a hazard on the physical health of people. This category includes fatalities, injuries or being displaced (evacuations) or lacking the necessities of life.
Environmental	The negative consequence of the occurrence of a hazard on the environment, including the soil, water, air, and/or plants and animals, both onsite and offsite.
Operational / Technical Performance	The extent of damage to operating facilities, starting from no damage and extending to a complete loss of the facility.
Project Cost	The negative economic consequences of the occurrence of the hazard.
Project Schedule	The extent increase in project duration / delay in project execution of the occurrence of the hazard.
Legal and Regulatory	The multifaceted extent of negative consequences to non-compliance including, legal liability, financial penalties, reputation damage or operational disruptions.
Image and Reputation	The extent of damage to the company's reputation as well-respected community minded organization locally, regionally, provincial/state-wide, nationally and internationally (Negative impacts could result from negative community perceptions, negative media coverage or regulatory enforcement).

Table 5.5-2: HAZID Likelihood Matrix.

Probability Descriptor	Qualitative Descriptor	Likelihood of Occurrence	Guidelines
P-5	Almost Certain	>80%	The unwanted event is almost certain to happen within the life of the project. In the case of repetitive/frequent tasks the unwanted event has or will occur in order of one or more times per year. In terms of major events, as also in the case of long-term health, environment, or social impacts, it may only happen once in the life of the project.
P-4	Likely	50% to 80%	There is a high probability that the unwanted event will occur within the life of the project. In the case of repetitive/frequent tasks the unwanted event has occurred or is likely to occur in the order of less than once per year. In terms of major events, as also in the case of long-term health, environment or social impact, it might happen once in the life of the project.
P-3	Possible	10% to 50%	It is possible that an unwanted event can occur within the life of the project. In the case of repetitive/frequent tasks, the unwanted event has occurred or is likely to occur in order of once every 5-10 years. In terms of major events, as also in the case of long-term health, environment or social impacts, there is a low probability for the event to happen in the life of the project.
P-2	Unlikely	2% to 10%	There is a low probability for the unwanted event to occur within the life of the project. In the case of repetitive / frequent tasks, the unwanted event has occurred sometime or is likely to occur not more than once every 10 - 20 years. In terms of major events, as also in the case of long-term health, environment or social impacts, there is a low probability for the event to happen in the life of the project.
P-1	Rare	>2%	There is a very low probability for the unwanted event to occur within the life of the project. In the case of repetitive/frequent tasks, the unwanted event has occurred there are no records if the event occurring, or it is highly unlikely the event will occur within the next 20 years. In terms of major events, as also in the case of long-term health environment or social impacts, there is a low probability for the event to every happen.

Table 5.5-3: HAZID Consequence Matrix.

Category	C-1 (Insignificant)	C-2 (Minor)	C-3 (Moderate)	C-4 (High)	C-5 (Major)
Health and Safety	First Aid Case	Medical Treatment Case	Lost Time Injury	Permanent disability or single fatality	Numerous permanent disabilities or multiple fatalities
Environmental	Lasting days or less; affecting small area (meters; receiving environment highly altered with no sensitive habitats and no biodiversity value (e.g., urban / industrial areas).	Lasting weeks; affecting limited area (hundreds of meters); receiving environment altered with little natural habitat and low biodiversity value.	Lasting months; affected extended area (km); receiving environment comprising largely natural habitat and moderate biodiversity value.	Lasting years; affecting area on sub-basin scale; receiving environment classified as having sensitive natural habitat with high biodiversity value.	Permanent impact; affecting area on a whole basin or regional scale; receiving environment classified as highly sensitive natural habitat with very high biodiversity value.
Operational / Technical Performance	Minor Difficulties, more than 99.4% of design capacity.	97.5 to 99.4% of design capacity.	93.5 to 97.5% of design capacity.	85 to 92.5% of design capacity.	Less than 85% of design capacity.
Project Cost	Less than 1% impact on the overall budget of the project.	May result in overall project budget overrun equal to or more than 1% and les than 3%.	May result in overall project budget overrun of equal to or more than 3% and less than 10%.	May result in overall project budget overrun of equal to or more than 10% and less than 30%.	May result in overall project budget overrun of 30% or more.
Project Schedule	Less than 1 % impact on overall project timeline.	May result in overall project timeline overrun equal to or more than 1% and less than 3%.	May result in overall project timeline overrun of equal to or more than 3% and less than 10%.	May result in overalls project timeline overrun of equal to or more than 10% and less than 30%.	May result in overall project timeline overrun of 30% or more.
Legal and Regulatory	Technical non-compliance. No warning received; no	Breach of regulatory requirements; report/involvement of	Minor breach of law; Report/investigation by authority. Attracts	Breach of the law; may attract criminal prosecution,	Significant breach of the law. Individual or company lawsuits;

Category	C-1 (Insignificant)	C-2 (Minor)	C-3 (Moderate)	C-4 (High)	C-5 (Major)
	regulatory reporting required.	authority. Attracts administrative fine.	compensation / penalties / enforcement action.	penalties/enforcement action. Individual license temporarily revoked.	permit to operate substantially modified or withdrawn.
Image and Reputation	Reference to community consultation group, public awareness may exist, but there is no public concern.	Adverse news in local media; concerns on performance raised by shareholders government or the community.	Adverse news in state or regional media; decrease in political, shareholder or community support.	Damage to corporate reputation at national level; raised in national media; significant decrease in political, shareholder or community support.	Damaged to corporate reputation at international level; raised in international media; major loss of political shareholder or community support.

Figure 5.1-1 presents the North Atlantic Risk Matrix.

Likelihood		C-1	C-2	C-3	C-4	C-5
	P-5	10 Tolerable (Medium)	16 Intolerable (Significant)	20 Intolerable (Significant)	23 Intolerable (High)	25 Intolerable (High)
	P-4	7 Tolerable (Medium)	12 Tolerable (Medium)	17 Intolerable (Significant)	21 Intolerable (High)	24 Intolerable (High)
	P-3	4 Broadly Acceptable (Low)	8 Tolerable (Medium)	13 Intolerable (Significant)	18 Intolerable (Significant)	22 Intolerable (High)
	P-2	2 Broadly Acceptable (Low)	5 Broadly Acceptable (Low)	9 Tolerable (Medium)	14 Intolerable (Significant)	19 Intolerable (Significant)
	P-1	1 Broadly Acceptable (Low)	3 Broadly Acceptable (Low)	6 Tolerable (Medium)	11 Tolerable (Medium)	15 Intolerable (Significant)
		C-1	**C-2**	**C-3**	**C-4**	**C-5**
				Consequence		

Figure 5.1-1: Risk Matrix.

5.2 Incident Classification

In the event of an incident, North Atlantic utilizes a three-tiered structure to assess and categorize incidents into three levels depending on the potential implications to the population and environment, and the severity of the incident. For all three levels, in the case of an emergency the Incident Command System (ICS) will be triggered as outlined in Section 6 below.

5.2.1   Level 1 – Minor / Moderate Emergency

A Level 1 incident is one in which the potential effect on the surrounding population and environment is low to moderate and can be corrected with the primary on-site resources in a reasonable time frame. Examples of a Level 1 incident include, but are not limited to:

- Medical Response to injured / sick person.
- Minor easily contained spills.
- Small fire.
- Minor vehicle accident with no injuries.

5.2.2   Level 2 – Serious Emergency

A Level 2 incident is one in which the potential or actual site implications and effects on the surrounding population and environment are potentially significant. The Level 2 response can be managed by the Project Emergency Response Team (ERT), with third party emergency services assistance as required. Examples of a Level 2 incident include but are not limited to:

- Moderate spill,
- Moderate fire,
- Equipment / Structural Failure,
- Serious Accident / Injury(s),
- Severe Weather Event.

Depending on the incident, Government involvement and media interest could be moderately high, but is primarily kept at the regional level.

5.2.3   Level 3 – Crisis

A Level 3 incident is one in which the surrounding population and environment are significantly impacted, with national or global implications. Examples of a Level 3 incident include but are not limited to:

- Hydrogen release,
- Major fire (e.g., bush fire),
- Death – an employee or third-party fatality would automatically become a Level 3 incident,
- Bomb threat / Extortion,
- Explosion.

6. Incident Command System

An Incident Command System (ICS) is a standardized approach to the command, control, and coordination of emergency response. It provides a common hierarchy within which responders from multiple agencies can be effective. Figure 6.0-1 provides North Atlantic's ICS response structure for an emergency at the Project sites.
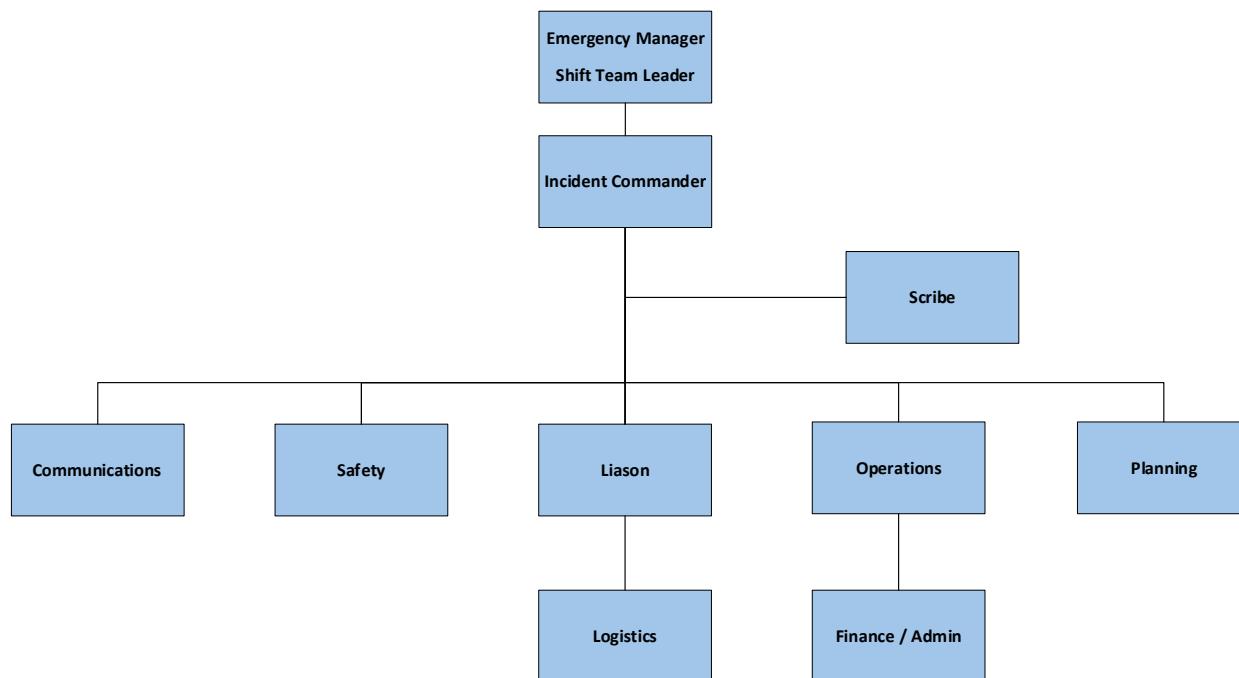
Figure 6.0-1: Incident Command Structure.

6.1 Responsibilities

It is a basic premise of this plan that all aspects of any large-scale environmental emergency will be specifically directed by the Shift Team Lead, until the Incident Commander (IC) arrives at the scene. As the facility is operated on a shift basis, 24 hours a day, seven days a week, the Shift Team Lead will provide initial response to an emergency during all hours and will assume the duties of the IC until the on-call IC arrives on-site.

North Atlantic and Braya have a support agreement in place such that trained and experienced Braya personnel will be available to respond in the event of an emergency at the Terminal. The following sections outline the responsibilities of individuals during an incident and should be read in conjunction with *SOP-HSE-009*.

6.1.1   First Person On-Site

The First Person On-Scene will:

1. Activate the emergency response procedure by calling 7100 or via the 2-way radio system.
2. Switch to the emergency channel on the two-way radio system.
3. If evacuation is required due to risk of fire and explosion or other risk, evacuate under direction from the Shift Team Lead or IC.
4. If safe to do so, stop all motorized equipment or other equipment capable of emitting sparks.

6.1.2   Incident Commander

The Incident Commander (IC) is authorized and responsible for ensuring that the response to an incident is immediate, effective and sustained. Additionally, they will:

1. Quickly assess the situation to understand the scope, scale, and impact of the incident.
2. Initiate immediate actions to stabilize the situation, such as activating alarms, evacuating personnel, or shutting down operations.
3. Take command of the incident response and establish a clear chain of command.
4. Go to the designated ECC, or if not possible establish an ECC at a central location, for managing the response.
5. Ensure clear, concise, and timely communication with all response team members and stakeholders.
6. Coordinate with the Communications Department to manage public information and media relations.
7. Develop an Incident Action Plan that outlines objectives, strategies, and tactics for managing the incident.
8. Define operational periods and establish priorities for each period.
9. Mobilize and deploy necessary resources, including personnel, equipment, and materials.
10. Coordinate logistics to ensure that resources are delivered and utilized effectively.
11. Appoint a Safety Officer to monitor and ensure the safety of response personnel and operations.
12. Identify and mitigate hazards to prevent injury or further damage during the response.
13. Appoint a Liaison Officer to coordinate with external agencies, such as fire departments, police, regulatory bodies, and other emergency services.

14. If multiple agencies are involved, establish a Unified Command structure to ensure coordinated efforts.

15. Ensure detailed documentation of the incident response, including decisions made, actions taken, and resources used.

16. Prepare and submit required reports to regulatory agencies and stakeholders.

17. Make strategic decisions based on the evolving situation, with input from key advisors and response team members.

18. Be prepared to adjust strategies and tactics as new information becomes available or as conditions change.

19. Plan and implement the orderly demobilization of resources and personnel once the incident is under control.

20. Conduct a debriefing session with all involved parties to review the response, identify lessons learned, and gather feedback.

21. Compile an After-Action Report (AAR) that details the incident, response efforts, outcomes, and recommendations for improvement.

22. Oversee the transition from response to recovery, ensuring that necessary steps are taken to restore normal operations and support affected individuals.

6.1.3   Shift Team Lead

The Shift Team Lead is responsible to provide initial response to an incident during all hours, and when the IC is not on-site. They will assume the role of IC until the on-duty IC arrives on-site and proceed to:

1. Ensure personnel are safe and accounted for.
2. Ensure a response to the incident has been launched.
3. Evaluate the size of the organization to be activated.
4. If there are insufficient personnel on-site, request security to call-in additional people.
5. Establish a headquarters in the incident command center.
6. Confirm current MARSEC level and, as required, consult with the Port Security Officer (if incident is near the Port).
7. Establish internal communications as necessary, where incident activities are expected to have an impact on other departments and processes.
8. Establish external communications, if required.
9. Oversee overall response.

10. Document all events.

11. Continue to act as the IC until the designated IC arrives on-site.

6.1.4   Safety

Safety is responsible for overseeing incident operations and offering guidance to the Emergency Coordinator regarding operational safety. Safety, in conjunction with the fire hall, are responsible for:

1. Ensure radio and telephone communications are maintained at all times.
2. Ensure Emergency response vehicles and other equipment are kept upwind of any emergency.
3. Extinguish, where safe to do so, hydrocarbon fires resulting from transfer operations at the jetty.
4. As required, assist First Aiders.
5. Advise the Shift Team Lead and IC on all aspects of health and safety on the site.
6. Coordinate the activities of the scribe to ensure information is recorded on boards and filed, as appropriate.
7. Recommend stopping work if any operation threatens worker or public health or safety.
8. During any emergency coordinate and lead all safety activities.
9. Periodically inspect protective clothing and personal protective equipment.
10. Monitor on-site hazards and conditions.
11. Instruct Security to notify, when necessary, local public emergency officials including fire department, hospital, and ambulance.
12. Coordinate emergency first aid care.
13. Maintain first aid equipment.
14. Conduct inside and outside safety tours and provides emergency safety briefs to all external personnel working on-site.

6.1.5   Scribe

The Scribe will:

1. Record information on the response centre boards.
2. Maintain a complete and accurate record of all events that occur during and after the incident.
3. File documentation.
4. Other duties as assigned.

6.1.6   Emergency Response Team

The emergency response team (ERT) , under the direction of the Shift Team Leader and/or IC, will launch a response to the incident. Members of the ERT will be drawn from trained shift workers on duty in the Braya and North Atlantic facilities at the time of the incident or those subject to call-in. Fire, Medical and Spill Response to the Terminal is provided under contract by Braya. Fire Technicians, Advanced First Aid providers and Spill responders are available on a 24-hour basis.

An ERT dedicated for the Wind Farm will be established by the Safety Manager.

6.1.7   Medical First Responder

The site has an advanced Emergency First Aid team, fully equipped ambulance and first aid station. In consultation with the foreman/ supervisors, should additional medical personnel including physicians, hospital staff, and ambulance personnel be required, they will;

1. Become familiar with the site.
2. Understand the potential for worker exposure.
3. Recommend a medical program for the site.
4. Provide emergency treatment, obtain special medications, equipment or supplies necessary to treat response personnel.
5. Provide emergency treatment procedures appropriate to the hazards on the site.
6. Prepare the Braya ambulance for response operations.
7. Undergo a site safety brief from Safety.

6.1.8   Security

The HGP and the HP are located within the boundaries of Braya Renewable Fuels Security system. In the event of an emergency Braya Security will:

1. Manage crowd control.
2. Monitor site access and close all entry and exit points to all vehicles and personnel except for emergency response personnel including regulators with an interest in the response.
3. Initiate call-in as requested by Shift Team Leader, IC and Fire/Safety Tech.
4. Monitor and answer Braya telephone.
5. Aid in accountability of personal during an emergency Muster.

Security at the Wind Farm will be established and will perform the above duties in coordination with security at the CBC facilities.

6.1.9 Human Resources

1. Provide support and counselling services to employees affected by the emergency, including those who may experience trauma or distress.
2. Coordinate with external resources, such as Employee Assistance Programs (EAPs) or mental health professionals, to offer additional support as needed.
3. Promote health and wellness initiatives to help employees cope with stress, maintain resilience, and stay healthy during and after an emergency.
4. Provide information and resources on mental health, stress management, and coping strategies to support employee well-being.

6.1.10 Communications

1. Develop and Implement: Develop an incident communication plan that outlines procedures for internal and external communication.
2. Activate the communication plan as soon as an incident is reported.
3. Inform all relevant internal stakeholders (e.g., management, staff, ERT) about the incident promptly.
4. Provide regular updates to keep everyone informed about the status of the incident and any actions being taken.
5. Communicate clear instructions to staff regarding safety measures, evacuation procedures, and other relevant actions.
6. Notify external stakeholders such as customers, partners, and suppliers about the incident and its potential impact.
7. Prepare and distribute press releases to media outlets, ensuring that accurate and timely information is shared.
8. Designate a spokesperson to handle media inquiries and public statements to ensure consistent messaging.
9. Gather accurate information about the incident from reliable sources within the organization.
10. Disseminate information promptly to prevent misinformation and rumors from spreading.
11. Maintain a record of all communications related to the incident for future reference and analysis.

12. Coordinate with the crisis management team to align communication strategies with overall incident response efforts.

13. Ensure that all communications are consistent, clear, and aligned with the organization's policies and values.

14. Manage public relations to protect the organization's reputation and build trust with stakeholders.

15. Monitor social media channels for mentions of the incident and respond appropriately.

16. Use social media to provide real-time updates and address public concerns.

17. Engage with the community to offer reassurance and support.

6.1.11 Legal

1. Conduct a legal analysis of the incident to understand potential liabilities and legal implications.

2. Ensure the organization's response complies with relevant laws, regulations, and industry standards.

3. Identify and fulfill any regulatory reporting requirements associated with the incident.

4. Serve as the primary contact with regulatory agencies, providing necessary documentation and information.

5. Ensure all details of the incident are accurately documented, including timelines, actions taken, and communications.

6. Preserve evidence related to the incident for potential legal proceedings or investigations.

7. Provide legal guidance to management and relevant departments on handling the incident.

8. Keep senior management informed about legal developments and potential risks.

9. Review and approve all public statements, press releases, and communications to ensure they do not create additional legal exposure.

10. Communicate with external stakeholders, such as customers and partners, to address legal concerns.

11. Review relevant contracts and agreements to identify any obligations or liabilities triggered by the incident.

12. Handle any claims or disputes arising from the incident, including communicating with insurance providers.

13. Represent the organization in legal proceedings, investigations, and negotiations related to the incident.

14. Coordinate with external legal counsel as needed for specialized expertise or support.

15. Review and update organizational policies and procedures to mitigate future risks based on lessons learned from the incident.
16. Provide training and resources to staff to enhance understanding of legal risks and compliance requirements.
17. Participate in the incident response team to provide legal perspective and support.
18. Assist in making legally sound decisions during the incident response process.
19. Conduct a debriefing to assess the legal handling of the incident and identify areas for improvement.
20. Prepare a comprehensive report detailing legal actions taken, outcomes, and recommendations for future incidents.

6.1.12 Operations

Operations will:

1. Manage on-site operations,
2. Supervise response teams,
3. Develop and implement strategy and tactics to accomplish the incident objectives,
4. Manage operational resources.

Finance will:

1. Oversee accounting, invoices, and payables associated with the incident,
2. Monitor costs,
3. Manage claims resulting from the incident,
4. Advise the IC on a regular basis.

6.1.13 Planning

Planning will:

1. Use existing modeling and other resources to provide periodic predictions on incident potential,
2. Advise the IC daily and provide a response action plan each morning,
3. Determine the need for specialized resources.

6.1.14 Liaison

Liaison will

1. Develop and implement strategy and tactics to accomplish the incident objectives.
2. Manage operational resources.

Logistics will coordinate:

1. Materials and resources,
2. Food Service for responders,
3. Transportation,
4. Site and Off-Site Communications.

7.   Emergency Communication

7.1.1   Offsite Coordination

In an effort to inform the public of an emergency, North Atlantic provides neighbours in close proximity with information on the nature of the emergency and instructions on what to do if action is required. A general contact number is also provided, should the public have further questions or concerns of what to do in the event of an emergency.

Should evacuation be required, the general public will be provided instruction from North Atlantic. If the incident circumstances warrant additional resources, the Local Fire Department may choose to activate its ERP and provide direction to evacuees. Emergency Planning Zones (EPZ) during a release will be established by the Local Fire Department and/or the RCMP who will reference their standard operating guidelines and this plan.

Should communication with the public be required at any time, it can be accomplished in several different ways depending on the direction of the local emergency services department, they may include:

- In-person communication,
- Local radio announcement,
- Local TV announcement,
- Automated phone messages, and
- Social media – Facebook, Twitter, etc.

7.1.2 External Agencies / Resource Contact List

The Table 7.1-1 provide a list of additional contacts.

Table 7.1-1: Resource Contact List.

Resource Contact	Contact Information
Provincial Department of Government services	
Occupational Health and Safety (OH&S) Division	1-709-729-4444 (24hrs) 1-709-726-6639 (fax)
Canadian Coast Guard	
Air Search & Rescue (Halifax)	1-800-565-1582
Marine & Air Distress Emergencies	1-800-563-2444
Marine Rescue Sub-Centre	1-709-772-5151/2597
Environmental Emergencies	
Eastern Canada Response Corporation (Level III Spills) 24-hr Emergency	1-709-364-6600 1-613-930-9690
Environment Canada	1-800-563-9089 1-709-772-2083
Regional Director, Environmental Enforcement – Atlantic Region	1-800-563-9089
Fishing Industry	
Arnolds' Cove – National Sea	1-709-463-2445
Avalon Ocean Products	1-709-463-8539
Division Manager – Science Branch Marine Environment and Habitat Management	1-709-772-2442 1-709-772-5562
Fish, Food, and Allied Workers (FFAW)	1-709-576-7276
Southern Harbour – Port Enterprises	1-709-463-2235
Transport Canada	
Emergency Centre	954-5101
Information	1-613-992-4626
National 24-hour number – Duty Officer Canadian Transportation	1-613-996-6666
Emergency Services	
Arnold's Cove Fire Department	1-709-463-8888
Come By Chance Fire Department	1-709-542-9999
GB Cross Memorial Hospital Emergency	1-709-466-3411 1-709-466-5555
Health Science Centre St. John's	1-709-777-6300
RCMP Telecommunications Operator - Clarenville	1-709-466-3211
Southern Harbour Fire Department	1-709-463-2250
St. Clare's Mercy Hospital	1-709-777-5000
Sunnyside Fire Department	1-709-472-4593
Triple Bay Eagle - Clarenville	911
Town Offices / Business	
Town of Arnold Cove	1-709-462-2323

Resource Contact	Contact Information
Town of Come By Chance	1-709-542-3240
Town of Sunnyside	1-709-472-4506
Town of Southern Harbour	1-709-463-2329
Local Resources	
Arnolds Cove Area Chamber of Commerce	1-709-463-0028
Asphalt Production Industries	1-709-368-4618
Battlefield	1-709-466-8859
Camin Cargo Control	1-709-463-4688
Canadian Blood Services – St. John's	1-709-758-8411
Canadian Helicopters – 24-hour Emergency	1-450-452-3000
Canadian Maritime Agency	1-709-463-8735
Comtug – St. John's	1-709-576-3433
IMTT	1-709-463-4688 1-709-463-4730 (Control Room)
Line Boat Master	1-709-542-3357
Lockes Electrical	1-709-463-8540 1-709-463-2275
National Public Relations	1-709-754-9617 1-709-730-5333
Newfoundland Power Emergency / Power Outages	1-709-737-5600 1-800-474-5711
North Atlantic Osprey	1-709-463-0128 1-709-687-1528
North Atlantic Petrel	1-709-463-0127 1-709-427-0011
Police – RMCP – Emergency	911 1-709-227-2000
St. John's Ambulance	1-709-726-4200
Universal Helicopters	1-709-576-4611
Provincial Resources	
Ambulance	911
Emergency Measures Organization	1-709-229-3703
Employment & Labour Relations Occupation Health and Safety	1-709-729-2711 1-709-729-2706
Fisheries and Oceans St. John's Regional Director General	1-709-772-4417
GFL	1-709-589-6247
Environmental Emergencies 24-hour Report Line	1-800-563-9089
Provincial Airlines Head Office	1-709-576-1800
Provincial Archeology Department	1-709-729-2462
Social Services – St. John's Regional Manager	1-709-729-6077
Federal Resources	
Canadian Coast Guard	1-709-722-2083
CANUTEC	1-613-996-6666

Resource Contact	Contact Information
Environment Canada – Newfoundland and Labrador Region	1-709-772-4285 / 5097 1-709-772-7745
Environment and Climate Change Canada – Environmental Emergencies / Science Table	1-800-563-9089
Fisheries and Oceans St. John's Regional Director General	1-709-772-4417
Joint Rescue Coordination Centre	1-800-565-1582 1-902-427-8200
Transport Canada – Atlantic Regional Duty Officer	1-902-426-3217 1-902-467-3860

8. Emergency Response Plan

At North Atlantic, ensuring health and safety is paramount. Every member of the project team is expected to prioritize emergency response protocols. This entails acknowledging that emergency response is a collective responsibility, shared by all project personnel, including employees, subcontractors, and visitors. The goals of the ERP are:

- **Ensure Personnel Safety:** The primary goal of the emergency response plan is to protect the safety and well-being of all individuals involved, including employees, visitors, and contractors.

- **Protect Property and Assets:** Minimize damage to property, equipment, and assets during emergencies, thereby reducing financial losses and operational disruptions.

- **Mitigate Risks:** Identify potential hazards and risks, as well as implement measures to mitigate these risks and prevent emergencies from occurring or escalating.

- **Ensure Effective Response:** Outlines clear procedures and protocols for responding to various types of emergencies, ensuring a timely and coordinated response to mitigate the impact of the event.

- **Minimize Environmental Impact:** In cases where emergencies may pose risks to the environment, such as chemical spills or natural disasters, the plan aims to minimize environmental damage and facilitate effective cleanup and remediation efforts.

- **Maintain Business Continuity:** By having measures in place to respond to emergencies efficiently, the plan helps maintain essential business operations and services, minimizing downtime and ensuring continuity of operations.

- **Coordinate with External Agencies:** Establishes mechanisms for coordination and communication with external emergency services, such as fire departments, police, and medical responders, to ensure a collaborative response effort.
- **Provide Support and Assistance:** Additionally, the plan outlines procedures for providing support and assistance to individuals affected by the emergency, including medical assistance, evacuation assistance, and psychological support.
- **Learn and Improve:** After the emergency has been resolved, the plan aims to facilitate debriefings and evaluations to identify lessons learned and areas for improvement, informing future revisions to the plan and enhancing overall emergency preparedness.

To ensure that these standard response goals are achieved, North Atlantic's encourages following the PPOST Process:

- Priorities: Life Safety, Incident Stabilization, Environment and Property conservation.
- Problem: What you know and observe of the incident.
- Objectives: Establish SMART (Specific, Measurable, Achievable, Realistic, Time-sensitive) objectives.
- Strategies: How (methods) are you going to do it.
- Tactics: Resources assigned to the tasks.

See Appendix 1 for North Atlantic's Incident Investigation Form.

8.1 Initial Assessment

The following are the procedure and considerations for the initial assessments within the ICS in the event of an incident or emergency.

1. Establishment of Safety Priorities:
    a. Life Safety (Always No.1),
    b. Incident Stabilization,
    c. Environment and property,
    d. Effective internal and external communication.
2. Assessment of the Problem:
    a. What you know and observe of the incident?

b. Are there other hazards or potential impacts?

c. What is the quantity and nature of the product?

d. What is the type, condition and behavior of the equipment, if applicable

e. Is the situation stable or unstable

f. Is there a potential for escalation?

3. What are the Modifying conditions of the incident:

a. Location,

b. Time of day,

c. Weather.

4. What are the potential impacts of the incident?

a. Impacts to staff and public,

b. Injuries/fatalities,

c. Toxic,

d. Flammable,

e. Public evacuation,

f. Impact on critical infrastructure (e.g., power, water, sewer, heating / cooling, telecommunications).

5. What is the extent of the control measures?

a. Internal resources,

b. Number of trained responders,

c. Personal protective equipment,

d. External resources,

e. Probability the incident can be contained or controlled within a short time.

6. What the incident is doing and what do you plan to do about it?

7. Who needs to know about this before our Incident Command Post is up and running?

8.2 Emergency Procedures

North Atlantic personnel are trained according to company policies and procedures, and records are maintained by the Risk Management Lead. As stated, emergency response services are provided by Braya Renewable Fuels. The Braya training department conducts training and maintains records of such for their personnel.

In the event of an emergency, decisions are often quantified based on the conditions present at the incident. All environmental emergency incidents at the facility are to be reported immediately to the

appropriate supervisor. The Risk Management Lead will ensure an incident report is generated within 24-hours of the occurrence. The incident report will be retained by North Atlantic for a minimum of seven years.

In addition to the initial assessment procedure outlined in Section 8.1, depending on the event, the general procedure is presented in Figure 8.2-1:

Assess	→	• Assess the scene and identify any hazards before taking action.
Notify	→	• Sound the alarm • Alert other on-site personnel • Call Emergency Services
Protect	→	• Put on the appropriate personnel protective equipment (PPE)\ • Remove yourself from the hazard
Isolate	→	• Isolate spills • Shutdown equipment
Respond	→	• Formulate a response plan • Execute response plan
Report / Document	→	• Complete all required reporting and documentation related to event.

Figure 8.2-1: Emergency Response Procedure.

The following sections provide emergency procedures for potential events for the Project.

8.2.1   Injury

In the event of a critical incident, activate emergency response by called 7100. The individual involved should be provided immediate medical assistance or first aid and taken to the nearest hospital without delay. Location and directions to the nearest medical centers can be found in *Section 4.5*.

The 24-hour accident reporting line number for the Newfoundland and Labrador Occupational Health and Safety (OHS) Division is 1 (709) 729-4444 and should be utilized by the HSE&S or Management as outlined by the reporting guidelines from Newfoundland and Labrador OHS Division.

In the event of an injury incident, the following procedure must be considered:

1. Assess:
    a. Take control of the situation.
    b. Assess the area for potential hazards.
2. Notify:
    a. Radio / phone for medical assistance including location and description of injury.
    b. Contact area Supervisor and Safety.
    c. Assure the victim that help is on its way.
3. Isolate:
    a. Utilize other employees for crowd control and assisting the emergency response equipment to the location.
    b. Stabilize victim to prevent further injury.
4. Respond:
    a. Request employee to retrieve first aid kit and / or AED.
    b. If capable render First Aid.
    c. Never move the victim unless they are in danger.
    d. Keep them warm.
    e. Never give them anything by mouth.
    f. Assist medical personnel if required.
5. Report / Document:
    a. Document the details of the incident, response actions taken, and lessons learned for future reference

All incidents resulting in injury of any kind must be reported to the ERT. Based upon assessment and treatment by the ERT, the injured individual will be cleared to return to their supervisor for reassignment. If the injury dictates, the worker will be required to seek further medical attention off site

8.2.1.1   Fatality

Dealing with a work-related fatality is an extremely sensitive and challenging situation that requires a careful and compassionate approach. Additionally, it is essential to involve legal and Human Resources (HR) professionals throughout the process.

In the event of such a situation, the following items must be considered:

1. Assess:
   a. Ensure the immediate safety of all employees.
   b. Contact emergency services and provide necessary medical attention.
   c. Shut down/turn off any equipment/machinery that may cause additional safety hazard.
   d. Secure the area to preserve evidence and prevent further incidents.
2. Notify:
   a. Follow local legal requirements for reporting workplace fatalities to the relevant authorities. External services such as the local RCMP, the hospital, and/or fire department shall be contacted as required by the Incident Commander. The Occupational Health and Safety branch shall be immediately contacted in the event of a work-related fatality incident.
   b. Cooperate fully with any investigations that may follow.
   c. Inform Next of Kin:
      i. Assign a designated representative (such as a member of the HR team or a supervisor) to personally inform the deceased employee's next of kin.
      ii. Communicate the news with empathy, sensitivity, and compassion.
      iii. Provide support resources or assistance, such as grief counseling services.
   d. Supporting Employees:
      i. Hold a meeting with the affected employees to inform them of the situation.
      ii. Provide emotional support and counseling services for employees who may be affected by the loss.
      iii. Ensure that all employees are aware of available resources for coping with grief.
3. Respond:
   a. Investigation:
      i. Conduct a thorough internal investigation into the circumstances of the fatality.
      ii. Cooperate with external agencies, such as occupational health and safety authorities, as required.
      iii. Identify any potential violations or hazards that may have contributed to the incident.
   b. Media and Public Relations:
      i. Designated Spokesperson: Designate a spokesperson to communicate with the media and address concerns from the public. Regular Updates: Provide regular updates to stakeholders, the public, and the media to ensure accurate information dissemination.

   c. Investigation and Analysis:

       i. Post-Incident Analysis: Conduct a thorough investigation to determine the cause of the fire or explosion.

      ii. Lessons Learned: Identify lessons learned from the incident and incorporate them into safety protocols and training.

4. Report / Document:

   a. Document all actions taken and decisions made throughout the process.

   b. Keep thorough records of the investigation and any changes made to prevent future incidents.

   c. Review and Improve:

       i. Conduct a post-incident review to identify areas for improvement in safety protocols and procedures.

      ii. Implement any necessary changes to prevent similar incidents in the future.

Any reporting to the public or media regarding Emergency Response events or accidents will be made directly by or on authority of North Atlantic External Affairs Manager. Notification to next-of-kin shall be conducted under the direction of the Corporate Affairs Department. Only the RCMP is permitted to release the victim's name

8.2.2 Missing Employee Procedure

This procedure provides a clear and structured approach for responding to situations involving missing employees during work hours. It aims to prioritize the safety and well-being of the individual while maintaining organizational protocols.

It is important to establish a specific timeframe based on company policies and the nature of the work, after which an employee is considered missing. The following procedure is to be referenced in the event of a missing employee:

1. Assess:

   a. Confirm the employee's absence by reviewing their schedule, attendance records, and recent communications.

   b. Check for any prior requests or updates from the employee that may explain their absence.

2. Notify:

   a. Contact Emergency Contacts:

       i.   If the employee cannot be reached, contact their emergency contacts listed in the personnel file.

      ii.   Ensure communication complies with privacy laws and company policies.

  b. Notify Key Personnel:

       i.   Inform relevant parties, such as the employee's supervisor, HR, and impacted team members.

      ii.   Maintain confidentiality when sharing information about the situation.

  c. If safety concerns escalate, contact local authorities following company policies and legal protocols.

3. Respond:

  a. Attempt Direct Contact with the Employee

       i.   Reach out to the employee via phone, email, or messaging platforms.

      ii.   Contact family members to confirm the employee's safety.

     iii.   If necessary, inquire with friends or colleagues for additional insights.

  b. Speak with Co-workers:

       i.   Consult with the employee's co-workers to determine if they have any information about the individual's whereabouts or well-being.

  c. Review Security and Access Logs:

       i.   Check security and access records for recent entries or any unusual activity involving the employee.

  d. Take Follow-up Actions:

       i.   Notify management as soon as the missing employee is located.

      ii.   Communicate updates to appropriate parties, including family members, RCMP, and search groups if involved.

     iii.   If the employee is injured, provide immediate first aid or arrange for emergency medical care.

  e. Engage HR Support:

       i.   Involve the HR department to ensure compliance with company policies and legal requirements.

      ii.   HR can provide guidance on managing the situation and any necessary follow-up.

  f. Support the Team:

       i.   Offer reassurance and support to the missing employee's team.

      ii. Address any concerns and ensure employees are informed of the situation's resolution.

4. Report / Document:

    a. Keep Detailed Records:

        i. Document all actions taken, including communication attempts, findings, and any additional steps.

8.2.3   Shelter in Place

A Shelter-in-Place protocol is a crucial safety measure designed to protect individuals during emergencies such as natural disasters, chemical spills, or other hazardous events. This protocol ensures that people can remain safe indoors until the threat has passed.

During an accidental release of hazardous materials, employees may need to shelter indoors to prevent exposure. Designated Shelter-in-Place locations will be identified on-site to provide adequate protection. These areas will have sealed windows and the capability to shut down ventilation systems, preventing hazardous materials from entering the building.

Each designated Shelter-in-Place location will include the following items:

- Emergency Supplies:
    - Water and non-perishable food,
    - First aid supplies,
    - Flashlights and batteries,
    - Duct tape,
    - Blankets.
- PPE:
    - Respiratory protection where appropriate.
- Communication Systems:
    - Landlines or radios.
- HVAC System Controls:
    - Procedures for shutting down or modifying Heating, Ventilation, and Air Conditioning (HVAC) systems to minimize the circulation of external air.
- Operational Resources:
    - Attendance log sheets,

- o Emergency response instructions,
- o Employee Actions During Shelter-in-Place.

Upon hearing the Shelter-in-Place alarm, employees should:

1. Assess:
    a. If indoors: Stay inside and close all doors and windows.
    b. If outdoors: Go indoors immediately and secure all doors and windows.
2. Notify:
    a. Alert other on-site personnel of the Shelter-in-Place event.
3. Protect:
    a. If a noticeable odor is detected: Cover your nose and mouth with a damp cloth.
4. Isolate:
    a. Turn off ignition sources**:** Shut off any sources of ignition to minimize risk.
5. Respond:
    a. Proceed to the designated Shelter-in-Place location: Conduct a roll call of all personnel and communicate attendance to security.
6. Report / Document:
    a. Document the details of the incident, response actions taken, and lessons learned for future reference.

In the event of severe weather, employees should:

1. Shelter-in-Place until the danger has passed.
2. Move to the lowest level of the building, as this provides the best protection.
3. Relocate to an interior room with no windows or a hallway on the lowest floor possible.
4. If all rooms have windows, move to an interior stairwell.
5. Stay in the center of the room, away from doors and windows.

To prevent drawing in outside air, the Heating and Ventilation system may be shut down or adjusted to re-circulate air within the building.

As part of review of this plan outlined in *Section 1.3.1*, site operations will conduct an emergency drill to test and evaluate the adequacy of the Shelter-in-Place protocol.

8.2.4　Bomb Threat

The purpose of this procedure is to provide guidelines for employees and management to follow in the event of a bomb threat, ensuring the safety and security of all personnel and assets within the workplace.

1. Assess:
    a. Stay Calm:
        i. In the event of a bomb threat, remain calm and focused.
        ii. Avoid engaging the caller in unnecessary conversation.
        iii. Avoid spreading panic among colleagues.
    b. Information Sharing:
        i. Avoid spreading rumors or unverified information.
        ii. Only share information from official sources.
2. Notify:
    a. If you receive a bomb threat, call emergency services immediately (7100) and inform them of the threat.
    b. Notify Supervisor or manager about the bomb threat.
3. Respond:
    a. If a bomb threat is received via phone call, the recipient should follow a predefined set of questions to gather essential information while remaining calm and courteous. Questions may include:
        i. Have the person taking the call write down exactly what was said.
        ii. When is the bomb supposed to explode?
        iii. Where is the bomb located?
        iv. What does the bomb look like?
        v. Why was the bomb placed?
        vi. Take note of details such as the caller's voice, background noises, and any specific information provided by the caller.
    b. If a bomb threat is received in a Written Threats:
        i. If a written bomb threat is discovered, employees should avoid handling the document unnecessarily. Preserve it for law enforcement analysis and notify management immediately.
        ii. Promptly report the threat to the designated authority or security personnel.

iii. If the threat is written, put the letter and envelope in a plastic cover before copying, faxing or further handling.

c. Evacuation Procedures:

i. Follow Evacuation Routes.

ii. Evacuate using the designated emergency exits and assembly points.

iii. Avoid using elevators during evacuation.

iv. Account for Personnel.

v. Managers and designated personnel must ensure a headcount at the assembly point to account for all employees.

vi. Do Not Return Until Cleared.

vii. Do not re-enter the building until emergency services or management declares it safe.

d. Search and Inspection:

i. Security personnel, in coordination with law enforcement, will conduct a thorough search of the premises.

ii. Employees should not attempt to search for suspicious items on their own.

iii. If a suspicious object is discovered, maintain a safe distance, and report it to the authorities immediately.

e. Media Relations:

i. Designate a spokesperson for communicating with the media.

ii. Refrain from providing details that could compromise security.

4. Report / Document:

a. Debriefing:

i. Conduct a debriefing session to discuss the incident and identify areas for improvement.

b. Review Procedures:

i. Regularly review and update bomb threat response procedures to address any gaps or changes in the workplace environment.

c. Counseling and Support:

i. Provide counseling and support services for employees affected by the incident.

d. Documentation:

i. Document the details of the incident, response actions taken, and lessons learned for future reference.

If a suspicious package is received at any of the North Atlantic Sites, the below procedure is to be followed:

1. Do not touch or tamper with a suspicious packages or objects:
    a. Report any such items to management or security personnel immediately.
2. Isolate the Area:
    a. If possible, cordon off the area around the suspicious package and keeps others away.
3. Wait for Experts:
    a. Allow bomb disposal experts or law enforcements to assess and handle the situation.

BOMB AND SABOTAGE THREAT REPORT FORM

Time: **Date:**   **# of Call:**

Questions to Ask:

When is the bomb going to explode?
Where is it right now?
What does it look like?
What kind of bomb is it?
What will cause it to explode?
Did you place the bomb?
Why?
What is your address?
What is your name?
Exacting wording of threat:

Additional Information

Sex: Age: Accent:

Caller's voice (Check all that apply)

Emotion:	Calm	Excited	Angry	Crying	Laughing
Volume:	Soft	Normal	Loud		
Speed:	Slow	Normal	Rapid		
Tone:	Deep	Normal	High	Nasal	
Breathing:	Deep	Normal	Shallow	Heavy	
Impediments:	Lisp	Stutter	Slurred	Raspy	Cough
Language:	Foul	Educated	Ragged	Irrational	Incoherent
Message:	Taped	Read by threat maker			
Familiarity:	Unfamiliar	Disguised	Familiar		
Other:					

Background Noises (Check all that apply)

Clear	Static	Local	Cellular	Long distance
Music	Voices	Animals	Motor	PA System
Street	Factory	Office	House	Booth
Other:				

8.2.5   Active Shooter

Active shooter situations are unpredictable and evolve quickly. Active shooting has increased throughout the years. Workplace shootings are often carried out by people who were employed or previously employed by the organization but can occur anywhere like grocery stores, churches, schools etc. All employees should learn how to help prevent, prepare, and respond to potential active shooter situations. In the event of an active shooter incident, employees should reference *SOP-HSE-016*, in addition to the details below.

1. Notify:
    a. If it is safe to do so, notify those in area of the event with a physical description of the suspect and type of weapons if known.
    b. Call 7100/911 and provide the following information:
        i. Location of shooting,
        ii. Description of suspect and possible location,
        iii. Number and types of weapons, if known,
        iv. Suspect direction of travel,
        v. Location and conditions of victims.
2. Respond:
    a. All employees have three potential courses of action in the following order:
        i. Run – If there is an accessible escape path, attempt to evacuate the area.
        ii. Hide – If evacuation is not possible, find a place to hide where the active shooter is less likely to find you
        iii. Fight – As a last resort, only if your life is in imminent danger, attempt to disrupt and / or incapacitate the active shooter.
3. Report / Document:
    a. Document the details of the incident, response actions taken, and lessons learned for future reference.

8.2.6   Spill or Release

In general, responses for a chemical spill or other release may involve many different actions and may be affected by a variety of regulatory requirements. Response actions and procedures will also be contingent upon the nature and quantity of the materials that are released.

In the event of a spill of oil or chemicals, the following spill response measures shall be taken as appropriate, in addition to those outlined in the Oil Spill Response Emergency Plan and the Environmental Emergency Plan. In the event of a spill leading to a fire please see Section 8.2.7.

1. Assess:
    a. Act quickly to reduce the risk of environmental impacts.
    b. Immediately assess the size, nature and severity of the spill.
    c. Identify the spilled substance(s) and their potential hazards.
    d. Identify source of release.
2. Notify:
    a. Warn people in the immediate vicinity.
    b. Notify Key Personnel and IC.
    c. If the spill is significant or poses a danger, immediately notify all employees in the affected area.
    d. Collaborate with local authorities, environmental agencies and emergency services as needed:
        i. Provide accurate and timely information to external agencies to facilitate their response efforts.
3. Protect:
    a. Ensure Personal/Public, Electrical and Environmental Safety.
    b. If necessary, initiate an immediate evacuation of personnel from the affected area.
    c. Ensure that all personnel involved wear appropriate PPE in accordance with spilled product SDS.
    d. Provide training on the proper use of PPE and ensure that it is readily available.
    e. Ensure that ignition sources are protected or removed if spill is a flammable material.
4. Isolate:
    a. Close valves, shut off pumps or plug holes/leaks (only operate equipment that we are authorized to operate).
    b. Stop the flow or the spill at its source (where possible).
    c. Limit access to the spill area.
    d. Prevent unauthorized entry onto the site.

5. Respond:

    a. Contain the Spill:

        i. Block off and protect drains, sewers and culverts, and prevent spilled material from entering any other drainage structure.

        ii. If necessary, use a dyke, sandbags, man-made berms, or any other method to prevent any uncontrolled discharge.

        iii. Make every effort to minimize contamination.

        iv. Deploy Boom and Barriers to prevent the spread of the spilled substance.

        v. Deploy Absorbent Materials.

        vi. Apply dispersants depending on the nature of the spilled substance, consider using approved dispersants to breakdown and disperse the oil and chemicals.

        vii. Use Skimmers to physically remove any spilled substances from water surfaces.

    b. Clean-up

        i. All equipment and/or material used in clean up will be disposed of in accordance with the Waste Management Guidelines.

        ii. Accidental spills may produce special wastes and contaminated soil. All waste disposals will comply with the **Environmental Protection Act** and applicable Regulations.

        iii. Contaminated soil will be treated and dealt with as required on a site-specific basis.

        iv. For water-based clean up and recover use pumps and Vacuums to recover the spilled substance from the water.

        v. Spill response kits and equipment will be replenished.

6. Report / Document:

    a. Prepare incident reports for regulatory authorities and vessel management (if required).

    b. Document the details of the incident, response actions taken, and lessons learned for future reference.

    c. Review the effectiveness of the emergency response and update EPR based on lessons learned.

8.2.7 Fire and Explosion

8.2.7.1 Minor Fire on Site

1. Assess:
    a. Assess the size and severity of the fire. Determine if it's safe to attempt to extinguish the fire or if evacuation is necessary.
    b. If possible, identify the source of the fire and shut it off. This will prevent any additional fuel from feeding the fire.
2. Notify:
    a. Activate Fire Alarm in area, if possible.
    b. Activate the emergency response process by calling 7100 or via the 2-way radio.
    c. Notify emergency services.
3. Protect:
    a. If the alarm is sounded and you can safely leave your post, proceed upwind to the nearest muster station, and swipe your employee identification card.
4. Isolate:
    a. If applicable and safe to do so, activate closest emergency stop or isolation valve.
5. Respond:
    a. For small fires involving Class A products (ordinary combustibles) use a fire extinguisher if it can be used safely. Fire extinguishers are located throughout the sites.
    b. Do not attempt to control anything other than a small fire.
    c. Await further instruction from the ERT, incident command or your supervisor.
6. Report / Document:
    a. Document the details of the incident, response actions taken, and lessons learned for future reference.

8.2.7.2 Building Fire

1. Assess:
    a. Assess the size and severity of the fire. Determine if it's safe to attempt to extinguish the fire or if evacuation is necessary.
2. Notify:
    a. Activate the building fire alarm, if applicable.
    b. Activate the emergency response process by calling 7100 or via the 2-way radio.

  c. Notify emergency services.

3. Protect:

  a. If the alarm is sounded and you are able to safely leave your post, proceed upwind to the nearest muster station, and swipe your employee identification card.

4. Respond:

  a. If the fire is small (i.e., can be managed safely), use a fire extinguisher to control the fire.

  b. Do not attempt to control anything other than a small fire.

  c. Evacuate the building and proceed to an assembly area located a safe distance from the fire.

  d. Await further instruction from the ERT, incident command or your supervisor.

5. Report / Document:

  a. Document the details of the incident, response actions taken, and lessons learned for future reference.

8.2.7.3 Fire, Chemical Release or Major Incident at a Neighbouring Facility

1. Assess:

  a. Cease all non-essential work including transfer, loading or discharge operations.

2. Notify:

  a. Alert other on-site personnel of incident at neighbouring site.

3. Protect:

  a. If the alarm is sounded and you are able to safely leave your post, proceed upwind to the nearest muster station, and swipe your employee identification card.

4. Respond:

  a. Await further instruction from the ERT, incident command or your supervisor.

5. Report / Document:

  a. Document the details of the incident, response actions taken, and lessons learned for future reference.

8.2.7.4 Hydrogen Fire Protection and Suppression

Normally hydrogen fires are not extinguished until the supply of hydrogen has been shut off or exhausted since there is a danger of re-ignition and explosion. Personnel who work around hydrogen will be trained in the characteristics of hydrogen fires and proper procedures for dealing with them. In areas where

hydrogen is being produced or stored ultraviolet (UV), or infrared (IR) flame detectors will be installed, as well as chemical sensors.

Since hydrogen has a very wide flammability range and low ignition energy, it should be assumed that any hydrogen leak or release is likely to result in hydrogen fire.

Hydrogen is colorless, odorless, burns with a nearly invisible flame (especially during daylight hours), and gives off relatively little radiant heat, a hydrogen fire is often difficult to detect. Thermal imaging cameras and flame detectors should be used to verify that a hydrogen flame is present. If these tools are not available, personnel should cautiously approach a suspected leak and watch for thermal waves that signal the presence of a flame and put combustible objects (e.g., a broom) or dust particles into the suspected flame to detect its presence.

Although hydrogen fires do not produce smoke themselves, burning of nearby combustible materials can result in smoke. Personnel should be aware that smoke inhalation can be a danger in a hydrogen fire.

Hydrogen fires can damage or ignite objects in the vicinity through heat transmitted by radiation and convection.

Training for first responders arriving at a hydrogen incident will include the following actions:

- Incident command and control areas.
- Unauthorized personnel.
- Upwind precaution.
- Venting gas.
- Thermal waves that would signal hydrogen flames.
- Elimination of ignition sources.
- Precautions while approaching hydrogen fire.
- Procedure for hydrogen-fed fire, protect adjacent surfaces.

8.2.7.4.1   Hydrogen Gas Fire Procedure

North Atlantic will establish emergency shut-down procedures for a hydrogen gas fire in the HGP to ensure the safety of personnel, equipment, and the surrounding environment. Due to its flammable nature handling hydrogen requires special precautions.

1. Assess:
    a. Assess the size and severity of the fire. Determine if it's safe to attempt to extinguish the fire or if evacuation is necessary.
    b. If possible, identify the source of the hydrogen gas leak and shut it off. This will prevent additional fuel from feeding the fire.
2. Notify:
    a. Activate fire alarm system at nearest pull station.
    b. Advise all staff via radio communication that an uncontrolled hydrogen leak condition exists, and that evacuation is required.
3. Protect:
    a. Thermal imaging camera.
    b. Structural Firefighting PPE.
    c. Insulated hand tools.
    d. Positive Pressure SCBA.
4. Isolate:
    a. Radio to control room to shutdown flow.
    b. Initiate local stop and manual valves.
    c. Press local emergency stop button.
    d. Emergency Shutdown Procedures:
        i. Procedures will include the specific steps to shut down equipment, valves, and processes associated with hydrogen.
        ii. Plant equipment will be easily identified, emergency shutdown buttons or switches, valves, and pump labels.
5. Respond:
    a. Evacuation and Safety:
        i. Initiate evacuation procedures for all personnel in the affected and surrounding areas.
        ii. Use pre-established evacuation routes and assembly area.
        iii. Account for all personnel and visitors to ensure everyone is safely evacuated.
    b. Fire Extinguishment:
        i. Fire suppression systems should be activated manually or automatically in the event of a fire.

ii. If the fire is small and manageable, attempt to use portable fire extinguishers that are appropriate for the type of fire (e.g., electrical, chemical).

iii. Keep a safe distance from the fire while applying the extinguishing agent. Hydrogen fires can be particularly hazardous due to their invisible flames, high heat, and potential for explosion. Continuously monitor the situation for any signs of reignition or escalation.

iv. Use an infrared camera to detect flame.

6. Report / Document:

a. Document the details of the incident, response actions taken, and lessons learned for future reference.

8.2.7.5 LOHC Fire Procedures

8.2.7.5.1 Toluene

1. Assess:

a. Assess the size and severity of the fire. Determine if it's safe to attempt to extinguish the fire or if evacuation is necessary.

b. If possible, identify the source of the toluene leak and shut it off. This will prevent additional fuel from feeding the fire.

2. Notify:

a. Activate fire alarm system at nearest pull station.

b. Advise all staff via radio communication that an uncontrolled toluene leak condition exists, and that evacuation is required.

3. Protect:

a. Wear PPE made from material which can not be permeated or degraded by this substance.

b. If employees are expected to fight fires, they must be trained and equipped as stated in the *OSHA Fire Brigades Standards (29 CFR 1910.156)*.

4. Isolate:

a. Radio to control room to shutdown flow.

b. Initiate local stop and manual valves.

c. Press local emergency stop button.

d. Emergency Shutdown Procedures:

       i. Procedures will include the specific steps to shut down equipment, valves, and processes associated with hydrogen.

      ii. Plant equipment will be easily identified, emergency shutdown buttons or switches, valves, and pump labels.

5. Respond:

  a. Evacuation and Safety:

       i. Initiate evacuation procedures for all personnel in the affected and surrounding areas.

      ii. Use pre-established evacuation routes and assembly area.

     iii. Account for all personnel and visitors to ensure everyone is safely evacuated.

  b. Fire Extinguishment:

       i. Fire suppression systems should be activated manually or automatically in the event of a fire.

      ii. If the fire is small and manageable, attempt to use portable fire extinguishers that are appropriate for the type of fire (e.g., dry chemical, CO_2, alcohol-resistant foam, water spray).

     iii. Use water spray to keep fire-exposed containers cool and reduce vapours.

     iv. Keep a safe distance from the fire while applying the extinguishing agent. Toluene gases produced in fires are poisonous. Can be particularly hazardous due vapours potentially travelling to a source of ignition and flash back.

6. Report / Document:

  a. Document the details of the incident, response actions taken, and lessons learned for future reference.

8.2.7.5.2   Methylcyclohexane

1. Assess:

  a. Assess the size and severity of the fire. Determine if it's safe to attempt to extinguish the fire or if evacuation is necessary.

  b. If possible, identify the source of the MCH leak and shut it off. This will prevent additional fuel from feeding the fire.

2. Notify:

  a. Activate fire alarm system at nearest pull station.

  b. Advise all staff via radio communication that an uncontrolled MCH leak condition exists, and that evacuation is required.

3. Protect:
    a. Wear solvent-resistant gloves and clothing.
4. Isolate:
    a. Radio to control room to shutdown flow.
    b. Initiate local stop and manual valves.
    c. Press local emergency stop button.
    d. Emergency Shutdown Procedures:
        i. Procedures will include the specific steps to shut down equipment, valves, and processes associated with hydrogen.
        ii. Plant equipment will be easily identified, emergency shutdown buttons or switches, valves, and pump labels.
5. Respond:
    a. Evacuation and Safety:
        i. Initiate evacuation procedures for all personnel in the affected and surrounding areas.
        ii. Use pre-established evacuation routes and assembly area.
        iii. Account for all personnel and visitors to ensure everyone is safely evacuated.
    b. Fire Extinguishment:
        i. Fire suppression systems should be activated manually or automatically in the event of a fire.
        ii. If the fire is small and manageable, attempt to use portable fire extinguishers that are appropriate for the type of fire (e.g., dry chemical, CO_2, alcohol or polymer foam).
        iii. Use water spray to keep fire-exposed containers cool and reduce vapours.
        iv. Keep a safe distance from the fire while applying the extinguishing agent. MCH gases produced in fires are poisonous. Can be particularly hazardous due vapours potentially travelling to a source of ignition and flash back.
6. Report / Document:
    a. Document the details of the incident, response actions taken, and lessons learned for future reference.

8.2.7.6　Fires on Marine Vessels

Information related to fire prevention and response is provided in the Jetty Regulations and Information Booklet. This booklet is provided to all vessel up on arrival with the vessel captain signing for receipt and agreement with the information provided.

8.2.8　Building Evacuation

You should familiarize yourself with the evacuation routes posted in all buildings. If an evacuation order is issued for your building, or if it were necessary to evacuate due to an emergency, fully cooperate with Safety and Management personnel and follow the below procedure:

1. Assess:
    a. Take only keys, wallets, and essential belongings with you.
2. Notify:
    a. Alter other on-site personnel of evacuation.
3. Protect:
    a. If possible, wear weather appropriate clothing.
4. Respond:
    a. Proceed in an orderly fashion to the exit closest to your work area as shown on the posted emergency evacuation procedures map. Follow the directions of your Area Coordinator.
    b. Walk, don't run.
    c. Use stairs, not elevators.
    d. Assist people with special needs.
    e. If you are the last one to exit your room close, and lock doors.
    f. Proceed to the area designated for your group on the posted emergency evacuation procedures map. Stay away from trees and overhead electrical wires:
        i. If you are not in your normal work location when the evacuation alarm is sounded exit with the group, then you are to assemble with your respective work group.
5. Report / Document:
    a. Document the details of the incident, response actions taken, and lessons learned for future reference.

8.2.9   Venting and Flaring

Flaring is the controlled burning of fuel or waste gas, in which the fuel or waste gas from production and processing is ignited at the top of a flare stack. There may be some odours associated with flaring.

Venting is the controlled release of unburned gases into the atmosphere, such as oxygen and hydrogen in the case of the Project. Venting can occur during production or maintenance activities. There may be some odours associated with venting.

If an uncontrolled flaring / venting event occurs, follow the below procedure:

1. Assess:
    a. Conduct a safety assessment to identify potential hazards associated with the uncontrolled flare/venting.
2. Notify:
    a. Notify the IC: The IC will take control of the situation and coordinate all actions to resolve the event. The IC will activate the ERT in standby mode.
    b. Notify relevant stakeholders: The IC should immediately communicate the incident to key personnel including senior management, Safety, and Operations.
    c. Contact emergency services (fire department, local authorities, etc.) if there is a risk of fire, explosion, or other hazards that could threaten the safety of the site or surrounding areas.
    d. Alert neighboring facilities or businesses about the uncontrolled release, particularly if there is a risk of toxic gas release or if air quality is impacted.
3. Protect:
    a. Evacuate the area: Ensure that all non-essential personnel are evacuated to a safe location, well away from the potential danger zone. Direct personnel to the designated muster point.
4. Isolate:
    a. Stop all operations in the affected area, including non-essential processes, and ensure that all personnel are alerted to the event.
5. Respond:
    a. Activate Emergency Shutdown (ESD): Trigger the appropriate emergency shutdown procedures to isolate the source of the flare/venting.
    b. Containment and Mitigation:

i. Monitor the flare/venting conditions using available instrumentation to track the volume, pressure, and composition of the gas being released.

c. Activate fire suppression systems (if applicable) in case of ignition of the flare or venting.

d. Verify safety zones: Ensure that no personnel are in danger zones identified for the flaring/venting and that perimeter security is in place.

e. Investigate the root cause: Operations should work with the engineering team to identify why the flaring/venting occurred and determine corrective actions.

f. Restoration and Follow-Up:

i. Restore normal operations: Once the uncontrolled flaring/venting is contained, proceed with restoring operations following all safety protocols.

ii. Evaluate corrective actions: Review and implement corrective measures to prevent future occurrences. This could include revising operational procedures or maintenance protocols.

g. Post-Incident Review: Hold a debriefing meeting to review the response, identify lessons learned, and update the ERP as necessary.

6. Report / Document:

a. Document the incident: Record all details of the uncontrolled flaring/venting event, including actions taken, personnel involved, and the results of the post-incident review.

b. Report to authorities: Comply with any regulatory reporting requirements and provide full details to the appropriate authorities as needed

8.2.10 Wind Turbines

When working on wind turbines, technicians shall always wear the appropriate PPE and carry an AED and self-rescue gear.

8.2.10.1 Fire/Explosion of Wind Turbines

Dealing with a fire or explosion in a wind turbine requires a systematic and well-coordinated response to ensure the safety of personnel and the surrounding environment. To ensure emergency response equipment and personal at the terminal are readily available for a response, they will not be deployed for an off-site response. As such, the response to an emergency at the windfarm will utilize a separate ERT than that for the terminal as well as separate equipment.

If the fire is small and at the beginning phase and if the technician is trained in using a fire extinguisher, they should attempt to extinguish the fire for as long as it is safe to do so. If the fire is growing rapidly, the

technician should exit the nacelle immediately using the ladder. If the ladder is inaccessible, they should exit onto the roof of the nacelle and use an approved safety harness or personal self-rescue device to rappel off the turbine; they shall not use the hoist to evacuate the tower during a fire or explosion. When evacuating, the technician should close all doors and hatches if safe to do so

The following procedure outlines general steps to be taken in the event of a fire or explosion in a wind turbine.

1. Notify:
   a. Notify security to activate ERT. Security will activate emergency services upon request by Incident Commander.
2. Protect:
   a. Emphasize the importance of following safety protocols, using PPE, and communicating effectively.
   b. Evacuation Plan: Implement the pre-established evacuation plan, ensuring that all personnel are aware of escape routes and assembly points.
   c. Assembly Points: Designate assembly points at a safe distance (minimum 250m) from the wind turbine to account for all personnel.
3. Isolate:
   a. Isolate the wind turbine or tower from the power grid to prevent electrical accidents.
   b. Implement lockout/tagout procedures to ensure that the turbine is de-energized and cannot be accidentally restarted during the dislodging process.
4. Respond:
   a. Equipment and Tools:
      i. Gather the necessary equipment and tools required for the fire/explosion operation. This may include cranes, winches, rigging equipment, and specialized tools.
      ii. Ensure that all equipment is in good working condition and properly certified.
   b. Preparation of the Site:
      i. Clear the area around the wind turbine to create a safe working zone.
      ii. Erect safety barriers and warning signs to restrict access to the fire/explosion site.
   c. Fire Suppression:
      i. Fire Extinguishers: If the fire is small and manageable, attempt to use portable fire extinguishers that are appropriate for the type of fire (e.g., electrical, chemical).

    ii.   Fire Suppression Systems: Activate any built-in fire suppression systems that may be installed in the turbine.

    d.   External Assistance:

        i.   Emergency Services: Provide emergency services with detailed information about the location, size, and nature of the incident.

        ii.   Fire Department Liaison: Establish communication with the local fire department to guide them to the turbine site.

    e.   Monitoring:

        i.   Remote Monitoring: Utilize remote monitoring systems to assess the situation and provide real-time information to emergency responders.

        ii.   Wind Direction Monitoring: Monitor wind direction to predict the potential spread of smoke or fire.

    f.   Media and Public Relations:

        i.   Designated Spokesperson: Designate a spokesperson to communicate with the media and address concerns from the public.

        ii.   Regular Updates: Provide regular updates to stakeholders, the public, and the media to ensure accurate information dissemination.

5.   Report / Document:

    a.   Investigation and Analysis:

        i.   Post-Incident Analysis: Conduct a thorough investigation to determine the cause of the fire or explosion.

        ii.   b. Lessons Learned: Identify lessons learned from the incident and incorporate them into safety protocols and training.

    b.   Documentation:

        i.   Incident Report: Document the incident thoroughly, including actions taken, lessons learned, and recommendations for future improvements.

        ii.   Regulatory Reporting: Comply with any regulatory requirements for reporting incidents.

    c.   Recovery:

        i.   Develop a recovery plan to assess the damage, repair or replace equipment, and restore the wind turbine to normal operations.

        ii.   Post-Incident Training: Conduct training sessions based on the lessons learned to enhance the preparedness of personnel for future incidents.

8.2.10.2 Dislodging of Wind Tower or Turbine Blades

In the event that a turbine or turbine blade suffers a catastrophic failure that piece of equipment is to be isolated and de-energized. The area must be cordoned off to prevent entry from untrained personnel and all stakeholders and local authorities notified. Due to the size and weight of turbines/turbine blades, mobile cranes will be required to either repair or remove the damaged equipment. The following are steps to be taken when dealing with this type of emergency:

1. Assess:
   a. Assess the area for any additional potential hazards.

2. Notify:
   a. Notify relevant authorities, including local emergency services and utility companies, about the wind tower dislodging operation.
   b. Coordinate with all stakeholders, such as landowners, maintenance teams, and regulatory agencies.

3. Protect:
   a. Conduct a comprehensive safety briefing for all personnel involved in the dislodging operation.
   b. Emphasize the importance of following safety protocols, using PPE, and communicating effectively.

4. Isolate:
   a. Isolate the wind turbine or tower from the power grid to prevent electrical accidents.
   b. Implement lockout/tagout procedures to ensure that the turbine is de-energized and cannot be accidentally restarted during the rescue process.

5. Respond:
   a. Equipment and Tools:
      i. Gather the necessary equipment and tools required for the dislodging operation. This may include cranes, winches, rigging equipment, and specialized tools.
      ii. Ensure that all equipment is in good working condition and properly certified.
   b. Preparation of the Site:
      i. Clear the area around the wind turbine to create a safe working zone.
      ii. Erect safety barriers and warning signs to restrict access to the dislodging site.
   c. Secure the Blade or Tower:
      i. Use appropriate rigging equipment to secure the damaged blade or tower in place.

      ii.   If dealing with a tower, ensure that it is properly supported to prevent any collapse.

   d. Disassembly and Removal:

      i.   If applicable, disassemble components of the turbine or blade to facilitate removal.

      ii.   Use cranes or other lifting equipment to carefully lift and dislodge the blade or tower from its mounting.

   e. Transportation and Storage:

      i.   Safely transport the dislodged component to a designated storage area.

      ii.   Ensure proper documentation and labeling for identification purposes.

   f. Site Cleanup and Restoration:

      i.   Remove any debris or materials from the dislodging site.

      ii.   Conduct a final safety check to ensure that the area is secure.

6. Report / Document:

   a. Inspect the dislodged component for further damage and document any findings.

   b. Provide a detailed report of the dislodging operation, including photographs and observations.

   c. Document the details of the incident, response actions taken, and lessons learned for future reference.

8.2.10.3 Wind Tower Rescue

All work above 10 ft will follow Braya's existing policy which specifies:

- Wok above 10 ft requires a fall protection system.
- If the fall protection system includes a Personal Fall Arrest System (PFAS), it shall be suitable for the work and inspected prior to use.
- Only Personnel with a valid fall protection certification may utilize a PFAS and all work at heights, which includes a PFAS, must include a fall protection plan, including an approved rescue plan.

In the event of a wind tower rescue the following procedure can be followed:

1. Assess:

   a. Identify the location of the person on the wind tower and assess the condition of the tower structure.

2. Notify:

a. Immediately notify ERT and emergency services (7100) if required and provide them with the necessary information about the accident / incident.

b. Clearly communicate the location of the accident and any other relevant details.

c. Notify relevant authorities, including local emergency services and utility companies, about the wind tower rescue operation.

d. Coordinate with all stakeholders, such as landowners, maintenance teams, and regulatory agencies.

3. Protect:

a. Ensure the safety of the rescue team by assessing the wind conditions, weather, and other potential hazards.

b. Establish communication with the person in distress if possible.

c. Ensure that all rescue team members are equipped with appropriate PPE, including fall protection gear, helmets, gloves, and safety glasses.

4. Isolate:

a. Isolate the wind turbine or tower from the power grid to prevent electrical accidents.

b. Implement lockout/tagout procedures to ensure that the turbine is de-energized and cannot be accidentally restarted during the rescue process.

c. Risk Assessment and Planning:

i. Conduct a thorough risk assessment to identify potential hazards associated with the wind tower rescue.

ii. Develop a detailed plan that includes safety measures, equipment requirements, and a timeline for the wind tower rescue operation.

5. Respond:

a. Equipment and Tools:

i. Gather the necessary equipment and tools required for the wind tower rescue operation. This may include cranes, winches, rigging equipment, and specialized tools.

ii. Ensure that all equipment is in good working condition and properly certified.

b. Rescue Team Deployment:

i. Deploy trained and equipped rescue team members to the location of the victim.

ii. Follow established communication protocols to coordinate the rescue efforts.

c. Media and Public Relations:

i. Designated Spokesperson: Designate a spokesperson to communicate with the media and address concerns from the public.

ii. Regular Updates: Provide regular updates to stakeholders, the public, and the media to ensure accurate information dissemination.

6. Report / Document:
   a. Document the details of the incident, response actions taken, and lessons learned for future reference.
   b. Conduct a debriefing session after the rescue to evaluate the effectiveness of the operation.
   c. Identify any areas for improvement and update the high angle rescue plan accordingly.

8.2.11 Energy Transmission Failure

Power failures at a wind hydrogen facility can arise from electrical outages, mechanical failures, or utility interruptions, posing significant risks to personnel, processes, and equipment. The following procedures are designed to ensure safety, minimize disruption, and protect assets during a utility failure.

1. Assess:
   a. Verify that restricted areas remain secure and unaffected by the outage.
2. Notify:
   a. Notify Supervision: Immediately report the power failure to the designated supervisor or site operations lead.
3. Respond:
   a. Evacuation Protocol: If evacuation is necessary, follow established evacuation routes to the Muster Station. Exercise caution if evacuation paths are dark or obstructed.
   b. Electrical Equipment:
      i. Unplug sensitive equipment, including hydrogen production and storage monitoring systems.
      ii. Shut down non-essential systems to prevent damage from power surges upon restoration.
   c. Lighting:
      i. Use flashlights for illumination. Do not use candles or open flames, especially near hydrogen systems.
   d. Contact the Power Provider:
      i. Obtain an estimated restoration timeline from the utility provider or wind farm operations team.
   e. Generator Operations:

i. Assign personnel to inspect backup generators and ensure readiness.

ii. Before starting generators, confirm that all safeguards are in place, and reissue required work permits.

f. System Restarts**:**

i. Perform step-by-step system checks before restarting hydrogen production equipment.

1. Inspect sensitive components, such as compressors and electrolyzers, for potential damage.

4. Report / Document:

a. Document the details of the incident, response actions taken, and lessons learned for future reference.

In event of a Hydrogen-Specific energy transmission failure, the following Safety Measures must be considered:

1. Hydrogen Production and Storage:

a. Operations personnel should execute standard shutdown procedures for hydrogen production systems to avoid overpressure or leakage.

b. Isolate hydrogen storage systems to prevent uncontrolled releases during the outage.

2. Ventilation Systems:

a. Ensure hydrogen ventilation systems remain operational using backup power, if available.

b. Monitor for hydrogen buildup in enclosed spaces and address potential leaks immediately.

3. Monitoring:

a. Use portable gas detection equipment to continuously monitor hydrogen levels.

b. Conduct regular rounds to inspect systems for leaks or other issues.

Extended Power Outages

1. One Hour: Critical monitoring systems may require battery backup or manual oversight.

2. Four Hours: Hydrogen storage monitoring systems and communication devices may require additional power sources or contingency plans.

Preparation and Preventative Measures

1. Emergency Lighting: Ensure all emergency lighting is functional and tested regularly.

2. Gas Detection Systems: Maintain portable and fixed hydrogen detection systems in good working order.

3. Flashlights and Radios**:** Keep flashlights and communication devices readily available in all critical areas.

4. Procedural Drills: Regularly conduct drills for power outage scenarios to ensure team readiness.

5. Additional Considerations:
   a. Maintain calm among team members and advise them to await instructions.
   b. Supervisors must account for all personnel and verify safety in their areas of responsibility.
   c. Evaluate whether the power outage presents additional risks, such as hydrogen buildup or equipment failure, and initiate evacuation if warranted.

8.2.12 Vehicle Accident

Drivers must report all vehicle incidents on an Incident Report must be completed and forwarded.

- Drivers who are involved in vehicular incidents and are found to be in error must attend a Defensive Driving course on their own time. (North Atlantic will cover the course costs).
- This may include additional courses as well as not being able to operate equipment for a specific period of time.

8.2.13 Inclement Weather

Safety is our top priority, especially during challenging weather conditions. Whether it's snow, ice, high winds, heavy rain, or extreme temperatures, following these safety practices can help protect everyone:

1. Stay Informed:
   a. Monitor weather updates from reliable sources to stay ahead of changing conditions.
   b. Follow all company alerts and instructions for weather-related safety.

2. Be Prepared:
   a. Wear appropriate clothing, including layers for cold weather or waterproof gear during rain.
   b. Ensure footwear is non-slip to prevent falls on icy or wet surfaces.

3. Stay Alert:
   a. Watch for hazards like slippery walkways, downed power lines, or falling debris during high winds.
   b. Use extra caution when driving; reduce speed and allow extra stopping distance.

4. Take Precautions:
    a. Avoid unnecessary outdoor work or travel during severe weather.
    b. Use handrails on stairs and maintain three points of contact when climbing in or out of vehicles.
5. Protect Yourself and Others:
    a. Hydrate and take breaks in warm shelters during cold weather to avoid frostbite or hypothermia.
    b. Look out for coworkers—report any signs of heat stress, cold stress, or injury immediately.
6. Follow Emergency Procedures:
    a. In case of evacuation, stick to designated routes and muster at the assigned location.
    b. If sheltering in place, move to secure indoor areas away from windows and exterior walls. See *Section 8.2.3* for Shelter in Place Procedure.

8.2.13.1   Flooding

Flooding can occur on site due to various reason, including but not limited to

- Water main break.
- Loss of power.
- Multiple major rainstorms.
- Equipment damage to the raw / fire water storage.

Minor or area flooding on site could occur because of a water main break, loss of power to sump pumps, or major multiple rainstorms. For imminent or actual flooding, and only if you can safely do so:

- Secure vital equipment, records, and other important papers.
- If present in your area, report all hazardous materials (chemical, biological, and/or radioactive) to Supervision.
- Move to higher, safer ground.
- Shut off all electrical equipment.
- Do not attempt to drive or walk-through flooded areas.
- Wait for further instructions on immediate action.
- If the building must be evacuated, follow the instructions on Building Evacuation.
- Do not return to your building if you have been evacuated by flooding until you have been instructed to do so.

- Take a product inventory reading of all aboveground tanks including water level readings.

8.2.13.2 Tornado

Around 230 tornadoes occur in Canada each year, with about 60 officially confirmed. The majority of these tornadoes take place in Southern Ontario, the southern Canadian Prairies, and southern Quebec. Site management is responsible for monitoring weather conditions and providing advance warnings of potential tornado-producing conditions to employees and contractors. If a Tornado Watch is issued, it indicates that a tornado is possible. In this case, site management will issue a Tornado Watch to employees and contractors in the field and provide further instructions. At a minimum, crews should be prepared to seek shelter.

Tornadoes can occur with little or no warning. To ensure the safety of all workers, the following precautionary actions should be taken if a tornado occurs in the area:

- Review and understand the Emergency Action Plan.
- Actively participate in emergency drills.
- Familiarize yourself with the on-site shelter-in-place location.
- Learn to recognize the warning signs of a tornado.
- Stay informed about the weather, particularly thunderstorms.
- Review response and recovery plans.

Weather forecasting alone cannot guarantee an accurate prediction of a tornado, and some tornadoes occur without a formal tornado warning. During tornado season, employees, contractors, and visitors should follow the guidelines below to identify potential tornado hazards in their vicinity and immediately contact site management if any of the following indicators are observed:

Early Indicators of Tornadoes in the Area:

- Strong, persistent rotation in the cloud base.
- Whirling dust or debris on the ground beneath a cloud base (tornadoes may not always have a visible funnel).
- Hail or heavy rain followed by sudden calmness or an intense wind shift.
- A loud, continuous roar or rumble, unlike the brief sound of thunder.
- At night, bright blue-green or white flashes at ground level near a thunderstorm (indicating power lines being snapped by strong winds, possibly caused by a tornado).

- At night, persistent lowering of the cloud base illuminated by lightning, especially if it touches the ground or is accompanied by power flashes beneath it.

By being aware of these indicators and following safety protocols, workers can help ensure their safety in the event of a tornado.

8.2.13.3   Strong Winds

Site Management shall monitor weather to provide advanced warnings of potential strong wind conditions to employees and contractors in the field.

Workers shall confirm wind speeds prior to commencing working at heights in strong wind conditions. All workers must make an individual determination if it is safe to go back up based on the wind speed averages provided by the specific turbine in question.

8.2.13.4   Hurricane

In Newfoundland, hurricane season expands June through November, peaking in August and October. Weather systems can include:

- Tropical depression.
- Tropical storms.
- Hurricanes.

In the event of an impending hurricane, the following activities are to be completed:

- Clear drains and basins.
- Trim Branches and cut down dead trees.
- Secure all loose items outdoors to prevent them from becoming flying debris.
- If possible, non-essential workers should be permitted to work remotely.
- Ensure all bunded areas are drained of water. Check before pumping to ensure that no contaminants are present.
- Coordinate all deliveries to site.
- Have an emergency kit available and be prepared for at least 72 hours, with food, water, batteries, a portable radio, and prescription medications..
- Stay up to date by monitoring forecast information and local news.

8.2.13.5 Thunderstorm and Lightning

Weather conditions can significantly impact work operations and the safety of personnel. Lightning, in particular, poses severe risks, including potentially fatal outcomes if not monitored and managed effectively. To address this, the Security Team will monitor lightning activity in the vicinity and communicate relevant information site-wide to ensure the safety of all personnel.

The following outlines the responsibilities of the Security Team in monitoring lightning and effectively communicating updates to site personnel in the event of thunderstorms or lightning

1. Assess:
   a. The Security Team will use multiple tools and methods to monitor lightning activity near the site, including:
      i. Environment Canada Lightning Radar**: https://weather.gc.ca/lightning**.
      ii. SkyScan or Equivalent Handheld Lightning Meters.
      iii. Field Observations.
2. Notify:
   a. The Security Team will provide verbal or email updates to all relevant parties to ensure supervisors can prepare their teams for impending lightning events. Team members will utilize SkyScan lightning monitors from strategic vantage points on-site to detect and track lightning activity.
   b. When lightning is detected, the Security Team will:
      i. Communicate the situation via radio or email.
      ii. Monitor the activity continuously using handheld lightning meters.
      iii. Confirm an "All Clear" status only after 30 minutes have passed without any detected lightning activity.
   c. Depending on the proximity of lightning, the Security Team will issue the following alerts:
      i. 15-30 km: Lightning Advisory
      Message: "This is a lightning advisory. Lightning has been detected in the area. Employees should be prepared to stop work and seek shelter as the storm moves closer. Please follow your respective work procedure and standby for updates."
      ii. 5-15 km: Lightning Warning
      Message: "This is a lightning warning. Lightning has been detected within 5-15 km. Please follow your specific lightning protocol and standby for updates."
      iii. 0-5 km: Lightning Warning

Message: "This is a lightning warning. Lightning has been detected within 5 km. All outside workers should immediately move to a building, vehicle, or designated safe zone inside the tower."

  iv. All Clear

  Message: "There has been no lightning detected for a period of 30 minutes. The Lightning Advisory/Warning is ended."

3. Protect:

   a. Key Safety Measures:

      i. Cease work and seek shelter immediately upon receiving a warning.

      ii. Avoid touching metal surfaces or standing near windows during a storm.

      iii. Follow site-specific lightning protocols and ensure communication with supervisors.

      iv. Remain in shelter until an "All Clear" message is received.

4. Respond:

   a. 15-30 km: Lightning Advisory

      i. Action: Workers, especially those at the wind farm, should prepare to cease operations and seek shelter.

   b. 5-15 km: Lightning Warning

      i. Workers in the wind farm, if safe, should exit to a secure location. Workers inside turbines should move to the center of the platform, avoid touching tower walls, and contact their supervisor via radio to report their turbine number.

   c. 0-5 km: Lightning Warning

      i. All outside workers should immediately move to a building, vehicle, or designated safe zone inside the tower

   d. All Clear

      i. An "All Clear" will be broadcast to all personnel via the site radio system.

8.2.13.6 Winter Weather

The following Winter Weather Operations Policy is designed to ensure the safety and well-being of all employees during adverse winter weather conditions in Newfoundland. The primary goal of this policy is to prioritize employee safety while ensuring the continuation of essential operations during winter weather events. Employees are encouraged to use their best judgment and prioritize their personal safety when commuting to and from work.

The policy also aims to adapt to and mitigate the impacts of winter weather conditions, which can be unpredictable and severe in Newfoundland.

When a Storm Watch Is Issued by Environment Canada, the Following Steps Shall Be Taken:

1. Assess:
    a. Monitoring Weather Conditions: Security will monitor weather forecasts and current conditions to anticipate any disruptions caused by winter weather.
    b. If severe weather is anticipated, Security will collect relevant data from Environment Canada and provide a summary to site management. Site management will assess the situation and determine if office closures or changes to operations are necessary.
2. Notify:
    a. Employees will be notified of changes in office hours or closures via email, text message, or other designated communication channels.
    b. Regular updates will be provided to employees regarding the evolving weather conditions and any operational changes.
3. Protect:
    a. Employees should ensure all doors and windows are properly secured in sheds and buildings to minimize exposure to the elements.
    b. Employees should dress appropriately for winter weather conditions and exercise caution when walking in icy or snowy areas.
    c. Efforts will be made to maintain safe and clear pathways on the premises during winter weather.
4. Isolate:
    a. Non-essential utilities should be turned off to conserve energy.

5. Respond:
    a. Remote Work:
        i. During severe winter weather conditions, employees may be required or encouraged to work remotely to ensure their safety.
        ii. Clear guidelines for remote work, including communication expectations and productivity requirements, will be provided.

      iii. Employees are responsible for ensuring they have the necessary equipment and reliable internet access to work remotely. If technical difficulties arise, employees should promptly inform their supervisor.

  b. Office Operations:

      i. Delayed Opening or Closure: If the office opening is delayed or the office is closed entirely, employees will be notified promptly of the new schedule.

      ii. Essential personnel may be required to report to the office even if it is closed to maintain critical operations.

  c. Flexible Work Hours:

      i. Employees may be allowed to adjust their work hours during winter weather to accommodate commuting challenges.

      ii. Flexible work hours must be communicated and approved by supervisors.

  d. Commuting:

      i. Safety First: Employees should assess their safety when commuting during winter weather and use their best judgment in deciding whether it is safe to travel.

      ii. Employees may be encouraged to use public transportation or carpooling to reduce individual travel risks during hazardous conditions.

6. Report / Document:

  a. Leave and Absences:

      i. Employees facing challenges in commuting due to winter weather may request time off, use paid time off, or arrange for alternative work arrangements.

      ii. Supervisors will consider individual circumstances and make appropriate accommodations.

8.2.13.7   Earthquakes

An earthquake is often 'announced' by a loud noise like that of a train. Initial earth movements and swaying of structures caused by the earthquake could be followed some time later (after hours or days) by after-shocks, usually of decreasing severity.

During the Earthquake:

1. If indoors, "Drop, Cover and Hold on".

  a. Stay inside. There could be falling debris around exits and outside.

  b. Drop under heavy furniture such as a table, desk, bed or any solid furniture.

c. Cover your head and torso to prevent being hit by falling objects.

d. Hold on to the object and remain covered. Be prepared to move with the object until the shaking has finished.

e. Can't get under something strong, or if in a hallway, flatten or crouch against an interior wall, protect your head and neck with your arms.

f. Stay away from windows, and shelves with heavy objects.

2. If you are Outdoors:

a. Stay outside.

b. Go to an open area away from buildings. The most dangerous place in near exterior walls.

c. If you are in a crowded public place, take cover.

3. If you are in a Vehicle:

a. Pull over to a safe place, do not block the road. Keep roads clear for rescue and emergency vehicles.

b. Avoid bridges, overpasses, underpasses, buildings or anything that could collapse.

c. Stop the car and stay inside.

d. Listen to your car radio for instructions from emergency officials.

e. Do not attempt to get out of your vehicle if downed power lines are across it.

Avoid the following in an Earthquake:

- Doorways. Doors may slam shut and cause injuries.
- Windows, bookcases, tall furniture and light fixtures.
- Downed power lines — stay at least 10 metres (33 feet) away to avoid injury.
- Coastline. Earthquakes can trigger large ocean waves called tsunamis. If you are near a coastline in a high-risk area during a strong earthquake, immediately move inland or to higher ground and remain there until officials declare the area safe.

After the Earthquake:

- Stay calm.
- Be prepared for aftershocks.
- Check for injuries, apply first aid and do not move the seriously injured unless in danger.
- Listen to the radio or television for information from authorities. Follow instructions.

- Only make calls if requiring emergency services (serious injury or fire).
- Check buildings for structural damage and other hazards. If the building is unsafe, do not re-enter.
- Turn off electricity, gas and water.
- Unplug appliances and broken lights to prevent fires when the power is restored.
- Stay away from brick walls and chimneys as they may be damaged or weakened and could collapse during aftershocks.
- Do not light matches or turn on lights until sure there are no gas leaks or flammable liquids spilled.
- If tap water is still available immediately after the earthquake, fill containers in case the supply gets cut off.
- Check for water or sewage leaks, broken electrical wiring, etc.
- Use extreme caution with hazardous materials or spills.
- Organize rescue measures if people are trapped or call for emergency assistance if you cannot safely help them.

8.2.13.8   Icing

Icing occurs when water vapor in the air freezes upon contact with a surface, leading to the accumulation of ice or snow. This can happen through in-cloud icing, which forms rime, or precipitation icing, which results in glaze, drizzle, or wet snow. In wind turbines, icing can affect operations and maintenance in several ways. Ice on rotor blades reduces aerodynamic performance, leading to production losses, and it can also increase vibrations and fatigue loads, potentially shortening the turbine's lifespan. Icing may also cause errors in measurement and control systems, as well as mechanical or electrical failures.

After an icing event, hazards like ice throw or ice fall are most likely to occur when temperatures rise close to or above freezing. Ice may shed due to vibrations or bending of the blades. It's important to note that ice fall is not limited to wind turbines; any iced structure on the wind farm can also be a source of falling ice.

Icing conditions are more likely when one or more of the following are true:

- Freezing rain occurred within the last 24 hours.
- The temperature has been around freezing during precipitation.
- Ice or compacted snow is visible on any part of the turbine.

- Ice or compacted snow has fallen off the turbine in the past 24 hours.

- Ice or compacted snow formations are present near the turbine.

- The temperature was above 32°F / 0°C after icing conditions.

- The current temperature is between -2°C and +2°C (28.4°F to 35.6°F).

- When these conditions are present, site management will issue an ice watch and direct workers to avoid areas where ice fall is a risk.

8.2.14 Wildlife Incident

North Atlantic operates in areas with diverse wildlife habitats, and there is possibility that different types of animals may be encountered during normal working activities. This procedure provides direction for managers and employees in such events:

- Ensuring that individuals to whom this policy applies are aware of the ways to prevent and respond to a wildlife encounter.

- Providing a means for employees to request deterrents (such as bear spray or air horn) and address the hazards associated with the use of such deterrents.

Wildlife encounters at the project site are common. Interaction with animals such as caribou, moose and black bears has the potential to impact people, property, and the environment. Feeding of wildlife on site is a contravention of the **Wild Life Act** and therefore not permitted on North Atlantic and adjacent properties. Potential incidents may include:

- Vehicle-wildlife collision on site access roads.

- Physical encounter with black bears causing personal harm or property damage.

- Damage to water treatment pond liners and fatality of animals such as caribou, moose, and black bears if they become trapped in sedimentation ponds.

- Encounters with rabid animals such as foxes.

When animals (e.g., black bear, moose, caribou, or foxes) pose a threat or a problem in the project area, the priority will be personnel safety. After measures have been taken to minimize risk of injury to people, consideration must be given to minimize impact to the animals. Live animal traps cannot be set within the North Atlantic and Braya area unless permission is granted by the Department of Natural Resources. Responsive actions for the situation will be determined by the Environmental Coordinator through consultation with the Facility Manager or designate, and the Department of Natural Resources, Forestry Services Branch.

Security personnel may conduct response for wildlife control as determined by the Environmental Coordinator. All actions must comply with Wildlife Division regulations and permits.

9. Training and Testing

9.1 Training

To ensure that the plan can be activated successfully, North Atlantic and its contractors will ensure that employees receive adequate training to be familiar with the ERP requirements. Regular training and drills will be conducted to prepare personnel and to test the viability of the plan.

North Atlantic, through its approved contractor, provides training to the operator(s) of the facility which is required to operate safely and to comply with the provincial requirements. Site specific training is provided, where the operator(s) will learn how to properly operate the equipment and the safety systems and will be trained on the emergency response procedures for the facility. Table 9.1-1 provides the training requirements for the ERP.

Table 9.1-1: North Atlantic Training Requirements.

Training	Position	Frequency
Emergency Response Plan – Awareness	All	On Hire
Emergency Response Plan – Full Simulation	ERT	Every 5 years
Emergency Response Plan – Tabletop	ERT	Annually

9.2 Testing

Testing of the ERP plan will be conducted yearly as per the requirements in the regulations. A record of the testing and training will be kept for a minimum of seven years.

Any deficiencies with the plan shall be documented with a time frame for correction. The entire plan must be tested at least once every 5 years. This is a full-blown, operational test of the entire plan. For the intermediate years the plan must be reviewed and updated, but only certain elements need to be tested. These intermediate tests may be administrative such as tabletop or synthetic or operational where only certain elements of the plan are tested.

Sample Administrative Test:

- Evacuation procedures and other emergency procedures shall be reviewed and documented.
- Emergency phone numbers shall be tested and contact list reviewed to ensure they are up to date.

- The training record of the employees and others accessing the plant shall also be reviewed at this time to ensure completeness.
- Review and update the ERP.
- Ensure licence(s) is valid.

Sample Operational Test:

- The entire system (transfer hoses, valves, safety systems etc.) shall be tested to see if operating properly.
- The test of the emergency procedures shall be held at the facility during normal business hours.
- Emergency phone numbers shall be tested to see if they are up to date and will be answered.
- Local fire service shall be invited to attend, and their comments/suggestions shall be recorded.
- Administrative Test shall be completed also when completing Operational Test.

9.3 Post-Incident Review and Debrief

After every incident or training exercise an incident debrief will be conducted for all personnel involved. Learnings will be documented and assessed to ensure the activities were carried out in accordance with the plan. If conditions change at the facility, the plan will be amended to ensure that it will continue to be an effective emergency plan. Safety equipment used during the event will be replaced and/or serviced as required.

Appendix 1: Incident Investigation Form

INCIDENT INVESTIGATION FORM

INCIDENT IDENTIFYING INFORMATION

Incident Title:	
Incident Location: (enter street address or land location)	

Client:		Supervisor:	
Incident Date:		Incident Time:	
Reported Date:		Reported By:	
Reviewed by (Supervisor):		Reviewed Date:	
Reviewed by (Safety Advisor):		Reviewed Date:	

INCIDENT INFORMATION

POTENTIAL		FREQUENCY OF OCCURRENCE		SEVERITY	
High	☐	Frequent – Likely to occur repeatedly	☐	Serious Harm (Medical Aid, LTI or higher)	☐
Medium	☐	Occasional – Likely to occur sometimes	☐	Minor Harm (First Aid)	☐
Low	☐	Rare – Not Likely to occur	☐	No Harm	☐

ENERGY SOURCES & POTENTIAL HAZARDS

BODY MECHANICS		THERMAL		GRAVITY		KINETIC		FIRE	
Lifting/Straining	☐	Ambient Cold	☐	Fall from Height	☐	Traffic	☐	Fuse	☐
Slip/Trip	☐	Ambient Heat	☐	Falling Object	☐	Vehicle Collision	☐	Apparatus Failure	☐
Repetitive Strain	☐	Hot Objects	☐	Falling Structure	☐	Vehicle Rollover	☐	Grass	☐

MECHANICAL		CHEMICAL		DAMAGE TYPE		SECURITY		ELECTRICAL	
Caught/Hit By	☐	Confined Space	☐	Abuse	☐	Break in	☐	Static Electricity	☐
Failure	☐	Corrosive	☐	Fire	☐	Fraud	☐	Shock	☐
Flying Particles	☐	Flammability	☐	Procedural	☐	Theft	☐	Fire/Explosion	☐
Sharp Tools	☐	Spills	☐	Struck By	☐	Vandalism	☐	Grounding/Bonding	☐
		Explosive	☐	Wear and Tear	☐	Violence	☐	Lightning	☐
				Lost	☐			Induction	☐
				Malfunction	☐			Other (Specify)	☐

PRESSURE	
Hydraulic Failure	☐
Compressed Gas	☐

Is the Incident reportable to the following authorities? Provincial OH&S; RCMP; Federal, Environmental, etc.:	☐Yes ☐No

INCIDENT DESCRIPTION:

INJURY INFORMATION

FOR INJURIES/ILLNESS ONLY CLASSIFICATION:	1st Aid ☐	Medical Aid ☐	Loss Time Incident ☐

BODY PARTS INJURED – (check one or more of the parts listed)

Eyes	☐	Back	☐	Internal	☐
Arms (including elbow)	☐	Feet (includes toes, ankles)	☐	Hands (includes wrist)	☐
Trunk (includes chest, hips, shoulders)	☐	Fingers (Includes thumb)	☐	Legs	☐
Head (includes face, neck)	☐	Knees	☐	Other (Specify):	☐

NATURE OF INJURY – (check one or more)

Cut	☐	Strain	☐	Sprain	☐
Shock	☐	Exposure	☐	Crush	☐
Burn	☐	Allergy	☐	Amputation	☐
Fracture	☐	Bruise	☐	Scrape	☐
Dermatitis	☐	Puncture	☐	Foreign Body	☐

Other (Specify):

TREATMENT

PERSONS INVOLVED

EMPLOYEE NAME:	TITLE	INJURY SUSTAINED	COMPANY NAME:
		Yes ☐ No ☐	
		Yes ☐ No ☐	
		Yes ☐ No ☐	
		Yes ☐ No ☐	

WITNESSES

NAME:			COMPANY NAME AND/OR PHONE NUMBER
	Witness ☐	Third Party ☐	
	Witness ☐	Third Party ☐	
	Witness ☐	Third Party ☐	
	Witness ☐	Third Party ☐	

FIRST AID

PRIMARY FIRST AIDER NAME:	QUALIFICATIONS OF FIRST AIDER	COMPANY NAME AND/OR PHONE NUMBER OF FIRST AIDER

FIRST AIDER CERTIFICATION #:	DESCRIPTION OF FIRST AID PROVIDED:

DAMAGES

Equipment/Property Damaged:		Estimated Cost:	

DAMAGE DESCRIPTION:

CAUSAL ANALYSIS (AREAS BELOW WHICH WERE THE CAUSE OF THE INCIDENT)

Job Planning	☐	Lock Out Standards	☐	Ergonomics/human engineering	☐	Personal Factors	☐
Work Procedures	☐	Protective Equipment	☐	Low Work Standards	☐	Tools	☐
Communications	☐	Engineering/Design	☐	Equipment Difficulty/Defective	☐	Other (Specify):	
Supervision	☐	Physical Conditions	☐	Lack Of Knowledge/Training	☐		

DESCRIPTION OF CAUSES:

PROGRAM OPPORTUNITIES FOR IMPROVEMENT

Roles and Responsibilities	☐	Inspections Monitoring	☐	Substance Abuse	☐	Orientation, Training, Meetings	☐
Supervision of Workers	☐	Incident Investigation	☐	Maintenance	☐	Safe Operating Procedures	☐
Subcontractor Requirements	☐	WHMIS	☐	Harassment	☐	Personal Protective Equipment	☐
Behavior Based Safety	☐	Violence	☐	New Worker	☐	Emergency Preparedness	☐
Hazard Analysis	☐	Fit for Duty	☐	Working Alone	☐	Fatigue Management	☐
Environmental:	☐	Vehicle	☐	Hygiene	☐	Safe Work Practices	☐

Other (Specify):

DESCRIPTION OF PROGRAM DEFICIENCIES:

SPECIFIC ACTIONS TO BE CARRIED OUT

ACTION / WORK TO CONTROL LOSS	BY WHOM	DATE DUE	DATE COMP.

SIGNED OFF BY:

NAME	POSITION	DATE
Sean Gaulton	HSE Manager	

HSE-FM-007