PACIFIC CANBRIAM ENERGY LIMITED

CORE

EMERGENCY RESPONSE PLAN

24 HOUR EMERGENCY LINE
1.877.269.2877

BCER 24 HOUR INCIDENT REPORTING LINE:
1.800.663.3456

AUGUST 10, 2025

CLASSIFICATION AND CHARACTERISTICS OF DANGEROUS GOODS

Any spill or release that goes off-lease that has caused, is causing, or may cause an adverse effect, must immediately be reported to Emergency Management BC (EMCR) – 1.800.663.3456 and CANUTEC – 1.888.226.8832

Class	Division	Characteristics of Dangerous Goods	Quantity	Packing Group
1 Explosives (Sections 2.9 – 2.12)	1.1	A substance or article with a mass explosion hazard	Any quantity	II – Hazardous Substances
	1.2	A substance or article with a projection hazard but not a mass explosion hazard		
	1.3	A Substance or article which has a fire hazard and either a minor blast hazard or a minor projection hazard or both, but does not have a mass explosion hazard		
	1.4	A substance or article which presents no significant hazard beyond the package in the event of ignition or initiation during transport		
	1.5	A very insensitive substance with a mass explosion hazard		
	1.6	Extremely insensitive article with no mass explosion hazard		
2 Gases (Sections 2.13 – 2.17)	2.1	A flammable gas which is easily ignited and burns	Any quantity	Not Applicable
	2.2	A non-flammable, non-toxic, non-corrosive gas		
	2.3	A toxic gas		
3 Flammable Liquids (Sections 2.18 – 2.19)	*	A flammable liquid with a closed-cup flash point less than or equal to 60.0°C	Any quantity (Packing Group I or II) 30 L or 30 kg (Packing Group III)	I – Very Hazardous Substances or II - Hazardous Substances, or III – Moderately Hazardous Substances
4 Flammable Solids (Sections 2.20 – 2.22)	4.1	A flammable solid which is readily combustible and may cause fire through friction or from heat retained from manufacturing	Any quantity (Packing Group I or II) 30 L or 30 kg (Packing Group III)	I – Very Hazardous Substances or II - Hazardous Substances, or III – Moderately Hazardous Substances
	4.2	A spontaneously combustible substance that ignites when exposed to air		
	4.3	A water-reactive substance which emits flammable gas when it comes into contact with water		
5 Oxidizing Substances, Organic Peroxides (Sections 2.23 – 2.25)	5.1	An oxidizing substance which may yield oxygen and contribute to the combustion of other material	Any quantity (Packing Group I or II) 30 L or 30 kg (Packing Group III)	I – Very Hazardous Substances or II - Hazardous Substances, or III – Moderately Hazardous Substances
	5.2	An organic peroxide which releases oxygen readily and may be liable to explosive decomposition, or sensitive to heat, shock or friction		
6 Toxic and Infectious Substances (Sections 2.26 – 2.36)	6.1	A toxic substance that is liable to cause harm to human health	Any quantity (Packing Group I or II) 30 L or 30 kg (Packing Group III)	I – Very Hazardous Substances or II - Hazardous Substances, or III – Moderately Hazardous Substances
	6.2	An infectious substance	Any quantity	A or B
7 Radioactive Materials (Sections 2.37 – 2.39)	None	Radioactive materials as defined in the Packaging and Transport of Nuclear Substance Regulations	A level of ionizing radiation greater than the level established in section 39 of the "Packaging and Transport of Nuclear Substance Regulations 2015"	Not Applicable
8 Corrosive Substances (Sections 2.40 – 2.42)	None	Solids or liquids such as acids or alkalis materials that cause destruction of the skin or corrode metals	Any quantity (Packing Group I or II) 30 L or 30 kg (Packing Group III)	I – Very Hazardous Substances or II - Hazardous Substances, or III – Moderately Hazardous Substances
9 Miscellaneous Products, Substances or Organisms (Sections 2.43 – 2.45)	None	A regulated substance that cannot be assigned to any other class. It includes genetically modified micro-organisms, marine pollutants and substances transported at elevated temperatures	30 L or 30 kg	II – Hazardous Substances or III – Moderately Hazardous Substances, or without packing group

WHAT TO DO AT THE SCENE OF AN EMERGENCY

Protect Life
Protect the Environment
Protect Property
Preserve Evidence

- **Do not panic. Assess the situation by determining the problem, the extent of the situation and the response action required.**
- **Evacuate and call for help. Sound the alarm and notify your immediate supervisor.**
- **Call emergency services, as required.**
- **Administer First Aid, if applicable.**
- **Depending on the nature of the emergency, begin corrective actions to bring the emergency under control.**
- **The Incident Commander will provide all information to the corporate Emergency Operations Centre (EOC).**
- **Declare the "All Clear" message once the emergency has been completely resolved.**

When REPORTING AN EMERGENCY be sure to provide the following information in a calm, collected tone:

1. **Your name and return telephone number(s)**
2. **Your present and future location**
3. **The present problem**
   - **Injuries**
   - **Damage to property**
   - **Damage to the environment**
   - **Other critical data**
4. **Your next steps**
5. **The present weather at your location**
6. **What you need assistance with**

PACIFIC CANBRIAM ENERGY 24 HOUR EMERGENCY LINE: 877.269.2877

PACIFIC CANBRIAM CONTACTS

NAME	TITLE	OFFICE	CELL
Nauman Rasheed	President	403.817.9041 Ext. 2141	403.899.0339
Jeremy Waddell	Manager, HSER and Operational Excellence	403.930.6736 Ext. 2736	587.576.6125
Steve Bernard	Manager, Drilling and Completions	403.300.2434 Ext. 2434	430.519.8442
Zitin Lamba	Manager, Operations	403.817.9052 Ext. 2152	403.618.6166

PROVINCIAL EMERGENCY CONTACTS

NAME	FUNCTION	NUMBER
BC Energy Regulator (BCER)	Incident Reporting Line	800.663.3456
	24 Hour Line	250.794.5200
Emergency Management & Climate Readiness (EMCR)	24 Hour Emergency Number	800.663.3456
BC Ministry of Environment & Parks	Environmental Emergencies	800.663.3456
BC Ministry of Transportation and Transit	Northern Regional Office	250.565.6185
BC 1 Call	Province Wide	800.474.6886
BC Wildfires	Province Wide	800.663.5555 From Cell: *5555
BC Drug and Poison Information Centre	Province Wide	604.682.5050 800.567.8911
HealthLink BC	Province Wide	811
Service BC	Within BC	800.663.7867
Technical Safety BC	To report an incident or safety hazard	866.566.7233
Transport Canada Dangerous Goods Reporting	CANUTEC Toll Free	888.CAN.UTEC (888.226.8832)
	CANUTEC	613.996.6666 From Cell: *666
Transportation Safety Board (TSB)	Rail Occurrence Hotline	819.997.7887
	Pipeline Occurrence Hotline	819.994.3741
WorkSafeBC	To report a serious incident or fatality	888.621.7233

EMERGENCY MANAGEMENT CONSULTANT

Behr Integrated Solutions	Calgary	403.444.6940

Refer to the *Emergency Contact Numbers Section* for additional contact information for Pacific Canbriam's BC Operations.

BCER INCIDENT CLASSIFICATION MATRIX

Instructions: Start at the top and continue down until you check off any one box in both consequence and probability to determine the incident classification. *This matrix is required as an attachment upon submission of an incident through the Compliance Management Information System (CM-IS).*

TABLE 1: CONSEQUENCE RANKING

RANK	CONSEQUENCE (any one of the following)
4	☐ Major on site equipment or infrastructure loss ☐ Major act of violence, sabotage, or terrorism which impacts permit holder assets ☐ Reportable liquid spill beyond site, uncontained and affecting environment ☐ Gas release beyond site affecting public safety
3	☐ Threats of violence, sabotage, or terrorism ☐ Reportable liquid spill or gas release beyond site, potentially affecting public safety, environment, or property ☐ HAZMAT worker exposure exceeding allowable limits ☐ Major on site equipment failure
2	☐ Major on site equipment damage ☐ A security breach that has potential to impact people, property or the environment ☐ Reportable liquid spill or gas release potentially or beyond site, not affecting public safety, environment, or property
1	☐ Moderate on site equipment damage ☐ A security breach that impacts oil and gas assets ☐ Reportable liquid spill or gas release on location ☐ **Occurrence of magnitude 4.0 or greater induced earthquake within 3 km of oil and gas operations or any earthquake which is felt on surface within a 3 km radius of oil and gas operations
0	☐ No consequential impacts

** For this consequence criteria, a probability score of 2 or higher must be used.

TABLE 2: PROBABILITY RANKING

RANK	PROBABILITY (any one of the following)
4	☐ Uncontrolled, with control unlikely in near term
3	☐ Escalation possible; under or imminent control
2	☐ Escalation unlikely; controlled or likely imminent control
1	☐ Escalation highly unlikely; controlled or imminent control
0	☐ Will not escalate; no hazard; no monitoring required

TABLE 3: INCIDENT RISK SCORE AND CLASSIFICATION

RISK SCORE	ASSESSMENT RESULT
MINOR (1-2)	**Notification Only;** permit holder **must** notify the Regulator online within 24 hours using the *Compliance Management Information System (CM-IS)*. In addition to Form A, spills must also be reported to EMCR.
MODERATE (3-4)	**Level-1 Emergency;** immediate notification (call EMCR)
MAJOR (5-6)	**Level-2 Emergency;** immediate notification (call EMCR)
SERIOUS (7-8)	**Level-3 Emergency;** immediate notification (call EMCR)

CONSEQUENCE _____ **+ PROBABILITY** _____ **= RISK SCORE** _____ **(this must be completed)**

SPILL REPORTING CRITERIA

Where the permit holder holds or maintains rights, the permit holder must report to the BC Energy Regulator, all spills of materials as identified below:

- A spill or release of any amount of materials which impacts water ways
- Hydrocarbons; 100 litres where the hydrocarbon contains no toxic materials and does not impact water ways
- Produced/salt water; 200 litres where the fluid contains no toxic materials
- Fresh water; 10,000 litres
- Drilling or invert mud; 100 litres
- Sour Natural gas; 10Kg or 15 m^3 by volume where operating pressure is >100 PSI
- Condensate; 100 litres
- Any fluid including hydrocarbons, drilling fluids, invert mud, effluent, emulsions, etc. which contain toxic substances; 25 litres

Please refer to the BC Environmental Management Act; Spill Reporting Regulation, Schedule "Reporting Levels for Certain Substances" for determining reportable spillage amounts of other substances.

PROBABILITY

CONSEQUENCE	4 ☐ Uncontrolled, with control unlikely in near term	3 ☐ Escalation possible; under or imminent control	2 ☐ Escalation unlikely; controlled or likely imminent control	1 ☐ Escalation highly unlikely; controlled or imminent control	0 ☐ Will not escalate; no hazard; no monitoring required
4 ☐ Major on site equipment or infrastructure loss ☐ Major act of violence, sabotage, or terrorism which impacts permit holder assets ☐ Reportable liquid spill beyond site, uncontained and affecting environment ☐ Gas release beyond site affecting public safety	LEVEL 3	LEVEL 3	LEVEL 2	LEVEL 2	LEVEL 1
3 ☐ Threats of violence, sabotage, or terrorism ☐ Reportable liquid spill or gas release beyond site, potentially affecting public safety, environment, or property ☐ HAZMAT worker exposure exceeding allowable limits ☐ Major on site equipment failure	LEVEL 3	LEVEL 2	LEVEL 2	LEVEL 1	LEVEL 1
2 ☐ Major on site equipment damage ☐ A security breach that has potential to impact people, property or the environment ☐ Reportable liquid spill or gas release potentially or beyond site, not affecting public safety, environment, or property	LEVEL 2	LEVEL 2	LEVEL 1	LEVEL 1	MINOR NOTIFICATION FORM
1 ☐ Moderate on site equipment damage ☐ A security breach that impacts oil and gas assets ☐ Reportable liquid spill or gas release on location ☐ **Occurrence of magnitude 4.0 or greater induced earthquake within 3 km of oil and gas operations or any earthquake which is felt on surface within a 3 km radius of oil and gas operations	LEVEL 2	LEVEL 1	LEVEL 1	MINOR NOTIFICATION FORM	MINOR NOTIFICATION FORM
0 ☐ No consequential impacts	LEVEL 1	LEVEL 1	MINOR NOTIFICATION FORM	MINOR NOTIFICATION FORM	NO NOTIFICATION REQUIRED

** For this consequence criteria, a probability score of 2 or higher must be used.

OTHER REPORTABLE INCIDENTS

The Regulator's Incident Risk Classification Matrix is designed to assist permit holders in determining which incidents must be reported. However, some incidents, which do occur, may not meet the criteria outlined in the Incident Classification Matrix but still require notification to the Regulator as a minor notification. These include the following:

- Spills or release of hazardous substances which are not provincially regulated, such as radioactive substances;
- Major damage to oil and gas roads or road structures;
- Drilling kicks when any one of the following occur:
  - pit gain of 3 m^3 or greater
  - casing pressure 85% of MA
  - 50% out of hole when kicked
  - well taking fluid (LC)
  - associated spill
  - general situation deterioration, i.e. leaks, equipment failure, unable to circulate, etc.
- Pipeline incidents, such as spills during construction phase, exposed pipe caused by flooding, pipeline over pressure, failure (without release) of any pressure control or ESD device during operations.
- Security related issues which are relatively minor; such information may be required for tracking and monitoring purposes only.

BRITISH COLUMBIA NOTIFICATION MATRIX

British Columbia

Notification Requirements for Key Government Agencies

INCIDENT TYPE	AGENCY OR RESOURCE																
	Initial Responders			Lead Agencies					Supporting Agencies & Other Government Contacts								Support Services
	Ambulance Service	Fire Department	RCMP ②	BCER ③	Local Authority ④	EMCR ①	HealthLink BC	CER	WorkSafeBC	Technical Safety BC	Ministry of Transportation	Ministry of Environment	Environment & Climate Change Canada	CANUTEC	ERAC	DFO	WCSS ⑦
Sour Gas / HVP Release (Uncontrolled)		✓	✓	✓	✓	✓	✓	✓*	✓3,4	✓	✓5	✓	✓6				
Chlorine Gas Release		✓	✓	✓	✓	✓	✓		✓3,4	✓	✓5	✓	✓6	✓7			
Sweet Combustible Gas Release		✓1	✓	✓	✓	✓	✓	✓*	✓3,4		✓5		✓6	✓7	✓8		
Spills - Unrefined Products**		✓1	✓	✓	✓	✓	✓2	✓*	✓3,4	✓	✓5	✓	✓6	✓7		✓9	✓
Spills - Refined Products**		✓1	✓	✓	✓	✓	✓2	✓*	✓3,4	✓	✓5	✓	✓6	✓7	✓8	✓9	✓
Serious Injury or Death (Including Vehicle Accidents)	✓		✓	✓		✓		✓*	✓								
Missing Person			✓														
Fire / Explosion	✓	✓1	✓	✓	✓	✓	✓2	✓*	✓	✓	✓			✓			
Pressure Vessel or Piping Incident				✓	✓	✓	✓2	✓*	✓3,4	✓		✓		✓	✓8	✓9	✓
Electrical Incident				✓		✓			✓3,4	✓							
Motor Vehicle Incident (No Injuries)			✓						✓		✓5						
Security Incident			✓	✓		✓		✓*	✓3,4								
On-Site Incident Involving E2 Regulated Substance		✓1	✓	✓		✓			✓3,4				✓	✓7	✓8		✓

✓ Mandatory contact ✓ Contact consideration based on emergency event details.

* CER is a mandatory contact only for emergencies involving CER regulated sites and inter-provincial pipelines.

** Refer to the Classifications and Characteristics of Dangerous Goods chart in the Immediate Actions Section

1) Contact the local fire department if there is potential for secondary fires resulting from the ignition of spilled liquids or escaping gases.

2) Contact HealthLinkBC if the incident has the potential to impact public health (eg. contaminated drinking water).

3) Contact WorkSafe BC when: an injury or accident results in death, an injury or accident results in death, an injury results in a worker being admitted to a hospital for more than (2) days, there is an unplanned or uncontrolled explosion, fire or flood that causes a serious injury or that has the potential to cause a serious injury, there is a collapse or upset of a craned derrick or hoist or, there is a collapse or failure of any component of a building or structure necessary for its structural integrity.

4) Contact WorkSafeBC within 72 hours of being notified of an injury / illness that results in or will likely result in: Lost time or the need to temporarily or permanently modify work beyond the date of accident, death or permanent disability, a disabling or potentially disabling condition caused by occupational exposure or activity, the need for medical treatment beyond first aid, or medical aid expenses.

5) Contact Ministry of Transportation or the RCMP if the emergency affects a highway designated.

6) Environment and Climate Change Canada (ECCC) will be notified by EMCR as required for incidents involving regulated substances at E2 registered facilities, incidents involving PCBs or any spills on First Nations lands, in National Parks, into river or lake systems containing fish, or onto railway right-of-way.

7) In most cases the Canadian Transport Emergency Centre (CANUTEC) will be notified by EMCR. CANUTEC can also provide guidance on handling procedures for toxic material releases.

8) Emergency Response Assistance Canada (ERAC) will only respond to incidents that involve the following UN numbers: 1075 (Propane, Butane, etc.) and 1010 (Butadiene), with a tank storage capacity of 450 litres or greater. Advisory assistance will be provided to incidents involving tank storage capacities less than 450 litres.

9) Contact the Fisheries and Oceans Canada (DFO) to report an oil spill that occurs in or around fresh and/or marine waters.

Legend:					
TSBC – Technical Safety BC	EMCR – Emergency Management and Climate Readiness	BCER – BC Energy Regulator	CER – Canada Energy Regulator	ECCC – Environment and Climate Change Canada	DFO – Fisheries and Oceans Canada
ERAC – Emergency Response Assistance Canada	WSBC – WorkSafeBC	WCSS – Western Canadian Spill Services	MOT – Ministry of Transportation	MOE – Ministry of Environment	

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Emergency Response Plan (ERP) Name	Pacific Canbriam Energy Limited Core Emergency Response Plan (ERP)	
ERP Manual	Version 1.0 of the Pacific Canbriam Energy Limited Core ERP was completed in August 2022 and submitted to the British Columbia Energy Regulator for approval.	
Distribution and Maintenance	Pacific Canbriam Energy Limited 2100 215 2 Street SW Calgary, AB T2P 1M4	
Administrator	Behr Integrated Solutions 750 600 6 Avenue SW Calgary, AB T2P 0S5	Phone: 403.444.6940 https://behrintegrated.com
Manual Revisions	Version 1.0 – Distributed August 2022 Revision 1.1 – Distributed August 2023 Revision 1.2 – Distributed August 2024 Revision 1.3 – Distributed August 2024 Revision 1.4 – Distributed August 2025	
Next Scheduled Revision Date	August 10, 2026	
Map Revision Date	Maps finalized on various dates. Refer to the Assets & Equipment Section.	

Disclaimer

This Emergency Response Plan has been designed to provide a series of guidelines for responding to emergency situations. This plan identifies, defines, and provides recommended actions for dealing with incidents that could impact the facility or facilities identified within the plan. This plan provides a logical and responsible approach to identifying and responding to incidents.

Verification of the information contained in this plan is the sole responsibility of the client. Behr Integrated Solutions does not accept any liability arising from the implementation or use of this plan.

This plan was prepared by:

Behr Integrated Solutions
750 600 6 Avenue SW
Calgary, AB T2P 0S5
Office: 403.444.6940

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Emergency Contact Numbers

Incident Management Team Facilities				
Pacific Canbriam Energy Limited 24 Hour Emergency Line				**1.877.269.2877**
Facility	**Location**	**Address**	**Phone**	**Fax**
Primary ICP	Altares b-24-H Field Office	b-24-H / 094-B-08	250.785.8322 Ext. 3201 Control Room: 250.785.8322 Ext. 3200	
	Altares b-72-A Field Office	b-72-A / 094-B-08	Conference Rm: 250.785.8322 Ext. 3 → Ext. 2 Control Room: 250.785.8322 Ext. 3400	
Secondary ICP	Fort St. John Field Office	1 10628 Peck Lane Fort St. John, BC V1J 4H9	Office: 250.785.8322 Conference Rm: 250.785.8322 Ext. 3105	
Primary EOC	Calgary Office	2100 215 2 Street SW Calgary, AB T2P 1M4	Office: 403.817.9054 Ext 154	403.269.7637

Name	Title	Possible Response Role	Business	Cellular
Corporate & Field				
Nauman Rasheed	President		403.817.9041 Ext. 2141	403.899.0339
Jeremy Waddell	Manager, HSER and Operational Excellence		403.930.6736 Ext. 2736	587.576.6125
Steve Bernard	Manager, Drilling and Completions		403.300.2434 Ext. 2434	430.519.8442
Zitin Lamba	Manager, Operations		403.817.9052 Ext. 2152	403.618.6166
Contractors				
Behr Integrated Solutions	Emergency Management Consultant		403.444.6940	

External Contacts – Government		
Agency/Department	**Function / Location**	**Contact Number**
British Columbia Energy Regulator		
Incident Reporting Line (via EMCR)	Reporting / Regulatory	800.663.3456
BCER 24 Hour Line (Fort St. John)	Reporting / Regulatory	250.794.5200 Fax: 250.794.5390
Local Authority		
Peace River Regional District	24 Hour	800.670.7773
	Dawson Creek Office	250.784.3200
	Fort St. John Branch Office	250.785.8084
Health Authority		
Northern Health Authority and Health Emergency Management BC (HEMBC)	Environmental Public Health	24 Hour: 855.554.3622
First Nations Health Authority – Fort St. John Office	Business Hours	250.787.7681
	After Hours *Calls received after 10:00 pm will be responded to the following day at 6:00 am.*	844.666.0711
HealthLink BC	Health Advice	811
Drug and Poison Information Centre (DPIC)	Poison and Drug Information	604.682.5050 800.567.8911
Additional Government Contacts		
BC Ministry of Environment & Parks	Environmental Emergencies	800.663.3456
	Report Poachers & Polluters	877.952.RAPP (877.952.7277)
	Peace Region Office (Fort St. John)	250.787.3411
BC Ministry of Forests	Wildfire Reporting	800.663.5555 From Cell: *5555
BC Ministry of Transportation & Transit	Northern Regional Office	250.565.6185
	Peace District – Fort St. John Office	250.787.3237
	Service Area 21 – South Peace Contractor: Argo Road Maintenance (South Peace) Inc.	800.663.7623
	Service Area 22 – North Peace Contractor: Dawson Road Maintenance Ltd.	800.842.4122

External Contacts – Government		
Agency/Department	**Function / Location**	**Contact Number**
Additional Government Contacts		
BC Office of the Fire Commissioner	Fire Codes and Incident Reporting	888.988.9488
	After Hours Emergency *via EMCR*	800.663.3456
BC 1 Call	Call Before You Dig!	800.474.6886
Canada Energy Regulator (CER)	Pipeline Emergencies *via Transportation Safety Board (TSB)*	819.997.7887
		Online Event Reporting System (OERS)
	All Other Emergencies	403.299.2773
Emergency Management & Climate Readiness (EMCR)	Emergency	800.663.3456
	North East Region	250.612.4172
Environment & Climate Change Canada (ECCC) *via Emergency Management and Climate Readiness (EMCR)*	Environmental Emergency Reporting	800.663.3456
Fisheries and Oceans Canada (DFO)	Report Marine Pollution	800.889.8852
NAV Canada *via Flight Information Centre (FIC)*	Notice to Airmen (NOTAM)	866.WX.BRIEF 866.(992.7433) 866.541.4102
Service BC	Contact Centre	800.663.7867
Technical Safety BC	Report Safety Incident or Hazard	866.566.7233
Transport Canada	CANUTEC Toll Free	888.CAN.UTEC (888.226.8832)
	CANUTEC	613.996.6666 From Cell: *666
Transportation Safety Board (TSB)	Rail Occurrence Hotline	819.997.7887
	Pipeline Occurrence Hotline	819.994.3741
		Online Event Reporting System (OERS) *via CER*
WorkSafeBC	Report Serious Incident or Fatality	888.621.7233

External Contacts – Emergency Service Providers		
Agency/Department	**Main**	**Other**
RCMP		
Dawson Creek RCMP	Emergency: 911	Non Emergency: 250.784.3700
Fort St. John RCMP	Emergency: 911	Non Emergency: 250.787.8140
Hudson's Hope RCMP	Emergency: 911	Non Emergency: 250.783.5241
Fire Department		
NOTE: The areas in this ERP are NOT covered by a fire department. Any wellsite fire or secondary fire must be handled by contract oilfield firefighting services. The following Municipal Fire Departments will ONLY respond to motor vehicle accidents and medical emergencies.		
Chetwynd Volunteer Fire Department	Emergency: 911	Non Emergency: 250.788.2424
Hudson's Hope Fire & Rescue Service	Emergency: 911	Non Emergency: 250.783.9901
Air Ambulance		
STARS	Emergency: 888.888.4567	
BC Emergency Health Services (BCEHS)	911	800.461.9911 / 250.374.5937
Ground Ambulance		
BC Ambulance Service (BCEHS)	911	
Where 911 is not available	800.461.9911	
Cell / SAT / Outside BC	250.374.5937	
Hospitals		
Chetwynd Hospital and Health Centre	250.788.2236	Fax: 250.788.7247
Dawson Creek & District Hospital	250.782.8501	Fax: 250.795.6201
Fort St. John Hospital and Peace Villa	250.262.5200	Fax: 250.261.7650
Hudson's Hope Health Centre	250.783.9991	Fax: 250.783.9125
Reception Centres		
Ramada by Wyndham Northern Grand Hotel & Conference Centre 9830 100 Ave, Fort St. John, BC	250.787.0521	
Stillwater Inn & Suites 9504 Canyon Drive, Hudson's Hope, BC	250.783.5400	

External Contacts – Western Canadian Spill Services (WCSS)		
WCSS 24 Hour Emergency Line		**1.866.541.8888**
See website for more information (www.wcss.ab.ca).		
Contact	**Contact Phone**	**Location**
WCSS Coop 9		
North River Midstream Kaylin Salanski	24 Hr: 250.262.3446 Bus: 250.919.7282	North River Midstream 13217 Westcoast Frontage Charlie Lake, BC V0C 1H0 Mile 53 Alaska Hwy
	Equipment: ▪ 52′ OSCAR Trailer (semi-truck) ▪ 40′ Boom Cache Sea Can (winch tractor/trailer) ▪ 20′ Wildlife Sea Can (winch tractor/trailer) ▪ Work Boat (1/2-ton truck w/ 2″ ball hitch) ▪ Drum Skimmer w/ Power Pak (1/2-ton truck) ▪ Single Engine Barge (1-ton truck w/ 2-5/16″ ball hitch & electric brakes) ▪ 400′ Shallow Water Boom (1/2-ton truck)	
Radar Road Trucking Rick Seidel	24 Hr: 250.774.4203 Bus: 250.775.0036	4900 46 Avenue Fort Nelson, BC V0C 1R0
	Equipment: ▪ 20’ ISRU Sea Can (winch truck & trailer) ▪ Work Boats (2) (1/2-ton truck w/ 2″ ball hitch)	

External Contacts – Industry Support

The following contact information/companies are listed for convenience only.

Contact	Location	Main	Other
Air Quality Monitoring			
Firemaster Oilfield Services	Grande Prairie	403.342.7500	780.539.4400
HSE Integrated Ltd.	Grande Prairie	780.532.2088	888.346.8260
Safety Boss	Fort St. John	250.785.2721	800.882.4967
Trojan Safety Services	Fort St. John	250.785.9557	
Aviation Support			
Bailey Helicopters	Fort St. John	250.785.2518	877.822.2245
Canadian Helicopters	Fort St. John Grande Prairie	250.787.0431 780.532.2047	780.429.6900
Taiga Helicopters	Chetwynd	780.778.3674	877.242.4211
Qwest Helicopters	Fort Nelson	250.774.5302	
Yellowhead Helicopters	Fort St. John	250.785.2331	888.566.4401
Communications Equipment Providers			
Earth Communications	Fort Nelson	877.560.3276	
Petron Communications	Fort St. John	250.785.3333	
T&T Communications	Fort St. John	250.785.0310	
Industry Fire Fighting			
Firemaster Oilfield Services	Grande Prairie	403.342.7500	780.539.4400
HSE Integrated Ltd.	Grande Prairie	780.532.2088	888.346.8260
Superior Fire Control Ltd.	Grande Prairie	877.882.0035	780.882.0070
Trojan Safety Services	Fort St. John	250.785.9557	
Safety Services and Equipment Providers			
Firemaster Oilfield Services	Grande Prairie	403.342.7500	780.539.4400
HSE Integrated Ltd.	Grande Prairie	780.532.2088	888.346.8260
Safety Boss	Fort St. John	250.785.2721	800.882.4967
Trojan Safety Services	Fort St. John	250.785.9557	
United Safety	Fort St. John	800.432.1809	250.261.5515

Legislation

This Emergency Response Plan has been developed using the following legislation, regulations, directives, guidelines, and plans:

Municipal
- Government Emergency Planning Regulation
- Municipal Bylaws

Provincial
- The BC Energy Regulator Emergency Management Regulation – September 1, 2023
- The BC Energy Regulator Emergency Management Manual – November 2023
- The BC Energy Regulator Oil and Gas Activity Operations Manual – December 9, 2024
- The BC Energy Regulator Emergency Response Plan Regulations - 2004
- The British Columbia Oil and Gas Handbook - 2003
- Canadian Association for Petroleum Producers, Emergency Response Planning: Shelter-In-Place Instructions (May 2006).

Federal
- Canadian Association for Petroleum Producers – Shelter-In-Place Instructions – May 24, 2006
- CSA Standards – CAN/CSA-Z246-1 – Security Management for Petroleum and Natural Gas Industry Systems – February 2021
- CSA Standards – CAN/CSA-Z246-2 – Emergency Preparedness and Response for Petroleum and Natural Gas Industry Systems – December 2023
- CSA Standards – CAN/CSA Z1600-17 – Emergency and Continuity Management Program – 2022
- Environment & Climate Change Canada – Canadian Environmental Protection Act – Environmental Emergency (E2) Regulations – Schedule 8 – February 25, 2019

Please refer to the above-named regulations and publications for clarification and guidance to achieve compliance.

This ERP has been prepared in accordance with Canadian Association of Petroleum Producers – CPA-IPAC Guidelines for the Preparation of Public Safety Emergency Response Plan for Sour Gas, Drilling, Completions and Servicing, September 1991.

Emergency Response Plan
Acknowledgement Form

I hereby acknowledge that I have received a copy of the Pacific Canbriam Energy Limited – Core Emergency Response Plan.

As a manual holder I understand that:

- I may receive periodic updates which I am responsible for incorporating into this Emergency Response Plan ensuring the document contains the most recently collected data.
- This manual contains confidential information and should be stored in a secure location at all times.
- I must notify Behr Integrated Solutions / Pacific Canbriam Energy Limited if this manual becomes damaged or lost.
- This manual will be returned to Behr Integrated Solutions if replaced or no longer valid.

To confirm your receipt of this manual, please complete the following information and return a signed copy of this letter by email to **erp.acknowledgement@behrintegrated.com**.

Name *(Please Print)*	Manual Number
Signature	Date

Emergency Response Plan
Document Status and Revision Form

This form is used to track any revisions made to this manual. All revisions are to be documented and provided to all manual holders.

Next Annual Review Date:	August 10, 2026				
Current Annual Review Date:	August 10, 2025				
ERP Revision Number	Distribution Date	Revised Sections	Annual Update Y or N	Date Inserted into ERP YYYY-MM-DD	Inserted By
--	Prior to 2022	Revision records have been archived.			
1.0	2022-08-11	Restructure of entire ERP document. All sections reviewed.	Y		
1.1	2023-04-14	Added Spills, Wildfire, and Civil Unrest information to Section 1.0. Updated all instances of OGC to BCER and EMBC to EMCR	N		
1.1	2023-08-11	Reviewed and updated all sections.	Y		
1.2	2024-08-10	All sections reviewed. Updated Front Insert, Notification Matrix, Information Page, Table of Contents, Emergency Contact Numbers, Corporate Governance, Immediate Actions, Levels of Emergency, Roles & Responsibilities, Government Involvement, Mutual Aid, Drills & Exercises, Forms, Glossary.	Y		
1.3	2024-08-16	Updated Emergency Contact Numbers, Corporate Governance, and Forms.	N		
1.4	2025-08-10	All sections reviewed. Updated Front Insert, Information Page, Table of Contents, Emergency Contact Numbers, Corporate Governance, Immediate Actions, Levels of Emergency, Response Structure, Roles & Responsibilities, Government Involvement, Mutual Aid, Post Incident Procedures, Assets & Equipment, Forms, Glossary	Y		

Emergency Response Plan
Management of Change Request Form

Item 1. _____

Section Number: _____

Page Number: _____

Description of Change: _____

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Requested By: _____ Date: _____

Item 2. _____

Section Number: _____

Page Number: _____

Description of Change: _____

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Requested By: _____ Date: _____

BEHR OFFICE USE

Received By: _____ Date: _____

Emergency Response Plan
Manual Distribution List

Manual No.	Recipient	Title	Location
Corporate – Confidential			
1	Nauman Rasheed	President	2100 215 2 Street SW Calgary, AB T2P 1M4
2	Jeremy Waddell	Manager, HSER and Operational Excellence	2100 215 2 Street SW Calgary, AB T2P 1M4
3	Steve Bernard	Manager, Drilling and Completions	2100 215 2 Street SW Calgary, AB T2P 1M4
4	Zitin Lamba	Operations Manager	2100 215 2 Street SW Calgary, AB T2P 1M4
5	Spare	Calgary Head Office	2100 215 2 Street SW Calgary, AB T2P 1M4
6	Spare	Calgary Head Office	2100 215 2 Street SW Calgary, AB T2P 1M4
7	Spare	Calgary Head Office	2100 215 2 Street SW Calgary, AB T2P 1M4
8	Spare	Calgary Head Office	2100 215 2 Street SW Calgary, AB T2P 1M4
Field Manuals – Confidential			
9	Drilling & Completions	b-72-A Warehouse	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
10	Drilling & Completions	b-72-A Warehouse	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
11	Drilling & Completions	b-72-A Warehouse	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
12	Drilling & Completions	b-72-A Warehouse	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
13	Drilling & Completions	b-72-A Warehouse	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
14	Drilling & Completions	b-72-A Warehouse	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
15	Jeleena Cawley	HSER Coordinator	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
16	Spare	Fort St. John Office	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
17	Spare	Fort St. John Office	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
18	Steve Gonwick	Operations, Altares b-72-A Plant	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
19	Operations	Operations, Altares b-72-A Plant	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
20	Control Room	b-24-H Altares Control Room	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
21	Control Room	b-24-H Altares Control Room	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2

A **BOLD, RED,** manual number indicates the manual contains confidential data collected during the Public Involvement Process

Manual No.	Recipient	Title	Location
Field Manuals – Confidential (continued)			
22	Control Room	b-24-H Altares Control Room	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
23	Control Room	b-24-H Altares Control Room	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
24	Control Room	b-72-A Altares Control Room	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
25	Control Room	b-72-A Altares Control Room	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
26	Control Room	b-72-A Altares Control Room	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
27	Control Room	b-72-A Altares Control Room	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
28	Spare	Kobes Field Office	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
External Manuals			
29	BC Energy Regulator (BCER)	Security and Emergency Management Branch	Bag 2 Fort St. John, BC V1J 2B0
30 PDF	BC Energy Regulator (BCER)	Security and Emergency Management Branch	SFTP Site
31 PDF	Emergency Management & Climate Readiness (EMCR)	Manager	3235 Westwood Drive Prince George, BC V2N 1S4
32 PDF	Peace River Regional District	Protective Services Manager	prrd.dc@prrd.bc.ca
33	Hudson's Hope RCMP	NCO in Charge	10317 Gething Street Hudson's Hope, BC V0C 1V0
34	Halfway River First Nations	Chief	PO Box 59, Wonowon, BC, V0C 2N0
Contractors			
Master	Behr Integrated Solutions	Emergency Management Consultants	750 600 6 Avenue SW Calgary, AB T2P 0S5

A **BOLD, RED,** manual number indicates the manual contains confidential data collected during the Public Involvement Process

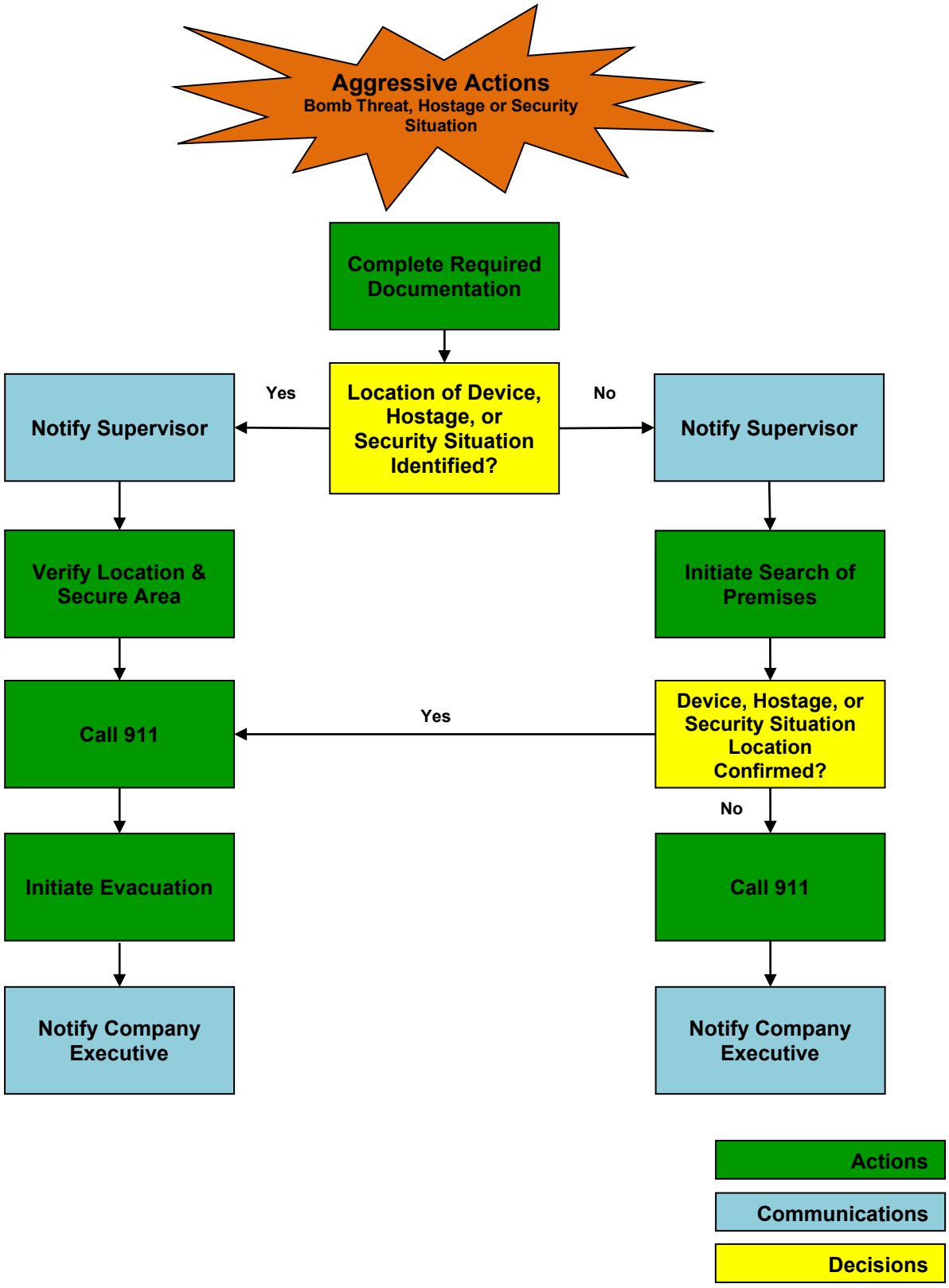
1.0 Immediate Actions

This section provides a brief description of response specific procedures to ensure all responders have an understanding of response activities.

Response steps outlined in this section are guidelines and may not meet the specific needs for all response situations. Depending on the scope of emergency more than one response specific procedure may need to be utilized.

Immediate Action	Page Number
Aggressive Actions – Including Bomb Threat, Hostage or Security Situation	2
Building / Structural Emergencies	6
Dangerous Goods Incident	8
Facility Fire / Explosion	11
Leaks / Ruptures and Well Control	14
Man Down, Rescue and Medical Situation	19
Natural Disasters	21
Odour Complaint	23
Spills	25
Vehicle Incident	28
Wildfire	30

1.1 Aggressive Actions - Bomb Threat, Hostage, or Security Situation



1.1 Aggressive Actions – including a Bomb Threat, Hostage or Security Situation

INCIDENT COMMANDER:
- Assume the role of Incident Commander until relieved by a more senior company representative.
- If a threat is received over the phone, log the conversation. Make note of the caller's demeanor, accent and / or instructions.
- Contact emergency services, as needed. (911, where available)
- Initiate a search for the device and confirm the location **or** confirm the location of the hostage situation.
- Update emergency services. (911, where available)
- Contact immediate supervisor and provide all available information.
- Assign roles and responsibilities to required Officers and Section Chiefs.
- Account for personnel on site.
- Sound the evacuation alarm and begin evacuation procedures, if required.
- Establish an Incident Command Post (ICP).

INFORMATION OFFICER:
- Provide timely information to the media, in consultation with the appropriate government agencies, when required.
- Notify next of kin in consultation with the RCMP, if required.

LIAISON OFFICER:
- Maintain contact with required government agencies, including the RCMP.
- Provide regular updates to the Incident Commander.
- Ensure required communication occurs between internal and external people.

OPERATIONS SECTION CHIEF:
- Implement tactical objectives and direct on site resources.

SAFETY OFFICER:
- Assess / monitor safety hazards or unsafe conditions. Develop measures to ensure the safety of response personnel.
- Ensure all response personnel are equipped with the appropriate PPE.

SITE CONTROL GROUP SUPERVISOR:
- Direct / implement control procedures on site to minimize impact.
- Assist emergency services as required.

PUBLIC SAFETY GROUP SUPERVISOR:
- Direct public safety related response activities.

ROVER / EVAC UNIT LEADER:
- Evacuate personnel from hazard area, if required.

ROADBLOCK UNIT LEADER:
- Secure the scene.
- Ensure evidence is documented and secured for investigation.
- Meet incoming investigative crews at the main entrance and direct them to the scene.

RECEPTION CENTRE UNIT LEADER:
- Establish a reception centre for evacuees, if required.
- If activated, receive evacuees at the reception centre.

Civil Unrest

Pacific Canbriam's goal during times of civil unrest is to keep employees, property and assets safe.

Civil unrest will usually take the form of an organized public demonstration (protest) of disapproval or display disagreement with an idea or course of action. The mission of a protest is to disrupt activities into and out of a facility / property.

There are 3 general types of civil unrest that may take place, however all 3 may be encountered in a single event as the situation escalates / de-escalates.

- Peaceful, Non-Obstructive Protest: Generally, peaceful protests should not be interrupted. Protestors should not be obstructed or provoked, and efforts should be made to conduct business as normally as possible.
- Non-Violent, Disruptive Protest: A protest event that interferes with the normal company operations or obstructs access to any property, equipment or assets.
- Violent, Disruptive Protest (Rioting, Vandalism): A protest in which threat of physical harm to persons, damage and / or unauthorized entry into property, equipment or assets is occurring or appears imminent.

Pre-emptive Civil Unrest Planning

- Gather intelligence by monitoring media reports, social media, internet, and other sources on potential civil unrest.
- Employees should share any suspicious activity with Pacific Canbriam.
- Pacific Canbriam should evaluate seriousness of activity and alert RCMP / Police and employees.
- Check that security / surveillance systems in place are working properly.
- Train employees on safety procedures when encountering protestors.
- Train select personnel to deal and speak with the Protest Leader(s) and RCMP / Police. Having predetermined Company Representatives helps to keep information consistent and accurate when reporting the incident to all involved.
- When prompted, the following statement can be provided to protestors:

"If you would like to speak with someone about your concerns, I can contact them for you. However this facility is private property and trespassers must leave our property immediately."

Civil Unrest Safety Procedures

In many cases a public demonstration is peaceful and non-obstructive, and should not be disrupted unless one or more of the following conditions exists:

- Interference of normal company operations.
- Obstructing access to any property, equipment or assets.
- Threat of physical harm to persons or damage to property, equipment or assets.
- Unauthorized entry into or occupation of any property, equipment or assets.

If personnel encounter a protest on-site:

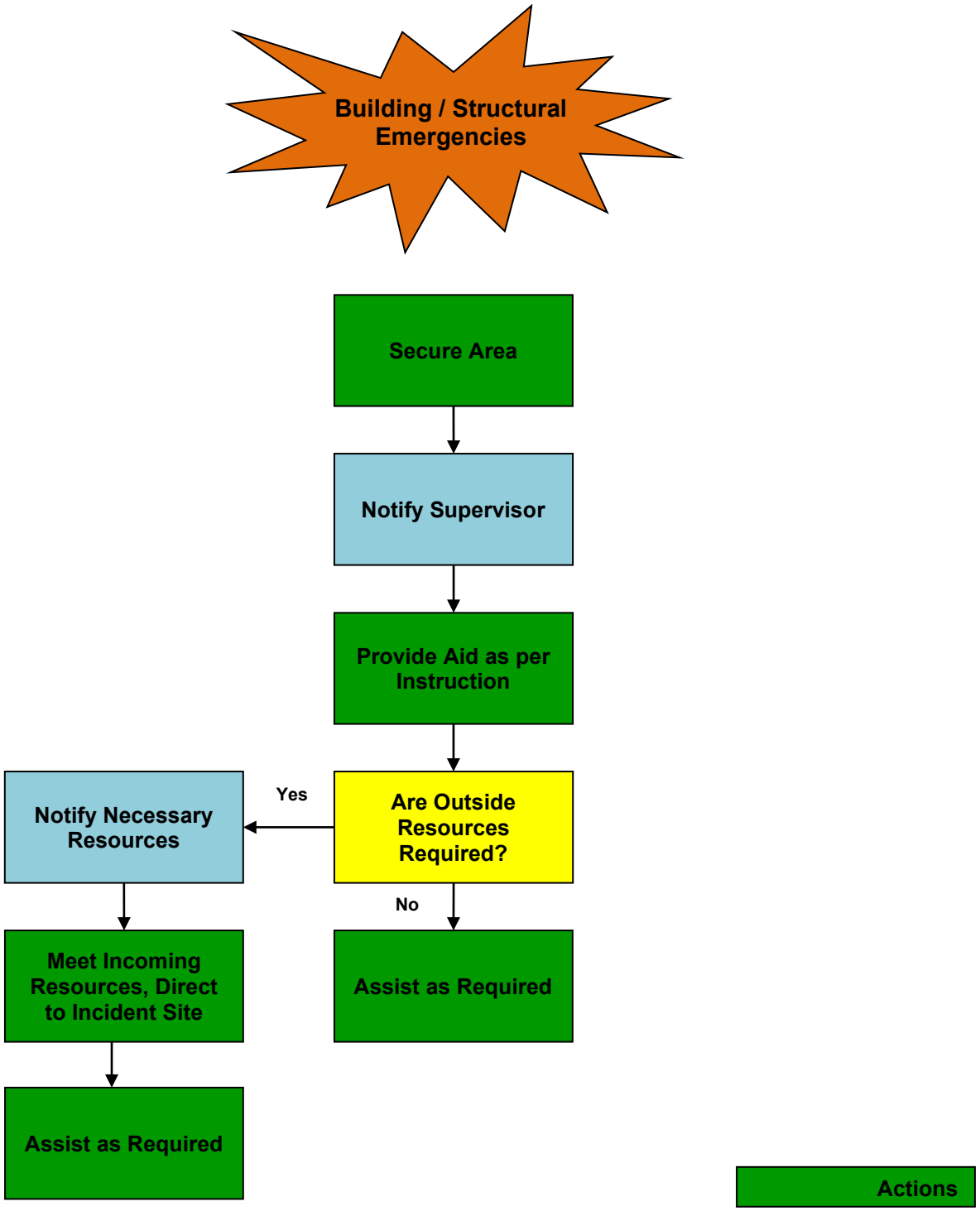
- Report Protest Activities
  - Report protest activities to Control Room / Supervisors and provide an initial assessment including location, area potentially affected and other hazards.
  - Pacific Canbriam will notify all personnel on-site (employees, contractors, and other company representatives) of protest activities and instruct them to follow safety procedures.
  - Pacific Canbriam will designate a pre-trained Company Representative to speak with Protest Leader(s) and RCMP.
  - Contact RCMP / Police and await further instructions.
- Be Safe
  - Stay calm and do not react aggressively either physically or verbally with protestors.
  - Report any injuries to Control Room / Supervisors.
- Protect Property and Assets
  - Report any concerns, unauthorized entry, or sabotage to Control Room / Supervisors.
  - If necessary and possible, deny access to facility or company equipment.
  - Keep all company vehicles at a safe distance.
  - Do not only focus on where the people are assembled. The entire facility is at risk and personnel need to be vigilant around and in the facility itself.
- Collect Evidence
  - Record all interactions from a safe distance.
  - Efforts should be made to secure positive identification of protestors in violation to facilitate later testimony, including photographs if deemed advisable.
  - Additionally, efforts should be made to record video of any law enforcement action for future reference.

If personnel encounter a protest while in a vehicle:

- Stay in vehicle and communicate situation to Supervisor.
- If alone, lock vehicle doors, put passenger-side seatbelt through passenger-side interior door handle to help prevent door being opened from the outside.
- Stay calm and do not react aggressively either physically or verbally with protestors.
- If safe, slowly move vehicle and leave area.
- Contact RCMP / Police and await further instructions.

RCMP / Police will speak to both the company representative and lead protester(s). Usually, the RCMP / Police will allow the protest to disrupt the flow into and out of the area but will negotiate a time to allow company vehicles and personnel into and out of the area safely.

1.2 Building / Structural Emergencies



1.2 Building / Structural Emergencies

INCIDENT COMMANDER:
- Assume the role of Incident Commander until relieved by a more senior company representative.
- Assign roles and responsibilities to required Officers and Section Chiefs.
- Determine need for backup or outside resources.
- Contact emergency services as needed. (911, where available)
- Sound the evacuation alarm and begin evacuation procedures, if required.
- Contact immediate supervisor giving an initial assessment including location, area potentially affected and other hazards.
- Notify the Emergency Operations Centre (EOC), as required by company policy.
- Account for personnel on site.
- Establish an Incident Command Post (ICP).

INFORMATION OFFICER:
- Provide timely information to the media, in consultation with the appropriate authorities, when required.

LIAISON OFFICER:
- Maintain contact with required government agencies.
- Provide regular updates to the Incident Commander.
- Ensure required communication occurs between internal and external people.

OPERATIONS SECTION CHIEF:
- Implement tactical objectives and direct on site resources.

SAFETY OFFICER:
- Assess / monitor safety hazards or unsafe conditions. Develop measures to ensure the safety of response personnel.
- Ensure all response personnel are equipped with the appropriate PPE.

STAGING AREA MANAGER:
- If established, ensure the readiness of resources and personnel.

SITE CONTROL GROUP SUPERVISOR:
- Direct / implement control procedures on site to minimize impact.
- Assess the need to stop normal operating activities in order to minimize risk to personnel and equipment, execute if necessary.
- Assess risk of controlling an incident with available personnel and equipment, execute if risk is deemed low.

PUBLIC SAFETY GROUP SUPERVISOR:
- Direct public safety related response activities.

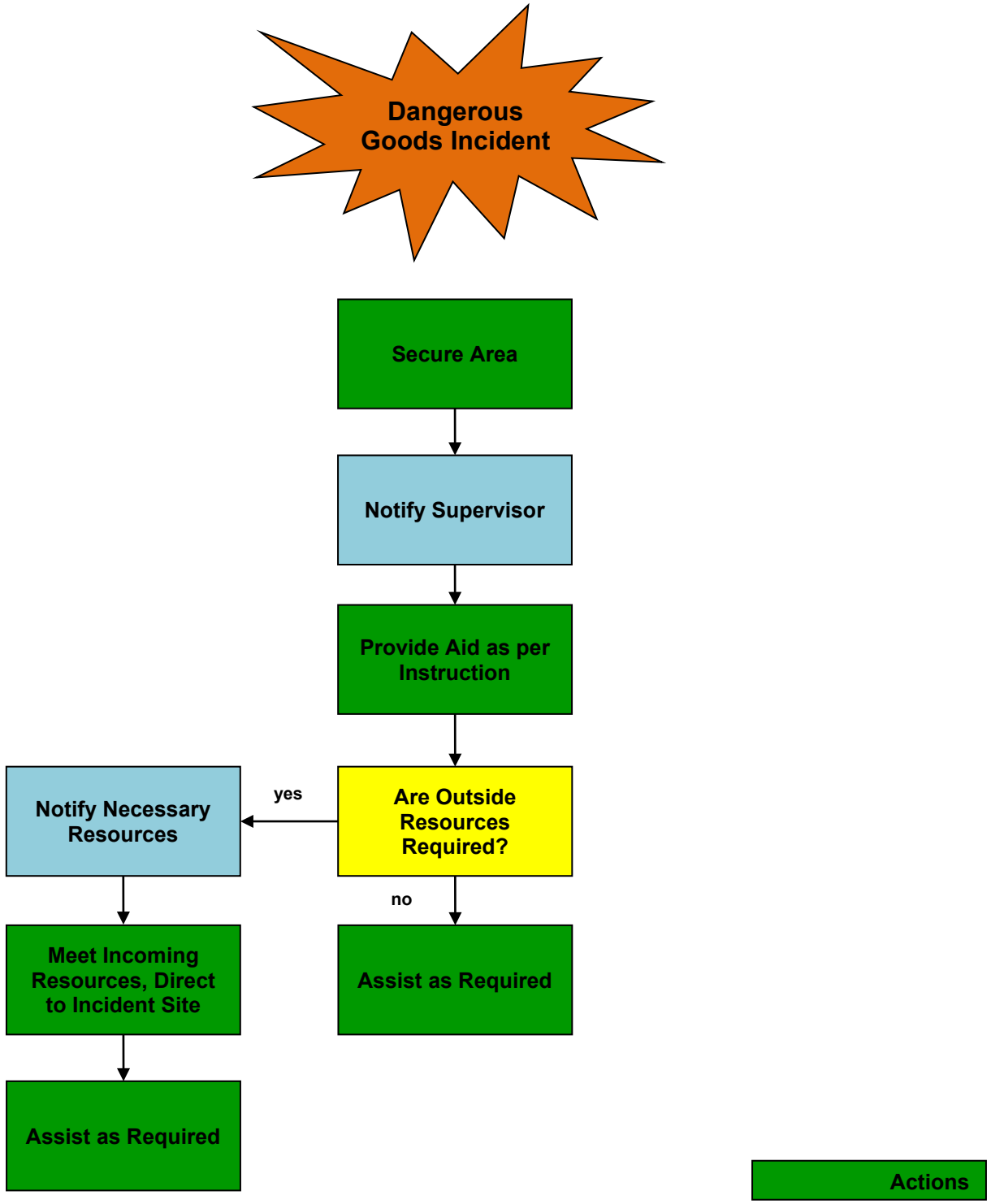
ROVER / EVAC UNIT LEADER:
- Evacuate personnel from hazard area, if required.

CONTROL UNIT LEADER:
- Ensure appropriate control and containment activities are taking place.
- Carry out necessary activities to protect the incident site, such as container stabilization or product transferring.

ROADBLOCK UNIT LEADER:
- Establish and maintain a secure incident scene. Ensure evidence is documented and secured for investigation.

RECEPTION CENTRE UNIT LEADER:
- Establish a reception centre for evacuees, if required.
- If activated, receive evacuees at the reception centre.

1.3 Dangerous Goods Incident



1.3 Dangerous Goods Incident

INCIDENT COMMANDER:
- Assume the role of Incident Commander until relieved by a more qualified individual.
- Assign roles and responsibilities to required Officers and Section Chiefs.
- Determine the Level of Emergency, notify the appropriate authorities (BCER, EMCR, the Ministry of Transportation and the Ministry of Environment), if required.
- Determine need for backup or outside resources.
- Contact emergency services, as needed. (911, where available)
- Sound the evacuation alarm and begin evacuation procedures, if required.
- Contact immediate supervisor giving an initial assessment including location, area potentially affected and other hazards.
- Notify the Emergency Operations Centre (EOC), as required by company policy.
- Account for personnel on site.
- Establish an Incident Command Post (ICP).

INFORMATION OFFICER:
- Provide timely information to the media, in consultation with the appropriate authorities, when required.

LIAISON OFFICER:
- Maintain contact with required government agencies.
- Provide regular updates to the Incident Commander.
- Ensure required communication occurs between internal and external people.

OPERATIONS SECTION CHIEF:
- Implement tactical objectives and direct on site resources.

STAGING AREA MANAGER:
- If established, ensure the readiness of resources and personnel.

SAFETY OFFICER:
- Assess / monitor safety hazards or unsafe conditions. Develop measures to ensure the safety of response personnel.
- Ensure all response personnel are equipped with the appropriate PPE.

SITE CONTROL GROUP SUPERVISOR:
- Direct / implement control procedures on site to minimize impact.
- Assess the need to stop normal operating activities in order to minimize risk to personnel and equipment, execute if necessary.
- Assess risk of controlling an incident with available personnel and equipment, execute if risk is deemed low.

CONTROL UNIT LEADER:
- Ensure appropriate control and containment activities are taking place.
- Eliminate all sources of ignition.
- Obtain MSDS sheets, as needed.
- Isolate the leak, prevent entry into waterways and sewers.
- Assess the damages, including damages to containers, vehicles, and structures as a result of the incident.
- Carry out activities to reduce or stop leaks such as container stabilization, dyking, storing, transferring and / or disposal.
- Notify the Site Control Group Supervisor if waste disposal services are required.

PUBLIC SAFETY GROUP SUPERVISOR:
- Direct public safety related response activities.

AIR MONITORING UNIT LEADER:
- Monitor the hazard area for the presence of H_2S / SO_2 or LEL readings.

ROVER / EVAC UNIT LEADER:
- Evacuate personnel from hazard area, if required.

ROADBLOCK UNIT LEADER:
- Assign members to meet incoming emergency services at the site entrance and escort them to the scene.
- Establish and maintain a secure incident scene. Ensure evidence is documented and secured for investigation.

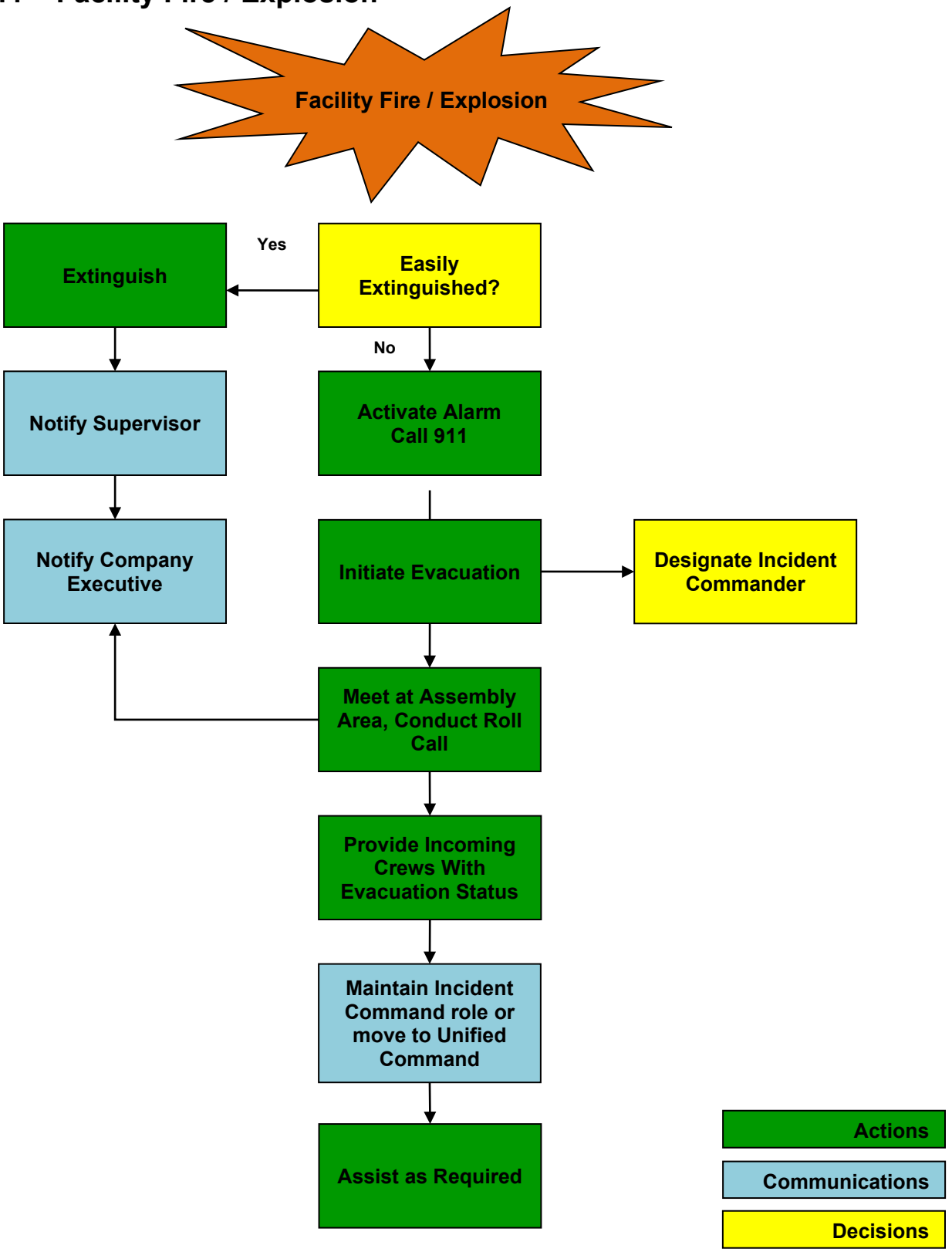
RECEPTION CENTRE UNIT LEADER:
- Establish a reception centre for evacuees, if required.
- If activated, receive evacuees at the reception centre.

CLASSIFICATION AND CHARACTERISTICS OF DANGEROUS GOODS

Any spill or release that goes off-lease that has caused, is causing, or may cause an adverse effect, must immediately be reported to the local police, Emergency Management & Climate Readiness (EMCR) – 1.800.663.3456 and CANUTEC – 1.888.226.8832

Class	Division	Characteristics of Dangerous Goods	Quantity	Packing Group
1 Explosives (Sections 2.9 – 2.12)	1.1	A substance or article with a mass explosion hazard	Any quantity	II – Hazardous Substances
	1.2	A substance or article with a projection hazard but not a mass explosion hazard		
	1.3	A Substance or article which has a fire hazard and either a minor blast hazard or a minor projection hazard or both, but does not have a mass explosion hazard		
	1.4	A substance or article which presents no significant hazard beyond the package in the event of ignition or initiation during transport		
	1.5	A very insensitive substance with a mass explosion hazard		
	1.6	Extremely insensitive article with no mass explosion hazard		
2 Gases (Sections 2.13 – 2.17)	2.1	A flammable gas which is easily ignited and burns	Any quantity	Not Applicable
	2.2	A non-flammable, non-toxic, non-corrosive gas		
	2.3	A toxic gas		
3 Flammable Liquids (Sections 2.18 – 2.19)	*	A flammable liquid with a closed-cup flash point less than or equal to 60.0°C	Any quantity (Packing Group I or II) 30 L or 30 kg (Packing Group III)	I – Very Hazardous Substances or II - Hazardous Substances, or III – Moderately Hazardous Substances
4 Flammable Solids (Sections 2.20 – 2.22)	4.1	A flammable solid which is readily combustible and may cause fire through friction or from heat retained from manufacturing	Any quantity (Packing Group I or II) 30 L or 30 kg (Packing Group III)	I – Very Hazardous Substances or II - Hazardous Substances, or III – Moderately Hazardous Substances
	4.2	A spontaneously combustible substance that ignites when exposed to air		
	4.3	A water-reactive substance which emits flammable gas when it comes into contact with water		
5 Oxidizing Substances, Organic Peroxides (Sections 2.23 – 2.25)	5.1	An oxidizing substance which may yield oxygen and contribute to the combustion of other material	Any quantity (Packing Group I or II) 30 L or 30 kg (Packing Group III)	I – Very Hazardous Substances or II - Hazardous Substances, or III – Moderately Hazardous Substances
	5.2	An organic peroxide which releases oxygen readily and may be liable to explosive decomposition, or sensitive to heat, shock, or friction		
6 Toxic and Infectious Substances (Sections 2.26 – 2.36)	6.1	A toxic substance that is liable to cause harm to human health	Any quantity (Packing Group I or II) 30 L or 30 kg (Packing Group III)	I – Very Hazardous Substances or II - Hazardous Substances, or III – Moderately Hazardous Substances
	6.2	An infectious substance	Any quantity	A or B
7 Radioactive Materials (Sections 2.37 – 2.39)	None	Radioactive materials as defined in the Packaging and Transport of Nuclear Substance Regulations	A level of ionizing radiation greater than the level established in section 39 of the "Packaging and Transport of Nuclear Substance Regulations 2015"	Not Applicable
8 Corrosive Substances (Sections 2.40 – 2.42)	None	Solids or liquids such as acids or alkalis materials that cause destruction of the skin or corrode metals	Any quantity (Packing Group I or II) 30 L or 30 kg (Packing Group III)	I – Very Hazardous Substances or II - Hazardous Substances, or III – Moderately Hazardous Substances
9 Miscellaneous Products, Substances or Organisms (Sections 2.43 – 2.45)	None	A regulated substance that cannot be assigned to any other class. It includes genetically modified micro-organisms, marine pollutants and substances transported at elevated temperatures	30 L or 30 kg	II – Hazardous Substances or III – Moderately Hazardous Substances, or without packing group

1.4 Facility Fire / Explosion



1.4 Facility Fire / Explosion

INCIDENT COMMANDER:
- Assume the role of Incident Commander until relieved by a more senior company representative.
- Assign roles and responsibilities to required Officers and Section Chiefs.
- Determine the Level of Emergency. Notify the BCER and appropriate agencies, if required.
- Determine need for backup or outside resources.
- Contact emergency services as needed. (911, where available)
- Sound the evacuation alarm and begin evacuation procedures, if required.
- Contact immediate supervisor giving an initial assessment including location, area potentially affected and other hazards.
- Notify the Emergency Operations Centre (EOC), as required by company policy.
- Account for personnel on site.
- Establish an Incident Command Post (ICP).

INFORMATION OFFICER:
- Provide timely information to the media, in consultation with the appropriate authorities, when required.

LIAISON OFFICER:
- Maintain contact with required government agencies.
- Provide regular updates to the Incident Commander.
- Ensure required communication occurs between internal and external people.

OPERATIONS SECTION CHIEF:
- Implement tactical objectives and direct on site resources.

SAFETY OFFICER:
- Assess / monitor safety hazards or unsafe conditions. Develop measures to ensure the safety of response personnel.
- **Request or administer first aid as necessary.**

STAGING AREA MANAGER:
- If established, ensure the readiness of resources and personnel.

SITE CONTROL GROUP SUPERVISOR:
- Ensure backup is present or en route before attempting to contain or control the fire.
- Implement control procedures to minimize impact.
- Assess the need to stop normal operating activities in order to minimize risk to personnel and equipment, execute if necessary.
- Assess risk of controlling an incident with available personnel and equipment, execute if risk is deemed low.

CONTROL UNIT LEADER:
- Ensure appropriate control and containment activities are taking place.

PUBLIC SAFETY GROUP SUPERVISOR:
- Direct public safety related response activities.

AIR MONITORING UNIT LEADER:
- Monitor the hazard area for the presence of H_2S / SO_2 or LEL readings.

ROVER / EVAC UNIT LEADERS:
- Evacuate personnel from hazard area.

ROADBLOCK UNIT LEADER:
- Establish and maintain a secure incident scene. Ensure evidence is documented and secured for investigation.

RECEPTION CENTRE UNIT LEADER:
- Establish a reception centre for evacuees, if required.
- If activated, receive evacuees at the reception centre.

Boiling Liquid Expanding Vapour Explosion (BLEVE)
BLEVE is a process whereby the flammable liquid in a vessel is heated through an outside source. The added heat causes the liquid to vaporize and the pressure to rise in the vessel. When the pressure reaches the release pressure of the vessel's pressure safety valve (PSV) the valve will lift and return the pressure in the tank to a safe level and then close. If the external heated source cannot be eliminated, this process will continue. When the liquid level in the tank drops below the level of the flame impingement, the vessel will begin to weaken and will eventually result in a catastrophic failure or BLEVE.

Tank Fires
When an LPG tank is involved in fire, there are important conditions which must be considered.

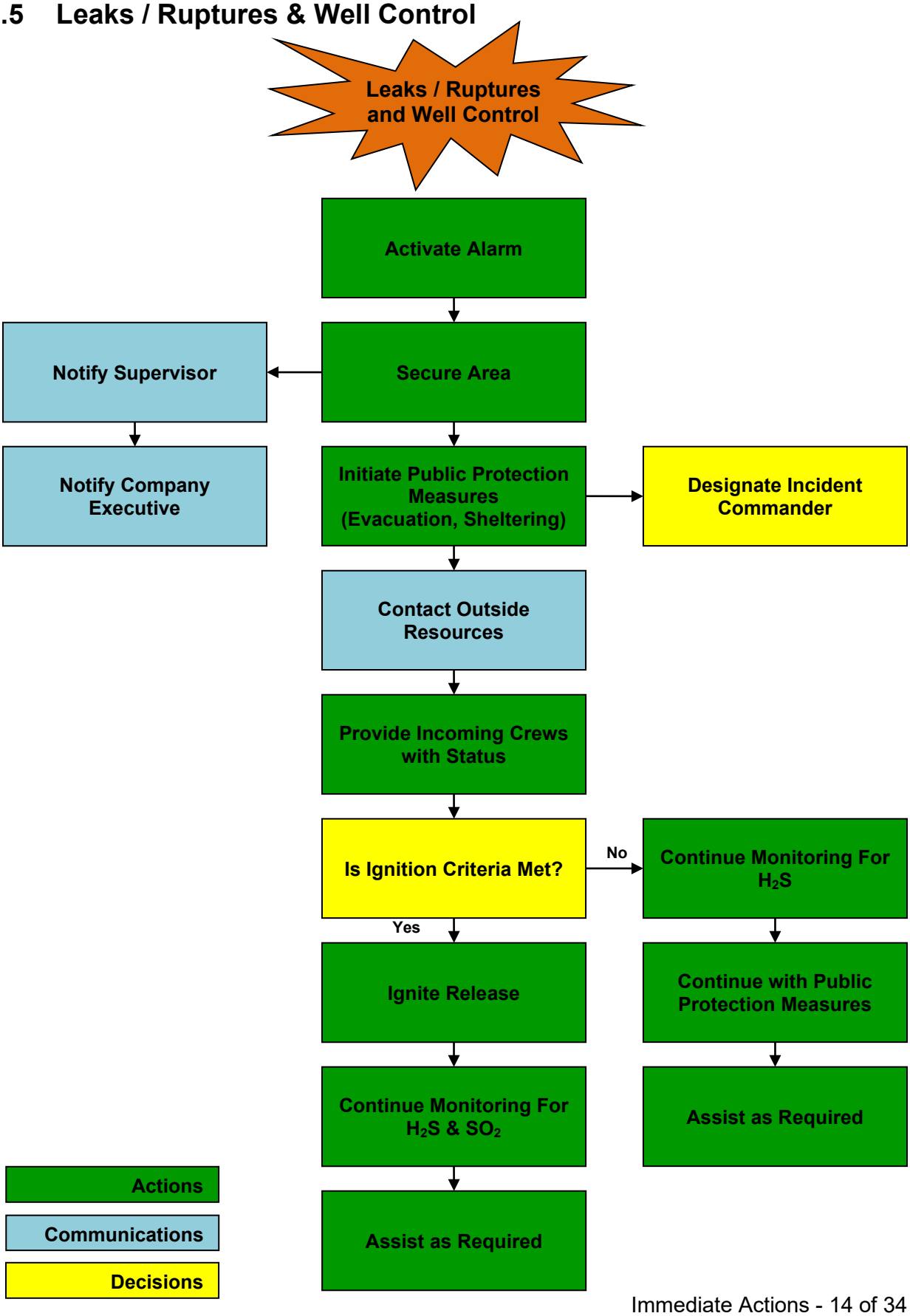
- Do the flames contact the tank shell itself? If not, there is no immediate risk of fire at the tank. Generally, radiant heat alone will not overheat the shell of the tank.
- Fight fire from the maximum distance possible or use unmanned hose holders or monitor nozzles.
- If the flames actually contact or impinge on the tank shell itself, determine the liquid level in the tank from the frost line. If the flames impinge below the liquid level, there will be a pressure build-up of vapours and the relief valve will operate with possible ignition. It will be necessary to cool the tank shell above the liquid level to reduce internal pressure and reset the valve. Also cool the tank at the point of flame impingement to reduce the possibility of tank shell failure.
- Cool container by flooding them with large quantities of water until well after fire is out.
- If the flames heat the shell above the liquid level in the tank a serious condition can develop quickly.
- Flames impinging above the liquid level will cause the shell to overheat and bulge.
- Do not direct water at the source of the leak or at safety devices, icing may occur.

Note: Leave the area immediately if you hear a rising sound from the venting safety devices or see discoloration of the tank.

Water Application

- The ideal method of applying water is to fan a long solid stream on top of the surface of the tank from the opposite side while staying at a safe distance. It is highly important that the streams of water are applied back and forth on the entire top surface of the vessel to gain uniform cooling.
- Begin cooling as early as possible and fan straight streams of water back and forth over the tank.
- Approach the tank from the sides and not the ends. Be aware that when a BLEVE occurs, sections of the tank can fly in any direction.

1.5 Leaks / Ruptures & Well Control



1.5 Leaks / Ruptures and Well Control

INCIDENT COMMANDER:
- Assume the role of Incident Commander until relieved by a more senior company representative.
- Assign roles and responsibilities to required Officers and Section Chiefs.
- Determine the Level of Emergency. Notify the BCER and appropriate agencies, if required.
- Determine need for backup or outside resources.
- Contact emergency services, as needed. (911, where available)
- Sound the evacuation alarm and begin evacuation procedures up wind of the hazard, if required
- Contact immediate supervisor giving an initial assessment including location, area potentially affected and other hazards.
- Notify the Emergency Operations Centre (EOC), as required by company policy.
- Account for personnel on site.
- Establish an Incident Command Post (ICP).

INFORMATION OFFICER:
- Provide timely information to the media, in consultation with the appropriate authorities, when required.

LIAISON OFFICER:
- Maintain contact with required government agencies.
- Provide regular updates to the Incident Commander.
- Ensure required communication occurs between internal and external people.

OPERATIONS SECTION CHIEF:
- Implement tactical objectives and direct on site resources.

SAFETY OFFICER:
- Assess / monitor safety hazards or unsafe conditions. Develop measures to ensure the safety of response personnel.
- Ensure all response personnel are equipped with the appropriate PPE.

STAGING AREA MANAGER:
- If established, ensure the readiness of resources and personnel.

SITE CONTROL GROUP SUPERVISOR:
- Direct / implement control procedures on site to minimize impact.
- Assess the need to stop normal operating activities in order to minimize risk to personnel and equipment, execute if necessary.
- Assess risk of controlling an incident with available personnel and equipment, execute if risk is deemed low.

CONTROL UNIT LEADER:
- Ensure appropriate control and containment activities are taking place.
- Eliminate all sources of ignition.
- Obtain MSDS sheets, as needed.
- If gasses are involved, prevent the spreading of vapours through sewers and confined areas. Isolate area until gas has dispersed.
- If liquids are involved, prevent entry into waterways and sewers.
- For pipeline leaks, isolate the leak and dissipate the pressure, consider all possibilities of trapped pressure.
- Carry out activities to reduce or stop leaks such as container stabilization, dyking, storing, transferring and / or disposal.
- Notify the Site Control Group Supervisor if waste disposal services are required.

IGNITION UNIT LEADER:
- If H_2S is involved and ignition criteria have been met, don appropriate PPE and begin ignition procedures.

PUBLIC SAFETY GROUP SUPERVISOR:
- Direct public safety related response activities.

AIR MONITORING UNIT LEADER:
- Monitor the hazard area for the presence of H_2S / SO_2 or LEL readings.

ROVER / EVAC UNIT LEADER:
- Evacuate personnel from hazard area, if required.

ROADBLOCK UNIT LEADER:
- Establish roadblocks to prevent any unauthorized personnel from entering the incident site.
- Ensure evidence is documented and secured for investigation.

RECEPTION CENTRE UNIT LEADER:
- Establish a reception centre for evacuees, if required.
- If activated, receive evacuees at the reception centre.

Characteristics and Dangers of H_2S

- Found in decaying organic matter, natural oil and gas, silos, and sewers.
- Found as gas at temperatures above -60°C.
- Flammable – burns to form SO_2.
- Odour of rotten eggs at low concentrations – kills all sense of smell at higher concentrations.
- Will tend to disperse more slowly in sheltered or calm, low lying areas.
- Extremely toxic.
- At lower concentrations (20-50 ppm) irritates mucous membranes (eyes, throat, lungs), causes headaches, dizziness, nausea, may cause pulmonary edema (fluid in the lungs) upon prolonged exposure.
- High concentrations (500-1000 ppm) may cause paralysis of the respiratory centre in the brain – breathing stops.
- This gas is dangerous because it kills the sense of smell very quickly.

Hydrogen Sulphide (H_2S) Toxicity Table

Hydrogen sulphide is a colourless, flammable, toxic gas. It affects people differently depending on concentration and length of exposure. Concentrations of H_2S are generally measured in parts per million (ppm), one part per million means one part of gas in one million parts of air. At very low concentrations, it has an offensive odour, (similar to rotten eggs) however, it is undetectable by odour at higher concentrations. A person can be exposed to H_2S concentrations of up to 10 ppm for up to 8 hours without breathing apparatus as per government exposure limits.

General Health Effects of Hydrogen Sulphide (H_2S)	
Concentration (ppm)	**Effects**
0.1 - 0.3	Detectable by odour.
1 - 5	Moderate to strong offensive odour may cause nausea, tearing of the eyes, headaches or loss of sleep upon prolonged exposure. Effects are moderate.
10	Ceiling limit. (WorkSafe BC).
20-50	Slight eye and lung irritation. May cause eye damage after several days of exposure, may cause digestive upset and loss of appetite.
100	Eye and lung irritation.
150	Kills sense of smell, severe eye and lung irritation.
500	Serious damage to eyes within 30 minutes, severe lung irritation, unconsciousness and death within 4 to 8 hours.
1000	Breathing stops within 1 or 2 breaths.

Characteristics and Health Effects of Sulphur Dioxide (SO_2)

- This is a choking gas, unlike H_2S, and one wants to move to an area where the discomfort is not experienced.
- Formed by the combustion of H_2S or sulphur and is non-flammable.
- Found as a gas at temperatures above -10°C.
- Has the odour that occurs when a wooden match is extinguished.
- Highly irritating – dissolves to form sulphuric acid.
- At lower concentrations irritates eyes, nose, and throat, causes difficulty in breathing and shortness of breath.
- Causes pulmonary edema at high concentrations – may be fatal.
- Effects on heavy smokers are more severe.

SO_2 Toxicity Table

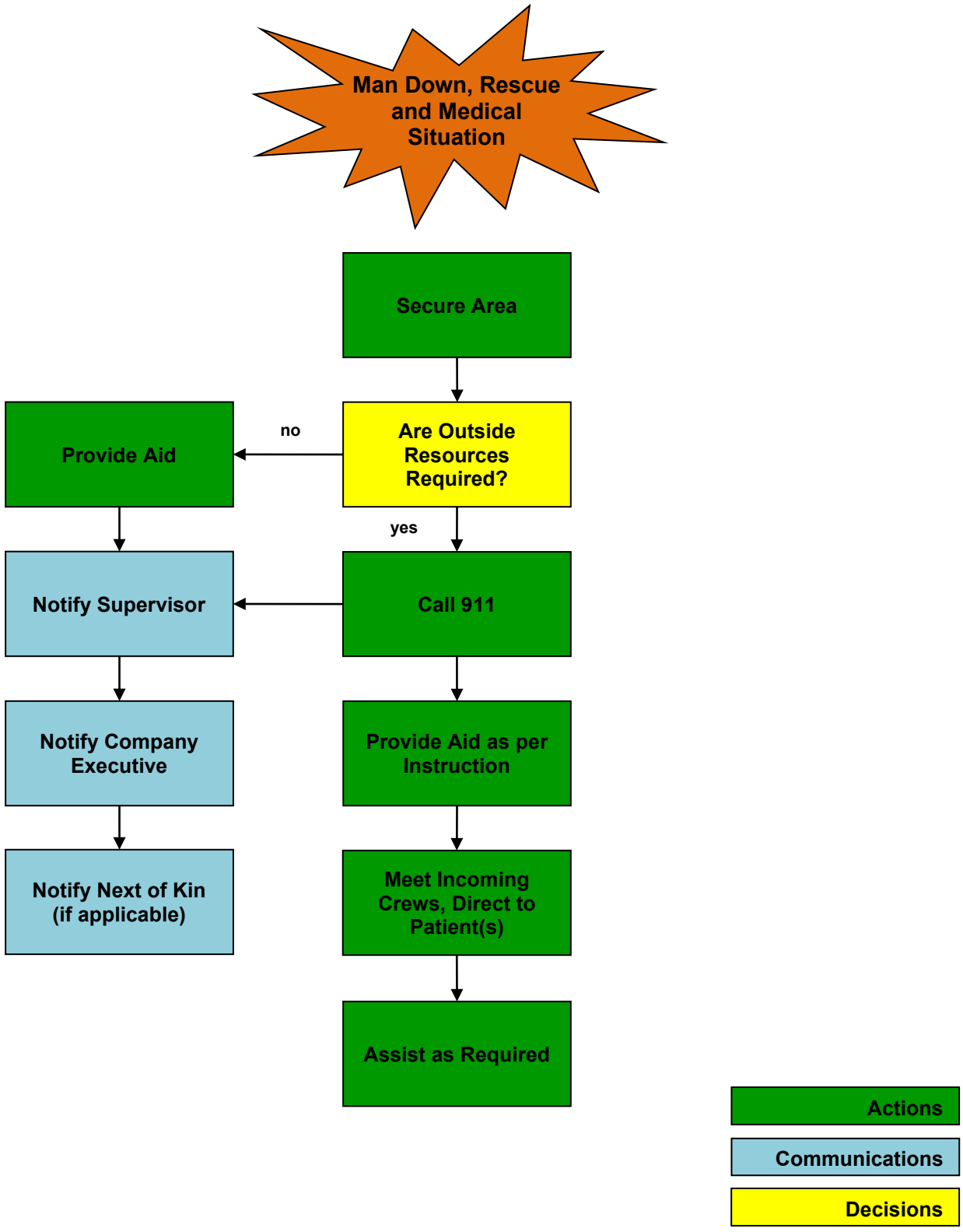
If a release of sour gas occurs and is threatening the safety of the public, the response is to ignite the gas. Burning the sour gas turns the H_2S to SO_2. The heat from the fire will carry the SO_2 and smoke up into the air, where it will disperse. By the time the SO_2 comes back to ground level, the concentrations would normally only be detectable with the use of an electronic gas detection monitor. These levels should be well below provincial environment regulations.

General Health Effects of Sulphur Dioxide (SO_2)	
Concentration (ppm)	**Effects**
0.13	24 hour evacuation level (MWLAP Level B criteria).
0.34	One hour average evacuation level (MWLAP Level B criteria).
2	Eight hour Occupational Exposure Limit (WorkSafeBC).
3 - 5	Odour threshold.
5	15 minute Occupational Exposure Limit (WorkSafeBC).
8 - 12	Throat irritation, coughing, constriction in chest, tearing and smarting of the eyes.
10 - 50	Exposure 5 -15 minutes: increased irritation of the eyes, nose, throat, choking, coughing and in some cases, wheezing as a sign of narrowing of the airways (which increases the resistance of the air-flow).
150	Short–term endurance lost due to severe eye irritation and because of the effects on the membranes of the nose, throat and lungs.
500	Highly dangerous after an exposure of 30-60 minutes.
1000 - 2000	May be fatal with continued exposure.

Characteristics and Dangers of Propane

- Extremely flammable.
- Will be easily ignited by heat, sparks, or flames.
- Will form explosive mixtures with air.
- Vapors from liquefied gas are initially heavier than air and spread along ground.
- Vapors may travel to source of ignition and flash back.
- Cylinders exposed to fire may vent and release flammable gas through pressure relief devices.
- Containers may explode when heated.
- Ruptured cylinders may rocket.
- Vapors may cause dizziness or asphyxiation without warning.
- May be irritating if inhaled at high concentrations.
- Contact with gas or liquefied gas may cause burns, severe injury and / or frostbite.
- Fire may produce irritating and / or toxic gases.

1.6 Man Down, Rescue and Medical Situation



1.6 Man Down, Rescue and Medical Situation

INCIDENT COMMANDER:
- Assume the role of Incident Commander until relieved by a more senior company representative.
- Contact emergency services (911, where available) and have them deployed to site.
- Assign roles and responsibilities to required Officers and Section Chiefs.
- Determine need for backup or outside resources.
- Contact immediate supervisor giving an initial assessment of the incident, including severity of injuries, location, resources needed, and first aid treatment provided.
- Notify the Emergency Operations Centre (EOC), as required by company policy.
- Account for all other personnel on site.
- Establish an Incident Command Post (ICP), as needed.

INFORMATION OFFICER:
- Provide timely information to the media, in consultation with the appropriate government agencies, when required.
- Notify next of kin, in consultation with the RCMP, if required.

LIAISON OFFICER:
- Maintain contact with required government agencies. Provide regular updates to the Incident Commander.
- Ensure required communication occurs between internal and external people.

OPERATIONS SECTION CHIEF:
- Implement tactical objectives and direct on site resources.

SAFETY OFFICER:
- Assess / monitor safety hazards or unsafe conditions. Develop measures to ensure the safety of response personnel.
- Ensure all response personnel are equipped with the appropriate PPE.

STAGING AREA MANAGER:
- If established, ensure the readiness of resources and personnel.

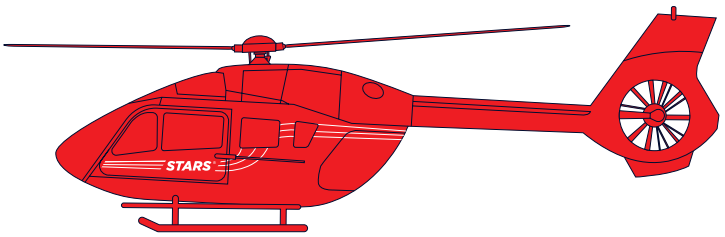
SITE CONTROL GROUP SUPERVISOR:
- Direct control procedures on site to minimize impact.

PUBLIC SAFETY GROUP SUPERVISOR:
- Direct public safety related response activities.

CONTROL UNIT LEADER:
- Ensure appropriate control and containment activities are taking place, if required.
- Eliminate all sources of ignition.
- Assign members to meet incoming emergency services at the site entrance and escort them to the scene.
- Prepare appropriate landing area if a helicopter is being used for transport.
- Assess the situation to ensure personal and others' safety.
- Administer first aid as necessary.
- Notify the Site Control Group Supervisor of further medical treatment, if required and any additional hazards on site.
- Ensure the required communication equipment is provided to personnel performing a rescue attempt.
- If a risk analysis indicates a rescue attempt is within reasonable risk, don appropriate Personal Protective Equipment (PPE) and rescue victim, moving them to a safe location.

ROADBLOCK UNIT LEADER:
- Establish and maintain a secure incident scene. Work with the Ministry of Transportation and the RCMP if public roads are required to be closed and traffic are routed.
- Ensure evidence is documented and secured for investigation.

LANDING ZONE INFORMATION CARD

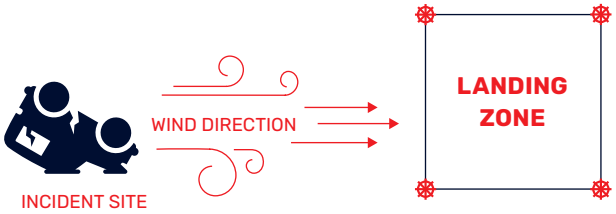


STEP 1

Advise your dispatch centre which channel you will be using to communicate with STARS.

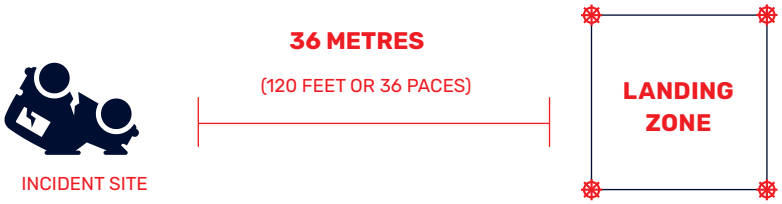
STEP 2

Select an area for the landing zone that is downwind from the incident site (unless hazardous materials or gases are present).



STEP 3

Select an area for the landing zone that is a minimum of 36 metres (or 120 feet, or 36 paces) from the incident site.



STEP 4

Select a flat, level surface for the landing zone; preferably pavement or concrete, if available.



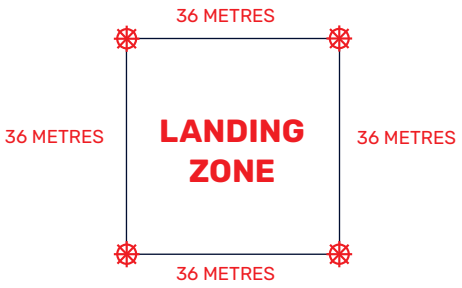
STEP 5

Ensure the landing zone area is clear of wires, poles, trees and debris.



STEP 6

Mark out a 36 metre by 36 metre (120 feet x 120 feet, or 36 paces x 36 paces) square, and mark the corners with LED beacons, heavy pylons or any other bright conspicuous objects easily seen from the air.



STEP 7

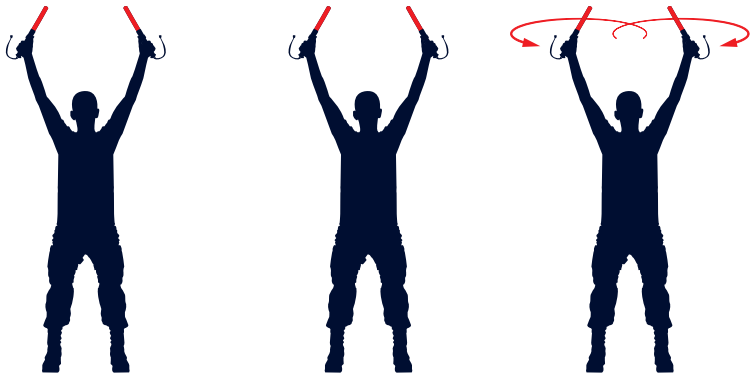
Brief STARS crew via radio or cell phone and stand at the middle of the upwind side of the landing zone with the wind at your back.

Monitor radio frequency to communicate with the STARS team.

As the helicopter approaches, go down on one knee and DO NOT MOVE from your position.

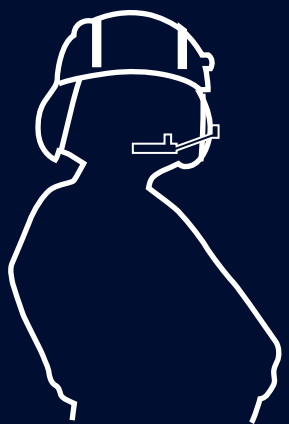
Do not approach the helicopter at any time unless escorted by the STARS crew.

LANDING ZONE HAND SIGNALS



ALL CLEAR TO LAND | ALL CLEAR TO DEPART | ABORT LANDING

LANDING ZONE BRIEFING FOR STARS CREW



STEP 1

Identify yourself and confirm the Landing Zone Officer is present, with the landing zone secure.

STEP 2

Communicate the location of the landing zone using N/E/S/W to reference the incident scene or other landmarks.

STEP 3

Identify the type of surface for the landing zone (field, road, other).

STEP 4

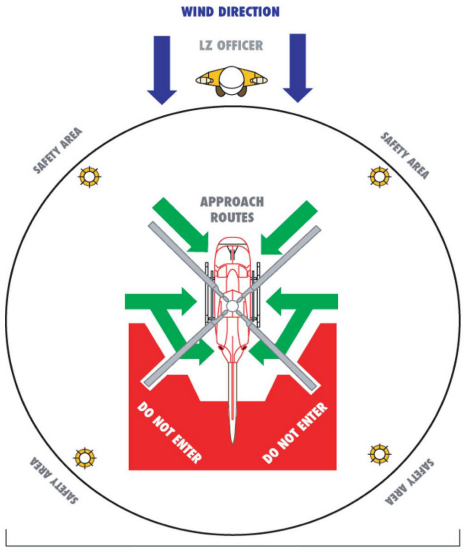
State what marking the corners of the landing zone: LED beacons, heavy pylons or any other bright conspicuous objects easily seen from the air.

STEP 5

Communicate the wind direction and approximate speed.

STEP 6

Identify the hazards in the area of the landing zone such as wires, poles, trees, or hazardous materials using N/E/S/W in reference to the landing zone.



STARS LANDING ZONE

SPECIAL CONSIDERATION

Remove any loose debris and indicate if there is snow or dust in the landing zone. If dusty, water down the landing zone, if possible, prior to the helicopter's arrival. As marshaller, maintain your position at the middle of the upwind side of the landing zone, go down on one knee and **DO NOT MOVE** from your position as the helicopter lands.

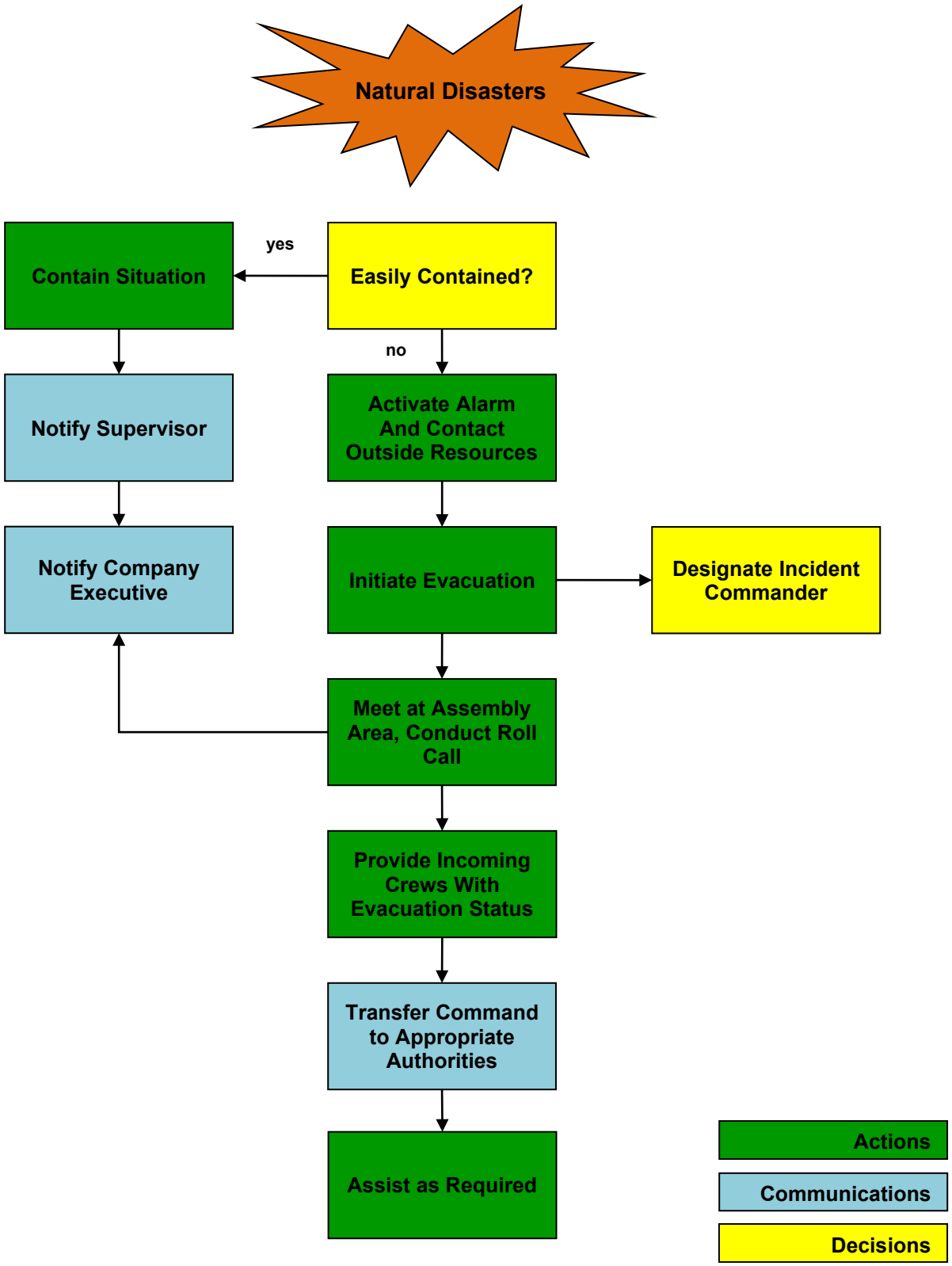
If you have any questions or comments regarding this landing zone information card or would like to watch our landing zone video, please visit **stars.ca**

EMERGENCY LINK CENTRE 1-888-888-4567

This number can also be used to provide a landing briefing to the STARS crew if radio communications are not available.

SITE # _____ **LOCATION** _____

1.7 Natural Disasters



1.7 Natural Disasters

INCIDENT COMMANDER:
- Assume the role of Incident Commander until relieved by a more qualified individual.
- Evaluate the situation.
- Determine the Level of Emergency and notify the required government agencies.
- Determine need for backup or outside resources.
- Contact emergency services as needed. (911, where available)
- Provide first aid and medical treatment, if trained to do so.
- Assign roles and responsibilities to Officers and Section Chiefs.
- Sound the evacuation alarm and begin evacuation procedures, if required.
- Establish an Incident Command Post (ICP).

INFORMATION OFFICER:
- Provide timely information to the media, in consultation with the required government agencies.
- Notify next of kin, in consultation with the RCMP, if required.
- Provide regular updates to the Incident Commander.

LIAISON OFFICER:
- Maintain contact with required government agencies.
- Provide regular updates to the Incident Commander.
- Ensure required communication occurs between internal and external people.

OPERATIONS SECTION CHIEF:
- Implement tactical objectives and direct on site resources.
- Provide regular updates to the Incident Commander.

SAFETY OFFICER:
- Assess / monitor safety hazards or unsafe conditions. Develop measures to ensure the safety of response personnel.
- Provide regular updates to the Incident Commander.

STAGING AREA MANAGER:
- If established, ensure the readiness of resources and personnel.

SITE CONTROL GROUP SUPERVISOR:
- Ensure backup is present or en route before attempting to contain or control the incident.
- Implement control procedures to minimize impact.
- Assess the need to stop normal operating activities in order to minimize risk to personnel and equipment, execute if necessary.
- Assess risk of controlling an incident with available personnel and equipment, execute if risk is deemed low.

CONTROL UNIT LEADER:
- Ensure appropriate control and containment activities are taking place.

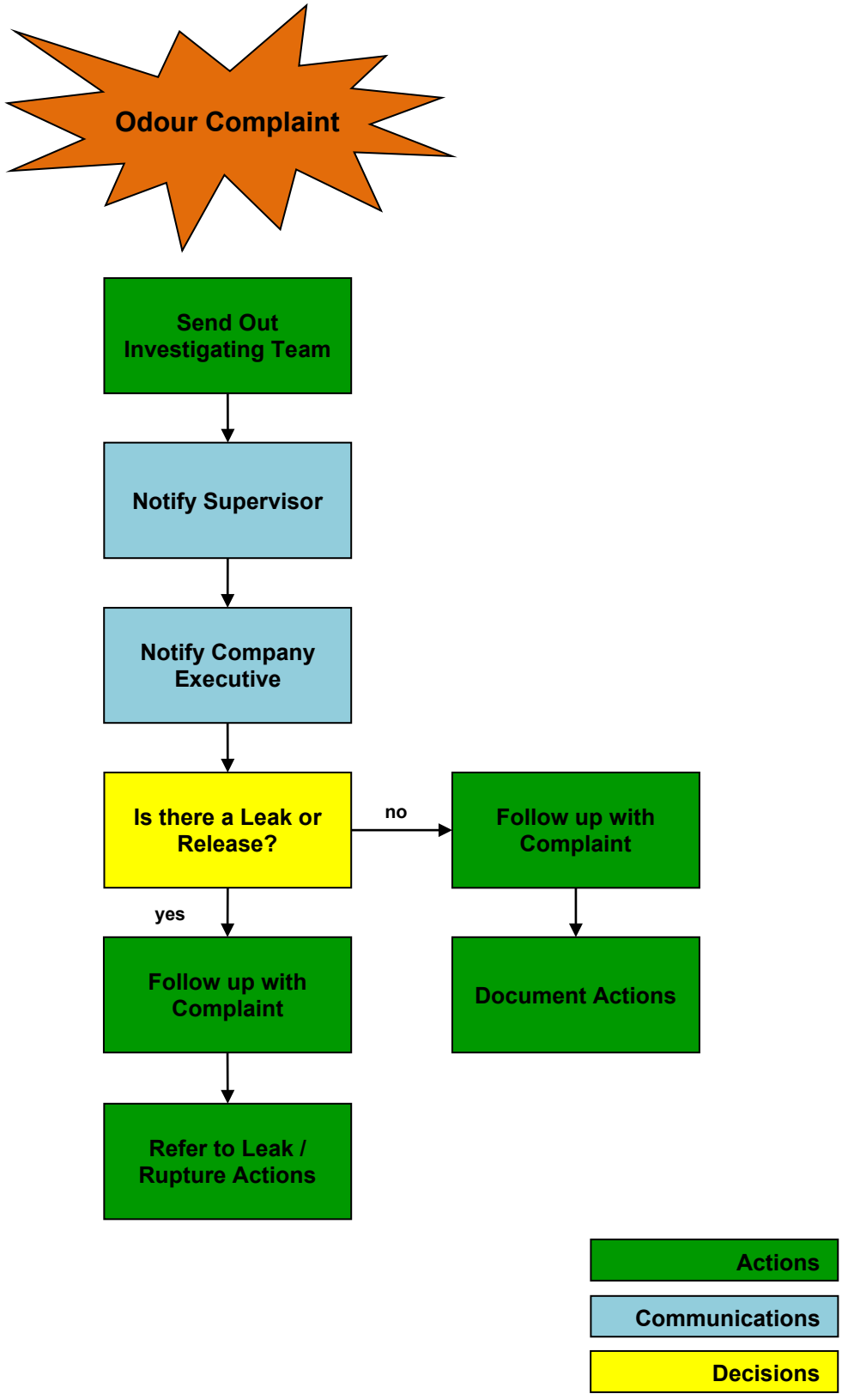
AIR OPERATIONS UNIT LEADER:
- Ensure the members are activated, if required, for air evacuation.

RECEPTION CENTRE UNIT LEADER:
- Establish a reception centre for evacuees.
- Receive evacuees at the reception centre.

ROVER / EVAC UNIT LEADER:
- Evacuate personnel from hazard area.
- Ensure evacuation routes are clear.

ROADBLOCK UNIT LEADER:
- Establish and maintain roadblocks.
- Direct traffic during the evacuation.
- Direct evacuees to the reception centre, if established.

1.8 Odour Complaint



1.8 Odour Complaint

INCIDENT COMMANDER:
- Assume the role of Incident Commander until relieved by a more senior company representative.
- If a member of the public suspects an H_2S release or the presence of SO_2 after ignition, have them take shelter until the source is confirmed.
- Assign roles and responsibilities to required Officers and Section Chiefs.
- Direct the Operations Section Chief to dispatch an investigating team to investigate the complaint.
- Contact immediate supervisor and report the complaint.
- Notify the Emergency Operations Centre (EOC), as required by company policy.
- If an emergency situation is confirmed by the investigating team, refer to the appropriate Immediate Action.

INFORMATION OFFICER:
- Provide timely information to the media, in consultation with the appropriate authorities, when required.

LIAISON OFFICER:
- Maintain contact with required government agencies.
- Provide regular updates to the Incident Commander.
- Ensure required communication occurs between internal and external people.

OPERATIONS SECTION CHIEF:
- Implement tactical objectives and direct on site resources.

SAFETY OFFICER:
- Assess / monitor safety hazards or unsafe conditions. Develop measures to ensure the safety of response personnel.
- Ensure all response personnel are equipped with the appropriate PPE.

SITE CONTROL GROUP SUPERVISOR:
- Direct control procedures on site to minimize impact.

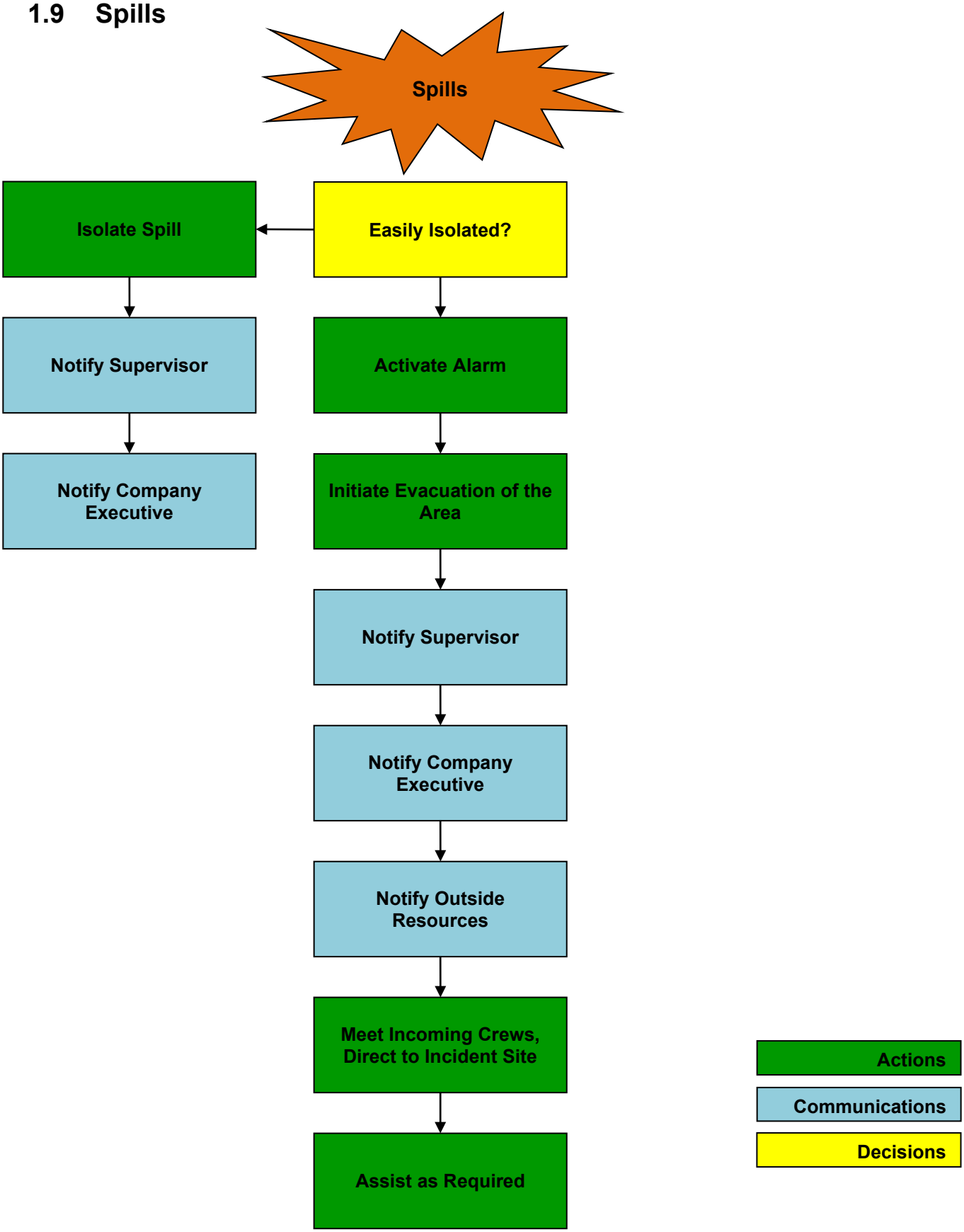
PUBLIC SAFETY GROUP SUPERVISOR:
- Direct public safety related response activities.

CONTROL UNIT LEADER:
- Travel to the site of the complaint and inspect equipment, ensure equipment is working properly and is not damaged.
- Report any damage or abnormal conditions to the Site Control Group Supervisor.

AIR MONITORING UNIT LEADER:
- Travel to the site of the complaint.
- Monitor the area for the presence of H_2S / SO_2 or LEL readings.
- Report all findings to the Public Safety Group Supervisor.

ROADBLOCK UNIT LEADER:
- Establish roadblocks at the entrance of the complaint site, if required.

1.9 Spills


Spills
Easily Isolated?
Isolate Spill
Notify Supervisor
Notify Company Executive
Activate Alarm
Initiate Evacuation of the Area
Notify Supervisor
Notify Company Executive
Notify Outside Resources
Meet Incoming Crews, Direct to Incident Site
Assist as Required
Actions
Communications
Decisions

1.9 Spills

INCIDENT COMMANDER:
- Assume the role of Incident Commander until relieved by a more senior company representative.
- Assign roles and responsibilities to required Officers and Section Chiefs.
- Determine the Level of Emergency, notify the appropriate authorities (BCER, EMCR, the Ministry of Transportation and the Ministry of Environment), if required.
- Determine need for backup or outside resources.
- Contact emergency services as needed. (911 where available).
- Contact immediate supervisor giving an initial assessment including location, area potentially affected and other hazards.
- Notify the Emergency Operations Centre (EOC), as required by company policy.
- Account for personnel on site.
- Establish an Incident Command Post (ICP).

INFORMATION OFFICER:
- Provide timely information to the media, in consultation with the appropriate authorities, when required.

LIAISON OFFICER:
- Maintain contact with required government agencies.
- Provide regular updates to the Incident Commander.
- Ensure required communication occurs between internal and external people.

OPERATIONS SECTION CHIEF:
- Implement tactical objectives and direct on site resources.

STAGING AREA MANAGER:
- If established, ensure the readiness of resources and personnel.

SAFETY OFFICER:
- Assess / monitor safety hazards or unsafe conditions. Develop measures to ensure the safety of response personnel.
- Ensure all response personnel are equipped with the appropriate PPE.
- Request or administer first aid as necessary.

SITE CONTROL GROUP SUPERVISOR:
- Direct / implement control procedures to minimize impact.
- Assess the need to stop normal operating activities in order to minimize risk to personnel and equipment, execute if necessary.
- Assess risk of controlling an incident with available personnel and equipment, execute if risk is deemed low.

CONTROL UNIT LEADER:
- Ensure appropriate control and containment activities are taking place.
- Eliminate all sources of ignition.
- Obtain MSDS sheets, as needed.
- If gasses are involved, prevent the spreading of vapours through sewers, ventilation systems and confined areas. Isolate area until gas has dispersed.
- If liquids are involved, prevent entry into waterways, sewers, basements, or confined spaces.
- For pipeline leaks, isolate the leak and dissipate the pressure, consider all possibilities of trapped pressure.
- Assess the damages, including damages to containers, vehicles, and structures as a result of the incident.
- Carry out activities to reduce or stop leaks such as container stabilization, dyking, storing, transferring and / or disposal.
- Notify the Site Control Group Supervisor if waste disposal services are required.

PUBLIC SAFETY GROUP SUPERVISOR:
- Direct public safety related response activities.

AIR MONITORING UNIT LEADER:
- Monitor the hazard area for the presence of H_2S / SO_2 or LEL readings.

ROVER / EVAC UNIT LEADER:
- Evacuate personnel from hazard area.

ROADBLOCK UNIT LEADER:
- Establish and maintain a secure incident scene. Ensure evidence is documented and secured for investigation.

RECEPTION CENTRE UNIT LEADER:
- Establish a reception centre for evacuees, if required.
- If activated, receive evacuees at the reception centre.

CLASSIFICATION AND CHARACTERISTICS OF DANGEROUS GOODS

Any spill or release that goes off-lease that has caused, is causing, or may cause an adverse effect, must immediately be reported to the local police, Emergency Management & Climate Readiness (EMCR) – 1.800.663.3456 and CANUTEC – 1.888.226.8832

Class	Division	Characteristics of Dangerous Goods	Quantity	Packing Group
1 Explosives (Sections 2.9 – 2.12)	1.1	A substance or article with a mass explosion hazard	Any quantity	II – Hazardous Substances
	1.2	A substance or article with a projection hazard but not a mass explosion hazard		
	1.3	A Substance or article which has a fire hazard and either a minor blast hazard or a minor projection hazard or both, but does not have a mass explosion hazard		
	1.4	A substance or article which presents no significant hazard beyond the package in the event of ignition or initiation during transport		
	1.5	A very insensitive substance with a mass explosion hazard		
	1.6	Extremely insensitive article with no mass explosion hazard		
2 Gases (Sections 2.13 – 2.17)	2.1	A flammable gas which is easily ignited and burns	Any quantity	Not Applicable
	2.2	A non-flammable, non-toxic, non-corrosive gas		
	2.3	A toxic gas		
3 Flammable Liquids (Sections 2.18 – 2.19)	*	A flammable liquid with a closed-cup flash point less than or equal to 60.0°C	Any quantity (Packing Group I or II) 30 L or 30 kg (Packing Group III)	I – Very Hazardous Substances or II - Hazardous Substances, or III – Moderately Hazardous Substances
4 Flammable Solids (Sections 2.20 – 2.22)	4.1	A flammable solid which is readily combustible and may cause fire through friction or from heat retained from manufacturing	Any quantity (Packing Group I or II) 30 L or 30 kg (Packing Group III)	I – Very Hazardous Substances or II - Hazardous Substances, or III – Moderately Hazardous Substances
	4.2	A spontaneously combustible substance that ignites when exposed to air		
	4.3	A water-reactive substance which emits flammable gas when it comes into contact with water		
5 Oxidizing Substances, Organic Peroxides (Sections 2.23 – 2.25)	5.1	An oxidizing substance which may yield oxygen and contribute to the combustion of other material	Any quantity (Packing Group I or II) 30 L or 30 kg (Packing Group III)	I – Very Hazardous Substances or II - Hazardous Substances, or III – Moderately Hazardous Substances
	5.2	An organic peroxide which releases oxygen readily and may be liable to explosive decomposition, or sensitive to heat, shock, or friction		
6 Toxic and Infectious Substances (Sections 2.26 – 2.36)	6.1	A toxic substance that is liable to cause harm to human health	Any quantity (Packing Group I or II) 30 L or 30 kg (Packing Group III)	I – Very Hazardous Substances or II - Hazardous Substances, or III – Moderately Hazardous Substances
	6.2	An infectious substance	Any quantity	A or B
7 Radioactive Materials (Sections 2.37 – 2.39)	None	Radioactive materials as defined in the Packaging and Transport of Nuclear Substance Regulations	A level of ionizing radiation greater than the level established in section 39 of the "Packaging and Transport of Nuclear Substance Regulations 2015"	Not Applicable
8 Corrosive Substances (Sections 2.40 – 2.42)	None	Solids or liquids such as acids or alkalis materials that cause destruction of the skin or corrode metals	Any quantity (Packing Group I or II) 30 L or 30 kg (Packing Group III)	I – Very Hazardous Substances or II - Hazardous Substances, or III – Moderately Hazardous Substances
9 Miscellaneous Products, Substances or Organisms (Sections 2.43 – 2.45)	None	A regulated substance that cannot be assigned to any other class. It includes genetically modified micro-organisms, marine pollutants and substances transported at elevated temperatures	30 L or 30 kg	II – Hazardous Substances or III – Moderately Hazardous Substances, or without packing group

1.9 Spills

In any incident, the first priority is Life Safety. This includes the protection of the public and the safety of response personnel.

Life Safety will always be the top strategic priority.

Public safety actions begin at the source of the release and are undertaken in a coordinated manner by Pacific Canbriam, the local authority and other responders as needed at the time of the incident.

The types of containment and recovery efforts depend on the type of spill. Containment and recovery response actions focus on minimizing the effects of the spill on the surrounding area. Clean-up activities will be conducted after containment and recovery actions are completed. Clean-up and disposal of contaminated material and site remediation work will continue until the spill site is returned as nearly as possible to pre-spill conditions and company environmental specialists and the agencies are satisfied.

Pacific Canbriam is an active member of the Western Canadian Spill Services (WCSS). Pacific Canbriam is expected to assess the risk that its operation poses to the environment and be prepared to provide effective emergency response capability in the event of a spill in a timely manner. The BCER states that response must be initiated within 6 hours from the time a spill is discovered. On the weekend or during the night response must be initiated within 12 hours from the time of discovery.

1.9.1 Initial Spill Response Actions

- Follow "What to do at the Scene of an Emergency" instructions on the Front Insert at the beginning of this manual.
- Size up considerations for a spill site:
  - Is there a fire or explosion hazard? What is the ignition source?
  - Is there H_2S or other toxin present?
  - Are there any areas deemed hazardous? (Mark with flags).
  - What are the ground and weather conditions? (Snow, gravel, sand etc.)
  - Where is the location of the leak, the type of release and the volume released?
  - How long has the spill been taking place?
  - Is the spill into a watercourse, watershed or a water body?
  - Is the spill contained or migrating? Which direction? How far can it go?
  - If the spill is not contained, determine and prioritize the containment points and methods to be used.
  - What lands will be affected? (Farm, livestock, brush, drinking water, etc.)
  - How is it going to be contained and cleaned up?
  - How to access the spill site, the source of the spill and recovery points?
  - What equipment is required? Is oil spill equipment (oil spill co-op) required?
  - Where can spill responders park so as not to interfere with spill equipment? (Minimize vehicular traffic as much as possible at the spill site.)

  - Are there any residences in the area? Do they have water wells that could be affected?
  - Should the spill site be cordoned off to prevent wildlife / livestock from entering?
- Relay information to internal company contacts, government agencies and if required, landowner, spill response contractors, and the designated Public Information Officer.

1.9.2 General Control and Containment

- If possible, immediately shut off the source of the spill ensuring your own safety.
- Response in a timely manner is critical.
- Prioritize and set up containment points
- Where possible, prevent a spill from entering a watercourse.
- Use safest and simplest method to get job done within resource and safety capabilities.
  - Isolate and depressurize (ESDs, manual block valves, manual valve isolation).
  - Plug and patch (e.g. fix faulty valve or hole in drum).
  - Absorb or adsorb (e.g. applying adsorbent pads to oil spill).
  - Transfer (e.g. removing product to waste truck or new container).
  - Containerize (e.g. put leaking drum into over-pack drum).
  - Reposition (e.g. upright or roll and chock leaking container).
  - Others (e.g. hot-tap, vent and burn, flaring).
- Contain the spill – containment is a priority for limiting environmental damage.
- Contain as close to source as safe and practical.
- Avoid excessive walking or driving on the spill area.
- Do not use absorbents on large spills.
- Consider ground disturbance guidelines.
- Determine where bell holes or trenches would be most effective.
- Keep trenches shallow and narrow as possible, to prevent additional clean-up.
- Use practical containment tools and equipment including shovels, dump trucks, sand bags, plastic bags, heavy earth moving equipment, “Plug and Patch”, foam, salvage covers, adsorbents, booms, hose, redwood plugs, etc.
- If weirs are installed, they should be able to handle large flow rates and surges.
- Surface run off may have to be diverted from the spill site if wet conditions are present.

1.9.3 Recovery of product and / or clean-up of the spill

- Ensure the health and safety of the persons responding to the spill.
- Once containment has been achieved, recovery and clean-up operations begin immediately.
  - Recover as much product and saturated debris as possible.
  - Keep environmental disturbance to a minimum.

1.9.4 Land Spills

Land spills will spread outward from the initial spill point toward lower-lying areas. Penetration downward into the soil will also occur at a rate that is dependent on the soil type and the

nature of the product spilled. During spills in winter, petroleum will spread under the snow making definition of the extent of the spill area difficult.

- Attempt to restrict spills on land to as small an area as possible based on site conditions.
- Prevent the spill from entering water bodies or flowing watercourses or flowing into manholes or culverts, within the bounds of safety and practicality.

The method chosen for land containment and recovery is dependent on site conditions and the equipment available. A summary of common options is presented in the following table:

Land Containment Options		
Containment Method	**Technique Description**	**Comments**
Earth or Sand Dike (All seasons)	Earth or sand at or near the site is used to contain spilled material on flat or sloped surfaces. Sandbags filled with soil or sand are used to contain spill.	Sufficient dry earth, gravel or sand must be available to contain spill. Earth may be frozen. Surface disturbance to remove earth or sand may result in erosion, especially on steep slopes. Work crews and/or earth-moving equipment are required to build dike.
Snow or Ice Dike (Winter only)	Snow or ice at or near the site is used to contain spilled material on flat or sloped surfaces.	Sufficient snow or water must be available to contain spill. Snow or ice dike will melt quickly in warm weather. Contaminated snow or ice may need to be removed or stored for treatment. Work crews and/or earth-moving equipment are required to build snow dike. Water spraying equipment may be required to construct ice dike.
Sorbent Dike (All seasons)	Sorbent material is used to contain spill.	Useful only in small spills, as purchase of large quantities of sorbent is expensive and impractical. Contaminated sorbent may need to be replaced or squeezed out during incident. Contaminated sorbents must be disposed in compliance with government legislation. Sufficient sorbent or sorbent boom, work crews and storage containers or a lined storage area for contaminated sorbents must be available to build sorbent dike.
Trench or Sump (All seasons)	A trench or sump is excavated downslope on sloping terrain to limit surface or subsurface spill movement. Work crews and/or earth-moving equipment are required to build trench or sump, as well as plastic or other impermeable sheeting for a trench liner.	Clean topsoil should be removed before trench construction. Frozen soil, bedrock close to the surface or soil type (e.g. sand) may make this option impractical. Surface disturbance to remove earth or sand may result in erosion or further penetration in sandy soil.

Land Recover Options		
Recovery Method	**Technique Description**	**Comments**
Vacuum Truck	A vacuum truck is used to recover spilled material from a dike or trench in areas accessible by trucks or heavy equipment.	The method depends on site access. Surface disturbance and soil damage may result from movement of the vacuum truck to and from the site. Topsoil may need to be stripped from the site before starting recovery activities.
Pumping Spilled Material into Storage	A pump is used to recover spilled material from a dike or trench in areas not accessible by vacuum trucks.	Pumps must be safe for use at the spill site and compatible with the product to be pumped. Surface disturbance and soil damage may result from movement of the pump and storage equipment to the site. Skid tanks, tanker trucks, port-a-tanks, fuel bladders, permanent tanks, or a lined excavated area must be available to provide storage for the recovered material. A work crew and power supply for the pump must also be available.

1.9.5 Spills into a Watercourse

Petroleum products will spread outward from the origin of the spill, eventually achieving a stable thickness on the water. Spills on rivers, creeks, or streams will flow downstream, contaminating riverbanks and vegetation, affecting wildlife, fish and water users in the area of the spill.

The rate of spill movement will depend on the current speed of the water and the time of year. Current may flow faster in the deepest channels in the river and slower in shallower areas, due to varying volumes of water.

Flow in a watercourse will also be faster in the spring, because of snowmelt entering the watercourse from the surrounding area. River currents in summer and fall will be generally slower than in the spring. Wind and wave action will also affect the rate and direction of spill travel.

Spill velocity on a watercourse may be estimated quickly by using a current velocity meter or by timing the movement of a floating object on the watercourse over a set distance.

The following table is used for estimating spill velocity based on a 30 metre (100 foot) distance:

Time Required for Object to Travel 100 meters (seconds)	Surface Current Speed		Boom Angle (degrees)
	(km/hr)	(m/s)	
720	0.5	0.14	60°
360	1.0	0.28	60°
240	1.5	0.42	60°
180	2.0	0.56	45°
143	2.5	0.69	45°
120	3.0	0.83	45°
103	3.5	0.97	15°
90	4.0	1.11	15°
80	4.5	1.25	15°
73	5.0	1.39	15°
60	6.0	1.67	15°

Note: In currents faster than 6.0 km/h, or in excessively turbulent waters, the use of containment booms may be impractical, and other containment or protection methods such as the use of diversion or exclusion booms may be required.

The velocity calculated will be an approximation only, as the watercourse velocity varies at different points across the river, due to changes in river depth and at various points upstream and downstream on the river. In the initial stages of the spill on a watercourse, lighter-end materials will tend to evaporate, especially in warm weather. Other processes that might affect spill behaviour include dispersion of the petroleum into the water, formation of stable oil/water emulsions and stranding or oil along the shoreline.

Containment of a spill on a watercourse should be completed as quickly as possible as the spilled material has the potential to travel a much greater distance and contaminate a larger area than spills on land. The Incident Commander and Incident Command System Operations personnel will implement appropriate containment actions based on the size of the watercourse and current velocity.

Watercourse Containment Options		
Containment Method	**Technique Description**	**Comments**
Containment Boom (Spring to Fall)	A containment boom is placed in the watercourse to prevent migration of the spilled material down-stream of the containment point.	The watercourse must be accessible to allow containment activities. If water is too shallow, or current is too fast, the containment boom may not be effective in containing the oil. Oil spill containment equipment, work and safety boats, and a work crew must be available to conduct this method.
Diversion Boom (Spring to Fall)	Diversion booms are used in large or swift rivers to divert spilled material to calmer water for containment and recovery. May be used in combination with containment boom.	The watercourse must be accessible to allow boom to be deployed. High current speeds or turbulence may make deployment impossible, or may cause deployed boom to fail, releasing spilled material downstream. Oil spill containment equipment, work and safety boats, and a work crew must be available to conduct this method.
Sorbent boom (Spring to Fall)	Sorbent booms may be used in narrow, low flow streams or rivers to remove small amounts of surface oil. Chicken wire or containment boom may be used to back up sorbent boom.	The watercourse must be accessible to allow boom to be deployed. Sorbent boom use is only viable in low flow watercourses, as boom is not very sturdy and breaks easily. (Chicken wire or containment boom may be used behind sorbent boom to reinforce sorbent boom and prevent breakage). Sorbent boom also has no skirt allowing large amounts of oil to easily flow under it. Sorbent boom will pick up sheen but not large amounts of oil. Sorbent boom is not very effective in cold weather. Large amounts of sorbent boom are expensive, and must be replaced in the watercourse when saturated. Used sorbent must be stored and disposed of in compliance with government legislation. Sorbent boom, work crew and possibly boats may be required.
Earth or Sand Dike (Spring to Fall)	Dikes are used across very shallow streams and intermittent creeks to contain flowing oil. Dikes can also be used to contain spilled materials along a shoreline.	Sufficient earth or sand is needed to construct the dike. Flowing may be caused if stream or creek is dammed (a containment weir may be used to alleviate this problem – see below) Damage may be caused by evacuation and construction in the watercourse and along the banks. A work crew with shovels, earth-moving equipment, earth or sand, sandbags and/or sheets of metal or wood may be required.

Watercourse Containment Options		
Containment Method	**Technique Description**	**Comments**
Containment Weir (Spring to Fall)	Containment weirs are physical dams with culverts or pipes constructed in the dam to allow free water movement from a site while containing surface oil.	Containment weirs are used in shallow streams and creeks and are suitable for maintaining a constant water level at the site and preventing flooding. Damage may be caused by excavation and construction in the watercourse and along the banks. A work crew with shovels, earthmoving equipment, earth or sand and piping or culvert material is required.

Watercourse Recovery Options		
Recovery Method	**Technique Description**	**Comments**
Vacuum Truck	A vacuum truck is used to recover free petroleum from water in areas accessible by trucks or heavy equipment.	A vacuum truck and operator are required. Use of this method is subject to site access. Surface disturbance and soil damage may result from movement of the vacuum truck to and from the site. Topsoil may need to be stripped from the site before conducting recovery activities.
Pumping of Spilled Material into Storage	A pump is used to recover free oil from the watercourse in areas not accessible by vacuum trucks.	Pumps must be safe for use at the spill site and be compatible with the product to be pumped. Surface disturbance and soil damage may result from movement of the pump and storage equipment to the site. Technique will generate large volumes of contaminated water that will require storage. Skid tanks, tankers, port-a-tanks, fuel bladders, permanent tanks or a lined excavated area must available to provide storage for the recovered material. A work crew and power supply for the pump must also be available.
Skimmers	Mechanical devices are used to skim oil from water surface or remove oil/water mixture for storage.	Skimmer will need sufficient water depth to float. Weir skimmers work best on thicker layers of oil in flowing water. Will generate large quantities of water/oil mixture. Drum or disc skimmers will pick up thinner layers of oil on slow moving water. Debris and vegetation may clog skimmer making oil pickup difficult. A suction, floating weir, disc or drum skimmer, pump and work crew are required. A secure storage facility (tanker, portable tanks, fuel bladders or excavated, lined storage site) is also required.

1.9.6 Spills into Water Bodies

In the absence of any current or wind, spills on water bodies such as lakes will spread out in all directions from the site of the spill until a uniform stable thickness is reached. If a wind and/or current is present, the spill will move with the wind or current until it reaches the shoreline. Wave action in the water body may also affect the spill causing oil-in-water or water-in-oil emulsions to form, making recovery and clean-up efforts more difficult.

Response personnel should attempt to contain the spill to as small an area as possible on the water body near the spill source. Dispersion of the spill over a large area on the water body could cause widespread impacts when the spill reaches the shore. If the spill can be contained on the water body, the spilled material is moved toward shore for recovery.

Containment options for spills on water bodies use a containment boom to surround the spill. See the local Oil Spill Contingency Plan for a discussion of containment booms and for boom configurations used to contain a boom in open water. If the area that may be impinged by the spilled materials is environmentally sensitive, appropriate shoreline protection measures may be implemented as recommended by company Environmental Specialists.

1.9.7 Spills into Wetlands or Muskeg

Wetlands are areas with high organic content, which contain large amounts of water in the soil. Wetlands may be continuously covered in water or water levels may fluctuate throughout the year. Muskeg is a land area that contains a high moisture content and is boggy in the summer because of large quantities of peat, moss, or other vegetative material in the soil. In winter, muskeg will freeze making excavation extremely difficult.

Spills in wetlands or muskeg can be some of the most difficult spills to contain, recover and clean up because of limited site access for both manpower and equipment. Because of the sensitive nature of these ecosystems, more damage may be caused by emergency response operations than was caused by the original spill. The Incident Commander may consult with government officials or environmental specialists before conducting emergency response operations in wetlands or muskegs. This will ensure that containment, recovery, and clean-up operations represent the most viable option for the spill, based on the type of product, size of spill and site specific safety, operational or environmental concerns.

If all other options are considered unviable, natural recovery may be approved by environmental protection agencies. Natural recovery uses micro-organisms already present in the ecosystem to degrade the oil. Degradation of the oil may be enhanced by addition of other nutrients required by the micro-organisms, to ensure sufficient levels of these nutrients are present to allow degradation to continue.

Natural recovery may be preferable to recovery and clean-up depending on:

- the amount, type and persistence of the oil
- the location of the site
- the nature and uses of the area
- whether the impacts of various clean-up methods are greater than damage related to the actual spill

Natural recovery should be considered if:

- clean-up activities will cause more harm than leaving the site to recover naturally
- leaving the area to recover naturally will not cause further harm to environmentally sensitive areas

Containment operations for wetland or muskeg spills in winter are similar to those for spills on land or ice. If containment operations are conducted at the site in the summer, a combination of land containment and water containment options will be used as appropriate.

Wetland or Muskeg Containment Options		
Containment Method	**Technique Description**	**Comments**
Containment Boom	A containment boom is placed in wetland to prevent migration of oil into non-contaminated areas.	If water is too shallow, or the current is too fast, the containment boom may not be effective in containing the oil. Oil spill containment equipment, work and safety boats and a work crew must be available to use this method.
Containment Weirs	Containment weirs are physical dams with culverts constructed in the dam to allow free water movement from a site while containing surface oil. Containment weirs are used to maintain a constant water level at spill site for easy oil recovery.	Access to the site by manpower and equipment may be limited. Building of containment weirs may be labour-intensive and time-consuming if done manually. Damage may be caused by excavation and construction in the watercourse and along the banks. A work crew with shovels, earthmoving equipment, earth or sand and piping or culvert material is required to use this method.
Vacuum Truck	Muskeg or wetland areas must be accessible. A vacuum truck can recover from a trench or water surface.	Surface disturbance and soil damage may result from movement of the vacuum truck to and from the site. Topsoil may need to be stripped from the site before undertaking recovery activities.

Wetland or Muskeg Containment Options		
Containment Method	**Technique Description**	**Comments**
Pumping of Spilled Material into Storage	A pump is used to recover free oil from wetlands or muskeg.	The wetland or muskeg area must be accessible for equipment. Pumps must be safe for use at the spill site and be compatible with the product to be pumped. The technique will generate large volumes of contaminated water that will require storage. Skid tanks, tanker trucks, port-a-tanks, fuel bladders, permanent tanks or a lined excavated area must be available. A work crew and power supply for the pump must also be available.
Skimmers	Used to skim oil from water surface or remove oil/water mixture for storage. Drum or disc skimmers will pick up thinner layers of oil on slow moving water.	The wetland or muskeg area must be accessible. Skimmer will need sufficient water depth to float. Debris and aquatic vegetation may clog skimmer, making oil pickup difficult. A suction, floating weir, disc or drum skimmer, pump and work crew are required to undertake method. A secure storage facility is also required.
Fresh Water Flushing	Water is flushed through an area to push oil that is in vegetation or on the water surface toward a collection point for recovery. The method can be used in conjunction with trenches.	The wetland or muskeg area must be accessible for equipment to allow recovery activities to be conducted. The method is not suitable for areas with extensive vegetation or obstructions. Physical damage may be caused to sensitive environmental areas. Pumps, a power supply, hoses, hot or cold water, and a work crew are required. A lined, excavated area or storage tanks may be required to hold water for treatment or testing.

1.9.8 Spills on Ice

Spills on ice will tend to spread out from the spill source toward lower-lying areas. Surface depressions, cracks and pockets in the ice will cause the spilled material to pool. A significant volume of some oils can be absorbed into ice.

The presence of oil on or in ice increases solar heating and the rate of melting. Subsequent freezing and melting may eventually cause the oil to migrate throughout the surface of the ice. Openings in the ice may allow the spilled material to migrate into open water or allow the spill to be swept under ice, making response operations more difficult.

The information presented should be used as a guideline only in determining typical load-bearing capacity of ice. The Incident Commander and Incident Command System Operations personnel must determine whether it is safe to work on ice based on actual site conditions.

The ability for ice on a river, stream or lake to support the weight of workers and equipment is determined by effective ice thickness which is based on the thickness of clear ice and presence of white ice.

Clear ice (sometimes called blue ice) is translucent and well compressed with few air pockets. This ice is very strong and has a high load-bearing capacity.

White ice (or snow ice) is very porous, with many air pockets and is much weaker. White ice has approximately half the load-bearing capacity of clear ice. White ice is formed by constant melting and freezing of the top layer of ice due to solar heating or mild temperatures and is normally found on top of clear ice.

Holes should be drilled in the ice at the work site, before starting any on ice operations, to determine the average thickness of white and clear ice.

Effective ice thickness then can be calculated, using the formula in the following table:

Effective Ice Thickness = clear ice thickness + ½ white ice thickness
Example: The spill site has 20 inches of clear ice and 10 inches of white ice 20 inches clear ice + ½ x 10 inches white ice = 25 Effective Ice Thickness
Note: If water lies between layers, use the depth of only the top layer of white ice

Based on the effective ice thickness, a determination can be made as to the stationary and moving loads that may be supported by the ice. Normally less ice is required for continuous movement on the ice than for stationary loads as less pressure is exerted on any one point on the ice during movement.

Load-Bearing Capacity of Ice Thickness for Continuous Travel [1]		
Permissible Load	Effective Ice Thickness inches (centimeters)	
	Lake	River
One person on foot	2.0 (5.0)	2.5 (6.3)
Group, in single file	3.2 (8.0)	3.5 (8.8)
Passenger car 4,400 lbs. (2000 kg)	7.1 (17.8)	8.3 (20.8)
Light Truck 5,500 lbs (2500 kg)	7.9 (19.8)	9.1 (22.8)
Medium Truck 7,700 lbs (3500 kg)	10.2 (25.5)	11.8 (29.5)
Heavy Truck 15,000 – 17,500 lbs (6800 – 8000 kg)	13.8 (34.5)	16.1 (40.3)
20,000 lbs (9000 kg)	15.0 (37.5)	17.3 (43.3)
50,000 lbs (23,000 kg)	24.8 (62.0)	28.7 (71.8)
99,000 lbs (45,000 kg)	31.5 (78.8)	36.2 (90.5)
150,000 lbs (68,000 kg)	39.4 (98.5)	45.3 (113.3)
240,000 lbs (109,000 kg)	49.2 (123.0)	56.7 (141.8)

Weight-Bearing Capacity for Stationary Loads and Working on Ice		
Permissible Load	Effective Ice Thickness inches (centimeters)	
	Lake	River
2,200 lbs (1000 kg)	8.0 (20.0)	9.1 (22.8)
4,400 lbs (2000 kg)	12.0 (30.0)	14.0 (35.0)
8,800 lbs (4000 kg)	18.0 (45.0)	21.0 (52.5)
17,600 lbs (8000 kg)	24.0 (60.0)	27.0 (67.5)
50,000 lbs (23,000 kg)	44.0 (110.0)	50.0 (125.0)
99,000 lbs (45,000 kg)	59.0 (147.5)	68.0 (170.0)
150,000 lbs (68,000 kg)	71.0 (177.5)	82.90 (205.0)
240,000 lbs (109,000 kg)	91.0 (227.5)	105.0 (262.5)

Note: These tables are guidelines only for determining the typical load-bearing capacity of ice.

[1] Does not apply to parked loads, or where ice faults are evident.

Temperature may affect the load-bearing capacity of ice on a water body. Air temperatures must remain below the freezing point of water (0°C) for a sufficient period to allow the ice to adequately support a stationary or moving load. Temperature effects are dependent on ice thickness, as follows:

- less than 50 centimetres (20 inches) of ice: temperature must be constant for 3 days
- between 50 and 100 centimetres (20 and 40 inches) of ice: temperature must be constant for 4 days
- over 100 centimetres (40 inches) of ice: temperature must be constant for 5 days

Sudden drops or increases in temperature can also cause thermal stressing or cracking of ice requiring temporary load restrictions for 3 to 5 days following the change. Thawing due to warm temperatures may also significantly affect ice conditions. On-site personnel should take extreme care when evaluating ice conditions during a thaw and limit work on or near ice under these conditions.

Containment and clean-up options for spills on ice are similar to those on land and are summarized in the following tables:

On-Ice Containment Options		
Containment Method	**Technique Description**	**Comments**
Earth or Sand Dike (All seasons)	Earth or sand at or near the site is used to contain spilled material on flat or sloped surfaces. Sandbags filled with earth or sand are used to contain spill.	Effective ice thickness must be sufficient to support the weight of manpower and equipment required to build dike. Sufficient dry earth, gravel or sand must be available to contain spill. Earth may be frozen. Surface disturbance to remove earth or sand may result in erosion, especially on steep slopes. Earth or sand placed on ice must be removed before spring break-up. Work crews and/or earth-moving equipment are required to build dike.
Snow or Ice Dike (Winter only)	Snow or ice at or near the site is used to contain spilled material on flat or sloped surfaces.	Effective ice thickness must be sufficient to support the weight of manpower and equipment required to build dike. Sufficient snow or water must be available to contain spill. Snow or ice dike may melt quickly in warm weather. Contaminated snow or ice may need to be removed or stored for treatment. Work crews and/or earth-moving equipment is required to build snow dike. Water spraying equipment may be required to construct and maintain an ice dike.

On-Ice Containment Options		
Containment Method	**Technique Description**	**Comments**
Sorbent Dike (All seasons)	Sorbent material is used to contain spill.	Useful only in small spills, as purchase of large quantities of sorbent is expensive and impractical. Contaminated sorbent may need to be replaced or squeezed out during incident. Contaminated sorbents must be disposed of properly to comply with government regulations. Sufficient sorbent or sorbent boom, work crews and storage containers or a lined storage area for contaminated sorbents must be available to build sorbent dike.

On-Ice Cleanup Options		
Clean-up Method	**Technique Description**	**Comments**
Manual Removal by Work Crew and/or Equipment (Winter)	A work crew or earth-moving equipment are used to remove thick oil or contaminated snow and ice.	Effective ice thickness must be sufficient to support the weight of manpower and equipment required. All necessary safety precautions should be undertaken for personnel who work near any open water. Manual removal may be a difficult and time-consuming process. A work crew with hand tools or earth-moving equipment (e.g. backhoe) and operators, as well as ice cutting equipment, may be required. Lined storage area or storage drums are required to store contaminated material before treatment or disposal. Oil present in snow may be skimmed off during spring thaw.
Steaming of Ice Surface	Steam is used to melt ice surface to aid in spill clean-up. The technique may be used in association with other clean-up and recovery techniques.	Effective ice thickness must be sufficient to support the weight of manpower and equipment required. All necessary safety precautions should be undertaken for personnel who work near any open water. A work crew with steaming equipment is required to undertake this method.
Sorbents (Spring to Fall)	The method is used in isolated areas to clean up small amounts of oil.	Clean-up is labour-intensive and time-consuming. Limited access to site may make this method difficult or impossible. Sorbents are not very effective on weathered oil or in cold weather. Sorbents may freeze to the surface. Sorbents must be disposed of properly to comply with government regulations. Sufficient sorbent, work crews and storage containers or a lined storage area for contaminated sorbents must be available.

On-Ice Cleanup Options		
Clean-up Method	**Technique Description**	**Comments**
Snow or ice melting	Snow or ice is removed from the clean-up site and melted in heated tanks to allow spilled material to be skimmed off the surface of the melt water. The technique may be used in association with other clean-up and recovery techniques.	Contaminated snow or ice must be removed from clean-up site and placed in melting tanks. The method may be labour-intensive and time-consuming, as melting is not be very efficient for clean-up of large volumes of petroleum-contaminated ice. In very cold temperatures, sufficient heat may not be available in the tanks to melt ice. A work crew, heating tanks, skimming equipment, transfer vehicles and operators are required. A lined storage facility for storage of contaminated ice or snow before melting may also be required, as well as storage tanks for storing recovered petroleum.

1.9.9 Spills Under Ice

Spills of petroleum under ice will spread and will travel under the ice at a velocity that is less than the current speed of the watercourse. The spill will tend to follow the path of the main current flow. The spill product may become trapped in crevices, cracks, pockets, and other irregularities under the ice and may freeze from the underside of the ice anywhere downstream or outward from the original spill. This will make recovery and clean-up operations extremely difficult.

Before conducting any response operations to contain, remove and clean up oil under ice, the Incident Commander should ensure that the response personnel have calculated the effective ice thickness to ensure it will support the weight of personnel and equipment.

For spills under ice, the Incident Commander and response personnel should attempt to determine the location of the spilled material and bring the spill to the surface of the water for containment and recovery. Spill movement under the ice is normally located by drilling holes through the ice using an ice auger downstream of the spill source on a flowing watercourse or outward from the spill source on a non-flowing water body. Alternately, aerial reconnaissance may be used to attempt to locate spilled material in cracks at the surface or under thin ice. Once the spill has been located, containment operations can be conducted to bring the spilled product to the surface.

Containment operations are normally accomplished by constructing slots in the ice. Ice slots allow petroleum products trapped under the ice to rise to the surface for recovery.

The slot is normally constructed at an angle in relation to the shore toward the area of strongest current flow in the river. If the slot is constructed correctly, the spilled material will rise into the slot and flow along it toward the shore for recovery.

The angle of slot construction in relation to the shore depends on the current velocity, similar to a containment boom placed in a flowing river. For higher currents in the river, a shallower angle is used for the ice slot, while a larger angle may be used for lower current flows.

If a slot is constructed at too great an angle to the current, turbulence may occur, sweeping the spilled material under the ice on the downstream side. Plywood or other types of sheeting may be placed on the downstream side of the slot and frozen in place to facilitate containment of the spilled material. The ice slot should be 0.5 to 1.0 metres (1.6 to 3.3 feet) wide, to aid in containment. Ice blocks may be cut using a ditch witch or backhoe if the effective ice thickness is sufficient to allow stationary equipment on the ice. [If ice is too thin for equipment but safe for personnel, crews equipped with chainsaws and proper safety gear can cut the ice.] Ice blocks can be removed to clear the slot or pushed under the ice downstream of the slot if sufficient water depth is available.

Ice blocks are extremely heavy (one cubic foot of ice weighs 24 kilograms (53 pounds). Blocks should be cut to a size that will allow the crews or equipment to remove them easily. To aid in block removal, the ones nearest the shore should be removed first and remaining blocks should be floated toward shore for removal. Plywood or other sheeting can be used upstream of the slot to divert oil into the slot for recovery. Narrow slots may be cut into the ice with a chain saw and sheeting may be wedged into the slots to channel the main current toward the ice slot in a manner similar to a diversion boom in open water.

Under-Ice Containment Options		
Containment Method	**Technique Description**	**Comments**
Ice Slotting	Ice slots are cut into ice on rivers to collect oil moving under the ice. The technique is best used for rivers with current, as oil will be moved toward slot by current.	Effective ice thickness must be sufficient to support the weight of manpower and equipment required to build slot. All personnel working near any open water must take all required safety precautions. The location of the spill must be confirmed by drilling holes downstream of the spill source before constructing the ice slot. Total containment of spilled petroleum in an ice slot is unlikely, due to material trapped under ice. Snowmobiles, communications gear, and ice augers may be required to determine the location of the spill. Work crews, chain saws and/or a backhoe or ditch witch are required to construct an ice slot. A recovery device such as a heat-traced ice skimmer is required to recover spilled material. Storage tanks or a lined excavated storage area may be required to store recovered oil/water mixture.

1.9.10 Spills in Broken Ice

The risk to Life Safety of the personnel attempting spill response in broken ice conditions using existing technology is extreme.

Emergency operations in broken ice conditions during spring thaw or winter freeze-up are extremely difficult. When oil is mixed with floating ice or covered by a very thin ice cover, ice interferes with the collection of the oil and could damage containment and recovery equipment. The presence of ice also makes the use of boats difficult.

Before authorizing any spill response operations in broken ice conditions, the Incident Commander and response personnel, along with the appropriate regulatory agencies, will evaluate whether it is safe or feasible to undertake containment and recovery operations and what methods should be used.

Containment options for spills during freeze-up or break-up are similar to those for spills on a river and on ice. If containment operations are determined to be feasible based on site conditions, response personnel will attempt to deflect ice away from the containment site.

Deflection of ice may be achieved using log booms or ice dams. A log boom consists of logs cabled together with chain, anchored upstream of a conventional containment boom. An ice dam is constructed upstream of the oil spill site and containment site, to attempt to divert upstream ice away from a containment site.

Log booms are deployed at an angle away from the containment site. Logs are spaced to allow spilled materials and water to move directly toward the containment site, while diverting the ice toward the opposite shore, allowing the ice to pass around the containment site.

1.9.11 Spill Control Point Descriptions

Control points are pre-identified locations on watercourses that allow for the staging and deployment of oil spill containment and recovery equipment in response to oil spills that have occurred upstream of the control point. Control point selection is critical to an effective oil spill response and part of your risk assessment and development of site-specific emergency response plan information.

Each oil spill cooperative conducts control point evaluation for the whole geographic co-op area.

Since Pacific Canbriam is a member in good standing with WCSS they would request spill points and maps in their areas of operation if it were necessary.

An ideal control point should have:

- quick access to the watercourse in all seasons, using clear ground, a road or a trail
- adequate work space to conduct operations and to store required equipment with minimal need for clearing of brush and vegetation

- sufficient space to deploy containment and recovery equipment quickly with minimal effort or obstructions (i.e. trees, rocks, steep banks, etc.) and minimal environmental impact
- boat launch location(s) for boats assisting in containment and recovery operations.

Selection of control points with public access is preferred.

For control points on private property – landowner approval and necessary permits for emergency access should be obtained in advance.

Designated site specific control points need to be reviewed at least annually. Each control point site should be visited periodically to evaluate suitability and to ensure information is accurate and complete. Old unsuitable control points should be removed and new control points added, as a part of revisions to site specific information, as required. Control point listings should include a site description, site diagram, access description, landowner/occupant phone number, site suitability and any other information related to the site.

1.9.12 Disposal and Remedial Operations

The proper disposal of contaminated materials as well as site remediation options is outside the scope of this Emergency Response Plan. Site restoration will be determined by consultation among the Incident Commander, company Environmental staff, environmental protection agency personnel and any external environmental consultants that are contracted by Pacific Canbriam.

1.9.13 Water Course Spill Containment and Recovery Techniques

Standing Water

Figure 1: Inverted Culvert Technique

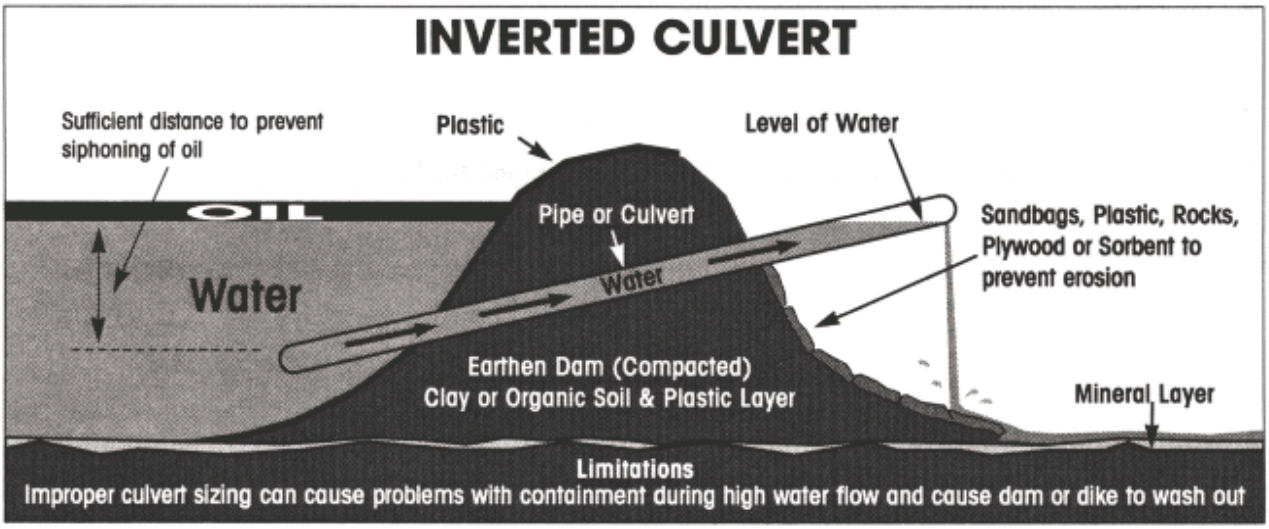
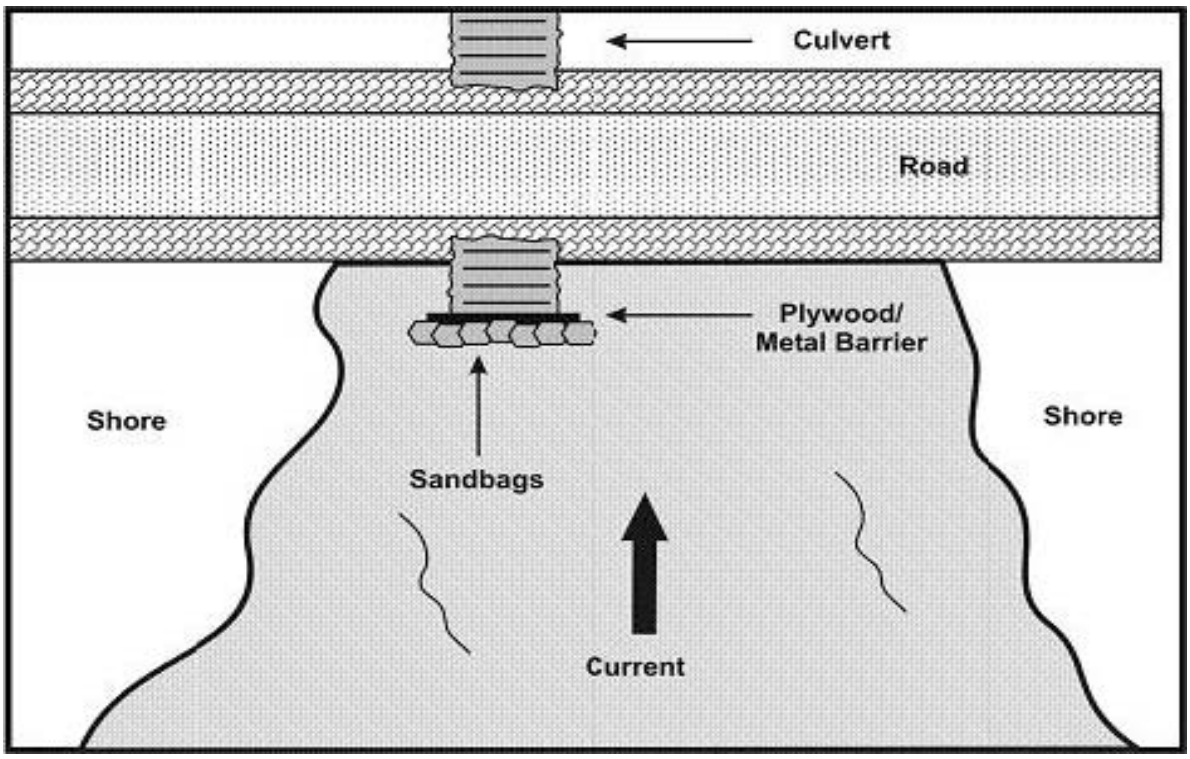


Figure 2: Culvert Blocking



High Volume Flow

Figure 3: Containment Boom

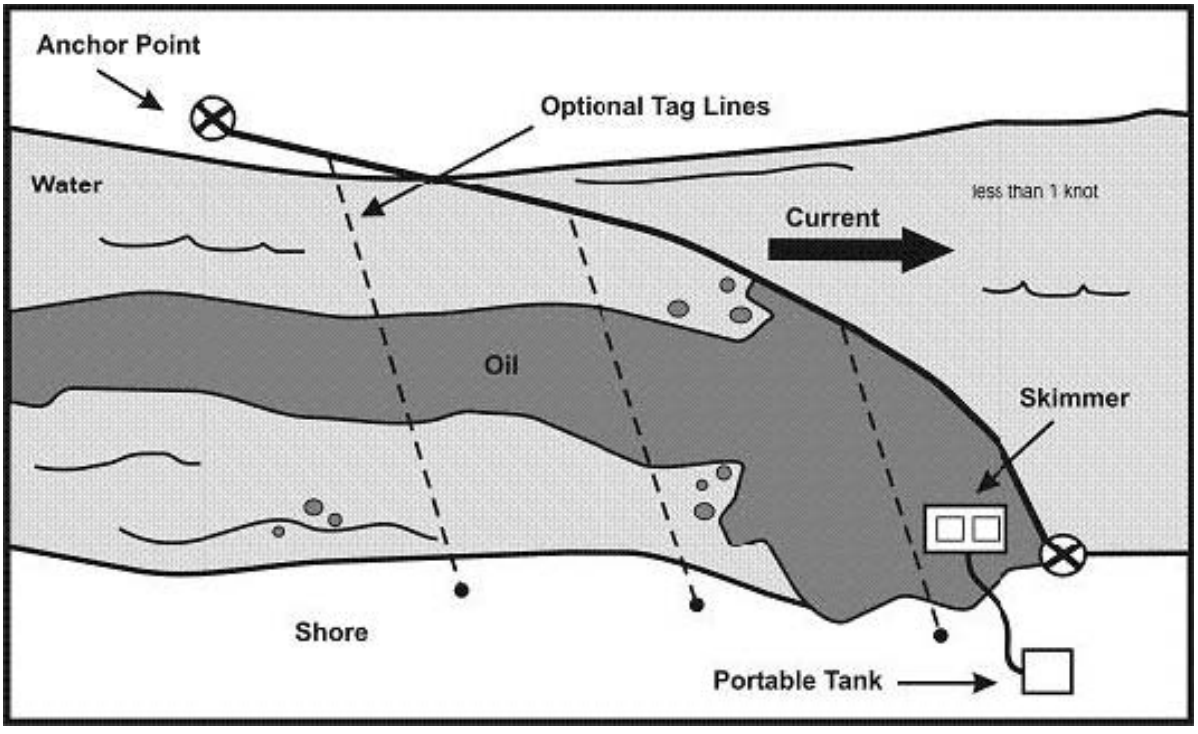


Figure 4: Containment Boom

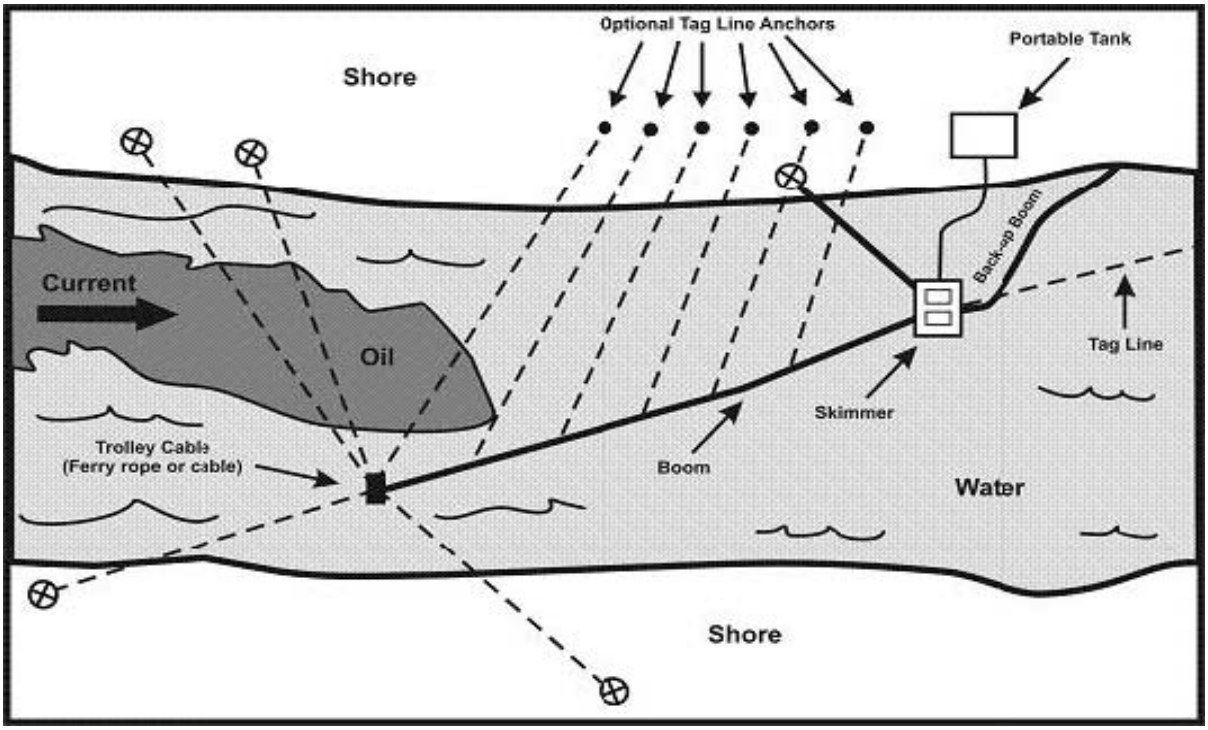


Figure 5: Containment Boom

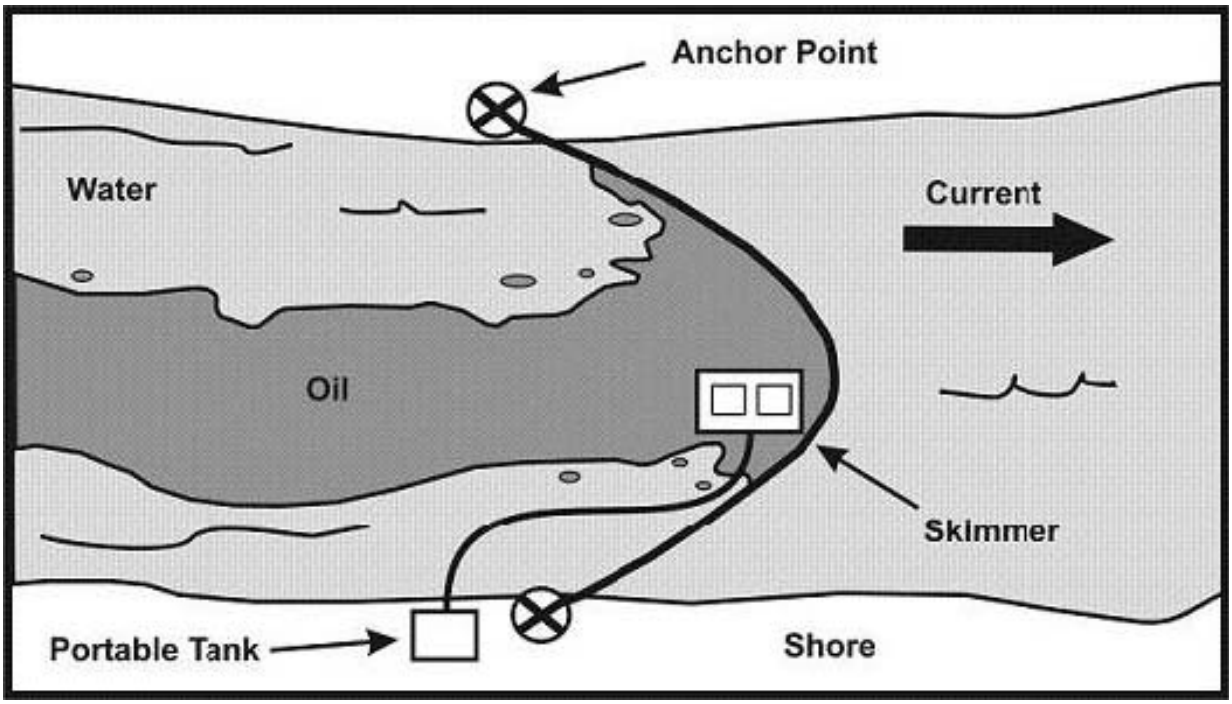


Figure 6: Ice Slotting Strategy

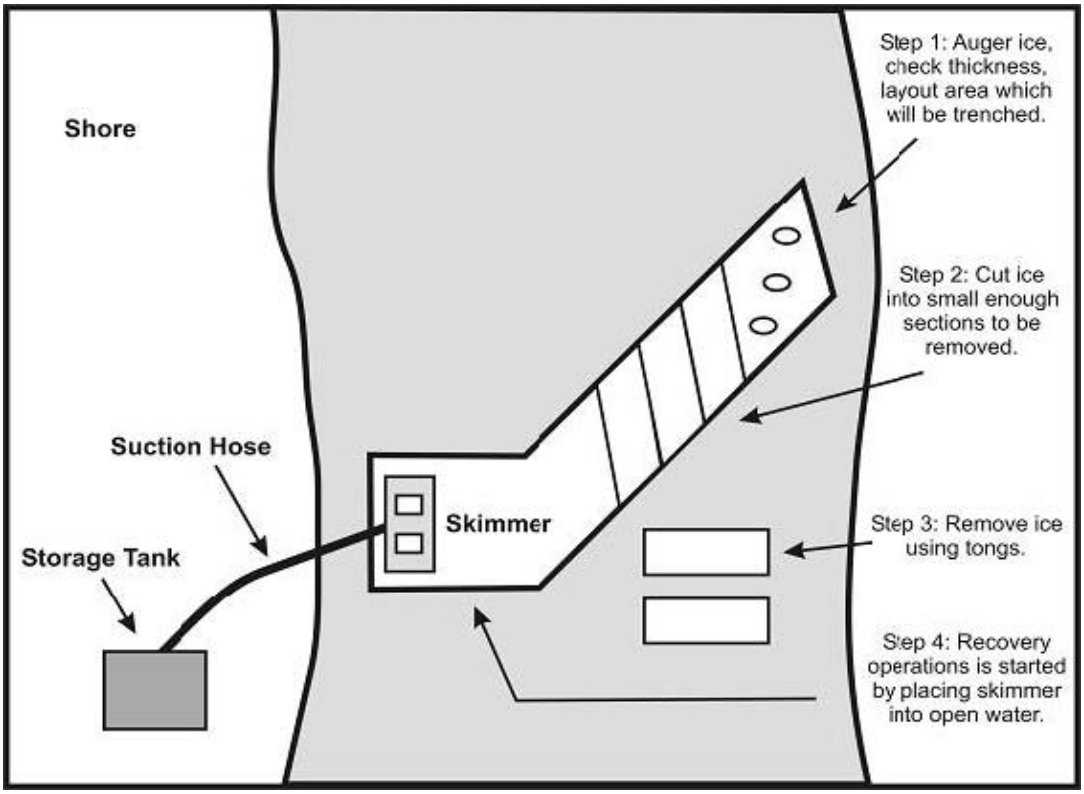
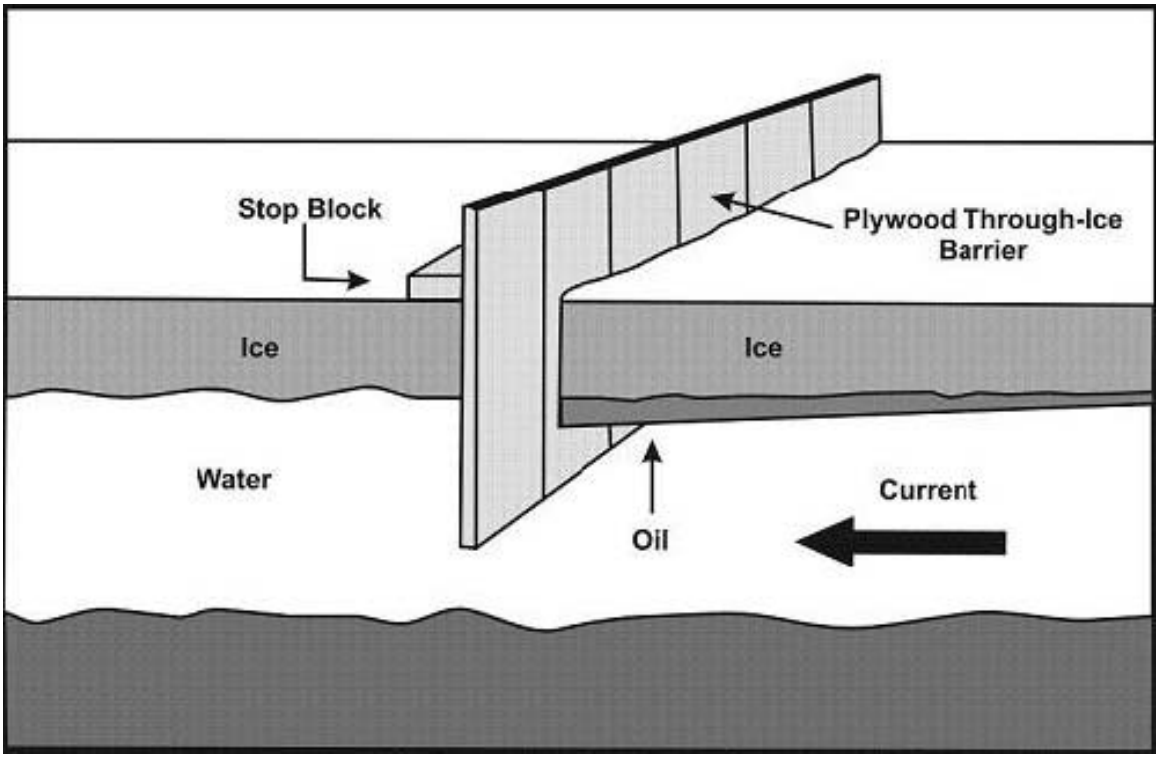
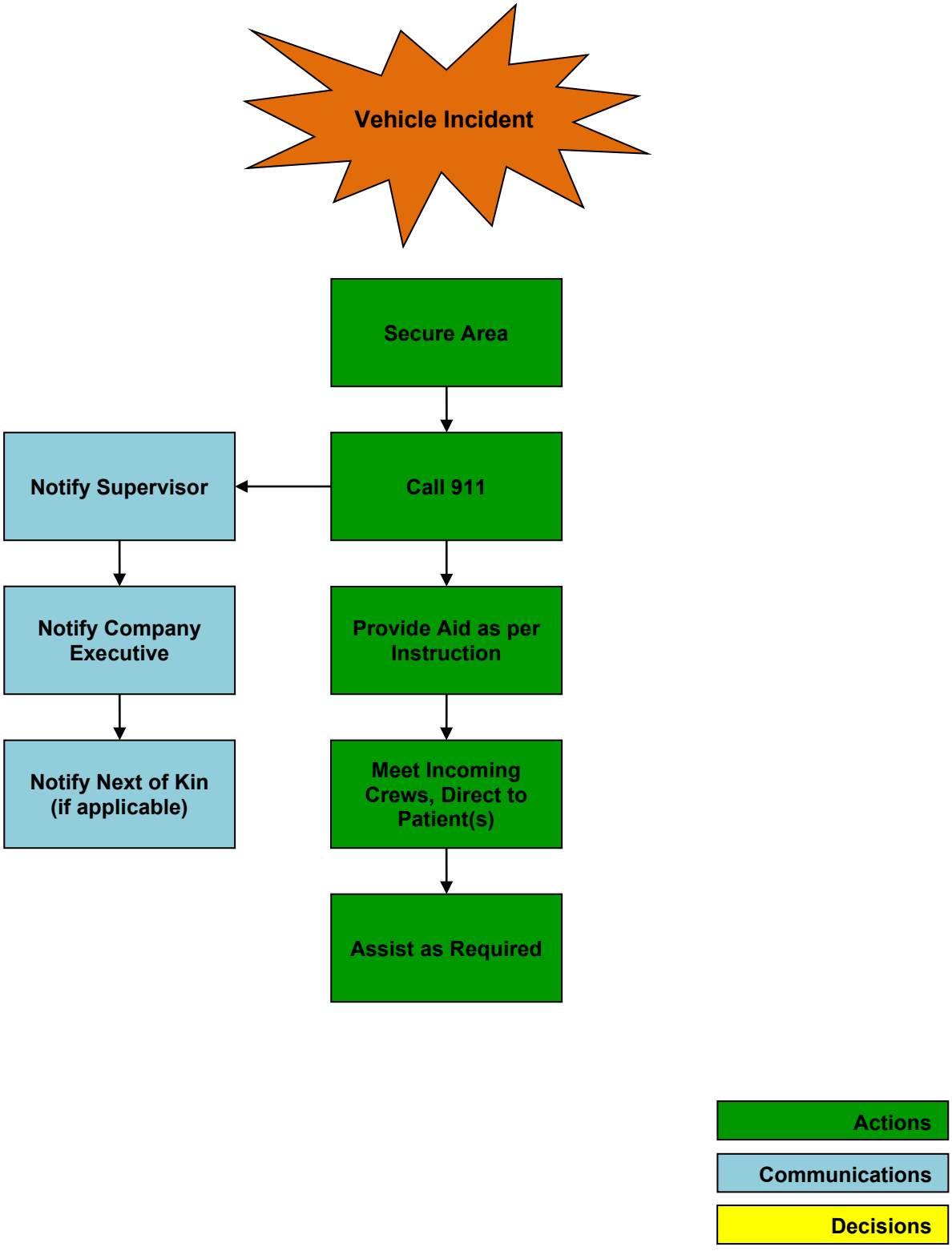


Figure 7: Deflective Board Strategy



1.10 Vehicle Incident



1.10 Vehicle Incident

INCIDENT COMMANDER:
- Assume the role of Incident Commander until relieved by a more senior company representative.
- Contact emergency services (911, where available) and have them deployed to site.
- Assign roles and responsibilities to required Officers and Section Chiefs.
- Determine need for backup or outside resources.
- Contact immediate supervisor giving an initial assessment including location, area potentially affected, injuries and other hazards.
- Notify the Emergency Operations Centre (EOC), as required by company policy.
- Account for all other personnel on site.
- Establish an Incident Command Post (ICP), as needed.

INFORMATION OFFICER:
- Provide timely information to the media, in consultation with the appropriate government agencies, when required.
- Notify next of kin, in consultation with the RCMP, if required.

LIAISON OFFICER:
- Maintain contact with required government agencies.
- Provide regular updates to the Incident Commander.
- Ensure required communication occurs between internal and external people.

OPERATIONS SECTION CHIEF:
- Implement tactical objectives and direct on site resources.

SAFETY OFFICER:
- Assess / monitor safety hazards or unsafe conditions. Develop measures to ensure the safety of response personnel.
- Ensure all response personnel are equipped with the appropriate PPE.

STAGING AREA MANAGER:
- If established, ensure the readiness of resources and personnel.

SITE CONTROL GROUP SUPERVISOR:
- Direct / implement control procedures on site to minimize impact.

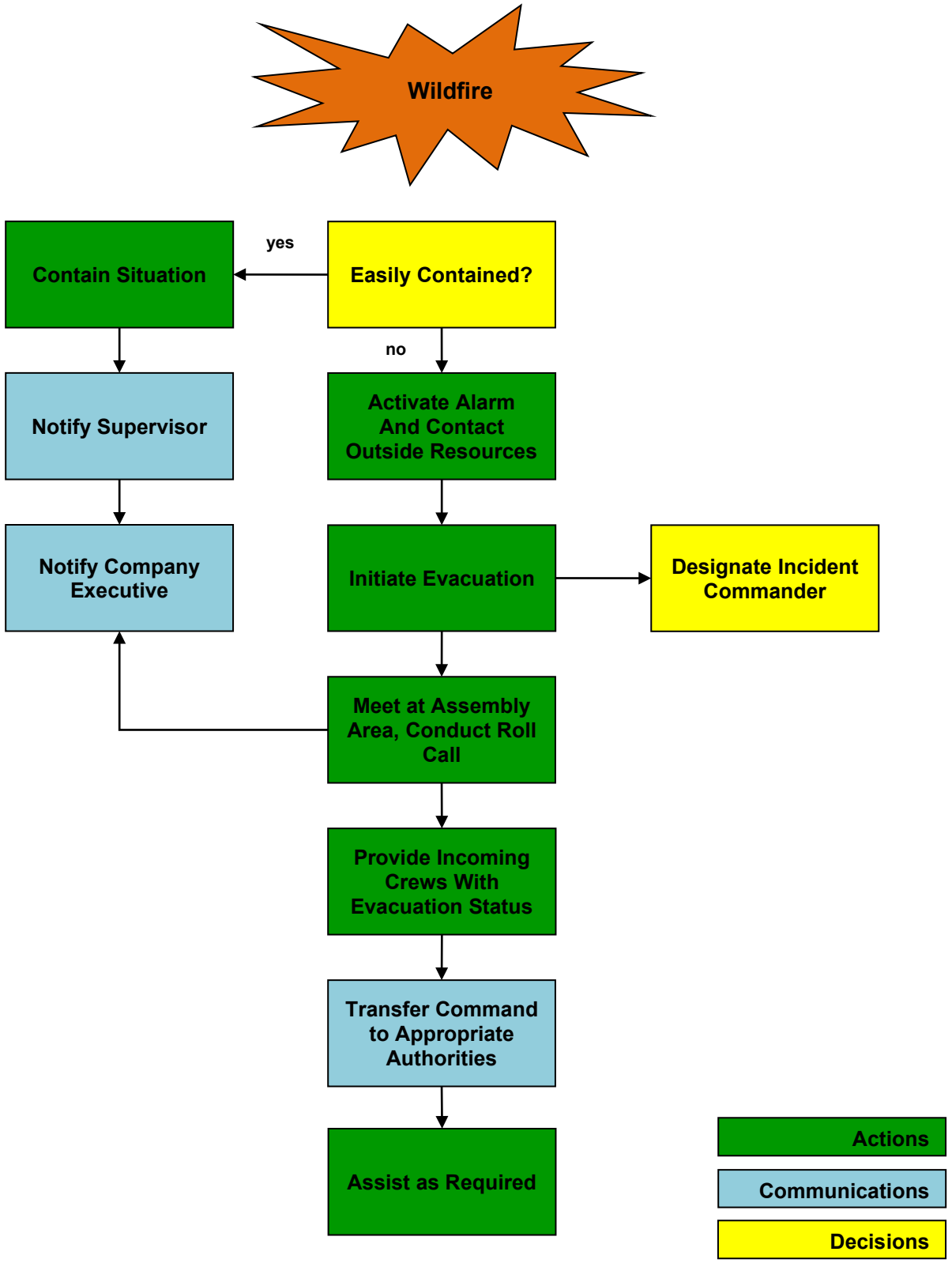
PUBLIC SAFETY GROUP SUPERVISOR:
- Direct public safety related response activities.

CONTROL UNIT LEADER:
- Ensure appropriate control and containment activities are taking place, if required.
- Eliminate all sources of ignition.
- Assign Group members to meet incoming emergency services at the site entrance and escort them to the scene.

ROADBLOCK UNIT LEADER:
- Establish and maintain a secure incident scene.
- Assign team members to meet incoming emergency services at the site entrance and escort them to the scene.
- Work with the provincial Ministry of Transportation and the RCMP if public roads are required to be closed and traffic re-routed.

RECOVERY UNIT LEADER:
- Ensure evidence is documented and secured for investigation.
- Request resources required for the recovery and transport of vehicle(s).

1.11 Wildfire



1.11 Wildfire

INCIDENT COMMANDER:
- Assume the role of Incident Commander until relieved by a more senior company representative.
- Evaluate the situation.
- Determine the Level of Emergency. Notify the BCER and appropriate agencies, if required.
- Determine need for backup or outside resources.
- Contact emergency services as needed. (911, where available)
- Assign roles and responsibilities to Officers and Section Chiefs.
- Sound the evacuation alarm and begin evacuation procedures, if required.
- Establish an Incident Command Post (ICP).

INFORMATION OFFICER:
- Provide timely information to the media, in consultation with the required government agencies.

LIAISON OFFICER:
- Maintain contact with required government agencies.
- Provide regular updates to the Incident Commander.
- Ensure required communication occurs between internal and external people.

OPERATIONS SECTION CHIEF:
- Implement tactical objectives and direct on site resources.

SAFETY OFFICER:
- Assess / monitor safety hazards or unsafe conditions. Develop measures to ensure the safety of response personnel.
- Request or administer first aid as necessary.

STAGING AREA MANAGER:
- If established, ensure the readiness of resources and personnel.

SITE CONTROL GROUP SUPERVISOR:
- Ensure backup is present or en route before attempting to contain or control the fire.
- Implement control procedures to minimize impact.
- Assess the need to stop normal operating activities in order to minimize risk to personnel and equipment, execute if necessary.
- Assess risk of controlling an incident with available personnel and equipment, execute if risk is deemed low.

PUBLIC SAFETY GROUP SUPERVISOR:
- Direct public safety related response activities.

ROVER / EVAC UNIT LEADER:
- Evacuate personnel from hazard area.
- Ensure evacuation routes are clear.

CONTROL UNIT LEADER:
- Ensure appropriate control and containment activities are taking place.

ROADBLOCK UNIT LEADER:
- Establish and maintain roadblocks.
- Direct traffic during the evacuation.
- Direct evacuees to the appropriate reception centre.

AIR OPERATIONS UNIT LEADER:
- Ensure the members are activated, if required, to confirm the location and distance of the fire.

RECEPTION CENTRE UNIT LEADER:
- Establish a reception centre for evacuees.
- Receive evacuees at the reception centre.

Wildfire Egress Actions

The following is a list of actions to be taken by Pacific Canbriam at the following specified distances from company assets and infrastructure.

Report all fires started or are visible from company assets to the BC Wildfire Service at 800.663.5555 or on cellular phone (in BC only) at *5555.

75 km	50 km	25 km
▪ Daily situational awareness via provincial wildfire information (eg: mobile app, webmap).	▪ Daily situational awareness via provincial wildfire information (eg: mobile app, webmap).	▪ Daily situational awareness via provincial wildfire information (apps).
▪ Gather and post Stakeholder Engagement Wildfire Egress map.	▪ Plot wildfires on Stakeholder Engagement Wildfire Egress map.	▪ Plot wildfires on Stakeholder Engagement Wildfire Egress map.
▪ Weekly meetings with management.	▪ Daily meetings with management – third party engagement.	▪ Daily meetings with management – third party engagement.
▪ Conduct wildfire-based Toolbox talks and employee communications.	▪ Daily employee communications.	▪ Daily employee communications.
▪ Weekly (as needed) update from local Forestry Industrial Liaison.	▪ Weekly (as needed) update from local Forestry Industrial Liaison.	▪ Daily update from local Forestry Industrial Liaison.
▪ Review & confirm your Mutual Aid Agreements and partnerships.	▪ Decision to engage third party support to interpret wildfire threat.	▪ Daily third-party assessment of situation.
	▪ Place 2-hour evacuation notice for non-essential personnel on-site.	▪ Place a 2-hour evacuation notice for essential & non-essential personnel on-site.

	▪ Review:
	  ▪ Evacuation plan.
	  ▪ Ensure evacuation readiness.
		▪ Ready production for immediate shut-down.

Wildfire Preparedness Tables

Evacuation Process Chart	
Step	**Regional Evacuation Decision Process**
1	**SIZE-UP** ❑ Gather and Post ○ Pacific Canbriam Stakeholder Engagement Wildfire Egress Map ❑ Gather Information ○ Location of Wildfires in the area ○ Google: BC Wildfire / interactive maps / active wildfires ❑ Plot Wildfires on Stakeholder Engagement Wildfire Egress Map ❑ Understand wind speed / direction, fire rating and egress routes ❑ 50 km Zone ○ Define objectives if conditions risk Pacific Canbriam's life hazards, safety and assets. ❑ 25 km Zone ○ Define objectives
2	**DEFINE OBJECTIVES** ❑ Define objective(s) and evacuation priorities ❑ Once Size-Up information has been gathered, the decision process should begin with a set of initial objectives that include: ○ Protect the life and health of workers, responders and the public ○ Avoid exposing personnel to more risk in preparing to evacuate or evacuation than the risk posed by the threat ❑ Use available resources in a safe, efficient and effective manner ❑ Consider stakeholder interests in the development of objectives and strategies, especially Site Supervisors and the Ministry of Environment. ❑ Minimize environmental damage and protect property
3	**DEVELOP STRATEGY** ❑ The hazards, risks and potential effects of the hazard and the risks of the evacuation operation are part of the overall assessment ❑ Develop situation specific strategies to meet objectives and priorities ❑ Establish local (situation specific) response strategies to align with overall objectives
4	**SELECT RESPONSE TACTICS** ❑ Select appropriate tactics (techniques / methods) to implement the strategy ❑ Define acceptable and available tactics to achieve the response objectives and strategies
5	**EVALUATE SAFETY AND PRACTICALITY** ❑ Identify the safety and practicality of proposed strategy and tactics ❑ Assess the physical and logistical constraints that might affect the proposed operations ❑ Evaluate the practicality and ability of the proposed operations and procedures to achieve the objectives and strategies ❑ Evaluate the effectiveness of the planned activities and the likely effects of proposed actions) ❑ Redefine strategy and tactics if the proposed actions: ○ cannot be conducted in a safe or effective manner, or ○ cannot be achieved, or ○ are not going to have life safety benefit (or may cause further risk or harm to personnel)
6	**PREPARE OPERATIONAL PLANS** ❑ Prepare or update the plan for the next operational period ❑ If required, obtain approval and input from the Pacific Canbriam Calgary Office

Evacuation Process Chart	
Step	**Regional Evacuation Decision Process**
7	**SAFELY CONDUCT AREA-WIDE EVACUATION** ❑ Ensure each Site Supervisor and Contractor is ready and prepared for evacuation and understands the priority and timing ❑ Ensure head counts are conducted on site and numbers of personnel and any issues are reported to the Pacific Canbriam Public Protection Group Supervisor. ❑ Establish a safe Reception Centre to register and log all personnel who have evacuated (Form 11: Reception Centre Registration Form). Work closely with Site Supervisors and Muster Point Coordinators of each of the evacuee groups ❑ Safely implement the strategies and tactics developed to evacuate and care for the evacuated personnel ❑ Work with Contractors, Pacific Canbriam Calgary Incident Management Team and other experts to determine what groups stay and which personnel are transported to their final destinations ❑ Incident Commander and Public Protection Group Supervisor develop a long-range transportation plan, and re-mobilization plan (business continuity) after the all-clear has been declared and personnel can return to work

Response to Wildfire Smoke			
Air Quality Category	**Health Messages for At-Risk Personnel**	**Health Messages for All Other Personnel**	**Recommended Actions**
Good Visibility: 15 km and up 1-3 hour average PM2.5 0-40 µg / m^3	Continue with usual outdoor activities.	Ideal air quality for outdoor activities.	Be aware of forecast (current, daily, tomorrow).
Moderate / Unhealthy for Sensitive Groups Visibility: 5-14 km 1-3 hour average PM2.5 41-175 µg / m^3	Reduce or reschedule prolonged strenuous activities and limit time spent outdoors.	Be aware of health effects of smoke and related symptom.	Advise workers about: health effects of smoke, related symptoms, and ways to reduce exposure. If the smoke event is projected to be prolonged, evaluate and notify possible cleaner air shelter sites and prepare evacuation plans for at-risk populations.
Unhealthy Visibility: 2.5-4 km 1-3 hour average PM2.5 176-300 µg / m^3	Avoid prolonged strenuous activities and stay indoors if possible.	Reduce or reschedule prolonged strenuous activities outdoors, especially if you experience symptom.	Consider cancelling non-essential outdoor activities. Restrict or eliminate access to the site by other visitors, Consider the distribution and use of respirators and masks.
Very Unhealthy Visibility: 1.5 -2 km 1-3 hour average PM2.5 301-500 µg / m^3	Avoid all strenuous activities and stay indoors if possible.	Avoid prolonged strenuous activities and stay indoors if possible.	Consider having at-risk personnel go to designated air shelters. Make preparations and take precautions against the threat from a wildfire, including the risk from fire (see Appendix A). Consider the distribution and use of respirators and masks.
Hazardous Visibility: < 1 km 1-3 hour average PM2.5 >500 µg / m^3	Avoid all strenuous activities and stay indoors.	Avoid all strenuous activities and stay indoors.	Restrict activities to the essentials. If smoke event is projected to be prolonged, consider evacuation of at-risk personnel. Make preparations and take precautions against the threat from a wildfire, including the threat from fire (see Appendix A). Consider the distribution and use of respirators and masks.

CAPP Guide – Emergency Preparedness Guide for Hazards Associated with Wildfires
Table 2: Recommended action in response to varying levels of particulates



Wildfire Site Evacuation Plan

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Introduction

This document is composed of four parts:

- Part 1: Legal Background
- Part 2: Best Management Practices (BMP) for Northeast BC
- Part 3: ERP NE BC Wildfire Supplement
- Part 4: Field Audit Standards for the BMP

The Legal Background section is an overview of the legislation and regulations pertaining to wildfires in BC. It is intended as a very brief summary of certain sections of the law to aid the reader in understanding the Best Management Practices. For a complete understanding of the legal requirements the original Acts and Regulations should be read.

The Best Management Practices are the standard by which Industry proves that it has completed the due diligence required of it by the Acts and Regulations. Following the BMP, documenting activities taken to evaluate risk and alter operations accordingly, providing expectations and training for personnel, and having sufficient tools on hand to deal with Industry-caused wildfire starts is the first part of proving due diligence. Making decisions and acting appropriately during wildfire events is the second part.

The ERP NE BC Wildfire Supplement is the field version of the plan. It lists the minimum equipment and actions that Industry must take in order to follow the law and prove due diligence with respect to wildfire starts caused by company activities.

The Field Audit Standards are intended to be a quick and easy-to-use checklist of the requirements, and to provide documented proof that commitments made in the BMPs are implemented in the field.

Part 1: Legal Background

Acts and Regulations:
- Wildfire Act, 2004
- Wildfire Regulation, 2024
- Open Burning Smoke Control Regulations
- Workers Compensation Act, Part 2 – Occupational Health and Safety, 2019

Wildfire Act and Regulations:

The act and regulations reflect British Columbia's "results-based" legislative focus. The Wildfire Act and Regulations describe the outcomes desired, and the standard required to demonstrate due diligence. It is up to the company to manage the risk to ensure that the desired result occurs. The act and regulations apply all year long, but a fire season is defined during which additional precautions must be taken.

The Act and Regulations are generally directed towards industry, with a bias towards the forest industry. However, for the oil and gas industry, "industrial activity" as defined in the act includes land clearing, high risk activities, debris piling, road construction, maintenance and deactivation, utility transmission operations, and the operation of a camp. A "high risk activity" includes mechanical brushing, disk trenching, preparation or use of explosives, using fire or spark-producing tools including cutting tools, grinding including rail grinding, mechanical land clearing, clearing and maintaining rights of way including grass mowing.

For the purposes of the Act, an official empowered to make decisions and issue orders can be a person employed by the Ministry of Forests, or by the BC Energy Regulator, or a Conservation Officer.

Summary of requirements
- There is a duty to immediately **report open fires** that are "burning unattended or uncontrolled" to the government.
- A person must **not risk starting an open fire** in forest land or grass land, or within 1 km of forest land or grass land, from a burning substance (match, torch), or any other thing that the person reasonably ought to know is likely to cause a fire (hot exhaust pipe, flare stacks, etc.).
- If a person causes a fire to start, then there is a legal obligation to extinguish the fire immediately.
- For industrial activities, they must be carried **out in a time and manner that** can "reasonably be expected to prevent fires from starting". If a fire starts from industrial activity the person responsible for the industrial activity must:
  - Immediately carry out fire control and extinguish the fire, if practicable, or
  - Continue with fire control until it's extinguished, until further control is impracticable, or they are relieved in writing by an official.
  - As soon as practicable, report the fire
  - Rehabilitate the land damaged by fire control.

Fire Season

Fire season in BC starts on the third day after the area is snow free, and ends at noon on the first day the area becomes snow covered and usually falls between March 1st and October 31st.

Fire danger classes must be determined for the worksite during fire season. The fire danger class can be found on the BC government website under BC Home>>Public Safety and Emergency Services>>Wildfire Service>>Preparedness>>Weather and Fire Danger Ratings>>Fire Danger, or the web link: https://www2.gov.bc.ca/gov/content/safety/wildfire-status/prepare/weather-fire-danger/fire-danger.

The Danger Class Report will be one of:

- I (Very Low Danger)
- II (Low Danger)
- III (Moderate Danger: Carry out any forest activities with caution)
- IV (High danger: Fire hazard is serious. Extreme caution must be used in any forest activities. Burning permits and industrial activities may be restricted)
- V (Extreme Danger: Extremely high fire hazard. General forest activities may be restricted, including burning permits, industrial activities and campfires)

When the Fire Danger Class as posted on the website is the value indicated in column 1 of the table below, the restriction in column 2 applies for the duration in column 3.

Column 1: Fire Danger Class (DGR)	Column 2: Restriction	Column 3: Duration
III (moderate)	After 3 consecutive days of DGR III or greater, maintain a fire watcher after work for a minimum of one hour	Until after the fire danger class falls below DGR III
IV (high)	Maintain a fire watcher after work for a minimum of 2 hours	Until after the fire danger class falls to DGR III for 2 consecutive days, or falls below DGR III
	After 3 consecutive days of DGR IV, cease activity between 1 pm PDT (Pacific Daylight Saving Time) and sunset each day	
V (extreme)	Cease activity between 1 pm PDT (Pacific Daylight Saving Time) and sunset each day and maintain a fire watcher after work for a minimum of 2 hours	Until after the fire danger class falls below DGR IV for 2 or more consecutive days
	After 3 consecutive days of DGR V, cease activity all day	Until after the danger class falls below DGR IV for 3 or more consecutive days, or falls below DGR IV

The risk of wildfire start is highest in the spring and summer, and lowest in winter.

Industrial Activities Due Diligence

- Industrial activity in a prescribed area (forested or grassland zones) and at prescribed intervals (during fire season) must conduct **fire hazard assessments.**
- The hazard assessment must be re-assessed at minimum every three months during fire season, including an assessment of the **fuel hazard**, the risk of a **fire starting**, and the risk of **a fire spreading**.
- A copy of the fire assessment must be provided to a government official when requested.
- During periods of high fire hazard, the fire hazard from industrial activity should be abated by the company.
- Burn Piles:
  - Most industrial burn piles are “Category 3” fires: material in one or more piles each exceeding 2 m in height or 3 m in width, or one or more windrows.
  - There must be a burn registration number for each fire: call 1.888.797.1717 or email hpr.1800@gov.bc.ca to get the number, and keep the number available on site.
  - Each fire area needs an 8 m fuel break around it to ensure that the fire does not escape
  - Fire fighting equipment required on site for a category three fire during fire season are: 2 pieces of heavy equipment, 2 fire suppression systems, 11 workers with at least one fire fighting hand tool each. Note: A variance to the regulatory requirements for equipment can be written by the BCER.
- There must be a **fire break** around camps or industrial sites large enough to ensure a fire on the site does not escape from the site.
- **Engines over 10 hp** that are stationary or semi-permanent must be surrounded by a fuel break.
- In the event of a fire in the area of an industrial operation, industry is required to provide for fire control:
  - All workers, all fire suppression systems (pumps, hoses) and all heavy equipment within 30 km by road from the industrial activity site.
  - A fire fighting hand tool for each person at the worksite
  - The workers, heavy equipment, and hand tools must be deployed as appropriate, given the circumstances and conditions applicable to the fire.

Requirement for fire tools

If there is a risk of a fire starting or spreading on or within 300 m of forest land or grass land, an industrial activity at a site in that area must ensure that fire fighting hand tools are available at that site in a combination and type to properly equip each person with a minimum of one fire fighting hand tool.
Acceptable fire tools are round-nosed shovels, Pulaskis, or mattocks and McLeod tools.

Powers of Government

- The government has the right to restrict open fires, and place restrictions on areas for entry, and limit activities, including the use of equipment, materials, or substances (eg. Trucks, welders, quads, rigs). Exemptions from restrictions are available from the government.
- The government can order all people out of an area if there is an active fire.
- At any time, a government official can order a halt to work to limit the risk of fire starting from industrial activity.
- Power to Requisition:
  - A government official may requisition facilities and equipment to be used to fight fires under the official's directions.
  - A person 19 years old or older may be ordered to assist in fire control if physically capable, or has skills that can be used.
  - Pay while under requisition is "his or her usual wages", unless they or the company they worked for started the fire, or owns the lease for the property on which the fires started.

Penalties

- Penalties for starting a fire are the cost of fighting the fire, the value of timber and grasslands destroyed, and other government indirect costs.
- Administrative penalties for violating the act and regulations (not just starting a fire, but ignoring orders, etc.) are fines ranging up to $1,000,000 or to imprisonment for terms ranging up to three years, or both.
- Note that there is vicarious liability, in that if a "corporation contravenes a provision of this Act or regulations, a director or an officer of the corporation who authorized, permitted or acquiesced in the contravention also contravenes the provision."
- The person responsible for the industrial activity must "rehabilitate the land damaged by fire control" at their own cost.

Workers Compensation Act

The Worker's Compensation Act applies indirectly to wildfires. If a wildfire starts due to industrial activities the government has the right to investigate and charge employers under the act. In the event of a natural (lighting) wildfire start that burns over industrial dispositions, any injuries or risks to employees could be investigated with respect to the company's safety plan.

WCA Requirements

- Every employer must ensure the health and safety of all workers working for that employer, and any other workers present at a workplace at which that employer's work is being carried out.
- An employer must ensure that the employer's workers are made aware of all known or reasonably foreseeable health or safety hazards to which they are likely to be exposed by their work.

- Provide and maintain in good condition protective equipment, devices and clothing as required by regulation and ensure that these are used by the employer's workers.
- Provide to the employer's workers the information, instruction, **training** and supervision necessary to ensure the health and safety of those workers in carrying out their work and to ensure the health and safety of other workers at the workplace.
- A supervisor must ensure that the workers under his or her direct supervision are made aware of all known or reasonably foreseeable health or safety hazards in the area where they work.

WCA Penalties

- Penalties include a fine of up to $1,748,657.15 and, in the case of a continuing offence, to a further fine of not more than $87,432.86 for each day during which the offence continues after the first day, or a prison term not exceeding 12 months, or both fine and imprisonment.
- Additional penalties can be ordered by the courts.

Part 2: Best Management Practices

Hazard Assessments

All worksites
Many industrial activities have the potential to start wildfires, whether from machine exhausts, hot work, or the activity (flaring). The potential for wildfire varies according to the type of vegetation and the time of year. The speed of ignition and rate-of-build of a fire varies over the season as the ground and vegetation leaf out, suffer from drought or heat, and finally cure and dry during the fall.

Any company working in British Columbia must be able to prove that they have done their due diligence in the event of a fire start, regardless if the fire was started by the company, another operator, or a natural event like lightning. The law requires that companies monitor the hazards associated with their activities, plus the hazards associated with the dryness of the forest or grasslands, and modify their work procedures accordingly to abate the combined hazard level. This process must be recorded, consistently applied, and auditable.

Best Management Practices
1. Industrial activity in forests or grasslands during fire season must conduct fire hazard assessments. These hazard assessments can be combined with tailgate meetings, hot work permits, or camp/facility inspections, health and safety audits, etc.
2. The hazard assessment must be re-assessed at minimum every three months during fire season, or when the Danger Class Report changes. The assessment should include an assessment of the fuel hazard, the risk of a fire starting, and the risk of a fire spreading.
3. The Fire Danger Class rating (low to extreme) and hazard assessment results should be covered in tailgate and safety meetings.

Transportation

Light Trucks

Gas powered light vehicles usually have catalytic converters that get very hot and if parked where they come in contact with dry grass may result in ignition of a wildfire.

Best Management Practices

1. Ensure vehicles with catalytic converters are not parked in tall dry grassy areas, park over exposed mineral soil when possible.
2. Do not leave vehicles idling while parked.

Quads and ATVs

The operations of ATVs in wildland areas pose a significant liability for the ignition of a wildfire. These types of fires typically originate from a component of the exhaust system coming into contact with flammable organic material or vegetation. During the operation of an ATV organic material such as grass and moss can accumulate around the exhaust system. Quad exhaust systems can get as hot as 450°C. The organic material is dried and heated to its ignition temperature, and smoldering materials can then fall to the ground and ignite dry grass or vegetation, which in turn can result in a wildfire. Recent studies by the Forest Engineering Research Institute of Canada (FERIC) have determined that this process can occur within 15 minutes from the time the material comes into contact with the hot exhaust system.

The risk of wildfires caused by ATVs is highest in the spring of the year (April/May) when natural fine fuels such as grass is still in its cured state and highly flammable. Wildland fire hazards during this time of the year are generally high to extreme due to low moisture content of forest fuels, low relative humidity and strong winds.

Best Management Practices

1. Operators of ATVs need to stop on a regular basis and remove accumulations of organic material and vegetation from around all components of the exhaust system. The frequency of this cleaning will be dependent on the terrain and weather conditions. For example, the operator must frequently stop and clean the exhaust after traveling through a muskeg area during the spring.
2. ATVs should be equipped with the appropriate tools according to the type of ATV to assist the operator in the removal of accumulations of debris from around the exhaust system. Hot or burning materials that are removed from the ATV must be cooled or extinguished with water or by burying in mineral soil.
3. ATVs should be parked on sites that contain bare mineral soil. Avoid parking in areas with cured grass or other fine fuels which are highly flammable.
4. Operators need to be particularly vigilant during the spring of the year when grass and other fine fuels will quickly ignite and spread to heavier fuels. Restrict or limit the use of ATVs during prolonged periods of extreme fire danger, particularly in dry conditions in spring or summer.

5. The exhaust system should be inspected by the operator on a regular basis to identify and remedy any malfunctions which may further contribute to the ignition of a wildfire. All ATVs should be equipped with a spark arrestor on the exhaust.
6. During the fire season, ATVs should be equipped with basic firefighting tools which may include: a canvas or plastic water pail, water, back pack water container (full of water), shovel, Pulaski, fire extinguisher. Tools will be restricted by the amount of space available on the ATV but must include a container of water, a fire extinguisher and a shovel.
7. Operators must be familiar with the protocol for reporting a wildfire in their area of operation. Thy must have the communication equipment and technology necessary to contact fire authorities. To report a wildfire in BC, call **1.800.663.5555** or ***5555** from a cellular phone. To report a wildfire in other areas call 9-1-1.
8. Prior to operating an ATV at the start of a work day, the operator should ensure that there are not any accumulations of organic material or vegetation surrounding any components of the exhaust system.
9. Oil company personnel and contractors utilizing ATVs should be educated about the potential of ATVs to start fires and what they can do to prevent fires from occurring and what to do should a fire occur. Daily safety briefings could include awareness of fire potential and mitigation.

Disposition Construction

Heavy Equipment

Using heavy equipment in forest areas for clearing forest vegetation, or working in tall cured grass or in very fibrous soils, can result in an accumulation of fine, highly flammable organic material on or near the exhaust systems. This flammable material dries and if heated on exhaust systems to temperatures greater than 240 to 260°C it will ignite. Through vibrations caused by the equipment the ignited materials often fall to the forest floor and cause a wildfire or the materials are carried to maintenance sites that are not fire proof.

Diesel engines that idle for long periods of time build up carbon in the exhaust system and when throttled up and placed under load can expel small very hot carbon particles that are capable of igniting dry forest vegetation and becoming a wildfire.

Best Management Practices

1. To prevent wildfire ignition by heavy equipment, establish a practice that requires all contractors to clean their equipment's exhaust systems on a regular basis.
2. While cleaning the engines, park the equipment on bare mineral soil if possible or spray the area with water then drive the equipment over the wet areas and clean them.
3. Ensure that equipment with diesel engines that idle for long periods of time are throttle up and placed under load to expel any carbon build up over a safe zone of mineral soil or other non-flammable material.
4. Heavy equipment should also carry a backpack water container (full of water) complete with hand pump, dry chemical extinguisher, shovel, axe or Pulaski during the fire season.

5. Heavy equipment operators should consider taking the Woodlands Operating Learning Foundation training on equipment maintenance.

Light Equipment

Light equipment such as power saws, power pumps, brush saws, mowers, mulchers and graders are used extensively by the oil and gas industry in the agricultural and forest areas of the province. During high and extreme fire danger periods, especially when the grass is in a cured and very dry state, there have been occasions when wildfires are started by light equipment.

Using mowers in ditches or right of ways have on occasion started a wildfire from sparks caused by the mower blades contacting rocks or other metal objects. The sparks may cause an ignition in very dry grass or other fine fuels. Graders operating on gravel roads during very dry periods have also caused ignitions from the sparks that result from the steel blades coming in contact with rocks especially along the edges of the ditch line. Mulcher heads are steel with carbide tips that rotate at high speeds and when they come in contact with rocks or metal cause a shower of sparks. These sparks can ignite dry grass and fine fuels and when conditions are right will cause wildfire starts.

Best Management Practices

1. All internal combustion engines shall be equipped with spark arrestors or mufflers in good working condition.
2. A person who uses a power saw in the forest protection area shall take the following precautions to prevent starting a forest fire:
   a. refrain from starting a power saw within 3 metres of the gasoline supply;
   b. refrain from placing a running or hot power saw engine on any flammable matter;
   c. have at the site of operation an approved fire extinguisher in working condition.
3. Evaluate the risks of mowing, mulching or using graders during periods of high and extreme fire danger periods when the grass is cured, the forest fine fuels are dry and the relative humidity is below 30 percent.
4. Allow small engines to cool down before refueling.
5. If it is essential that these operations are under taken during high and extreme fire danger periods with high probability of wildfire ignitions then a water tanker complete with crew, hose and pump should accompany the operation to patrol behind the operation to detect and extinguish any fires that may be started.

Debris Piles

Total disposal of woody debris by burning at a safe time, is a regulated requirement on most Oil and Gas industry dispositions. Burning brush piles is a standard method of total disposal; however escaped fires from these piles are a liability for the industry. The majority of wildfire ignitions result from improperly extinguished fires or holdover fires that reside in deep duff layers or within large brush piles that contain fibrous organic top soil. These holdover fires can surface during dry windy conditions and spread rapidly to the flammable forest vegetation. These fires are often not discovered until they are well developed and under fire behavior conditions that make them difficult to contain.

Best Management Practices

1. A burn registration number is required year round.
2. Debris piles scheduled for burning should be placed on sites with shallow organic soils (Deciduous or mixed wood forest vegetation sites of less than 15 cm of duff) rather than deep duff layers such as those found in muskeg and coniferous forest vegetation sites.
3. During years of extreme drought in the fall, try to use a portable burning sled or ensure that all piles are built on bare mineral soil, away from any organic material.
4. On rights-of-way less than 30 metre width, the windrows or piles shall be located and burned along the centre of the rights-of-way, and on other cleared areas the windrows or piles shall not be placed and burned less than 15 metres from adjacent un-cleared areas.
5. Windrows should be no more than 60 metres in length, with a minimum of 8 metres break between windrows.
6. Round piles should be at least 15 metres apart and a minimum of 8 metres from standing timber.
7. Debris should be piled in a manner that allows for clean, efficient burning of all material: avoid mixing soil into the pile.
8. The best time for burning brush and debris piles is during the winter months when sites are snow covered.
9. Wind speed should be 20 km per hour or less.
10. An option to piling debris for burning is to utilize burning sleds, towed by heavy equipment. This is particularly effective for burning green woody debris.
11. Ensure precautions are taken to keep the fire under control at all times. Monitor burning and have adequate water sources, pumps, manpower and equipment on site to deal with the potential for escape fires.
12. Burn piles must be spread and mixed with water or snow to ensure they are properly extinguished.

Drilling and Completions

Flaring

The majority of fires originating from flaring occur during windy conditions in the afternoon during the seasons with cured grass and vegetation. Flaring can be accomplished in a safe manner by ensuring that burning materials from a flaring operation do not come in contact with flammable vegetation.

There are a number of operational activities, both mechanical and human, that lead to wildfires caused through flaring. Some of the more common causes are the use of flare guns that over shoot flare stacks or pits and flare stack burps that send hot carbon into flammable vegetation. Many fires are caused by an insufficient expanse of mineral soil between the flare stack and surrounding wildland vegetation and flaring during high and extreme wildfire burning periods.

Best Management Practices

1. The horizontal distance from the base of a flare stack to the closest forest vegetation must be at least 2.5 times the height of the stack. (For example, a 5 metre vertical pipe must be 12.5 metres away from the closest forest vegetation.)
2. An 8 metre vegetation-free zone (bare mineral soil or gravel) should be maintained around the base of a flare stack.
3. Operators will perform regular maintenance of any associated fluid tanks at the base of flare stacks to avoid burping.
4. Reduce flare stack carbon build-up through routine maintenance and technology upgrades.
5. A projectile-flare device may be used to ignite flare stacks on public land **only in the event of an emergency** and all residues from such flares shall be extinguished by the user before he leaves the site.
6. If at all possible, routine flaring should not be conducted during periods of high or extreme fire hazard.
7. Operators shall endeavor to complete flaring operations during the evening or early morning when the vegetation ignition risk is at the lowest due to higher relative humidity and lower temperatures. Flaring should be avoided during the spring and fall when there is an abundance of cured grass and other vegetation.

Welding

Welding on pipeline projects or when performing regular maintenance and repairs to equipment during the active fire season does have the potential for starting a wildfire. The risk is especially high during the spring and fall cured grass stages, on muskeg sites or other areas with deep organic soil layers during very dry periods. Wildfires resulting from welding are rare, however the risk of starting a wildfire does exist during high and extreme fire danger periods, and prevention measures should be considered.

Best Management Practices

1. Establish a practice that requires employees and contractors operating in wildland areas to conduct welding operations on bare mineral soil if possible. As an alternative, during high fire hazard periods the work area where welding is to take place, should be wet down with water or foam.
2. Another option is to use a non-flammable shield around the area where welding will take place to confine and prevent the sparks from spreading in all directions.
3. If it is essential that these operations are undertaken during high and extreme fire danger periods with very high probability of wildfire ignitions then a water tanker complete with crew, hose and pump should accompany the welding operation to patrol, detect and extinguish any fires that may be started.
4. Class A Wildfire Foam (Fire Foam 104) should be considered for use when welding on pipelines during high and extreme ignition potential periods to reduce the amount of water required and to ensure the water penetrates into the organic layers. Properly mixed foam will expand the volume of water 5 to 20 times, depending on the foam and equipment used. Foam acts as a fire suppressant rather than a fire retardant. A suppressant extinguishes the flaming and glowing phases of combustion when applied directly to forest vegetation.

Operations/Facilities

Camps

Camps should be located in areas of deciduous forest if at all possible, as coniferous forest are far more prone to burning, and burn with much more heat. Fuel tanks and propane bullets should be placed a minimum of 15 metres from the forest edge. A Canadian study indicated that the air temperatures of a flame front at the height of structures and hydrocarbon storage facilities could reach temperatures of 1000°C. If structures or storage facilities are placed within 10 metres of coniferous forest vegetation then the probability of damage from intense heat is likely.

Best Management Practices

1. Camps should have a minimum of 10 metres between the structures and flammable forest vegetation with a height greater than 10 metres.
2. Diesel, gasoline, and propane fuel tanks should be 15 metres from the forest edge, and a vegetation-free zone of at least 8 metres should be maintained. Fuel tanks should not be placed in a location that would limit the options for escape in the event of a forest fire.
3. Camps operating during fire season should conduct **fire hazard assessments**. The hazard assessment must be re-assessed every three months during fire season, including an assessment of the **fuel hazard**, the risk of a **fire starting**, and the risk of **a fire spreading**.
4. Camps should be equipped with five round-nosed shovels and five Pulaskis or mattocks for fire-fighting.
5. The current Fire Danger Class should be posted during fire season.

Smoking

The activities relating to smoking have caused 3% of the fires attributed to the oil and gas industry. These fires are generally caused by careless disposal of smoker's materials including matches, cigarettes or cigars on to flammable forest vegetation. These types of fires would typically occur when the grass is cured and/or during high to extreme fire danger periods when dry vegetation is combined with very low relative humidity and strong winds.

Best Management Practices

1. Smokers' materials such as cigarettes should be "field stripped" by the user to ensure that all material is extinguished before disposal on bare mineral soil. The material shall be broken up and spread before discarding, or placed in a metal or glass receptacle.
2. Matches must be cold to the touch before disposal. The preferred safest method of lighting tobacco materials is with a child-proof lighter.
3. Smoking in forest areas during periods of high or extreme fire danger conditions should be prohibited.
4. If personnel must smoke in the wildland they should not be walking while smoking. The preferred location for smoking is in a vehicle.
5. If smoking in a vehicle, use the ash tray to dispose of smoking materials; do not throw these materials onto the ground.

Hills and Location on Slopes
A wildfire will burn more rapidly and intensely uphill compared to flat or level ground. Fires can also burn uphill against the wind. In general, structures and leases higher up on a slope, with vegetation below, face a significantly higher probability of ignition or radiant heat damage from wildfires burning over the site.

Slope influence on wildfire spread speed is similar to wind effect: for every 10% increase in slope the fire spread rate will double.

Best Management Practices
1. The distance from the forest edge to structures should be doubled where the slope below the disposition is 30% or greater.
2. Fuel tanks should be kept as far away from the downhill edge of the slope as possible, while still maintaining necessary setbacks from the uphill forest.

Structural Materials
The roof of a structure is the most vulnerable for fire ignition, and roof ignition is one of the main causes of structural losses. Embers and flaming debris from wind-driven fires can travel great distances, and embers landing on a combustible roof surface can start a new fire. Building codes have long recognized the importance roofing plays in fire spread. A fire rating class of “A” is the best fire-resistant classification assigned to roofing, and includes materials such as metal roofing.

Best Management Practices
1. Structures should be constructed using non-combustible exterior cladding.
2. Keep roofs and gutters clean of moss, vegetation, and debris. Use non-corroding 3mm metal screen on eaves and vents, and turn vent openings downward if possible.
3. Where water supplies exist, install sprinkler systems on key structures, and test the sprinkler systems regularly during fire season.
4. Keep the area around structures vegetation-free, or closely mowed, for a distance of 10 metres.

Storage of Flammable Materials
Storage of flammable materials, such as fuel tanks or propane tanks, on a lease or plant site can create additional threats to structures on the disposition based on the presence or absence of hydrocarbons, how flammable the material being stores id, whether airborne embers could accumulate on the tops of tanks or other flammable materials, the closeness of storage sites from the forest, and the distance from flammable materials to the facility structures.

Best Management Practices
1. Keep flammable materials away from key facilities.
2. Clean up spilled flammable hydrocarbons promptly.
3. Tank tops should be cone shaped and designed in such a way that airborne embers will not become lodged around tank openings or vents.

4. Keep the area around tanks and propane tanks clear of vegetation for a minimum of three metres. (no grass, trees, or shrubs)
5. Consider the storage of wooden matting or other flammable material relative to the location of buildings/camps/facilities.

Evacuation Routes

Evacuation routes can be critical for evacuation personnel from a facility during a wildfire emergency. Emergency response plans should identify how the facility or camp will be evacuated. Areas that are designated for helicopter landing or vehicle parking should be kept in a vegetation-free state, and maintained as needed.

Best Management Practices

1. Identify all surface routes into and out of sites, with reference to the width of the driving surface, the width of the road corridor and the number of corners and turns as visibility can be dramatically obscured by drifting smoke.
2. Ensure that parking areas on the facility are large enough to turn around a vehicle, or a loop road around the structures exists.
3. Pre-identify and keep clear potential helicopter landing sites for air lift evacuation should road access be cut off due to wildfire.
4. Identify waterways that can be accessed by boat, if applicable.

Part 3: ERP NE BC Wildfire Supplement

These Guidelines apply to working in North-eastern British Columbia during fire season. Fire season starts the third day of snow-free conditions in the spring to the first day of snow cover in the winter and usually falls between March 1st and October 31st.

Application of these guidelines help Industry Inc. demonstrate due diligence in preparing for company-caused fire starts.

1.0 Fire Emergency Response

1. **Recognize the Problem**
   - Is there a forest fire, equipment fire, or structural fire?

2. **Evaluate the Hazard**
   - Are there threats to people and property?
   - Is the fire spreading fast or slowly?
   - Is smoke blowing across the site limiting vision?
   - Are access routes blocked by fire?
   - Are muster points safe and free of danger?

3. **Take Control**
   - Shutdown operations.
   - Identify what you will require to fight the fire.

4. **Call out for Help**
   - Call for help and additional supplies (on-site personnel if available)
   - Call 1.800.663.5555 or *5555 (cell phone only) with the following details:
     - Size of the fire (hectares).
     - Location (Mapsheet location).
     - Type of fire (structural or forest fire).
     - Fuel type the fire is burning in (slash, grass, bog, big timber).
     - Water supply available (if known).

5. **Take Action**
   - If safe, use the resources you have to action the fire.
   - If you think the fire is too large to handle, evacuate the area immediately and/or find a safe location.
   - Wait for further help from BC Forest Protection.

6. **Follow Up**
   - Contact your Foreman, Contractor Supervisor, or the Industry Area Supervisor.
   - Complete the Accident/Incident Investigation Form.

2.0 Emergency Contacts

Contact	Number	Comments
24-Hour Forest Fire Report Line	**1.800.663.5555**	All phones
	***5555**	Cellular phones in BC only
Fire Information Line	1.888.3FOREST 1.888.336.7378	For recorded information on campfire, open fire and travel bans or restrictions, toll-free number
Burn Registration Line	1.888.797.1717	To register a Category 3 open burn.
Prince George Fire Centre	250.960.2300	General inquiries
Fort Nelson Fire Zone	250.774.7905	General inquiries

ALL FIRES STARTED OR VISIBLE FROM THE WORKSITE, CAMP, OR FACILITY NEED TO BE REPORTED TO THE FIRE REPORT LINE!

3.0 Hazard Assessments

For all activities during the fire season, the QRCI Site Supervisor or HSE rep. is to ensure that hazard assessments for wildfire risks are completed at regular intervals. These hazard assessments may be combined with other assessments, should be written, and must take into account activities ongoing and resources/equipment available. BC law requires that:

- Industrial activity, including construction, drilling and completions, facility operation, and camp operation in forested or grassland zones during fire season must conduct **fire hazard assessments**.
- The hazard assessment includes an assessment of the **fuel hazard**, the risk of a **fire starting**, and the risk of **a fire spreading** for the construction activity ongoing.
- The hazard assessment must be **re-assessed** at minimum every three months during fire season, or as the fire Danger Class Report (see below) changes.
- A copy of the fire assessment must be **available onsite** and provided to a government official when requested.
- During periods of high fire hazard, the fire hazard from industrial activity should be abated by the company.

Fire danger classes must be determined for the worksite during fire season. The Fire Danger Class can be found on the BC government website under BC Home>>Public Safety and Emergency Services>>Wildfire Service>>Preparedness>>Weather and Fire Danger Ratings>>Fire Danger, or the web link: https://www2.gov.bc.ca/gov/content/safety/wildfire-status/prepare/weather-fire-danger/fire-danger.

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- V (Extreme Danger: Extremely high fire hazard. General forest activities may be restricted, including burning permits, industrial activities and campfires)

When the Fire Danger Class as posted on the website is the value indicated in column 1 of the table below, the restriction in column 2 applies for the duration in column 3.

Column 1: Fire Danger Class (DGR)	Column 2: Restriction	Column 3: Duration
III (moderate)	After 3 consecutive days of DGR III or greater, maintain a fire watcher after work for a minimum of one hour	Until after the fire danger class falls below DGR III
IV (high)	Maintain a fire watcher after work for a minimum of 2 hours	Until after the fire danger class falls to DGR III for 2 consecutive days, or falls below DGR III
	After 3 consecutive days of DGR IV, cease activity between 1 pm PDT (Pacific Daylight Saving Time) and sunset each day	
V (extreme)	Cease activity between 1 pm PDT (Pacific Daylight Saving Time) and sunset each day and maintain a fire watcher after work for a minimum of 2 hours	Until after the fire danger class falls below DGR IV for 2 or more consecutive days
	After 3 consecutive days of DGR V, cease activity all day	Until after the danger class falls below DGR V for 3 or more consecutive days, or falls below DGR IV

During extremely dry conditions the forest can be closed by the British Columbia Government. Permits must be obtained to continue working and travel in the woods. The Industry Supervisor must call the BC Ministry of Forests in Fort Nelson if the forest is closed to arrange permits.

4.0 Burning Requirements and Contacts

Brush piles or log decks are classes as a Category Three fire in BC (industrial fires, land clearing). Prior to burning brush piles or log decks, a burn registration number must be obtained from the BC Government, and kept available onsite during the burning.

Burning is only allowed when atmospheric conditions are appropriate for smoke dispersal. Call the Air Quality Information Line prior to burning to ensure the Fort Nelson burning conditions are “Good” or “Fair”. Contact information is in the table below:

Contact	Number	Comments
Provincial Venting and Air Quality Information Line	**1.888.281.2992**	Call the Provincial Venting and Air Quality Information Line to ensure open burning restrictions are not in effect and to ensure that weather is good for smoke dispersion. Press ‘7’ for Omineca-Peace Region
Burn Registration Number	1.888.797.1717	Obtain a Ministry of Forests and Range Burn Registration Number prior to igniting burn piles.

5.0 Internet Wildfire Information

BC Wildland Fire Information through the Internet: visit the Ministry of Forests Wildfire Service website at http://bcwildfire.ca/ for:

- Campfire bans or open fire restrictions.
- Travel restrictions/road closures.
- Maps showing Fire Danger Class, temperature, relative humidity, precipitation and wind speed.
- Detailed Fire Danger Class (available for Fort Nelson fire weather station)

6.0 Minimum Fire Equipment

During fire season, each quad, truck, or manned worksite should be outfitted with the required equipment listed in the table below. (Requirements from the BC Wildfire Act and Regulations.)

At worksites, the equipment should be stored in a clearly marked, easily accessible location.

Location	Required Equipment	Comment
ATV's	1 shovel 1 axe, mattock, or Pulaski 5-litre container of water (if possible) Fire extinguisher (if possible)	Can be the equipment shared with the truck
Pickup Trucks	1 shovel 1 axe, mattock, or Pulaski 1 backpack with pump, 5-litre	The backpack pump does not need to be filled, but should be filled during fire season
Heavy Equipment	1 fire suppression hand tool (shovel, axe, mattock, or Pulaski, 5 Litre water	As stated in best practices
Worksites (Per person)	1 shovel, axe, mattock, or Pulaski per person	The fire tools in trucks count towards the total

Heavy equipment (cats, excavators, graders, bunchers, skidders, etc.) should be outfitted with a minimum of one fire suppression hand tool, in addition to a fire extinguisher.

In the event of a fire start, BC law mandates that all heavy equipment controlled by the company within 30 kilometres of the fire be made available to fight the fire as fast as reasonably possible.

Fire fighting equipment required on site for a category three fire (burning brush piles and log decks during construction) during fire season are:

- 2 pieces of heavy equipment,
- 2 fire suppression systems (pumps and hoses),
- 11 workers with at least one fire fighting hand tool each.

Note: A variance to the regulatory requirements for equipment can be written by the BCER. The Industry Area Supervisor is responsible for ensuring that the equipment and people are present, or a variance is obtained.

7.0 Emergency Response Plan

- Refer to the Industry Emergency Response Plan, and know where to find it at the worksite.
- Use Best Management Practices during the fire season:
  - All hot work should be completed over exposed mineral soil.
  - Use of open flame should be minimized.
  - Smoke only in designated areas.
  - Park heavy equipment, trucks and ATVs on bare mineral soil to minimize the chance of hot exhaust systems starting grass fires.
  - Flare Stacks should be 2.5 times the height of the stack distance away from the forest, and surrounded by bare mineral soil. (10m stack should be 25 metres from the forest edge).
  - Camps and facilities should have a 10 metre buffer of mineral soil or closely mowed vegetation around buildings.
  - Stationary engines (generators, pumps) should be within containers or have bare mineral soil around them. Do not refuel hot engines.
- For each worksite, identify evacuation staging areas in evacuation plans for use during a wildfire event.
- Ensure all personnel are aware of evacuation alerts, evacuation routes, and evacuation staging areas away from the wildfire. If possible, the evacuation point should be down wind and downhill of the site.
- Know the legal location (National Topographic System mapsheet location) of each worksite so wildfire starts can be reported.
- In the event of a forest fire, use the reporting form in Appendix A to provide information to British Columbia.
- A Burn Registration Number is required for all open fires in BC all year long.

8.0 General Points

- Fire burns uphill fastest, and can burn uphill against the wind.
- Spruce burns better than pine, which burns better than leafy trees.
- 60% of forest fires in BC are caused by lightning, 40% are caused by people.

No person is expected to fight a forest fire without the proper training, equipment, and experience. Industry expects the priorities to be personal safety, environmental protection, and asset protection. If there is any doubt, evacuate to a safe area and call for help.

Part 4: Field Audit Standards for the BMP

Camps/Facilities	Pass✓ Fail✖	Comment/Follow up
Recent fire hazard assessment on file? Hazard assessment includes fuel risks, fire start and spread risks?		
Fire Danger Class posted and current?		
Hand fire tools present?		
Camp building >10m from forest edge on flat ground? Or camp buildings > 20m from forest edge on sloped ground >30%?		
10m buffer of vegetation-free (or mowed) around buildings?		
Propane, gas, and diesel tanks +15m from forest edge on flat land? Or, propane, gas and diesel tanks +30m from forest edge where the slop below tanks is 30% or greater?		
8m buffer of vegetation-free (or mowed) around fuel tanks?		
Metal containers for cigarette butts at designated smoking areas?		
Flammable materials piled near buildings? (wood matting, fuel barrels, etc.)		
Building roofs and gutters clean of needles and flammable materials?		
Muster location clearly marked and +15m from forest edge?		
Helicopter landing zone identified and vegetation-free?		
Is vehicle parking designed to allow easy escape?		
Is any welding taking place over mineral soil?		

Construction Sites	Pass✓ Fail✖	Comment/Follow up
Recent fire hazard assessment on file? Hazard assessment includes fuel risks, fire start and spread risks?		
Do tailgate meeting notes include Fire Danger Class rating and hazard assessment results?		
One hand fire tools present per employee on site? Note: truck mounted hand tools count towards total		
Are vehicles, equipment, and ATVs parked on mineral soil when not in use?		
If the fire danger class rating is “high” or “extreme” is a water truck available on site?		
Employee Questions (employee chosen randomly)		
Is the Fire Danger Class and hazard assessment known?		
Is the BC government forest fire number known? (1.800.663.5555 or *5555 on a cell phone)		
Does the employee know who to contact in the case of a fire start?		
Is the muster point known?		
Does the employee know who to call in the event of a forest fire?		
Does the employee know where to find fire hand tools?		
Are there debris piles on site? If yes:		
Is there 8m of bare mineral soil around each pile?		
Are the piles >15m from the forest edge?		
Are the piles at least 15m apart?		
Is there a burn registration number on site for burning or previously burnt piles?		
Are previously burnt piles scanned with infra-red technology?		

Equipment/Trucks/ATVs	Pass✓ Fail✗	Comment/Follow up
Pickup Trucks		
Is the truck equipped with a shovel, Pulaski and backpack sprayer?		
If a crew truck, is there one fire fighting hand tool per person in the truck?		
Is the vehicle left idling when not in use, while not on bare mineral soil?		
All-Terrain Vehicles		
Is the ATV equipped with a shovel and an axe/Pulaski?		
Is there a tool to remove organic buildup from around mufflers and exhaust systems?		
Does the operator of the ATV know about the potential of ATVs to start forest fires? (Organic accumulation and ember dropping)		
Has the ATV driver had training on operating ATVs in forested/grassland areas during fire season?		
Heavy Equipment		
Is the machine equipped with one fire suppression hand tool?		
Is the exhaust system cleaned on a regular basis (especially land clearing equipment)?		
Is the machine parked on exposed mineral soil when not in use?		
Does the operator know who to call in the event of a fire?		

Appendix A: Forest Fire Reporting Form

Caller's Name _____ Phone Number _____

Location _____ Fire Size _____

Rate of Spread _____ Fuel Type _____

Type of Fire _____ Water Availability _____
(ground, surface, crown)

Any Resources En-route Or Working On The Fire At Time Of Report : _____

_____

_____

_____

_____

Equipment and manpower required to gain control: _____ _____

_____ _____

_____ _____

_____ _____

_____ _____

2.0 Public Protection

2.1 Purpose of an Emergency Response Plan (ERP)

An emergency shall be considered as any situation that creates the potential for harm to the residents, environment, or property surrounding the assets. The response priorities are:

- 1st - People
- 2nd - Environment
- 3rd - Property

An ERP is a document developed to ensure quick access to critical information necessary to effectively respond to an emergency and is a key component of emergency preparedness and response. The extent of the information contained within the plan is determined by the potential hazard(s) identified. An ERP addresses emergency scenarios, potential hazards to the public, and systems required for adequate response.

The purpose of emergency preparedness and response is to establish a decision framework and action plan so that the licensee can quickly and effectively respond to an emergency.

The goals of an ERP are to:

- Enhance the safety of the public, company personnel (including contractors), the environment and property.
- Provide company personnel with established procedures to respond to an emergency.
- Provide company personnel with access to critical information required to respond to an emergency.
- Eliminate or minimize the effects that incidents have on Pacific Canbriam Energy Limited operations.

Where the health and safety of the public cannot be assured, Pacific Canbriam Energy Limited responders will determine the best approach to protecting the public. If an emergency situation occurs which causes or creates a potentially dangerous situation to personnel or the general public, a Hazard Planning Zone (HPZ) shall be established, and the best method of public protection implemented.

Depending on an incident's specifics, Pacific Canbriam Energy Limited will implement the necessary method(s) of public protection: air monitoring, evacuation, ignition, isolation or sheltering.

2.2 Hazard Planning Zone (HPZ) Determination

Hazard planning distances are used to identify a geographical area (HPZ) within which persons, property, or the environment may be affected by an emergency. The combined geographic areas of hazard (emergency) planning zones are used by Pacific Canbriam Energy Limited to identify an HPZ where immediate response actions are required, in the event of an emergency.

The HPZ is based upon the greatest hazard present, or expected to be normally present, for which the ERP has been developed. In many cases, oil and gas operations will have a number of products associated with their operation, such as propane bullets, condensate storage, containment for produced water etc. that create a hazard area. When present, H_2S is typically the greatest hazard and will often determine the extent of an HPZ.

Sour Wells
The initial size of a sour well HPZ is determined by the maximum potential release rate. Equations that may be used to calculate a well's HPZ or located in *Schedule B of the BC Emergency Management Regulation*.

Sour Pipelines and Sour Multiphase Pipelines
The HPZ for a sour pipeline or sour multiphase pipeline is determined using the maximum licensed operating pressure, the internal diameter and the licensed maximum H_2S concentration to calculate the H_2S release volume in cubic metres (m^3) for each segment of pipeline. The release volume at the break point is the drained volume, which may be the sum of the release volumes from several segments that may exist between emergency shutdown valves (ESDs) and check valves.

Note: The release volume calculation for pipelines assumes that ESDs close instantaneously upon failure of the pipeline and check valves close instantaneously downstream of the failure. The calculation also assumes that manual block valves do not close instantaneously and the entire volume of gas in that segment of the pipeline is released.

Sour Production Facility HPZs
The HPZ for a sour production facility is calculated by using the largest H_2S release volume from any pipeline entering or leaving the facility. If the facility has an acid gas disposal well on site, the HPZ for the well may determine the size of the HPZ for the sour production facility.

HVP Pipelines
Under the current BCER Emergency Response Plan Requirements, an established procedure for calculating an HPZ for an HVP pipeline has not been developed. Licensees must conduct a plume dispersion assessment based on release volumes for each segment of pipeline. The volume release at the breakpoint is the drained volume, which may be the sum of release volumes that exist between ESD valves and check valves.

The Canadian Association of Petroleum Producers' (CAPP) *Emergency Response Planning Process Guideline for HVP Operators* recommends an HPZ of 1.5 times the distance from the point of release to the isopleth representing the 50 percent lower flammable limit (LFL).

Hydrocarbon Storage in Caverns

Under the BCER Emergency response Plan Requirements there is no established procedure for calculating an HPZ based on release of hydrocarbons stored in caverns. A licensee may use the current industry HPZ of 0.8 km until such time as a government / stakeholder committee has studied the issue and presented recommendations.

Documentation

Detailed documentation must be available for review by the BCER, if requested, and must clearly describe the methods, assumptions, and modeling uncertainties in sufficient detail so that a third party could duplicate the numerical results. A description of the skills and experience of the person(s) undertaking the hazard assessment must also be included in the documentation.

2.3 Air Quality Monitoring

Pacific Canbriam Energy Limited is responsible for providing the necessary personnel and equipment to monitor and confirm the location of the H_2S / SO_2 or explosive mixtures cloud and to remove occupants or prevent occupants from entering the HPZ.

Air quality monitoring equipment is used to:

- Detect traces of H_2S / SO_2 and explosive mixtures.
- Track the plume.
- Determine if ignition criteria are met.
- Determine whether evacuation and / or sheltering criteria have been met, particularly beyond the HPZ.
- Assist in determining when the emergency can be downgraded.
- Determine roadblock locations.
- Determine concentrations in areas being evacuated to ensure that evacuation is safe.
- Determine if the evacuation area will need to be expanded based on H_2S and SO_2 levels exceeding government regulated limits, or if health effects area apparent by monitoring.
- Monitoring occurs downwind with priority at the nearest un-evacuated residence or where people are present.
- Where release has the possibility of being sustained, hazard area must be redefined using mobile monitoring vehicles equipped with devices to continuously measure and record wind speed, direction and H_2S and SO_2 concentrations to establish 3 minute average concentrations.
- Determine if a mobile monitor will be placed on standby or dispatched to the site at a Level 1 emergency depending on the travel time to the site.

There are various types of Air Quality Monitoring equipment that may be used at a well site and within the HPZ:

- Electronic personal H_2S monitors for all personnel
- Stationary monitoring units
- Mobile monitoring units
- Other monitoring / notification Equipment:
  - Fixed in place electronic H_2S monitoring system
  - H_2S Sensors
  - Low alarm (flashing light)
  - High alarm (audible siren)
  - Combustible / LEL sensors

Assigned Pacific Canbriam Energy Limited personnel will be equipped with the appropriate personnel protective equipment (PPE), self-contained breathing apparatus (SCBA), and electronic personal H_2S monitors to monitor the following areas:

- Any area in which an H_2S / SO_2 or explosive mixtures cloud odour complaint has been received.
- The nearest downwind un-evacuated area from the incident site, if an H_2S / SO_2 or explosive mixtures cloud release has occurred.
- Any area in which H_2S / SO_2 or explosive mixtures cloud LEL is suspected.

During the implementation of the ERP, air quality monitoring for Hydrogen Sulphide (H_2S), and if ignition has taken place, Sulphur Dioxide (SO_2), shall be conducted at the incident site and throughout the HPZ. Personnel shall maintain a record of the Air Quality Monitoring results using the required forms and immediately report any H_2S or SO_2 detection to the Air Quality Monitoring Unit Leader. The Air Quality Monitoring Unit will maintain detailed records of the progress of an H_2S release and help to monitor the effects, dispersion, and dilution.

In regard to H_2S concentrations in unevacuated areas refer to Evacuation Criteria, and for H_2S / SO_2 concentrations in unevacuated areas refer to *Table 3 – Downwind Mobile Air Quality Monitoring Requirements.*

Table 3 – Downwind Mobile Air Quality Monitoring Requirements
BCER Emergency Response Plan Requirements

	Level 1 Emergency	Level 2 Emergency	Level 3 Emergency
Sour Well	If estimated time of arrival is greater than the estimated time for gas to surface (an estimated time for gas to surface should be based on the time to circulate bottoms-up) then dispatch to site. If estimated time of arrival is less than the estimated time for gas to surface place on standby.	Deploy unit(s) from well site and commence mobile air quality monitoring. (If a mobile air quality monitoring unit has not arrived on site by the time that gas has reached the surface ignition criteria may have been met for a partially controlled or an uncontrolled release.)	Continue mobile air quality monitoring.

Readings Outside the HPZ
In regard to Evacuation Criteria and H_2S / SO_2 concentrations in unevacuated areas, refer to *Table 2 – Notification and Evacuation Requirements Outside* the HPZ (BCER Emergency Response Plan Requirements). Air Quality Monitoring will continue throughout the time of the emergency until the all clear is given.

Table 2 – Notification and Evacuation Requirements Outside the HPZ	
H_2S concentrations in unevacuated areas	**Requirement**
1-9 ppm	Individuals must be informed of the concentrations and advised to leave. All other individuals should consider leaving the area and seek medical advice if health symptoms develop.
10 ppm	Immediate evacuation of the area must take place or the release must be ignited.
Note: H_2S Evacuation Level – when downwind monitoring at the nearest unevacuated downwind residence, outside the emergency planning zone, indicates a level of 10 ppm, evacuation procedures will be initiated if safe to do so).	
SO_2 concentrations in unevacuated areas	**Requirement**
1 ppm	Voluntary evacuation.
2 ppm	Evacuation of the area should begin.
5 ppm	Mandatory evacuation of the area.

The Air Quality Monitoring Unit Leader will be notified of wind direction changes at all times during the emergency by the Air Quality Monitoring Unit in order to follow the wind direction of the plume.

Preparedness
As operating areas are developed, Pacific Canbriam Energy Limited may place electronic H_2S monitors along pipeline right of ways or on well sites.

Response
If an air quality monitor alarm on site is triggered personnel investigating the alarm would take appropriate safety precautions to investigate / confirm the situation and report to the Air Quality Monitoring Supervisor immediately.

Based on the Air Quality Monitoring information received, the Incident Commander will determine if a Level 1 Emergency will be declared.

Level 1 Emergency
- If a Level 1 Emergency is declared, the Incident Commander will:
- Alert a contracted air quality monitoring company and place them on stand by ensuring their readiness should they need to be dispatched or dispatch them to the site if travel time is expected to be lengthy.
- A record will be kept of the wind speed and direction.
- The Air Quality Monitoring Unit Leader will notify the Public Safety Supervisor of changes to wind direction on a regular basis.

Level 2 or 3 Emergency

- If a Level 2 or 3 Emergency is declared, Pacific Canbriam Energy Limited will mobilize air quality monitoring unit(s) downwind of the incident site and / or at the nearest evacuated residence.
- Once in place, it will monitor for H_2S / SO_2 and explosive mixtures, record the wind speed and direction and maintain communications with the Air Quality Monitoring Unit Leader.

Post Incident Procedures

- The Air Quality Monitoring Unit will test any buildings within the HPZ and if required, beyond the HPZ, that may have been exposed to the plume to determine if any emissions are in the building prior to allowing residents / occupants back into the area.

2.4 Evacuation

The purpose of an evacuation is the removal of people from the HPZ to reduce the risk of exposure to H_2S / SO_2 or an explosive mixtures cloud. The BCER must be notified of an evacuation of people within the HPZ.

In the event of a hazardous material incident where evacuation needs to take place, local emergency services and municipalities shall be notified immediately to advise them of the situation so that they can take appropriate safety precautions for their personnel who may travel into the HPZ.

First responders may commence evacuation procedures without the authority of Pacific Canbriam Energy Limited, the BCER, or the local and provincial disaster services. It is imperative that police, fire and emergency medical services are advised of the situation immediately and apprised of the evacuation procedures (if any) or shelter in place procedures.

Evacuation Criteria
Criteria to consider that may cause Pacific Canbriam Energy Limited to initiate evacuation procedures include:

- Level of emergency.
- Conditions at the wellsite and if they are likely to escalate to a more serious situation.
- Residents' sensitivities and / or medical conditions.
- The levels of H_2S reaching the public outside the HPZ.

A Level 2 Emergency dictates mandatory evacuation of all public from the HPZ. Evacuation of members of the public outside the HPZ is mandatory when H_2S levels reach 10 ppm - if safe to do so.

Evacuation – Level 1 Emergency

- At a Level 1 Emergency, evacuation is a voluntary action, however transients found within the HPZ including itinerant workers and recreational users should be advised to evacuate due to their inability to safely shelter.
- The Telephone Unit will notify any members of the public listed as having special needs (if applicable), any known transients, and other area operators within the HPZ.
- All information regarding evacuees requiring evacuation assistance will be forwarded to the Rover / Evacuation Unit Leader.
- If a publicly used facility, including schools and hospitals, is located within the HPZ Rovers will be dispatched to the facility at a Level 1 Emergency to assist with early evacuation. A large number of people requiring assistance with transportation may cause the need to deviate from normal evacuation procedures.
- Rovers may be dispatched during a Level 1 Emergency to search the HPZ for transients, recreational users and Trappers / Guides.

Evacuation – Level 2 Emergency

- At a Level 2 Emergency, evacuation of all people including transients and other area users, public facilities and places of commercial activities within the HPZ is mandatory.
- Pacific Canbriam Energy Limited shall initiate evacuation procedures.
- The Telephone Unit will notify all people (residents, transients and other area operators) in the HPZ and advise them of the immediate mandatory evacuation.
- Any new information regarding evacuees requiring evacuation assistance will be forwarded to the Rover / Evacuation Unit Leader.
- Evacuation will be prioritized based on distance from release or other factors where appropriate.

Evacuation – Level 3 Emergency

- If the evacuation of the HPZ has not been completed at a Level 3 Emergency, any people who have not been evacuated will be notified to shelter in place. Necessary instructions for sheltering in place will be provided in the event that evacuation is not possible.
- If a hazardous plume has been ignited and it is relatively certain the plume will stay ignited, those evacuees who were asked to shelter in place will be called and notified to evacuate the area to the Reception Centre.
- Any new information regarding evacuees requiring evacuation assistance will be forwarded to the Rover / Evacuation Unit Leader.

Evacuation Procedure – By Land

- The Incident Commander will determine the safest route(s) to evacuate the area by road.
- This decision may be based on the location of the asset, wind direction and speed.
- Additional transportation may need to be arranged to evacuate public facilities where large numbers of people can be anticipated.
- Evacuation routes are provided to the Roadblock Unit, Telephone Unit and Rover / Evacuation Unit Leader.
- Rovers will be assigned to patrol the area searching for transients, including trappers, guides / outfitters and recreational users.
- During sour operations one or more evacuation vehicle must be available 24 hours a day, with at least one driver onsite who is not required to assist in well control operations.

Evacuation Procedures – By Helicopter

- Helicopters may be required to assist in the search and rescue of people within the HPZ.
- Helicopters may also be used during an emergency to track the plume in order to aid in the evacuation of people within the HPZ.
- Communication with the Air Quality Monitoring Unit is imperative in order to prevent sending the helicopter into a plume.
- The helicopter is to be equipped with loud hailers and / or loudspeaker to notify occupants within the HPZ of the emergency and advise them to evacuate the area.
- Helicopters will be provided the radio frequency to use for the emergency at the time of initial contact, as well as the latitude / longitude coordinates of the Helispots and Reception Centres.

- Pacific Canbriam Energy Limited may wish to activate the helicopter(s) at a Level 1 Emergency if conditions at the emergency site are deteriorating quickly, or if there is a large number of trapped residents, transients, recreational users, and other area operators.
- At a Level 2 Emergency, helicopters may be activated to search for and evacuate people in the area to designated emergency evacuation pick up points, or Helispots.

Evacuation outside the HPZ

The public outside of the HPZ must be notified and evacuated in accordance with criteria in *Table 2 of the BCER Emergency Response Plan Requirements* (*Air Monitoring* Section) and in conjunction with the local authority for the area. As a minimum, notification, and evacuation beyond the HPZ is based on monitored levels of H_2S and SO_2, which includes levels of H_2S reaching the public outside the HPZ at 10 ppm.

- Residents / occupants of an HPZ who are downwind of the asset will be evacuated first. Pacific Canbriam Energy Limited will provide air monitoring at the nearest downwind unevacuated residence.
- If air monitoring results indicate the plume to be outside of the HPZ, evacuation would be provided on a priority basis.
- Residents upwind of the emergency location but within the HPZ would be evacuated on a lower priority basis.
- Evacuation area will be expanded where H_2S and SO_2 exceed evacuation levels or health effects are apparent by monitoring.
- Broadcast media (radio, television) will be used to notify residents outside the HPZ in the event that immediate evacuation of the area must take place.
- Pacific Canbriam Energy Limited along with the local authority will coordinate their respective emergency plans with each other. The local authority may enact their Municipal Disaster Response Plan to deal with the emergency.
- Local disaster services and mutual aid partners (if applicable) will assist in the notification and evacuation of people located in the area outside of the HPZ, in campgrounds, or other transient areas.
- Air quality monitoring information will be made available to the public on a regular basis throughout the duration of the emergency.
- Evacuees will be informed of the best route to their designated Reception Centre and this route must be recorded.
- Evacuees must check in at the Reception Centre.

Prolonged Evacuation

If the problem cannot be readily corrected and evacuees are required to be away from the area for an extended period of time, Pacific Canbriam Energy Limited if required, will:

- Provide assistance in arranging their food and temporary accommodation.
- Provide area security.
- Arrange relief for all responders if the evacuation remains in effect for over eight hours.

Return of Evacuees

Once the emergency is over, the decision to permit the return of persons shall be made by the Incident Commander, in consultation with the BCER and local and provincial disaster services.

2.5 Ignition

If control of an asset is lost and the safety of the public cannot be assured the asset may be ignited to reduce the hazard to the public. Deliberate ignition of a sour gas release is a drastic measure used to control a sustained uncontrolled or partially controlled flow that poses an imminent danger to the public or workers.

Pacific Canbriam Energy Limited will take immediate steps to prepare for ignition at the earliest signs of an asset control problem to ensure there will be no delay. Ignition does not negate the need for continuing evacuation and air quality monitoring. Any partially controlled or uncontrolled release of H_2S gas shall be ignited if the ignition criteria as set forth below have been met. When the sour gas is ignited, the H_2S is converted to SO_2 and is carried higher into the atmosphere by the heat of combustion. This causes any toxic gases to disperse over a larger area and reduces the risk of hazardous ground level concentrations.

Ignition Criteria
The Incident Commander has the authority to direct ignition of the release. If time permits the decision will be made in conjunction with the Pacific Canbriam Energy Limited EOC and the appropriate government agencies. Once any of the below criteria has been met, ignition must occur within 15 minutes of the decision to ignite.

Ignition of a sour gas flow to the atmosphere must take place as soon as all personnel working at the site can be cleared to a safe distance and when one of the following conditions has been met:

- Personnel working at the site can be cleared to a safe distance.
- The well is experiencing an uncontrolled flow, the well effluent has reached the surface, no immediate chance of control and the flow, if not ignited, could lead to loss of life.
- The well is flowing sour gas to surface and safety of residents cannot be assured because:
  - Evacuation of residents within the HPZ cannot be accomplished, or
  - Monitoring results indicate H_2S of 15 ppm for 15 minutes in unevacuated areas, or
  - Monitoring is not taking place due to some unforeseen circumstances, such as bad weather or communication breakdown or
  - Monitored H_2S concentrations exceed 1 ppm (1 hour average) in urban density developments.
- For special sour wells, two means of ignition must be on site (flare gun and firefly).
- The release cannot be brought under control in the short term (ignition decision will be made in consultation with the BCER).

If an immediate threat to human life exists and there is not sufficient time to evacuate the emergency hazard area, the Incident Commander is authorized to ignite the release and their decision to ignite will be fully supported by the IMT.

Important Ignition Factors

The following factors should always be considered when preparing for or conducting a sour ignition:

- Ignition (burning) of H_2S will produce SO_2.
- Has the perimeter of the hazard area been established?
- Have all persons been evacuated from the area?
- Will ignition worsen the situation by endangering the environment, public or private property?
- Will any of the following variables affect ignition procedures:
  - Time of release (day, night, weekend).
  - Weather patterns.
  - Release boundaries (proximity to large urban centre or residents).
  - Product volume and plume size.
  - Wind direction and speed.
  - Site conditions (eg. topography, vegetation, road access, etc.) and how it will affect the behaviour of the vapour plume and control options.

Ignition Safety

- Ignition of the sour gas release is a hazardous procedure and should be conducted with caution by trained personnel following safe work procedures.
- Ignition should only take place once the criteria have been met and not before all of the on site personnel have been accounted for and safely relocated to an upwind area.
- If possible ensure there are at least two people for rescue backup.
- If possible assign two ignition units as follows:
  - UNIT 1 (PRIMARY) - Designated Personnel and Site Safety Officer.
  - UNIT 2 (BACKUP) - Designated Personnel (2 people).
- Evacuate beyond explosive mixture areas.

Sample Ignition Procedure – Pistol / Flare Gun

- Assemble equipment and brief the Ignition Units at an upwind safe area.
- Provide for the safety of ignition team, workers and the public.
- Isolate the HPZ and establish roadblocks.
- Obtain a closure order from the BCER or declare a state of emergency if the incident progresses beyond the HPZ.
- BCER can issue a NOTAM for closure of airspace, if necessary.
- Ensure each member has the appropriate equipment at hand.
- Ensure each member remains in visual contact with each other at all times.
- The Primary Ignition Unit shall approach the gas flow from the upwind side checking that an explosive mixture does not exist in their immediate area.
- Select a firing location that provides maximum protection to the Ignition Unit, with good access and egress routes.

Before firing the flare pistol for igniting flammable material, check the atmosphere for combustible gases with a combustible gas indicator. Always ignite the release from upwind and do not approach any closer than necessary.

- One person shall be responsible for checking the atmosphere for explosive gases with a combustible gas indicator.
- The other person shall be responsible for lighting the emission source.
- Ignite the release from the maximum range of the flare gun (45 - 60 metres) - shells shall be shot towards the gas release in such a manner that ignition will occur at the furthest outside edge of the gas plume.

If an uncontrolled gas release has occurred and no ignition has taken place, it may be very dangerous to send personnel into the potential explosive / fire area to close a valve or make repairs. A high pressure water fog line can be used to keep the gas mixture present below the lower explosive limit. If there is any movement of air, the gas should be approached from the upwind side and the water stream placed through the area where it is known or suspected that the gas is laying.

- If possible, remain on standby at the ignition site to re-ignite the release, if required.
- Repeat until ignition is achieved.

Post-Ignition Procedures

- All people should be moved to a safe distance.
- Ensure the downwind monitoring equipment is adjusted to monitor SO_2 and H_2S.
- Set up SO_2 monitors at the edge of the HPZ and continue evacuation outwards if needed.
- The Ignition Unit Leader advises the Incident Commander that the gas has been ignited.

2.6 Isolation of the HPZ

Establishing and managing manned roadblocks in order to prohibit unauthorized entry into the response zones may become necessary during a sour gas release that could potentially jeopardize public safety.

Isolation of the HPZ (roadblocks) will be required to properly protect the public. This may include:

Roads
- Roadblock personnel may set up roadblocks on lease roads, public roads and provincial highways to protect the public from entering into the HPZ.
- Contact the RCMP immediately to advise of the roadblocks on public roads and provincial highways.
- The Ministry of Transportation will also need to be notified of any road closures on provincial roadways. RCMP are responsible for contacting Transport Canada.
- Roadblocks will be set up bordering the HPZ, if there is not a safe place for motorists to turn around at the established roadblock, Roadblock personnel will also be stationed along the roadway and at the detour point (if applicable) to assist motorists traveling around the HPZ.

Trails
- If applicable, access to trails may be restricted by roadblock personnel and / or municipal or provincial personnel.
- Signage may be used during sour operations to alert those in the area that they will be entering an Emergency Planning Zone.

Railroads
- If applicable, CN, CPKC or private railroad companies will need to be notified of the situation and will stop or relocate rail traffic.

Rivers
- If applicable, rivers may need to be monitored to ensure that recreational users do not travel into the HPZ.
- This may be accomplished by working with municipal, provincial or private companies as well as Transport Canada.
- Signage may be used during sour operations to alert those in the area that they will be entering an Emergency Planning Zone.
- Rovers may be assigned to monitor the river at the edge of the HPZ and boat launches outside of the HPZ during an emergency situation.

Air
- Notification of the BCER to issue a Notice to Airmen (NOTAM) to advise pilots of airspace restrictions above the HPZ may also be required.
- NOTAM may be requested at a Level 2 and 3 Emergency.

Level 1 Emergency
In the case of a well site emergency, the entrance into the well site shall be isolated during a Level 1 Emergency with a roadblock. Additional roadblocks may be established as required. Persons allowed entry into the area shall be briefed on the existing conditions and are equipped with the appropriate Personal Protective Equipment (PPE).

Level 2 or 3 Emergency
In the case of a well site emergency, the HPZ shall be isolated during a Level 2 or 3 Emergency as directed by the Incident Commander. If the incident impacts provincial highways the RCMP shall be notified to provide assistance. The RCMP will notify the Ministry of Transportation and Transport Canada for a coordinated response, as required.

Roadblock Units can be staffed by:
- Safety Company (contractor).
- Company personnel
- Local Authority Mutual Aid, upon request.

Roadblock Teams stationed at the roadblock locations should be equipped with the appropriate Personal Protective Equipment (PPE) including:
- Self contained breathing apparatus (SCBA).
- H_2S / SO_2 detector and high visibility vests.

2.7 Shelter in Place

Shelter in place is the practice of going or remaining indoors during a sudden outdoor release of a hazardous substance. Shelter in place has been demonstrated to be the most effective response to a substance release by creating a buffer between you and any hazard that may be in the outside air. Shelter in place is recommended as a protection measure of short duration, ranging from several minutes to half an hour. The goal of shelter in place is to reduce the movement of air into and within the home until the hazard has passed. It is based on using a building that is constructed to withstand severe winter weather conditions.

An event such as a fire, motor vehicle incident, train derailment, industrial incident, or a natural disaster may cause a substance release. As a result, emergency responders may request that residents shelter in place. If the situation warrants, specific instructions for taking shelter in the home will be given. Shelter in place may protect against any H_2S contaminated air outside and reduce the amount to which people may be exposed.

Shelter in place is not a viable option for recreational users or transients, due to their inability to safely shelter.

Shelter in place must be considered the primary protective measure in limited circumstances when:

- There is not enough time or warning to safely evacuate the public that may be at risk.
- Residents are waiting for evacuation assistance.
- The public would be at higher risk if evacuated.
- Buildings are considered to be within or near to toxic or explosive gas plumes.
- Escape routes traverse the hazards.
- There is a sour gas release of limited duration (eg. due to a pipeline rupture).
- The location of the release has not been identified.
- Duration of release is short term.

Shelter in Place Instructions

These instructions should be provided to anyone who cannot or should not evacuate.

- Immediately gather everyone indoors and stay there.
- Close and lock all windows and outside doors – if possible, tape the gaps around the door frames.
- Extinguish indoor wood burning fires - if possible, close the damper.
- Turn off appliances or equipment that either uses inside air, blows out inside air or sucks in outside air, such as:
  - Stoves
  - Fireplaces
  - Clothes dryers
  - Air conditioners
  - Bathroom and kitchen fans
  - Built in vacuum systems
- Turn off heat and hot water pilot lights.
- Do not smoke or have open flame.

- Leave all inside doors open.
- Wait in an interior upstairs room for further instructions.
- Avoid using the telephone, except for emergencies, so that you can be contacted by emergency personnel.

  The responder should ask if emergency services have been notified so that a coordinated response can be conducted.

- Stay tuned to local radio for possible information updates or for further instructions.
- Even if you see people outside do not leave until told to do so.
- If you are unable to follow these instructions, please notify company emergency response personnel.
- After the hazardous substance has passed through the area you will receive an all clear message from emergency response personnel along with instructions to:
  - Ventilate your building by opening all windows and doors.
  - Turn on fans, turn up thermostats, and furnace circulating fans.
  - Once the building is completely ventilated return all equipment to normal.

If warranted, Pacific Canbriam Energy Limited personnel shall carry out notification of residents outside of the HPZ in consultation with the Incident Commander, the BCER and the local authority. All people within the HPZ need to be informed of the emergency situation and given instructions on in place sheltering and / or evacuation procedures.

3.0 Levels of Emergency

This ERP is implemented using three emergency levels. Levels of Emergency may be implemented in sequence or initiated at any level, depending on the severity of the problem.

Once the magnitude of the problem has been determined, the first person on scene shall assume the role of Incident Commander. The Incident Commander will activate the ERP if the situation warrants. Additional contacts are then made to fully implement the ERP.

Pacific Canbriam Energy Limited is responsible for the management of emergency situations relating to its operations. Should an emergency occur, Pacific Canbriam Energy Limited shall activate this ERP and work with the affected municipality, the BCER, EMCR and other provincial government departments, as required.

3.1 Information Flow

The flow of information is structured in a tiered system. The greater the incident severity and company response, the higher the level of management / executive personnel that is required and the greater the number of liaison resources involved in the response effort.

3.2 Classifying Incidents and Responses

Assigning the Level of Emergency needs to occur immediately and be communicated to all response team members, EMCR and the BCER. Each time the Level of Emergency is changed the entire response organization must be notified. The three emergency levels are as follows:

Level 1 – Moderate Emergency
There is no immediate danger to the public or environment as no H_2S has been released, a release of a hazardous substance is confined to the lease or company property. The incident creates little or no media interest, has a low potential to escalate, poses no immediate threat to workers and can be handled by company personnel.

A Level 1 Emergency could include the circumstance of the sour zone being open and any of the following examples occurring:

- Pipe or tool stuck in the hole.
- Lost circulation or inability to circulate.
- H_2S or soluble sulphides detected at surface in the drilling fluids.
- Influx of sour formation fluids.

Level 1 – Moderate Emergency - Action Plan

- A Level 1 Emergency is declared.
- Alert all well site / facility personnel. Evaluate problem and initiate appropriate remedial action.
- Assemble personnel on site and brief them on situation. Equip personnel as required to perform their duties.
- Well control procedures are initiated. Level 1 duties are implemented.
- Unnecessary personnel to leave the site. Non-essential well site personnel are released to the Reception Centre, if required.
- The EOC is notified that a Level 1 Emergency has been declared.
- Alert the mobile monitoring company and be ready for a call out or mobilize monitoring equipment if the location is remote.
- The BCER, RCMP and Emergency Services are notified that a Level 1 Emergency has been declared.
- Notify Emergency Management and Climate Readiness (EMCR) representative.
- Prepare for evacuation in case of escalation of the situation or begin evacuation of residents / transients if there is a large number of residents.
- The Roadblock Units are notified and placed on standby.
- A roadblock is set up at entrance to the lease site.
- Activities in the HPZ are observed and documented.
- Additional equipment and services are mobilized, as required.
- A Rover is activated to check the HPZ for transients, industry operators, recreational users and trappers / guides.
- Telephone personnel shall notify members of the public within the HPZ.
- All members of the EOC maintain 24 hour availability.

Level 1 Potential Emergency - Public Notification and Evacuation

The Incident Commander may elect to begin evacuating members of the public within the HPZ during a Level 1 Emergency if:

- Conditions at the well are deteriorating.
- The problem at the well is becoming progressively more complex and is not likely to be corrected in the near future, or
- Significant time is going to be required to completely evacuate and secure the HPZ.

Level 2 – Major Emergency

A Level 2 Emergency is declared if there is the potential of risk to the public or environment, as the emergency could extend beyond Pacific Canbriam Energy Limited property; however, control of the hazardous substance is still possible. Local or regional media interest is created and the incident may require the involvement of external emergency services, federal, provincial, or local agencies.

A Level 2 Emergency could include the following examples:

- Incomplete combustion of H_2S at the flare pit.
- Equipment malfunction that hinders well control while circulating a kick.
- Inability to maintain required volumes of circulation material.

Level 2 – Major Emergency - Action Plan

- A Level 2 Emergency is declared.
- Well control procedures continue.
- Ensure all Level 1 actions are complete.
- The EOC is notified and advised that a Level 2 Emergency has been declared.
- The BCER, RCMP detachment, Emergency Services and Emergency Management and Climate Readiness are notified that a Level 2 Emergency has been declared and advised that roadblocks are being set up.
- Discuss issuance of a closure order with the BCER office at Fort St. John.
- Initiate evacuation of HPZ.
- Roadblocks are set up on the roads and access into the HPZ is restricted.
- Security of evacuated property is implemented.
- The Telephone Unit shall notify members of the public and advise them to evacuate the area.
- The Rover shall continue to search the HPZ for transients, industry operators, recreational users, and trappers / guides to notify them of the emergency and ask them to evacuate the area immediately.
- Any members of the public found within the HPZ are asked to evacuate the area and go to the Reception Centre.
- A Pacific Canbriam Energy Limited representative is dispatched to the Provincial Regional Emergency Operations Centre (PREOC), if established.
- Mobile air monitoring continues or is mobilized. Mobile monitoring is initiated if not done earlier.
- Send company representative to Reception Centre.
- The Ignition Unit is assembled and briefed, in case of escalation of the situation.
- Additional equipment and personnel are mobilized, as required.
- Non-essential well site personnel are released to the Reception Centre.
- All members of the EOC are activated, as required.
- Establish communication links to offsite command centre, if established
- Mobilize well control group.
- Consider the fire hazards in the area if the release should be ignited.

Level 2 Emergency - Public Notification and Evacuation

Once a Level 2 Emergency has been declared, all members of the public within the HPZ will be asked to evacuate the area immediately and go to the Reception Centre.

Level 3 – Serious Emergency

At a Level 3 Emergency, there exists an immediate danger to the public or environment as control of the situation has been lost. Provincial or national media interest is created. The release of the hazardous substance is uncontrolled and extensive involvement of external emergency services including, federal and / or provincial agencies is required as the emergency now extends beyond company property.

A Level 3 Emergency could include the following:

- Uncontrolled flow (eg. a gas flow which cannot be shut off at the operator's discretion) from the well.
- H_2S readings have reached 15 ppm, over a 15 minute time weighted average, at the nearest unevacuated residence.

Level 3 – Serious Emergency - Action Plan

- A Level 3 Emergency is declared.
- Well control procedures continue.
- Ensure all Level 1 and 2 actions are complete.
- The EOC is notified and advised that a Level 3 Emergency has been declared.
- The BCER, RCMP detachment, Emergency Services and Emergency Management and Climate Readiness are notified that a Level 3 Emergency has been declared.
- Expand HPZ, as necessary.
- Roadblocks and security of evacuated property are maintained. Only authorized personnel have access to the HPZ.
- Continue evacuation and / or sheltering.
- Confirm if evacuation is complete or still in progress.
- Mobile air monitoring continues.
- Search and rescue continue, as required, within the HPZ.
- Non-essential well site personnel are released to the Reception Centre.
- Any uncontrolled or partially uncontrolled sour gas release will be ignited if ignition criteria are met.

Level 3 Emergency - Public Notification and Evacuation

Once a Level 3 Emergency has been declared, mandatory evacuation remains in effect.

BCER INCIDENT CLASSIFICATION MATRIX

Instructions: Start at the top and continue down until you check off any one box in both consequence and probability to determine the incident classification. *This matrix is required as an attachment upon submission of an incident through the Compliance Management Information System (CM-IS).*

TABLE 1: CONSEQUENCE RANKING

RANK	CONSEQUENCE (any one of the following)
4	☐ Major on site equipment or infrastructure loss ☐ Major act of violence, sabotage, or terrorism which impacts permit holder assets ☐ Reportable liquid spill beyond site, uncontained and affecting environment ☐ Gas release beyond site affecting public safety
3	☐ Threats of violence, sabotage, or terrorism ☐ Reportable liquid spill or gas release beyond site, potentially affecting public safety, environment, or property ☐ HAZMAT worker exposure exceeding allowable limits ☐ Major on site equipment failure
2	☐ Major on site equipment damage ☐ A security breach that has potential to impact people, property or the environment ☐ Reportable liquid spill or gas release potentially or beyond site, not affecting public safety, environment, or property
1	☐ Moderate on site equipment damage ☐ A security breach that impacts oil and gas assets ☐ Reportable liquid spill or gas release on location ☐ **Occurrence of magnitude 4.0 or greater induced earthquake within 3 km of oil and gas operations or any earthquake which is felt on surface within a 3 km radius of oil and gas operations
0	☐ No consequential impacts

**** For this consequence criteria, a probability score of 2 or higher must be used.**

TABLE 2: PROBABILITY RANKING

RANK	PROBABILITY (any one of the following)
4	☐ Uncontrolled, with control unlikely in near term
3	☐ Escalation possible; under or imminent control
2	☐ Escalation unlikely; controlled or likely imminent control
1	☐ Escalation highly unlikely; controlled or imminent control
0	☐ Will not escalate; no hazard; no monitoring required

TABLE 3: INCIDENT RISK SCORE AND CLASSIFICATION

RISK SCORE	ASSESSMENT RESULT
MINOR (1-2)	**Notification Only;** permit holder **must** notify the Regulator online within 24 hours using the *Compliance Management Information System (CM-IS)*. In addition, spills must also be reported to EMCR.
MODERATE (3-4)	**Level-1 Emergency;** immediate notification (call EMCR)
MAJOR (5-6)	**Level-2 Emergency;** immediate notification (call EMCR)
SERIOUS (7-8)	**Level-3 Emergency;** immediate notification (call EMCR)

CONSEQUENCE _____ **+ PROBABILITY** _____ **= RISK SCORE** _____

(this must be completed)

SPILL REPORTING CRITERIA

Where the permit holder holds or maintains rights, the permit holder must report to the BC Energy Regulator, all spills of materials as identified below:

- A spill or release of any amount of materials which impacts water ways
- Hydrocarbons; 100 litres where the hydrocarbon contains no toxic materials and does not impact water ways
- Produced / salt water; 200 litres where the fluid contains no toxic materials
- Fresh water; 10,000 litres
- Drilling or invert mud; 100 litres
- Sour Natural gas; 10 Kg or 15 m^3 by volume where operating pressure is >100 PSI
- Condensate; 100 litres
- Any fluid including hydrocarbons, drilling fluids, invert mud, effluent, emulsions, etc. which contain toxic substances; 25 litres

Please refer to the BC Environmental Management Act; Spill Reporting Regulation, Schedule "Reporting Levels for Certain Substances" for determining reportable spillage amounts of other substances:

OTHER REPORTABLE INCIDENTS

The Regulator's Incident Risk Classification Matrix is designed to assist permit holders in determining which incidents must be reported. However, some incidents, which do occur, may not meet the criteria outlined in the Incident Classification Matrix but still require notification to the Regulator as a minor notification. These include the following:

- Spills or release of hazardous substances which are not provincially regulated, such as radioactive substances;
- Major damage to oil and gas roads or road structures;
- Drilling kicks when any one of the following occur:
  - pit gain of 3 m^3 or greater
  - casing pressure 85% of MA
  - 50% out of hole when kicked
  - well taking fluid (LC)
  - associated spill
  - general situation deterioration, i.e. leaks, equipment failure, unable to circulate, etc.
- Pipeline incidents, such as spills during construction phase, exposed pipe caused by flooding, pipeline over pressure, failure (without release) of any pressure control or ESD device during operations.
- Security related issues which are relatively minor; such information may be required for tracking and monitoring purposes only.

BCER INCIDENT CLASSIFICATION MATRIX			PROBABILITY				
			4 ☐ Uncontrolled, with control unlikely in near term	3 ☐ Escalation possible; under or imminent control	2 ☐ Escalation unlikely; controlled or likely imminent control	1 ☐ Escalation highly unlikely; controlled or imminent control	0 ☐ Will not escalate; no hazard; no monitoring required
CONSEQUENCE	4	☐ Major on site equipment or infrastructure loss ☐ Major act of violence, sabotage, or terrorism which impacts permit holder assets ☐ Reportable liquid spill beyond site, uncontained and affecting environment ☐ Gas release beyond site affecting public safety	LEVEL 3	LEVEL 3	LEVEL 2	LEVEL 2	LEVEL 1
	3	☐ Threats of violence, sabotage, or terrorism ☐ Reportable liquid spill or gas release beyond site, potentially affecting public safety, environment, or property ☐ HAZMAT worker exposure exceeding allowable limits ☐ Major on site equipment failure	LEVEL 3	LEVEL 2	LEVEL 2	LEVEL 1	LEVEL 1
	2	☐ Major on site equipment damage ☐ A security breach that has potential to impact people, property or the environment ☐ Reportable liquid spill or gas release potentially or beyond site, not affecting public safety, environment, or property	LEVEL 2	LEVEL 2	LEVEL 1	LEVEL 1	MINOR NOTIFICATION FORM
	1	☐ Moderate on site equipment damage ☐ A security breach that impacts oil and gas assets ☐ Reportable liquid spill or gas release on location ☐ **Occurrence of magnitude 4.0 or greater induced earthquake within 3 km of oil and gas operations or any earthquake which is felt on surface within a 3 km radius of oil and gas operations	LEVEL 2	LEVEL 1	LEVEL 1	MINOR NOTIFICATION FORM	MINOR NOTIFICATION FORM
	0	☐ No consequential impacts	LEVEL 1	LEVEL 1	MINOR NOTIFICATION FORM	MINOR NOTIFICATION FORM	NO NOTIFICATION REQUIRED

** For this consequence criteria, a probability score of 2 or higher must be used.

3.3 Confirmation of Incident

Pacific Canbriam Energy Limited may be alerted of an incident through electronic warning systems, by manual inspections of an asset or by a public concern. All odour complaints, public concerns or abnormal operating situations reported to or observed by company personnel shall be investigated and acted upon immediately. In these instances, a trained / experienced company representative equipped with appropriate Personal Protective Equipment (PPE) will be asked to investigate, monitor, and confirm the location of the situation (eg. H_2S / SO_2 or explosive mixtures cloud, injury, or spill).

3.4 Reporting and Notification Procedures

3.4.1 British Columbia

The most qualified personnel at the site of the emergency shall act as the Incident Commander. Notification will vary accordingly and will be coordinated to the guidelines required for each level of emergency. The *Roles and Responsibilities Section* illustrates response actions for responders at both the Emergency Operations Centre (EOC) and the incident site.

Level 1 Emergency
Pacific Canbriam Energy Limited will notify members of the public requesting early notification (if applicable). Pacific Canbriam Energy Limited will also notify transients, industry operators, recreational users, trappers / guides, public facilities and school boards within an HPZ at a Level 1 Emergency (to allow for additional time to evacuate, if necessary). Transients, recreational users and trappers / guides will be instructed to evacuate to the Reception Centre at a Level 1 Emergency due to their inability to safely shelter. The ERP must be activated and the BCER and EMCR must be notified.

WorkSafeBC requires notification of a Level 1 Emergency as it may affect worker safety.

Level 2 and 3 Emergency
Pacific Canbriam Energy Limited will notify all members of the public at Level 2 and 3 Emergencies. The ERP must be activated and the BCER and EMCR must be notified.

WorkSafeBC requires notification of a Level 2 and 3 Emergency as it may affect worker safety.

Reporting Information
The following is a list of core information that is required in any situation relating to an emergency:

- Any injury or loss of life.
- Name of injured or fatality.
- Source, time and location of emergency.
- Cause and severity of emergency.
- Steps that have been taken or are in progress to control emergency.

- Equipment and assistance required.
- Proximity to sensitive areas.
- Volume of spill, rate of release, and gas concentration.
- Wind speed and direction.

WorkSafeBC Reporting Requirements

Section 172 of the *Workers Compensation Act* states that Pacific Canbriam Energy Limited must immediately notify WorkSafeBC of the occurrence of any accident that:

- Resulted in serious injury to or the death of a worker,
- Involved a major structural failure or collapse of a building, bridge, tower, crane, hoist, temporary construction support system or excavation.
- Involved the major release of a hazardous substance, or
- Was an incident required by regulation to be reported.

Additionally, Section 172 provides that employers must immediately report:

- Any incident that kills or seriously injures a worker
- A major leak or release of a dangerous substance
- A major structural failure or collapse of a structure, equipment, construction support system, or excavation
- Any blasting accident that results in injury, or unusual event involving explosives (required by regulation)
- A diving incident that causes death, injury, or decompression sickness requiring treatment (required by regulation)

Such incidents must also be investigated by the employer under Section 173 of the *Workers Compensation Act.*

WorkSafeBC defines a serious injury is any injury that can reasonably be expected at the time of the incident to endanger life or cause permanent injury. Serious injuries include both traumatic injuries that are life threatening or that result in a loss of consciousness, and incidents such as chemical exposures, heat stress, and cold stress which are likely to result in a life threatening condition or cause permanent injury or significant physical impairment.

Traumatic injuries that should be considered as serious injuries include:

- Major fractures or crush injuries including a fracture of the skull, spine, or pelvis.
- Multiple, open, or compound fractures, or fractures to major bones such as the humerus, fibula or tibia, or radius or ulna.
- Crushing injuries to the trunk, head or neck, or multiple crush injuries.
- An amputation, at the time of the accident, of an arm or leg or amputation of a major part of a hand or foot.
- Penetrating injuries to eye, head, neck, chest, abdomen, or groin.
- An accident that caused significant respiratory compromise, or punctured lung.
- Circulatory shock (eg. internal hemorrhage) or injury to any internal organ.
- Lacerations that cause severe hemorrhages.

- All burns that meet the rapid transport criteria of the Occupational First Aid Training Manual, including:
  - Third degree burns to more than 2% of the body surface.
  - Third degree burns to the face, head, or neck.
  - Burns of any degree with complications.
- Asphyxiation or poisoning resulting in a partial or total loss of physical control (eg. loss of consciousness of a worker in a confined space) or a respiratory rate of fewer than 10 breaths per minute or severe difficult or laboured breathing.
- Traumatic injury which is likely to result in a loss of:
  - Sight.
  - Hearing.
  - Touch.

Injuries that require a critical intervention such as CPR, artificial ventilation or control of hemorrhaging or treatment beyond First Aid, such as the intervention of Emergency Health Services personnel (eg. transportation to further medical attention), a physician and subsequent surgery, or admittance to an intensive care unit should also be considered serious injuries.

Employers are required to report serious injuries and fatalities to WorkSafeBC immediately. This reporting should occur as part of the employers' response at the time of the incident. In responding to the incident, Pacific Canbriam Energy Limited should ensure any workplace conditions that present an immediate hazard to other workers are addressed, ensure first aid and medical treatment for the worker, and then notify WorkSafeBC of the incident.

The purpose of the reporting requirement is to ensure that a WorkSafeBC prevention officer and / or an investigations officer is able to respond to the incident, as soon as possible, in order to:

- Attend at the scene to conduct an investigation of the incident and ensure the integrity of the scene
- Offer availability of counseling services, as appropriate
- Undertake an inspection of the workplace to help ensure that workers are protected before work is resumed
- Help ensure that any post-incident response or cleanup is performed in a safe manner
- Provide a referral to compensation services

The requirement to immediately report a serious injury or fatality is separate from the requirement to report injuries for claims purposes. Filing a claims form will not satisfy the obligation to immediately report a serious injury or fatality. Failure to immediately notify WorkSafeBC of a serious injury or fatality will be considered a breach of Section 172 and may result in an administrative penalty.

Section 172 also requires Pacific Canbriam Energy Limited to notify WorkSafeBC of any accident that involved the major release of a hazardous substance. A major release does not only mean a considerable quantity, or the peculiar nature of the release, such as a gas or volatile liquid, but, more importantly, the seriousness of the risk to the health of workers.

Factors that determine the seriousness of the risk include the degree of preparedness of the employer to respond to the release, the necessity of working in close proximity to the release, the atmospheric conditions at the time of the release and the nature of the substance.

3.4.2 Federal

The CER and the Transportation Safety Board (TSB) are independent federal agencies that have adopted a single window approach for event reporting by regulated companies. This means that CER events and TSB pipeline occurrences share a single point of contact.

Pacific Canbriam Energy Limited will provide verbal and written notification within 3 hours of an event meeting any of the following definitions:

- An incident that harms people or the environment.
- A rupture.
- A toxic plume.

The TSB Reporting Hotline must be called first, and then a Preliminary Incident Report submitted via the CER Online Event Reporting System (OERS).

In situations where the TSB cannot be reached, Pacific Canbriam Energy Limited should report directly to the CER.

The CER expects companies to take a precautionary approach to event reporting, even if there is some doubt as to whether an event needs to be reported. In other words, companies should adopt a “when in doubt, notify” approach. There is a selection in OERS that allows a company to indicate when it is reporting an event on a precautionary basis.

3.5 Downgrading the Emergency

Level 1, 2 and 3 Emergencies – The decision to downgrade a Level 1, 2 or 3 Emergency is made by the Incident Commander in consultation with the BCER and Emergency Management and Climate Readiness (EMCR). All affected persons and the media must be kept informed of the status of the emergency.

The Incident Commander will notify their respective personnel of the downgrade and return to normal activities.

The Public Information Officer will notify government and the media to advise them of the downgrade and the return to normal operations.

The Telephone, Reception Centre, Rover / Evacuation, and Roadblock Units will notify people within the HPZ of the downgrade and the return to normal operating activities.

Pacific Canbriam Energy Limited personnel will provide instructions for settlement of loss of expenses or other costs directly caused by the emergency.

Once the decision to return to normal operating activities has been made, people can return to their activities within the HPZ.

3.6 Return to Normal – End of Evacuation

The decision to end emergency operations / and return to normal operations, will be made by the Incident Commander in consultation with the BCER, EMCR and other appropriate government agencies, when required. The licensee will develop a return to normal plan that outlines procedures to ensure the safe return of the public into the HPZ.

4.0 Response Structure

Pacific Canbriam Energy Limited has adopted the Incident Command System (ICS) as the communication and response model that will guide and assist in preserving life, the environment, and property in the event of an emergency.

Key ICS Principles

- Flexible organizational structure with role descriptions.
- Ability to respond to small or large multi-agency incidents.
- Common terminology used by all agencies.
- An integrated communications system.
- A manageable span of control. A supervisor can only effectively manage a certain number of personnel – three to seven – with an optimal ratio of five personnel to one supervisor.
- A personnel and resources accountability system.
- Designated incident facilities.
- Use of incident action plans.
- Unity of command – each person reports to only one supervisor.

Benefits of Using ICS

- Cost effective emergency planning.
- Only those positions or functions which are needed are activated.
- More than one position may be assigned to an individual.
- Effective incident management for fires, explosions, spills, releases, and other emergency situations.
- ICS organizational structure does not change with changes in personnel.

The scale of emergency will determine if the event is handled solely by one person, one team, or all components. The size or number of response roles activated will depend on the requirements of the emergency. Additionally, response roles may be filled by responders from outside agencies and / or support services. Therefore, the number of response positions assigned to Pacific Canbriam Energy Limited representatives will be based upon the number of available personnel and the roles necessary to carry out the response. Responders may also fill more than one response role until additional responders arrive and are briefed on their assigned responsibilities.

Large scale incidents may require the use of a unified command involving Pacific Canbriam Energy Limited, regulatory bodies, and local authorities. Unified command enables multiple agencies to manage an incident together by having a common set of objectives and strategies. This also allows joint decisions to be made within a single command structure

4.1 Incident Command Post (ICP)

The ICP is the location from which the Incident Commander oversees all incident operations and is designed to assess the situation, manage on site emergency activities and coordinate the activities at the site. The ICP should be positioned outside of the present and potential hazard area but close enough to the incident to maintain command. The ICP may be located in a vehicle, a trailer at the site, or in a nearby building. For safety purposes the ICP may have to change locations during the event. Members of the ICP may be requested to:

- Develop and direct the implementation of public protection measures.
- Identify the HPZ and when it is safe for responders to enter.
- Ensure that people inside the HPZ are accounted for and initiate a search if required.
- Establish objectives and priorities.
- Determine needs and request additional resources from the EOC.
- Manage emergency response resources.
- Ensure the ERP is implemented.
- Monitor changing conditions.
- Ensure planning meetings are scheduled as required.
- Develop implementation of both action and site safety plans.
- Keep the EOC informed of all decisions.
- Advise EOC at the end of emergency operations.
- Participate in debriefing.

Functions and representation include:

Command Staff

- Incident Commander – responsible for overall command of the incident site. Works with the EOC Director at the Emergency Operations Centre (EOC).
- Liaison Officer – contact and maintain contact with municipal, provincial and if required federal agency representatives as well as non-government organizations. Works with the EOC Liaison Support.
- Safety Officer – monitors and assesses the safety conditions and develop / recommend ways to ensure safety of assigned personnel at the incident site. Works with the EOC Risk / Legal Support.
- Information Officer – act as spokesperson at the incident site in the event that media arrives at the site. Disseminate information to incident site personnel. Works with the EOC Information Support.

General Staff

- Operations Section Chief – determine and implement tactical objectives, conduct tactical operations, and direct all resources at the incident site. Works with the EOC Operations Section Support. Directs the response actions of the following personnel:
  - Staging Area Manager.
  - Site Control Group.
  - Public Safety Group.
    - Ignition Leader – company personnel, contracted source, or mutual aid.
    - Air Monitoring Leader – company personnel, contracted source, or mutual aid.

- Roadblock Leader – company personnel, contracted source, or mutual aid.
- Rover/Evacuation Leader – company personnel, contracted source, or mutual aid.
- Reception Centre Leader – company personnel or government personnel.
- Air Operations Leader – company personnel or contracted source.

Additionally, on site responders will be responsible for site control and security, including the following:

- Perimeter and site control.
- Methods for keeping track of responders.
- Hazard identification.
- Personal protective equipment.
- Monitoring of individuals and the environment.
- Emergency medical care.
- Site evacuation and rescue plans.
- Communications and warning protocols.
- Plans for partial of full decontamination.
- Rest periods and rehabilitation services for responders.
- Security - may also be police, if available.

Planning Section Chief* – develop the action plan, evaluate information, and maintain the status of resources.

- Resources Unit – responsible for all check in activity. Maintains status of all personnel and equipment.
- Situation Unit – collect, analyze, and process information on the current situation. Create and maintain situation status board, summaries, and display of maps.
- Documentation Unit – prepare Incident Action Plan. Maintain all incident documentation.
- Technical Specialists – provide specialized skills or expertise that may be required for a limited time.

*The Planning Section Chief may be located at the EOC.

Logistics Section Chief* – provide support and resources to meet the needs of the incident.

- Communications Unit – develop communications plan, distribute, and maintain communications equipment (radios, phones).
- Medical Unit – develop medical plan, organize emergency medical transportation, and provide first aid to responding personnel.
- Food Unit – determine and supply food and drinking water requirements to responding personnel.
- Supply Unit – order, store and maintain supplies and equipment.
- Facilities Unit – set up and maintain any facility that may be required to provide support for the incident.
- Ground Support Unit – provide transportation and maintenance of vehicles, including fuelling.

*The Logistics Section Chief may be located at the EOC.

Finance / Administration Section Chief* – provide accounting, procurement, administrative and cost analysis services. Monitor costs associated within the incident site.

- Time Unit – ensure all personnel time related to the incident is recorded.
- Procurement Unit – process administrative paperwork with equipment rental, supply contracts, and time reporting.
- Compensation & Claims Unit – documentation related to Workers' Compensation, injuries and / or illness, investigation of damaged property associated with the incident.
- Cost Unit – collect all information related to costs, provide cost estimates and recommendations for cost savings.

*The Finance / Administration Section Chief may be located at the EOC.

4.2 Emergency Operations Centre (EOC)

The EOC is designed as support to the ICP and links to the PREOC. Under the ICS, the EOC is the facility that supports emergency response operations at the site of the incident.

The EOC shall be located in the Pacific Canbriam Energy Limited Office in Calgary, AB.

- EOC Director – Coordinate the response with site from the EOC.
- Liaison Officer – Contact and maintain contact with municipal, provincial and, if required, federal agency representatives as well as non-government organizations. Works with the Liaison Officer at site.
- Risk / Legal Support – Monitor and assess the risk management factors that may affect Pacific Canbriam Energy Limited. Provide legal advice or work directly with the legal department.
- Information Support – Act as a spokesperson for Pacific Canbriam Energy Limited. Works with the Information Officer at the incident site.
- Operations Section Support – Assist in determining tactical objectives at the incident site. Works with the Operations Section Chief at the incident site.
- Telephone Leader – Contact and maintain contact with occupants in the IIZ and EPZ, and areas beyond if required.

Members of the EOC may be requested to:

- Make key decisions.
- Provide technical information.
- Establish communications with outside agencies and liaise with government agencies.
- Procure and approve the use of additional resources.
- Monitor the effectiveness of the response.
- Establish long tern mitigation objectives.
- Gather information and record details of the response.
- Coordinate release of information to the public in a timely matter.

4.3 Provincial Regional Emergency Operations Centre (PREOC)

The PREOC is a command centre established by the BCER in a suitable location to manage larger aspects of the emergency that is manned jointly by government agencies including the Provincial Emergency Program, BC Ambulance Service, and the Ministry of Transportation. Pacific Canbriam Energy Limited may send representatives to the PREOC.

4.4 Staging Area

- The Staging Area is to be used for initial drop off of heavy equipment and large numbers of personnel used in an emergency response. This will aid the efficiency and preparedness of all equipment movement into the EPZ when required.
- The Staging Area may be a contracted source and a Staging Area Manager would be appointed to report directly to the Operations Section Chief.
- Resources in the Staging Area need to be ready for deployment, and should be located within five minutes from the incident site, if at all possible. When establishing the Staging Area, ensure that it has adequate entrance and exit routes and is on a paved surface, if possible.

The Staging Area will be established at the time of the incident depending on the location of the incident.

4.5 Reception Centre

The Reception Centre is designed as a facility to accommodate evacuees and shall be more than adequate to accommodate the disaster social service needs of evacuees.

The Reception Centre Unit Leader, located at the Reception Centre, would report to the Public Safety Group Supervisor and shall coordinate activities along with the local authority Reception Centre representatives. Services provided include: registration and inquiry, emergency food services, emergency clothing services, emergency lodging services and personal services.

A Reception Centre(s), if required, will be established outside of the HPZ at the time of an incident based on the location of the incident. Refer to the *Emergency Contacts Section* for a list of pre-determined Reception Centres.

4.6 Helibase

- The Helibase is where aircraft are fuelled and maintained.
- If helicopter evacuation is, or may be a requirement, the helicopter services will be placed on standby at a Level 1 Emergency.

If required, the Helibase will be established at the time of an incident based on the location of the incident and / or the location of the available aircraft.

4.7 Helispot

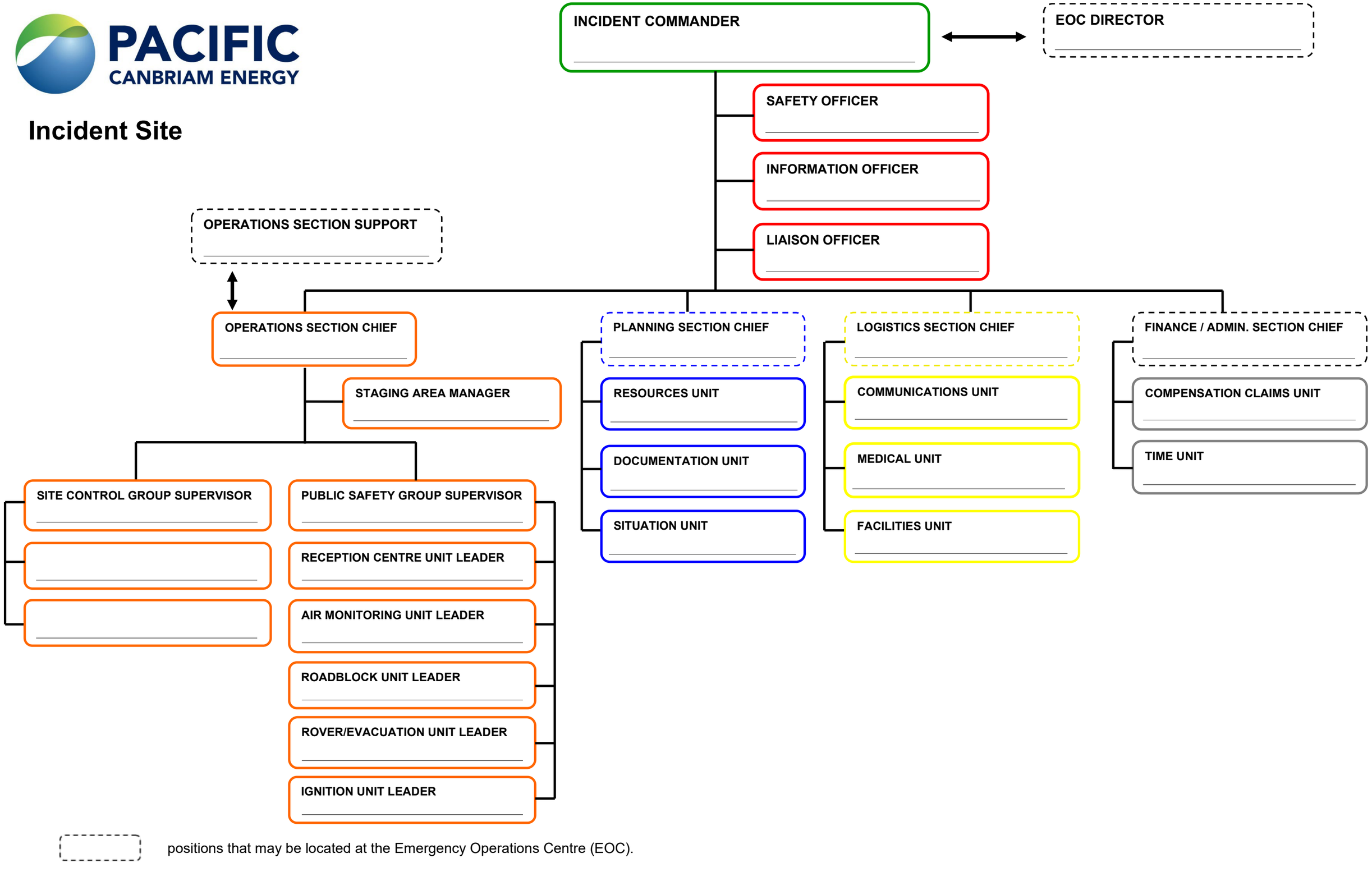
- The Helispot is a temporary location where the helicopter can land to load or unload evacuees, equipment, and supplies.
- Rover / Evacuation personnel will be located at each Helispot to assist evacuees.

If required, Helispot(s) will be established at the time of an incident based on the location of the incident.

Note: Helicopters equipped with loud hailers or loudspeakers may be used in an evacuation to locate transients, residents and other area operators within the HPZ or where the evacuation area has been expanded in areas where H_2S and SO_2 exceed evacuation levels or health effects are apparent.

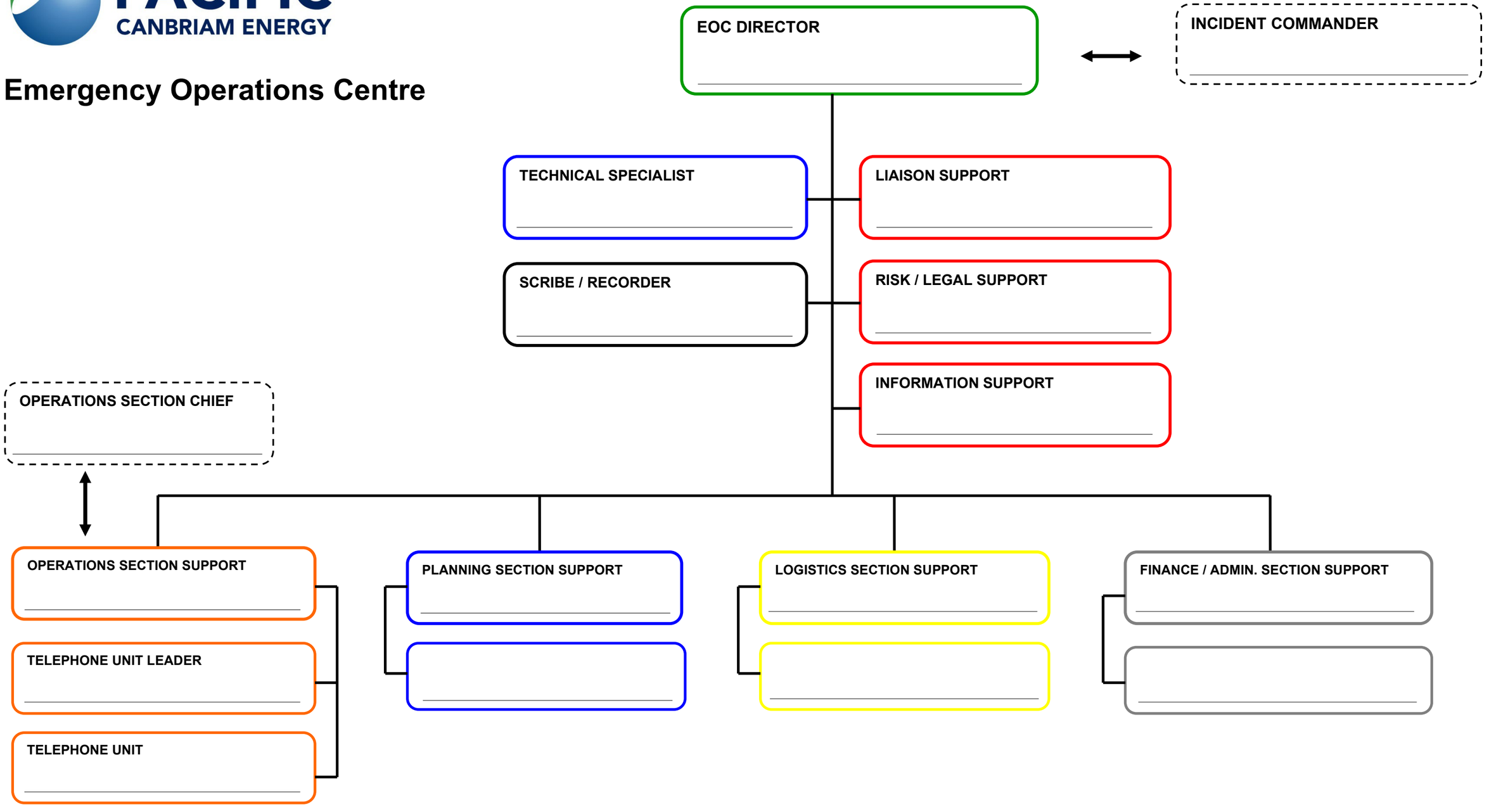
PACIFIC CANBRIAM ENERGY

Incident Site



positions that may be located at the Emergency Operations Centre (EOC).

Emergency Operations Centre



positions that will be located at the Incident Command Post (ICP).

5.0 Roles and Responsibilities

The following roles and responsibilities outline possible response activities at a Level 1, 2 or 3 Emergency. These checklists do not incorporate everything that is required in a response, rather they are guidelines to assist in processing the initial steps and responsibilities. Although these emergency response duties are written specifically for certain Pacific Canbriam Energy Limited position titles, they are not a closed list of duties that might be required during a particular emergency situation. Duties under one position may be delegated to another as the need arises.

5.1 Roles and Responsibilities Checklists

The following pages distinguish each response area and member specific roles and responsibilities. The roles are separated by page so that each role can be individually removed from the manual during a practice or actual emergency.

Section	Role	Page	Section	Role	Page
5.2	Incident Commander	2	5.17	Ignition Unit	25
5.3	Safety Officer	4	5.18	Air Operations Unit Leader	26
5.4	Information Officer	5	5.19	EOC Director	27
5.5	Liaison Officer	6	5.20	Liaison Support	29
5.6	Operations Section Chief	7	5.21	Risk / Legal Support	30
5.7	Site Control Group Supervisor	9	5.22	Information Support	31
5.8	Public Safety Group Supervisor	10	5.23	Operations Section Support	32
5.9	Staging Area Manager	12	5.24	Telephone Unit Leader	33
5.10	Reception Centre Unit	13	5.25	Telephone Unit	34
5.11	Air Monitoring Unit Leader	15	5.26	Planning Section Chief	35
5.12	Air Monitoring Unit	17	5.27	Documentation Unit	36
5.13	Roadblock Unit Leader	19	5.28	Logistics Section Chief	37
5.14	Roadblock Unit	20	5.29	Finance / Administration Section Chief	38
5.15	Rover / Evacuation Unit Leader	21	5.30	Scribe / Recorder	39
5.16	Rover / Evacuation Unit	23			

5.2 Incident Commander

Name:	**Phone No.:**
Reports To: EOC Director	**Phone No.:**
Mission:	Provide overall command of the incident site.
Resources:	ERP Manual, Maps, Forms, Telephone and / or Radio
Forms:	ICS 201 Form, ICS 202 Form, Incident Report Form, Incident / Event Log, Incident Investigation Report, Motor Vehicle Incident Supplementary Report, Suspect & Vehicle Identification Worksheet, Daily Expense Claim Form, Spill Report Form, Hazard Assessment, Preliminary Media Statement, External Agency Post Incident Evaluation, *Compliance Management Information System (CM-IS)*.

Level 1	Completed By	Time Completed
❑ Confirm emergency situation (size up).		
❑ What is the nature of the incident?		
❑ What hazards are present?		
❑ How large an area is affected?		
❑ Are all on site personnel accounted for?		
❑ Are there any injuries? Call for medical help. If it is safe to do so, commence first aid treatment.		
❑ Eliminate all ignition sources.		
❑ Advise immediate supervisor.		
❑ Discuss response and confirm HPZ (if applicable).		
❑ Declare appropriate level of emergency.		
❑ Contact required emergency support services (ambulance, fire, etc.).		
❑ Secure area.		
❑ Determine location and establish the Incident Command Post.		
❑ Implement corrective / control procedures.		
❑ Determine location and establish Staging Area (if required).		
❑ Determine entrance / exit routes and safe routes that are appropriate for the flow of emergency responders and equipment.		
❑ Mobilize required Command and General Staff.		
❑ Notify the Operations Section Support to mobilize the Telephone Unit Leader - to begin evacuation notification telephone calls to members of the public requesting early notification (if applicable) at a Level 1 Emergency, trappers, and other area users.		
❑ Direct Operations Section Chief to mobilize the following units, as required:		
❑ Air Monitoring Unit Leader – on site and off site.		
❑ Rover / Evacuation Unit Leader – to begin evacuation of residents and trappers on a voluntary basis.		
❑ Reception Centre Unit Leader – to establish the reception centre and commence receiving evacuees.		

5.2 Incident Commander

Level 1 - Continued	Completed By	Time Completed
❑ Roadblock Unit Leader – to establish roadblock(s) at the entrance(s) to the incident site.		
❑ Air Operations Unit Leader – if helicopter evacuation may be required put the helicopter services on standby.		
❑ Ensures BCER and RCMP have been notified and requested to call other government agencies, as required.		
❑ Ensure communication with WorkSafe BC and the Ministry of Environment & Parks is taking place, if required.		
❑ Record information received from outside sources and investigate.		
❑ Ensure all required resources (equipment, supplies and personnel) are available.		
❑ Complete the required forms in the *Forms* Section.		
❑ Provide status reports to EOC.		
Level 2		
❑ Ensure all Level 1 Emergency duties have been completed.		
❑ Continue to implement control procedures and direct on site personnel.		
❑ Make preparations for possible relocation of Incident Command Post, if required.		
❑ Ensure the assembly of the Ignition Unit and ensure equipment is in a state of readiness.		
Level 3		
❑ Ensure all Level 1 and 2 Emergency duties have been completed.		
❑ Ensure the Ignition Unit has been directed to begin ignition procedures if ignition criteria has been met.		
Post Incident		
❑ Demobilize teams (if required), and equipment.		
❑ Request a damage assessment report from the Operations Section Chief.		
❑ Ensure all necessary site investigations are completed before cleanup and repair begins.		
❑ Advise and direct Operations Section Chief regarding cleanup, repair, and resumption of operations.		
❑ Ensure all affected public have been notified of the demobilization and have received assistance.		
❑ Conduct debriefings with personnel involved in the emergency response.		
❑ Ensure Critical Incident Stress Debriefing (CISD), is available to staff and evacuees, as appropriate.		
❑ Participate in incident debriefing and analysis meetings, document improvement preparedness, and response opportunities.		
❑ Collect all forms and documentation.		
❑ Prepare post incident report and submit to the EOC Director.		

5.3 Safety Officer

Name:	**Phone No.:**
Reports To: Incident Commander	**Phone No.:**
Mission:	Assess / monitor safety hazards or unsafe conditions, develop measures to ensure safety of response personnel.
Resources:	ERP Manual, Maps, Forms, Telephone and / or Radio
Forms:	Incident / Event Log, Incident Investigation Report, Suspect and Vehicle Identification Worksheet

Level 1	Completed By	Time Completed
❑ Maintain communication with the Incident Commander and ensure safety procedures are being adhered to.		
❑ Travel to the Incident Command Post, if required.		
❑ Coordinate safety strategies and provide support as required.		
❑ Advises the IRT of safety requirements.		
❑ Determine the need for additional personnel and equipment, in consultation with the Incident Commander in regard to safety.		
❑ Sets up, deploys and maintains medical, fire, breathing and resuscitation apparatus, H_2S and SO_2 portable hand-operated and continuous monitoring equipment and audible alarm system.		
❑ Ensures personnel on site have the necessary breathing apparatus, first aid qualifications (including H_2S casualty resuscitation techniques) and casualty rescue training.		
❑ Ensure all required resources (equipment, supplies and personnel) are available.		
❑ Complete the required forms in the *Forms* Section.		
❑ Provide status report to the Incident Commander.		
❑ Maintain a log of activities / decisions.		
Level 2		
❑ Ensure all Level 1 Emergency duties have been completed.		
Level 3		
❑ Ensure all Level 1 and 2 Emergency duties have been completed.		
Post Incident		
❑ Demobilize teams (if required), and equipment.		
❑ Debrief all personnel on site and document improvement opportunities.		
❑ Participate in incident debriefing and analysis meetings.		

5.4 Information Officer

Name:	**Phone No.:**
Reports To: Incident Commander	**Phone No.:**
Mission:	Provide timely information to media / public seeking information regarding incident. Act as spokesperson at the incident site if and when media arrives. Work with EOC Information Support.
Resources:	ERP Manual, Maps, Forms, Telephone and / or Radio
Forms:	Incident / Event Log, Suspect and Vehicle Identification Worksheet, Preliminary Media Statement

Level 1	Completed By	Time Completed
❑ Upon notification of an emergency, proceed to the Incident Command Post and report to the Incident Commander.		
❑ Act as spokesperson at the incident site in the event that media arrives.		
❑ Disseminate information to personnel at incident site.		
❑ Notify joint venture partners and other parties (as required).		
❑ Ensure all public and media inquiries are to be coordinated through the EOC Information Support and the BCER.		
❑ Ensure all required resources (equipment, supplies, and personnel) are available.		
❑ Complete the required forms in the *Forms* Section.		
❑ Provide status report to the Incident Commander.		
❑ Maintain a log of activities / decisions.		
Level 2		
❑ Ensure all Level 1 Emergency duties have been completed.		
Level 3		
❑ Ensure all Level 1 and 2 Emergency duties have been completed		
Post Incident		
❑ Demobilize teams (if required), and equipment.		
❑ Debrief all personnel on site and document improvement opportunities.		
❑ Participate in incident debriefing and analysis meetings.		

5.5 Liaison Officer

Name:	**Phone No.:**
Reports To: Incident Commander	**Phone No.:**
Mission:	Coordinate with representatives from regulatory and assisting agencies. Notify the BCER, RCMP, Local Authorities, and government agencies.
Resources:	ERP Manual, Maps, Forms, Telephone and / or Radio
Forms:	Incident / Event Log, Suspect and Vehicle Identification Worksheet, External Agency Post Incident Evaluation

Level 1	Completed By	Time Completed
❑ Upon notification of an emergency, proceed to the Incident Command Post and report to the Incident Commander.		
❑ Notify and maintain contact with the government and regulatory bodies throughout the emergency – for example:		
❑ BCER		
❑ EMCR		
❑ Local Authorities		
❑ RCMP		
❑ Ministry of Environment & Parks		
❑ Ministry of Forests		
❑ Ministry of Transportation and Transit		
❑ Local Health Unit		
❑ Ensure all required resources (equipment, supplies, and personnel) are available.		
❑ Complete the required forms in the *Forms* Section.		
❑ Provide status report to the Incident Commander.		
❑ Maintain a log of activities / decisions.		
Level 2		
❑ Ensure all Level 1 Emergency duties have been completed.		
Level 3		
❑ Ensure all Level 1 and 2 Emergency duties have been completed.		
Post Incident		
❑ Demobilize teams (if required), and equipment.		
❑ Debrief all personnel on site and document improvement opportunities.		
❑ Participate in incident debriefing and analysis meetings.		

5.6 Operations Section Chief

Name:	**Phone No.:**
Reports To: Incident Commander	**Phone No.:**
Mission:	Determine and implement tactical objectives, conduct tactical operations and direct all resources at the incident site.
Resources:	ERP Manual, Maps, Forms, Telephone and / or Radio
Forms:	Incident / Event Log, Suspect and Vehicle Identification Worksheet, Daily Expense Claim Form

Level 1	Completed By	Time Completed
❑ Proceed to the incident site and report to the Incident Commander.		
❑ Mobilize the following groups as required:		
❑ Control Unit – well, pipeline or facility control resources to commence control procedures.		
❑ Air Monitoring Unit – on site and off site.		
❑ Rover / Evacuation Unit – begin evacuation of residents and trappers on a voluntary basis.		
❑ Reception Centre Unit – establish the Reception Centre and commence receiving evacuees.		
❑ Roadblock Unit – establish roadblock(s) at the entrance(s) to the incident site.		
❑ Air Operations – if helicopter evacuation may be required put the helicopter services on standby.		
❑ Staging Area – as required.		
❑ Assign roles to personnel.		
❑ Record information received from outside sources and investigate.		
❑ Continue to implement corrective / control procedures.		
❑ Assess potential to escalate to a Level 2 Emergency.		
❑ Ensure all required resources (equipment, supplies and personnel) are available.		
❑ Complete the required forms in the *Forms* Section.		
❑ Provide status report to the Incident Commander.		
❑ Maintain a log of activities / decisions.		
Level 2		
❑ Ensure all Level 1 Emergency duties have been completed.		
❑ Ensure Ignition Unit has been put on alert.		

5.6 Operations Section Chief

Level 3		
❑ Ensure all Level 1 and 2 Emergency duties have been completed.		
❑ Continue to implement control procedures and direct on site personnel.		
❑ Direct Ignition Unit to begin ignition procedures if ignition criteria has been met.		
Post Incident		
❑ Demobilize teams (if required), and equipment.		
❑ Assess damage to assets (well site, pipeline or facility).		
❑ Provide assessment report to the Incident Commander.		
❑ Debrief all personnel on site and document improvement, preparedness and response opportunities.		
❑ Participate in incident debriefing and analysis meetings.		

5.7 Site Control Group Supervisor

Name:	**Phone No.:**
Reports To: Operations Section Chief	**Phone No.:**

Mission:	Implement and direct control procedures, as required, for corrective purposes.
Resources:	ERP Manual, Maps, Forms, H_2S / SO_2 detection and monitoring equipment and Telephone and / or Radio. Operations manuals and operating procedures, where established.
Forms:	Incident / Event Log, Suspect and Vehicle Identification Worksheet

Level 1	Completed By	Time Completed
❑ Upon notification of the incident, immediately proceed to the Incident Command Post and report to the Operations Section Chief.		
❑ Instruct Site Control Units to begin corrective / control procedures as instructed by the Operations Section Chief.		
❑ Complete the required forms in the *Forms* Section.		
❑ Provide status report to the Operations Section Chief.		
❑ Maintain a log of activities / decisions.		
Level 2		
❑ Ensure all Level 1 Emergency duties have been completed.		
Level 3		
❑ Ensure all Level 1 and 2 Emergency duties have been completed.		
Post Incident		
❑ Demobilize teams (if required), and equipment.		
❑ Debrief all personnel on site and document improvement opportunities.		
❑ Participate in incident debriefing and analysis meetings.		

5.8 Public Safety Group Supervisor

Name:	**Phone No.:**
Reports To: Operations Section Chief	**Phone No.:**

Mission:	Implement and direct procedures used to protect public safety.
Resources:	ERP Manual, Maps, Forms, Telephone and / or Radio, H_2S / SO_2 detection and monitoring equipment.
Forms:	Incident / Event Log, Suspect and Vehicle Identification Worksheet, Daily Expense Claim Form

Level 1	Completed By	Time Completed
❑ Upon notification of the incident, immediately proceed to the Incident Command Post and report to the Operations Section Chief.		
❑ Mobilize the following units as required:		
❑ Air Monitoring Unit – on site and off site.		
❑ Rover / Evacuation Unit – begin evacuation of transients, industry operators, recreational users and trappers / guides on a voluntary basis.		
❑ Reception Centre Unit – establish the Reception Centre and commence receiving evacuees.		
❑ Roadblock Unit – establish roadblock(s) at the entrance(s) to the incident site.		
❑ Assign roles to personnel.		
❑ Record information received from outside sources and investigate.		
❑ Continue to implement corrective / control procedures.		
❑ Ensure all required resources (equipment, supplies and personnel) are available.		
❑ Complete the required forms in the *Forms* Section.		
❑ Provide status report to the Operations Section Chief.		
❑ Maintain a log of activities / decisions.		
Level 2		
❑ Ensure all Level 1 Emergency duties have been completed.		
❑ Place Ignition Unit on standby.		
Level 3		
❑ Ensure all Level 1 and 2 Emergency duties have been completed.		
❑ Direct Ignition Unit to begin ignition procedures if ignition criteria has been met.		

5.8 Public Safety Group Supervisor

Post Incident		
❑ Demobilize teams (if required), and equipment.		
❑ Assess damage to assets (well site, pipeline or facility).		
❑ Provide assessment report to the Operations Section Chief.		
❑ Debrief all personnel on site and document improvement, preparedness and response opportunities.		
❑ Participate in incident debriefing and analysis meetings.		

5.9 Staging Area Manager

Name:	**Phone No.:**
Reports To: Operations Section Chief	**Phone No.:**
Mission:	Track and ensure the ready state of all personnel and resources at the Staging Area.
Resources:	Maps, Forms, Telephone and / or Radio.
Forms:	Incident / Event Log, Suspect and Vehicle Identification Worksheet

Level 1	Completed By	Time Completed
❑ Report to the designated Staging Area or report to the Incident Commander and decide on location with the Operations Section Chief and the Incident Commander.		
❑ When establishing the Staging Area, ensure that it has adequate entrance and exit routes and is on a paved surface, if possible.		
❑ Ensure personnel and equipment are prepared for assignments and ready for deployment within three minutes.		
❑ Maintain communications with the Operations Section Chief.		
❑ Keep accurate logs of activities at the Staging Area.		
Level 2		
❑ Ensure all Level 1 Emergency duties have been completed.		
Level 3		
❑ Ensure all Level 1 and 2 Emergency duties have been completed.		
Post Incident		
❑ Demobilize teams (if required), and equipment.		
❑ Debrief all personnel on site and document improvement opportunities.		
❑ Participate in incident debriefing and analysis meetings.		

5.10 Reception Centre Unit

Name:	**Phone No.:**
Reports To: Public Safety Group Supervisor	**Phone No.:**

Mission:	Responsible for Disaster Social Services (food, clothing, personal services, registration, inquiry and lodging) needs of all evacuees.
Resources:	ERP Manual, Telephone and / or Radio, Reception Centre Kit from the local municipality.
Forms:	Incident / Event Log, Suspect and Vehicle Identification Worksheet, Reception Centre Registration Form, Daily Expense Claim Form, School Children Registration Form

Level 1	Completed By	Time Completed
❑ Travel to incident scene, check in at Incident Command Post and report to the Public Safety Group Supervisor		
❑ Activate the Reception Centre, address concerns and assist with temporary accommodation, as required.		
❑ Coordinate Reception Centre efforts with the Local Authorities.		
❑ Begin to make arrangements for food at the Reception Centre.		
❑ Receive voluntary evacuees, create records of all persons who arrive at the Reception Centre and list those not accounted for using the appropriate form in the *Forms* Section.		
❑ Make a record of all evacuated Special Needs (if applicable) and advise the Telephone Unit Leader of their arrival at the Reception Centre.		
❑ Record the destination of residents / public who have checked in. Record contact numbers for those who leave the evacuation centre		
❑ Provide lodging, personal services and clothing services as required.		
❑ Ensure all required resources (equipment, supplies, and personnel) are available.		
❑ Refer media inquiries to the Information Officer.		
❑ Complete the required forms in the *Forms* Section.		
❑ Provide status report to the Public Safety Group Supervisor.		
❑ Maintain a log of activities / decisions.		
Level 2		
❑ Ensure all Level 1 Emergency duties have been completed.		
❑ Alert Rover / Evacuation Unit Leader of any members of the public requiring assistance that were not previously known.		
❑ Ensure that all members of the public within the HPZ have been notified and evacuated by working with the Rover / Evacuation Unit Leader and the Telephone Unit Leader.		

5.10 Reception Centre Unit

Level 3		
❑ Ensure all Level 1 and 2 Emergency duties have been completed.		
❑ Commence with the development of a plan to provide services to evacuees overnight or longer.		
Post Incident		
❑ Demobilize teams (if required), and equipment.		
❑ Debrief all personnel on site and document improvement opportunities.		
❑ Participate in incident debriefing and analysis meetings.		

5.11 Air Monitoring Unit Leader

Name:	**Phone No.:**
Reports To: Public Safety Group Supervisor	**Phone No.:**
Mission:	Responsible for the management of all air quality monitoring at the incident site, within the HPZ and beyond the HPZ (if applicable).
Resources:	ERP Manual, Maps, Forms, Telephone and / or Radio, H_2S / SO_2 detection and monitoring equipment.
Forms:	Incident / Event Log, Suspect and Vehicle Identification Worksheet, Environmental Monitoring Form,

Level 1	Completed By	Time Completed
❑ Upon notification of an emergency, proceed to the Incident Command Post and report to the Public Safety Group Supervisor.		
❑ Brief and mobilize Air Monitoring Unit.		
❑ Alert additional mobile air quality monitoring equipment companies (as required).		
❑ Position Air Monitoring Unit at the closest downwind resident.		
❑ Maintain site safety and monitor air quality on site using hand held monitors.		
❑ Update Operations Section Chief immediately of H_2S and LEL detection as teams report.		
❑ Assist with procedures to control or minimize effects of incident.		
❑ Ensure all required resources (equipment, supplies, and personnel) are available.		
❑ Complete the required forms in the *Forms* Section.		
❑ Provide status report to the Public Safety Group Supervisor.		
❑ Maintain a log of activities / decisions.		
Level 2		
❑ Ensure all Level 1 Emergency duties have been completed.		
❑ Mobilize Air Monitoring Unit and commence monitoring downwind at nearest unevacuated residence.		
❑ Request additional mobile air monitoring equipment, if required.		
❑ Assign hand-held detector air monitoring to the nearest unevacuated site.		
Level 3		
❑ Ensure all Level 1 and 2 Emergency duties have been completed.		
❑ Continues mobile air monitoring downwind. Should ignition criteria be met then track the plume.		
❑ Continue monitoring H_2S and SO_2 levels.		

5.11 Air Monitoring Unit Leader

Post Incident		
❑ Once the incident has been brought under control and prior to occupants returning to residences / buildings, the Air Monitoring Unit shall check each building for air quality and report any levels to the Public Safety Group Supervisor immediately.		
❑ Demobilize teams (if required), and equipment.		
❑ Debrief all personnel on site and document improvement opportunities.		
❑ Participate in incident debriefing and analysis meetings.		

5.12 Air Monitoring Unit

Name:	**Phone No.:**
Reports To: Air Monitoring Unit Leader	**Phone No.:**
Mission:	Responsible for conducting and reporting on air monitoring at the site, throughout the HPZ and if applicable, beyond the HPZ.
Resources:	Maps, Forms, Telephone and / or Radio, H_2S / SO_2 detection and monitoring equipment.
Forms:	Incident / Event Log, Suspect and Vehicle Identification Worksheet, Environmental Monitoring Form

Level 1	Completed By	Time Completed
❑ Upon notification of an emergency, proceed to the Incident Command Post and report to the Air Monitoring Unit Leader.		
❑ Monitor air quality in the HPZ.		
❑ Update Air Monitoring Unit Leader immediately of H_2S and LEL detection.		
❑ Ensure all required resources (equipment, supplies, and personnel) are available.		
❑ Complete the required forms in the *Forms* Section.		
❑ Provide status report to the Air Monitoring Unit Leader.		
❑ Maintain a log of activities / decisions.		
Level 2		
❑ Ensure all Level 1 Emergency duties have been completed.		
❑ Proceed to nearest unevacuated, at risk residence or roadblock location and begin to monitor the air quality.		
❑ Follow plume and determine boundary of HPZ.		
❑ Report boundary zone to the Air Monitoring Unit Leader.		
❑ Check unevacuated sites to ensure evacuation guidelines have not been exceeded.		
❑ Record H_2S and LEL concentrations, including time, location, wind speed, and direction using the Plume Tracking Record.		
❑ Update Air Monitoring Unit Leader immediately of H_2S / SO_2 and LEL detection.		
Level 3		
❑ Ensure all Level 1 and 2 Emergency duties have been completed.		
❑ Record H_2S / SO_2 / LEL concentrations, including time, location, and wind speed and direction using the Plume Tracking Record.		
❑ Continue SO_2 monitoring if plume is ignited.		
❑ Update Air Quality Unit Leader immediately of H_2S / SO_2 / LEL detection.		

5.12 Air Monitoring Unit

Post Incident		
❑ Once the incident has been brought under control and prior to occupants returning to residences / buildings, the Air Monitoring Unit will check each building for air quality and report any levels to the Operations Section Chief immediately.		
❑ Participate in incident debriefing and analysis meetings.		

5.13 Roadblock Unit Leader

Name:	**Phone No.:**
Reports To: Public Safety Group Supervisor	**Phone No.:**
Mission:	Responsible for the set up and management of roadblocks throughout the HPZ and HPZ, if applicable.
Resources:	ERP Manual, Maps, Forms, Telephone and / or Radio, H_2S / SO_2 detection and monitoring equipment and Roadblock Kit.
Forms:	Incident / Event Log, Suspect and Vehicle Identification Worksheet, Roadblock Registration Form, Roadblock Unit Cell Phone List

Level 1	Completed By	Time Completed
❑ Upon notification of an emergency, proceed to the Incident Command Post and report to the Public Safety Group Supervisor.		
❑ Set up roadblocks to control access to the site.		
❑ Alert additional Roadblock Unit personnel, as required.		
❑ Advise the Operations Section Chief immediately of H_2S and LEL detection.		
❑ Ensure all required resources (equipment, supplies, and personnel) are available.		
❑ Complete the required forms in the *Forms* Section.		
❑ Provide status report to the Public Safety Group Supervisor.		
❑ Maintain a log of activities / decisions.		
Level 2		
❑ Ensure all Level 1 Emergency duties have been completed.		
❑ Mobilize Roadblock Unit using available resources and coordinate roadblocks to isolate the HPZ.		
❑ Document and report any roadblock problems to Incident Commander.		
❑ Contact Public Safety Group Supervisor if RCMP / Police assistance is required to block and detour highway traffic.		
Level 3		
❑ Ensure Level 1 and 2 Emergency duties have been completed.		
❑ Advise Public Safety Group Supervisor immediately of H_2S / SO_2 / LEL detection.		
Post Incident		
❑ Demobilize teams (if required), and equipment.		
❑ Debrief all personnel on site and document improvement opportunities.		
❑ Participate in incident debriefing and analysis meetings.		

5.14 Roadblock Unit

Name:	**Phone No.:**
Reports To: Roadblock Unit Leader	**Phone No.:**
Mission:	Responsible for setting up and manning all HPZ roadblocks.
Resources:	Maps, Forms, Telephone and / or Radio, H_2S / SO_2 detection and monitoring equipment and Roadblock Kit.
Forms:	Incident / Event Log, Suspect and Vehicle Identification Worksheet, Roadblock Registration Form

Level 1	Completed By	Time Completed
❑ Upon notification of an emergency, proceed to the Incident Command Post and report to the Roadblock Unit Leader.		
❑ Set up roadblock(s) at the entrance(s) to the incident site and control access to the site.		
❑ Controls and records the movement or all personnel to and from the site, ensures that safety rules are met, and that proper equipment is worn as required.		
❑ Document and report any roadblock problems to the Roadblock Unit Leader.		
❑ Ensure applicable signs are visible and in good condition, (if applicable).		
❑ Advise Roadblock Unit Leader immediately of H_2S / SO_2 and LEL detection.		
❑ Ensure all required resources (equipment, supplies, and personnel) are available.		
❑ Complete the required forms in the *Forms* Section.		
❑ Provide status report to the Roadblock Unit Leader.		
❑ Maintain a log of activities / decisions.		
Level 2		
❑ Ensure all Level 1 Emergency duties have been completed.		
❑ Set up roadblocks surrounding the HPZ and control access to the area.		
❑ Stop all traffic attempting to proceed into the HPZ, briefly explain the problem and request they take an alternate route.		
❑ If the occupant is trying to reach their residence within the HPZ, direct them to the assigned Reception Centre.		
❑ Controls and records the movement of all personnel to and from the site and ensures that safety rules are met, and that proper protective equipment is worn as required.		
Level 3		
❑ Ensure all Level 1 and 2 duties have been completed.		
❑ Advise Roadblock Group Unit Leader immediately of H_2S / SO_2 / LEL detection.		
Post Incident		
❑ Participate in incident debriefing and analysis meetings.		

5.15 Rover / Evacuation Unit Leader

Name:	**Phone No.:**
Reports To: Public Safety Group Supervisor	**Phone No.:**

Mission:	Responsible for management of rover personnel traveling the HPZ ensuring all occupants are notified of the incident and commence evacuation procedures, assist with evacuation of occupants to the Reception Centre.
Resources:	ERP Manual, Maps, Forms, Telephone and / or Radio, H_2S / SO_2 detection and monitoring equipment.
Forms:	Incident / Event Log, Suspect and Vehicle Identification Worksheet, Transient Evacuation Notice, Empty Residence Notice

Level 1	Completed By	Time Completed
❑ Upon notification of an emergency, proceed to the Incident Command Post and report to the Public Safety Group Supervisor.		
❑ Activate the Rover / Evacuation Unit.		
❑ Establish and maintain contact with the Reception Centre Unit regarding the number of expected evacuees, etc.		
❑ Establish and maintain contact with the Telephone Unit Leader.		
❑ Contact HPZ occupants and other area users to advise them of the incident.		
❑ Direct the voluntary evacuation occupants to the Reception Centre.		
❑ Search HPZ for transients, and other area users, as required.		
❑ Advise Public Safety Group Supervisor immediately of H_2S and LEL detection.		
❑ Ensure all required resources (equipment, supplies, and personnel) are available.		
❑ Complete the required forms in the *Forms* Section.		
❑ Provide status report to the Public Safety Group Supervisor.		
❑ Maintain a log of activities / decisions.		
Level 2		
❑ Ensure all Level 1 Emergency duties have been completed.		
❑ Direct Rover / Evacuation Unit to ensure all occupants are evacuated from the HPZ.		
❑ Escort response personnel entering the HPZ to the Incident Command Post or alternate location and advise the Public Safety Group Supervisor.		
❑ Instruct the Rover / Evacuation Unit to continue to monitor the HPZ for occupants and other area users who have not yet evacuated or been advised of the evacuation.		
❑ Advise Public Safety Group Supervisor of any evacuation problems.		

5.15 Rover / Evacuation Unit Leader

Level 3		
❑ Ensure Level 1 and 2 Emergency duties have been completed.		
❑ Advise Public Safety Group Supervisor immediately of H_2S / SO_2 / LEL detection		
Post Incident		
❑ Demobilize teams (if required), and equipment.		
❑ Debrief all personnel on site and document improvement opportunities.		
❑ Participate in incident debriefing and analysis meetings.		

5.16 Rover / Evacuation Unit

Name:	**Phone No.:**
Reports To: Rover / Evacuation Unit Leader	**Phone No.:**
Mission:	Responsible for all the search and rescue activities within the HPZ and if required, beyond the HPZ.
Resources:	ERP Manual, Maps, Forms, Telephone and / or Radio, H_2S / SO_2 detection and monitoring.
Forms:	Incident / Event Log, Suspect and Vehicle Identification Worksheet, Transient Evacuation Notice, Empty Residence Notice

Level 1	Completed By	Time Completed
❑ Upon notification of an emergency, proceed to the Incident Command Post and report to the Rover / Evacuation Unit Leader.		
❑ Utilize proper PPE (SCBA, radio, monitor, etc.).		
❑ Assists public with evacuation, where required.		
❑ Search HPZ for members of the public to inform them of the emergency status. Advise them to evacuate to the Reception Centre. Use the necessary forms located in the *Forms* Section to record occupant information and advise the Rover / Evacuation Unit Leader of this information.		
❑ Search HPZ for transients, industry operators, recreational users and trappers / guides and inform them of the emergency status. Advise them to evacuate to the Reception Centre. Use the necessary forms located in the *Forms* Section to record occupant information and advise the Rover / Evacuation Unit Leader of this information		
❑ Provide roadblock relief as required.		
❑ Patrol emergency area to ensure site security.		
❑ Ensure all required resources (equipment, supplies, and personnel) are available.		
❑ Advise Rover / Evacuation Unit Leader of H_2S / LEL detection.		
❑ Complete the required forms in the *Forms* Section.		
❑ Provide status report to the Rover / Evacuation Unit Leader.		
❑ Maintain a log of activities / decisions.		
Level 2		
❑ Ensure all Level 1 Emergency duties have been completed.		
❑ Continue to search the HPZ for transients, industry operators, recreational users, and trappers / guides within the HPZ, and advise to evacuate to the Reception Centre.		
❑ Advise Rover / Evacuation Unit Leader of H_2S / LEL detection.		
❑ Report evacuation status to Rover / Evacuation Unit Leader.		

5.16 Rover / Evacuation Unit

Level 3		
❑ Ensure Level 1 and 2 Emergency duties have been completed.		
❑ Advise Rover / Evacuation Unit Leader of H_2S / SO_2 / LEL detection.		
Post Incident		
❑ Participate in incident debriefing and analysis meetings.		

5.17 Ignition Unit

Name:	**Phone No.:**
Reports To: Public Safety Group Supervisor	**Phone No.:**
Mission:	Evaluate conditions at site and ensure the safe ignition of a release of H_2S.
Resources:	ERP Manual, Maps, Forms, Telephone and / or Radio, Flare Gun.
Forms:	Incident / Event Log, Suspect and Vehicle Identification Worksheet

Level 1	Completed By	Time Completed
❑ Assess situation.		
❑ Instruct safety and rig personnel of duties to secure site control.		
❑ Provide status report to the Public Safety Group Supervisor.		
❑ Ignition Unit is not required at this point.		
Level 2		
❑ Ignition Unit should be on standby if emergency escalates to Level 3.		
Level 3		
❑ Assemble safely to ignite the plume if ignition criteria has been met		
❑ Wait for instructions from Public Safety Group Supervisor.		
❑ Ensure all non-essential personnel have left location.		
❑ Don breathing apparatus and lay down flat on stomach.		
❑ Backup rescue team will hookup safety harness and take cover.		
❑ Once in position, fire the flare toward the plume.		
❑ When safe to do so the rescue team shall assist blowout professionals in controlling the release.		
Post Incident		
❑ Demobilize teams (if required), and equipment.		
❑ Debrief all personnel on site and document improvement opportunities.		
❑ Participate in incident debriefing and analysis meetings.		

5.18 Air Operations Unit Leader

Name:	**Phone No.:**
Reports To: Public Safety Group Supervisor	**Phone No.:**
Mission:	Provide helicopter services.
Resources:	ERP Manual, Binoculars, Maps, Forms, Telephone and / or Radio.
Forms:	Incident / Event Log, Suspect and Vehicle Identification Worksheet

Level 1	Completed By	Time Completed
❑ Upon notification of an emergency, proceed to the Incident Command Post and report to the Public Safety Group Supervisor.		
❑ Obtain briefing from the Public Safety Group Supervisor and assess air support requirements.		
❑ If helicopter evacuation is or may be a requirement, the helicopter services will be placed on standby at a Level 1 Emergency.		
❑ Determine current air traffic status and any flight restrictions.		
❑ Organize preliminary air operations and determine Helibase and Helispot requirements.		
❑ Ensure the establishment of a helicopter landing zone, if required.		
❑ Perform operational planning to maintain effective air operations.		
Level 2		
❑ Ensure all Level 1 Emergency duties have been completed.		
Level 3		
❑ Ensure all Level 1 and 2 Emergency duties have been completed.		
Post Incident		
❑ Demobilize teams (if required), and equipment.		
❑ Debrief all personnel on site and document improvement opportunities.		
❑ Participate in incident debriefing and analysis meetings.		

5.19 EOC Director

Name:	**Phone No.:**
Reports To: Company Executive	**Phone No.:**
Mission:	Provide overall command of the EOC and provide support to the Incident Commander.
Resources:	ERP Manual, Maps, Forms, Telephone and / or Radio.
Forms:	Incident / Event Log, Suspect and Vehicle Identification Worksheet

Level 1	Completed By	Time Completed
❑ Confirm emergency situation (size up).		
❑ What is the nature of the incident?		
❑ How are operations affected by this incident in the operating area?		
❑ Analyze the business continuity of the operating area, if possible.		
❑ Determine other operating areas that may be notified to provide assistance to the response activities.		
❑ If there are any injuries, begin notification procedures of family.		
❑ Advise Company Executive.		
❑ Mobilize required EOC personnel.		
❑ Provide support to the Incident Command Post.		
❑ Record information received from outside sources and investigate.		
❑ Ensure all required resources (equipment, supplies, and personnel) are available.		
❑ Maintain a log of activities / decisions.		
Level 2		
❑ Ensure all Level 1 Emergency duties have been completed.		
Level 3		
❑ Ensure all Level 1 and 2 Emergency duties have been completed.		
Post Incident		
❑ Demobilize teams (if required), and equipment.		
❑ Request for a damage assessment report from the Incident Commander.		
❑ Ensure all necessary site investigations are completed before clean up and repair begins.		
❑ Advise and direct Incident Commander regarding cleanup, repair and resumption of operations.		

5.19 EOC Director

Post Incident - Continued		
❑ Ensure all affected public have been notified of the demobilization and have received assistance.		
❑ Conduct debriefings with Incident Commander and other personnel involved in the emergency response.		
❑ Ensure Critical Incident Stress Debriefing (CISD) is available to staff and evacuees, as appropriate.		
❑ Participate in incident debriefing.		
❑ Collect all forms and documentation.		
❑ Prepare post-incident report and submit to required government agencies.		

5.20 Liaison Support

Name:	**Phone No.:**
Reports To: EOC Director	**Phone No.:**
Mission:	Coordinate with representatives from regulatory and assist agencies. Notify the BCER, RCMP, Local Authorities, and government agencies.
Resources:	ERP Manual, Maps, Forms, Telephone and / or Radio.
Forms:	Incident / Event Log, Suspect and Vehicle Identification Worksheet, External Agency Post Incident Evaluation

Level 1	Completed By	Time Completed
❑ Upon notification of an emergency, proceed to the Emergency Operations Centre and report to the EOC Director.		
❑ Coordinate with the Liaison Officer at the ICP and maintain contact with the government and regulatory bodies throughout the emergency, for example:		
❑ BCER		
❑ EMCR		
❑ Local Authorities		
❑ RCMP		
❑ Ministry of Environment & Parks		
❑ Ministry of Forests		
❑ Ministry of Transportation and Transit		
❑ Local Health Unit		
❑ Ensure all required resources (equipment, supplies, and personnel) are available.		
❑ Complete the required forms in the *Forms* Section.		
❑ Provide status report to the EOC Director.		
❑ Maintain a log of activities / decisions.		
Level 2		
❑ Ensure all Level 1 Emergency duties have been completed.		
Level 3		
❑ Ensure all Level 1 and 2 Emergency duties have been completed.		
Post Incident		
❑ Demobilize teams (if required), and equipment.		
❑ Debrief all personnel on site and document improvement opportunities.		
❑ Participate in incident debriefing and analysis meetings.		

5.21 Risk / Legal Support

Name:	**Phone No.:**
Reports To: EOC Director	**Phone No.:**
Mission:	Monitor and assess the risk management factors that may affect the company. Provide legal advice or work directly with the legal department. Work with the Safety Officer at the Incident Site.
Resources:	ERP Manual, Maps, Forms, Telephone and / or Radio.
Forms:	Incident / Event Log, Suspect and Vehicle Identification Worksheet, Incident Investigation Report

Level 1	Completed By	Time Completed
❑ Complete an Incident / Event Log.		
❑ Maintain communication with the EOC Director and discuss risk management issues.		
❑ Coordinate risk management strategies and provide legal advice or work with the legal department, as required.		
❑ Ensure all required resources are available.		
❑ Complete the required forms in the *Forms* Section.		
❑ Provide status report to the EOC Director.		
❑ Maintain a log of activities / decisions.		
Level 2		
❑ Ensure all Level 1 Emergency duties have been completed.		
Level 3		
❑ Ensure all Level 1 and 2 Emergency duties have been completed.		
Post Incident		
❑ Demobilize teams (if required), and equipment.		
❑ Debrief all personnel on site and document improvement opportunities.		
❑ Participate in incident debriefing and analysis meetings.		

5.22 Information Support

Name:	**Phone No.:**
Reports To: EOC Director	**Phone No.:**
Mission:	Company spokesperson. Provide timely information to media / public seeking information regarding incident. Work with Information Officer.
Resources:	ERP Manual, Maps, Forms, Telephone and / or Radio.
Forms:	Incident / Event Log, Preliminary Media Statement

Level 1	Completed By	Time Completed
❑ Upon notification of an emergency, proceed to the Emergency Operations Centre and report to the EOC Director.		
❑ Act as spokesperson for the company.		
❑ Disseminate information to personnel.		
❑ Notify joint venture partners and other parties, as required.		
❑ Ensure all public and media inquiries are coordinated, and if required, through the Information Officer and the BCER.		
❑ Ensure all required resources (equipment, supplies, and personnel) are available.		
❑ Complete the required forms in the *Forms* Section.		
❑ Provide status report to the EOC Director.		
❑ Maintain a log of activities / decisions.		
Level 2		
❑ Ensure all Level 1 Emergency duties have been completed.		
Level 3		
❑ Ensure all Level 1 and 2 Emergency duties have been completed.		
Post Incident		
❑ Demobilize teams (if required), and equipment.		
❑ Debrief all personnel on site and document improvement opportunities.		
❑ Participate in incident debriefing and analysis meetings.		

5.23 Operations Section Support

Name:	**Phone No.:**
Reports To: EOC Director	**Phone No.:**
Mission:	Determine / implement objectives, strategies, and tactics to carry out the plan and support the Incident Commander and Operations Section Chief.
Resources:	Maps, Forms, Telephone and / or Radio.
Forms:	Incident / Event Log

Level 1	Completed By	Time Completed
❑ Upon notification of the incident, immediately proceed to the Emergency Operations Centre and report to the EOC Director.		
❑ Mobilize the Telephone Unit to begin notification telephone calls to occupants and other area users.		
❑ Assign roles to personnel.		
❑ Record information received from outside sources and investigate.		
❑ Assist the site with corrective / control procedures.		
❑ Assess potential to escalate to a Level 2 Emergency.		
❑ Ensure all required resources (equipment, supplies and personnel) are available.		
❑ Complete the required forms in the *Forms* Section.		
❑ Provide status report to the EOC Director.		
❑ Maintain a log of activities / decisions.		
Level 2		
❑ Ensure all Level 1 Emergency duties have been completed.		
Level 3		
❑ Ensure all Level 1 and 2 Emergency duties have been completed.		
Post Incident		
❑ Demobilize teams (if required) and equipment.		
❑ Assess damage to assets (well site, pipeline or facility).		
❑ Provide assessment report to EOC Director.		
❑ Debrief all personnel on site and document improvement preparedness and response opportunities.		
❑ Participate in incident debriefing and analysis meetings.		

5.24 Telephone Unit Leader

Name:	**Phone No.:**
Reports To: Operations Section Support	**Phone No.:**

Mission:	Coordinate telephone notification with HPZ and other area users, etc.
Resources:	ERP Manual, Maps, Forms, Telephone & / or Radio
Forms:	Incident / Event Log, Telephone / Evacuation Contact Log, Voluntary Evacuation Message, Mandatory Evacuation Message, Resident Shelter Message, Resident Warning Message, Resident Evacuation Message, Transient Evacuation Message,

Level 1	Completed By	Time Completed
❑ Upon notification of an emergency, proceed to the Emergency Operations Centre or alternate location and advise the Operations Section Support of your arrival.		
❑ Obtain pertinent information from the Operations Section Support that is to be communicated to occupants (eg. Reception Centre Unit, evacuation routes, helicopter evacuation required, etc.).		
❑ Activate Telephone Unit.		
❑ Direct Telephone Unit to notify occupants and other area operators.		
❑ Establish and maintain contact with the Rover / Evacuation Unit Leader and the Reception Centre Unit in regard to determining occupants that have been safely evacuated out of the evacuation area and those that are still unaccounted for.		
❑ Maintain a record of all calls, outcome of calls and problems or concerns. Advise Operations Section Support.		
❑ Obtain a report from the Rover / Evacuation Unit Leader of all successful evacuated residences.		
❑ Ensure all required resources (equipment, supplies, and personnel) are available.		
❑ Complete the required forms in the *Forms* Section.		
❑ Provide status report to the Operations Section Support.		
❑ Maintain a log of activities / decisions.		
Level 2		
❑ Ensure all Level 1 Emergency duties have been completed.		
Level 3		
❑ Ensure all Level 1 and 2 Emergency duties have been completed.		
Post Incident		
❑ Demobilize teams (if required), and equipment.		
❑ Debrief all personnel on site and document improvement opportunities.		
❑ Participate in incident debriefing and analysis meetings.		

5.25 Telephone Unit

Name:	**Phone No.:**
Reports To: Telephone Unit Leader	**Phone No.:**
Mission:	Telephone occupants, transients, schools, and other area users within the HPZ and provide obtained related information.
Resources:	Maps, Forms, Telephones
Forms:	Incident / Event Log, Telephone / Evacuation Contact Log, Voluntary Evacuation Message, Mandatory Evacuation Message, Resident Shelter Message, Resident Warning Message, Resident Evacuation Message, Transient Evacuation Message,

Level 1	Completed By	Time Completed
❑ Upon notification of an emergency, proceed to the Emergency Operations Centre or alternate location and report to the Telephone Unit Leader.		
❑ Obtain pertinent information from the Telephone Unit Leader that is to be communicated to occupants (eg. Reception Centre location, evacuation routes, helicopter evacuation required, etc.).		
❑ Notify all area occupants within the HPZ (if applicable), including Residents, Trappers, Guides and other area operators.		
❑ Maintain a record of all calls, outcome of calls and problems or concerns. Advise Telephone Unit Leader.		
❑ Ensure all required resources (equipment, supplies, and personnel) are available.		
❑ Complete the required forms in the *Forms* Section.		
❑ Provide status reports to the Telephone Unit Leader.		
❑ Maintain a log of activities / decisions.		
Level 2		
❑ Ensure all Level 1 Emergency duties have been completed.		
Level 3		
❑ Ensure all Level 1 and 2 Emergency duties have been completed.		
Post Incident		
❑ Participate in incident debriefing and analysis meetings.		

5.26 Planning Section Chief

Name:	**Phone No.:**
Reports To: EOC Director	**Phone No.:**
Mission:	Develop action plan, evaluate information and maintain status of resources.
Resources:	ERP Manual, Maps, Forms, Telephone and / or Radio.
Forms:	Incident / Event Log

Level 1	Completed By	Time Completed
❑ Upon notification of an emergency, proceed to the Emergency Operations Centre and report to the EOC Director.		
❑ Is responsible for the following activities and / or personnel:		
❑ Resources Unit – record status of resources that are committed to the incident.		
❑ Situation Unit – collect, organize and analysis of incident status information and for analyzing the situation as it progresses.		
❑ Documentation Unit – collect, record, and protect all documents.		
❑ Demobilization Unit – orderly, safe, and efficient demobilization of incident.		
❑ Technical Specialists – technical specialists pertaining to the specific emergency response.		
❑ Ensure all required resources (equipment, supplies, and personnel) are available.		
❑ Complete the required forms in the *Forms* Section.		
❑ Provide status report to the EOC Director.		
❑ Maintain a log of activities / decisions.		
Level 2		
❑ Ensure all Level 1 Emergency duties have been completed.		
Level 3		
❑ Ensure Level 1 and 2 Emergency duties have been completed.		
Post Incident		
❑ Demobilize teams (if required), and equipment.		
❑ Debrief all personnel on site and document improvement opportunities.		
❑ Participate in incident debriefing and analysis meetings.		

5.27 Documentation Unit

Name:	**Phone No.:**
Reports To: Planning Section Chief	**Phone No.:**
Mission:	Collect, record, and protect all documents related to the incident.
Resources:	Stationery Supplies, Telephone, Forms.
Forms:	Incident / Event Log

Level 1, 2 or 3	Completed By	Time Completed
❑ Upon notification of an emergency, proceed to the Emergency Operations Centre and report to the EOC Director.		
❑ Record preliminary information and all activities.		
❑ Maintain a chronological order of all information received and transmitted.		
❑ Record outstanding questions.		
❑ Document identified issues.		
❑ Receive, copy, and distribute incoming faxes.		
❑ Keep copies and track all incoming and outgoing correspondence.		
❑ Compile news releases (eg. newspaper clippings). Record news casts from TV or radio pertaining to the emergency.		
❑ Take minutes at briefings, capturing action items for follow up.		
Post Incident		
❑ Participate in incident debriefing and analysis meetings.		

5.28 Logistics Section Chief

Name:	**Phone No.:**
Reports To: EOC Director	**Phone No.:**

Mission:	Ensure that equipment, materials and staff are quickly accessed and directed to the appropriate area in regard to the incident, Incident Command Post, Staging Area, etc.
Resources:	ERP Manual, Maps, Forms, Telephone and / or Radio.
Forms:	Incident / Event Log

Level 1	Completed By	Time Completed
❑ Upon notification of an emergency, proceed to the Emergency Operations Centre and report to the EOC Director.		
❑ Responsible for the following activities and / or personnel:		
❑ Communications Unit – provide communication services (radio, telephone, etc.).		
❑ Food Unit – coordinate meal service for responders.		
❑ Supply Unit – order equipment / supplies required for incident operations.		
❑ Facilities Unit – provide fixed facilities for an incident (incident base, sleeping area, eating areas, etc.).		
❑ Ensure all required resources (equipment, supplies, and personnel) are available.		
❑ Complete the required forms in the *Forms* Section.		
❑ Provide status report to the EOC Director.		
❑ Maintain a log of activities / decisions.		
Level 2		
❑ Ensure all Level 1 Emergency duties have been completed.		
Level 3		
❑ Ensure Level 1 and 2 Emergency duties have been completed.		
Post Incident		
❑ Demobilize teams (if required), and equipment.		
❑ Debrief all personnel on site and document improvement opportunities.		
❑ Participate in incident debriefing and analysis meetings.		

5.29 Finance / Administration Section Chief

Name:	**Phone No.:**
Reports To: EOC Director	**Phone No.:**

Mission:	Provide accounting, procurement, administrative and cost analysis services. Monitor costs associated with the incident.
Resources:	ERP Manual, Maps, Forms, Telephone and / or Radio.
Forms:	Incident / Event Log, Daily Expense Claim Form

Level 1	Completed By	Time Completed
❑ Upon notification of an emergency, proceed to the Emergency Operations Centre and report to the EOC Director.		
❑ Responsible for the following activities and / or personnel:		
❑ Time Unit – record time for incident personnel / equipment.		
❑ Procurement Unit – responsible for financial matters involving vendor contractors.		
❑ Compensation / Claims Unit – process financial matters resulting from injuries, fatalities, property and environmental damage.		
❑ Cost Unit – track costs, analyze cost related data, cost estimates, cost saving measures.		
❑ Ensure all required resources (equipment, supplies, and personnel) are available.		
❑ Complete the required forms in the *Forms* Section.		
❑ Provide status report to the EOC Director.		
❑ Maintain a log of activities / decisions.		
Level 2		
❑ Ensure all Level 1 Emergency duties have been completed.		
Level 3		
❑ Ensure Level 1 and 2 Emergency duties have been completed.		
Post Incident		
❑ Demobilize teams (if required), and equipment.		
❑ Debrief all personnel on site and document improvement opportunities.		
❑ Participate in incident debriefing and analysis meetings.		

5.30 Scribe / Recorder

Name:	**Phone No.:**
Reports To: EOC Director, Incident Commander	**Phone No.:**
Mission:	To document an incident's key events and decisions made during an emergency response. Provide a timeline of events for after action reports, a list of challenges for lessons learned, decisions made for inquiries and legal proceedings, and details on costs and related expenditures.
Resources:	Log Book, Maps, Forms, Telephone and / or Radio.
Forms:	Incident/Event Log

Level 1	Completed By	Time Completed
❑ Upon notification of an emergency, proceed to the Emergency Operations Centre or Incident Command Post and report to the EOC Director or Incident Commander.		
❑ Obtain a briefing of the situation including the onsite and external communications capabilities and restrictions.		
❑ Schedule regular intervals for reporting to the EOC Director or Incident Commander (when on site).		
❑ Ensure sufficient supplies are available:		
❑ Office supplies (pens, paper, staplers, tape, etc).		
❑ Necessary forms.		
❑ Telephone/Radios		
❑ Area Maps		
❑ Contact Lists		
❑ Complete the required forms in the *Forms* Section.		
❑ Maintain an Incident/Event Log		
❑ Transcribe and distribute summary of Planning Cycle meetings		
❑ Maintain the Strategic/Incident Action Plan documents		
❑ Create 'key contact' lists		
❑ Create and update 'To-do' list for designated position		
❑ Maintain other key forms as required		
❑ Provide status report to the EOC Director.		
❑ Maintain a log of activities / decisions.		

5.30 Scribe / Recorder

Level 2		
❑ Ensure all Level 1 Emergency duties have been completed.		
Level 3		
❑ Ensure all Level 1 and 2 Emergency duties have been completed.		
Post Incident		
❑ Demobilize teams (if required), and equipment.		
❑ Collect all forms and documentation.		
❑ Debrief all personnel on site and document improvement opportunities.		
❑ Participate in incident debriefing and analysis meetings.		

6.0 Government Involvement

Government agencies will contribute valuable support to Pacific Canbriam Energy Limited during an emergency by providing advice, resources, and local information. In order to avoid conflicts over jurisdiction and response priorities, company representatives need to work as a team with external groups. Field response shall achieve an integrated response that protects the public, the property, and the environment. The extent of the BCER and other government support will vary depending on the severity of the incident and jurisdiction.

Provincial government agencies and local authorities are involved in the implementation of the ERP. When criteria for any emergency level is met, the Incident Commander must immediately contact Emergency Management & Climate Readiness (EMCR) to advise them of the emergency situation, confirm the level of emergency with the BC Energy Regulator (BCER) and the local RCMP. EMCR will do a fan out notification to all required government agencies including the BCER. Liaison with involved government agencies will be through the BCER representative.

6.1 Government Agencies – Roles and Responsibilities

The following is an outline of the responsibilities for each government agency upon initiation of the Emergency Response Plan:

BC Energy Regulator (BCER)

- Oversees the permit holder's response to an incident.
- Notified by the EMCR, other crown agencies, or by the permit holder of incidents within BCER's jurisdiction.
- Establishes communication with the permit holder .
- Confirms incident level with permit holder .
- Oversees the permit holder's response to an incident.
- Issues road closure order upon request from the permit holder .
- Request NOTAM order from NAV Canada upon request from the permit holder .
- May send an BCER representative to the On-Site Command Post and / or Evacuation Centre.
- May establish a government EOC at the BCER office.
- May confirm ignition decision with permit holder if time permits.
- May confirm / coordinate media releases issued by the permit holder.
- May confirm downgrade of incident level.
- May issue orders to preserve an incident site for investigation.

Emergency Management & Climate Readiness (EMCR)

- Implement the Government of British Columbia Provincial Emergency Program telephone fan out to alert all affected departments, municipalities and other levels of government and industry.
- Alert the following local authorities whose jurisdictional boundary is affected by the incident:
  - BCER.
  - Ministry of Environment & Parks.

  - Ministry of Environment & Parks, Waste Management Branch.
  - Ministry of Forestry, Fish and Wildlife Branch.
  - Ministry of Forestry, Forest Service.
  - Ministry of Transportation and Transit / Federal Public Works.
  - Regional District.
  - Local Health Region.
- Provides a representative to the Provincial Regional Emergency Operations Centre (PREOC).
- Coordinates reception plans for evacuation of the public with the affected municipalities.
- All other actions to protect British Columbia property from the effects of sour gas.

Note: EMCR does not contact WorkSafeBC during their telephone fan out.

Minister of Agriculture and Food

- Provide advice to farmers, agriculturists, and fishers on the protection of crops, livestock and provincially managed fish and marine plant stocks.
- Coordinate the emergency evacuation and care of poultry and livestock.
- Inspect and regulate food quality.
- Identify food and potable water supplies.
- Assist the Minister of Health in the inspection and regulation of food safety.

Attorney General

- Provide advice to local governments, provincial ministries and government corporations on legal matters relating to the preparation and promulgation of emergency orders, regulations, declarations, and contractual arrangements.
- Prepare, promulgate and implement orders relating to law enforcement and internal security.
- Through the police force having jurisdiction, provide the following:
  - Advice to local authorities respecting the maintenance of law and order.
  - Reinforcement of local police services.
  - Security control of emergency areas.
  - Traffic and crowd control.
  - Search and rescue services for missing persons on land and in inland waters.
  - Provide coroner's services including the operation of temporary morgues, identification of the dead and registration of death.
- Through Emergency Management & Climate Readiness (EMCR), provide the following:
  - Provide a 24 hour capability to direct requests for emergency assistance to appropriate municipal, provincial, federal, or private sector agencies.
  - Serve as the point of contact for requests for emergency assistance from and to the Government of Canada, unless otherwise specified in intergovernmental agreements.
  - Administer the emergency assistance vote to cover those of the incremental costs that:
    - Are incurred by local governments, ministries, and government corporations in responding to an emergency.
    - The minister has approved.
- Organize and administer registered volunteers and temporary workers as requested or detailed in emergency response plans.

- Coordinate the emergency response activities of supporting ministries as requested or detailed in emergency response plans.

Minister of Environment & Parks

A Ministry representative (Environmental Emergency Response Officer - EERO) will provide regulatory oversight and monitor the situation to ensure that the Responsible Party (RP) is taking the appropriate actions:

- May provide a representative to the Off-Site Command Centre (OSCC) and the BCER Emergency Operations Centre (EOC) and / or the Provincial Emergency Operations Centre (PREOC) on a 24-hour basis. In a larger scale incident, based on risk, additional ministry resources such as IMTs (Incident Management Teams) may be deployed to establish unified command and monitor, augment, or take over the response if the Responsible Party fails to take appropriate action as deemed necessary by the EERO or Provincial Incident Commander.
- May assist the RP to ensure that other required agencies and affected stakeholders are contacted.
- Monitors all discharges to the land, atmosphere, and all water bodies.
- May provide assistance with hazardous waste management.
- May conduct sampling for monitoring and enforcement purposes.

Minister of Finance

- Provide risk management services in respect of possible compensation and liability claims.
- Arrange the assignment of suitably qualified public employees from various ministries to special emergency duties.
- Coordinate, in cooperation with ministries, the establishment and maintenance of Emergency Financial Response and Backup Teams throughout BC.

Minister of Forests

- Provide Ministry of Forests personnel with equipment, supplies, telecommunications equipment, aviation support and weather information to assist in emergency response operations.

Minister of Government Services

- Provide Government aircraft and vehicles.
- Provide for the leasing of purchase of emergency supplies and equipment.
- Through the government communications office, coordinate the provincial government emergency information services.

Environmental Health

- Act as a consultant utilizing provided information on toxic chemicals to the Emergency Operations Center.
- Monitor health effects of the incident to ensure appropriate data is collected and investigate such health effects.
- Provide advice to the government on the existing or potential health effects of the incident.
- Establish and operate trauma teams for emergency health services.

- Provide health advice and safety levels for any health care or special care facility and for the more vulnerable residents.
- Monitor adverse effects / contamination of water systems.
- Enforce and regulate Public Health Regulations.

Minister of Housing and Municipal Affairs
- Through the office of the fire commissioner, coordinate firefighting in a declared state of emergency.

Minister of Social Services
- Provide the following: Food, clothing, and shelter in private or congregate facilities.
- Registration and information to assist in locating and reuniting of families.
- Care of children who are not accompanied by a guardian or custodian, and mentally challenged persons.
- Necessary financial assistance.
- Provide clothing, food, shelter, registration, and information services as may be required by emergency workers.
- Provide assistance to local authorities in the planning and operation of emergency social services consisting of emergency feeding, clothing, lodging, registration and inquiry and personal services.

Minister of Transportation and Transit
- Coordinate and arrange for transportation, engineering, and construction resources.

British Columbia Hydro and Power Authority
- Coordinate the restoration of electric facilities, taking into account domestic, commercial, industrial and government requirements.
- Interrupt Hydro services when they pose a threat to life or property.
- Conduct safety measures in respect to BC Hydro dams, including initiating warnings in the event of dam failures.

British Columbia Rail Limited
- Provide priority movement of emergency personnel, equipment, and supplies.
- In cooperation with Transport Canada, assist at railway crashes, derailments in the conduct of rescue operations, removal of debris and the cleanup of hazardous material.
- Provide railcars for emergency facilities.
- Provide specialized equipment.

British Columbia Systems Corporation
- Provide technical advice and assistance on the acquisition of telecommunications equipment, systems, and computers.

British Columbia Transit
- Coordinate requirements for public transportation, including school and privately owned buses.

Technical Safety BC

- Technical Safety BC is an independent, self-funded organization that oversees the safe installation and operation of technical systems and equipment across the province subject to the Safety Standards Act and / or Railway Safety Act.
- Technical Safety BC is to be notified of any incidents and hazards of "regulated products", which are defined as a piece of equipment or system subject to the Safety Standards Act.

WorkSafeBC

- WorkSafeBC should be notified in any Level of Emergency (1, 2 or 3) as all of these incidents deal with worker safety.
- WorkSafeBC notification and reporting requirements are listed in the *Levels of Emergency Section* of this ERP.

Royal Canadian Mounted Police

- Assist with roadblocks, traffic control and evacuation.

Local Municipal Government

Each Regional District has a formal Emergency Management Plan which outlines the measures and sources of assistance that can be obtained to support emergency response efforts within their jurisdiction. Upon request from the BCER , the Regional District may address emergency response capabilities, expectations, and preparedness. If required, the Regional District may activate their emergency plan in order to achieve any of the following:

- Dispatch representative(s) to the BCER's PREOC, if established.
- Ensure notification of endangered area residents.
- Coordinate Emergency Social Services (ESS).
- If necessary, declare a State of Emergency.
- Assist in public information service.

BC Ambulance Service (BCAS)

- Coordinate patient transportation.
- Assist in the mobilization of other available ambulance and auxiliary ambulance resources, as required.
- Coordinate health care needs at Reception Centres.

Canada Energy Regulator (CER)

- Monitors, observes, and assesses the overall effectiveness of a company's emergency response and holds the company accountable for responding appropriately
- Confirms that a company is following its emergency procedures manual commitments, plans, and procedures and CER regulations, and identifies non-compliances and potential additional threats
- Participates in single or unified command and other roles within the ICS framework (or similar framework if the ICS is not used)
- Investigate the event, either together with the Transportation Safety Board, under the Canada Labour Code, or under the CER Act or COGOA (whichever is applicable)
- Coordinates post-emergency follow-up meetings with the company to ensure compliance further and to share knowledge obtained during the emergency

- Inspects and examines the integrity of the pipeline or facility and verifies that repairs are completed appropriately
- Oversees cleanup and approves the restart of the pipeline
- Coordinates indigenous and stakeholder feedback both during and after the emergency phase
- Requires appropriate remediation of contaminated areas
- Takes enforcement actions as required

Environment & Climate Change Canada (ECCC)
Environment & Climate Change Canada (ECCC) may act as the lead agency if a spill occurs at a federal facility, at the request of a province or territory, or when the environment is not being well protected. At other times, ECCC's role is to provide support and advice to the lead agency.

ECCC provides 24 hour response support and advice through five regional offices across Canada, the National Environmental Emergencies Centre in Gatineau, Quebec, and the Environmental Technology Centre located in Ottawa, Ontario.

ECCC staff provide technical advice to responders, employ state-of-the-art monitoring equipment, evaluate environmental impacts, and appear in court to aid in polluter prosecution.

When the need arises to access a wide variety of expertise and resources, a Regional Environmental Emergencies Team (REET) can be activated.

ECCC Emergency officers have hazardous materials (HAZMAT) expertise, backed by scientific support, which enables response in the event of spills involving hazardous materials. The role of the environmental emergency response team is to provide advice and support on:

- Hazardous material properties, behaviour, fate, and environmental effects.
- Spill behaviour movement modeling using the latest models and techniques.
- Training in personnel protection at pollution emergencies.
- Advice and direct support on state of the art, onsite monitoring of human and environmental hazard levels at pollution emergencies.
- Sample collection at spill sites.
- The evaluation of spill countermeasures, particularly those relating to containment and recovery, treatment, and disposal techniques.

7.0 Mutual Aid

Mutual Aid among industries and government agencies allow for sharing of personnel and equipment, which enhances response capabilities.

A wide range of emergencies may occur that have an impact on neighbouring stakeholders. In this event, multiple parties may want to provide assistance during the emergency.

It must be agreed upon prior to any type of third party response that Pacific Canbriam Energy Limited will remain the primary emergency responder, and that any assistance provided by third parties must be under the supervision of a Pacific Canbriam Energy Limited representative. Furthermore, the party providing mutual aid must comply with all applicable Pacific Canbriam Energy Limited policies and applicable government regulations.

7.1 Municipal Mutual Aid

During an incident, the regional district and provincial health authority will be notified, via telephone or in person, of the situation and kept apprised of decisions to evacuate, shelter in place, etc. The Incident Commander may contact mutual aid partners or assign another responder to do so. Municipalities may provide assistance, where capable and as required, to assist with the coordination and administration of a reception centre, assist with evacuations and roadblocks, establishing the respective command centre, arranging temporary accommodations and HPZ public notifications.

Each Regional District has a formal Emergency Management Plan which outlines the measures and sources of assistance that can be obtained to support emergency response efforts within their jurisdiction. Upon request from the BCER, the Regional District may address emergency response capabilities, expectations, and preparedness. If required, the Regional District may activate their emergency plan in order to achieve any of the following:

- Dispatch representative(s) to the BCER's PREOC, if established.
- Ensure notification of endangered area residents.
- Coordinate Emergency Social Services (ESS).
- If necessary, declare a State of Emergency.
- Assist in public information service.

Peace River Regional District	
24 Hour Number	250.784.3200 or 800.670.7773
Primary Emergency Contact	Kevin Clarkson, General Manager Community Services Bus: 250.784.3218 Cell: 250.219.3000 Email: Kevin.Clarkson@prrd.bc.ca
Secondary Emergency Contact	Kevin Kirkham, Protective Services Manager Bus: 250.784.3222 Cell: 250.219.4080 Email: ryan.kirkham@prrd.bc.ca
Main Office:	250.784.3200 Fort St. John Branch: 250.785.8084
Address:	1981 Alaska Avenue Dawson Creek, BC V1G 4H8

Roles & Responsibilities

Peace River Regional District

1981 Alaska Avenue, Box 810, Dawson Creek, BC V1G 4H8
Tel: (250) 784-3200 Fax: (250) 784-3201 www.prrd.bc.ca

Local Authority (Regional District)

Peace River Regional District has a formal Emergency Management Plan which outlines the measures and sources of assistance that can be obtained to support emergency response efforts within their jurisdiction. Upon request from the Oil and Gas Commission (OGC), the Regional District may address emergency response capabilities, expectations and preparedness. If required, the Regional District may activate their emergency plan in order to achieve any of the following:

- Dispatch representative(s) to the OGC's Emergency Operations Centre (EOC), if established
- Provide support to ensure notification of endangered area residents.
- Provide support to coordinate and deliver emergency social services to evacuated residents
- If necessary, declare a State of Local Emergency and issue an evacuation Alert, Order and Rescind
- Assist in a public information service (joint OGC, Industry, local government)
- Provide building re-entry procedures.

Revised October 27, 2010

Consultation Details

The information above was confirmed / revised on July 16, 2025 by Catherine Main Reception.

7.2 Industry Mutual Aid

Contract Operators and / or local industry operators may provide assistance in an emergency situation. Written or verbal mutual aid understandings may be established allowing for the sharing of resources.

Local industry operators may assist with the coordination and administration of roadblocks, manning equipment used during the response effort and / or filling additional response roles as dictated by the needs of the response effort. Mutual aid responders should be in support roles only and should not fill a command or control role in the response.

Assistance to / from local industry will be based on operational availability. Personnel, equipment, or other resources may be supplied without disrupting operations at the time of the emergency response. Mutual aid response will be based on a 'Best Efforts' response.

All Emergency Response personnel have the 'Right to Refuse Unsafe Work'. Life Safety is our #1 priority. Mutual Aid Emergency Responders must immediately notify their supervisor upon receiving a Mutual Aid request & limit personal and corporate risk exposure when reacting to a mutual aid request. Corporate liability should not be increased due to a Mutual Aid response.

All Emergency Response personnel must react within their capabilities and trained competencies. If another Area Operator provides assistance, the principal behind this assistance should remain as follows:

- Companies or individuals providing assistance are to provide the support outside the lease boundary. The focus will be to provide the manpower and support required for roadblock crews, rovers, resident contact, and evacuation co-ordination as required by Pacific Canbriam Energy Limited requesting the assistance.
- Third party responders will report to the Incident Commander or other coordinating position in the area.
- Individuals providing assistance retain the right to withdraw the assistance should his/her personal safety be jeopardized.

7.3 Third Party Emergencies

For emergencies involving third parties, Pacific Canbriam Energy Limited will respond with the procedures most appropriate to the event in the *Immediate Actions* Section.

Where Pacific Canbriam Energy Limited has a legal obligation to respond, they shall respond immediately in accordance with this ERP to the extent required by law.

Where Pacific Canbriam Energy Limited has no legal duty to respond to a third party emergency, (but where public perception or the name of Pacific Canbriam Energy Limited is involved in any way, or a definite threat exists to people or the environment), and prompt response is not forthcoming from others, Pacific Canbriam Energy Limited personnel will attempt to respond to the extent required to control and contain the emergency and eliminate danger to the public.

When Pacific Canbriam Energy Limited has no association to the emergency, Pacific Canbriam Energy Limited will attempt to respond when requested by government authority, the public or industry without prejudice. All emergencies shall be reported internally and externally in accordance with the procedures set out in this ERP.

7.4 Assistance from Local Health Authorities

Northern Health may, if capable, carry out the following activities:

- Act as a consultant utilizing provided information on toxic chemicals to the Emergency Operations Center.
- Monitor health effects of the incident to ensure appropriate data is collected and investigate such health effects.
- Provide advice to the government on the existing or potential health effects of the incident.
- Establish and operate trauma teams for emergency health services.
- Provide health advice and safety levels for any health care or special care facility and for the more vulnerable residents.
- Monitor adverse effects / contamination of water systems.
- Enforce and regulate Public Health Regulations.

Emergency Response Roles & Responsibilities

Health Emergency Management BC, North (HEMBC)

HEMBC is a program under the Provincial Health Services Authority (PHSA). HEMBC provides the expertise, education, tools, and support specifically for the BC Health Sector to effectively mitigate, prepare for, respond to, and recover from the impacts of emergency events; ensuring the continuity of health services. There is a HEMBC team in each BC health authority. HEMBC-North deals specifically with Northern Health.

Roles and responsibilities:

- Maintain a 24-hour emergency/on call contact number for notification and activation of the health system in Northern BC (appendix I)
- Notify/activate the appropriate Northern Health programs (i.e. Public Health, Acute Care, etc.) based on the nature of the incident/emergency event.

Northern Health (NH)

Northern Health is the regional health authority responsible for providing health services to 300,000 people over an area of 600,000 square kilometers in the province of British Columbia. Services include:

- Acute (hospital) Care
- Public Health (Protection, Preventive and Population Health services)
- Mental Health and Addictions
- Home and Community Care

In the event of a major emergency/disaster, Northern Health will provide health care services within its capacity, and will activate its emergency response management plan(s).

NH Roles & responsibilities - <u>PREPAREDNESS (PRE-EVENT):</u>

- Participate with industry, local authority and other partners in the development of their Emergency Response Plans as it relates to health authority roles and responsibilities:
- Participate in stakeholder training and exercises associated with activation of an Emergency Response Plan, in which Northern Health or HEMBC have a role and responsibility (as resources allow);

NH Roles & responsibilities - <u>RESPONSE:</u>

- Activate internal health emergency management plans related to ongoing provision of services (listed above);
- Provide acute care and emergency services at existing Northern Health hospitals/health centres;
- Work with BC Emergency Health Services (Ambulance) and the BC Patient Transfer Network to transport patients to the appropriate levels of care;
- Apply and enforce the Public Health Act, and associated regulations;
- Provide advice/information to the stakeholders on the existing or potential public health effects of an incident (including drinking water safety, air quality, environmental contaminants, communicable disease prevention, re-occupancy of evacuated areas, etc.);
- Provide advice/information on the best methods for monitoring health effects from an incident.
- Assist in development of (joint) messaging for public information on emergency incidents;
- Provide guidance to stakeholders and local authorities on public health considerations in operating reception and evacuation centres, and group lodging facilities

NOTE: British Columbia Emergency Health Services (BCEHS - Ambulance) remains independent of Northern Health. If an ambulance is required please contact BCEHS via 911 (or the local contact number, if 911 is not available in your area).

Appendix I

NH/HEMBC- Contact information

1. **For Emergency events that require immediate connection with Northern Health, please call :**
   - HEMBC on call number (24/7) **855-554-3622** (or 855-55-HEMBC)
     - HEMBC will notify/activate the appropriate Northern Health programs (i.e. Public Health, Acute Care, etc.) based on the nature of the event/ emergency. Please include this number in industry ERPS, for the use of permit holders in contacting Northern Health on an emergency basis.
     - **Please do NOT** include this number on Public Awareness Pamphlets for individual projects; the EMBC/Oil and Gas Commission's emergency number(s) is more appropriate, and the HEMBC 24/7 number is on record with those agencies.

2. **For non-urgent requests related to Emergency Response Plans, or emergency exercise planning/information,** contact HEMBC North Director Mary Charters, at:
   - 250-617-5288
   - HEMBC@northernhealth.ca

3. **For Environmental assessment inquires and general government consultation questions pertaining to health** please email the NH Office of Health and Resource Development at:
   - resource.development@northernhealth.ca

EMERGENCY RESPONSE ROLES & RESPONSIBILITIES

Before An Emergency

- Assist the BCER with planning initiatives regarding upstream petroleum industry emergency response as requested by the BCER
- EMCR Northeast Region receives Industry Facility Emergency Response Plans.
- Participate in selected licensee ERP exercises when requested as time permits.
- Maintain a 24 hour 800 telephone contact where petroleum industry spill incidents can be reported.
- Maintain 24 hour emergency contact numbers for local governments and provincial emergency responders.

During an Emergency

- ECC Victoria will notify the BCER on call Emergency Response Officer and initiate British Columbia's notification of government agencies including MOF, MOE, MOT, Health Unit, WorkSafe BC, affected municipalities and all other level of government and industry, depending on the level of "coding" (notification Code: 1,2,3 is determined by the Lead Agency MOE or BCER); depending on the code level Standard Operating Procedures (SOP's) in ECC will determine who is notified).
- Provide representatives to help coordinate provincial response as required.

After an Emergency

- As requested by BCER.

8.0 Communications

Clear, concise communication is essential to a successful response to an emergency. Care must be taken to provide early notification that is both accurate and concise. There are 3 main phases in the communication process covered in this section:

- Non Emergency Communication.
- Emergency Communication.
- Post Emergency Communication.

8.1 Non Emergency Communication

These communications are designed to keep people informed of operations. Non-emergency communications that typically occur with the undertaking of a development project include:

- Personal consultations and notifications during the public involvement program.
- Operational communications pertaining to pre sour meetings, rig moves and the completion of operations.
- Updates or revisions to the ERP.

Personal Consultations and Notifications
Pacific Canbriam Energy Limited may be required to conduct a public involvement program identifying all individuals, residents, public facilities, local authorities, and area operators that may be impacted by a development project. This identification process can be accomplished through means such as identifying surface developments within an HPZ, meetings with local interest groups and community leaders, contacting other industrial operators and government agencies / departments and talking with land owners. Pacific Canbriam Energy Limited may be required to develop public information packages for personal consultations and notifications during this public involvement program.

Planned Public Communication
Keeping the public informed as operations proceed is critical to the success of a project. The planned communication may be done in person or by an automated call out system.

Operational Communications
Operational communication is conducted by staff working in conjunction with the companies' operations. This group can provide valuable feedback to the project managers to keep the ERP and other project details current.

Websites and Toll free Numbers
A website or bulletin board may be used for projects to provide updates to the resident(s) and interested parties.

Toll free numbers are an effective way to communicate with residents. They are to be monitored and answered at all times.

8.2 Emergency Communications

Emergency communications must be clear and concise. In the event of an emergency, the following procedures may be used to ensure communications are completed in an organized and effective manner.

Initial Notifications – In the Field
These steps are to be taken as soon as the caller is safe and can make the call. The earliest possible initial notifications need to occur before a response is undertaken.

Step 1: Contact Immediate Supervisor or Pacific Canbriam Energy Limited's 24 Hour Emergency Line **1.877.269.2877,** and

Step 2: Provide critical data:

- Your name and return telephone number(s)
- Your present and future location
- The present status of:
  - Injuries.
  - Damage to property.
  - Damage to the environment.
- Other critical data.
- Your next actions.
- The present weather at your location.
- What you need assistance with.

Step 3: Activate the ERP, assume the role of Incident Commander until relieved by a more senior Pacific Canbriam Energy Limited representative. Contact EMCR emergency number **800.663.3456** immediately and upon contact with the BCER, confirm level of emergency.

Initial Notification Received – With the EOC
Once the notification of a potential emergency has been received, the supervisor needs to respond immediately.

Step 1: Contact the Incident Commander and advise of the potential emergency.

Step 2: Assemble the Emergency Operations Committee and review the potential emergency. Contact EMCR emergency number **800.663.3456** immediately and upon contact with the BCER, confirm level of emergency.

Step 3: If a Level 1 or higher is declared, activate the ERP, assemble the response team, and assign key roles.

Ongoing Emergency Communication
There are 4 types of Emergency Communication that will occur during an Emergency:

- Response Teams Communication.
- Internal Communication (Head Office).
- External Communication (Outside of Response Teams).
- On-Site Communication.

All communication must be accurately recorded and followed up on. Communication must be clear and concise during the response.

Response Teams
The Emergency Operations Committee and Incident Commander must clearly identify who is participating in the response and identify their role(s) in the emergency. This shall then be communicated to all responders. Regularly scheduled meetings may be held, as needed.

The communication flow is based on the ICS structure:
- Only Commanders and Section Chiefs can communicate outside of the response structure with the other response team.
- The Units in the field or on site report directly to their Leaders.
- The Leaders report directly to the Supervisors.
- The Supervisors report directly to the Section Chiefs.
- The Section Chiefs report directly to the Incident Commander.
- The Emergency Operations Committee and the Incident Commander are to have a direct line of communication.

Reporting
All responders are required to fill out the necessary forms located in the *Forms* Section and return them to their Unit Leader or person they are reporting to immediately following the incident. All internal reports are to be retained by Pacific Canbriam Energy Limited for review or provided to the BCER upon request.

The EOC Director, in consultation with the Incident Commander will provide written reports within 14 days of the incident, detailing the cause of the incident, the means used to control or end the emergency situation, lessons learned and any additional information to outside agencies including emergency services, regulatory agencies and other public authorities.

Internal Communication (Head Office)
Should an emergency occur during normal business hours, all local staff should be notified of the emergency and asked to standby in case they are asked to become a part of the response. Additionally:
- The Receptionist shall be advised on how to direct all incoming calls.
- No contact shall be made with outside agencies, except approved statements made by the Information Officer, to prevent media leaks.
- Consideration to the length of the emergency should be given and some staff should be released so that they may become team members in 8-10 hours.
- Avoid making public announcements to protect confidentiality.

External Communications (Outside of the Response Teams)
All communication outside of the Response Teams may be subject to public scrutiny so be cautious, accurate, calm, factual, and punctual.

Public Notification
Pacific Canbriam Energy Limited must make the information listed in the below table available to the public as soon as possible during an emergency

Information Disseminated to the Public at the Onset and During an Incident
To those evacuated or sheltered – during
▪ Type and status of incident. ▪ Location and proximity of the incident to people in the vicinity. ▪ Public protection measures to follow including sheltering and evacuation instructions, and any other emergency response measures to consider such as the location of the reception centre. ▪ Actions being taken to respond to the situation, including anticipated time period. ▪ Contacts for additional information. ▪ Description of the products involved and their short term and long term effects. ▪ Potential effects the incident may have on people in the vicinity and what the affected public must do if they experience adverse effects. ▪ Areas impacted by the incident.
To those evacuated or sheltered – post incident
▪ Status of recovery ▪ Financial reimbursement information ▪ Contact for additional information
To the general public - during
▪ Type and status of incident. ▪ Location of the incident. ▪ Areas impacted by the incident. ▪ Description of the products involved. ▪ Confirmation that the permit holder is responding to the incident. ▪ Actions being taken to respond to the situation, including anticipated time period. ▪ Contacts for additional information.

On Site Communication
Pacific Canbriam Energy Limited shall supply the communication systems and equipment required to provide an effective exchange between the Incident Command Post and the:
- Evacuation, roadblock, and air monitoring personnel.

- Emergency Operations Committee.
- Reception Centre Leader.
- Provincial Regional Emergency Operations Centre (PREOC).
- Staging Area.

Radio Communications
Radio communications will be utilized where required for on site and off site communications.

Landline Telephones
A landline telephone shall be available from the Incident Command Post to the EOC and the PREOC. Landline telephones shall also exist at the Reception Centre. In some cases, landlines may not be available, in those instances cellular or satellite communications shall be available.

Mobile/Cellular Telephones
Mobile/cellular telephones will be located at the Incident Command Post and shall be available to all field personnel.

Media
All communication with the media is undertaken by the Information Officer in consultation with the BCER. The Information Officer must coordinate any media releases with the BCER and applicable government agencies prior to releasing the information to ensure consistency and accuracy of information. Communication with the media should not be delayed and should be calm, factual, and punctual. Pacific Canbriam Energy Limited shall keep a record of all public statements released to the media and the data and time of release for post incident debriefing and reporting purposes.

The following information must be released to the public as soon as possible:
- Type and status of incident.
- Location and proximity of the incident to people in the vicinity.
- Public protection measures to follow including sheltering and evacuation instructions, and any other emergency response measures to consider such as the location of the reception centre.
- Actions being taken to respond to the situation, including anticipated time period.
- Contacts for additional information.
- Description of the products involved and their short term and long term effects.
- Potential effects the incident may have on people in the vicinity and what the affected public must do if they experience adverse effects.
- Areas impacted by the incident.

Pacific Canbriam Energy Limited employees and contractors/sub-contractors shall not volunteer information or opinions regarding any incident. If approached by the public or media, refer the representative to the Incident Commander or when established, the designated Information Officer. Do not speculate on the cause or damages resulting from the emergency and under no circumstances are the names of any victims to be released before next of kin are notified.

Next Of Kin Notification / Visit (Serious Injury / Death)

Preparation

- Immediacy is important.
- The family must be notified prior to the media or a neighbour contacting them.
- Coordinate the notification with appropriate local authorities. For example, the RCMP have procedures to follow and will normally make the notification, accompanied by a company representative.
- Choose a team of two or three people, considering appropriate Pacific Canbriam Energy Limited representation (eg. Information Officer). These people should be prepared to spend a minimum of three hours time with the next of kin.
- Human Resources can supply family structure, names, and information on employee benefit issues. Co-workers may be able to supply names for support persons.
- Determine what details of the incident can be revealed before meeting the family. Only factual information can be provided of which may not be immediately available. Check with the Incident Commander before releasing information.
- Determine, when possible, the cause of death or injury, what was done to rescue, ease suffering, etc.

When Meeting the Family

- The RCMP will perform notifications along with a Pacific Canbriam Energy Limited representative.
- Visit the home shortly after confirmation of serious injury or death if a company representative did not accompany the RCMP.
- Request that you be invited inside.
- Try to be seated and introduce yourself. If you remain standing this can be interpreted as a threatening stance.
- Display calmness / openness, competency / compassion.
- Provide facts in a brief and honest manner, no speculations, personal opinions or blaming.
- If it is a death, use the word “dead” rather than “passed away.”
- Do not make empty promises (eg. “Don’t worry I’m sure everything will turn out all right.”)
- Do assure the family that, “We will do everything we can to help you through this.”
- Listen carefully and allow the person(s) to express emotions.
- Ask, “What are your concerns / wishes / needs / right now?” - so that you can be clear about what you can offer.
- People can react very differently. Be prepared for anger, denial, tears, withdrawal, etc.
- Be aware that a variety of physical reactions could occur.
- The chance of a serious adverse medical reaction to bad news is remote, however, you might encourage a visit to the family physician and any suggestion of suicidal thinking requires immediate medical assessment.
- Do not leave an individual family member alone. Offer transportation to wherever requested.
- Assist contact with a support person (eg. family, friends, clergy, etc.).
- Offer to arrange childcare / telephone answering service etc. until family / friend support has been organized.

- Leave the following names and telephone numbers with the family:
  - Who to reference for media inquiries.
  - Pacific Canbriam Energy Limited Human Resources.
  - Employee Assistance Program Contact.
  - Member of Notifying Team.

Follow Up

- Notify the Pacific Canbriam Energy Limited Human Resources and the EOC Director immediately after a visit.
- Human Resources can access an Employee Assistance Program (EAP).
- Check back with the family to offer assistance on a regular basis.
- If a fatality was involved, consider who from the company will attend the funeral services.

8.3 Post Emergency Communications

Tasks are not complete when the response to the emergency is over. A great deal of work and communication remains. The types of Post Emergency tasks are:

- Gathering of response team logs.
- Contacting any parties who were notified.
- Resident follow up.
- Damage assessment and monitoring.
- Press releases and media follow up.

Gathering of Response Team Logs

Both the Emergency Operations Committee and the Incident Commander need to gather notes and logs from all persons who responded to the incident so that they may be reviewed for:

- Required follow ups.
- Submission to regulatory agencies.
- Learnings and ERP updates.

Contacting Parties Who Were Notified

All agencies, residents, mutual aid partners, and bystanders that were contacted during the emergency need to be followed up with. Needs, insights, or observations shall be gathered, and everyone shall be informed of the current status of the emergency. Failure to contact any single entity may result in poor public relations.

Resident Follow Up

All residents, occupants, transients, or other members of the public that were contacted or adversely affected by the emergency need to be followed up with immediately to determine additional physical needs, emotional or financial losses, business continuity concerns, etc. Each follow up needs to be documented and concerns dealt with immediately.

Damage Assessment and Monitoring

Agencies or members of the public that have suffered damage shall be continuously followed up with. On site damage needs to be documented and monitored to prevent further contamination and avoid evidence from being altered.

Press Releases and Media Follow Up

Ensure a complete and accurate press release is prepared after the emergency and make certain that it reaches every member of the press who attended. Focus on the many positives from the response (eg. all safety equipment operated as required, training was extremely beneficial, the quick response resulted in a minimum of damage, no loss of life or serious injuries occurred, etc.).

9.0 Post Incident Procedures

Post incident procedures may be lengthy and, in some instances, may be longer than the incident itself. The time period between the demobilization of the response and the implementation and completion of the recovery program may be from a few days to several weeks depending on the incident.

Keeping the public and government informed of the post emergency procedure process is critical to the success of returning to normal activities and rebuilding public confidence.

The decision to return people to the area and to resume normal operations will be made by Pacific Canbriam Energy Limited and relevant government agencies responsible for public safety. Government clearance to resume normal activities may be required if there has been a fatality, serious injury, or extensive damage. Relevant government agencies that may be involved include the RCMP, WorkSafe BC, Occupational Health and Safety, BCER, EMCR, and environmental agencies.

Once a decision to return to normal status is made, Pacific Canbriam Energy Limited will notify all affected parties.

When the all clear is given, ensure that:
- Buildings are ventilated and checked for gas pockets before allowing the occupants to enter.
- All safety equipment, machinery and tools are cleaned, repaired, and returned to their normal locations.
- All work areas are cleared and restored.
- Emergency responders and other key participants in the emergency are debriefed as soon as possible.
- Critical Incident Stress Debriefing (CISD) is quickly initiated whenever required.

Post Incident Manual Check
After an incident is resolved, this ERP must be reviewed for completeness. Any defaced or missing pages are reported to the manual coordinator and are replaced.

9.1 Response Demobilization

- Demobilize response equipment / supplies.
- Ensure all equipment is serviced and recalibrated.
- Ensure all equipment / supplies are replenished.
- Ensure the removal of any public notifications that may have been posted.
- Submit / collect all response incident / event logs and all other forms.
- Ensure all evacuees have been notified of the demobilization and have received assistance.
- Collect all claim forms from evacuees and submit to the Finance / Administration Section Chief to process.

9.2 Response Debriefing

- Complete response debriefing for all response teams.
- Submit, in writing, response findings and recommendations to the Incident Commander, which will be submitted to the EOC Director.

9.3 Critical Incident Stress Management (CISM)

An important part of any emergency response and post emergency wrap up is to set up a CISM program for all Pacific Canbriam Energy Limited personnel and affected residents that are directly involved in the emergency response within 72 hours following the incident.

After an emergency, company personnel should go through a critical incident stress debriefing. Personnel who responded to the emergency may have experienced one or more of the following:

- A death or serious injury of a co-worker, perhaps witnessed events that have left them very distressed and unable to cope with what they witnessed.
- Witnessed distressing sights (eg. casualties of co-workers or members of the public).
- Stress from pressures, responsibility overload, physical, mental, and emotional demands, limited resources, and high expectations from others.
- Extreme working conditions (eg. hazardous environments or weather conditions).

Company personnel may require assistance from mental health personnel to deal with what they are feeling after the emergency is over. Pacific Canbriam Energy Limited will ensure that all responders to the emergency are provided with the necessary medical or mental health treatment they require to deal with the stress of the emergency.

A CISM program will need to be made available to the affected residents / occupants of the HPZ as well as the EAZ (if applicable). Responders and the affected public should not be involved in the same CISM sessions.

9.4 Recovery Plans – Public

A comprehensive recovery plan will need to be developed and implemented to keep the public apprised of the recovery process and commence the rebuilding of public confidence.

Operations at Site

- A comprehensive recovery plan will need to be developed and implemented to return operations to the site, or to ensure that the site is safe.

Administrative

- Maintain site integrity through the use of roadblocks, rovers, and physical barriers
- Meet with company legal counsel
- File an insurance claim
- Meet with government agencies
- Log all persons entering / exiting the site on the *Incident Investigation Report*

9.5 Incident Investigation

All incidents, regardless of their severity, should be investigated. The purpose of investigations is to identify both the factors that contributed to an incident and the root causes behind those factors. For all incident investigations the *Incident Investigation Report* shall be completed.

The incident investigation entails a detailed review of the circumstances leading up to and including the incident. The investigation shall be initiated by the supervisor or manager and conducted with participation from all levels (including managers, supervisors, Health and Safety Committee members, and other workers who might bring specialized skills or knowledge to the investigation process) as soon as practicable. As well as documenting the basic and immediate causes, incident investigation requires a more in-depth review by identifying indirect contributing factors and root causes. Each incident investigation will be required to identify corrective action and a specific person responsible for follow-up and an associated timeline for completion. All reports and investigations should be reviewed and signed off by Senior Management upon completion and follow-up action has been taken to prevent a recurrence of the incident.

Do not disturb the scene of a reportable incident or injury unless photographic / video documentation has occurred, and:

- You have to attend to someone who has been injured or killed
- You have to take some action to prevent further injuries
- You have to protect property that is endangered as a result of the incident
- You have been given permission to do so by an Occupational Health and Safety Officer or a Peace Officer

In some cases, external agencies such as the RCMP, WCB, WorkSafe BC, BC Energy Regulator (BCER) and the Ministry of Jobs and Economic Growth may be required to conduct their own investigations.

9.6 Recovery Demobilization

Recovery Demobilization should include procedures to:

- Demobilize recovery personnel.
- Demobilize recovery equipment / supplies.
- Submit / collect all incident / event logs and all other forms.

9.7 Recovery Debriefing

Complete recovery debriefing for all recovery teams and submit findings, recommendations, changes etc. to the EOC Director.

9.8 Recovery Reporting

- Pacific Canbriam Energy Limited will complete a report and file it with the BCER if they were notified of an incident.
- An *BCER Post Incident Report* must be completed and filed with the BCER within 60 days of the incident for a Level 1, 2 or 3 emergency or any level of incident involving a pipeline, including minor incidents.
- A detailed report will be prepared by Pacific Canbriam Energy Limited, which will evaluate the emergency control procedures. From this analysis, areas of weakness in the existing system will be identified. Recommendations for improvement in areas such as training, communications, logistic support, and established planning procedures, etc. will be implemented immediately in order to improve the capabilities for handling future emergency situations.
- A summary of this report should be prepared and sent to all affected residents in the area.

10.0 Training, Meetings and Exercises

Training, meetings, and exercises are essential elements of emergency preparedness. Conducting simulations, drills and meetings on a regularly scheduled basis is necessary to ensure proper personnel training in the ERP and proficiency in executing the ERP for a wide range of emergencies. They also ensure all equipment, maintenance, and usage programs are sufficient.

All aspects of the ERP are required to be exercised by drills and simulations at prescribed frequencies based on exposure, risk, and regulatory requirements. Periodic drills are the most effective method for keeping the ERP current and ensuring personnel are proficient in its use.

A wide range of emergency scenario situations are conducted to ensure a balanced and complete plan. Upgrading the ERP shall be a continuous process with the maximum number of plan upgrades resulting from periodic simulations / drills.

Pacific Canbriam Energy Limited managers and supervisors will work to ensure that personnel are able to attend mandatory scheduled drills, exercises, and ERP review meetings. More than one scheduled drill, exercise, or ERP review meeting may need to be held in order to accommodate personnel attendance.

10.1 Training

In order to demonstrate that response personnel are competent in the emergency response procedures Pacific Canbriam Energy Limited must provide training sessions to ensure that response personnel are competent in emergency response procedures. Records of those who attend a training session are to be kept for a period of 3 years.

Attendance at ERP Training
All personnel and contractors, who have a response role, should attend the training. Pacific Canbriam Energy Limited may invite disaster management representatives from the local authority, fire, police, and emergency medical services to participate as well.

Frequency of Training
- Initial ERP training when a new plan has been developed / implemented.
- Update ERP training when major changes have occurred to the ERP, for example:
  - Command structure or roles and responsibilities change.
  - Learned outcomes from a drill or exercise that result in changes to the ERP.
  - Changes in regulations and / or legislation.
- At the discretion of the Pacific Canbriam Energy Limited office.

New Employees / Contractors

New employees and / or contractors that commence work with Pacific Canbriam Energy Limited after the initial ERP Implementation Training has been held must also receive the same training within the first week of their employment. It is the responsibility of their immediate supervisor to review the ERP with them.

ERP Maintenance

The BCER requires companies to evaluate changes to the following items regularly and retain documentation that clearly shows the evaluation criteria used, results of the evaluation, and why an ERP was or was not updated.

- Company information.
- Mapping information.
- Resident contact information.
- Response staff or capacity changes.
- New facility additions, such as well or pipeline tie-ins.

Changes in information that are instrumental to implementing the ERP must be distributed to all required plan holders.

Environment & Climate Change Canada's (ECCC) *Environmental Emergency Plan* requires Pacific Canbriam Energy Limited to update this plan annually to ensure its contents are complete and accurate. For plans submitted to the Ministry, Pacific Canbriam Energy Limited is required to submit a notice that the required review and updates have been completed.

Pacific Canbriam Energy Limited shall be responsible for providing training to all response personnel in the following areas:

- Roles and responsibilities during an incident.
- General ERP familiarity.
- Public protection measures used during an emergency.
- Available communication methods.

The Environment & Climate Change Canada (ECCC) *Environmental Emergency Plan* requires this plan be tested annually and personnel who will be involved in the implementation of this plan be trained for their specific response roles. Training opportunities for responders may include ERP implementation sessions, ICS training, exercises, drills, and additional sessions pertaining to corporate policies and procedures.

10.2 ERP Exercises

Pacific Canbriam Energy Limited must conduct emergency response exercises annually for each operating area through the following types of exercises to promote emergency response preparedness:

- Administrative (tabletop or synthetic), combined with a communications exercise, held annually for each area ERP, except in a year where a major exercise is held.
- Major (full scale / full blown), once every three years for each area of the ERP.

In situations where Pacific Canbriam Energy Limited has multiple area ERPs with the same response personnel and infrastructure, the ERPs may be tested simultaneously through one exercise.

Pacific Canbriam Energy Limited is required to notify the BCER 30 days in advance of a scheduled exercise and invite representatives to participate or observe. Pacific Canbriam Energy Limited is required to develop a report of exercise results to be maintained for audit purposes. The report must contain the following information:

- Type of exercise held.
- Scope and objectives.
- Persons involved.
- Outcome (objectives achieved)
- Lessons learned.
- Action plan, including timelines.

Sour well ERPs do not require an exercise unless specifically requested by the BCER; however, Pacific Canbriam Energy Limited must review its ERP by conducting a meeting with key responders no more the 24 hours prior to conducting operations in the sour zone.

10.3 Exercise Design

Refer *to Section 4.10 Exercises* of *CAN / CSA-Z-Z246-2 – Emergency Preparedness and Response for Petroleum and Natural Gas Industry Systems* for further detail in exercise design.

An exercise is a simulation of an actual emergency. It enables responders to be trained properly by practicing their roles. When choosing an exercise, the exercise design team shall select one that will:

- Achieve the purpose of the emergency plan.
- Reinforce previous training (prior exercises).
- Ensure the exercise is straightforward enough that available resources are adequate but complicated enough to be challenging for the responders.
- Provide the maximum lessons to be learned.
- Be cost effective.

10.4 Types of Exercises

The type of exercise depends on the purpose of the training, the availability of personnel (and if applicable, local authorities and contracted service personnel) material resources, cost considerations, and the limitations surrounding the location of operations (eg. urban or rural).

Administrative - Tabletop Exercises

- Tabletop exercises shall be considered an intermediate step in a progressive exercise program.
- Usually, tabletop exercises are used when you want to introduce new personnel to the ERP, revise or replace an existing ERP, or create an opportunity to group problem solve.
- The exercise is commonly held in a conference room, free of the stress and time constraints of full scale exercises and normally run for several hours.
- Meetings to plan for the tabletop exercise include department heads of the various departments and / or groups within Pacific Canbriam Energy Limited, responding agencies (eg. safety company, air monitoring company, etc.), local authorities, and other oil / gas companies.
- The time frame surrounding the design of a tabletop exercise may take approximately one to two months.
- A final report on the outcome of the exercise needs to be completed and acted upon. Retention of the report for audit purposes is three years from the date of the exercise.

Administrative - Synthetic Exercises

- A synthetic exercise is a pre-programmed exercise in which all participants use electronic equipment (eg. computers).
- You may combine a portion of a synthetic exercise, for example, testing emergency response management software, with a tabletop exercise.

Communication Exercises

A communication exercise can be:

- Alerting Exercise – a fan out call to personnel.
- Emergency Operations Centre Exercise – interorganizational exercises are designed to test and develop communication among company departments. Communications include telephone lines, runners, radio phones, fax machines, computers, etc. Interorganizational exercises are designed to accommodate external responding agencies (eg. local authority, health authority, non-government organizations, etc.).
- Media Exercise – coordination with the media to disseminate factual information to the media.

Major (Full Field) Exercises

- Major exercises involve emergency response agencies, Pacific Canbriam Energy Limited, and the deployment of all resources required to test the plan. The exercise may involve only one, a few, or all of the following: police, fire, ambulance, regulatory agencies, municipal or other governments, and Pacific Canbriam Energy Limited.

- Major exercises are intended to provide a realistic simulation of an emergency response. A major exercise is similar to a tabletop exercise with the exception that all required resources are actually deployed.
- The design of a major exercise must take into account: cost of the exercise (not only to Pacific Canbriam Energy Limited, but also external agencies – meaning they need to budget for a major exercise plan), resources required internally and externally, safety of all personnel and any public members involved, exercise termination directives, notification of the exercise to everyone involved (eg. public, media, response agencies, regulatory authorities, etc.) and an emergency notification procedure in the event of an actual emergency during the exercise.
- The time frame surrounding the design of a major exercise could take up to a year to build a scenario, develop a budget and to design the exercise.
- A final report on the outcome of the exercise would need to be completed and acted upon. Retention of the report for audit purposes is three years from the date of the exercise.

10.5 Drills

A drill is taking specific components of the ERP and testing it. Examples of drills may include:
- Testing the Emergency Call Out System
- Testing the Roadblock Unit
- Testing the Logistics Section
- Fire Drill

A drill can be tested in the field or in an office setting. Documentation of the drill plan and report outcomes will need to be completed and acted upon. Retention of the report for audit purposes is three years from the date of the drill.

10.6 Post Exercise / Drill Discussion

- A post exercise / drill discussion must be completed immediately following an exercise or drill.
- Discussion and review by all personnel involved in the exercise / drill shall assist in assessing the results of the objectives.
- The discussion shall be led by either the appropriate management representative from Pacific Canbriam Energy Limited, or an exercise consultant.
- One or more documentation supervisors shall be available to document outcomes of the exercise / drill and a final report prepared.

10.7 Lessons Learned

- Lessons learned from exercises / drills are a valuable source of evaluated information and reference data for the emergency planning program.
- Any outcomes that necessitate change to the ERP will be submitted to the administrator of the ERP and the ERP updated appropriately.

- If additional training is required, Pacific Canbriam Energy Limited shall schedule the training.

10.8 Documentation

The Environment & Climate Change Canada (ECCC) *Environmental Emergency Plan* requires Pacific Canbriam Energy Limited to submit a notice to the Minister following any portion of this plan being tested along with any updates to the plan and certification that the information within this plan is current, accurate and complete. Not all plans are submitted to ECCC. A record of plan revisions and results from annual tests are to be kept on file by Pacific Canbriam Energy Limited for a period of seven years.

11.0 Assets and Equipment

The following information is a summary of area operations and equipment for Pacific Canbriam Energy Limited's operations in northeast BC. For specific information pertaining to each area, please refer to the appropriate area tab.

Pacific Canbriam Energy Limited currently operates assets in the following areas:

Current Operating Areas	CEPA Sites
Altares / Farrell Creek	• Altares b-24-H/94-B-8 • Altares b-72-A/94-B-8
Groundbirch	
Kobes	

11.1 Safety Equipment

During normal operations, all operators carry their own equipment as required by safety and emergency response plans. This equipment may include, but is not limited to the following:

- Communications equipment (cellular telephone or radio)
- Fire extinguishers
- First aid kits
- Handheld H_2S
- Flare gun and flares
- Roadblock equipment (barricade, orange vest, hard hat, reflective coveralls, gloves, personal H_2S monitor and flashlight)

Pacific Canbriam Energy Limited requires that all operators test equipment annually and that all personnel are trained on the safe and proper use of equipment.

The primary methods of communication will be cell phones and two-way radios. In an emergency situation, additional communication equipment (cellular and / or satellite phones and radios) will be provided to responders, including rovers, roadblock, reception centre and air monitoring personnel, as needed. Additional equipment can be acquired from local contracting companies. Refer to the appropriate area tab for more information.

Batteries are equipped with Emergency Shut Down Valves (ESDs), some of which are activated by a SCADA system and each facility is equipped with H_2S and LEL detectors, alarms, shut down equipment and automatic callouts on alarms with 24 hour monitoring.

PACIFIC CANBRIAM ENERGY LIMITED
NORTHEAST BC FIELD OPERATIONS
EMERGENCY RESPONSE PLAN

24 HOUR EMERGENCY LINE
1.877.269.2877

BCER 24 HOUR INCIDENT REPORTING LINE:
1.800.663.3456

AUGUST 10, 2025

Information Page

Emergency Response Plan (ERP) Name	Pacific Canbriam Energy Limited Northeast BC Field Operations ERP Supplement	
ERP Manual	Version 1.0 of the Pacific Canbriam Energy Limited Northeast BC Field Operations ERP Supplement was completed in September 2022 and submitted to the British Columbia Energy Regulator for approval.	
Distribution and Maintenance	Pacific Canbriam Energy Limited 2100 215 2 Street SW Calgary, AB T2P 1M4	
Administrator	Behr Integrated Solutions 750 600 6 Avenue SW Calgary, AB T2P 0S5	Phone: 403.444.6940 https://behrintegrated.com
Manual Revisions	Version 1.0 – Completed September 30, 2022 Revision 1.1 – Completed September 30, 2023 Revision 1.2 – Completed October 31, 2023 Revision 1.3 – Completed September 30, 2024 Revision 1.4 – Completed August 10, 2025	
Next Scheduled Revision Date	August 10, 2026	
Map Revision Date	Maps finalized on various dates. Refer to area specific tabs.	
Current Operating Areas	▪ Altares / Farrell Creek ▪ Groundbirch ▪ Kobes	

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Emergency Response Plan
Acknowledgement Form

I hereby acknowledge that I have received a copy of the Pacific Canbriam Energy Limited – Northeast BC Field Operations ERP Supplement.

As a manual holder I understand that:

- I may receive periodic updates which I am responsible for incorporating into this Emergency Response Plan ensuring the document contains the most recently collected data.
- This manual contains confidential information and should be stored in a secure location at all times.
- I must notify Behr Integrated Solutions / Pacific Canbriam Energy Limited if this manual becomes damaged or lost.
- This manual will be returned to Behr Integrated Solutions if replaced or no longer valid.

To confirm your receipt of this manual, please complete the following information and return a signed copy of this letter by email to **erp.acknowledgement@behrintegrated.com**.

Name *(Please Print)*	Manual Number
Signature	Date

Emergency Response Plan
Document Status and Revision Form

This form is used to track any revisions made to this manual. All revisions are to be documented and provided to all manual holders.

Next Annual Review Date:	August 10, 2026				
Current Annual Review Date:	August 10, 2025				
ERP Revision Number	Distribution Date	Revised Sections	Annual Update Y or N	Date Inserted into ERP YYYY-MM-DD	Inserted By
--	Prior to 2022	Revision records have been archived.			
1.0	2022-09-30	Restructure of entire ERP document. All sections reviewed and updated.	Y		
1.1	2023-09-30	All sections reviewed and updated.	Y		
1.2	2023-10-31	Altares / Farrell Creek and Kobes / Groundbirch information amalgamated into one Field Supplement ERP.	N		
1.3	2024-09-30	All sections reviewed and updated.	Y		
1.4	2025-08-10	All sections reviewed and updated.	Y		

Emergency Response Plan
Management of Change Request Form

Item 1. _____

Section Number: _____

Page Number: _____

Description of Change: _____

_____

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Requested By: _____ Date: _____

Item 2. _____

Section Number: _____

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Description of Change: _____

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_____

Requested By: _____ Date: _____

BEHR OFFICE USE

Received By: _____ Date: _____

Emergency Response Plan
Manual Distribution List

Manual No.	Recipient	Title	Location
Corporate – Confidential			
1	Paul Myers	President	2100 215 2 Street SW Calgary, AB T2P 1M4
2	Jeremy Waddell	Manager, HSER and Operational Excellence	2100 215 2 Street SW Calgary, AB T2P 1M4
3	Steve Bernard	Manager, Drilling and Completions	2100 215 2 Street SW Calgary, AB T2P 1M4
4	Zitin Lamba	Operations Manager	2100 215 2 Street SW Calgary, AB T2P 1M4
5	Spare	Calgary Head Office	2100 215 2 Street SW Calgary, AB T2P 1M4
6	Spare	Calgary Head Office	2100 215 2 Street SW Calgary, AB T2P 1M4
7	Spare	Calgary Head Office	2100 215 2 Street SW Calgary, AB T2P 1M4
8	Spare	Calgary Head Office	2100 215 2 Street SW Calgary, AB T2P 1M4
Field Manuals – Confidential			
9	Drilling & Completions	b-72-A Warehouse	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
10	Drilling & Completions	b-72-A Warehouse	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
11	Drilling & Completions	b-72-A Warehouse	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
12	Drilling & Completions	b-72-A Warehouse	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
13	Drilling & Completions	b-72-A Warehouse	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
14	Drilling & Completions	b-72-A Warehouse	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
15	Jeleena Cawley	HSER Coordinator	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
16	Spare	Fort St. John Office	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
17	Spare	Fort St. John Office	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
18	Steve Gonwick	Operations, Altares b-72-A Plant	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
19	Lyndon Toews	Operations, Altares b-72-A Plant	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
20	Control Room	b-24-H Altares Control Room	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
21	Control Room	b-24-H Altares Control Room	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2

A **BOLD, RED,** manual number indicates the manual contains confidential data collected during the Public Involvement Process

Manual No.	Recipient	Title	Location
Field Manuals – Confidential (continued)			
22	Control Room	b-24-H Altares Control Room	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
23	Control Room	b-24-H Altares Control Room	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
24	Control Room	b-72-A Altares Control Room	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
25	Control Room	b-72-A Altares Control Room	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
26	Control Room	b-72-A Altares Control Room	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
27	Control Room	b-72-A Altares Control Room	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
28	Spare	Kobes Field Office	3, 10799 Finning Frontage Rd Fort St. John, BC V1J 8B2
External Manuals			
29	BC Energy Regulator (BCER)	Security and Emergency Management Branch	Bag 2 Fort St. John, BC V1J 2B0
30 PDF	BC Energy Regulator (BCER)	Security and Emergency Management Branch	SFTP Site
31 PDF	Emergency Management & Climate Readiness (EMCR)	Manager	3235 Westwood Drive Prince George, BC V2N 1S4
32 PDF	Peace River Regional District	Protective Services Manager	prrd.dc@prrd.bc.ca
33	Hudson's Hope RCMP	NCO in Charge	10317 Gething Street Hudson's Hope, BC V0C 1V0
34	Halfway River First Nations	Chief	PO Box 59, Wonowon, BC, V0C 2N0
Contractors			
Master	Behr Integrated Solutions	Emergency Management Consultants	750 600 6 Avenue SW Calgary, AB T2P 0S5

A **BOLD, RED,** manual number indicates the manual contains confidential data collected during the Public Involvement Process

1.0 Public Safety

1.1 Public Notification

Pacific Canbriam Energy Limited must make the information listed in the below table available to the public as soon as possible during an emergency

Information Disseminated to the Public at the Onset and During an Incident
To the affected public - immediately
▪ Type and status of incident. ▪ Location and proximity of the incident to people in the vicinity. ▪ Public protection measures to follow, evacuation direction, and any other emergency response measures to consider. ▪ Actions being taken to respond to the situation and time period anticipated. ▪ Contacts for additional information.
To the affected public - during
▪ Description of the products involved and their short term and long term affects. ▪ Effects the impact may have on people in the vicinity. ▪ Areas impacted by the incident. ▪ Actions the affected public should take if they experience adverse effects.
To the general public - during
▪ Type and status of incident. ▪ Location of the incident. ▪ Areas impacted by the incident. ▪ Description of the products involved. ▪ Contacts for additional information. ▪ Actions being taken to respond to the situation and time period anticipated.

Refer to the *Pacific Canbriam Energy Limited Core Emergency Response Plan* for additional procedures.

1.2 Isolation of the HPZ

Establishing and managing manned roadblocks in order to prohibit unauthorized entry into the response zones may become necessary during a sour gas release that could potentially jeopardize public safety.

Isolation of the HPZ (roadblocks) will be required to properly protect the public. This may include:

Roads
- Roadblock personnel may set up roadblocks on lease roads, public roads and provincial highways to protect the public from entering into the HPZ.
- Contact the RCMP immediately to advise of the roadblocks on public roads and provincial highways.
- The Ministry of Transportation and Transit will also need to be notified of any road closures on provincial roadways. RCMP are responsible for contacting Transport Canada.
- Roadblocks will be set up bordering the HPZ, if there is not a safe place for motorists to turn around at the established roadblock, Roadblock personnel will also be stationed along the roadway and at the detour point (if applicable) to assist motorists traveling around the HPZ.

Trails
- If applicable, access to trails may be restricted by roadblock personnel and / or municipal or provincial personnel.
- Signage may be used during sour operations to alert those in the area that they will be entering an Emergency Planning Zone.

Railroads
- If applicable, CN, CPKC or private railroad companies will need to be notified of the situation and will stop or relocate rail traffic.

Rivers
- If applicable, rivers may need to be monitored to ensure that recreational users do not travel into the HPZ.
- This may be accomplished by working with municipal, provincial or private companies as well as Transport Canada.
- Signage may be used during sour operations to alert those in the area that they will be entering an Emergency Planning Zone.
- Rovers may be assigned to monitor the river at the edge of the HPZ and boat launches outside of the HPZ during an emergency situation.

Air
- Notification of the BCER to issue a Notice to Airmen (NOTAM) to advise pilots of airspace restrictions above the HPZ may also be required.
- NOTAM may be requested at a Level 2 and 3 Emergency.

Level 1 Emergency
In the case of a well site emergency, the entrance into the well site shall be isolated during a Level 1 Emergency with a roadblock. Additional roadblocks may be established as required. Persons allowed entry into the area shall be briefed on the existing conditions and are equipped with the appropriate Personal Protective Equipment (PPE).

Level 2 or 3 Emergency
In the case of a well site emergency, the HPZ shall be isolated during a Level 2 or 3 Emergency as directed by the Incident Commander. If the incident impacts provincial highways the RCMP shall be notified to provide assistance. The RCMP will notify the Ministry of Transportation and Transit and Transport Canada for a coordinated response, as required.

Roadblock Units can be staffed by:
- Safety Company (contractor).
- Company personnel.
- Local Authority Mutual Aid, upon request.

Roadblock Teams stationed at the roadblock locations should be equipped with the appropriate Personal Protective Equipment (PPE) including:
- Self contained breathing apparatus (SCBA).
- H_2S / SO_2 detector and high visibility vests.

Refer to the *Pacific Canbriam Energy Limited Core Emergency Response Plan* for additional procedures.

1.3 Evacuation

The purpose of an evacuation is the removal of people from the HPZ to reduce the risk of exposure to H_2S / SO_2 or an explosive mixtures cloud. The BCER must be notified of an evacuation of people within the HPZ.

In the event of a hazardous material incident where evacuation needs to take place, local emergency services and municipalities shall be notified immediately to advise them of the situation so that they can take appropriate safety precautions for their personnel who may travel into the HPZ.

First responders may commence evacuation procedures without the authority of Pacific Canbriam Energy Limited, the BCER, or the local and provincial disaster services. It is imperative that police, fire and emergency medical services are advised of the situation immediately and apprised of the evacuation procedures (if any) or shelter in place procedures.

Evacuation Criteria
Criteria to consider that may cause Pacific Canbriam Energy Limited to initiate evacuation procedures include:

- Level of emergency.
- Conditions at the wellsite and if they are likely to escalate to a more serious situation.
- Residents sensitivities and / or medical conditions.
- The levels of H_2S reaching the public outside the HPZ.

A Level 2 Emergency dictates mandatory evacuation of all public from the HPZ. Evacuation of members of the public outside the HPZ is mandatory when H_2S levels reach 10 ppm - if safe to do so.

Evacuation – Level 1 Emergency

- At a Level 1 Emergency, evacuation is a voluntary action, however transients found within the HPZ including itinerant workers and recreational users should be advised to evacuate due to their inability to safely shelter.
- The Telephone Unit will notify any members of the public listed as having special needs (if applicable), any known transients, and other area operators within the HPZ.
- All information regarding evacuees requiring evacuation assistance will be forwarded to the Rover / Evacuation Unit Leader.
- If a publicly used facility, including schools and hospitals, is located within the HPZ Rovers will be dispatched to the facility at a Level 1 Emergency to assist with early evacuation. A large number of people requiring assistance with transportation may cause the need to deviate from normal evacuation procedures.
- Rovers may be dispatched during a Level 1 Emergency to search the HPZ for transients, recreational users and Trappers / Guides.

Evacuation – Level 2 Emergency

- At a Level 2 Emergency, evacuation of all people including transients and other area users, public facilities and places of commercial activities within the HPZ is mandatory.
- Pacific Canbriam Energy Limited shall initiate evacuation procedures.
- The Telephone Unit will notify all people (residents, transients and other area operators) in the HPZ and advise them of the immediate mandatory evacuation.
- Any new information regarding evacuees requiring evacuation assistance will be forwarded to the Rover / Evacuation Unit Leader.
- Evacuation will be prioritized based on distance from release or other factors where appropriate.

Evacuation – Level 3 Emergency

- If the evacuation of the HPZ has not been completed at a Level 3 Emergency, any people who have not been evacuated will be notified to shelter in place. Necessary instructions for sheltering in place will be provided in the event that evacuation is not possible.
- If a hazardous plume has been ignited and it is relatively certain the plume will stay ignited, those evacuees who were asked to shelter in place will be called and notified to evacuate the area to the Reception Centre.
- Any new information regarding evacuees requiring evacuation assistance will be forwarded to the Rover / Evacuation Unit Leader.

Evacuation Procedure – By Land

- The Incident Commander will determine the safest route(s) to evacuate the area by road.
- This decision may be based on the location of the asset, wind direction and speed.
- Additional transportation may need to be arranged to evacuate public facilities where large numbers of people can be anticipated.
- Evacuation routes are provided to the Roadblock Unit, Telephone Unit and Rover / Evacuation Unit Leader.
- Rovers will be assigned to patrol the area searching for transients, including trappers, guides / outfitters and recreational users.
- During sour operations one or more evacuation vehicle must be available 24 hours a day, with at least one driver onsite who is not required to assist in well control operations.

Evacuation Procedures – By Helicopter

- Helicopters may be required to assist in the search and rescue of people within the HPZ.
- Helicopters may also be used during an emergency to track the plume in order to aid in the evacuation of people within the HPZ.
- Communication with the Air Quality Monitoring Unit is imperative in order to prevent sending the helicopter into a plume.
- The helicopter is to be equipped with loud hailers and / or loudspeaker to notify occupants within the HPZ of the emergency and advise them to evacuate the area.
- Helicopters will be provided the radio frequency to use for the emergency at the time of initial contact, as well as, the latitude / longitude coordinates of the Helispots and Reception Centres.

- Pacific Canbriam Energy Limited may wish to activate the helicopter(s) at a Level 1 Emergency if conditions at the emergency site are deteriorating quickly, or if there is a large number of trapped residents, transients, recreational users and other area operators.
- At a Level 2 Emergency, helicopters may be activated to search for and evacuate people in the area to designated emergency evacuation pick up points, or Helispots.

Evacuation outside the HPZ

The public outside of the HPZ must be notified and evacuated in accordance with criteria in *Table 2* of the *BCER Emergency Response Plan Requirements* (*Air Monitoring* Section) and in conjunction with the local authority for the area. As a minimum, notification, and evacuation beyond the HPZ is based on monitored levels of H_2S and SO_2, which includes levels of H_2S reaching the public outside the HPZ at 10 ppm.

- Residents / occupants of an HPZ who are downwind of the asset will be evacuated first. Pacific Canbriam Energy Limited will provide air monitoring at the nearest downwind unevacuated residence.
- If air monitoring results indicate the plume to be outside of the HPZ, evacuation would be provided on a priority basis.
- Residents upwind of the emergency location but within the HPZ would be evacuated on a lower priority basis.
- Evacuation area will be expanded where H_2S and SO_2 exceed evacuation levels or health effects are apparent by monitoring.
- Broadcast media (radio, television) will be used to notify residents outside the HPZ in the event that immediate evacuation of the area must take place.
- Pacific Canbriam Energy Limited along with the local authority will coordinate their respective emergency plans with each other. The local authority may enact their Municipal Disaster Response Plan to deal with the emergency.
- Local disaster services and mutual aid partners (if applicable) will assist in the notification and evacuation of people located in the area outside of the HPZ, in campgrounds, or other transient areas.
- Air quality monitoring information will be made available to the public on a regular basis throughout the duration of the emergency.
- Evacuees will be informed of the best route to their designated Reception Centre and this route must be recorded.
- Evacuees must check in at the Reception Centre.

Prolonged Evacuation

If the problem cannot be readily corrected and evacuees are required to be away from the area for an extended period of time, Pacific Canbriam Energy Limited if required, will:

- Provide assistance in arranging their food and temporary accommodation.
- Provide area security.
- Arrange relief for all responders if the evacuation remains in effect for over eight hours.

Return of Evacuees

Once the emergency is over, the decision to permit the return of persons shall be made by the Incident Commander, in consultation with the BCER and local and provincial disaster services.

1.4 Shelter in Place

Shelter in place is the practice of going or remaining indoors during a sudden outdoor release of a hazardous substance. Shelter in place has been demonstrated to be the most effective response to a substance release by creating a buffer between you and any hazard that may be in the outside air. Shelter in place is recommended as a protection measure of short duration, ranging from several minutes to half an hour. The goal of shelter in place is to reduce the movement of air into and within the home until the hazard has passed. It is based on using a building that is constructed to withstand severe winter weather conditions.

An event such as a fire, motor vehicle incident, train derailment, industrial incident, or a natural disaster may cause a substance release. As a result, emergency responders may request that residents shelter in place. If the situation warrants, specific instructions for taking shelter in the home will be given. Shelter in place may protect against any H_2S contaminated air outside and reduce the amount to which people may be exposed.

Shelter in place is not a viable option for recreational users or transients, due to their inability to safely shelter.

Shelter in place must be considered the primary protective measure in limited circumstances when:

- There is not enough time or warning to safely evacuate the public that may be at risk.
- Residents are waiting for evacuation assistance.
- The public would be at higher risk if evacuated.
- Buildings are considered to be within or near to toxic or explosive gas plumes.
- Escape routes traverse the hazards.
- There is a sour gas release of limited duration (eg. due to a pipeline rupture).
- The location of the release has not been identified.
- Duration of release is short term.

Shelter in Place Instructions

These instructions should be provided to anyone who cannot or should not evacuate.

- Immediately gather everyone indoors and stay there.
- Close and lock all windows and outside doors – if possible, tape the gaps around the door frames.
- Extinguish indoor wood burning fires - if possible, close the damper.
- Turn off appliances or equipment that either uses inside air, blows out inside air or sucks in outside air, such as:
  - Stoves
  - Fireplaces
  - Clothes dryers
  - Air conditioners
  - Bathroom and kitchen fans
  - Built in vacuum systems
- Turn off heat and hot water pilot lights.
- Do not smoke or have open flame.

- Leave all inside doors open.
- Wait in an interior upstairs room for further instructions.
- Avoid using the telephone, except for emergencies, so that you can be contacted by emergency personnel.

  The responder should ask if emergency services have been notified so that a coordinated response can be conducted.

- Stay tuned to local radio for possible information updates or for further instructions.
- Even if you see people outside do not leave until told to do so.
- If you are unable to follow these instructions, please notify company emergency response personnel.
- After the hazardous substance has passed through the area you will receive an all clear message from emergency response personnel along with instructions to:
  - Ventilate your building by opening all windows and doors.
  - Turn on fans, turn up thermostats, and furnace circulating fans.
  - Once the building is completely ventilated return all equipment to normal.

If warranted, Pacific Canbriam Energy Limited personnel shall carry out notification of residents outside of the HPZ in consultation with the Incident Commander, the BCER and the local authority. All people within the HPZ need to be informed of the emergency situation and given instructions on in place sheltering and / or evacuation procedures.

2.0 Mutual Aid

Mutual Aid among industries and government agencies allow for sharing of personnel and equipment, which enhances response capabilities.

A wide range of emergencies may occur that have an impact on neighbouring stakeholders. In this event, multiple parties may want to provide assistance during the emergency.

It must be agreed upon prior to any type of third party response that Pacific Canbriam Energy Limited will remain the primary emergency responder, and that any assistance provided by third parties must be under the supervision of a Pacific Canbriam Energy Limited representative. Furthermore, the party providing mutual aid must comply with all applicable Pacific Canbriam Energy Limited policies and applicable government regulations.

2.1 Municipal Mutual Aid

During an incident, the regional district and provincial health authority will be notified, via telephone or in person, of the situation and kept apprised of decisions to evacuate, shelter in place, etc. The Incident Commander may contact mutual aid partners or assign another responder to do so. Municipalities may provide assistance, where capable and as required, to assist with the coordination and administration of a reception centre, assist with evacuations and roadblocks, establishing the respective command centre, arranging temporary accommodations and HPZ public notifications.

Each Regional District has a formal Emergency Management Plan which outlines the measures and sources of assistance that can be obtained to support emergency response efforts within their jurisdiction. Upon request from the BCER, the Regional District may address emergency response capabilities, expectations, and preparedness. If required, the Regional District may activate their emergency plan in order to achieve any of the following:

- Dispatch representative(s) to the BCER's PREOC, if established.
- Ensure notification of endangered area residents.
- Coordinate Emergency Social Services (ESS).
- If necessary, declare a State of Emergency.
- Assist in public information service.

Peace River Regional District	
24 Hour Number	250.784.3200 or 800.670.7773
Primary Emergency Contact	Kevin Clarkson, General Manager Community Services Bus: 250.784.3218 Cell: 250.219.3000 Email: Kevin.Clarkson@prrd.bc.ca
Secondary Emergency Contact	Ryan Kirkham, Protective Services Manager Bus: 250.784.3222 Cell: 250.219.4080 Email: ryan.kirkham@prrd.bc.ca
Main Office:	250.784.3200 Fort St. John Branch: 250.785.8084
Address:	1981 Alaska Avenue Dawson Creek, BC V1G 4H8

Roles & Responsibilities

Peace River Regional District

1981 Alaska Avenue, Box 810, Dawson Creek, BC V1G 4H8
Tel: (250) 784-3200 Fax: (250) 784-3201 www.prrd.bc.ca

Local Authority (Regional District)

Peace River Regional District has a formal Emergency Management Plan which outlines the measures and sources of assistance that can be obtained to support emergency response efforts within their jurisdiction. Upon request from the Oil and Gas Commission (OGC), the Regional District may address emergency response capabilities, expectations and preparedness. If required, the Regional District may activate their emergency plan in order to achieve any of the following:

- Dispatch representative(s) to the OGC's Emergency Operations Centre (EOC), if established
- Provide support to ensure notification of endangered area residents.
- Provide support to coordinate and deliver emergency social services to evacuated residents
- If necessary, declare a State of Local Emergency and issue an evacuation Alert, Order and Rescind
- Assist in a public information service (joint OGC, Industry, local government)
- Provide building re-entry procedures.

Revised October 27, 2010

Consultation Details

The information above was confirmed / revised on July 16, 2025 by Catherine Main Reception.

Halfway River First Nation	
24 Hour Number	250.329.8911
Primary Emergency Contact	Darlene Hunter, Chief Cell: 250.329.7350
Secondary Emergency Contact	Sherry Welch Cell: 250.329.8911
Main Office:	250.772.5058
Address:	PO Box 59 Wonowon, BC V0C 2N0
Consultation Details	
The information above was confirmed / revised on July 16, 2025 by Main Reception.	

2.2 Industry Mutual Aid

Contract Operators and/or local industry operators may provide assistance in an emergency situation. Written or verbal mutual aid understandings may be established allowing for the sharing of resources.

Local industry operators may assist with the coordination and administration of roadblocks, manning equipment used during the response effort and/or filling additional response roles as dictated by the needs of the response effort. Mutual aid responders should be in support roles only and should not fill a command or control role in the response.

Assistance to/from local industry will be based on operational availability. Personnel, equipment or other resources may be supplied without disrupting operations at the time of the emergency response. Mutual aid response will be based on a 'Best Efforts' response.

All Emergency Response personnel have the 'Right to Refuse Unsafe Work', Life Safety is our #1 priority. Mutual Aid Emergency Responders must immediately notify their supervisor upon receiving a Mutual Aid request & limit personal and corporate risk exposure when reacting to a mutual aid request. Corporate liability should not be increased due to a Mutual Aid response.

All Emergency Response personnel must react within their capabilities and trained competencies. If another Area Operator provides assistance, the principal behind this assistance should remain as follows:

- Companies or individuals providing assistance are to provide the support outside the lease boundary. The focus will be to provide the manpower and support required for roadblock crews, rovers, resident contact, and evacuation co-ordination as required by Pacific Canbriam Energy Limited requesting the assistance.
- Third party responders will report to the Incident Commander or other coordinating position in the area.
- Individuals providing assistance retain the right to withdraw the assistance should his/her personal safety be jeopardized.

2.3 Third Party Emergencies

For emergencies involving third parties, Pacific Canbriam Energy Limited will respond with the procedures most appropriate to the event in the *Immediate Actions* Section.

Where Pacific Canbriam Energy Limited has a legal obligation to respond, they shall respond immediately in accordance with this ERP to the extent required by law.

Where Pacific Canbriam Energy Limited has no legal duty to respond to a third party emergency, (but where public perception or the name of Pacific Canbriam Energy Limited is involved in any way, or a definite threat exists to people or the environment), and prompt response is not forthcoming from others, Pacific Canbriam Energy Limited personnel will attempt to respond to the extent required to control and contain the emergency and eliminate danger to the public.

When Pacific Canbriam Energy Limited has no association to the emergency, Pacific Canbriam Energy Limited will attempt to respond when requested by government authority, the public or industry without prejudice. All emergencies shall be reported internally and externally in accordance with the procedures set out in this ERP.

2.4 Assistance from Local Health Authorities

Northern Health may, if capable, carry out the following activities:

- Act as a consultant utilizing provided information on toxic chemicals to the Emergency Operations Center.
- Monitor health effects of the incident to ensure appropriate data is collected and investigate such health effects.
- Provide advice to the government on the existing or potential health effects of the incident.
- Establish and operate trauma teams for emergency health services.
- Provide health advice and safety levels for any health care or special care facility and for the more vulnerable residents.
- Monitor adverse effects / contamination of water systems.
- Enforce and regulate Public Health Regulations.

Emergency Response Roles & Responsibilities

Health Emergency Management BC, North (HEMBC)

HEMBC is a program under the Provincial Health Services Authority (PHSA). HEMBC provides the expertise, education, tools, and support specifically for the BC Health Sector to effectively mitigate, prepare for, respond to, and recover from the impacts of emergency events; ensuring the continuity of health services. There is a HEMBC team in each BC health authority. HEMBC-North deals specifically with Northern Health.

Roles and responsibilities:

- Maintain a 24-hour emergency/on call contact number for notification and activation of the health system in Northern BC (appendix I)
- Notify/activate the appropriate Northern Health programs (i.e. Public Health, Acute Care, etc.) based on the nature of the incident/emergency event.

Northern Health (NH)

Northern Health is the regional health authority responsible for providing health services to 300,000 people over an area of 600,000 square kilometers in the province of British Columbia. Services include:

- Acute (hospital) Care
- Public Health (Protection, Preventive and Population Health services)
- Mental Health and Addictions
- Home and Community Care

In the event of a major emergency/disaster, Northern Health will provide health care services within its capacity, and will activate its emergency response management plan(s).

NH Roles & responsibilities - <u>PREPAREDNESS (PRE-EVENT):</u>

- Participate with industry, local authority and other partners in the development of their Emergency Response Plans as it relates to health authority roles and responsibilities:
- Participate in stakeholder training and exercises associated with activation of an Emergency Response Plan, in which Northern Health or HEMBC have a role and responsibility (as resources allow);

NH Roles & responsibilities - <u>RESPONSE:</u>

- Activate internal health emergency management plans related to ongoing provision of services (listed above);
- Provide acute care and emergency services at existing Northern Health hospitals/health centres;
- Work with BC Emergency Health Services (Ambulance) and the BC Patient Transfer Network to transport patients to the appropriate levels of care;
- Apply and enforce the Public Health Act, and associated regulations;
- Provide advice/information to the stakeholders on the existing or potential public health effects of an incident (including drinking water safety, air quality, environmental contaminants, communicable disease prevention, re-occupancy of evacuated areas, etc.);
- Provide advice/information on the best methods for monitoring health effects from an incident.
- Assist in development of (joint) messaging for public information on emergency incidents;
- Provide guidance to stakeholders and local authorities on public health considerations in operating reception and evacuation centres, and group lodging facilities

NOTE: British Columbia Emergency Health Services (BCEHS - Ambulance) remains independent of Northern Health. If an ambulance is required please contact BCEHS via 911 (or the local contact number, if 911 is not available in your area).

Appendix I

NH/HEMBC- Contact information

1. **For Emergency events that require immediate connection with Northern Health, please call :**
   - HEMBC on call number (24/7) **855-554-3622** (or 855-55-HEMBC)
     - HEMBC will notify/activate the appropriate Northern Health programs (i.e. Public Health, Acute Care, etc.) based on the nature of the event/ emergency. Please include this number in industry ERPS, for the use of permit holders in contacting Northern Health on an emergency basis.
     - **Please do NOT** include this number on Public Awareness Pamphlets for individual projects; the EMBC/Oil and Gas Commission's emergency number(s) is more appropriate, and the HEMBC 24/7 number is on record with those agencies.

2. **For non-urgent requests related to Emergency Response Plans, or emergency exercise planning/information,** contact HEMBC North Director Mary Charters, at:
   - 250-617-5288
   - HEMBC@northernhealth.ca

3. **For Environmental assessment inquires and general government consultation questions pertaining to health** please email the NH Office of Health and Resource Development at:
   - resource.development@northernhealth.ca

NH Chief Medical Health Officer approval: July 5, 2016
Rev. Sept 2022- HEMBC North

EMERGENCY RESPONSE ROLES & RESPONSIBILITIES

Before An Emergency

- Assist the BCER with planning initiatives regarding upstream petroleum industry emergency response as requested by the BCER
- EMCR Northeast Region receives Industry Facility Emergency Response Plans.
- Participate in selected licensee ERP exercises when requested as time permits.
- Maintain a 24 hour 800 telephone contact where petroleum industry spill incidents can be reported.
- Maintain 24 hour emergency contact numbers for local governments and provincial emergency responders.

During an Emergency

- ECC Victoria will notify the BCER on call Emergency Response Officer and initiate British Columbia's notification of government agencies including MOF, MOE, MOT, Health Unit, WorkSafe BC, affected municipalities and all other level of government and industry, depending on the level of "coding" (notification Code: 1,2,3 is determined by the Lead Agency MOE or BCER); depending on the code level Standard Operating Procedures (SOP's) in ECC will determine who is notified).
- Provide representatives to help coordinate provincial response as required.

After an Emergency

- As requested by BCER.

3.0 Assets and Equipment

The following information is a summary of area operations and equipment for Pacific Canbriam's operations in northeast BC. For specific information pertaining to each area, please refer to the appropriate area tab in the Northeast BC Field Operations ERP Supplement.

Pacific Canbriam currently operates assets in the following areas:

Current Operating Areas	CEPA Regulated Sites
Altares / Farrell Creek	▪ Altares b-24-H/94-B-8 ▪ Altares b-72-A/94-B-8
Groundbirch	
Kobes	

3.1 Safety Equipment

During normal operations, all operators carry their own equipment as required by safety and emergency response plans. This equipment may include, but is not limited to the following:

- Communications equipment (cellular telephone or radio)
- Fire extinguishers
- First aid kits
- Handheld H_2S
- Flare gun and flares
- Roadblock equipment (barricade, orange vest, hard hat, reflective coveralls, gloves, personal H_2S monitor and flashlight)

Pacific Canbriam requires that all operators test equipment annually and that all personnel are trained on the safe and proper use of equipment.

The primary methods of communication will be cell phones and two-way radios. In an emergency situation, additional communication equipment (cellular and/or satellite phones and radios) will be provided to responders, including rovers, roadblock, reception centre and air monitoring personnel, as needed. Additional equipment can be acquired from local contracting companies. Refer to the appropriate area tab for more information.

Batteries are equipped with Emergency Shut Down Valves (ESDs), some of which are activated by a SCADA system and each facility is equipped with H_2S and LEL detectors, alarms, shut down equipment and automatic callouts on alarms with 24 hour monitoring.

3.2 Site Specific Products

Hazardous Product	General Description	Health Effects	Minimum PAZ	Applicable Areas
Diesel and/or Petroleum Distillates (used as base oil for Invert)	▪ Highly flammable and is easily ignited by heat, sparks, or flames. ▪ Vapors may form explosive mixtures with air. ▪ Vapors may travel to source of ignition and flash back. ▪ Most vapors are heavier than air, they will spread along ground and collect in low or confined areas. ▪ Containers may explode when heated.	▪ Inhalation or contact with material may irritate or burn skin and eyes. ▪ Fire may produce irritating, corrosive and/or toxic gases. ▪ Vapors may cause dizziness or suffocation. ▪ Runoff from fire control or dilution water may cause pollution.	▪ Isolate spill or leak area for at least 50 m in all directions. ▪ Keep unauthorized personnel away. Stay upwind, uphill and/or upstream. Ventilate closed spaces before entering. ▪ If a tank or tank truck is involved in a fire, isolate for 800 m (½ mile) in all directions; also consider initial evacuation for 800 m (½ mile) in all directions.	▪ Altares / Farrell Creek ▪ Groundbirch ▪ Kobes
Drilling Fluid Additives	▪ Mostly in DRY form stored in paper or plastic sacks.	▪ Inhalation or contact with material may irritate or burn skin and eyes. ▪ Fire may produce irritating, corrosive and/or toxic gases.	▪ Isolate spill or leak area for at least 50 m in all directions. ▪ Keep unauthorized personnel away. Stay upwind, uphill and/or upstream. Ventilate closed spaces before entering.	▪ Altares / Farrell Creek ▪ Groundbirch ▪ Kobes
Drilling mud (emulsion of base oil and water)	▪ Highly flammable and is easily ignited by heat, sparks, or flames. ▪ Vapors may form explosive mixtures with air. ▪ Vapors may travel to source of ignition and flash back. ▪ Many liquids are lighter than water.	▪ Inhalation or contact with material may irritate or burn skin and eyes. ▪ Fire may produce irritating, corrosive and/or toxic gases. ▪ Vapors may cause dizziness or suffocation. ▪ Runoff from fire control or dilution water may cause pollution.	▪ Isolate spill or leak area for at least 50 m in all directions. ▪ Keep unauthorized personnel away. Stay upwind, uphill and/or upstream. Ventilate closed spaces before entering. ▪ If a tank or tank truck is involved in a fire, isolate for 800 m (½ mile) in all directions; also consider initial evacuation for 800 m (½ mile) in all directions	▪ Altares / Farrell Creek ▪ Groundbirch ▪ Kobes

Hazardous Product	General Description	Health Effects	Minimum PAZ	Applicable Areas
Hydrogen Sulphide (H_2S)	▪ Flammable-explosive when mixed with air. ▪ Forms SO_2 when combusted. ▪ "Rotten egg" smell at low concentrations. ▪ Inhibits olfactory senses at high concentrations. ▪ Heavier than air. ▪ Will tend to disperse slower in sheltered or low lying areas. ▪ Extremely toxic.	▪ Moderate to strong offensive odour. ▪ May cause nausea, burning of the eyes, headaches, or loss of sleep upon prolonged exposure. ▪ Moderate to severe irritation to the eyes and lungs. ▪ May cause indigestions and loss of appetite. ▪ Loss of smell. ▪ Serious damage to lungs and eyes ensues within 30 minutes of exposure leading to loss of consciousness. ▪ Death within four to eight hours after exposure.	▪ 400 m (small spill) ▪ 5400 m (large spill)	▪ Altares / Farrell Creek ▪ Groundbirch ▪ Kobes
Methane (natural Gas) (LNG)	▪ Odourless; colourless; often referred to as "Sweet Natural Gas" ▪ Extremely Flammable; will form explosive mixtures with air. ▪ Vapours from liquefied gas are initially heavier than air.	▪ Vapours may cause dizziness or asphyxiation without warning. Some may be irritating if inhaled at high concentrations. ▪ Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite. ▪ Fire may produce irritating and/or toxic gases.	▪ 800 m (large spill) ▪ 1600 m (fire)	▪ Altares / Farrell Creek ▪ Groundbirch ▪ Kobes
Methanol	▪ Colourless, volatile and poisonous. ▪ Highly Flammable; will burn with an invisible flame. ▪ Vapours may form explosive mixtures with air, and may travel to source of ignition and flash back. ▪ Liquid at room temperature.	▪ Toxic; may be fatal if inhaled, ingested or absorbed through skin. ▪ Inhalation or contact with some of these materials will irritate or burn skin and eyes. ▪ Fire will produce irritating, corrosive and/or toxic gases. ▪ Vapours may cause dizziness or asphyxiation, especially when in closed or confined areas. ▪ Runoff from fire control or dilution water may cause environmental contamination	▪ 800 m (fire)	▪ Altares / Farrell Creek ▪ Groundbirch ▪ Kobes
Produced Water	▪ Water produced as a byproduct when oil and gas are extracted. ▪ Composition can vary from well to well, or if water is reused during extraction of oil and gas. ▪ Potential danger with the transport of produced water comes from the highway tanks used are often also used to transport other oil and gas products.	▪ Health effects are dependent upon composition and residue last contained in the container.		▪ Altares / Farrell Creek ▪ Groundbirch ▪ Kobes

Hazardous Product	General Description	Health Effects	Minimum PAZ	Applicable Areas
Propane (or Liquid Propane Gas (LPG))	▪ Extremely flammable and can easily ignite by heat, sparks, or flames. ▪ Vapors may travel to source of ignition and flash back. ▪ Cylinders exposed to fire may vent and release flammable gas through pressure relief devices. ▪ Containers may explode when heated. Ruptured cylinders may rocket.	▪ Vapours may cause dizziness or asphyxiation without warning. Some may be irritating if inhaled at high concentrations. ▪ Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite. ▪ Fire may produce irritating and/or toxic gases.	▪ 800 m (large spill) ▪ 1600 m (fire) ▪ 307 m (BLEVE)	▪ Altares / Farrell Creek ▪ Groundbirch ▪ Kobes
Silica Dust (Crystalline)	▪ Agitation of “frac sand” will produce a fine silica dust.	▪ Difficulty breathing, shortness of breath ▪ Lung damage and silicosis with prolonged breathing of crystalline silica dust. ▪ Is known to cause lung cancer	▪ Stay upwind, uphill and/or upstream. ▪ Ventilate closed spaces before entering.	▪ Altares / Farrell Creek ▪ Groundbirch ▪ Kobes
Sulphur Dioxide (SO_2)	▪ Non-flammable, toxic and corrosive gas.	▪ Choking effect. ▪ Poisonous gas. ▪ Immediately dangerous to life or health at 100 ppm. ▪ 400-500 ppm are immediately life threatening. ▪ Can cause skin and respiratory tract burns. ▪ May be inhaled or absorbed.	▪ 400 m (small spill) ▪ 5400 m (large spill)	▪ Altares / Farrell Creek ▪ Groundbirch ▪ Kobes
Triethylene Glycol (TEG)	▪ Colourless, almost odourless liquid.	▪ Virtually non-toxic with single exposure, however repeated ingestion of high doses may cause kidney damage.		▪ Altares / Farrell Creek ▪ Groundbirch ▪ Kobes
Corrosion Inhibitor (Baker Hughes CRO9815C)	▪ Red brown clear liquid with strong odor. ▪ Highly Flammable. Will be easily ignited by heat, sparks or flames.	▪ Toxic; may be fatal if inhaled, ingested or absorbed through skin. ▪ Inhalation or contact with some of these materials will irritate or burn skin and eyes. ▪ Fire will produce irritating, corrosive and/or toxic gases. ▪ Vapours may cause dizziness or asphyxiation, especially when in closed or confined areas. ▪ Runoff from fire control or dilution water may cause environmental contamination.	▪ 800 m Fire	▪ Altares / Farrell Creek ▪ Groundbirch ▪ Kobes

Characteristics and Dangers of H_2S

- Found in decaying organic matter, natural oil and gas, silos and sewers.
- Found at gas temperatures above -60°C.
- Flammable – burns to form SO_2.
- Odour of rotten eggs at low concentrations – kills all sense of smell at higher concentrations.
- Will tend to disperse more slowly in sheltered or calm low lying areas.
- Extremely toxic.
- At lower concentrations (20-50 ppm) irritates mucous membranes (eyes, throat, lungs), causes headaches, dizziness, nausea, may cause pulmonary edema (fluid in the lungs) upon prolonged exposure.
- High concentrations (500-1000 ppm) may cause paralysis of the respiratory centre in the brain – breathing stops.
- This gas is dangerous because it kills the sense of smell very quickly.

Hydrogen Sulphide (H_2S) Toxicity Table

Hydrogen sulphide is a colourless, flammable, toxic gas. It affects people differently depending on concentration and length of exposure. Concentrations of H_2S are generally measured in parts per million (ppm), one part per million means one part of gas in one million parts of air. At very low concentrations, it has an offensive odour, (similar to rotten eggs) however, it is undetectable by odour at higher concentrations. A person can be exposed to H_2S concentrations of up to 1 ppm for up to 8 hours without breathing apparatus as per government exposure limits.

General Health Effects of H_2S	
Concentration	**Effects**
0.01-0.3 ppm	Detectable by odour.
1-5 ppm	Moderate to strong offensive odour may cause nausea, tearing of the eyes, headaches or loss of sleep upon prolonged exposure. Effects are moderate.
10 ppm	Ceiling limit. (WorkSafe BC).
20-50 ppm	Slight eye and lung irritation. May cause eye damage after several days of exposure, may cause digestive upset and loss of appetite.
100 ppm	Eye and lung irritation.
150 ppm	Kills sense of smell, severe eye and lung irritation.
500 ppm	Serious damage to eyes within 30 minutes, severe lung irritation, unconsciousness and death within 4 to 8 hours.
1000 ppm	Breathing stops within 1 or 2 breaths.

Characteristics and Health Effects of Sulphur Dioxide (SO_2)

- This is a choking gas, unlike H_2S, and one wants to move to an area where the discomfort is not experienced.
- Formed by the combustion of H_2S or sulphur and is non-flammable.
- Found as a gas at temperatures above -10°C.
- Has the odour that occurs when a wooden match is extinguished.
- Highly irritating – dissolves to form sulphuric acid.
- At lower concentrations irritates eyes, nose and throat, causes difficulty in breathing and shortness of breath.
- Causes pulmonary edema at high concentrations – may be fatal.
- Effects on heavy smokers are more severe.

SO_2 Toxicity Table

If a release of sour gas occurs and is threatening the safety of the public, the response is to ignite the gas. Burning the sour gas turns the H_2S to SO_2. The heat from the fire will carry the SO_2 and smoke up into the air, where it will disperse. By the time the SO_2 comes back to ground level, the concentrations would normally only be detectable with the use of an electronic gas detection monitor. These levels should be well below provincial environment regulations.

General Health Effects of SO_2	
Concentration	**Effects**
0.13 ppm	24 hour evacuation level (MWLAP Level B criteria).
0.34 ppm	One hour average evacuation level (MWLAP Level B criteria).
2 ppm	Eight hour Occupational Exposure Limit (WorkSafeBC).
3-5 ppm	Odour threshold.
5 ppm	15 minute Occupational Exposure Limit (WorkSafeBC).
8-12 ppm	Throat irritation, coughing, constriction in chest, tearing and smarting of the eyes.
10-50 ppm	Exposure 5 -15 minutes: increased irritation of the eyes, nose, throat, choking, coughing and in some cases, wheezing as a sign of narrowing of the airways (which increases the resistance of the air-flow).
150 ppm	Short–term endurance lost due to severe eye irritation and because of the effects on the membranes of the nose, throat and lungs.
500 ppm	Highly dangerous after an exposure of 30-60 minutes.
1000-2000 ppm	May be fatal with continued exposure.

PACIFIC CANBRIAM ENERGY

NORTHEAST BC FIELD OPERATIONS OVERVIEW MAP 2025

122°0'0"W

120°0'0"W

56°0'0"N

SASQUATCH CROSSING

PINK MOUNTAIN

WONOWON

BUICK

BLUEBERRY RIVER FIRST NATIONS

DOIG RIVER FIRST NATION

ROSE PRAIRIE

BRITISH COLUMBIA

ALBERTA

KOBES

PEACELAND FARMS SETTLEMENT

HALFWAY RIVER FIRST NATION

GOODLOW

ALTARES / FARRELL CREEK

CITY OF FORT ST. JOHN

DISTRICT OF TAYLOR

DISTRICT OF HUDSONS HOPE

HUDSON'S HOPE

GROUNDBIRCH

SAULTEAU FIRST NATIONS

WEST MOBERLY FIRST NATIONS

DISTRICT OF CHETWYND

DAWSON CREEK

POUCE COUPE

CHETWYND

DISTRICT OF CHETWYND

DISTRICT OF CHETWYND

TUMBLER RIDGE

DISTRICT OF TUMBLER RIDGE

97 29 64 49 52 2 43

BEHR Integrated Solutions

NORTHEAST BC ASSET AREAS 2025

Scale: 1:750,000
Map Projection: NAD 83 UTM 10
Map Created : JULY 2025

N W E S

0 10 20 30 40 50 km

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ALTARES / KOBES STAKEHOLDER ENGAGEMENT WILDFIRE EGRESS NORTH MAP 2025

PACIFIC CANBRIAM ENERGY

BEHR Integrated Solutions
www.behrintegrated.com

Drawn By: GS
Scale: 1:125,000 — Project No.: 15006
Map Projection: NAD 83 UTM 10 — Revision: 0 – JULY, 2025

0 2 4 6 8 10 12 14 16 km

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FACILITY TYPE

- GAS PROCESSING PLANT
- CENTRAL TREATMENT PLANT
- CENTRAL PROCESSING FACILITY
- INJECTION PLANT
- COMPRESSOR
- PUMP STATION
- PIPELINE TERMINAL
- DEHYDRATOR
- WASTE PROCESSING
- METER STATION
- HEADER / RISER
- BATTERY
- SALES METER
- WATER DISPOSAL
- CHECK VALVE
- BLOCK VALVE
- EMERGENCY SHUTDOWN VALVE
- ORIFICE BULLET
- TANK

SURFACE DEVELOPMENT

- RESIDENCE OCCUPIED
- BUSINESS OCCUPIED
- RESIDENCE SENSITIVE
- BUSINESS SENSITIVE
- RESIDENCE SEASONAL
- BUSINESS SEASONAL
- PUBLIC FACILITY
- STRUCTURE VACANT
- STRUCTURE ABANDONED
- STRUCTURE OUTSIDE OF EPZ
- OTHER BUILDINGS

PIPELINE TYPE

- OIL SOUR - OPERATING
- OIL SWEET - OPERATING
- OIL PRODUCTS - DISCONTINUED
- GAS SOUR - OPERATING
- GAS SWEET - OPERATING
- GAS PRODUCTS - DISCONTINUED
- WATER SOUR - OPERATING
- WATER SWEET - OPERATING
- WATER - DISCONTINUED
- HVP - OPERATING
- HVP - DISCONTINUED
- LVP - OPERATING
- LVP - DISCONTINUED
- STEAM - OPERATING
- STEAM / MR - DISCONTINUED
- MISC - OPERATING
- MISC - DISCONTINUED

NON-CLIENT OPERATORS

- GAS PROCESSING PLANT
- FACILITY
- WELL
- PIPELINE

WELL TYPE

- WELL - GAS
- WELL - OIL
- WELL - WATER SOURCE
- WELL - WATER INJECTION
- WELL - OBSERVATION
- WELL - ABANDONED
- WELL - GAS SUSPENDED
- WELL - OIL SUSPENDED

EMERGENCY RESPONSE

- EPZ (EMERGENCY PLANNING ZONE)
- IZ (INITIAL ISOLATION ZONE)
- CEPA ZONE
- EPZ (OTHER SYSTEM)
- EGRESS
- ERP ACCESS
- HAZARD POINT
- CAUTION POINT
- FLOODING INCIDENT
- WILDFIRE INCIDENT
- INCIDENT COMMAND POST (ICP)
- MUSTER POINT
- STAGING AREA
- ROADBLOCK
- DEAD END
- GATED - KEYED ACCESS
- SPILL CONTROL POINT - INCISION SPILL COOP
- SPILL CONTROL POINT - CRITICAL
- SPILL CONTROL POINT - CLIENT
- STARS SITE
- EVACUATION / RECEPTION CENTRE
- EVACUATION ROUTE

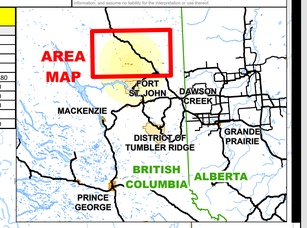
CULTURE

- AIRPORT
- AIR STRIP
- HELIPAD
- TOWER - FORESTRY
- TOWER - COMMUNICATION
- TOWER - OTHER
- COMMUNICATIONS SITE
- ELECTRICAL SUBSTATION
- SENSITIVE WILDLIFE AREA
- ARCHAEOLOGICAL
- HISTORICAL SITE
- WATER CROSSING
- BRIDGE
- GAS
- HEAVY EQUIPMENT
- TRAIL ROAD
- BOAT LAUNCH
- SOLAR FARM
- WIND FARM
- OTHER INTEREST GROUP
- HOSPITAL
- MEDICAL CENTER
- CANADA CUSTOMS CHECKPOINT
- SCHOOL
- PLACE OF WORSHIP
- CEMETERY
- FIRE HALL
- COMMUNITY CENTRE
- INDUSTRY CAMP
- GRAVEL PIT
- GOLF COURSE
- GOLF COURSE
- CAMPGROUND
- CAMPSITE
- PICNIC / REST AREA
- DUMP / LANDFILL

- HIGHWAY - PRIMARY
- HIGHWAY - SECONDARY
- MAIN ACCESS ROAD
- OTHER ACCESS ROAD / TRAIL
- LOCAL AUTHORITY / MUNICIPAL BOUNDARY
- LAW ENFORCEMENT
- HEALTH AUTHORITY
- REGULATION AUTHORITY
- SPILL COOP
- TREATY / RESOURCE DISTRICT (B.C. Only)
- FOREST MANAGEMENT AREA (AB Only)
- WMU / GUIDE OUTFITTER
- TRAILINE
- PROVINCE
- WATER
- POPULATED AREA
- FIRST NATION - METIS
- RECREATIONAL AREA
- GRAZING / RANGE AREA
- GRAZING / RANGE TENURE (AB & BC)
- LANDOWNER
- RIGHTS HOLDER / ALLOTMENT USER
- CUTBLOCK
- TIMBER OPENINGS
- MINING LICENCE
- FOREST COVER RESERVATIONS
- SURVEYED PARCELS
- MILITARY AREA
- FENCE
- FENCED AREA

ALTARES / KOBES AREA RADIO ROAD FREQUENCIES

ROAD NAME	FREQUENCY
Haystack Forest Service Road	RR 12 – 150.500
Iron Creek Road	RR 18 – 150.710
Pilsner Road	RR-7 – 150.260
Harold Ellis Road	RR-7 – 150.260
Upper Halfway Road	Mile 95 Road – 153.380
Kobes Creek Road (km 24.5 to km 46.3)	RR 08 – 150.4400
Beryl Prairie Road (entire length)	RR 03 – 150.1400
The Core Road (entire length)	RR 04 – 150.1850
Camp Road	RR 21 – 151.010
The West Altares Road	RR 03 – 150.1400



75 km FIRE RADIUS
50 km FIRE RADIUS
25 km FIRE RADIUS

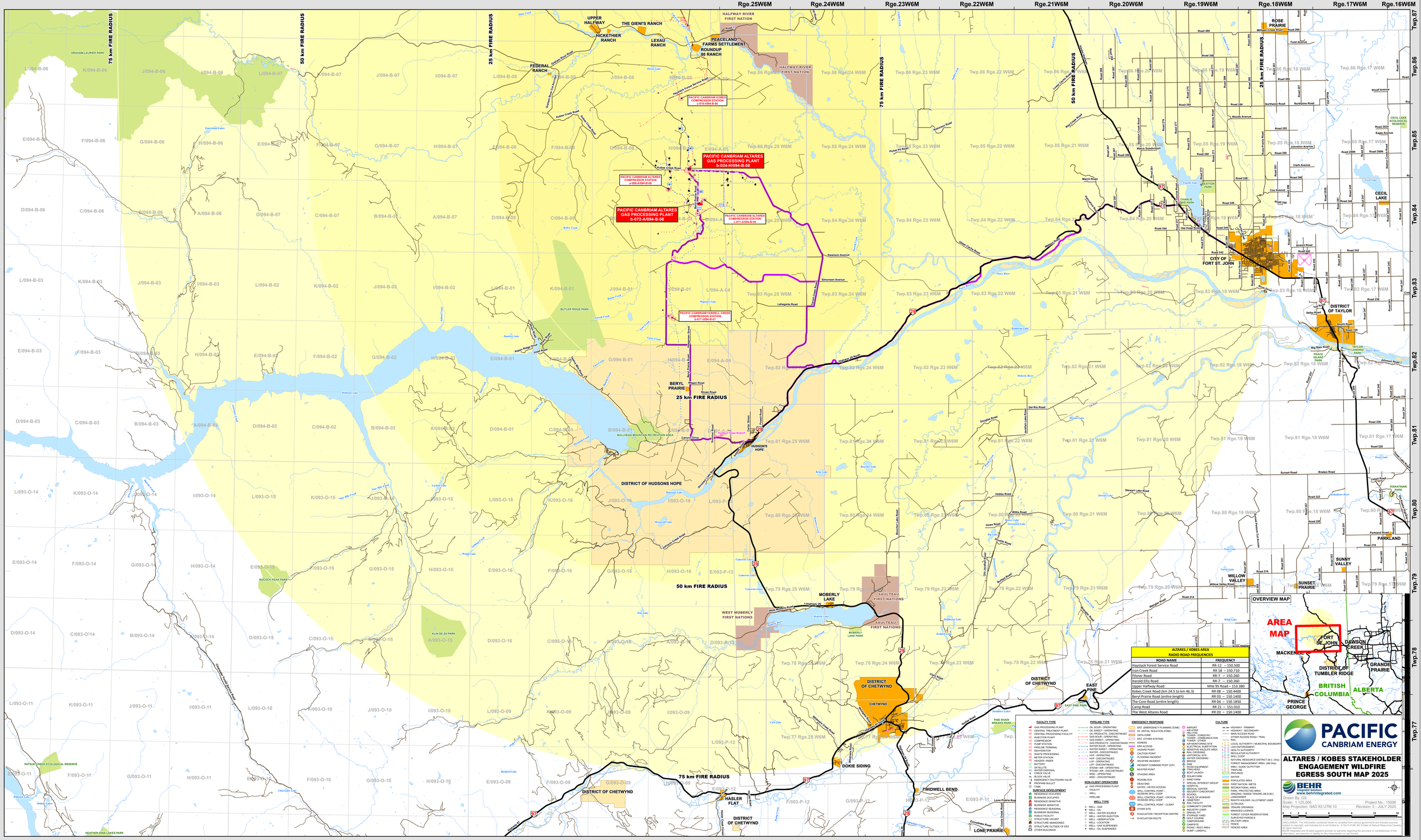
SASQUATCH CROSSING
PINK MOUNTAIN
BORING RANCH
BRADY RANCH
BEATON RANCH
MCKEARNEY RANCH
SIMPSON RANCH
UPPER HALFWAY
HICKETHIER RANCH
THE GIENI'S RANCH
LEXAU RANCH
FEDERAL RANCH
ROUNDUP 80 RANCH
PEACELAND FARMS SETTLEMENT
WONOWON
BUICK
PRESPATOU
ALTONA
PEEJAY
ROSE PRAIRIE
CECIL LAKE

PACIFIC CANBRIAM KOBES COMPRESSOR STATION c-057-G/094-B-09
PACIFIC CANBRIAM KOBES COMPRESSOR STATION b-024-A/094-B-09
PACIFIC CANBRIAM KOBES COMPRESSOR STATION c-013-I/094-B-08
PACIFIC CANBRIAM ALTARES GAS PROCESSING PLANT b-024-H/094-B-08
PACIFIC CANBRIAM ALTARES COMPRESSOR STATION c-005-A/094-B-08
PACIFIC CANBRIAM ALTARES GAS PROCESSING PLANT b-072-A/094-B-08
PACIFIC CANBRIAM ALTARES COMPRESSOR STATION c-071-A/094-B-08

HALFWAY RIVER FIRST NATION
DOIG RIVER FIRST NATION
BLUEBERRY RIVER FIRST NATIONS

Twp.88 Twp.87 Twp.86 Twp.85 Twp.84 Twp.83

Rge.26W6M Rge.25W6M Rge.24W6M Rge.23W6M Rge.22W6M Rge.21W6M Rge.20W6M Rge.19W6M Rge.18W6M Rge.17W6M



ALTARES / KOBES AREA RADIO ROAD FREQUENCIES

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Beryl Prairie Road (entire length)	RR 03 – 150.1400
The Core Road (entire length)	RR 04 – 150.1850
Camp Road	RR 21 – 151.010
The West Altares Road	RR 03 – 150.1400

OVERVIEW MAP

AREA MAP

FORT ST. JOHN
DAWSON CREEK
MACKENZIE
DISTRICT OF TUMBLER RIDGE
GRANDE PRAIRIE
BRITISH COLUMBIA
ALBERTA
PRINCE GEORGE

FACILITY TYPE
GAS PROCESSING PLANT
CENTRAL TREATMENT PLANT
CENTRAL PROCESSING FACILITY
INJECTION PLANT
COMPRESSOR
GAS PLANT
PIPELINE TERMINAL
DEHYDRATOR
WASTE PROCESSING
METER STATION
HEATER-TREATER
BATTERY
SATELLITE
WATER DISPOSAL
CHECK VALVE
BLOCK VALVE
EMERGENCY SHUTDOWN VALVE
FLARE BULLET
TANK
SURFACE DEVELOPMENT
RESIDENCE OCCUPIED
BUSINESS OCCUPIED
RESIDENCE SENSITIVE
BUSINESS SENSITIVE
RESIDENCE SEASONAL
BUSINESS SEASONAL
PUBLIC FACILITY
STRUCTURE VACANT
STRUCTURE ABANDONED
STRUCTURE OUTSIDE OF EPZ
OTHER BUILDINGS

PIPELINE TYPE
OIL SOUR – OPERATING
OIL SWEET – OPERATING
OIL PRODUCTS – DISCONTINUED
GAS SOUR – OPERATING
GAS SWEET – OPERATING
GAS PRODUCTS – DISCONTINUED
WATER SOUR – OPERATING
WATER SWEET – OPERATING
WATER – DISCONTINUED
HVP – OPERATING
HVP – DISCONTINUED
LVP – OPERATING
LVP – DISCONTINUED
STEAM – OPERATING
STEAM – DISCONTINUED
MISC – OPERATING
MISC – DISCONTINUED

NON-CLIENT OPERATORS
GAS PROCESSING PLANT FACILITY
WELL
PIPELINE

WELL TYPE
WELL – GAS
WELL – OIL
WELL – WATER SOURCE
WELL – WATER INJECTION
WELL – OBSERVATION
WELL – SUSPENDED
WELL – GAS SUSPENDED
WELL – OIL SUSPENDED

EMERGENCY RESPONSE
EPZ (EMERGENCY PLANNING ZONE)
EZ (INITIAL ISOLATION ZONE)
CEPA ZONE
EPZ (OTHER SYSTEM)
EGRESS
ERP ACCESS
HAZARD POINT
IGNITION POINT
FLOODING INCIDENT
WILDFIRE INCIDENT
INCIDENT COMMAND POST (ICP)
MUSTER POINT
STAGING AREA
ROADBLOCK
DEAD END
GATED - KEYED ACCESS
SPILL CONTROL POINT – WOSSKIN SPILL COOP
SPILL CONTROL POINT - CRITICAL WOSSKIN SPILL COOP
SPILL CONTROL POINT - CLIENT
STAMS SITE
EVACUATION / RECEPTION CENTRE
EVACUATION ROUTE

CULTURE
AIRPORT
AIR STRIP
TOWER
TOWER - FORESTRY
TOWER - COMMUNICATION
FIRE TOWER
AIR MONITORING SITE
ELECTRICAL SUBSTATION
SENSITIVE WILDLIFE AREA
FIRE DEPARTMENT
MEDICAL SITE
WATER CROSSING
BRIDGE
CAMP
MOSS EQUIPMENT
MUSTER POINT
BOAT LAUNCH
WATER SOURCE
WIND FARM
SPECIAL INTEREST GROUP
RECREATIONAL AREA
MEDICAL CENTER
BORDER CHECKPOINT
SCHOOL
PLACE OF WORSHIP
RAIL YARD
RAIL FACILITY
COMMUNITY CENTRE
INDUSTRY CAMP
GRAVEL PIT
GOLF COURSE AND
GOLF COURSE
CAMPGROUND
CAMPSITE
PICNIC / REST AREA
DUMP / LANDFILL

HIGHWAY - PRIMARY
HIGHWAY - SECONDARY
MAIN ACCESS ROAD
MAIN ACCESS ROAD / TRAIL
RAIL
LOCAL AUTHORITY / MUNICIPAL BOUNDARY
LAW ENFORCEMENT
HEALTH AUTHORITY
REGULATOR AUTHORITY
NPRI - SOUR
NPRI - OIL & RESOURCE DISTRICT (B.C. Only)
FOREST MANAGEMENT AREA - (AB Only)
WMU / GUIDE OUTFITTER
TIMBLINE
PROVINCE
WATER
POPULATED AREA
RECREATIONAL SITES
RECREATIONAL AREA
PWMA / PROTECTED AREA
GRAZING / RANGE TENURE (AB & BC)
LANDOWNER
RIGHTS HOLDER / ALLOTMENT USER
CUTBLOCK
CLEARINGS
MANAGED LICENCE
FOREST COVER RESERVATIONS
SURVEYED PARCELS
MILITARY AREA
FENCE
FENCED AREA

PACIFIC CANBRIAM ENERGY

ALTARES / KOBES STAKEHOLDER ENGAGEMENT WILDFIRE EGRESS SOUTH MAP 2025

BEHR Integrated Services
www.behrintegrated.com

Drawn By: GS
Scale: 1:125,000
Project No.: 15006
Map Projection: NAD 83 UTM 10
Revision: 0 - JULY 2025

0 1 2 3 4 5 10 15 20 Kilometers

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2025 ANNUAL ERP UPDATE — ALTARES / FARRELL CREEK AREA

PACIFIC CANBRIAM ENERGY

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24 HOUR EMERGENCY LINE: 1.877.269.2877

Pacific Canbriam Energy Limited Head Office	403.269.2874 Fax: 403.269.7637	2100, 215 – 2 Street SW Calgary, AB T2P 1M4
Fort St. John Field Office	250.785.8322	3, 10799 Finning Frontage Rd Fort St. John, BC

FORT ST. JOHN FIELD CONTACT NUMBERS

Jeleena Cawley	Bus: 250.785.8322 Ext. 1 → Ext. 2	Cell: 250.948.8386
Reception or Administrative Support	Bus: 250.785.8322 Ext. 1 → Ext. 1	
Conference Room	Bus: 250.785.8322 Ext. 1 → Ext. 5	

SUPERINTENDENTS

Steve Gonwick	Bus: 250.785.8322 Ext. 4 → Ext. 2	Cell: 250.793.8000
Jake Zepeda	Bus: 250.785.8322 Ext. 4 → Ext. 3	Cell: 587.966.2675

ALTARES b-24-H PLANT

b-24-H Control Room	Bus: 250.785.8322 Ext. 2 → Ext. 1	
b-24-H Field Office	Bus: 250.785.8322 Ext. 2 → Ext. 2	
b-24-H Conference Room	Bus: 250.785.8322 Ext. 2 → Ext. 3	
b-24-H Camp/On Call	Bus: 250.785.8322 Ext. 2 → Ext. 4	

ALTARES b-72-A PLANT

b-72-A Camp/On Call	Bus: 250.785.8322 Ext. 3 → Ext. 1	
b-72-A Conference Room	Bus: 250.785.8322 Ext. 3 → Ext. 2	
b-72-A Control Room	Bus: 250.785.8322 Ext. 3400	

Altares b-72-A Plant Operations

Lyndon Toews	Bus: 250.785.8322 Ext. 4 → Ext. 1	Cell: 250.981.8199
Trevor Bickerstaff	Bus: 250.785.8322 Ext. 4 → Ext. 4	Cell: 780.522.7304
Field Lead Neil Schilling	Bus: 250.785.8322 Ext. 4 → Ext. 3	Cell: 250.401.1085
Field Lead Ryan Sephton		Cell: 604.556.4090

Altares b-72-A Maintenance

Anthony Corno	Bus: 250.785.8322 Ext. 5 → Ext. 1	Cell: 250.261.1428
Chris Bouwsema	Bus: 250.785.8322 Ext. 5 → Ext. 1	Cell: 780.515.0423

ALTARES b-73-A CAMP

b-73-A Camp	Bus: 250.785.8322 Ext. 8	780.940.2434

c-62-A WATER PLANT

c-62-A Water Hub	Bus: 250.785.8322 Ext. 4	
Water Hub Lead Corey Reschke	Bus: 250.785.8322 Ext. 7	250.783.0603

CORPORATE CONTACTS

Nauman Rasheed	President	403.817.9041 Ext. 2141 403.899.0339
Jeremy Waddell	Manager, HSER and Operational Excellence	403.930.6736 Ext. 2736 587.576.6125
Steve Bernard	Manager, Drilling and Completions	403.300.2434 Ext. 2434 403.519.8442
Zitin Lamba	Manager, Operations	403.817.9052 Local 2152 403.618.6166

FACILITY DESCRIPTION

Pacific Canbriam owns and operates three gas processing facilities, numerous sweet gas wells and pipelines in the Altares and Farrell Creek areas of Northeast BC. There are also suspended sour gas wells in Altares.

EPZ INFORMATION

The maximum expected H_2S concentration for the wells is 9.97% with a maximum EPZ of 167 m. The maximum expected H_2S concentration for the pipeline is 26% with a maximum EPZ of 348 m. The maximum expected facility EPZ is 348 m.

A 1.050 km Canadian Environmental Protection Act (CEPA) Hazard Zone has been assigned around the Altares b-24-H and the Altares b-72-A plant sites.

Pacific Canbriam's policy is to assign a 100 m Emergency Planning Zone (EPZ) around any sweet well or pipeline if the pipeline is inactive. If the pipeline is within 100 m of a structure, Pacific Canbriam may model that specific pipeline segment to determine if the EPZ encompasses the structure.

ON-SITE STORAGE

b-24-H/94-B-8

Condensate Storage:
- 5 tanks each 750 bbl capacity
- 1 tank 1,000 bbl capacity

LPG storage:
- 5 bullets each 2500 bbl capacity

b-72-A/94-B-8

Condensate storage:
- 12 tanks each 2000 bbl capacity

LPG storage:
- 10 bullets each 2500 bbl capacity

CLOSEST URBAN CENTRE

The nearest urban centre is Hudson's Hope, BC, 25 km southeast of the Farrell Creek field operations.

LAND USE / TERRAIN

Pacific Canbriam's operations are located in forested areas west and north-west of Fort St. John on the eastern slopes of the Rocky Mountains with average elevation of 1200 metres. These areas are predominantly used by trappers, grazing lease holders, forest management and for seasonal recreation such as hunting and fishing.

HYDROLOGY

Groundbirch Creek, Halfway River, Mackie Creek, Wapoose Creek, Lynx Creek and numerous unnamed creeks and small bodies of water are within the area.

HIGHWAYS

No highways intersect with the HPZ's in this field.

SITE ACCESS

Refer to access map on the following pages.

OTHER AREA OPERATORS & TIE-INS

OIL & GAS

ARC Resources	780.831.2026	TC Energy	888.982.7222
CNRL	888.878.3700	Tourmaline Oil	877.504.4252
Canadian Spirit Resources Inc.	403.539.5005	Westcoast Energy (Enbridge)	800.663.9931
PETRONAS	844.299.2566	Western LNG	855.920.4696
Plateau Pipelines / Pembina	800.360.4706		

TIE-INS*

There are no tie-ins with the above-mentioned companies.

PARKS

Bullhead Mountain Recreation Area	800.689.9025

SAFETY EQUIPMENT

OPERATOR / TRUCK SAFETY EQUIPMENT

Operator field trucks will carry personal protective equipment, first aid kits and fire extinguishers.

NOTIFICATION

Altares b-24-H/94-B-8 Facility

The b-24-H facility is manned 12 hours/day. The plant can also be monitored remotely at the b-72-A control room 24 hours/day. The wells have remote shut down capability. There is a minimum of 2 operators in the PCE Operations Camp available for call-out's.

Altares b-72-A/94-B-8 Facility

Operators attend to the b-72-A facility 24 hours/day The plant can also be monitored remotely. The wells have remote shut down capability. There is a minimum of 2 operators in the PCE Operations Camp available for call-out's.

Farrell Creek b-17-I/94-B-1

The Farrell Creek facility is located at b-17-I/94-B-I. The Facility is sweet and produces natural gas. The plant can also be monitored remotely through SCADA systems. The wells have remote shut down capability. There are a minimum of two operators in the PCE Operations camp available for any call-out's.

COMMUNICATIONS

Cellular telephones are the primary communication devices to be employed during an emergency. Cellular reception and coverage is good in the Altares and Farrell Creek areas.

RADIO FREQUENCIES

Pacific Canbriam Radio Frequencies

b-24-H Plant / Pacific Canbriam Altares Field VHF	TX168.3000	RX162.945
b-72-A Plant UHF	TX459.5000	RX459.5000

Area Radio Frequencies

The frequencies and tones listed below should be programmed into all Pacific Canbriam contractors, representatives, and personnel's mobile radios in order to communicate with repeaters in each area.

Kobes Creek Road from km 24.5 to km 46.3	RR 08 – 150.4400
Beryl Prairie Road (entire length)	RR 03 – 150.1400
Haystack Road (entire length)	RR 13 – 150.530
The Core Road (entire length)	RR 04 – 150.1850
Camp Road	RR 21 – 151.010
The West Altares Road	RR 03 – 150.140
33 Access Road	RR 29

ROADBLOCK KITS / IGNITION KITS

Pacific Canbriam will establish roadblocks at the edge of the 100 m EPZ and evacuate the area in the event of an incident. Roadblocks for pipelines would tend to be short term while the line is shut down and depressurized.
At Pacific Canbriam discretion the setback distance may be reduced if supported by LEL monitoring results.

Roadblock and Mobile Helicopter Landing Pad Kits, if required, would be obtained from **the b-72-A Facility** and dispatched at a Level 1 Emergency. The number of Rovers, Roadblocks and Air Monitors required to be determined at the time of incident. Refer to the ERP cabinet for specific kit locations.

Roadblock Kits

Stop paddle, reflective traffic vest, amber beacon, flashlight with spare batteries, reflective barricade, personal electronic monitor (minimum tri-head), self-contained breathing apparatus, radio (public protection frequency, truck or portable), area map and hard hat.

Mobile Helicopter Landing Pad Kits

Air traffic wands, turbo flares, road flares, reflective flares, reflective PPE & pylons.

AGENCY CONTACTS

IMMEDIATE CONTACT REQUIRED AT ANY LEVEL OF EMERGENCY:

BC Energy Regulator (BCER) – Incident Reporting Line *(via EMCR)*		800.663.3456
Emergency Management and Climate Readiness (EMCR)		
BCER	Fort St. John	250.794.5200
WorkSafe BC	Report an Incident	888.621.7233

IMMEDIATE CONTACT REQUIRED IF ANY RESIDENTS ARE CONTACTED AT LEVEL 1 OR HIGHER:

RCMP	Hudson's Hope	911 250.783.5241
Peace River Regional District	Dawson Creek	800.670.7773 250.784.3200
Northern Health Authority	HEMBC On Call	855.554.3622

PROVINCIAL GOVERNMENT CONTACTS

BC 1 Call	Call Before You Dig	800.474.6886
BC Drug & Poison Information Centre	BC DPIC	800.567.8911
BC Ministry of Environment & Parks	Peace Region	250.787.3411
	Report Poachers & Polluters	877.952.RAPP (877.952.7277)
BC Ministry of Forests	Peace Natural Resource District	250.784.1200
BC Ministry of Transportation & Transit	Peace District Office North Peace Contractor	250.787.3237 800.842.4122
CANUTEC	Dangerous Goods Emergencies	888.226.8832 613.996.6666 From Cell: *666
Emergency Response Assistance Canada (ERAC)	(ERP2-0010-364)	800.265.0212
NAV Canada *via Flight Information Centre (FIC)*	Notice to Airmen (NOTAM)	866.WX.BRIEF 866.(992.7433) 866.541.4102
Public Works Association of BC (PWABC)	executivedirector@pwabc.ca	
Technical Safety BC	Report an Incident	866.566.7233
Transportation Safety Board	Rail Occurrence	819.944.3741
	Pipeline Occurrence	819.997.7887
WorkSafe BC	Report an Incident	888.621.7233
BC Wildfire Service	Report a Wildfire	800.663.5555 From Cell: *5555

EMERGENCY SERVICES

AMBULANCES

Air Ambulance (STARS)	Emergency Link	888.888.4567
	#3687 – PCE b-72-A/94-B-08	
BC Ambulance Services	Fort St. John	911 800.461.9911
BC Emergency Health Service	Cell / SAT phone/ Outside BC	250.374.5937
Bailey Helicopters Ltd.	Fort St. John	250.785.2518

HOSPITALS

Chetwynd Hospital and Health Centre	Chetwynd	250.788.2236
Dawson Creek & District Hospital	Dawson Creek	250.782.8501
Fort St. John Hospital and Peace Villa	Fort St. John	250.262.5200
Fort St. John Health Unit	Fort St. John	250.263.6000
Hudson's Hope Health Center	Hudson's Hope	250.783.9991

FIRE DEPARTMENTS

Hudson's Hope Fire & Rescue		911 250.783.9901

2025 ANNUAL ERP UPDATE — ALTARES / FARRELL CREEK AREA

PACIFIC CANBRIAM ENERGY

SERVICE CONTRACTORS

MOBILE AIR MONITORING		
Firemaster Oilfield Services	Central Dispatch	403.342.7500
HSE Integrated Ltd.	Province Wide	888.346.8260
Trojan Safety Services	Central Dispatch	250.785.9557
OILFIELD FIRE FIGHTING / SAFETY CONTRACTORS / WELL CONTROL SPECIALISTS / IGNITION		
Firemaster Oilfield Services	Central Dispatch	403.342.7500
HSE Integrated Ltd.	Province Wide	888.346.8260
Safety Boss	24 Hour Emergency	800.882.4967
Superior Fire Control Ltd.	24 Hour Emergency	877.882.0035
CRISIS COMMUNICATIONS		
Petron Communications	Fort St. John	250.785.3333
T&T Communications	Fort St. John	250.785.0310
SAFETY SERVICES		
HSE Integrated Ltd.	Province Wide	888.346.8260
Trojan Safety Services	Central Dispatch	250.785.9557
United Safety Ltd.	Central Dispatch	800.432.1809
SPILL RESPONSE		
Emergency Response Assistance Canada (ERAC)	(LPG Spills Only) AB/BC	800.265.0212
Clean Harbors	Province Wide	800.645.8265
Troyer Ventures Ltd.	Fort Nelson Fort St. John	250.774.5332 250.785.5332
Ambipar Response	Fort St. John	866.574.7928
BULK FUEL DELIVERY		
Smith Fuel Services	24/7 Dispatch	250.785.3466
TRUCKING COMPANIES		
Cascade Energy Services LP	24 Hour Dispatch	780.876.8900
CEDA	24 Hour Dispatch	250.784.5151
D.W Wilson Services Ltd.	Fort St. John	250.785.7737
Energetic Services Inc.	Fort St. John	250.785.4761
Fedderly Transportation Ltd.	Fort St. John	250.787.0398
Formula Powell L.P. Trucking	Fort St. John	250.785.4222
Fort St. John Water Inc	Fort St. John	250.785.0862
Maxim Industries Inc.	Fort St. John	250.785.7775
Oculus Transport Ltd	Fort St. John	250.264.2252
Raven Oilfield Rentals	Fort St. John	800.799.7188
Troyer Ventures Ltd.	Fort Nelson Fort St. John	250.774.5332 250.785.5332

SERVICE CONTRACTORS (Continued)

UTILITIES		
ATCO Electric	Province Wide	800.668.5506
BC Hydro	Province Wide	888.769.3766
Telus	Province Wide	310.2255 *611
ELECTRICAL / INSTRUMENTATION CONTRACTOR		
CDN Controls Ltd.	Fort St. John	855.530.8151
Epscan Industries Ltd.	Fort St. John	250.787.9659
Techmation Electric & Controls	Fort St. John	250.261.6532
PTW Energy Services	Fort St. John	250.785.9072
ENVIRONMENTAL SERVICES		
Clean Harbors (WCSS Spill Response Trailer)	Fort St. John	250.785.4577
Roy Northern Land & Environmental	Fort St. John	250.261.6644
Montrose Enviromental	24 Hour Spill Response	877.774.5525
Eco-Web Ecological Consulting	Fort St. John	250.787.1110
EMERGENCY RESPONSE MANAGEMENT		
Behr Integrated Solutions	Calgary	403.444.6940
TRANSPORTATION		
Standard Bus Contracting Ltd	Chetwynd Dispatch	250.788.2415 250.617.7710
Standard Bus Contracting Ltd	Prince George	250.617.7710
Avis Car and Truck Rental	Fort St. John Grande Prairie	250.785.5515 780.539.4101
Driving Force	Fort St. John Grande Prairie	250.787.0634 780.814.9596
HELICOPTER COMPANIES		
Qwest Helicopters	Fort Nelson	250.774.5302
Bailey Helicopters	Fort St. John	250.785.2518
Yellowhead Helicopters	24 Hour Emergency Fort St. John	888.566.4401 250.785.2331
ROAD SERVICES		
Dawson Road Maintenance Ltd.	Fort St. John	800.842.4122
Argo Road Maintenance (South Peace) Inc.	Dawson Creek – Pouce Coupe	800.663.7623
PILOT HOT SHOT AND TRAFFIC CONTROL		
Big League Oilfield Services	Fort St. John	250.787.9812
Peace Hot Shot & Picker Services	Fort St. John	250.785.8432
Energetic Traffic Control	Fort St. John	250.793.3331
PUMPING SERVICES		
BJ Energy Solutions	Clairmont	780.539.5210
Trican Well Service	Fort St. John	888.989.8975

SERVICE CONTRACTORS (Continued)

WCSS **See website for more info (www.wcss.ab.ca)*

COOP 9

24 Hour Emergency Contact	866.541.8888

Regional Custodian

North River Midstream Kaylin Salanski	250.262.3446 250.919.7282

Location: North River Midstream: 13217 Westcoast Frontage, Charlie Lake, BC V0C 1H0, Mile 53 Alaska Hwy

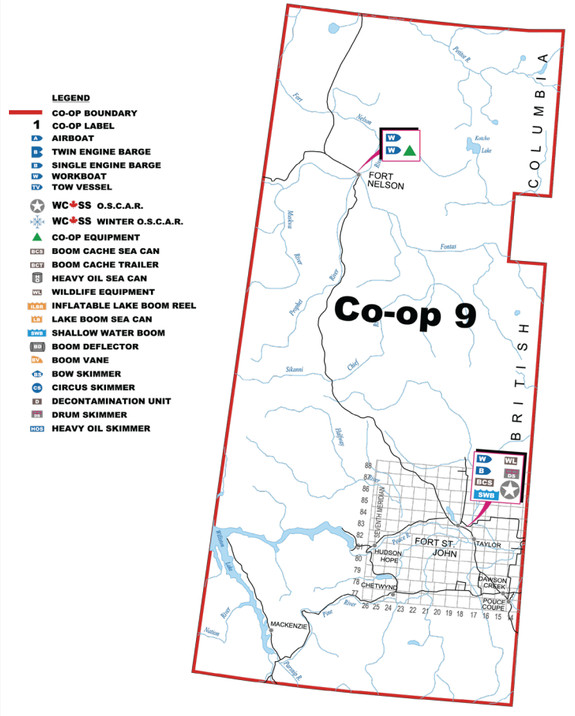
Equipment:
- 52′ OSCAR Trailer (semi-truck)
- 40′ Boom Cache Sea Can (winch tractor/trailer)
- 20′ Wildlife Sea Can (winch tractor/trailer)
- Work Boat (1/2-ton truck w/ 2″ ball hitch)
- Drum Skimmer w/ Power Pak (1/2-ton truck)
- Single Engine Barge (1-ton truck w/ 2-5/16″ ball hitch & electric brakes)
- 400′ Shallow Water Boom (1/2-ton truck)

COOP Custodian

Radar Road Trucking Rick Seidel	250.774.4203 250.775.0036

Location: 4900 - 46 Avenue, Fort Nelson, BC V0C 1R0

Equipment:
- 20′ ISRU Sea Can (winch truck & trailer)
- Work Boats (2) (1/2-ton truck w/ 2″ ball hitch)



RANGE TENURE

ID	COMPANY / NAME	EMERGENCY
RAN73263	Ray Jackson / Frank Miles (Horseshoe Creek Outfitters)	250.783.0561 250.263.1919
RAN76279	Gary Shelton	N/A
RAN76290	Christoph & Erika Weder (Venator Ranches Ltd.)	250.783.9999
RAN77273	Trento Holdings LTD.	250.783.9135

TRAPPERS

TRAPPER ID	NAME	EMERGENCY
735T002	David & James Vince	N/A
735T004	Anilee Rose Anderson	250.793.9273
735T004	Allen George Chatten	250.262.1972
735T005	Renee Ardill	250.263.7997 250.262.0184

GUIDES & OUTFITTERS

ID	COMPANY / NAME	EMERGENCY
701265	Steven Gonwick (Bullhead Mountain Outfitters Ltd.)	250.793.8000
750023	Luther Jackson	250.783.0561

RIGHTS HOLDERS

ID	COMPANY / NAME	EMERGENCY
Forest Tenure	ARC Resources	250.782.7952
Forest Tenure	BC Timber Sales (BCTS) – Peace-Liard	250.784.1200 250.795.4200
Forest Tenure	CANFOR	250.782.3302
Forest Tenure	Dale Benke	250.788.1806
Forest Tenure	Douglas Summer	N/A
Forest Tenure	Henry Bergen	250.630.2563 250.630.6160
Forest Tenure	Jacobus Haagsman	250.783.5389
Forest Tenure	Louisiana Pacific Canada Ltd.	250.782.3302 X227
Forest Tenure	Mathew Harder (W & M Enterprises)	250.785.2373 250.827.3810
Forest Tenure	Nathan Troyer	N/A
Forest Tenure	Pinewest Woodland Management Ltd.	N/A
Forest Tenure	Western LNG/Nisga'a Nation (Prince Rupert Gas Transmission Ltd.)	855.920.4696
Forest Tenure	TC Energy (Nova Gas)	888.982.7222

SURFACE DEVELOPMENT INFORMATION

There are 13 surface developments inside the EPZs. Note, there is random backcountry camping throughout the EPZ. In the event of an incident, ensure all members of the public are notified and provided with response information. If required use rovers and roadblocks to clear and isolate the areas in close proximity to the incident.

UNIQUE FEATURES AFFECTING EMERGENCY RESPONSE

None

RECEPTION CENTRES

Northern Grand Hotel	9830 100 Avenue Fort St. John, BC V1J 1Y5	250.787.0521
Stillwater Inn & Suites	9504 Canyon Drive Hudson's Hope, BC V0C 1V0	250.783.5400

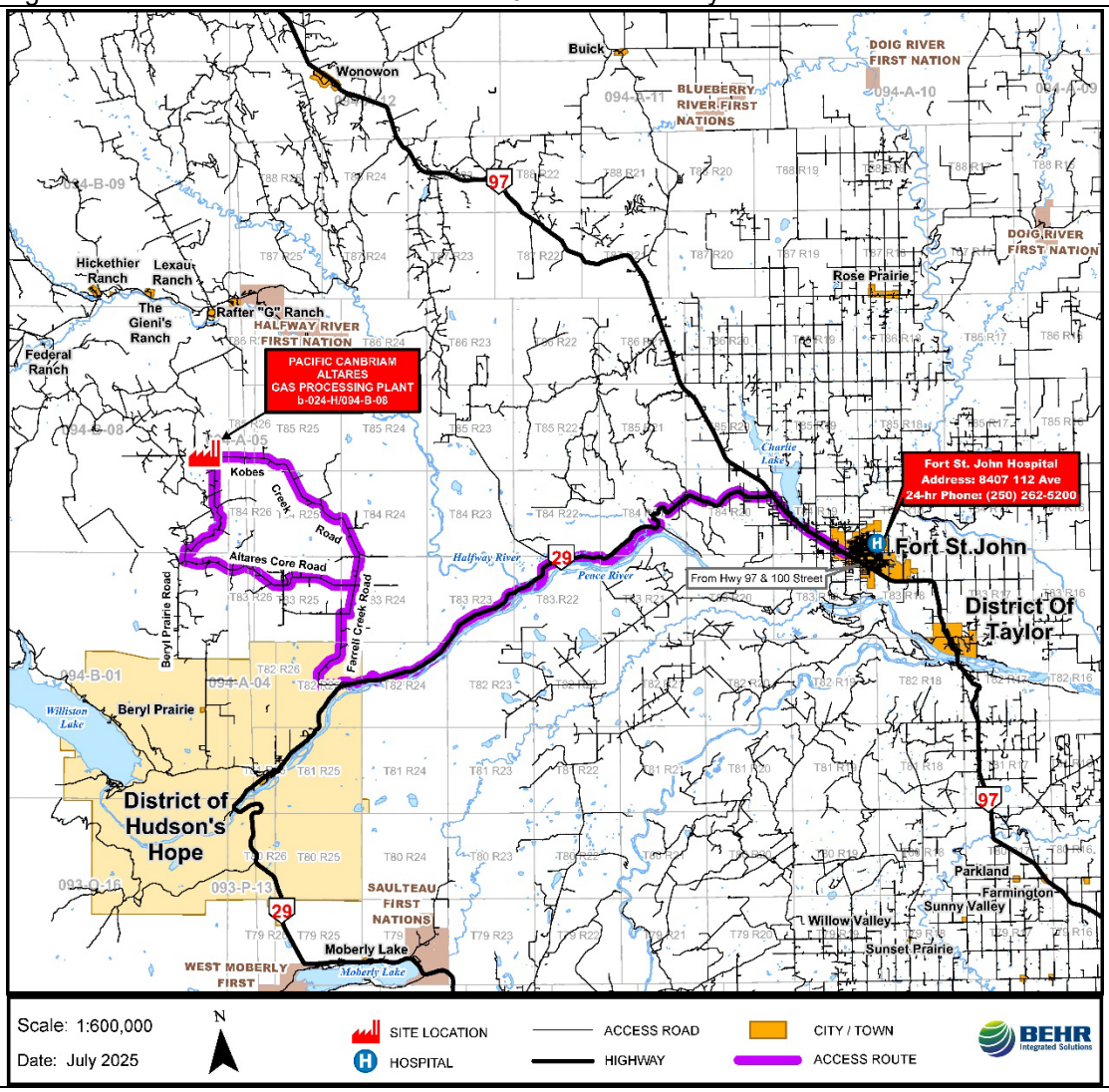
To Altares Gas Plant b-024-H / 94-B-08 – Total Distance 116 km

From Intersection of Hwy 97 and 100th Street, Fort St. John, BC

- Travel northwest on Hwy 97 for 12.5 km to Hwy 29 (Don Phillips Way).
- Turn left and travel southwest on Hwy 29 for 60.8 km.
- Turn right and travel west (then north) on Farrell Creek Road for 23.8 km.
- Continue travelling northwest onto Kobes Creek FSR for 20.5 km (preferred route).
- Turn right onto access road and travel north for 0.2 km into facility.

Or

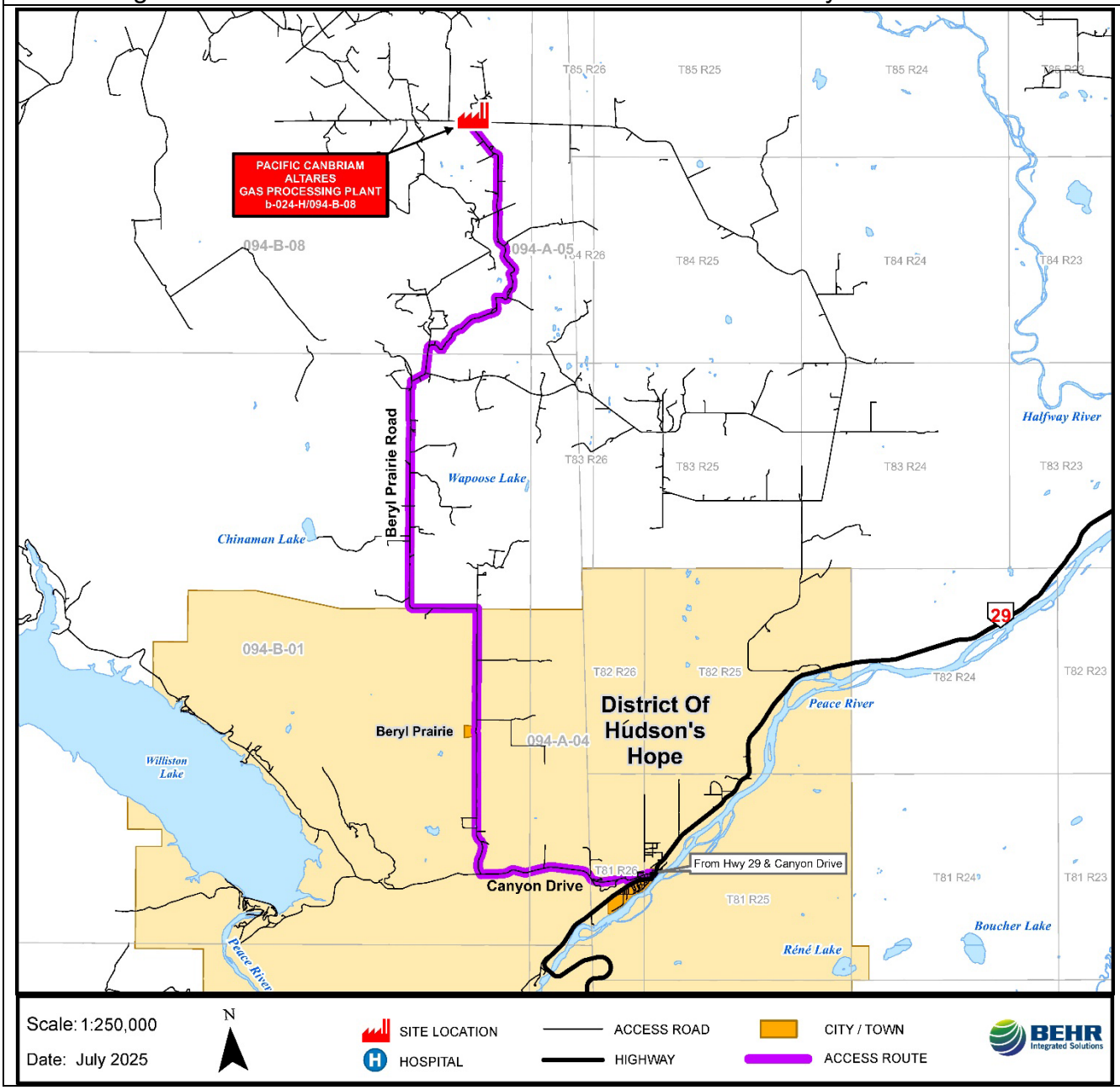
- Travel northwest on Hwy 97 for 12.5 km to Hwy 29 (Don Phillips Way).
- Turn left and travel southwest on Hwy 29 for 60.8 km.
- Turn right and travel west (then north) on Farrell Creek Road for 17.0 km.
- Turn left and travel west on Altares Core Road for 8.9 km.
- Continue west on Progress Connector for 0.8 km.
- Continue west on PDR 623 Progress Farrell Core Road for 11.5 km.
- Turn right and travel north on Beryl Prairie Road for 5.0 km.
- Continue north on Beryl Prairie FSR for 11.0 km.
- Turn right and travel east on Kobes Creek Road for 0.3 km.
- Turn right onto access road and travel north for 0.2 km into facility.



To Altares Gas Plant b-024-H / 94-B-08 – Total Distance 51.7 km

From Intersection of Hwy 29 and Canyon Drive, Hudson's Hope, BC

- Travel west on Canyon Drive for 8.5 km.
- Turn right and continue north on Beryl Prairie Road for 24.7 km.
- Continue north on PDR 623 Progress Farrell Core Road for 2.6 km.
- Continue north on Beryl Prairie Road for 5.0 km.
- Continue north on Beryl Prairie FSR for 11.0 km.
- Turn right and travel east on Kobes Creek Road for 0.3 km.
- Turn right onto access road and travel north for 0.2 km into facility.



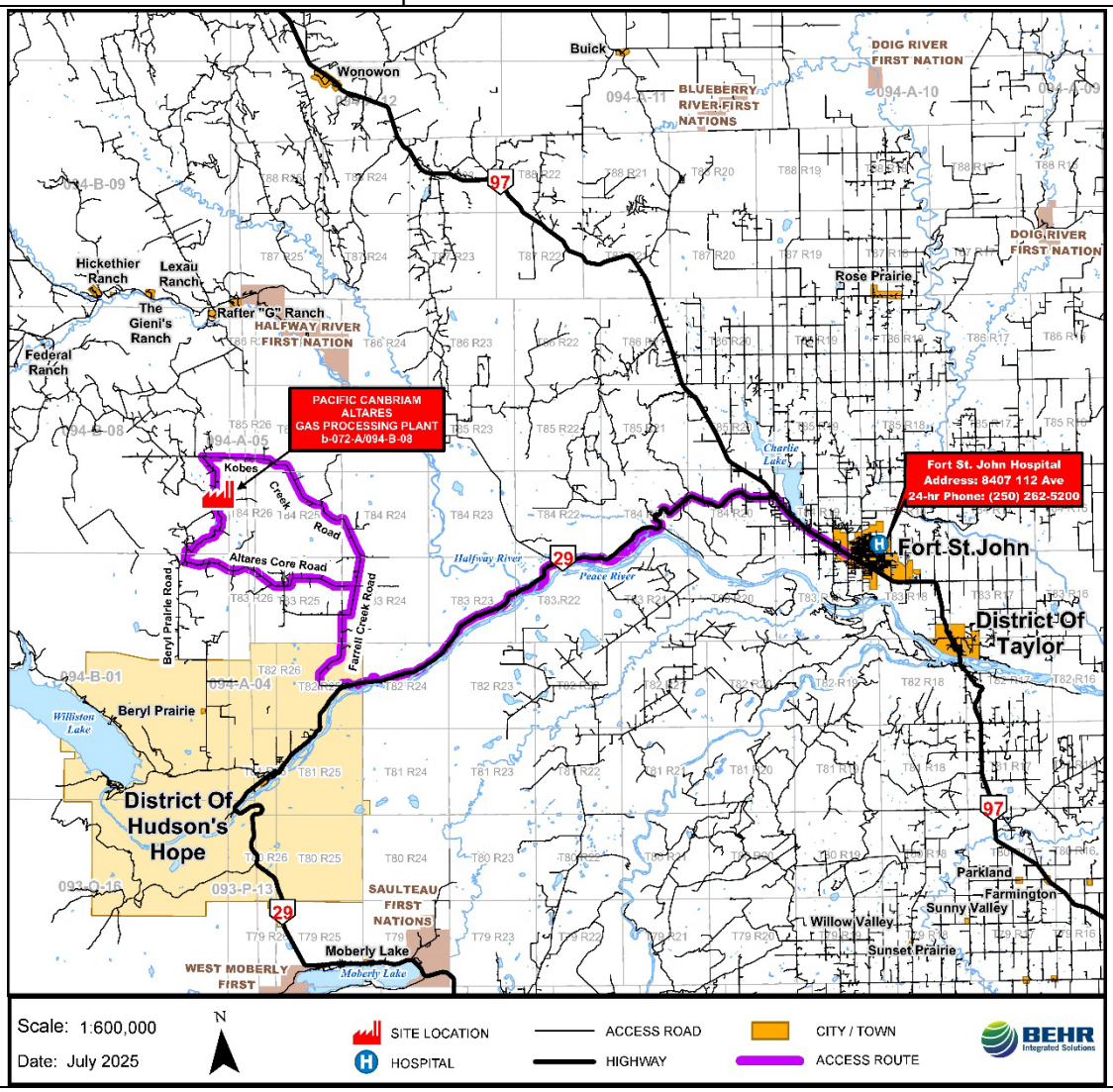
To Altares Gas Plant b-072-A / 94-B-08 – Total Distance 117 km

From Intersection of Hwy 97 and 100th Street, Fort St. John, BC

- Travel northwest on Hwy 97 for 12.5 km to Hwy 29 (Don Phillips Way).
- Turn left and travel southwest on Hwy 29 for 60.8 km.
- Turn right and travel west (then north) on Farrell Creek Road for 23.8 km.
- Continue travelling northwest onto Kobes Creek FSR for 20.8 km (preferred route).
- Turn left and travel south on Beryl Prairie FSR for 4.1 km.
- Turn left onto lease road to arrive into plant area.

Or

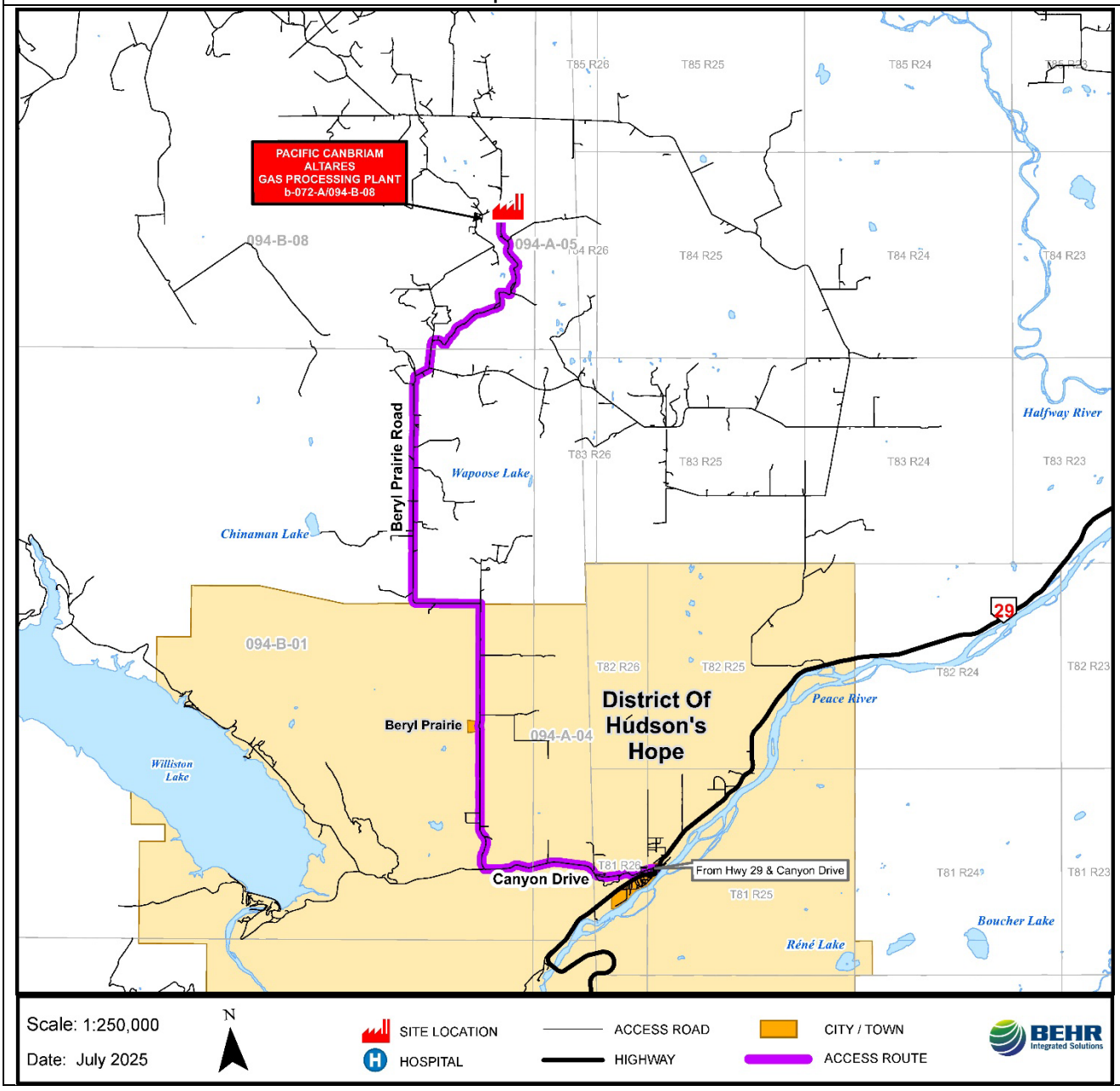
- Travel northwest on Hwy 97 for 12.5 km to Hwy 29 (Don Phillips Way).
- Turn left and travel southwest on Hwy 29 for 60.8 km.
- Turn right and travel west (then north) on Farrell Creek Road for 17.0 km.
- Turn left and travel west on Altares Core Road for 8.9 km.
- Continue west on Progress Connector for 0.8 km.
- Continue west on PDR 623 Progress Farrell Core Road for 11.5 km.
- Turn right and travel north on Beryl Prairie Road for 5.0 km.
- Continue north on Beryl Prairie FSR for 6.0 km.
- Turn left onto lease road to arrive into plant area.



To Altares Gas Plant b-072-A / 94-B-08 – Total Distance 46.3 km

From Intersection of Hwy 29 and Canyon Drive, Hudson's Hope, BC

- Travel west on Canyon Drive for 8.5 km.
- Turn right and continue north on Beryl Prairie Road for 24.7 km.
- Continue north on PDR 623 Progress Farrell Core Road for 2.6 km.
- Continue north on Beryl Prairie Road for 5.0 km.
- Continue north on Beryl Prairie FSR for 6.0 km.
- Turn left onto lease road to arrive in plant area.



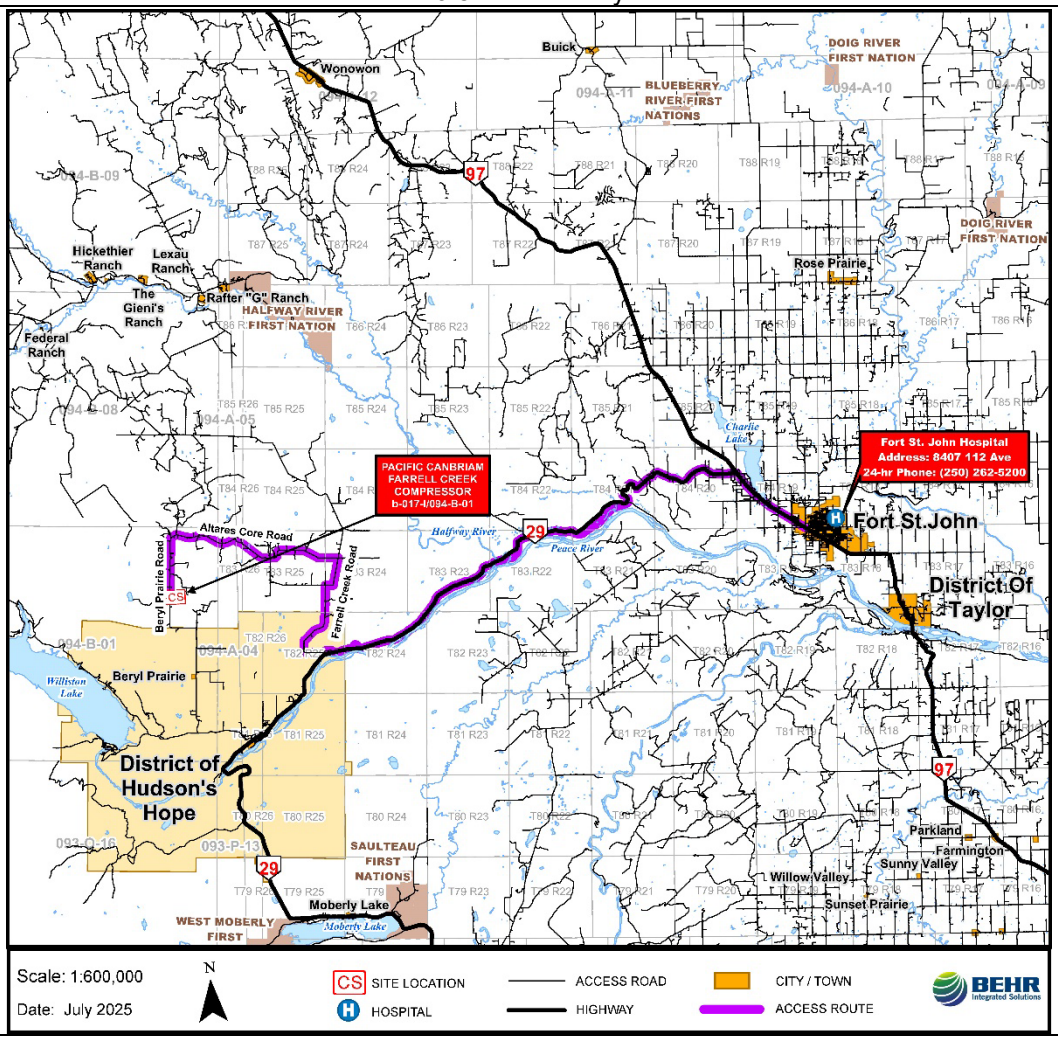
To Farrell Creek Compressor b-017-I / 94-B-01 – Total Distance 113 km

From Intersection of Hwy 97 and 100th Street, Fort St. John, BC

- Travel northwest on Hwy 97 for 12.5 km to Hwy 29 (Don Phillips Way).
- Turn left and travel southwest on Hwy 29 for 60.8 km.
- Turn right and travel west (then north) on Farrell Creek Road for 23.8 km.
- Continue travelling northwest onto Kobes Creek FSR for 20.8 km (preferred route).
- Turn left and travel south on Beryl Prairie FSR for 11.0 km.
- Continue south on Beryl Prairie FSR for 5.0 km.
- Continue south on PDR 623 Progress Farrell Core Road for 2.6 km.
- Turn left and continue south on Beryl Prairie Road for 5.0 km.
- Turn left and travel east on access road for 0.8 km to facility.

Or

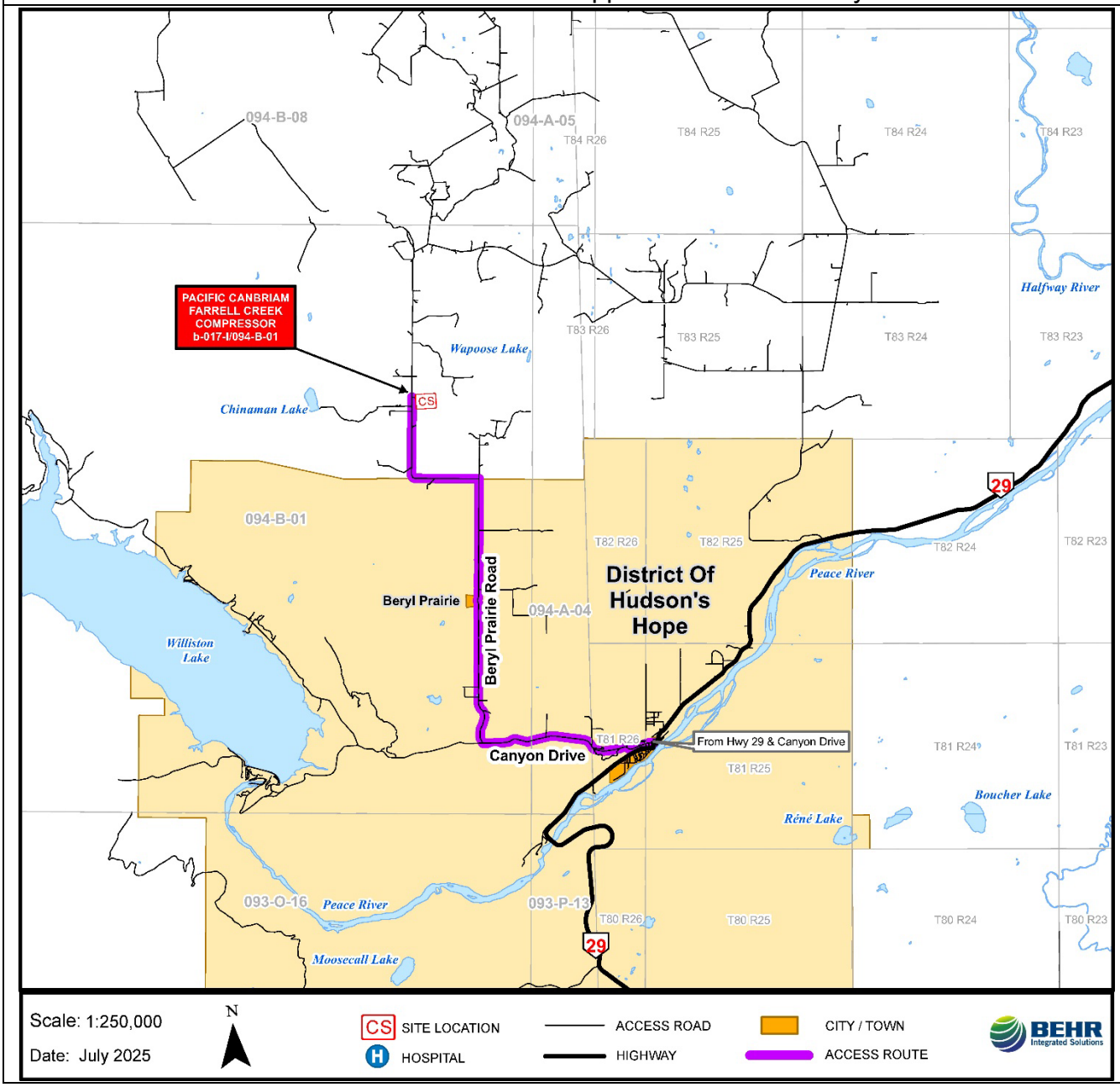
- Travel northwest on Hwy 97 for 12.5 km to Hwy 29 (Don Phillips Way).
- Turn left and travel southwest on Hwy 29 for 60.8 km.
- Turn right and travel west (then north) on Farrell Creek Road for 17.0 km.
- Turn left and travel west on Altares Core Road for 8.9 km.
- Continue west on Progress Connector for 0.8 km.
- Continue west on PDR 623 Progress Farrell Core Road for 14.1 km.
- Turn left and travel south on Beryl Prairie Road for 5.0 km.
- Turn left and travel east on access road for 0.8 km to facility.



To Farrell Creek Compressor b-017-I / 94-B-01 – Total Distance 28.1 km

From Intersection of Hwy 29 and Canyon Drive, Hudson's Hope, BC

- Travel west on Canyon Drive for 8.5 km.
- Turn right and continue north on Beryl Prairie Road for 24.7 km.
- Continue north on PDR 623 Progress Farrell Core Road for 2.6 km.
- Continue north on Beryl Prairie Road for 5.0 km.
- Continue north on Beryl Prairie FSR for 11.0 km.
- Turn right and travel east on Kobes Creek Road for 0.3 km.
- Turn left on access road and drive north for approx. 0.2 km to facility.



Altares / Farrell Creek - Wells

License	UWI	Surface Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Well Name	Substance	Status	Distance to Nearest Residence (km)	H_2S (ppm)	H_2S Release Rate (m^3/sec)	Assigned HPZ (m)
Operating											
049925	100/16-28-084-25W6/00	16-32-084-25 W6M	567667.07	6243543.45	PACIFIC CANBRIAM HZ ALTARES L16-32-084-25	Gas	Producing	>2	0	0.0000	100
049926	102/16-28-084-25W6/00	16-32-084-25 W6M	567661.47	6243537.79	PACIFIC CANBRIAM HZ ALTARES M16-32-084-25	Gas	Producing	>2	0	0.0000	100
043193	100/01-33-084-25W6/00	16-32-084-25 W6M	567735.99	6243612.23	PACIFIC CANBRIAM HZ ALTARES A16-32-084-25	Gas	Producing	>2	0	0.0000	100
043195	102/01-33-084-25W6/00	16-32-084-25 W6M	567717.97	6243594.35	PACIFIC CANBRIAM HZ ALTARES C16-32-084-25	Gas	Producing	>2	0	0.0000	100
043197	103/01-33-084-25W6/00	16-32-084-25 W6M	567706.64	6243582.93	PACIFIC CANBRIAM HZ ALTARES E16-32-084-25	Gas	Producing	>2	0	0.0000	100
049923	104/01-33-084-25W6/00	16-32-084-25 W6M	567678.40	6243554.76	PACIFIC CANBRIAM HZ ALTARES J16-32-084-25	Gas	Producing	>2	0	0.0000	100
049924	105/01-33-084-25W6/00	16-32-084-25 W6M	567672.80	6243548.99	PACIFIC CANBRIAM HZ ALTARES K16-32-084-25	Gas	Producing	>2	0	0.0000	100
043192	100/15-08-085-25W6/00	16-32-084-25 W6M	567734.95	6243611.32	PACIFIC CANBRIAM HZ ALTARES 16-32-084-25	Gas	Producing	>2	0	0.0000	100
049919	102/15-08-085-25W6/00	16-32-084-25 W6M	567701.04	6243577.38	PACIFIC CANBRIAM HZ ALTARES F16-32-084-25	Gas	Producing	>2	0	0.0000	100
049920	103/15-08-085-25W6/00	16-32-084-25 W6M	567695.38	6243571.73	PACIFIC CANBRIAM HZ ALTARES G16-32-084-25	Gas	Producing	>2	0	0.0000	100
049921	104/15-08-085-25W6/00	16-32-084-25 W6M	567689.72	6243565.96	PACIFIC CANBRIAM HZ ALTARES H16-32-084-25	Gas	Producing	>2	0	0.0000	100
049922	105/15-08-085-25W6/00	16-32-084-25 W6M	567684.06	6243560.41	PACIFIC CANBRIAM HZ ALTARES I16-32-084-25	Gas	Producing	>2	0	0.0000	100
043194	100/16-08-085-25W6/00	16-32-084-25 W6M	567723.69	6243599.90	PACIFIC CANBRIAM HZ ALTARES B16-32-084-25	Gas	Producing	>2	0	0.0000	100
043196	102/16-08-085-25W6/00	16-32-084-25 W6M	567712.37	6243588.70	PACIFIC CANBRIAM HZ ALTARES D16-32-084-25	Gas	Producing	>2	0	0.0000	100
037341	100/11-12-085-26W6/00	08-06-085-25 W6M	566007.02	6244408.40	PACIFIC CANBRIAM HZ ALTARES A08-06-085-25	Gas	Producing	>2	0	0.0000	100
037343	102/11-12-085-26W6/02	08-06-085-25 W6M	566030.47	6244442.72	PACIFIC CANBRIAM HZ ALTARES C08-06-085-25	Gas	Producing	>2	0	0.0000	100
037345	103/11-12-085-26W6/00	08-06-085-25 W6M	566040.53	6244460.02	PACIFIC CANBRIAM HZ ALTARES E08-06-085-25	Gas	Producing	>2	0	0.0000	100
041119	100/15-12-085-26W6/00	08-06-085-25 W6M	566045.47	6244468.67	PACIFIC CANBRIAM HZ ALTARES F08-06-085-25	Gas	Producing	>2	0	0.0000	100
038562	100/04-32-084-25W6/00	01-01-085-26 W6M	564049.33	6243946.67	PACIFIC CANBRIAM HZ ALTARES A02-01-085-26	Gas	Producing	>2	0	0.0000	100
038561	102/05-32-084-25W6/00	01-01-085-26 W6M	564049.33	6243946.67	PACIFIC CANBRIAM HZ ALTARES 02-01-085-26	Gas	Producing	>2	0	0.0000	100
038563	100/13-29-084-25W6/00	02-01-085-26 W6M	564027.18	6244144.26	PACIFIC CANBRIAM HZ ALTARES B02-01-085-26	Gas	Producing	>2	0	0.0000	100
038564	102/13-29-084-25W6/00	02-01-085-26 W6M	564022.18	6244135.95	PACIFIC CANBRIAM HZ ALTARES C02-01-085-26	Gas	Producing	>2	0	0.0000	100
038565	100/16-30-084-25W6/00	02-01-085-26 W6M	564017.11	6244127.64	PACIFIC CANBRIAM HZ ALTARES D02-01-085-26	Gas	Producing	>2	0	0.0000	100
038566	102/16-30-084-25W6/00	02-01-085-26 W6M	564012.16	6244119.33	PACIFIC CANBRIAM HZ ALTARES E02-01-085-26	Gas	Producing	>2	0	0.0000	100
043701	103/13-29-084-25W6/00	07-01-085-26 W6M	564059.75	6244198.86	PACIFIC CANBRIAM HZ ALTARES C07-01-085-26	Gas	Producing	>2	0	0.0000	100
043702	104/13-29-084-25W6/00	07-01-085-26 W6M	564064.82	6244207.17	PACIFIC CANBRIAM HZ ALTARES D07-01-085-26	Gas	Producing	>2	0	0.0000	100
043703	105/13-29-084-25W6/00	07-01-085-26 W6M	564069.76	6244215.59	PACIFIC CANBRIAM HZ ALTARES E07-01-085-26	Gas	Producing	>2	0	0.0000	100

Altares / Farrell Creek - Wells

License	UWI	Surface Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Well Name	Substance	Status	Distance to Nearest Residence (km)	H_2S (ppm)	H_2S Release Rate (m^3/sec)	Assigned HPZ (m)
Operating											
043698	103/16-30-084-25W6/00	07-01-085-26 W6M	564044.73	6244173.70	PACIFIC CANBRIAM HZ ALTARES 07-01-085-26	Gas	Producing	>2	0	0.0000	100
043699	104/16-30-084-25W6/00	07-01-085-26 W6M	564049.80	6244182.12	PACIFIC CANBRIAM HZ ALTARES A07-01-085-26	Gas	Producing	>2	0	0.0000	100
043700	105/16-30-084-25W6/00	07-01-085-26 W6M	564054.75	6244190.43	PACIFIC CANBRIAM HZ ALTARES B07-01-085-26	Gas	Producing	>2	0	0.0000	100
043704	102/04-32-084-25W6/00	07-01-085-26 W6M	564074.83	6244223.91	PACIFIC CANBRIAM HZ ALTARES F07-01-085-26	Gas	Producing	>2	0	0.0000	100
043705	103/04-32-084-25W6/00	07-01-085-26 W6M	564079.84	6244232.22	PACIFIC CANBRIAM HZ ALTARES G07-01-085-26	Gas	Producing	>2	0	0.0000	100
043706	104/04-32-084-25W6/00	07-01-085-26 W6M	564084.91	6244240.65	PACIFIC CANBRIAM HZ ALTARES H07-01-085-26	Gas	Producing	>2	0	0.0000	100
036845	100/05-32-084-25W6/00	10-01-085-26 W6M	564075.61	6244935.71	PACIFIC CANBRIAM HZ ALTARES 10-01-085-26	Gas	Producing	>2	0	0.0000	100
036844	100/12-32-084-25W6/00	15-01-085-26 W6M	564078.15	6244939.98	PACIFIC CANBRIAM HZ ALTARES H15-01-085-26	Gas	Producing	>2	0	0.0000	100
027474	102/01-06-085-25W6/02	15-01-085-26 W6M	564110.62	6244996.35	PACIFIC CANBRIAM HZ ALTARES C15-01-085-26	Gas	Producing	>2	0	0.0000	100
031815	100/03-06-085-25W6/00	15-01-085-26 W6M	564105.62	6244987.71	PACIFIC CANBRIAM HZ ALTARES D15-01-085-26	Gas	Producing	>2	0	0.0000	100
028394	200/B-049-D/094-A-05/02	15-12-084-26 W6M	564307.82	6236983.53	PACIFIC CANBRIAM HZ ALTARES 15-12-084-26	Gas	Producing	>2	0	0.0000	100
037344	200/C-028-E/094-A-05/00	08-06-085-25 W6M	566035.54	6244451.26	PACIFIC CANBRIAM HZ ALTARES D08-06-085-25	Gas	Producing	>2	0	0.0000	100
037340	200/D-029-E/094-A-05/00	08-06-085-25 W6M	566002.08	6244399.76	PACIFIC CANBRIAM HZ ALTARES 08-06-085-25	Gas	Producing	>2	0	0.0000	100
037342	202/D-029-E/094-A-05/00	08-06-085-25 W6M	566012.07	6244417.17	PACIFIC CANBRIAM HZ ALTARES B08-06-085-25	Gas	Producing	>2	0	0.0000	100
043710	203/C-021-H/094-B-08/00	01-01-085-26 W6M	564451.85	6243928.14	PACIFIC CANBRIAM HZ ALTARES L02-01-085-26	Gas	Producing	>2	0	0.0000	100
043696	200/B-021-H/094-B-08/00	02-01-085-26 W6M	563955.19	6244145.52	PACIFIC CANBRIAM HZ ALTARES F02-01-085-26	Gas	Producing	>2	0	0.0000	100
043708	200/C-021-H/094-B-08/00	02-01-085-26 W6M	563963.29	6244149.65	PACIFIC CANBRIAM HZ ALTARES J02-01-085-26	Gas	Producing	>2	0	0.0000	100
043697	202/B-021-H/094-B-08/00	02-01-085-26 W6M	563959.21	6244149.81	PACIFIC CANBRIAM HZ ALTARES G02-01-085-26	Gas	Producing	>2	0	0.0000	100
043709	202/C-021-H/094-B-08/00	02-01-085-26 W6M	563967.44	6244149.49	PACIFIC CANBRIAM HZ ALTARES K02-01-085-26	Gas	Producing	>2	0	0.0000	100
043707	200/B-031-H/094-B-08/00	07-01-085-26 W6M	563975.16	6244178.99	PACIFIC CANBRIAM HZ ALTARES I07-01-085-26	Gas	Producing	>2	0	0.0000	100
031816	200/C-030-E/094-A-05/00	15-01-085-26 W6M	564100.55	6244979.06	PACIFIC CANBRIAM HZ ALTARES E15-01-085-26	Gas	Producing	>2	0	0.0000	100
027472	200/D-030-E/094-A-05/00	15-01-085-26 W6M	564070.89	6245076.91	PACIFIC CANBRIAM HZ ALTARES A15-01-085-26	Gas	Producing	>2	0	0.0000	100
031818	200/D-021-H/094-B-08/00	15-01-085-26 W6M	564083.14	6244948.74	PACIFIC CANBRIAM HZ ALTARES G15-01-085-26	Gas	Producing	>2	0	0.0000	100
031817	200/A-031-H/094-B-08/02	15-01-085-26 W6M	564085.68	6244953.01	PACIFIC CANBRIAM HZ ALTARES F15-01-085-26	Gas	Producing	>2	0	0.0000	100
041428	100/11-30-084-25W6/00	c-098-D/094-A-05	564103.08	6243354.36	PACIFIC CANBRIAM HZ ALTARES C- 098-D/094-A-05	Gas	Producing	>2	0	0.0000	100
041430	100/10-30-084-25W6/00	c-099-D/094-A-05	564113.08	6243371.65	PACIFIC CANBRIAM HZ ALTARES C-B098-D/094-A-05	Gas	Producing	>2	0	0.0000	100
041431	100/15-30-084-25W6/00	c-099-D/094-A-05	564118.09	6243380.41	PACIFIC CANBRIAM HZ ALTARES C-C098-D/094-A-05	Gas	Producing	>2	0	0.0000	100

Altares / Farrell Creek - Wells

License	UWI	Surface Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Well Name	Substance	Status	Distance to Nearest Residence (km)	H_2S (ppm)	H_2S Release Rate (m^3/sec)	Assigned HPZ (m)
Operating											
041429	102/11-30-084-25W6/00	c-099-D/094-A-05	564108.02	6243363.00	PACIFIC CANBRIAM HZ ALTARES C-A098-D/094-A-05	Gas	Producing	>2	0	0.0000	100
043270	102/10-30-084-25W6/00	c-099-D/094-A-05	564150.51	6243436.67	PACIFIC CANBRIAM HZ ALTARES C-G098-D/094-A-05	Gas	Producing	>2	0	0.0000	100
043266	103/11-30-084-25W6/00	c-099-D/094-A-05	564135.50	6243410.62	PACIFIC CANBRIAM HZ ALTARES C-D098-D/094-A-05	Gas	Producing	>2	0	0.0000	100
043271	103/10-30-084-25W6/00	c-099-D/094-A-05	564155.45	6243445.32	PACIFIC CANBRIAM HZ ALTARES C-H098-D/094-A-05	Gas	Producing	>2	0	0.0000	100
043268	104/11-30-084-25W6/00	c-099-D/094-A-05	564140.57	6243419.26	PACIFIC CANBRIAM HZ ALTARES C-E098-D/094-A-05	Gas	Producing	>2	0	0.0000	100
043269	105/11-30-084-25W6/00	c-099-D/094-A-05	564145.57	6243428.02	PACIFIC CANBRIAM HZ ALTARES C-F098-D/094-A-05	Gas	Producing	>2	0	0.0000	100
043274	105/10-30-084-25W6/00	c-099-D/094-A-05	564170.46	6243471.26	PACIFIC CANBRIAM HZ ALTARES C-K098-D/094-A-05	Gas	Producing	>2	0	0.0000	100
043273	106/16-30-084-25W6/00	c-099-D/094-A-05	564165.52	6243462.61	PACIFIC CANBRIAM HZ ALTARES C-J098-D/094-A-05	Gas	Producing	>2	0	0.0000	100
043275	107/16-30-084-25W6/00	c-099-D/094-A-05	564175.46	6243479.90	PACIFIC CANBRIAM HZ ALTARES C-L098-D/094-A-05	Gas	Producing	>2	0	0.0000	100
043278	200/D-012-H/094-B-08/00	c-099-D/094-A-05	564065.09	6243408.55	PACIFIC CANBRIAM HZ ALTARES C-O098-D/094-A-05	Gas	Producing	>2	0	0.0000	100
043277	202/C-011-H/094-B-08/00	c-099-D/094-A-05	564061.05	6243401.70	PACIFIC CANBRIAM HZ ALTARES C-N098-D/094-A-05	Gas	Producing	>2	0	0.0000	100
043267	200/C-001-H/094-B-08/00	d-099-D/094-A-05	563276.18	6243369.37	PACIFIC CANBRIAM HZ ALTARES D- 099-D/094-A-05	Gas	Producing	>2	0	0.0000	100
043282	200/B-011-H/094-B-08/00	d-099-D/094-A-05	563280.16	6243376.22	PACIFIC CANBRIAM HZ ALTARES D-A099-D/094-A-05	Gas	Producing	>2	0	0.0000	100
043276	200/C-011-H/094-B-08/00	d-099-D/094-A-05	563284.20	6243383.18	PACIFIC CANBRIAM HZ ALTARES D-B099-D/094-A-05	Gas	Producing	>2	0	0.0000	100
043272	104/10-30-084-25W6/00	c-099-D/094-A-15	564160.52	6243453.85	PACIFIC CANBRIAM HZ ALTARES C-I098-D/094-A-05	Gas	Producing	>2	0	0.0000	100
025603	200/B-006-I/094-B-01/02	b-017-I/094-B-01	556594.06	6226071.49	PACIFIC CANBRIAM HZ W FARRELL B- 017-I/094-B-01	Gas	Producing	0.926	0	0.0000	100
025603	200/B-017-I/094-B-01/00	b-017-I/094-B-01	556600.29	6226074.92	PACIFIC CANBRIAM HZ W FARRELL B- 017-I/094-B-01	Gas	Producing	0.933	0	0.0000	100
025929	200/C-006-I/094-B-01/00	c-018-I/094-B-01	555849.26	6226838.91	PACIFIC CANBRIAM HZ W. FARRELL C- 018-I/094-B-01	Gas	Producing	0.294	0	0.0000	100
026815	200/D-040-I/094-B-01/00	c-018-I/094-B-01	555825.36	6226833.92	PACIFIC CANBRIAM HZ ALTARES C-B018-I/094-B-01	Gas	Producing	0.309	0	0.0000	100
025465	200/B-034-I/094-B-01/00	c-045-I/094-B-01	558256.13	6229436.26	PACIFIC CANBRIAM HZ W FARRELL C- 045-I/094-B-01	Gas	Producing	>2	0	0.0000	100
025521	200/D-026-I/094-B-01/02	c-048-I/094-B-01	556094.71	6229263.77	PACIFIC CANBRIAM HZ W FARRELL C-A048-I/094-B-01	Gas	Producing	1.930	0	0.0000	100
029600	200/D-008-A/094-B-08/02	c-029-A/094-B-08	555062.17	6236889.23	PACIFIC CANBRIAM HZ ALTARES C- 029-A/094-B-08	Gas	Producing	1.252	0	0.0000	100
035252	200/A-052-B/094-B-08/00	c-029-A/094-B-08	555035.52	6236857.39	PACIFIC CANBRIAM HZ ALTARES C-A029-A/094-B-08	Gas	Producing	1.293	0	0.0000	100
035253	202/A-052-B/094-B-08/00	c-029-A/094-B-08	555025.58	6236849.91	PACIFIC CANBRIAM HZ ALTARES C-B029-A/094-B-08	Gas	Producing	1.305	0	0.0000	100
020413	200/D-033-A/094-B-08/00	a-043-A/094-B-08	560074.37	6238240.38	PACIFIC CANBRIAM ALTARES A-043-A/094-B-08	Gas	Shut-in	>2	0	0.0000	100
020413	200/D-033-A/094-B-08/03	a-043-A/094-B-08	560074.37	6238240.38	PACIFIC CANBRIAM ALTARES A-043-A/094-B-08	N/A	Observation	>2	0	0.0000	100
029850	200/C-033-A/094-B-08/00	c-054-A/094-B-08	558792.18	6239750.79	PACIFIC CANBRIAM HZ ALTARES C- 054-A/094-B-08	Gas	Producing	0.717	0	0.0000	100

Altares / Farrell Creek - Wells

License	UWI	Surface Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Well Name	Substance	Status	Distance to Nearest Residence (km)	H_2S (ppm)	H_2S Release Rate (m^3/sec)	Assigned HPZ (m)
Operating											
032843	200/A-043-A/094-B-08/00	c-054-A/094-B-08	558832.10	6239750.78	PACIFIC CANBRIAM HZ ALTARES C-D054-A/094-B-08	Gas	Producing	0.691	0	0.0000	100
030276	202/C-033-A/094-B-08/02	c-054-A/094-B-08	558812.10	6239750.84	PACIFIC CANBRIAM HZ ALTARES C-B054-A/094-B-08	Gas	Producing	0.704	0	0.0000	100
030355	202/D-033-A/094-B-08/02	c-054-A/094-B-08	558822.13	6239750.87	PACIFIC CANBRIAM HZ ALTARES C-C054-A/094-B-08	Gas	Producing	0.698	0	0.0000	100
032846	202/B-042-A/094-B-08/00	c-054-A/094-B-08	558842.13	6239750.70	PACIFIC CANBRIAM HZ ALTARES C-E054-A/094-B-08	Gas	Producing	0.685	0	0.0000	100
030275	202/D-044-A/094-B-08/02	c-054-A/094-B-08	558802.16	6239762.84	PACIFIC CANBRIAM HZ ALTARES C-A054-A/094-B-08	Gas	Producing	0.702	0	0.0000	100
029313	200/D-044-A/094-B-08/00	d-055-A/094-B-08	558635.82	6239805.29	PACIFIC CANBRIAM HZ ALTARES D- 055-A/094-B-08	Gas	Producing	0.795	0	0.0000	100
030679	202/D-042-A/094-B-08/00	d-063-A/094-B-08	559933.20	6240670.26	PACIFIC CANBRIAM HZ ALTARES D- 063-A/094-B-08	Gas	Producing	0.463	0	0.0000	100
030721	203/D-042-A/094-B-08/00	d-063-A/094-B-08	559943.17	6240670.06	PACIFIC CANBRIAM HZ ALTARES D-A063-A/094-B-08	Gas	Producing	0.472	0	0.0000	100
026200	200/D-064-A/094-B-08/00	d-064-A/094-B-08	559185.26	6240526.33	PACIFIC CANBRIAM ALTARES D- 064-A/094-B-08	Gas	Producing	0.253	0	0.0000	100
029998	200/B-042-A/094-B-08/00	b-074-A/094-B-08	558946.19	6241207.29	PACIFIC CANBRIAM HZ ALTARES B-E074-A/094-B-08	Gas	Producing	0.662	0	0.0000	100
031427	200/D-043-A/094-B-08/00	b-074-A/094-B-08	558955.23	6241211.42	PACIFIC CANBRIAM HZ ALTARES B-G074-A/094-B-08	Gas	Producing	0.655	0	0.0000	100
029210	200/A-053-A/094-B-08/00	b-074-A/094-B-08	558901.91	6241219.25	PACIFIC CANBRIAM HZ ALTARES B-C074-A/094-B-08	Gas	Producing	0.707	0	0.0000	100
027786	200/B-053-A/094-B-08/00	b-074-A/094-B-08	558884.16	6241210.10	PACIFIC CANBRIAM HZ ALTARES B-A074-A/094-B-08	Gas	Producing	0.719	0	0.0000	100
026688	200/A-075-A/094-B-08/00	b-074-A/094-B-08	558752.75	6241070.37	PACIFIC CANBRIAM ALTARES B- 074-A/094-B-08	Gas	Producing	0.805	0	0.0000	100
031428	202/C-042-A/094-B-08/00	b-074-A/094-B-08	558964.27	6241215.66	PACIFIC CANBRIAM HZ ALTARES B-H074-A/094-B-08	Gas	Producing	0.649	0	0.0000	100
029733	202/A-053-A/094-B-08/00	b-074-A/094-B-08	558910.76	6241223.83	PACIFIC CANBRIAM HZ ALTARES B-D074-A/094-B-08	Gas	Producing	0.701	0	0.0000	100
029209	202/B-053-A/094-B-08/00	b-074-A/094-B-08	558893.00	6241214.68	PACIFIC CANBRIAM HZ ALTARES B-B074-A/094-B-08	Gas	Producing	0.713	0	0.0000	100
031429	203/C-042-A/094-B-08/00	b-074-A/094-B-08	558973.30	6241219.91	PACIFIC CANBRIAM HZ ALTARES B-I074-A/094-B-08	Gas	Producing	0.643	0	0.0000	100
033957	200/C-095-A/094-B-08/00	c-074-A/094-B-08	558941.51	6241299.95	PACIFIC CANBRIAM HZ ALTARES C- 074-A/094-B-08	Gas	Producing	0.710	0	0.0000	100
033960	200/B-005-H/094-B-08/00	c-074-A/094-B-08	558968.74	6241312.57	PACIFIC CANBRIAM HZ ALTARES C-C074-A/094-B-08	Gas	Producing	0.694	0	0.0000	100
035534	202/C-095-A/094-B-08/00	c-074-A/094-B-08	558932.35	6241295.37	PACIFIC CANBRIAM HZ ALTARES C-E074-A/094-B-08	Gas	Producing	0.716	0	0.0000	100
033959	202/A-006-H/094-B-08/00	c-074-A/094-B-08	558959.70	6241308.33	PACIFIC CANBRIAM HZ ALTARES C-B074-A/094-B-08	Gas	Producing	0.699	0	0.0000	100
033961	203/D-006-H/094-B-08/00	c-074-A/094-B-08	558977.78	6241316.82	PACIFIC CANBRIAM HZ ALTARES C-D074-A/094-B-08	Gas	Producing	0.689	0	0.0000	100
026058	200/C-073-A/094-B-08/00	b-083-A/094-B-08	559572.25	6242076.49	PACIFIC CANBRIAM ALTARES B-A083-A/094-B-08	N/A	Observation	0.699	0	0.0000	100
031333	200/C-063-A/094-B-08/00	c-084-A/094-B-08	559013.80	6242560.97	PACIFIC CANBRIAM HZ ALTARES C-G084-A/094-B-08	Gas	Producing	1.159	0	0.0000	100
031330	200/D-063-A/094-B-08/00	c-084-A/094-B-08	559040.90	6242573.70	PACIFIC CANBRIAM HZ ALTARES C-D084-A/094-B-08	Gas	Producing	1.133	0	0.0000	100
030289	200/A-015-H/094-B-08/00	c-084-A/094-B-08	558991.92	6242627.01	PACIFIC CANBRIAM HZ ALTARES C-A084-A/094-B-08	Gas	Producing	1.118	0	0.0000	100

Altares / Farrell Creek - Wells

License	UWI	Surface Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Well Name	Substance	Status	Distance to Nearest Residence (km)	H_2S (ppm)	H_2S Release Rate (m^3/sec)	Assigned HPZ (m)
Operating											
030298	200/B-015-H/094-B-08/00	c-084-A/094-B-08	558973.79	6242618.52	PACIFIC CANBRIAM HZ ALTARES C-C084-A/094-B-08	Gas	Producing	1.136	0	0.0000	100
034674	202/C-063-A/094-B-08/00	c-084-A/094-B-08	558981.85	6242546.16	PACIFIC CANBRIAM HZ ALTARES C-J084-A/094-B-08	Gas	Producing	1.190	0	0.0000	100
031331	202/D-063-A/094-B-08/00	c-084-A/094-B-08	559031.87	6242569.45	PACIFIC CANBRIAM HZ ALTARES C-E084-A/094-B-08	Gas	Producing	1.142	0	0.0000	100
031334	202/C-005-H/094-B-08/00	c-084-A/094-B-08	558951.05	6242607.85	PACIFIC CANBRIAM HZ ALTARES C-H084-A/094-B-08	Gas	Producing	1.159	0	0.0000	100
029799	202/A-015-H/094-B-08/00	c-084-A/094-B-08	559000.96	6242631.14	PACIFIC CANBRIAM HZ ALTARES C- 084-A/094-B-08	Gas	Producing	1.110	0	0.0000	100
030297	202/B-015-H/094-B-08/00	c-084-A/094-B-08	558982.89	6242622.77	PACIFIC CANBRIAM HZ ALTARES C-B084-A/094-B-08	Gas	Producing	1.127	0	0.0000	100
034675	203/A-053-A/094-B-08/00	c-084-A/094-B-08	558972.75	6242541.92	PACIFIC CANBRIAM HZ ALTARES C-K084-A/094-B-08	Gas	Producing	1.198	0	0.0000	100
031332	203/D-063-A/094-B-08/00	c-084-A/094-B-08	559022.84	6242565.21	PACIFIC CANBRIAM HZ ALTARES C-F084-A/094-B-08	Gas	Producing	1.151	0	0.0000	100
033947	203/C-005-H/094-B-08/00	c-084-A/094-B-08	558942.02	6242603.72	PACIFIC CANBRIAM HZ ALTARES C-I084-A/094-B-08	Gas	Producing	1.168	0	0.0000	100
031650	200/A-098-A/094-B-08/00	d-088-A/094-B-08	556283.81	6242523.00	PACIFIC CANBRIAM ALTARES D- 088-A/094-B-08	Gas	Producing	>2	0	0.0000	100
031223	200/B-019-H/094-B-08/00	a-097-A/094-B-08	556335.04	6242839.93	PACIFIC CANBRIAM HZ ALTARES A-C098-A/094-B-08	Gas	Producing	>2	0	0.0000	100
031222	202/B-019-H/094-B-08/00	a-097-A/094-B-08	556326.39	6242834.92	PACIFIC CANBRIAM HZ ALTARES A-B098-A/094-B-08	Gas	Producing	>2	0	0.0000	100
030274	200/B-075-A/094-B-08/00	b-097-A/094-B-08	556381.32	6242764.07	PACIFIC CANBRIAM HZ ALTARES B-C097-A/094-B-08	Gas	Producing	>2	0	0.0000	100
030132	200/A-076-A/094-B-08/00	b-097-A/094-B-08	556363.95	6242754.15	PACIFIC CANBRIAM HZ ALTARES B-A097-A/094-B-08	Gas	Producing	>2	0	0.0000	100
029601	200/C-009-H/094-B-08/00	b-097-A/094-B-08	556355.35	6242749.03	PACIFIC CANBRIAM HZ ALTARES B- 097-A/094-B-08	Gas	Producing	>2	0	0.0000	100
030133	202/A-076-A/094-B-08/00	b-097-A/094-B-08	556372.60	6242759.16	PACIFIC CANBRIAM HZ ALTARES B-B097-A/094-B-08	Gas	Producing	>2	0	0.0000	100
031225	202/C-009-H/094-B-08/00	a-098-A/094-B-08	556317.67	6242829.90	PACIFIC CANBRIAM HZ ALTARES A-A098-A/094-B-08	Gas	Producing	>2	0	0.0000	100
031224	203/C-009-H/094-B-08/00	a-098-A/094-B-08	556309.02	6242824.89	PACIFIC CANBRIAM HZ ALTARES A- 098-A/094-B-08	Gas	Producing	>2	0	0.0000	100
028979	200/B-083-A/094-B-08/00	c-004-H/094-B-08	559008.79	6244055.57	PACIFIC CANBRIAM HZ ALTARES C-B004-H/094-B-08	Gas	Producing	0.852	0	0.0000	100
031627	200/B-035-H/094-B-08/00	c-004-H/094-B-08	558997.53	6244127.11	PACIFIC CANBRIAM HZ ALTARES C-H004-H/094-B-08	Gas	Producing	0.907	0	0.0000	100
031328	200/C-036-H/094-B-08/00	c-004-H/094-B-08	558979.35	6244118.62	PACIFIC CANBRIAM HZ ALTARES C-F004-H/094-B-08	Gas	Producing	0.915	0	0.0000	100
031329	200/D-036-H/094-B-08/00	c-004-H/094-B-08	558988.38	6244122.86	PACIFIC CANBRIAM HZ ALTARES C-G004-H/094-B-08	Gas	Producing	0.911	0	0.0000	100
031326	200/D-037-H/094-B-08/00	c-004-H/094-B-08	558911.28	6244109.55	PACIFIC CANBRIAM HZ ALTARES C-D004-H/094-B-08	Gas	Producing	0.962	0	0.0000	100
028977	202/A-083-A/094-B-08/00	c-004-H/094-B-08	558999.77	6244050.55	PACIFIC CANBRIAM HZ ALTARES C-A004-H/094-B-08	Gas	Producing	0.856	0	0.0000	100
028526	202/B-083-A/094-B-08/00	c-004-H/094-B-08	558990.80	6244046.53	PACIFIC CANBRIAM HZ ALTARES C- 004-H/094-B-08	Gas	Producing	0.860	0	0.0000	100
031327	202/C-036-H/094-B-08/00	c-004-H/094-B-08	558970.32	6244114.48	PACIFIC CANBRIAM HZ ALTARES C-E004-H/094-B-08	Gas	Producing	0.919	0	0.0000	100
030237	203/A-083-A/094-B-08/00	c-004-H/094-B-08	559017.76	6244060.04	PACIFIC CANBRIAM HZ ALTARES C-C004-H/094-B-08	Gas	Producing	0.848	0	0.0000	100

Altares / Farrell Creek - Wells

License	UWI	Surface Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Well Name	Substance	Status	Distance to Nearest Residence (km)	H_2S (ppm)	H_2S Release Rate (m^3/sec)	Assigned HPZ (m)
Operating											
032971	200/D-062-A/094-B-08/00	d-004-H/094-B-08	559036.45	6244067.76	PACIFIC CANBRIAM HZ ALTARES D- 004-H/094-B-08	Gas	Producing	0.839	0	0.0000	100
032976	200/B-071-A/094-B-08/00	d-004-H/094-B-08	559063.47	6244080.82	PACIFIC CANBRIAM HZ ALTARES D-C004-H/094-B-08	Gas	Producing	0.827	0	0.0000	100
032975	200/A-072-A/094-B-08/00	d-004-H/094-B-08	559054.38	6244076.47	PACIFIC CANBRIAM HZ ALTARES D-B004-H/094-B-08	Gas	Producing	0.831	0	0.0000	100
032974	202/D-062-A/094-B-08/00	d-004-H/094-B-08	559045.47	6244072.11	PACIFIC CANBRIAM HZ ALTARES D-A004-H/094-B-08	Gas	Producing	0.835	0	0.0000	100
032977	202/D-037-H/094-B-08/00	d-004-H/094-B-08	559029.17	6244141.79	PACIFIC CANBRIAM HZ ALTARES D-D004-H/094-B-08	Gas	Producing	0.894	0	0.0000	100
043328	203/C-036-H/094-B-08/00	d-004-H/094-B-08	559047.18	6244150.06	PACIFIC CANBRIAM HZ ALTARES D-F004-H/094-B-08	Gas	Producing	0.887	0	0.0000	100
043327	203/D-037-H/094-B-08/00	d-004-H/094-B-08	559038.02	6244145.92	PACIFIC CANBRIAM HZ ALTARES D-E004-H/094-B-08	Gas	Producing	0.891	0	0.0000	100
021710	200/B-006-H/094-B-08/00	b-006-H/094-B-08	557308.33	6243948.29	PACIFIC CANBRIAM ALTARES B-006-H/094-B-08	N/A	Observation	>2	0	0.0000	100
033869	200/C-075-A/094-B-08/00	c-007-H/094-B-08	556611.64	6244270.80	PACIFIC CANBRIAM HZ ALTARES C-E007-H/094-B-08	Gas	Producing	>2	0	0.0000	100
031019	200/D-030-H/094-B-08/00	c-007-H/094-B-08	556590.33	6244292.11	PACIFIC CANBRIAM HZ ALTARES C-C007-H/094-B-08	Gas	Producing	>2	0	0.0000	100
031018	200/A-040-H/094-B-08/00	c-007-H/094-B-08	556583.26	6244299.03	PACIFIC CANBRIAM HZ ALTARES C-B007-H/094-B-08	Gas	Producing	>2	0	0.0000	100
033870	202/A-075-A/094-B-08/00	c-007-H/094-B-08	556618.72	6244263.66	PACIFIC CANBRIAM HZ ALTARES C-F007-H/094-B-08	Gas	Producing	>2	0	0.0000	100
031819	202/A-030-H/094-B-08/02	c-007-H/094-B-08	556597.36	6244284.86	PACIFIC CANBRIAM HZ ALTARES C-D007-H/094-B-08	Gas	Producing	>2	0	0.0000	100
031017	202/A-040-H/094-B-08/00	c-007-H/094-B-08	556576.24	6244306.06	PACIFIC CANBRIAM HZ ALTARES C-A007-H/094-B-08	Gas	Producing	>2	0	0.0000	100
033871	203/A-075-A/094-B-08/00	c-007-H/094-B-08	556625.80	6244256.63	PACIFIC CANBRIAM HZ ALTARES C-G007-H/094-B-08	Gas	Producing	>2	0	0.0000	100
041394	204/A-075-A/094-B-08/00	c-007-H/094-B-08	556632.88	6244249.49	PACIFIC CANBRIAM HZ ALTARES C-H007-H/094-B-08	Gas	Producing	>2	0	0.0000	100
041395	205/A-075-A/094-B-08/00	c-007-H/094-B-08	556639.96	6244242.46	PACIFIC CANBRIAM HZ ALTARES C-I007-H/094-B-08	Gas	Producing	>2	0	0.0000	100
031500	200/C-084-A/094-B-08/00	c-017-H/094-B-08	556466.01	6245087.94	PACIFIC CANBRIAM HZ ALTARES C-E017-H/094-B-08	Gas	Producing	1.822	0	0.0000	100
033919	200/A-085-A/094-B-08/00	c-017-H/094-B-08	556442.33	6245069.37	PACIFIC CANBRIAM HZ ALTARES C-H017-H/094-B-08	Gas	Producing	1.798	0	0.0000	100
031499	200/B-094-A/094-B-08/00	c-017-H/094-B-08	556473.90	6245093.95	PACIFIC CANBRIAM HZ ALTARES C-D017-H/094-B-08	Gas	Producing	1.829	0	0.0000	100
030113	200/C-039-H/094-B-08/00	c-017-H/094-B-08	556417.12	6245133.71	PACIFIC CANBRIAM HZ ALTARES C-B017-H/094-B-08	Gas	Producing	1.772	0	0.0000	100
034812	200/C-050-H/094-B-08/00	c-017-H/094-B-08	556442.26	6245028.52	PACIFIC CANBRIAM HZ ALTARES C-I017-H/094-B-08	Gas	Producing	1.800	0	0.0000	100
031501	202/B-084-A/094-B-08/00	c-017-H/094-B-08	556458.18	6245081.71	PACIFIC CANBRIAM HZ ALTARES C-F017-H/094-B-08	Gas	Producing	1.814	0	0.0000	100
030240	202/C-039-H/094-B-08/00	c-017-H/094-B-08	556409.29	6245127.60	PACIFIC CANBRIAM HZ ALTARES C-C017-H/094-B-08	Gas	Producing	1.764	0	0.0000	100
034813	202/C-050-H/094-B-08/00	c-017-H/094-B-08	556426.61	6245057.03	PACIFIC CANBRIAM HZ ALTARES C-J017-H/094-B-08	Gas	Producing	1.783	0	0.0000	100
031502	203/B-084-A/094-B-08/00	c-017-H/094-B-08	556450.22	6245075.60	PACIFIC CANBRIAM HZ ALTARES C-G017-H/094-B-08	Gas	Producing	1.806	0	0.0000	100
028659	204/B-049-H/094-B-08/00	c-017-H/094-B-08	556434.87	6245124.04	PACIFIC CANBRIAM HZ ALTARES C- 017-H/094-B-08	Gas	Producing	1.790	0	0.0000	100

Altares / Farrell Creek - Wells

License	UWI	Surface Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Well Name	Substance	Status	Distance to Nearest Residence (km)	H_2S (ppm)	H_2S Release Rate (m^3/sec)	Assigned HPZ (m)
Operating											
030112	205/B-049-H/094-B-08/00	c-017-H/094-B-08	556425.02	6245139.94	PACIFIC CANBRIAM HZ ALTARES C-A017-H/094-B-08	Gas	Producing	1.780	0	0.0000	100
030579	200/D-092-A/094-B-08/00	c-023-H/094-B-08	559723.48	6246060.94	PACIFIC CANBRIAM HZ ALTARES C-D023-H/094-B-08	Gas	Producing	0.504	0	0.0000	100
030580	200/A-002-H/094-B-08/00	c-023-H/094-B-08	559729.98	6246068.83	PACIFIC CANBRIAM HZ ALTARES C-E023-H/094-B-08	Gas	Producing	0.505	0	0.0000	100
027196	200/C-002-H/094-B-08/00	c-023-H/094-B-08	559682.69	6246096.11	PACIFIC CANBRIAM HZ ALTARES C- 023-H/094-B-08	Gas	Producing	0.450	0	0.0000	100
027242	200/B-044-H/094-B-08/00	c-023-H/094-B-08	559692.23	6246107.59	PACIFIC CANBRIAM HZ ALTARES C-A023-H/094-B-08	Gas	Producing	0.452	0	0.0000	100
027243	200/C-044-H/094-B-08/00	c-023-H/094-B-08	559701.89	6246119.20	PACIFIC CANBRIAM HZ ALTARES C-B023-H/094-B-08	Gas	Producing	0.454	0	0.0000	100
030578	202/B-002-H/094-B-08/00	c-023-H/094-B-08	559716.97	6246053.28	PACIFIC CANBRIAM HZ ALTARES C-C023-H/094-B-08	Gas	Producing	0.503	0	0.0000	100
026584	200/C-035-H/094-B-08/00	b-024-H/094-B-08	558893.27	6245548.76	PACIFIC CANBRIAM HZ ALTARES B-A024-H/094-B-08	Gas	Producing	0.090	0	0.0000	100
027596	200/B-045-H/094-B-08/00	b-024-H/094-B-08	558812.89	6245523.94	PACIFIC CANBRIAM HZ ALTARES B-B024-H/094-B-08	Gas	Producing	0.139	0	0.0000	100
030585	200/C-005-H/094-B-08/00	c-027-H/094-B-08	556408.45	6246011.34	PACIFIC CANBRIAM HZ ALTARES C-G027-H/094-B-08	Gas	Producing	1.973	0	0.0000	100
031446	200/A-006-H/094-B-08/00	c-027-H/094-B-08	556428.94	6245943.59	PACIFIC CANBRIAM HZ ALTARES C-I027-H/094-B-08	Gas	Producing	1.962	0	0.0000	100
027957	200/D-006-H/094-B-08/00	c-027-H/094-B-08	556331.43	6245975.36	PACIFIC CANBRIAM HZ ALTARES C-B027-H/094-B-08	Gas	Producing	1.888	0	0.0000	100
027530	200/B-049-H/094-B-08/00	c-027-H/094-B-08	556304.28	6245962.76	PACIFIC CANBRIAM HZ ALTARES C- 027-H/094-B-08	Gas	Producing	1.858	0	0.0000	100
030582	200/C-049-H/094-B-08/00	c-027-H/094-B-08	556381.18	6245998.62	PACIFIC CANBRIAM HZ ALTARES C-D027-H/094-B-08	Gas	Producing	1.943	0	0.0000	100
031445	202/D-006-H/094-B-08/00	c-027-H/094-B-08	556437.97	6245947.94	PACIFIC CANBRIAM HZ ALTARES C-H027-H/094-B-08	Gas	Producing	1.972	0	0.0000	100
027956	202/B-049-H/094-B-08/00	c-027-H/094-B-08	556317.91	6245969.17	PACIFIC CANBRIAM HZ ALTARES C-A027-H/094-B-08	Gas	Producing	1.873	0	0.0000	100
030583	202/C-049-H/094-B-08/00	c-027-H/094-B-08	556390.33	6246002.86	PACIFIC CANBRIAM HZ ALTARES C-E027-H/094-B-08	Gas	Producing	1.953	0	0.0000	100
028656	203/B-049-H/094-B-08/00	c-027-H/094-B-08	556358.57	6245988.08	PACIFIC CANBRIAM HZ ALTARES C-C027-H/094-B-08	Gas	Producing	1.918	0	0.0000	100
030584	203/C-049-H/094-B-08/00	c-027-H/094-B-08	556399.36	6246007.10	PACIFIC CANBRIAM HZ ALTARES C-F027-H/094-B-08	Gas	Producing	1.963	0	0.0000	100
037954	200/C-033-G/094-B-08/00	a-030-H/094-B-08	554542.59	6245838.17	PACIFIC CANBRIAM HZ ALTARES A- 030-H/094-B-08	Gas	Producing	0.719	0	0.0000	100
037955	200/B-043-G/094-B-08/00	a-030-H/094-B-08	554537.64	6245829.42	PACIFIC CANBRIAM HZ ALTARES A-A030-H/094-B-08	Gas	Producing	0.711	0	0.0000	100
037953	202/B-043-G/094-B-08/00	d-030-H/094-B-08	554547.55	6245846.80	PACIFIC CANBRIAM HZ ALTARES D-D030-H/094-B-08	Gas	Producing	0.727	0	0.0000	100
037952	203/B-043-G/094-B-08/00	d-030-H/094-B-08	554552.57	6245855.66	PACIFIC CANBRIAM HZ ALTARES D-C030-H/094-B-08	Gas	Producing	0.735	0	0.0000	100
037951	203/C-043-G/094-B-08/00	d-030-H/094-B-08	554557.52	6245864.18	PACIFIC CANBRIAM HZ ALTARES D-B030-H/094-B-08	Gas	Producing	0.743	0	0.0000	100
037950	204/C-043-G/094-B-08/00	d-030-H/094-B-08	554562.67	6245872.82	PACIFIC CANBRIAM HZ ALTARES D-A030-H/094-B-08	Gas	Producing	0.751	0	0.0000	100
037949	205/C-043-G/094-B-08/00	d-030-H/094-B-08	554567.62	6245881.46	PACIFIC CANBRIAM HZ ALTARES D- 030-H/094-B-08	Gas	Producing	0.759	0	0.0000	100
028708	202/D-003-H/094-B-08/00	b-034-H/094-B-08	558918.53	6246500.45	PACIFIC CANBRIAM HZ ALTARES B-C034-H/094-B-08	Gas	Producing	0.421	0	0.0000	100

Altares / Farrell Creek - Wells

License	UWI	Surface Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Well Name	Substance	Status	Distance to Nearest Residence (km)	H_2S (ppm)	H_2S Release Rate (m^3/sec)	Assigned HPZ (m)
Operating											
028290	203/C-003-H/094-B-08/02	b-034-H/094-B-08	558855.05	6246474.41	PACIFIC CANBRIAM HZ ALTARES B- 034-H/094-B-08	Gas	Producing	0.473	0	0.0000	100
031053	203/D-003-H/094-B-08/00	b-034-H/094-B-08	558927.61	6246504.69	PACIFIC CANBRIAM HZ ALTARES B-D034-H/094-B-08	Gas	Producing	0.414	0	0.0000	100
031054	204/D-003-H/094-B-08/00	b-034-H/094-B-08	558936.64	6246508.94	PACIFIC CANBRIAM HZ ALTARES B-E034-H/094-B-08	Gas	Producing	0.407	0	0.0000	100
043392	200/C-037-H/094-B-08/00	c-037-H/094-B-08	556375.93	6246837.00	PACIFIC CANBRIAM HZ ALTARES C-E037-H/094-B-08	Gas	Producing	>2	0	0.0000	100
043393	203/A-015-H/094-B-08/00	c-037-H/094-B-08	556378.63	6246582.11	PACIFIC CANBRIAM HZ ALTARES C-F037-H/094-B-08	Gas	Producing	>2	0	0.0000	100
033639	203/B-015-H/094-B-08/00	c-037-H/094-B-08	556313.37	6246806.45	PACIFIC CANBRIAM HZ ALTARES C-A037-H/094-B-08	Gas	Producing	>2	0	0.0000	100
033638	204/C-005-H/094-B-08/00	c-037-H/094-B-08	556304.35	6246802.21	PACIFIC CANBRIAM HZ ALTARES C-037-H/094-B-08	Gas	Producing	>2	0	0.0000	100
043394	204/A-015-H/094-B-08/00	c-037-H/094-B-08	556384.08	6246856.14	PACIFIC CANBRIAM HZ ALTARES C-G037-H/094-B-08	Gas	Producing	>2	0	0.0000	100
033640	204/B-015-H/094-B-08/00	c-037-H/094-B-08	556322.46	6246810.69	PACIFIC CANBRIAM HZ ALTARES C-B037-H/094-B-08	Gas	Producing	>2	0	0.0000	100
033641	205/B-015-H/094-B-08/00	c-037-H/094-B-08	556331.49	6246814.92	PACIFIC CANBRIAM HZ ALTARES C-C037-H/094-B-08	Gas	Producing	>2	0	0.0000	100
033642	206/B-015-H/094-B-08/00	c-037-H/094-B-08	556340.52	6246819.05	PACIFIC CANBRIAM HZ ALTARES C-D037-H/094-B-08	Gas	Producing	>2	0	0.0000	100
043392	207/B-015-H/094-B-08/02	c-037-H/094-B-08	556365.90	6246847.77	PACIFIC CANBRIAM HZ ALTARES C-E037-H/094-B-08	Gas	Producing	>2	0	0.0000	100
037945	200/C-042-G/094-B-08/00	a-040-H/094-B-08	554673.86	6246429.28	PACIFIC CANBRIAM HZ ALTARES A-B040-H/094-B-08	Gas	Producing	1.303	0	0.0000	100
037944	200/D-042-G/094-B-08/00	a-040-H/094-B-08	554678.88	6246437.91	PACIFIC CANBRIAM HZ ALTARES A-A040-H/094-B-08	Gas	Producing	1.312	0	0.0000	100
037948	200/C-043-G/094-B-08/00	a-040-H/094-B-08	554658.81	6246403.26	PACIFIC CANBRIAM HZ ALTARES A-E040-H/094-B-08	Gas	Producing	1.277	0	0.0000	100
037946	200/D-043-G/094-B-08/00	a-040-H/094-B-08	554668.91	6246420.53	PACIFIC CANBRIAM HZ ALTARES A-C040-H/094-B-08	Gas	Producing	1.294	0	0.0000	100
037943	202/C-042-G/094-B-08/00	a-040-H/094-B-08	554683.84	6246446.55	PACIFIC CANBRIAM HZ ALTARES A- 040-H/094-B-08	Gas	Producing	1.320	0	0.0000	100
037947	202/C-043-G/094-B-08/00	a-040-H/094-B-08	554663.83	6246411.89	PACIFIC CANBRIAM HZ ALTARES A-D040-H/094-B-08	Gas	Producing	1.285	0	0.0000	100
030690	200/B-065-H/094-B-08/00	c-044-H/094-B-08	558710.69	6247905.87	PACIFIC CANBRIAM HZ ALTARES C-E044-H/094-B-08	Gas	Producing	1.667	0	0.0000	100
028341	200/C-065-H/094-B-08/00	c-044-H/094-B-08	558766.96	6247938.26	PACIFIC CANBRIAM HZ ALTARES C- 044-H/094-B-08	Gas	Producing	1.679	0	0.0000	100
028518	200/C-075-H/094-B-08/00	c-044-H/094-B-08	558736.68	6247920.81	PACIFIC CANBRIAM HZ ALTARES C-B044-H/094-B-08	Gas	Producing	1.672	0	0.0000	100
030689	202/C-065-H/094-B-08/00	c-044-H/094-B-08	558719.34	6247910.78	PACIFIC CANBRIAM HZ ALTARES C-D044-H/094-B-08	Gas	Producing	1.669	0	0.0000	100
026479	200/D-043-H/094-B-08/00	c-064-H/094-B-08	558800.42	6249657.61	PACIFIC CANBRIAM HZ ALTARES C-A064-H/094-B-08	Gas	Producing	>2	0	0.0000	100
026891	200/B-085-H/094-B-08/00	c-064-H/094-B-08	558774.07	6249718.92	PACIFIC CANBRIAM HZ ALTARES C-C064-H/094-B-08	Gas	Producing	>2	0	0.0000	100
024356	200/C-085-H/094-B-08/00	c-064-H/094-B-08	558820.43	6249657.78	PACIFIC CANBRIAM HZ ALTARES C- 064-H/094-B-08	Gas	Producing	>2	0	0.0000	100
033161	200/A-054-H/094-B-08/00	d-076-H/094-B-08	557696.87	6250758.34	PACIFIC CANBRIAM HZ ALTARES D-A076-H/094-B-08	Gas	Producing	>2	0	0.0000	100
038029	200/B-018-I/094-B-08/00	d-076-H/094-B-08	557640.14	6250726.85	PACIFIC CANBRIAM HZ ALTARES D-F076-H/094-B-08	Gas	Producing	>2	0	0.0000	100

Altares / Farrell Creek - Wells

License	UWI	Surface Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Well Name	Substance	Status	Distance to Nearest Residence (km)	H_2S (ppm)	H_2S Release Rate (m^3/sec)	Assigned HPZ (m)
Operating											
037910	200/B-028-I/094-B-08/00	d-076-H/094-B-08	557666.36	6250741.56	PACIFIC CANBRIAM HZ ALTARES D-C076-H/094-B-08	Gas	Producing	>2	0	0.0000	100
038028	200/A-029-I/094-B-08/00	d-076-H/094-B-08	557648.90	6250731.64	PACIFIC CANBRIAM HZ ALTARES D-E076-H/094-B-08	Gas	Producing	>2	0	0.0000	100
033162	202/A-054-H/094-B-08/00	d-076-H/094-B-08	557688.17	6250753.44	PACIFIC CANBRIAM HZ ALTARES D-B076-H/094-B-08	Gas	Producing	>2	0	0.0000	100
038027	202/B-028-I/094-B-08/00	d-076-H/094-B-08	557657.60	6250736.55	PACIFIC CANBRIAM HZ ALTARES D-D076-H/094-B-08	Gas	Producing	>2	0	0.0000	100
031452	200/A-064-H/094-B-08/00	b-095-H/094-B-08	557943.42	6252053.12	PACIFIC CANBRIAM HZ ALTARES B- 095-H/094-B-08	Gas	Producing	>2	0	0.0000	100
031454	200/C-027-I/094-B-08/00	b-095-H/094-B-08	557904.53	6252030.66	PACIFIC CANBRIAM HZ ALTARES B-B095-H/094-B-08	Gas	Producing	>2	0	0.0000	100
031453	202/C-064-H/094-B-08/00	b-095-H/094-B-08	557934.78	6252048.10	PACIFIC CANBRIAM HZ ALTARES B-A095-H/094-B-08	Gas	Producing	>2	0	0.0000	100
031455	202/C-027-I/094-B-08/00	b-095-H/094-B-08	557895.90	6252025.64	PACIFIC CANBRIAM HZ ALTARES B-C095-H/094-B-08	Gas	Producing	>2	0	0.0000	100
041122	203/B-028-I/094-B-08/00	b-095-H/094-B-08	557861.18	6252005.69	PACIFIC CANBRIAM HZ ALTARES B-F095-H/094-B-08	Gas	Producing	>2	0	0.0000	100
029244	200/B-051-F/094-B-09/00	c-029-G/094-B-09	546824.50	6274032.53	PACIFIC CANBRIAM HZ KOBES C-A029-G/094-B-09	Gas	Producing	>2	0	0.0000	100
048731	200/B-064-A/094-B-08/00	c-007-H/094-B-08	556516.97	6244229.69	PACIFIC CANBRIAM HZ ALTARES C-M007-H/094-B-08	N/A	Producing	>2	0	0.0000	100
048733	200/D-065-A/094-B-08/00	c-007-H/094-B-08	556528.31	6244218.38	PACIFIC CANBRIAM HZ ALTARES C-O007-H/094-B-08	N/A	Producing	>2	0	0.0000	100
048734	200/B-074-A/094-B-08/00	c-007-H/094-B-08	556534.01	6244212.77	PACIFIC CANBRIAM HZ ALTARES C-P007-H/094-B-08	N/A	Producing	>2	0	0.0000	100
048736	200/C-074-A/094-B-08/00	c-007-H/094-B-08	556545.36	6244201.35	PACIFIC CANBRIAM HZ ALTARES C-R007-H/094-B-08	N/A	Producing	>2	0	0.0000	100
048728	200/C-041-G/094-B-08/00	c-007-H/094-B-08	556500.05	6244246.72	PACIFIC CANBRIAM HZ ALTARES C-J007-H/094-B-08	N/A	Producing	>2	0	0.0000	100
048732	202/B-064-A/094-B-08/00	c-007-H/094-B-08	556522.61	6244223.98	PACIFIC CANBRIAM HZ ALTARES C-N007-H/094-B-08	N/A	Producing	>2	0	0.0000	100
048735	202/B-074-A/094-B-08/00	c-007-H/094-B-08	556539.65	6244207.06	PACIFIC CANBRIAM HZ ALTARES C-Q007-H/094-B-08	N/A	Producing	>2	0	0.0000	100
048729	202/C-041-G/094-B-08/00	c-007-H/094-B-08	556505.69	6244241.01	PACIFIC CANBRIAM HZ ALTARES C-K007-H/094-B-08	N/A	Producing	>2	0	0.0000	100
048730	202/D-042-G/094-B-08/00	c-007-H/094-B-08	557045.46	6244323.35	PACIFIC CANBRIAM HZ ALTARES C-L007-H/094-B-08	N/A	Producing	>2	0	0.0000	100
Not Operating											
029072	100/15-36-082-24W6/00	15-36-082-24 W6M	586428.09	6224591.11	PACIFIC CANBRIAM HZ ALTARES 15-36-082-24	N/A	Drilled & Cased	>2		-	100
032255	100/01-20-083-23W6/02	08-30-083-23 W6M	585786.28	6231622.48	PACIFIC CANBRIAM HZ ATTACHIE 08-30-083-23	N/A	Drilled & Cased	>2		-	100
027435	100/12-07-083-24W6/02	12-07-083-24 W6M	575079.20	6227247.14	PACIFIC CANBRIAM ALTARES 12-07-083-24	N/A	Drilled & Cased	0.876		-	100
029490	100/01-23-083-24W6/00	01-27-083-24 W6M	581069.61	6231107.80	PACIFIC CANBRIAM HZ ALTARES 01-27-083-24	N/A	Drilled & Cased	1.655		-	100
035456	100/05-35-083-24W6/00	01-27-083-24 W6M	581069.36	6231117.81	PACIFIC CANBRIAM HZ ALTARES A01-27-083-24	N/A	Drilled & Cased	1.645		-	100
028743	100/03-24-083-25W6/00	03-24-083-25 W6M	573734.06	6229416.96	PACIFIC CANBRIAM ALTARES 03-24-083-25	N/A	Drilled & Cased	0.626		-	100
032009	100/13-17-084-25W6/00	13-19-084-25 W6M	564974.58	6240123.32	PACIFIC CANBRIAM HZ ALTARES 13-19-084-25	N/A	Drilled & Cased	>2		-	100

Altares / Farrell Creek - Wells

License	UWI	Surface Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Well Name	Substance	Status	Distance to Nearest Residence (km)	H_2S (ppm)	H_2S Release Rate (m^3/sec)	Assigned HPZ (m)
Not Operating											
005487	100/10-15-084-25W6/05	10-22-084-25 W6M	570729.22	6240065.56	PACIFIC CANBRIAM HZ ALTARES 10-22-084-25	N/A	Drilled & Cased	>2		-	100
005487	100/10-15-084-25W6/06	10-22-084-25 W6M	570729.22	6240065.56	PACIFIC CANBRIAM HZ ALTARES 10-22-084-25	N/A	Drilled & Cased	>2		-	100
042634	100/06-08-084-25W6/02	15-12-084-26 W6M	564313.86	6235805.63	PACIFIC CANBRIAM HZ ALTARES A15-12-084-26	N/A	Drilled & Cased	>2		-	100
028394	100/15-12-084-26W6/00	15-12-084-26 W6M	564326.26	6235768.64	PACIFIC CANBRIAM HZ ALTARES 15-12-084-26	N/A	Drilled & Cased	>2		-	100
042634	102/15-12-084-26W6/00	15-12-084-26 W6M	564313.86	6235805.63	PACIFIC CANBRIAM HZ ALTARES A15-12-084-26	N/A	Drilled & Cased	>2		-	100
049292	200/A-022-H/094-B-08/00	07-01-085-26 W6M	564003.16	6244224.61	PACIFIC CANBRIAM HZ ALTARES N07-01-085-26	N/A	Drilled & Cased	>2		-	100
049296	202/B-031-H/094-B-08/00	07-01-085-26 W6M	564043.26	6244349.56	PACIFIC CANBRIAM HZ ALTARES R07-01-085-26	N/A	Drilled & Cased	>2		-	100
049298	203/B-021-H/094-B-08/00	07-01-085-26 W6M	563995.08	6244211.13	PACIFIC CANBRIAM HZ ALTARES L07-01-085-26	N/A	Drilled & Cased	>2		-	100
049297	203/B-031-H/094-B-08/00	07-01-085-26 W6M	564043.26	6244349.56	PACIFIC CANBRIAM HZ ALTARES S07-01-085-26	N/A	Drilled & Cased	>2		-	100
049291	204/B-021-H/094-B-08/00	07-01-085-26 W6M	563999.06	6244217.87	PACIFIC CANBRIAM HZ ALTARES M07-01-085-26	N/A	Drilled & Cased	>2		-	100
049293	204/C-021-H/094-B-08/00	07-01-085-26 W6M	564007.14	6244231.24	PACIFIC CANBRIAM HZ ALTARES O07-01-085-26	N/A	Drilled & Cased	>2		-	100
049294	205/C-021-H/094-B-08/00	07-01-085-26 W6M	564043.26	6244349.56	PACIFIC CANBRIAM HZ ALTARES P07-01-085-26	N/A	Drilled & Cased	>2		-	100
049295	206/C-021-H/094-B-08/00	07-01-085-26 W6M	564043.26	6244349.56	PACIFIC CANBRIAM HZ ALTARES Q07-01-085-26	N/A	Drilled & Cased	>2		-	100
031817	102/15-01-085-26W6/00	15-01-085-26 W6M	564108.91	6244978.63	PACIFIC CANBRIAM HZ ALTARES F15-01-085-26	N/A	Drilled & Cased	>2		-	100
043279	202/C-001-H/094-B-08/00	c-098-D/094-A-05	564077.44	6243430.34	PACIFIC CANBRIAM HZ ALTARES C-P098-D/094-A-05	N/A	Drilled & Cased	>2		-	100
043280	202/B-011-H/094-B-08/00	c-098-D/094-A-05	564081.42	6243437.30	PACIFIC CANBRIAM HZ ALTARES C-Q098-D/094-A-05	N/A	Drilled & Cased	>2		-	100
049288	202/D-012-H/094-B-08/00	c-098-D/094-A-05	563460.26	6243413.19	PACIFIC CANBRIAM HZ ALTARES C-W098-D/094-A-05	N/A	Drilled & Cased	>2		-	100
049289	202/A-022-H/094-B-08/00	c-098-D/094-A-05	563460.26	6243413.19	PACIFIC CANBRIAM HZ ALTARES C-X098-D/094-A-05	N/A	Drilled & Cased	>2		-	100
043281	203/B-011-H/094-B-08/00	c-098-D/094-A-05	564085.40	6243444.26	PACIFIC CANBRIAM HZ ALTARES C-R098-D/094-A-05	N/A	Drilled & Cased	>2		-	100
049287	203/C-011-H/094-B-08/00	c-098-D/094-A-05	563460.26	6243413.19	PACIFIC CANBRIAM HZ ALTARES C-V098-D/094-A-05	N/A	Drilled & Cased	>2		-	100
049284	204/B-011-H/094-B-08/00	c-098-D/094-A-05	563460.26	6243413.19	PACIFIC CANBRIAM HZ ALTARES C-S098-D/094-A-05	N/A	Drilled & Cased	>2		-	100
049286	204/C-011-H/094-B-08/00	c-098-D/094-A-05	563460.26	6243413.19	PACIFIC CANBRIAM HZ ALTARES C-U098-D/094-A-05	N/A	Drilled & Cased	>2		-	100
049285	205/B-011-H/094-B-08/00	c-098-D/094-A-05	563460.26	6243413.19	PACIFIC CANBRIAM HZ ALTARES C-T098-D/094-A-05	N/A	Drilled & Cased	>2		-	100
025521	202/C-048-I/094-B-01/00	c-048-I/094-B-01	556097.53	6229261.91	PACIFIC CANBRIAM HZ W FARRELL C-A048-I/094-B-01	N/A	Drilled & Cased	1.931		-	100
035254	202/C-029-A/094-B-08/00	c-029-A/094-B-08	555031.65	6236854.55	PACIFIC CANBRIAM HZ ALTARES C-C029-A/094-B-08	N/A	Drilled & Cased	1.298		-	100
030276	200/C-054-A/094-B-08/00	c-054-A/094-B-08	558815.43	6239770.14	PACIFIC CANBRIAM HZ ALTARES C-B054-A/094-B-08	N/A	Drilled & Cased	0.687		-	100
030355	202/C-054-A/094-B-08/00	c-054-A/094-B-08	558825.40	6239751.80	PACIFIC CANBRIAM HZ ALTARES C-C054-A/094-B-08	N/A	Drilled & Cased	0.695		-	100

Altares / Farrell Creek - Wells

License	UWI	Surface Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Well Name	Substance	Status	Distance to Nearest Residence (km)	H_2S (ppm)	H_2S Release Rate (m^3/sec)	Assigned HPZ (m)
Not Operating											
033958	200/D-096-A/094-B-08/00	c-074-A/094-B-08	558950.36	6241304.19	PACIFIC CANBRIAM HZ ALTARES C-A074-A/094-B-08	N/A	Drilled & Cased	0.705		-	100
020757	200/D-013-H/094-B-08/05	c-013-H/094-B-08	559640.10	6245149.18	PACIFIC CANBRIAM ALTARES C- 013-H/094-B-08	N/A	Drilled & Cased	0.350		-	100
025584	200/B-003-H/094-B-08/00	b-024-H/094-B-08	558903.75	6245532.43	PACIFIC CANBRIAM HZ ALTARES B-024-H/094-B-08	N/A	Drilled & Cased	0.071		-	100
024098	200/B-043-H/094-B-08/00	d-044-H/094-B-08	559151.75	6248156.33	PACIFIC CANBRIAM HZ ALTARES D-044-H/094-B-08	N/A	Drilled & Cased	1.813		-	100
024098	202/A-033-H/094-B-08/02	d-044-H/094-B-08	559151.75	6248156.33	PACIFIC CANBRIAM HZ ALTARES D-044-H/094-B-08	N/A	Drilled & Cased	1.813		-	100
031916	200/C-057-H/094-B-08/03	d-076-H/094-B-08	557761.74	6250795.74	PACIFIC CANBRIAM HZ ALTARES D- 076-H/094-B-08	N/A	Drilled & Cased	>2		-	100
010236	200/B-079-H/094-B-08/00	b-079-H/094-B-08	554967.28	6250348.77	PACIFIC CANBRIAM ALTARES B- 079-H/094-B-08	N/A	Drilled & Cased	>2		-	100
041121	200/A-028-I/094-B-08/00	b-095-H/094-B-08	557878.57	6252015.72	PACIFIC CANBRIAM HZ ALTARES B-E095-H/094-B-08	N/A	Drilled & Cased	>2		-	100
041120	200/D-028-I/094-B-08/00	b-095-H/094-B-08	557887.20	6252020.74	PACIFIC CANBRIAM HZ ALTARES B-D095-H/094-B-08	N/A	Drilled & Cased	>2		-	100
044804	100/01-17-084-25W6/00	13-19-084-25 W6M	564929.58	6240257.67	PACIFIC CANBRIAM HZ ALTARES E13-19-084-25	N/A	Permitted	>2		-	100
044805	100/08-17-084-25W6/00	13-19-084-25 W6M	564929.58	6240257.67	PACIFIC CANBRIAM HZ ALTARES F13-19-084-25	N/A	Permitted	>2		-	100
038400	100/11-17-084-25W6/00	13-19-084-25 W6M	564984.97	6240132.05	PACIFIC CANBRIAM HZ ALTARES A13-19-084-25	N/A	Permitted	>2		-	100
038402	100/14-17-084-25W6/00	13-19-084-25 W6M	565000.69	6240144.43	PACIFIC CANBRIAM HZ ALTARES C13-19-084-25	N/A	Permitted	>2		-	100
038403	100/11-29-084-25W6/00	13-19-084-25 W6M	564976.36	6240262.17	PACIFIC CANBRIAM HZ ALTARES D13-19-084-25	N/A	Permitted	>2		-	100
044806	102/01-17-084-25W6/00	13-19-084-25 W6M	564929.58	6240257.67	PACIFIC CANBRIAM HZ ALTARES G13-19-084-25	N/A	Permitted	>2		-	100
044809	102/08-17-084-25W6/00	13-19-084-25 W6M	564929.58	6240257.67	PACIFIC CANBRIAM HZ ALTARES J13-19-084-25	N/A	Permitted	>2		-	100
038401	102/11-17-084-25W6/00	13-19-084-25 W6M	564992.86	6240138.18	PACIFIC CANBRIAM HZ ALTARES B13-19-084-25	N/A	Permitted	>2		-	100
044807	103/01-17-084-25W6/00	13-19-084-25 W6M	564929.58	6240257.67	PACIFIC CANBRIAM HZ ALTARES H13-19-084-25	N/A	Permitted	>2		-	100
044808	104/01-17-084-25W6/00	13-19-084-25 W6M	564929.58	6240257.67	PACIFIC CANBRIAM HZ ALTARES I13-19-084-25	N/A	Permitted	>2		-	100
052166	100/15-14-084-25W6/00	10-22-084-25 W6M	570632.55	6239953.19	PACIFIC CANBRIAM HZ ALTARES A10-22-084-25	N/A	Permitted	>2		-	100
052167	100/16-33-084-25W6/00	16-32-084-25 W6M	567716.82	6243546.13	PACIFIC CANBRIAM HZ ALTARES N16-32-084-25	N/A	Permitted	>2		-	100
043197	103/16-08-085-25W6/00	16-32-084-25 W6M	567706.64	6243582.93	PACIFIC CANBRIAM HZ ALTARES E16-32-084-25	N/A	Permitted	>2		-	100
027835	100/01-07-084-25W6/00	16-12-084-26 W6M	564707.16	6237025.97	PACIFIC CANBRIAM HZ ALTARES A16-12-084-26	N/A	Permitted	>2		-	100
049798	200/D-081-A/094-B-08/00	07-25-084-26 W6M	564092.30	6241115.41	PACIFIC CANBRIAM HZ ALTARES 07-25-084-26	N/A	Permitted	>2		-	100
049799	200/B-091-A/094-B-08/00	07-25-084-26 W6M	564092.30	6241115.41	PACIFIC CANBRIAM HZ ALTARES A07-25-084-26	N/A	Permitted	>2		-	100
049801	200/C-091-A/094-B-08/00	07-25-084-26 W6M	564092.30	6241115.41	PACIFIC CANBRIAM HZ ALTARES C07-25-084-26	N/A	Permitted	>2		-	100
049802	200/D-091-A/094-B-08/00	07-25-084-26 W6M	564092.30	6241115.41	PACIFIC CANBRIAM HZ ALTARES D07-25-084-26	N/A	Permitted	>2		-	100

Altares / Farrell Creek - Wells

License	UWI	Surface Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Well Name	Substance	Status	Distance to Nearest Residence (km)	H_2S (ppm)	H_2S Release Rate (m^3/sec)	Assigned HPZ (m)
Not Operating											
049804	200/A-001-H/094-B-08/00	07-25-084-26 W6M	564092.30	6241115.41	PACIFIC CANBRIAM HZ ALTARES F07-25-084-26	N/A	Permitted	>2		-	100
049806	202/D-081-A/094-B-08/00	07-25-084-26 W6M	564092.30	6241115.41	PACIFIC CANBRIAM HZ ALTARES H07-25-084-26	N/A	Permitted	>2		-	100
049800	202/B-091-A/094-B-08/00	07-25-084-26 W6M	564092.30	6241115.41	PACIFIC CANBRIAM HZ ALTARES B07-25-084-26	N/A	Permitted	>2		-	100
049811	202/C-091-A/094-B-08/00	07-25-084-26 W6M	564092.30	6241115.41	PACIFIC CANBRIAM HZ ALTARES M07-25-084-26	N/A	Permitted	>2		-	100
049803	202/D-091-A/094-B-08/00	07-25-084-26 W6M	564092.30	6241115.41	PACIFIC CANBRIAM HZ ALTARES E07-25-084-26	N/A	Permitted	>2		-	100
049805	202/A-001-H/094-B-08/00	07-25-084-26 W6M	564092.30	6241115.41	PACIFIC CANBRIAM HZ ALTARES G07-25-084-26	N/A	Permitted	>2		-	100
049807	203/D-081-A/094-B-08/00	07-25-084-26 W6M	564092.30	6241115.41	PACIFIC CANBRIAM HZ ALTARES I07-25-084-26	N/A	Permitted	>2		-	100
049808	203/B-091-A/094-B-08/00	07-25-084-26 W6M	564092.30	6241115.41	PACIFIC CANBRIAM HZ ALTARES J07-25-084-26	N/A	Permitted	>2		-	100
049812	203/D-091-A/094-B-08/00	07-25-084-26 W6M	564092.30	6241115.41	PACIFIC CANBRIAM HZ ALTARES N07-25-084-26	N/A	Permitted	>2		-	100
049817	203/A-001-H/094-B-08/00	07-25-084-26 W6M	564092.30	6241115.41	PACIFIC CANBRIAM HZ ALTARES S07-25-084-26	N/A	Permitted	>2		-	100
049809	204/B-091-A/094-B-08/00	07-25-084-26 W6M	564092.30	6241115.41	PACIFIC CANBRIAM HZ ALTARES K07-25-084-26	N/A	Permitted	>2		-	100
049813	204/D-091-A/094-B-08/00	07-25-084-26 W6M	564092.30	6241115.41	PACIFIC CANBRIAM HZ ALTARES O07-25-084-26	N/A	Permitted	>2		-	100
049810	205/B-091-A/094-B-08/00	07-25-084-26 W6M	564092.30	6241115.41	PACIFIC CANBRIAM HZ ALTARES L07-25-084-26	N/A	Permitted	>2		-	100
049814	205/D-091-A/094-B-08/00	07-25-084-26 W6M	564092.30	6241115.41	PACIFIC CANBRIAM HZ ALTARES P07-25-084-26	N/A	Permitted	>2		-	100
049815	206/D-091-A/094-B-08/00	07-25-084-26 W6M	564092.30	6241115.41	PACIFIC CANBRIAM HZ ALTARES Q07-25-084-26	N/A	Permitted	>2		-	100
049816	207/D-091-A/094-B-08/00	07-25-084-26 W6M	564092.30	6241115.41	PACIFIC CANBRIAM HZ ALTARES R07-25-084-26	N/A	Permitted	>2		-	100
049299	208/C-021-H/094-B-08/00	02-01-085-26 W6M	564049.39	6243946.67	PACIFIC CANBRIAM HZ ALTARES I02-01-085-26	N/A	Permitted	>2		-	100
049290	203/A-022-H/094-B-08/00	c-098-D/094-A-05	563460.26	6243413.19	PACIFIC CANBRIAM HZ ALTARES C-Y098-D/094-A-05	N/A	Permitted	>2		-	100
028050	200/B-063-A/094-B-08/00	d-053-A/094-B-08	560155.51	6239633.67	PACIFIC CANBRIAM ALTARES D-C053-A/094-B-08	N/A	Permitted	1.102		-	100
035382	200/B-034-A/094-B-08/00	c-055-A/094-B-08	558274.00	6239578.70	PACIFIC CANBRIAM HZ ALTARES C-055-A/094-B-08	N/A	Permitted	1.221		-	100
031639	200/B-065-A/094-B-08/00	d-055-A/094-B-08	558625.32	6239840.10	PACIFIC CANBRIAM ALTARES D-A055-A/094-B-08	N/A	Permitted	0.783		-	100
033108	200/C-041-A/094-B-08/00	d-063-A/094-B-08	560003.21	6240669.01	PACIFIC CANBRIAM HZ ALTARES D-F063-A/094-B-08	N/A	Permitted	0.524		-	100
033106	200/A-042-A/094-B-08/00	d-063-A/094-B-08	559983.21	6240669.40	PACIFIC CANBRIAM HZ ALTARES D-D063-A/094-B-08	N/A	Permitted	0.506		-	100
030722	203/A-042-A/094-B-08/00	d-063-A/094-B-08	559937.38	6240707.61	PACIFIC CANBRIAM HZ ALTARES D-B063-A/094-B-08	N/A	Permitted	0.447		-	100
030723	204/A-042-A/094-B-08/00	d-063-A/094-B-08	559947.40	6240707.64	PACIFIC CANBRIAM HZ ALTARES D-C063-A/094-B-08	N/A	Permitted	0.456		-	100
033107	204/D-042-A/094-B-08/00	d-063-A/094-B-08	559993.24	6240669.32	PACIFIC CANBRIAM HZ ALTARES D-E063-A/094-B-08	N/A	Permitted	0.515		-	100
030748	202/C-075-A/094-B-08/00	b-074-A/094-B-08	558747.16	6241071.85	PACIFIC CANBRIAM ALTARES B-F074-A/094-B-08	N/A	Permitted	0.810		-	100

Altares / Farrell Creek - Wells

License	UWI	Surface Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Well Name	Substance	Status	Distance to Nearest Residence (km)	H_2S (ppm)	H_2S Release Rate (m^3/sec)	Assigned HPZ (m)
Not Operating											
044794	200/B-007-H/094-B-08/00	c-074-A/094-B-08	558848.53	6241491.58	PACIFIC CANBRIAM HZ ALTARES C-J074-A/094-B-08	N/A	Permitted	0.898		-	100
044790	200/A-017-H/094-B-08/00	c-074-A/094-B-08	558848.53	6241491.58	PACIFIC CANBRIAM HZ ALTARES C-F074-A/094-B-08	N/A	Permitted	0.898		-	100
044791	202/C-007-H/094-B-08/00	c-074-A/094-B-08	558848.53	6241491.58	PACIFIC CANBRIAM HZ ALTARES C-G074-A/094-B-08	N/A	Permitted	0.898		-	100
044792	203/C-007-H/094-B-08/00	c-074-A/094-B-08	558848.53	6241491.58	PACIFIC CANBRIAM HZ ALTARES C-H074-A/094-B-08	N/A	Permitted	0.898		-	100
044793	204/C-007-H/094-B-08/00	c-074-A/094-B-08	558848.53	6241491.58	PACIFIC CANBRIAM HZ ALTARES C-I074-A/094-B-08	N/A	Permitted	0.898		-	100
034124	200/D-052-A/094-B-08/00	a-083-A/094-B-08	559998.68	6242180.33	PACIFIC CANBRIAM HZ ALTARES A-A083-A/094-B-08	N/A	Permitted	0.261		-	100
034129	200/B-061-A/094-B-08/00	a-083-A/094-B-08	560010.75	6242131.74	PACIFIC CANBRIAM HZ ALTARES A-F083-A/094-B-08	N/A	Permitted	0.266		-	100
034125	202/D-052-A/094-B-08/00	a-083-A/094-B-08	560001.11	6242170.68	PACIFIC CANBRIAM HZ ALTARES A-B083-A/094-B-08	N/A	Permitted	0.261		-	100
034130	202/B-061-A/094-B-08/00	a-083-A/094-B-08	560013.17	6242122.09	PACIFIC CANBRIAM HZ ALTARES A-G083-A/094-B-08	N/A	Permitted	0.269		-	100
034126	203/D-052-A/094-B-08/00	a-083-A/094-B-08	560003.53	6242160.92	PACIFIC CANBRIAM HZ ALTARES A-C083-A/094-B-08	N/A	Permitted	0.262		-	100
034131	203/B-061-A/094-B-08/00	a-083-A/094-B-08	560015.60	6242112.44	PACIFIC CANBRIAM HZ ALTARES A-H083-A/094-B-08	N/A	Permitted	0.271		-	100
034127	204/D-052-A/094-B-08/00	a-083-A/094-B-08	560005.90	6242151.15	PACIFIC CANBRIAM HZ ALTARES A-D083-A/094-B-08	N/A	Permitted	0.263		-	100
034128	205/D-052-A/094-B-08/00	a-083-A/094-B-08	560008.32	6242141.50	PACIFIC CANBRIAM HZ ALTARES A-E083-A/094-B-08	N/A	Permitted	0.264		-	100
033394	204/B-019-H/094-B-08/00	b-097-A/094-B-08	556402.93	6242776.15	PACIFIC CANBRIAM HZ ALTARES B-D097-A/094-B-08	N/A	Permitted	>2		-	100
031013	200/D-076-A/094-B-08/00	c-097-A/094-B-08	556420.68	6243340.32	PACIFIC CANBRIAM HZ ALTARES C-A097-A/094-B-08	N/A	Permitted	>2		-	100
031820	200/A-029-H/094-B-08/00	c-097-A/094-B-08	556402.33	6243433.03	PACIFIC CANBRIAM HZ ALTARES C-D097-A/094-B-08	N/A	Permitted	>2		-	100
031014	202/D-076-A/094-B-08/00	c-097-A/094-B-08	556429.40	6243345.22	PACIFIC CANBRIAM HZ ALTARES C-B097-A/094-B-08	N/A	Permitted	>2		-	100
031015	203/D-076-A/094-B-08/00	c-097-A/094-B-08	556438.12	6243350.13	PACIFIC CANBRIAM HZ ALTARES C-C097-A/094-B-08	N/A	Permitted	>2		-	100
031012	203/B-019-H/094-B-08/00	c-097-A/094-B-08	556411.91	6243335.42	PACIFIC CANBRIAM HZ ALTARES C-097-A/094-B-08	N/A	Permitted	>2		-	100
029260	200/A-020-H/094-B-08/00	d-022-G/094-B-08	552891.51	6246047.29	PACIFIC CANBRIAM HZ ALTARES D-A022-G/094-B-08	N/A	Permitted	1.980		-	100
043329	200/A-037-H/094-B-08/00	d-004-H/094-B-08	559233.02	6244279.88	PACIFIC CANBRIAM HZ ALTARES D-G004-H/094-B-08	N/A	Permitted	0.879		-	100
036567	200/A-082-A/094-B-08/00	b-013-H/094-B-08	559758.14	6244644.67	PACIFIC CANBRIAM HZ ALTARES B-013-H/094-B-08	N/A	Permitted	0.783		-	100
037426	200/D-082-A/094-B-08/00	b-013-H/094-B-08	559767.85	6244671.30	PACIFIC CANBRIAM HZ ALTARES B-C013-H/094-B-08	N/A	Permitted	0.767		-	100
037425	202/B-071-A/094-B-08/00	b-013-H/094-B-08	559758.82	6244667.05	PACIFIC CANBRIAM HZ ALTARES B-B013-H/094-B-08	N/A	Permitted	0.765		-	100
037565	202/D-082-A/094-B-08/00	b-013-H/094-B-08	559776.87	6244675.54	PACIFIC CANBRIAM HZ ALTARES B-D013-H/094-B-08	N/A	Permitted	0.768		-	100
037424	203/B-071-A/094-B-08/00	b-013-H/094-B-08	559749.79	6244662.92	PACIFIC CANBRIAM HZ ALTARES B-A013-H/094-B-08	N/A	Permitted	0.763		-	100
034814	203/B-095-A/094-B-08/00	c-017-H/094-B-08	556426.59	6245016.18	PACIFIC CANBRIAM HZ ALTARES C-K017-H/094-B-08	N/A	Permitted	1.785		-	100

Altares / Farrell Creek - Wells

License	UWI	Surface Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Well Name	Substance	Status	Distance to Nearest Residence (km)	H_2S (ppm)	H_2S Release Rate (m^3/sec)	Assigned HPZ (m)
Not Operating											
034816	203/C-039-H/094-B-08/00	c-017-H/094-B-08	556381.70	6245106.08	PACIFIC CANBRIAM HZ ALTARES C-M017-H/094-B-08	N/A	Permitted	1.737		-	100
034817	204/C-039-H/094-B-08/00	c-017-H/094-B-08	556373.81	6245099.97	PACIFIC CANBRIAM HZ ALTARES C-N017-H/094-B-08	N/A	Permitted	1.729		-	100
034815	207/B-049-H/094-B-08/00	c-017-H/094-B-08	556389.59	6245112.31	PACIFIC CANBRIAM HZ ALTARES C-L017-H/094-B-08	N/A	Permitted	1.745		-	100
028241	200/B-024-H/094-B-08/00	b-024-H/094-B-08	558813.41	6245499.12	PACIFIC CANBRIAM HZ ALTARES B-D024-H/094-B-08	N/A	Permitted	0.132		-	100
028243	200/A-025-H/094-B-08/00	b-024-H/094-B-08	558813.44	6245479.20	PACIFIC CANBRIAM HZ ALTARES B-F024-H/094-B-08	N/A	Permitted	0.130		-	100
028242	202/C-035-H/094-B-08/00	b-024-H/094-B-08	558813.37	6245489.10	PACIFIC CANBRIAM HZ ALTARES B-E024-H/094-B-08	N/A	Permitted	0.131		-	100
028240	202/B-045-H/094-B-08/00	b-024-H/094-B-08	558813.40	6245509.14	PACIFIC CANBRIAM HZ ALTARES B-C024-H/094-B-08	N/A	Permitted	0.134		-	100
031448	203/B-005-H/094-B-08/00	c-027-H/094-B-08	556409.29	6245962.04	PACIFIC CANBRIAM HZ ALTARES C-K027-H/094-B-08	N/A	Permitted	1.952		-	100
031450	204/D-006-H/094-B-08/00	c-027-H/094-B-08	556427.47	6245970.63	PACIFIC CANBRIAM HZ ALTARES C-M027-H/094-B-08	N/A	Permitted	1.972		-	100
031449	205/C-005-H/094-B-08/00	c-027-H/094-B-08	556418.32	6245966.27	PACIFIC CANBRIAM HZ ALTARES C-L027-H/094-B-08	N/A	Permitted	1.962		-	100
031447	206/B-005-H/094-B-08/00	c-027-H/094-B-08	556400.26	6245957.80	PACIFIC CANBRIAM HZ ALTARES C-J027-H/094-B-08	N/A	Permitted	1.942		-	100
050053	202/C-033-G/094-B-08/00	a-030-H/094-B-08	554578.76	6245610.65	PACIFIC CANBRIAM HZ ALTARES A-G030-H/094-B-08	N/A	Permitted	0.488		-	100
050049	202/D-043-G/094-B-08/00	a-030-H/094-B-08	554578.76	6245610.65	PACIFIC CANBRIAM HZ ALTARES A-C030-H/094-B-08	N/A	Permitted	0.488		-	100
050048	203/C-042-G/094-B-08/00	a-030-H/094-B-08	554578.76	6245610.65	PACIFIC CANBRIAM HZ ALTARES A-B030-H/094-B-08	N/A	Permitted	0.488		-	100
050051	204/B-043-G/094-B-08/00	a-030-H/094-B-08	554578.76	6245610.65	PACIFIC CANBRIAM HZ ALTARES A-E030-H/094-B-08	N/A	Permitted	0.488		-	100
050052	205/B-043-G/094-B-08/00	a-030-H/094-B-08	554578.76	6245610.65	PACIFIC CANBRIAM HZ ALTARES A-F030-H/094-B-08	N/A	Permitted	0.488		-	100
050050	206/C-043-G/094-B-08/00	a-030-H/094-B-08	554578.76	6245610.65	PACIFIC CANBRIAM HZ ALTARES A-D030-H/094-B-08	N/A	Permitted	0.488		-	100
043355	200/A-019-I/094-B-08/00	d-076-H/094-B-08	557599.31	6250750.89	PACIFIC CANBRIAM HZ ALTARES D-I076-H/094-B-08	N/A	Permitted	>2		-	100
043353	202/B-018-I/094-B-08/00	d-076-H/094-B-08	557599.31	6250750.89	PACIFIC CANBRIAM HZ ALTARES D-G076-H/094-B-08	N/A	Permitted	>2		-	100
049942	202/A-029-I/094-B-08/00	d-076-H/094-B-08	557599.31	6250750.89	PACIFIC CANBRIAM HZ ALTARES D-J076-H/094-B-08	N/A	Permitted	>2		-	100
043354	203/B-018-I/094-B-08/00	d-076-H/094-B-08	557599.31	6250750.89	PACIFIC CANBRIAM HZ ALTARES D-H076-H/094-B-08	N/A	Permitted	>2		-	100
049943	203/A-029-I/094-B-08/00	d-076-H/094-B-08	557599.31	6250750.89	PACIFIC CANBRIAM HZ ALTARES D-K076-H/094-B-08	N/A	Permitted	>2		-	100
049944	204/A-029-I/094-B-08/00	d-076-H/094-B-08	557599.31	6250750.89	PACIFIC CANBRIAM HZ ALTARES D-L076-H/094-B-08	N/A	Permitted	>2		-	100
049945	205/A-029-I/094-B-08/00	d-076-H/094-B-08	557599.31	6250750.89	PACIFIC CANBRIAM HZ ALTARES D-M076-H/094-B-08	N/A	Permitted	>2		-	100
038730	200/D-080-E/094-A-05/00	d-094-H/094-B-08	559222.41	6252840.00	PACIFIC CANBRIAM HZ ALTARES D-094-H/094-B-08	N/A	Permitted	>2		-	100
038731	202/D-080-E/094-A-05/00	d-094-H/094-B-08	559226.04	6252849.29	PACIFIC CANBRIAM HZ ALTARES D-A094-H/094-B-08	N/A	Permitted	>2		-	100
038732	203/D-080-E/094-A-05/00	d-094-H/094-B-08	559229.80	6252858.58	PACIFIC CANBRIAM HZ ALTARES D-B094-H/094-B-08	N/A	Permitted	>2		-	100

Altares / Farrell Creek - Wells

License	UWI	Surface Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Well Name	Substance	Status	Distance to Nearest Residence (km)	H_2S (ppm)	H_2S Release Rate (m^3/sec)	Assigned HPZ (m)
Not Operating											
048982	200/D-027-I/094-B-08/00	b-095-H/094-B-08	557930.20	6252148.45	PACIFIC CANBRIAM HZ ALTARES B-G095-H/094-B-08	N/A	Permitted	>2		-	100
048987	202/A-028-I/094-B-08/00	b-095-H/094-B-08	557930.20	6252148.45	PACIFIC CANBRIAM HZ ALTARES B-L095-H/094-B-08	N/A	Permitted	>2		-	100
048986	202/D-028-I/094-B-08/00	b-095-H/094-B-08	557930.20	6252148.45	PACIFIC CANBRIAM HZ ALTARES B-K095-H/094-B-08	N/A	Permitted	>2		-	100
048983	203/C-027-I/094-B-08/00	b-095-H/094-B-08	557930.20	6252148.45	PACIFIC CANBRIAM HZ ALTARES B-H095-H/094-B-08	N/A	Permitted	>2		-	100
048988	203/A-028-I/094-B-08/00	b-095-H/094-B-08	557930.20	6252148.45	PACIFIC CANBRIAM HZ ALTARES B-M095-H/094-B-08	N/A	Permitted	>2		-	100
048984	204/C-027-I/094-B-08/00	b-095-H/094-B-08	557930.20	6252148.45	PACIFIC CANBRIAM HZ ALTARES B-I095-H/094-B-08	N/A	Permitted	>2		-	100
048985	205/C-027-I/094-B-08/00	b-095-H/094-B-08	557930.20	6252148.45	PACIFIC CANBRIAM HZ ALTARES B-J095-H/094-B-08	N/A	Permitted	>2		-	100
038733	200/A-090-E/094-A-05/00	a-004-I/094-B-08	559233.55	6252868.43	PACIFIC CANBRIAM HZ ALTARES A-004-I/094-B-08	N/A	Permitted	>2		-	100
044844	200/D-090-E/094-A-05/00	a-004-I/094-B-08	559110.04	6253092.35	PACIFIC CANBRIAM HZ ALTARES A-C004-I/094-B-08	N/A	Permitted	>2		-	100
044843	202/A-090-E/094-A-05/00	a-004-I/094-B-08	559110.04	6253092.35	PACIFIC CANBRIAM HZ ALTARES A-B004-I/094-B-08	N/A	Permitted	>2		-	100
044847	202/D-090-E/094-A-05/00	a-004-I/094-B-08	559110.04	6253092.35	PACIFIC CANBRIAM HZ ALTARES A-F004-I/094-B-08	N/A	Permitted	>2		-	100
044845	203/A-090-E/094-A-05/00	a-004-I/094-B-08	559110.04	6253092.35	PACIFIC CANBRIAM HZ ALTARES A-D004-I/094-B-08	N/A	Permitted	>2		-	100
044842	204/D-080-E/094-A-05/00	a-004-I/094-B-08	559110.04	6253092.35	PACIFIC CANBRIAM HZ ALTARES A-A004-I/094-B-08	N/A	Permitted	>2		-	100
044846	204/A-090-E/094-A-05/00	a-004-I/094-B-08	559110.04	6253092.35	PACIFIC CANBRIAM HZ ALTARES A-E004-I/094-B-08	N/A	Permitted	>2		-	100
029072	100/04-07-083-23W6/02	15-36-082-24 W6M	586424.34	6224589.15	PACIFIC CANBRIAM HZ ALTARES 15-36-082-24	N/A	Suspended	>2	0	-	100
026462	100/14-13-084-25W6/00	12-13-084-25 W6M	573243.29	6238552.47	PACIFIC CANBRIAM ALTARES 12-13-084-25	N/A	Suspended	>2		-	100
005487	100/10-22-084-25W6/04	16-22-084-25 W6M	570729.22	6240065.56	PACIFIC CANBRIAM HZ ALTARES 10-22-084-25	Gas	Suspended	>2	0	-	100
027344	100/01-06-085-25W6/00	15-01-085-26 W6M	564106.10	6245025.34	PACIFIC CANBRIAM HZ ALTARES 15-01-085-26	Gas	Suspended	>2	0	-	100
026550	200/A-007-I/094-B-01/00	c-018-I/094-B-01	555840.32	6226834.12	PACIFIC CANBRIAM HZ ALTARES C-A018-I/094-B-01	N/A	Suspended	0.302		-	100
003797	200/A-023-A/094-B-08/02	a-023-A/094-B-08	560088.40	6236273.25	PACIFIC CANBRIAM ET AL ALTARES A-023-A/094-B-08	Gas	Suspended	>2		-	100
003797	200/A-023-A/094-B-08/03	a-023-A/094-B-08	560088.40	6236273.25	PACIFIC CANBRIAM ET AL ALTARES A-023-A/094-B-08	Gas	Suspended	>2		-	100
030027	200/D-023-A/094-B-08/00	a-023-A/094-B-08	560112.96	6236279.38	PACIFIC CANBRIAM HZ ALTARES A-A023-A/094-B-08	Gas	Suspended	>2		-	100
020413	200/D-033-A/094-B-08/02	a-043-A/094-B-08	560074.37	6238240.38	PACIFIC CANBRIAM ALTARES A-043-A/094-B-08	Gas	Suspended	>2		-	100
019029	200/B-043-A/094-B-08/00	b-043-A/094-B-08	559762.04	6238374.58	PACIFIC CANBRIAM ET AL ALTARES B-043-A/094-B-08	Gas	Suspended	1.976	0	-	100
019029	200/B-043-A/094-B-08/02	b-043-A/094-B-08	559761.98	6238374.58	PACIFIC CANBRIAM ET AL ALTARES B-043-A/094-B-08	Gas	Suspended	1.976		-	100
025290	200/D-053-A/094-B-08/00	d-053-A/094-B-08	560180.51	6239633.69	PACIFIC CANBRIAM ET AL ALTARES D-B053-A/094-B-08	Gas	Suspended	1.122	0	-	100
018745	200/D-072-A/094-B-08/00	c-071-A/094-B-08	561022.96	6241463.40	PACIFIC CANBRIAM ALTARES C-071-A/094-B-08	Gas	Suspended	0.704	81,300	0.0113	148

Altares / Farrell Creek - Wells

License	UWI	Surface Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Well Name	Substance	Status	Distance to Nearest Residence (km)	H_2S (ppm)	H_2S Release Rate (m^3/sec)	Assigned HPZ (m)
Not Operating											
018745	200/D-072-A/094-B-08/02	c-071-A/094-B-08	561022.96	6241463.40	PACIFIC CANBRIAM ALTARES C-071-A/094-B-08	Gas	Suspended	0.704	81,300	0.0113	148
018745	200/D-072-A/094-B-08/03	c-071-A/094-B-08	561022.96	6241463.40	PACIFIC CANBRIAM ALTARES C-071-A/094-B-08	Gas	Suspended	0.704	81,300	0.0113	148
021734	200/B-093-A/094-B-08/00	c-082-A/094-B-08	560556.80	6242496.36	PACIFIC CANBRIAM HZ ALTARES C-082-A/094-B-08	Gas	Suspended	0.394		-	100
024322	200/B-002-H/094-B-08/00	c-082-A/094-B-08	560576.16	6242461.35	PACIFIC CANBRIAM HZ ALTARES C-A082-A/094-B-08	Water Disposal	Suspended	0.389	81,300	-	100
024239	200/D-022-G/094-B-08/00	d-022-G/094-B-08	552905.59	6245983.46	PACIFIC CANBRIAM ALTARES D-022-G/094-B-08	Gas	Suspended	1.939	0	-	100
031016	200/A-030-H/094-B-08/00	c-007-H/094-B-08	556549.70	6244339.33	PACIFIC CANBRIAM HZ ALTARES C-007-H/094-B-08	Water Disposal	Suspended	>2		-	100
023873	200/D-003-H/094-B-08/00	c-014-H/094-B-08	558916.83	6245378.10	PACIFIC CANBRIAM HZ ALTARES C-B014-H/094-B-08	Gas	Suspended	0.099		-	100
023971	200/D-004-H/094-B-08/00	c-014-H/094-B-08	558917.39	6245418.08	PACIFIC CANBRIAM HZ ALTARES C-C014-H/094-B-08	Gas	Suspended	0.061	0	-	100
023873	202/B-003-H/094-B-08/02	c-014-H/094-B-08	558916.83	6245378.10	PACIFIC CANBRIAM HZ ALTARES C-B014-H/094-B-08	Gas	Suspended	0.099		-	100
020038	202/C-014-H/094-B-08/00	c-014-H/094-B-08	558916.56	6245353.16	PACIFIC CANBRIAM ALTARES C-A014-H/094-B-08	N/A	Suspended	0.123	91,700	0.0064	107
020038	202/C-014-H/094-B-08/02	c-014-H/094-B-08	558916.56	6245353.16	PACIFIC CANBRIAM ALTARES C-A014-H/094-B-08	Gas	Suspended	0.123	91,700	0.0064	107
030581	202/A-002-H/094-B-08/00	c-023-H/094-B-08	559736.36	6246076.38	PACIFIC CANBRIAM HZ ALTARES C-F023-H/094-B-08	Gas	Suspended	0.506	0	-	100
025013	200/B-012-H/094-B-08/00	b-033-H/094-B-08	559721.29	6246630.09	PACIFIC CANBRIAM HZ ALTARES B-C033-H/094-B-08	Gas	Suspended	0.496		-	100
021732	200/A-023-H/094-B-08/00	b-033-H/094-B-08	559758.74	6246498.59	PACIFIC CANBRIAM HZ ALTARES B-A033-H/094-B-08	Gas	Suspended	0.471		-	100
010237	200/B-033-H/094-B-08/02	b-033-H/094-B-08	559649.50	6246681.85	PACIFIC CANBRIAM ET AL ALTARES B-033-H/094-B-08	Gas	Suspended	0.473		-	100
022954	200/C-043-H/094-B-08/00	b-033-H/094-B-08	559733.27	6246595.64	PACIFIC CANBRIAM HZ ALTARES B-B033-H/094-B-08	Gas	Suspended	0.488	99,700	0.0138	167
028291	200/C-003-H/094-B-08/00	b-034-H/094-B-08	558864.08	6246478.65	PACIFIC CANBRIAM HZ ALTARES B-A034-H/094-B-08	Gas	Suspended	0.465	0	-	100
028292	202/C-003-H/094-B-08/00	b-034-H/094-B-08	558873.23	6246482.79	PACIFIC CANBRIAM HZ ALTARES B-B034-H/094-B-08	Gas	Suspended	0.458	0	-	100
031055	205/D-003-H/094-B-08/00	b-034-H/094-B-08	558945.79	6246513.07	PACIFIC CANBRIAM HZ ALTARES B-F034-H/094-B-08	Gas	Suspended	0.400	0	-	100
028517	200/B-075-H/094-B-08/00	c-044-H/094-B-08	558709.78	6247887.38	PACIFIC CANBRIAM HZ ALTARES C-A044-H/094-B-08	Gas	Suspended	1.650	0	-	100
030688	202/B-075-H/094-B-08/00	c-044-H/094-B-08	558727.98	6247915.80	PACIFIC CANBRIAM HZ ALTARES C-C044-H/094-B-08	Gas	Suspended	1.671	0	-	100
024348	200/B-074-H/094-B-08/00	d-044-H/094-B-08	559119.91	6248180.60	PACIFIC CANBRIAM HZ ALTARES D-A044-H/094-B-08	Water Disposal	Suspended	1.840		-	100
026668	202/D-043-H/094-B-08/00	c-064-H/094-B-08	558795.32	6249696.06	PACIFIC CANBRIAM HZ ALTARES C-B064-H/094-B-08	Gas	Suspended	>2	0	-	100
Cancelled / Abandoned											
028488	100/15-18-083-24W6/00	01-25-083-25 W6M	574525.97	6231097.01	CANBRIAM HZ ALTARES 01-25-083-25	N/A	Canceled	1.647			-
031789	200/A-018-H/094-B-08/00	a-018-H/094-B-08	556255.52	6244541.70	PACIFIC CANBRIAM ALTARES A-018-H/094-B-08	N/A	Canceled	1.714			-
028628	200/A-065-H/094-B-08/00	c-033-H/094-B-08	559571.03	6247175.01	CANBRIAM HZ ALTARES C-033-H/094-B-08	N/A	Canceled	0.864			-

Altares / Farrell Creek - Wells

License	UWI	Surface Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Well Name	Substance	Status	Distance to Nearest Residence (km)	H_2S (ppm)	H_2S Release Rate (m^3/sec)	Assigned HPZ (m)
Cancelled / Abandoned											
031149	202/D-072-A/094-B-08/00	c-093-A/094-B-08	559766.73	6243429.74	CANBRIAM HZ ALTARES C-093-A/094-B-08	N/A	Canceled	0.131			-
031150	203/D-072-A/094-B-08/00	c-093-A/094-B-08	559757.71	6243425.27	PACIFIC CANBRIAM HZ ALTARES C-A093-A/094-B-08	N/A	Canceled	0.128			-
031151	204/D-072-A/094-B-08/00	c-093-A/094-B-08	559748.80	6243420.92	PACIFIC CANBRIAM HZ ALTARES C-B093-A/094-B-08	N/A	Canceled	0.125			-
031152	200/C-072-A/094-B-08/00	c-093-A/094-B-08	559739.77	6243416.56	PACIFIC CANBRIAM HZ ALTARES C-C093-A/094-B-08	N/A	Canceled	0.123			-
031821	202/B-024-H/094-B-08/00	c-093-A/094-B-08	559671.66	6243488.96	PACIFIC CANBRIAM HZ ALTARES C-D093-A/094-B-08	N/A	Canceled	0.028			-
030764	200/D-027-H/094-B-08/00	d-027-H/094-B-08	556879.61	6246123.92	CANBRIAM HZ ALTARES D-027-H/094-B-08	N/A	Canceled	>2			-
032255	100/08-30-083-23W6/00	08-30-083-23 W6M	585786.28	6231622.48	PACIFIC CANBRIAM HZ ATTACHIE 08-30-083-23	N/A	Abandoned Zone	>2			-
017649	100/09-22-084-25W6/00	16-22-084-25 W6M	571155.61	6240047.94	PACIFIC CANBRIAM ALTARES 09-22-084-25	Gas	Abandoned Zone	>2			-
037343	100/08-06-085-25W6/00	08-06-085-25 W6M	566030.06	6244441.38	PACIFIC CANBRIAM HZ ALTARES C08-06-085-25	N/A	Abandoned Zone	>2			-
027473	100/15-01-085-26W6/00	15-01-085-26 W6M	564017.92	6244957.44	PACIFIC CANBRIAM HZ ALTARES B15-01-085-26	Water Disposal	Abandoned Zone	>2			-
027473	100/15-01-085-26W6/02	15-01-085-26 W6M	564017.92	6244957.44	PACIFIC CANBRIAM HZ ALTARES B15-01-085-26	N/A	Abandoned Zone	>2			-
027474	100/16-01-085-26W6/00	15-01-085-26 W6M	564110.62	6244996.35	PACIFIC CANBRIAM HZ ALTARES C15-01-085-26	N/A	Abandoned Zone	>2			-
017739	202/A-003-H/094-B-08/00	a-003-H/094-B-08	559863.15	6244022.65	PACIFIC CANBRIAM ALTARES A-A003-H/094-B-08	N/A	Abandoned Zone	0.541			-
017739	202/A-003-H/094-B-08/02	a-003-H/094-B-08	559863.15	6244022.65	PACIFIC CANBRIAM ALTARES A-A003-H/094-B-08	Gas	Abandoned Zone	0.541			-
017739	202/A-003-H/094-B-08/03	a-003-H/094-B-08	559863.15	6244022.65	PACIFIC CANBRIAM ALTARES A-A003-H/094-B-08	Gas	Abandoned Zone	0.541			-
028290	203/C-003-H/094-B-08/00	b-034-H/094-B-08	558855.05	6246474.41	PACIFIC CANBRIAM HZ ALTARES B- 034-H/094-B-08	N/A	Abandoned Zone	0.473			-
031819	200/C-007-H/094-B-08/00	c-007-H/094-B-08	556597.36	6244284.86	PACIFIC CANBRIAM HZ ALTARES C-D007-H/094-B-08	N/A	Abandoned Zone	>2			-
020757	200/D-013-H/094-B-08/00	c-013-H/094-B-08	559640.10	6245149.18	PACIFIC CANBRIAM ALTARES C- 013-H/094-B-08	Gas	Abandoned Zone	0.350			-
020757	200/D-013-H/094-B-08/02	c-013-H/094-B-08	559640.10	6245149.18	PACIFIC CANBRIAM ALTARES C- 013-H/094-B-08	Gas	Abandoned Zone	0.350			-
020757	200/D-013-H/094-B-08/03	c-013-H/094-B-08	559640.10	6245149.18	PACIFIC CANBRIAM ALTARES C- 013-H/094-B-08	N/A	Abandoned Zone	0.350			-
020757	200/D-013-H/094-B-08/04	c-013-H/094-B-08	559640.10	6245149.18	PACIFIC CANBRIAM ALTARES C- 013-H/094-B-08	N/A	Abandoned Zone	0.350			-
025596	200/C-020-E/094-A-04/00	c-020-E/094-A-04	562383.79	6217330.52	PACIFIC CANBRIAM HZ PORTAGE C- 020-E/094-A-04	N/A	Abandoned Zone	0.904			-
025596	200/D-021-H/094-B-01/02	c-020-E/094-A-04	562383.79	6217330.52	PACIFIC CANBRIAM HZ PORTAGE C- 020-E/094-A-04	N/A	Abandoned Zone	0.904			-
029600	200/C-029-A/094-B-08/00	c-029-A/094-B-08	555062.17	6236889.23	PACIFIC CANBRIAM HZ ALTARES C- 029-A/094-B-08	N/A	Abandoned Zone	1.252			-
030275	203/C-054-A/094-B-08/00	c-054-A/094-B-08	558811.26	6239767.08	PACIFIC CANBRIAM HZ ALTARES C-A054-A/094-B-08	N/A	Abandoned Zone	0.692			-
020032	200/C-059-H/094-B-08/00	c-059-H/094-B-08	554915.31	6248957.62	PACIFIC CANBRIAM ALTARES C- 059-H/094-B-08	N/A	Abandoned Zone	0.879			-
022319	202/A-013-H/094-B-08/00	d-003-H/094-B-08	559936.18	6244141.23	PACIFIC CANBRIAM HZ ALTARES D-003-H/094-B-08	Gas	Abandoned Zone	0.679			-

Altares / Farrell Creek - Wells

License	UWI	Surface Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Well Name	Substance	Status	Distance to Nearest Residence (km)	H_2S (ppm)	H_2S Release Rate (m^3/sec)	Assigned HPZ (m)
Cancelled / Abandoned											
022319	202/A-023-H/094-B-08/02	d-003-H/094-B-08	559936.18	6244141.23	PACIFIC CANBRIAM HZ ALTARES D-003-H/094-B-08	Gas	Abandoned Zone	0.679			-
018809	200/D-042-A/094-B-08/00	d-053-A/094-B-08	560180.38	6239533.84	PACIFIC CANBRIAM HZ ALTARES D-053-A/094-B-08	Gas	Abandoned Zone	1.183			-
018809	202/D-053-A/094-B-08/02	d-053-A/094-B-08	560180.38	6239533.84	PACIFIC CANBRIAM HZ ALTARES D-053-A/094-B-08	N/A	Abandoned Zone	1.183			-
031916	202/B-085-H/094-B-08/00	d-076-H/094-B-08	557761.80	6250795.85	PACIFIC CANBRIAM HZ ALTARES D- 076-H/094-B-08	N/A	Abandoned Zone	>2			-
031916	202/B-085-H/094-B-08/02	d-076-H/094-B-08	557761.80	6250795.85	PACIFIC CANBRIAM HZ ALTARES D- 076-H/094-B-08	Water Disposal	Abandoned Zone	>2			-
009417	200/D-083-G/094-B-08/00	d-083-G/094-B-08	552336.00	6251426.02	PACIFIC CANBRIAM ALTARES D- 083-G/094-B-08	Gas	Abandoned Zone	>2			-
009417	200/D-083-G/094-B-08/02	d-083-G/094-B-08	552336.00	6251425.90	PACIFIC CANBRIAM ALTARES D- 083-G/094-B-08	Gas	Abandoned Zone	>2			-
003797	200/A-023-A/094-B-08/00	a-023-A/094-B-08	560088.46	6236273.25	PACIFIC CANBRIAM ET AL ALTARES A-023-A/094-B-08	N/A	Abandoned & Re-entered	>2			-
022582	100/09-23-081-26W6/00	08-23-081-26 W6M	565631.08	6210572.43	PACIFIC CANBRIAM PORTAGE 08-23-081-26	N/A	Abandoned	0.837			-
022582	100/09-23-081-26W6/02	08-23-081-26 W6M	565631.08	6210572.43	PACIFIC CANBRIAM PORTAGE 08-23-081-26	N/A	Abandoned	0.837			-
022582	100/09-23-081-26W6/03	08-23-081-26 W6M	565631.08	6210572.43	PACIFIC CANBRIAM PORTAGE 08-23-081-26	N/A	Abandoned	0.837			-
022582	100/09-23-081-26W6/04	08-23-081-26 W6M	565631.08	6210572.43	PACIFIC CANBRIAM PORTAGE 08-23-081-26	N/A	Abandoned	0.837			-
026388	100/15-11-082-26W6/00	03-12-082-26 W6M	566531.02	6216406.72	PACIFIC CANBRIAM HZ PORTAGE 03-12-082-26	N/A	Abandoned	>2			-
024032	100/05-05-083-24W6/00	05-05-083-24 W6M	576727.56	6224970.58	PACIFIC CANBRIAM FARRELL 05-05-083-24	N/A	Abandoned	1.586			-
027435	100/12-07-083-24W6/00	12-07-083-24 W6M	575103.30	6227243.33	PACIFIC CANBRIAM ALTARES 12-07-083-24	N/A	Abandoned	0.893			-
006792	100/07-19-083-24W6/00	01-19-083-24 W6M	575666.23	6229958.69	PACIFIC CANBRIAM GROUNDBIRCH 07-19-083-24	N/A	Abandoned	0.618			-
024135	100/01-31-083-24W6/00	01-31-083-24 W6M	575997.24	6232822.55	PACIFIC CANBRIAM FARRELL 01-31-083-24	N/A	Abandoned	0.886			-
024135	100/01-31-083-24W6/02	01-31-083-24 W6M	575997.24	6232822.55	PACIFIC CANBRIAM FARRELL 01-31-083-24	N/A	Abandoned	0.886			-
005487	100/10-22-084-25W6/00	10-22-084-25 W6M	570729.22	6240065.56	PACIFIC CANBRIAM HZ ALTARES 10-22-084-25	N/A	Abandoned	>2			-
005487	100/10-22-084-25W6/02	10-22-084-25 W6M	570808.77	6240109.96	PACIFIC CANBRIAM HZ ALTARES 10-22-084-25	N/A	Abandoned	>2			-
005487	100/10-22-084-25W6/03	10-22-084-25 W6M	570808.77	6240109.96	PACIFIC CANBRIAM HZ ALTARES 10-22-084-25	N/A	Abandoned	>2			-
027832	100/16-12-084-26W6/00	16-12-084-26 W6M	564698.06	6237021.94	PACIFIC CANBRIAM ALTARES 16-12-084-26	N/A	Abandoned	>2			-
019844	100/09-07-085-25W6/00	16-07-085-25 W6M	566100.13	6246397.30	PACIFIC CANBRIAM KOBES 09-07-085-25	N/A	Abandoned	>2			-
020140	200/A-033-H/094-B-08/00	a-033-H/094-B-08	559823.92	6246398.65	PACIFIC CANBRIAM ALTARES A- 033-H/094-B-08	Gas	Abandoned	0.515			-
020140	200/A-033-H/094-B-08/02	a-033-H/094-B-08	559823.92	6246398.65	PACIFIC CANBRIAM ALTARES A- 033-H/094-B-08	N/A	Abandoned	0.515			-
029082	200/A-064-A/094-B-08/00	a-064-A/094-B-08	559311.76	6240259.03	PACIFIC CANBRIAM ALTARES A-064-A/094-B-08	N/A	Abandoned	0.052			-
010237	200/B-033-H/094-B-08/00	b-033-H/094-B-08	559649.50	6246681.85	PACIFIC CANBRIAM ET AL ALTARES B-033-H/094-B-08	N/A	Abandoned	0.473			-

Altares / Farrell Creek - Wells

License	UWI	Surface Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Well Name	Substance	Status	Distance to Nearest Residence (km)	H_2S (ppm)	H_2S Release Rate (m^3/sec)	Assigned HPZ (m)
Cancelled / Abandoned											
022912	200/B-053-H/094-B-08/00	b-053-H/094-B-08	559544.17	6248232.17	PACIFIC CANBRIAM ALTARES B-053-H/094-B-08	Gas	Abandoned	1.896			-
022912	200/B-053-H/094-B-08/02	b-053-H/094-B-08	559544.17	6248232.17	PACIFIC CANBRIAM ALTARES B-053-H/094-B-08	Gas	Abandoned	1.896			-
010236	200/B-079-H/094-B-08/02	b-079-H/094-B-08	554967.28	6250348.65	PACIFIC CANBRIAM ALTARES B- 079-H/094-B-08	N/A	Abandoned	>2			-
002408	200/C-061-G/094-B-08/00	c-061-G/094-B-08	553343.72	6249737.19	PACIFIC CANBRIAM ET AL ALTARES C- 061-G/094-B-08	N/A	Abandoned	1.772			-
002408	200/C-061-G/094-B-08/02	c-061-G/094-B-08	553343.65	6249737.19	PACIFIC CANBRIAM ET AL ALTARES C- 061-G/094-B-08	N/A	Abandoned	1.772			-
027575	200/C-064-H/094-B-08/00	c-064-H/094-B-08	558832.32	6249766.48	PACIFIC CANBRIAM HZ ALTARES C-D064-H/094-B-08	N/A	Abandoned	>2			-
027575	200/C-064-H/094-B-08/03	c-064-H/094-B-08	558832.32	6249766.48	PACIFIC CANBRIAM HZ ALTARES C-D064-H/094-B-08	N/A	Abandoned	>2			-
027575	200/C-064-H/094-B-08/04	c-064-H/094-B-08	558832.32	6249766.48	PACIFIC CANBRIAM HZ ALTARES C-D064-H/094-B-08	N/A	Abandoned	>2			-
027575	200/D-054-H/094-B-08/05	c-064-H/094-B-08	558832.32	6249766.48	PACIFIC CANBRIAM HZ ALTARES C-D064-H/094-B-08	N/A	Abandoned	>2			-
027575	200/D-085-H/094-B-08/02	c-064-H/094-B-08	558832.32	6249766.48	PACIFIC CANBRIAM HZ ALTARES C-D064-H/094-B-08	N/A	Abandoned	>2			-

Comments:

- All operating and suspended wells were assigned a minimum 100 m HPZ to comply with the *All Hazards Approach* utilized in BC.

Altares / Farrell Creek - Pipelines

License	Line	From Location	From Facility	From Valve	From Valve Easting (Zone 10)	From Valve Northing (Zone 10)	To Location	To Facility	To Valve	To Valve Easting (Zone 10)	To Valve Northing (Zone 10)	Sub-stance	Status	MOP (kPa)	OD (mm)	WT (mm)	L (km)	H_2S (%)	Cumulative H_2S Release Volume (m^3)	Assigned HPZ[1, 2] (km)
Operating																				
14454	1A	D-053-A/094-B-08	WE				A-073-A/094-B-08	PL	CV	560226	6239594	NG	Q	9930	168.30	4.80	1.650	0.00	na	0.145
14454	1B	A-073-A/094-B-08	PL	ESD	560165	6241074	C-014-H/094-B-08	CS	CV/ESD	558795	6245155	NG	Q	9930	168.30	4.80	4.675	0.00	na	0.133
14454	6	C-014-H/094-B-08	CS	ESD	558774	6245183	D-015-H/094-B-08	PL				NG	Q	9930	168.30	4.80	0.354	0.00	na	0.187
14620	1	B-043-A/094-B-08	WE	ESD	559766	6238374	D-053-A/094-B-08	PL				NG	Q	9930	168.30	4.80	1.601	0.00	na	0.150
16333	1	A-023-A/094-B-08	WE	ESD	560074	6236281	A-043-A/094-B-08	PL	CV/ESD	560051	6238176	NG	Q	9930	168.30	4.80	2.647	0.00	na	0.136
22104	1	D-064-A/094-B-08	WE	ESD	559185	6240526	A-073-A/094-B-08	PL	CV	560158	6241102	NG	Q	9930	114.30	4.00	1.252	0.00	na	0.100
22208	1	C-018-I/094-B-01	WE				B-017-I/094-B-01	PL				NG	Q	4960	219.10	4.80	1.988	0.00	na	0.136
22208	2	B-017-I/094-B-01	WE				B-017-I/094-B-01	PL				NG	Q	4960	114.30	6.00	0.025	0.00	na	0.138
22208	3	B-017-I/094-B-01	PL				D-007-I/094-B-01	PL				NG	Q	6410	273.10	5.60	0.384	0.00	na	0.248
22256	1	C-048-I/094-B-01	WE				B-017-I/094-B-01	PL				NG	Q	4960	219.10	4.80	4.114	0.00	na	0.128
22323	1	B-074-A/094-B-08	WE	ESD	558752	6241070	D-064-A/094-B-08	PL	CV	559308	6240668	NG	Q	9930	114.30	4.00	0.631	0.00	na	0.121
22336	1	D-015-H/094-B-08	WE				B-024-H/094-B-08	PL				NG	Q	9930	168.30	4.80	0.773	0.00	na	0.174
22429	1	C-045-I/094-B-01	WE				C-048-I/094-B-01	PL				NG	Q	4960	219.10	4.80	2.846	0.00	na	0.131
22569	1	C-023-H/094-B-08	WE				B-024-H/094-B-08	PL				NG	Q	9930	323.90	6.40	0.979	0.00	na	0.276
22605	1	B-024-H/094-B-08	PL				D-028-H/094-B-08	PL				NG	Q	9930	406.40	7.90	3.269	0.00	na	0.308
22605	2	C-027-H/094-B-08	PL				B-024-H/094-B-08	PL				NG	Q	9930	323.90	6.40	3.122	0.00	na	0.279
22678	1	C-064-H/094-B-08	WE				C-044-H/094-B-08	PL				NG	Q	9930	323.90	6.40	2.081	0.00	na	0.287
22678	3	C-044-H/094-B-08	WE				A-024-H/094-B-08	PL				NG	Q	9930	323.90	6.40	2.400	0.00	na	0.268
22684	1	B-024-H/094-B-08	PL				B-024-H/094-B-08	PL				NG	Q	9930	323.90	6.40	0.206	0.00	na	0.284
22701	1	15-01-085-26W6	WE				C-013-H/094-B-08	PL				NG	Q	9930	168.30	4.80	4.430	0.00	na	0.133
22701	2	C-013-H/094-B-08	PL				B-024-H/094-B-08	PL				NG	Q	9930	273.10	6.40	1.067	0.00	na	0.258
22996	1	C-044-H/094-B-08	PL				B-044-H/094-B-08	PL				NG	Q	9930	219.10	5.60	0.165	0.00	na	0.215
23075	1	B-074-A/094-B-08	PL				C-013-H/094-B-08	PL				NG	Q	9930	273.10	6.40	4.504	0.00	na	0.239
23075	3	B-074-A/094-B-08	WE				B-074-A/094-B-08	PL				NG	Q	9930	219.10	6.40	0.100	0.00	na	0.220
23075	4	C-004-H/094-B-08	WE				C-004-H/094-B-08	PL				NG	Q	9930	219.10	6.40	0.100	0.00	na	0.220
23075	5	C-084-A/094-B-08	WE				C-084-A/094-B-08	PL				NG	Q	9930	219.10	6.40	0.100	0.00	na	0.220
23075	6	D-084-A/094-B-08	WE				D-084-A/094-B-08	PL				NG	Q	9930	273.10	6.40	0.084	0.00	na	0.267
23075	7	C-004-H/094-B-08	WE				D-004-H/094-B-08	PL				NG	Q	9930	273.10	6.40	0.349	0.00	na	0.241
23133	1	D-055-A/094-B-08	WE	ESD	558635	6239805	B-043-A/094-B-08	PL	CV/ESD	559762	6238376	NG	Q	6200	168.30	4.80	1.711	0.00	na	0.114
23152	1	B-097-A/094-B-08	PL				B-074-A/094-B-08	PL				NG	Q	9930	219.10	5.60	2.950	0.00	na	0.190
23152	3	B-097-A/094-B-08	WE				B-097-A/094-B-08	PL				NG	Q	9930	219.10	5.60	0.525	0.00	na	0.218

Altares / Farrell Creek - Pipelines

License	Line	From Location	From Facility	From Valve	From Valve Easting (Zone 10)	From Valve Northing (Zone 10)	To Location	To Facility	To Valve	To Valve Easting (Zone 10)	To Valve Northing (Zone 10)	Sub-stance	Status	MOP (kPa)	OD (mm)	WT (mm)	L (km)	H_2S (%)	Cumulative H_2S Release Volume (m^3)	Assigned HPZ[1, 2] (km)
Operating																				
23152	5	B-097-A/094-B-08	PL				B-074-A/094-B-08	PL				NG	Q	9930	323.90	7.90	2.640	0.00	na	0.279
23152	6	D-088-A/094-B-08	WE				B-097-A/094-B-08	PL				NG	Q	9930	168.30	4.80	0.348	0.00	na	0.187
23232	1	B-072-A/094-B-08					B-024-H/094-B-08					NG	Q	9930	406.40	7.90	5.983	0.00	na	0.303
23233	1	B-074-A/094-B-08	PL				B-072-A/094-B-08	PT				NG	Q	9930	323.90	7.90	2.209	0.00	na	0.276
23233	2	B-074-A/094-B-08	PL				B-072-A/094-B-08	PT				NG	Q	9930	323.90	7.90	2.209	0.00	na	0.276
23233	6	B-074-A/094-B-08	PL				B-072-A/094-B-08	PT				NG	Q	9930	406.40	10.30	2.209	0.00	na	0.329
23233	7	B-074-A/094-B-08	PL				B-072-A/094-B-08	PL				NG	Q	9930	406.40	10.30	2.209	0.00	na	0.329
23249	1	15-12-084-26W6	WE	ESD	564223	6236883	A-023-A/094-B-08	WE	CV/ESD	560066	6236261	NG	Q	9930	114.30	4.00	4.550	0.00	na	0.100
23410	1	C-054-A/094-B-08	WE				B-074-A/094-B-08	PL				NG	Q	9930	219.10	5.60	2.201	0.00	na	0.194
23483	1	D-017-H/094-B-08	PL				B-097-A/094-B-08	PL				NG	Q	9930	219.10	5.60	3.350	0.00	na	0.188
23483	2	D-017-H/094-B-08	PL				B-097-A/094-B-08	PL				NG	Q	9930	323.90	7.90	3.350	0.00	na	0.276
23741	1	C-084-A/094-B-08	WE				B-074-A/094-B-08	PL				NG	Q	9930	406.40	9.50	1.558	0.00	na	0.321
23836	1	D-063-A/094-B-08	PL				D-063-A/094-B-08	PL				NG	Q	9930	406.40	11.90	0.700	0.00	na	0.304
23836	2	D-063-A/094-B-08	WE				D-063-A/094-B-08	PL				NG	Q	9930	219.10	6.40	0.300	0.00	na	0.216
24490	1	B-095-H/094-B-08	WE				C-064-H/094-B-08	PL				NG	Q	9930	323.90	7.90	2.969	0.00	na	0.278
24490	6	D-076-H/094-B-08					C-075-H/094-B-08					NG	C	9930	273.10	6.40	0.148	0.00	na	0.255
24499	1	C-037-H/094-B-08	WE				D-028-H/094-B-08	PL				NG	Q	9930	219.10	5.20	1.728	0.00	na	0.207
24503	1	A-024-H/094-B-08	PL				D-084-A/094-B-08	PL				NG	Q	9930	406.40	9.50	4.087	0.00	na	0.307
24573	1	C-029-A/094-B-08	WE				C-054-A/094-B-08	PL				NG	Q	9930	168.30	4.00	5.977	0.00	na	0.134
24877	1	15-01-085-26W6					C-013-H/094-B-08					NG	Q	9930	323.90	7.90	4.357	0.00	na	0.276
24993	1	C-062-A/094-B-08					B-078-A/094-B-08					NG	Q	10657	406.40	9.50	4.889	0.00	na	0.301
24993	2	D-063-A/094-B-08					C-062-A/094-B-08					NG	Q	9930	323.90	10.30	0.214	0.00	na	0.279
24993	3	D-063-A/094-B-08					C-062-A/094-B-08					NG	Q	9930	406.40	12.70	0.213	0.00	na	0.332
24993	4	D-063-A/094-B-08					C-062-A/094-B-08					NG	Q	9930	323.90	10.30	0.212	0.00	na	0.277
24993	5	D-063-A/094-B-08					C-062-A/094-B-08					NG	Q	9930	406.40	12.70	0.211	0.00	na	0.333
24993	9	D-063-A/094-B-08					C-062-A/094-B-08					NG	Q	9930	406.40	12.70	0.195	0.00	na	0.335
25029	1	08-06-085-25W6					15-01-085-26W6					NG	Q	9930	323.90	7.90	2.502	0.00	na	0.279
25037	2	C-007-H/094-B-08					C-007-H/094-B-08					NG	Q	9930	323.90	9.50	0.065	0.00	na	0.310
25266	1	D-030-H/094-B-08	WE				D-017-H/094-B-08	PL				NG	Q	9930	323.90	7.90	3.248	0.00	na	0.276
25730	1	C-098-D/094-A-05					C-098-D/094-A-05					NG	Q	9930	406.40	9.50	0.151	0.00	na	0.348
25730	4	C-098-D/094-A-05					B-008-E/094-A-05					NG	Q	9930	406.40	9.50	0.649	0.00	na	0.308

Altares / Farrell Creek - Pipelines

License	Line	From Location	From Facility	From Valve	From Valve Easting (Zone 10)	From Valve Northing (Zone 10)	To Location	To Facility	To Valve	To Valve Easting (Zone 10)	To Valve Northing (Zone 10)	Sub-stance	Status	MOP (kPa)	OD (mm)	WT (mm)	L (km)	H_2S (%)	Cumulative H_2S Release Volume (m^3)	Assigned HPZ[1, 2] (km)
Operating																				
25749	1	07-01-085-26W6					B-008-E/094-A-05					NG	Q	9930	323.90	7.90	0.668	0.00	na	0.272
25749	4	B-008-E/094-A-05					14-01-085-26W6					NG	Q	9930	406.40	9.50	1.799	0.00	na	0.327
25797	2	C-098-D/094-A-05					C-068-D/094-A-05					NG	Q	9930	406.40	9.50	2.898	0.00	na	0.298
25797	10	C-068-D/094-A-05					D-063-A/094-B-08					NG	Q	9930	406.40	9.50	4.037	0.00	na	0.307
25797	11	C-098-D/094-A-05					C-068-D/094-A-05					NG	Q	9930	406.40	9.50	2.898	0.00	na	0.329
25797	12	C-068-D/094-A-05					D-063-A/094-B-08					NG	Q	9930	406.40	9.50	4.037	0.00	na	0.307
25869	1	16-32-084-25W6					08-06-085-25W6					NG	Q	9930	323.90	7.90	1.990	0.00	na	0.283
26240	1	13-19-084-25W6					C-068-D/094-A-05					NG	Q	9930	406.40	9.50	1.611	0.00	na	0.322
26381	1	07-25-084-26W6					C-068-D/094-A-05					NG	Q	9930	406.40	9.50	0.770	0.00	na	0.306
26483	1	B-095-H/094-B-08					A-024-H/094-B-08					NG	C	9930	406.40	9.50	7.614	0.00	na	0.299
350	4	B-033-H/094-B-08	WE				D-044-H/094-B-08	PL				FG	Q	1379	60.30	6.70	1.635	0.00	na	0.100
350	5	D-044-H/094-B-08	WE				B-053-H/094-B-08	PL				FG	Q	1379	60.30	6.70	0.220	0.00	na	0.100
16979	2	C-014-H/094-B-08	WE				C-014-H/094-B-08	PL				FG	Q	1378	88.90	9.09	0.411	0.00	na	0.100
17677	2	C-014-H/094-B-08	WE				A-033-H/094-B-08	PL				FG	Q	1378	88.90	9.09	1.394	0.00	na	0.100
21517	1	A-054-H/094-B-08	WE				C-064-H/094-B-08	PL				FG	Q	4960	168.30	4.00	1.439	0.00	na	0.100
22258	1	B-024-H/094-B-08	PL				A-054-H/094-B-08	WE				FG	Q	4960	168.30	4.80	2.980	0.00	na	0.100
22497	4	B-017-I/094-B-01	PL				D-017-I/094-B-01	PL				FG	Q	1173	88.90	12.20	0.480	0.00	na	0.100
22569	3	B-024-H/094-B-08	PL				A-024-H/094-B-08	PL				FG	Q	1380	88.90	8.10	0.095	0.00	na	0.100
22569	7	A-024-H/094-B-08					C-023-H/094-B-08					FG	Q	1380	88.90	8.10	0.870	0.00	na	0.100
22569	8	A-024-H/094-B-08					A-024-H/094-B-08					FG	Q	1379	88.90	8.10	0.065	0.00	na	0.100
22569	9	A-024-H/094-B-08					A-024-H/094-B-08					FG	Q	1379	88.90	8.10	0.064	0.00	na	0.100
22678	5	A-054-H/094-B-08					D-044-H/094-B-08					FG	Q	4960	88.90	8.08	0.106	0.00	na	0.100
22678	6	A-054-H/094-B-08					A-054-H/094-B-08					FG	Q	4960	88.90	5.54	0.018	0.00	na	0.100
23075	8	C-004-H/094-B-08	WE				D-004-H/094-B-08	PL				FG	Q	1900	88.90	3.20	0.350	0.00	na	0.100
23075	9	D-084-A/094-B-08	PL				C-084-A/094-B-08	WE				FG	Q	1379	88.90	8.08	0.123	0.00	na	0.100
23075	10	D-084-A/094-B-08					D-084-A/094-B-08					FG	Q	1379	88.90	8.08	0.087	0.00	na	0.100
23145	2	A-097-I/094-B-01	PL				A-097-I/094-B-01	PL				FG	Q	6450	114.30	4.00	0.210	0.00	na	0.123
23233	5	B-072-A/094-B-08	PL				B-073-A/094-B-08	Camp				FG	Q	1900	88.90	3.20	0.846	0.00	na	0.100
23836	4	D-063-A/094-B-08	PL				D-063-A/094-B-08	WE				FG	Q	1900	88.90	3.20	0.300	0.00	na	0.100
24490	3	C-064-H/094-B-08	PL				B-095-H/094-B-08	WE				FG	Q	1379	88.90	8.10	2.964	0.00	na	0.100
24490	4	C-075-H/094-B-08					D-076-H/094-B-08					FG	Q	9930	168.30	6.40	0.145	0.00	na	0.186

Altares / Farrell Creek - Pipelines

License	Line	From Location	From Facility	From Valve	From Valve Easting (Zone 10)	From Valve Northing (Zone 10)	To Location	To Facility	To Valve	To Valve Easting (Zone 10)	To Valve Northing (Zone 10)	Sub-stance	Status	MOP (kPa)	OD (mm)	WT (mm)	L (km)	H_2S (%)	Cumulative H_2S Release Volume (m^3)	Assigned HPZ[1, 2] (km)
Operating																				
24490	5	C-075-H/094-B-08					D-076-H/094-B-08					FG	UC	1379	88.90	8.10	0.150	0.00	na	0.100
24499	3	D-028-H/094-B-08	PL				C-037-H/094-B-08	WE				FG	Q	1379	88.90	8.10	1.721	0.00	na	0.100
24503	2	A-024-H/094-B-08	PL				D-084-A/094-B-08	PL				FG	Q	1379	88.90	8.10	4.087	0.00	na	0.100
24877	3	C-013-H/094-B-08					15-01-085-26W6					FG	Q	1379	124.00	12.00	4.357	0.00	na	0.100
24877	5	15-01-085-26W6					15-01-085-26W6					FG	Q	1379	88.90	8.10	0.271	0.00	na	0.100
24993	6	C-062-A/094-B-08					D-063-A/094-B-08					FG	Q	4960	124.00	12.50	0.210	0.00	na	0.100
25029	3	15-01-085-26W6					08-06-085-25W6					FG	Q	1379	88.90	8.10	2.501	0.00	na	0.100
25037	3	C-007-H/094-B-08					C-007-H/094-B-08					FG	Q	9930	88.90	5.49	0.065	0.00	na	0.123
25266	3	D-017-H/094-B-08					D-030-H/094-B-08					FG	Q	1379	88.90	8.10	3.249	0.00	na	0.100
25414	2	C-097-A/094-B-08					C-097-A/094-B-08					FG	Q	1379	88.90	8.10	0.099	0.00	na	0.100
25730	3	B-008-E/094-A-05					C-098-D/094-A-05					FG	Q	1379	124.00	12.50	0.799	0.00	na	0.100
25749	3	14-01-085-26W6					07-01-085-26W6					FG	Q	1379	124.00	12.50	1.799	0.00	na	0.100
25797	3	D-063-A/094-B-08					C-098-D/094-A-05					FG	Q	4960	124.00	12.50	6.791	0.00	na	0.100
25797	7	C-068-D/094-A-05					D-069-D/094-A-05					FG	Q	4960	124.00	12.50	0.515	0.00	na	0.100
25869	3	08-06-085-25W6					16-32-084-25W6					FG	Q	1379	124.00	12.50	1.990	0.00	na	0.100
26240	3	C-068-D/094-A-05					13-19-084-25W6					FG	Q	4960	124.00	12.50	1.611	0.00	na	0.100
26381	3	C-068-D/094-A-05					07-25-084-26W6					FG	Q	4960	124.00	12.50	0.769	0.00	na	0.100
26483	3	C-064-H/094-B-08					B-095-H/094-B-08					FG	C	4960	124.00	12.50	3.139	0.00	na	0.100
22569	4	B-024-H/094-B-08	PL				C-023-H/094-B-08	PL				PW	Q	2206	273.10	37.40	0.979	0.00	na	0.130
22605	3	B-024-H/094-B-08	PL				C-027-H/094-B-08	PL				PW	Q	2206	273.10	37.40	3.122	0.00	na	0.130
22678	2	A-024-H/094-B-08	PL				C-064-H/094-B-08	PL				PW	Q	2010	273.10	37.40	4.480	0.00	na	0.130
22678	4	A-054-H/094-B-08					D-044-H/094-B-08					PW	Q	2010	168.30	23.00	0.124	0.00	na	0.100
22684	2	B-024-H/094-B-08	PL				B-024-H/094-B-08	PL				PW	Q	2206	273.10	37.40	0.206	0.00	na	0.130
22701	4	C-013-H/094-B-08	PL				B-024-H/094-B-08	PL				PW	Q	2206	323.90	44.40	1.067	0.00	na	0.154
23075	2	C-013-H/094-B-08	PL				B-074-A/094-B-08	PL				PW	Q	2206	323.90	44.40	4.504	0.00	na	0.154
23145	1	B-067-I/094-B-01	PL				A-097-I/094-B-01	PL				PW	Q	2206	406.40	55.70	3.280	0.00	na	0.192
23145	3	A-097-I/094-B-01	PL				C-062-A/094-B-08	PT				PW	Q	2206	406.40	55.70	10.194	0.00	na	0.192
23152	2	B-074-A/094-B-08	PL				B-097-A/094-B-08	PL				PW	Q	2206	273.10	37.40	3.287	0.00	na	0.130
23232	2	C-062-A/094-B-08	PT				B-024-H/094-B-08	PL				PW	Q	2206	323.90	44.40	6.557	0.00	na	0.154
23232	3	B-024-H/094-B-08	PL				B-024-H/094-B-08	PL				PW	Q	2206	124.00	12.50	0.200	0.00	na	0.100
23233	3	B-074-A/094-B-08	PL				C-062-A/094-B-08	PT				PW	Q	2206	323.90	44.40	2.525	0.00	na	0.154

Altares / Farrell Creek - Pipelines

License	Line	From Location	From Facility	From Valve	From Valve Easting (Zone 10)	From Valve Northing (Zone 10)	To Location	To Facility	To Valve	To Valve Easting (Zone 10)	To Valve Northing (Zone 10)	Sub-stance	Status	MOP (kPa)	OD (mm)	WT (mm)	L (km)	H_2S (%)	Cumulative H_2S Release Volume (m^3)	Assigned HPZ[1, 2] (km)
Operating																				
23410	2	C-054-A/094-B-08	PL				B-074-A/094-B-08	PL				PW	Q	2206	323.90	44.40	2.201	0.00	na	0.154
23483	3	D-017-H/094-B-08	PL				B-097-A/094-B-08	PL				PW	Q	2206	323.90	7.30	3.800	0.00	na	0.154
24490	2	C-064-H/094-B-08	PL				B-095-H/094-B-08	PL				PW	Q	2190	273.10	37.40	2.964	0.00	na	0.130
24499	2	C-037-H/094-B-08	PL				D-028-H/094-B-08	PL				PW	Q	2180	323.90	44.40	1.725	0.00	na	0.154
24877	2	D-013-H/094-B-08					15-01-085-26W6					PW	Q	2190	323.90	44.40	3.964	0.00	na	0.154
24993	8	C-062-A/094-B-08					D-063-A/094-B-08					PW	Q	2190	323.90	44.50	0.084	0.00	na	0.154
24993	10	B-072-A/094-B-08					C-062-A/094-B-08					PW	Q	9930	191.00	24.50	0.679	0.00	na	0.100
25029	2	08-06-085-25W6					15-01-085-26W6					PW	Q	2190	323.90	44.40	2.502	0.00	na	0.154
25037	1	C-007-H/094-B-08					C-007-H/094-B-08					PW	Q	2206	323.90	44.37	0.065	0.00	na	0.154
25266	2	D-030-H/094-B-08					D-028-H/094-B-08					PW	Q	2190	323.90	44.40	2.417	0.00	na	0.154
25266	4	D-028-H/094-B-08					D-017-H/094-B-08					PW	Q	2190	323.90	44.40	0.866	0.00	na	0.154
25414	1	C-097-A/094-B-08					C-097-A/094-B-08					PW	Q	2206	406.40	55.70	0.099	0.00	na	0.192
25414	3	C-097-A/094-B-08					C-097-A/094-B-08					PW	Q	2206	406.40	55.70	0.099	0.00	na	0.192
25730	2	C-098-D/094-A-05					B-008-E/094-A-05					PW	Q	2190	406.40	55.70	0.800	0.00	na	0.192
25749	2	07-01-085-26W6					14-01-085-26W6					PW	Q	2190	406.40	55.70	1.794	0.00	na	0.192
25797	1	C-098-D/094-A-05					D-069-D/094-A-05					PW	Q	2190	406.40	55.67	3.225	0.00	na	0.192
25869	2	16-32-084-25W6					08-06-085-25W6					PW	Q	2190	323.90	44.37	1.990	0.00	na	0.154
26240	2	13-19-084-25W6					C-068-D/094-A-05					PW	Q	2185	406.40	55.60	1.610	0.00	na	0.192
26381	2	C-068-D/094-A-05					07-25-084-26W6					PW	Q	2185	406.40	55.66	0.770	0.00	na	0.192
26483	2	A-024-H/094-B-08					B-095-H/094-B-08					PW	C	2190	323.90	44.36	7.614	0.00	na	0.154
22496	2	D-044-B/094-B-01	LK				C-036-A/094-B-01	IP				FW	Q	1730	406.40	45.20	6.909	0.00	na	ROW
22497	1	C-036-A/094-B-01	IP				D-007-I/094-B-01	IP				FW	Q	1730	406.40	45.20	16.425	0.00	na	ROW
22497	2	D-007-I/094-B-01	PL				B-017-I/094-B-01	PL				FW	Q	1730	406.40	45.20	0.480	0.00	na	ROW
22497	3	D-007-I/094-B-01	PS				B-067-I/094-B-01	PL				FW	Q	2200	406.40	55.70	4.837	0.00	na	ROW
25797	5	C-062-A/094-B-08					D-069-D/094-A-05					FW	Q	2190	323.90	44.37	3.882	0.00	na	ROW
25797	6	C-062-A/094-B-08					D-069-D/094-A-05					FW	Q	2190	323.90	44.37	3.881	0.00	na	ROW
24993	7	C-062-A/094-B-08					D-063-A/094-B-08					Air	Q	1380	88.90	8.10	0.209	0.00	na	ROW
Not Operating																				
350	1	B-053-H/094-B-08	BE	ESD	559544	6248232	D-044-H/094-B-08	BE	CV	559151	6248156	SNG	D	9930	114.30	4.00	0.363	26.00	-	0.100
350	2	B-033-H/094-B-08	BE	ESD	559648	6246725	A-033-H/094-B-08	BE	CV	559823	6246399	SNG	D	9930	168.30	4.80	0.431	26.00	-	0.100
350	3	D-044-H/094-B-08	BE	ESD	559151	6248156	B-033-H/094-B-08	BE				SNG	D	9930	168.30	4.80	1.635	26.00	-	0.100

Altares / Farrell Creek - Pipelines

License	Line	From Location	From Facility	From Valve	From Valve Easting (Zone 10)	From Valve Northing (Zone 10)	To Location	To Facility	To Valve	To Valve Easting (Zone 10)	To Valve Northing (Zone 10)	Sub-stance	Status	MOP (kPa)	OD (mm)	WT (mm)	L (km)	H_2S (%)	Cumulative H_2S Release Volume (m^3)	Assigned HPZ[1, 2] (km)
Not Operating																				
14454	2	D-053-A/094-B-08	BE				C-014-H/094-B-08	BE				NG	D	1378	88.90	9.88	6.325		-	0.100
14454	3	A-003-H/094-B-08	BE	ESD	559844	6244002	A-003-H/094-B-08	BE				SNG	D	9930	114.30	4.00	0.100	20.00	-	0.100
14454	4	C-071-A/094-B-08	BE	ESD	561021	6241467	A-073-A/094-B-08	BE	CV	560180	6241084	SNG	D	9930	114.30	4.00	0.935	20.00	-	0.100
14454	5	C-071-A/094-B-08	BE				A-073-A/094-B-08	BE				NG	D	1378	88.90	9.88	0.935	0.00	-	0.100
14454	7	A-003-H/094-B-08	BE				A-003-H/094-B-08	BE				NG	D	1378	88.90	9.88	0.100	0.00	-	0.100
14620	2	B-043-A/094-B-08	BE				D-053-A/094-B-08	BE				NG	D	1378	88.90	9.88	1.601	0.00	-	0.100
16333	2	A-043-A/094-B-08	BE				A-023-A/094-B-08	BE				NG	D	1378	88.90	9.09	2.647	0.00	-	0.100
16333	3	A-043-A/094-B-08	BE				A-043-A/094-B-08	BE				SNG	D	9930	114.30	4.00	0.088	20.00	-	0.100
16333	4	A-043-A/094-B-08	BE				A-043-A/094-B-08	BE				NG	D	1379	88.90	9.88	0.088	0.00	-	0.100
16979	1	C-014-H/094-B-08	BE	ESD	558867	6245279	C-014-H/094-B-08	BE	CV/ESD	558697	6245261	SNG	D	9930	168.30	4.80	0.411	26.00	-	0.100
17677	1	A-033-H/094-B-08	BE	ESD	559824	6246398	C-014-H/094-B-08	BE	CV/ESD	558978	6245366	SNG	D	9930	168.30	4.80	1.394	26.00	-	0.100
17677	3	C-014-H/094-B-08	BE	ESD	558867	6245295	C-014-H/094-B-08	BE	CV/ESD	558681	6245261	SNG	D	9930	168.30	4.80	0.299	26.00	-	0.100
17909	1	C-013-H/094-B-08	BE	ESD	559649	6245161	C-014-H/094-B-08	BE	CV	558930	6245291	SNG	D	9930	168.30	4.80	0.784	26.00	-	0.100
17909	2	C-014-H/094-B-08	BE				C-013-H/094-B-08	BE				NG	D	1379	88.90	9.88	0.784	0.00	-	0.100
18587	1	C-082-A/094-B-08	BE	ESD	560557	6242497	D-083-A/094-B-08	BE	CV	560156	6242479	NG	D	9930	114.30	4.00	0.422	20.00	-	0.100
18587	2	D-083-A/094-B-08	BE				C-082-A/094-B-08	BE				FG	D	1379	60.30	6.70	0.422	0.00	-	0.100
19914	1	D-003-H/094-B-08	BE	ESD	559930	6244140	C-014-H/094-B-08	BE	ESD	558724	6245224	SNG	D	9930	168.30	4.80	1.810	26.00	-	0.100
21148	1	D-022-G/094-B-08	BE				B-022-G/094-B-08	BE				NG	D	9930	114.30	3.20	0.624	0.01	-	0.100
22569	6	C-023-H/094-B-08	BE				C-023-H/094-B-08	BE				FG	D	1380	88.90	12.10	0.060	0.00	-	0.100
23152	7	B-097-A/094-B-08	BE				D-088-A/094-B-08	BE				FG	D	9930	88.90	4.00	0.347	0.00	-	0.100
24241	1	B-024-H/094-B-08	BE				B-024-H/094-B-08	BE				FG	D	9930	88.90	4.80	0.229	0.00	-	0.100
24515	1	D-013-H/094-B-08	BE				15-01-085-26W6	BE				PW	D	3000	124.00	12.00	3.952	0.00	-	0.100
Not Constructed																				
18587	3	C-082-A/094-B-08					D-083-A/094-B-08					FG	NC	1379	88.90	8.08	0.385	0.00	-	-
18587	4	D-083-A/094-B-08					C-082-A/094-B-08					PW	NC	2206	168.30	23.05	0.385	0.00	-	-
22569	5	C-023-H/094-B-08	WE				C-023-H/094-B-08	PL				NG	NC	9930	323.90	219.10	0.060	0.00	-	-
22701	3	C-013-H/094-B-08	PL				15-01-085-26W6	PL				PW	NC	2206	273.10	37.40	4.430	0.00	-	-
23836	5	D-063-A/094-B-08	PL				D-063-A/094-B-08	WE				FG	NC	1900	88.90	3.20	0.436	0.00	-	-
25239	1	B-024-H/094-B-08					D-017-H/094-B-08					FG	NC	4960	124.00	12.50	2.150	0.00	-	-
25239	2	D-017-H/094-B-08					C-017-H/094-B-08					FG	NC	4960	124.00	12.50	0.637	0.00	-	-
25239	3	B-024-H/094-B-08					D-028-H/094-B-08					NG	NC	9930	406.40	9.50	3.358	0.00	-	-

Altares / Farrell Creek - Pipelines

License	Line	From Location	From Facility	From Valve	From Valve Easting (Zone 10)	From Valve Northing (Zone 10)	To Location	To Facility	To Valve	To Valve Easting (Zone 10)	To Valve Northing (Zone 10)	Sub-stance	Status	MOP (kPa)	OD (mm)	WT (mm)	L (km)	H_2S (%)	Cumulative H_2S Release Volume (m^3)	Assigned HPZ[1, 2] (km)
Not Constructed																				
25245	1	C-017-H/094-B-08					C-007-H/094-B-08					FG	NC	1379	88.90	8.10	0.883	0.00	-	-
25726	1	10-22-084-25W6					15-22-084-25W6					NG	NC	9930	168.30	4.80	0.170	0.00	-	-
25726	2	10-22-084-25W6					15-22-084-25W6					PW	NC	9930	114.30	4.00	0.170	0.00	-	-
25726	3	15-22-084-25W6					10-22-084-25W6					NG	NC	9930	114.30	4.00	0.170	0.00	-	-
25797	4	D-063-A/094-B-08					B-074-A/094-B-08					FG	NC	4960	124.00	12.50	1.879	0.00	-	-
25797	8	C-062-A/094-B-08					C-062-A/094-B-08					PW	NC	2190	323.90	44.37	0.281	0.00	-	-
25797	9	D-063-A/094-B-08					B-074-A/094-B-08					PW	NC	2190	323.90	44.37	1.907	0.00	-	-
Abandoned																				
21517	2	A-054-H/094-B-08					D-044-H/094-B-08					NG	A	9930	168.30	4.00	0.291	0.00	-	-

Comments:

- All pipelines with a calculated HPZ less than 100 m were assigned a 100 m HPZ to comply with the *All Hazards Approach* utilized in BC.

Footnotes:

1. The Assigned HPZ for the sweet natural gas and fuel gas pipelines has been taken to be the largest of the LEL/2 or Heat Radiation to 5 kW/m^2 calculations with a minimum HPZ of 0.100 km.
2. The Assigned HPZ for the produced water pipelines has been calculated based on 12m per inch OD, with a minimum HPZ of 0.100 km.

Pipeline Legend:	
Facility:	B = Battery BE = Bind End CS = Compressor Station DH = Dehydrator GP = Gas Plant GS = Gathering System MS = Meter Station PS = Pump Station PL = Pipeline PT = Plant S = Satellite WE = Well CP = Camp LK = Lake
Substance:	FG = Fuel Gas FW = Fresh Water NG = Natural Gas SNG = Sour Natural Gas SW = Salt Water/Sour Water PW = Produced Water FW = Fresh Water HVP = HVP Products
Status:	A = Abandoned D = Deactivated Q = Active NC = Not Constructed UC = Under Construction C = Consturcted
Valve:	CV = Check Valve ESD = Emergency Shut Down Valve
Other:	L = Length OD = Outside Diameter WT = Wall Thickness MOP = Maximum Operating Pressure GLR = Gas to Liquid Ratio

Altares / Farrell Creek - Facilities

Facility Licence #	Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Facility Type	Status	Distance to Nearest Residence or public facility (km)	H_2S Release Volume (m^3)	Assigned HPZ (km)	CEPA EPZ (km)
Operating									
0027608	13-19-084-25W6	564976.36	6240262.17	Well Facility	New	>2	na	0.322	
0028166	16-32-084-25W6	567717.97	6243594.35	Well Facility	Active	>2	na	0.283	
0025641	15-12-084-26W6	564306.71	6236951.99	Well Facility	Active	>2	na	0.100	
0026920	08-06-085-25W6	566002.85	6244394.95	Well Facility	Active	>2	na	0.283	
0027513	02-01-085-26W6	564067.79	6243900.63	Well Facility	Active	>2	na	0.100	
0025218	15-01-085-26W6	564074.54	6245045.16	Well Facility	Active	>2	na	0.279	
0025150	15-01-085-26W6	564074.54	6245045.16	Well Facility	Active	>2	na	0.279	
0027324	D-069-D/094-A-05	563279.00	6240812.00	Water Hub	Active	>2	na	0.192	
0027514	C-098-D/094-A-05	563478.26	6243414.11	Well Facility	Active	>2	na	0.348	
0018119	D-007-I/094-B-01	557264.00	6225751.00	Pump station	Active	1.12	na	0.248	
0008634	B-017-I/094-B-01	556749.81	6226157.69	Gas Sales Meter (BC)	Active	0.92	na	0.248	
0007833	B-017-I/094-B-01	556749.81	6226157.69	Compressor station	Active	0.92	na	0.248	
0018128	A-097-I/094-B-01	557106.00	6233770.00	Pump station	Active	1.64	na	0.192	
0026580	C-029-A/094-B-08	555061.60	6236888.67	Well Facility	Active	1.25	na	0.134	
0018168	C-054-A/094-B-08	558804.59	6239765.58	Well Facility	Active	0.70	na	0.194	
0025934	D-055-A/094-B-08	558638.59	6239807.65	Well Facility	Active	0.79	na	0.114	
0018063	C-062-A/094-B-08	560392.00	6240427.00	Water Hub	Active	0.65	na	0.335	
0026309	D-063-A/094-B-08	559983.23	6240686.46	Well Facility	Active	0.498	na	0.335	
0024567	D-064-A/094-B-08	559188.13	6240528.86	Well Facility	Active	0.254	na	0.121	
0017909	B-072-A/094-B-08	560499.00	6241051.00	Gas processing plant	Active	0.065	na	0.329	1.050[(1)]
0024819	B-074-A/094-B-08	558755.53	6241072.96	Well Facility	Active	0.802	na	0.329	
0018044	B-074-A/094-B-08	558755.53	6241072.96	Well Facility	Active	0.802	na	0.329	
0027606	C-074-A/094-B-08	558848.53	6241491.58	Well Facility	New	0.898	-	0.100	

Altares / Farrell Creek - Facilities

Facility Licence #	Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Facility Type	Status	Distance to Nearest Residence or public facility (km)	H_2S Release Volume (m^3)	Assigned HPZ (km)	CEPA EPZ (km)
Operating									
0023616	C-082-A/094-B-08	560559.63	6242498.96	Well Facility	Active	0.398	-	0.100	
0027210	C-082-A/094-B-08	560559.63	6242498.96	Water disposal facility	New	0.398	-	0.100	
0018164	C-084-A/094-B-08	559000.00	6242630.00	Well Facility	Active	1.11	na	0.321	
0026211	D-088-A/094-B-08	556286.46	6242525.61	Well Facility	Active	>2	na	0.187	
0018084	B-097-A/094-B-08	556366.65	6242756.63	Well Facility	Active	>2	na	0.279	
0027124	C-097-A/094-B-08	556446.58	6243390.92	Water Hub	Active	>2	na	0.192	
0026345	A-098-A/094-B-08	556321.43	6242766.57	Compressor station	New	>2	-	0.100	
0018114	C-004-H/094-B-08	559020.36	6244062.52	Well Facility	Active	0.85	na	0.241	
0027190	C-007-H/094-B-08	556602.87	6244251.76	Well Facility	Active	>2	na	0.310	
0028298	C-007-H/094-B-08	556545.36	6244201.35	Well Facility	New	>2	na	0.310	
0007505	C-014-H/094-B-08	558919.53	6245380.66	Compressor station	Active	0.10	na	0.187	
0018163	C-017-H/094-B-08	556411.95	6245130.42	Well Facility	Active	1.767	-	0.100	
0018319	C-023-H/094-B-08	559719.80	6246055.91	Well Facility	Active	0.504	na	0.276	
0007834	B-024-H/094-B-08	558766.03	6245462.08	Gas processing plant	Active	0.177	na	0.308	
0026285	B-024-H/094-B-08	558766.03	6245462.08	Compressor station	Active	0.177	na	0.308	
0026116	C-027-H/094-B-08	556306.93	6245965.26	Well Facility	Active	1.862	na	0.279	
0025746	C-027-H/094-B-08	556306.93	6245965.26	Well Facility	Active	1.862	na	0.279	
0025426	C-027-H/094-B-08	556306.93	6245965.26	Well Facility	Active	1.862	na	0.279	
0025425	C-027-H/094-B-08	556306.93	6245965.26	Well Facility	Active	1.862	na	0.279	
0025243	C-027-H/094-B-08	556306.93	6245965.26	Well Facility	Active	1.862	na	0.279	
0026115	C-027-H/094-B-08	556306.93	6245965.26	Well Facility	New	1.862	na	0.279	
0026114	C-027-H/094-B-08	556306.93	6245965.26	Well Facility	New	1.862	na	0.279	
0026113	C-027-H/094-B-08	556306.93	6245965.26	Well Facility	New	1.862	na	0.279	

Altares / Farrell Creek - Facilities

Facility Licence #	Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Facility Type	Status	Distance to Nearest Residence or public facility (km)	H_2S Release Volume (m^3)	Assigned HPZ (km)	CEPA EPZ (km)
Operating									
0027452	D-030-H/094-B-08	554614.99	6245863.73	Well Facility	Active	0.738	na	0.276	
0026188	B-034-H/094-B-08	558875.67	6246485.56	Well Facility	Active	0.456	na	0.100	
0026187	B-034-H/094-B-08	558875.67	6246485.56	Well Facility	Active	0.46	na	0.100	
0026186	B-034-H/094-B-08	558875.67	6246485.56	Well Facility	Active	0.46	na	0.100	
0025763	B-034-H/094-B-08	558875.67	6246485.56	Well Facility	Active	0.46	na	0.100	
0025586	B-034-H/094-B-08	558875.67	6246485.56	Well Facility	Active	0.456	na	0.100	
0025584	B-034-H/094-B-08	558875.67	6246485.56	Well Facility	Active	0.456	na	0.100	
0026737	C-037-H/094-B-08	556303.83	6246802.15	Well Facility	Active	>2	na	0.207	
0027448	A-040-H/094-B-08	554629.95	6246410.39	Well Facility	Active	1.284	na	0.100	
0025692	C-044-H/094-B-08	558760.81	6247935.94	Well Facility	Active	1.678	na	0.287	
0025614	C-044-H/094-B-08	558760.81	6247935.94	Well Facility	Active	1.678	na	0.287	
0023491	D-044-H/094-B-08	559122.63	6248183.36	Well Facility	Active	1.843	na	0.100	
0027207	D-044-H/094-B-08	559122.63	6248183.36	Water disposal facility	Active	1.843	na	0.100	
0024916	C-064-H/094-B-08	558823.13	6249660.56	Well Facility	Active	>2	na	0.287	
0024711	C-064-H/094-B-08	558823.13	6249660.56	Well Facility	Active	>2	na	0.287	
0023640	C-064-H/094-B-08	558823.13	6249660.56	Well Facility	Active	>2	na	0.287	
0026621	D-076-H/094-B-08	557761.26	6250795.99	Well Facility	Active	>2	na	0.255	
0026523	D-076-H/094-B-08	557761.26	6250795.99	Well Facility	Active	>2	na	0.255	
0026622	D-076-H/094-B-08	557761.26	6250795.99	Water disposal facility	Active	>2	na	0.255	
0026496	B-095-H/094-B-08	557860.51	6252026.36	Well Facility	Active	>2	na	0.299	
0024232	B-017-I/094-B-01	556749.81	6226157.69	Well Facility	Active	0.915	na	0.248	
0024886	C-018-I/094-B-01	555851.43	6226841.96	Well Facility	Active	0.290	na	0.136	
0024409	C-018-I/094-B-01	555851.43	6226841.96	Well Facility	Active	0.290	na	0.136	

Altares / Farrell Creek - Facilities

Facility Licence #	Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Facility Type	Status	Distance to Nearest Residence or public facility (km)	H_2S Release Volume (m^3)	Assigned HPZ (km)	CEPA EPZ (km)
Operating									
0024153	C-045-I/094-B-01	558258.93	6229438.66	Well Facility	Active	>2	na	0.131	
0024183	C-048-I/094-B-01	556097.23	6229266.16	Well Facility	Active	1.93	na	0.131	
Not Operating									
0021740	A-043-A/094-B-08	560076.93	6238242.96	Well Facility	Not Active	>2	na	0.136	
0007803	D-053-A/094-B-08	560194.00	6239640.00	Dehydrator	Not Active	1.130	na	0.150	
0025470	D-053-A/094-B-08	560194.00	6239640.00	Well Facility	Not Active	1.130	na	0.150	
0020650	A-003-H/094-B-08	559865.73	6244025.36	Well Facility	Not Active	0.545	-	0.100	
0022606	D-003-H/094-B-08	559938.73	6244143.86	Well Facility	Not Active	0.682	-	0.100	
0023421	C-014-H/094-B-08	558919.53	6245380.66	Well Facility	Not Active	0.096	na	0.187	
0021580	A-033-H/094-B-08	559826.53	6246401.36	Well Facility	Not Active	0.518	na	0.100	
0022860	B-053-H/094-B-08	559546.93	6248234.86	Well Facility	Not Active	1.899	na	0.100	
0027609	A-004-I/094-B-08	559110.05	6253092.35	Well Facility	Not Active	>2	na	0.100	
0026042	A-023-A/094-B-08	560091.13	6236275.76	Well Facility	Not Active	>2	na	0.136	
0018699	A-023-A/094-B-08	560091.13	6236275.76	Well Facility	Not Active	>2	na	0.136	
0021038	B-043-A/094-B-08	559764.83	6238377.16	Well Facility	Not Active	1.97	na	0.150	
0023573	D-022-G/094-B-08	552908.03	6245986.06	Well Facility	Not Active	1.94	-	0.100	
0007747	C-014-H/094-B-08	558919.53	6245380.66	Well Facility	Not Active	0.10	na	0.187	
0022366	B-033-H/094-B-08	559651.63	6246728.36	Well Facility	Not Active	0.508	na	0.100	
0025585	B-034-H/094-B-08	558875.67	6246485.56	Well Facility	Not Active	0.456	na	0.100	
0025691	C-044-H/094-B-08	558760.81	6247935.94	Well Facility	Not Active	1.68	na	0.287	
0024805	C-064-H/094-B-08	558823.13	6249660.56	Well Facility	Not Active	>2	na	0.287	
0024747	C-018-I/094-B-01	555851.43	6226841.96	Well Facility	Suspended	0.290	na	0.136	
0020972	D-053-A/094-B-08	560194.00	6239640.00	Well Facility	Suspended	1.130	na	0.150	

Altares / Farrell Creek - Facilities

Facility Licence #	Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Facility Type	Status	Distance to Nearest Residence or public facility (km)	H_2S Release Volume (m^3)	Assigned HPZ (km)	CEPA EPZ (km)
Not Operating									
0007513	C-071-A/094-B-08	561023.00	6241457.00	Compressor station	Suspended	0.701	-	0.100	
0022367	C-082-A/094-B-08	560559.63	6242498.96	Well Facility	Suspended	0.398	-	0.100	
0021905	C-013-H/094-B-08	559642.63	6245151.86	Well Facility	Suspended	0.351	na	0.276	
0023970	B-033-H/094-B-08	559651.63	6246728.36	Well Facility	Suspended	0.508	na	0.100	
0022877	B-033-H/094-B-08	559651.63	6246728.36	Well Facility	Suspended	0.508	na	0.100	
0019266	B-033-H/094-B-08	559651.63	6246728.36	Well Facility	Suspended	0.508	na	0.100	
0023636	D-044-H/094-B-08	559122.63	6248183.36	Well Facility	Suspended	1.843	na	0.100	
Cancelled / Removed									
0024475	B-083-A/094-B-08			Well Facility	Cancelled			-	
0015525	C-064-H/094-B-08			Test Facility (BC)	Cancelled			-	
0015396	C-014-H/094-B-08			Test Facility (BC)	Cancelled			-	
0015254	01-31-083-24W6			Test Facility (BC)	Cancelled			-	
0018007	B-024-H/094-B-08			Gathering Point (BC)	Cancelled			-	
0018863	10-22-084-25W6			Well Facility	Cancelled			-	
0025219	15-01-085-26W6			Well Facility	Removed			-	
0026926	C-007-H/094-B-08			Water disposal facility	Removed			-	

Comments:

- All operating and suspended facilities were assigned a minimum 100 m HPZ to comply with the *All Hazards Approach* utilized in BC.

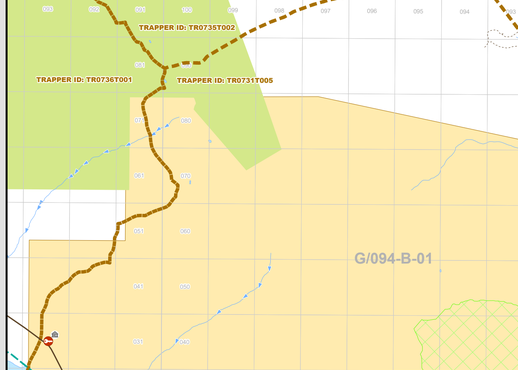
Footnotes:

1. Refer to "Altares b-072-A/094-B-08 Gas Plant Site-Specific Hazard Planning Distance Calculations for CEPA Products and Combustible Liquids" report prepared on April 24, 2023 by Behr Integrated Solutions Inc.

KOBES AREA

PEACE RIVER REGIONAL DISTRICT
RCMP: HUDSON'S HOPE
NORTHERN HEALTH
BCER: CENTRAL
PEACE NATURAL RESOURCE DISTRICT
WCSS: COOP 9

OVERVIEW MAP



ALTARES / KOBES AREA RADIO ROAD FREQUENCIES	
ROAD NAME	FREQUENCY
Haystack Forest Service Road	RR-12 – 150.500
Iron Creek Road	RR 18 – 150.710
Pilsner Road	RR-7 – 150.260
Harold Ellis Road	RR-7 – 150.260
Upper Halfway Road	Mile 95 Road – 153.380
Kobes Creek Road (km 24.5 to km 46.3)	RR 08 – 150.4400
Beryl Prairie Road (entire length)	RR 03 – 150.1400
The Core Road (entire length)	RR 04 – 150.1850
Camp Road	RR 21 – 151.010
The West Altares Road	RR 03 – 150.1400

EMERGENCY RESPONSE PLAN (ERP) STAKEHOLDERS: ALTARES/FARRELL

REGULATOR AUTHORITY :	BCER: CENTRAL
LOCAL AUTHORITY :	PEACE RIVER REGIONAL DISTRICT
FIRST NATION / MÉTIS SETTLEMENT :	N/A
LAW ENFORCEMENT :	RCMP: HUDSON'S HOPE
HEALTH AUTHORITY :	NORTHERN
SPILL COOP :	WCSS: COOP 9
TRANSPORTATION/HWY/RAIL :	N/A
TRAPPER :	TR0735T002,TR0735T004, TR0735T005
GUIDE/OUTFITTER :	701265, 750023
GRAZING/RANGE TENURE :	RAN073263, RAN76279, RAN76290, RAN77273
NATURAL RESOURCE DISTRICT :	PEACE NATURAL RESOURCE DISTRICT
PARK :	BULLHEAD MOUNTAIN RECREATION AREA

FACILITY TYPE
- GAS PROCESSING PLANT
- CENTRAL TREATMENT PLANT
- CENTRAL PROCESSING FACILITY
- INJECTION PLANT
- COMPRESSOR
- PUMP STATION
- PIPELINE TERMINAL
- DEHYDRATOR
- WASTE PROCESSING
- METER STATION
- HEADER / RISER
- BATTERY
- SATELLITE
- WATER DISPOSAL
- CHECK VALVE
- BLOCK VALVE
- EMERGENCY SHUTDOWN VALVE
- PROPANE BULLET
- TANK

SURFACE DEVELOPMENT
- RESIDENCE OCCUPIED
- BUSINESS OCCUPIED
- RESIDENCE SENSITIVE
- BUSINESS SENSITIVE
- RESIDENCE SEASONAL
- BUSINESS SEASONAL
- PUBLIC FACILITY
- STRUCTURE VACANT
- STRUCTURE ABANDONED
- STRUCTURE OUTSIDE OF EPZ
- OTHER BUILDINGS

PIPELINE TYPE
- OIL SOUR - OPERATING
- OIL SWEET - OPERATING
- OIL PRODUCTS - DISCONTINUED
- GAS SOUR - OPERATING
- GAS SWEET - OPERATING
- GAS PRODUCTS - DISCONTINUED
- WATER SOUR - OPERATING
- WATER SWEET - OPERATING
- WATER - DISCONTINUED
- HVP - OPERATING
- HVP - DISCONTINUED
- LVP - OPERATING
- LVP - DISCONTINUED
- STEAM / AIR - OPERATING
- STEAM / AIR - DISCONTINUED
- MISC - OPERATING
- MISC - DISCONTINUED

NON-CLIENT OPERATORS
- GAS PROCESSING PLANT FACILITY
- WELL
- PIPELINE

WELL TYPE
- WELL - GAS
- WELL - OIL
- WELL - WATER SOURCE
- WELL - WATER INJECTION
- WELL - OBSERVATION
- WELL - LOCATION
- WELL - GAS SUSPENDED
- WELL - OIL SUSPENDED

EMERGENCY RESPONSE
- EPZ (EMERGENCY PLANNING ZONE)
- IIZ (INITIAL ISOLATION ZONE)
- CEPA ZONE
- EPZ (OTHER SYSTEM)
- EGRESS
- ERP ACCESS
- HAZARD POINT
- CAUTION POINT
- FLOODING INCIDENT
- WILDFIRE INCIDENT
- INCIDENT COMMAND POST (ICP)
- MUSTER POINT
- STAGING AREA
- ROADBLOCK
- DEAD END
- GATED - KEYED ACCESS
- SPILL CONTROL POINT - WCSS/SK SPILL COOP
- SPILL CONTROL POINT - CRITICAL WCSS/SK SPILL COOP
- SPILL CONTROL POINT - CLIENT
- STARS SITE
- EVACUATION / RECEPTION CENTRE
- EVACUATION ROUTE

- AIRPORT
- AIR STRIP
- HELI PAD
- TOWER - FORESTRY
- TOWER - COMMUNICATION
- TOWER - OTHER
- AIR MONITORING SITE
- ELECTRICAL SUBSTATION
- SENSITIVE WILDLIFE AREA
- RAIL CROSSING
- HISTORICAL SITE
- WATER CROSSING
- BRIDGE
- DAM
- WCSS EQUIPMENT
- TRAILHEAD
- BOAT LAUNCH
- SOLAR FARM
- WIND FARM
- SPECIAL INTEREST GROUP
- HOSPITAL
- MEDICAL CENTER
- SECURITY CHECKPOINT
- SCHOOL
- PLACE OF WORSHIP
- CEMETERY
- RAIL FACILITY
- COMMUNITY CENTRE
- INDUSTRY CAMP
- GRAVEL PIT
- STORAGE YARD
- GOLF COURSE
- CAMPGROUND
- CAMPSITE
- PICNIC / REST AREA
- DUMP / LANDFILL

CULTURE
- HIGHWAY - PRIMARY
- HIGHWAY - SECONDARY
- MAIN ACCESS ROAD
- OTHER ACCESS ROAD / TRAIL
- RAIL
- LOCAL AUTHORITY / MUNICIPAL BOUNDARY
- LAW ENFORCEMENT
- HEALTH AUTHORITY
- REGULATOR AUTHORITY
- SPILL COOP
- NATURAL RESOURCE DISTRICT (B.C. Only)
- FOREST MANAGEMENT AREA (AB Only)
- WMU / GUIDE OUTFITTER
- TRAPLINE
- PROVINCE
- WATER
- POPULATED AREA
- FIRST NATION / MÉTIS
- RECREATIONAL AREA
- PARK / PROTECTED AREA
- GRAZING / RANGE TENURE (AB & BC)
- LANDOWNER
- RIGHTS HOLDER / ALLOTMENT USER
- CUTBLOCK
- TENURE OPENINGS
- MANAGED LICENCE
- FOREST COVER RESERVATIONS
- SURVEYED PARCELS
- MILITARY AREA
- FENCE
- FENCED AREA

PACIFIC CANBRIAM ENERGY

NEBC FIELD SUPPLEMENT 2025
ALTARES / FARRELL CREEK AREA MAP

BEHR Integrated Solutions
www.behrintegrated.com

Drawn By: GS
Scale:1:50,000 — Project No.: 15006
Map Projection: NAD 83 UTM 10 — Revision: 0 - AUG. 2025

0 1 2 3 4 5 6 km

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Area Occupant Data

Confidential Data

Confidential data collected during the Public Involvement Program will only be included in manuals labelled as ***Confidential***.

All manuals will contain contact information for publicly listed data for area occupants within the HPZ that may include Trappers, Grazing Lease Holders and Industrial Operators. Refer to each site-specific area in the *Assets and Equipment Section* for this information.

The following reports are only included in copies of the confidential ERP:

Surface Development – Summary Report
- Includes contact information for all surface developments within the HPZ.
- Report sorted by Map Coordinates.

Special Needs Contacts within the EPZ – Summary Report
- Includes residents who have indicated they may require early response actions due to medical needs or communication barriers.
- Report sorted by Map Coordinates.

School / Student – Summary Report
- Includes children who may be in school during an incident.
- Report sorted by Map Coordinates.

Surface Development – Detail Report (per location)
- Includes all information pertaining to a specific location.
- The individual detail reports are sorted by Map Coordinates.

Surface Development – Summary Report (Alphabetical)
- Includes contact information for all surface developments within the HPZ.

Report is sorted Alphabetically.

Public Information Package

A public information package was prepared and delivered to area occupants during the public involvement process. A copy of the public information package is included in all manuals.

EPZ STAKEHOLDER SUMMARY REPORT

Pacific Canbriam Energy/Altares / Farrell Creek

The following report provides an overview of all Stakeholders identified within the Emergency Planning Zone, based on information gathered during the most recent Public Notification and Consultation Campaign, and other situational awareness data gathered during the most recent Emergency Response Plan update.

EMERGENCY PLANNING ZONE (EPZ) OVERVIEW	
Surface Developments within the EPZ	13
Occupants within the EPZ (includes Resident and Non-Resident Land Users)	410
Students attending school who live within the EPZ	1
Surface Developments with Sensitivities (There may be more than one sensitivity per Surface Development)	4

OCCUPANT SENSITIVITIES OVERVIEW (Sensitivities are identified for response activities and for consultation awareness)	
Aboriginal Community Member	0
Evacuation Assistance	0
Language / Comprehension Barrier	0
Not Contacted During Public Notification / Consultation Campaign	3
Other Special Needs	0
Potentially Contentious Occupant	1
Requires Early Notification	0
Sensitive to Industry Development	0

SURFACE DEVELOPMENTS OVERVIEW	
PRIVATE PROPERTY (Locations where people live)	
Residences – Abandoned	0
Residences – Not contacted	2
Residences – Occupied Full Time	1
Residences – Seasonal / Part Time	1
Residences – Vacant	0
Building - Unoccupied	0
Resident Surface Developments within the EPZ	4
Unoccupied Surface Developments within the EPZ	0

PUBLIC FACILITIES (Locations where members of the public may congregate)	
Airport/Airstrip	0
Boat Launch - Recreational	0
Camp site – Off-Road	0
Campground - Official	0
Campsite - Developed	0
Cemetery	0
Community Center	0
Evacuation / Reception Centre	0

Golf Course	0
Helispot	0
Hospital	0
Picnic / Rest Area	0
Place of Worship	0
Public Facility	0
School	0
Public Facility Locations within the EPZ	0

NON RESIDENT LAND USERS (Locations where people may be working)	
Business / Industrial Land Users	
Business	1
Other O&G Operator Battery	0
Other O&G Operator Camp	5
Other O&G Operator Compressor	2
Other O&G Operator Plant	1
Business / Other O&G Operator Locations within the EPZ	9

Other Land Users (Locations where people may be working periodically)	
Air Monitoring Site / Trailer	0
Electrical Sub Station	0
Gravel Pit	0
Guide / Outfitter	0
Landowner	0
Military / Base	0
Registered Trapline / Trapper	0
Rights Holder / Allotment User	0
Security Gate / Checkpoint	0
Solar Farm	0
Special Interest Group	0
Spill Control Point	0
Storage / Laydown Yard	0
Tower - Communication	0
Tower - Forestry	0
Tower - Other	0
Wind Farm	0
Other Non - Resident Land Users within the EPZ (This total does not include Businesses / Industrial Locations above)	0

ABOUT SOUR GAS

Hydrogen Sulphide (H_2S) is a colourless, flammable, toxic gas. It affects people differently depending on concentration and length of exposure. At very low concentrations it has an offensive odour (similar to rotten eggs); however, it is undetectable by odour at higher concentrations. A person can be exposed to H_2S concentrations of up to 1 part per million for up to 8 hours (government exposure limits) without a breathing apparatus.

In the unlikely event of an emergency, the ERP will be activated and the safety of the public will be maximized through evacuation, sheltering or ignition procedures. If you suspect H_2S or SO_2 in the air please remain indoors and contact the Pacific Canbriam 24 hour emergency number on the first and last page of this package.

HYDROGEN SULPHIDE (H_2S)

- Found in decaying organic matter, natural oil and gas, silos and sewers
- Found at gas temperatures above -60°C
- Flammable – burns to form SO_2
- Odour of rotten eggs at low concentrations- kills all sense of smell at higher concentrations
- Will tend to disperse more slowly in sheltered or calm low lying areas
- Extremely toxic
- At lower concentrations (20-50 ppm) irritates mucous membranes (eyes, throat, lungs), causes headaches, dizziness, nausea, may cause pulmonary edema (fluid in the lungs) upon prolonged exposure
- High concentrations (500-1000 ppm) may cause paralysis of the respiratory centre in the brain – breathing stops, suffocation begins

GENERAL HEALTH EFFECTS OF H_2S

Concentration	Effects
0.01-0.3 ppm	Detectable by odour.
1-5 ppm	Moderate to strong offensive odour may cause nausea, tearing of the eyes, headaches or loss of sleep upon prolonged exposure. Effects are moderate.
10 ppm	Ceiling limit. (WorkSafe BC)
20-50 ppm	Slight eye and lung irritation. May cause eye damage after several days of exposure, may cause digestive upset and loss of appetite.
100 ppm	Eye and lung irritation.
150 ppm	Kills sense of smell, severe eye and lung irritation.
500 ppm	Serious damage to eyes within 30 minutes, severe lung irritation, unconsciousness and death within 4 to 8 hours.
1000 ppm	Breathing stops within 1 or 2 breaths.

It is important to note that burning sour gas turns the H_2S to Sulphur Dioxide (SO_2). The heat from the fire will carry the SO_2 and smoke up into the air where it will be dispersed over a large area. By the time the SO_2 comes back to ground level, the concentrations would normally only be detectable with the use of an electronic gas detection monitor. These levels should be well below the levels that provincial environment regulations accept.

EVACUATION - CONTINUED

Evacuation of the public outside the EPZ is mandatory when H_2S levels reach 10 ppm in un-evacuated areas. Pacific Canbriam will provide air monitoring, starting at a Level 1 Emergency, to determine H_2S levels.

As public safety is the primary goal during an incident, primary response efforts will be concentrated on members of the public. Response efforts for livestock and pets will be addressed at the time of incident based on the response needs and responder capabilities.

SHELTER IN PLACE

Shelter in place is the practice of remaining indoors during a sudden outdoor release of a hazardous substance.

Shelter in place is not a viable option for recreational users or transients, due to their inability to safely shelter.

Shelter in Place Instructions

- Immediately gather everyone indoors and remain there.
- Close and lock all windows and outside doors – if possible, tape the gaps around the door frames.
- Extinguish indoor wood burning fires - if possible, close the damper.
- Turn off appliances or equipment that either uses inside air, blows out inside air or sucks in outside air, such as:
  - Stoves
  - Fireplaces
  - Clothes dryers
  - Air conditioners
  - Bathroom and kitchen fans
  - Built in vacuum systems
- Turn off heat and hot water pilot lights.
- Leave all inside doors open.
- Wait in an interior upstairs room.
- Avoid using the telephone, except for emergencies, so that you can be contacted by emergency personnel.
- Stay tuned to local radio for possible information updates or for further instructions.
- Even if you see people outside do not leave until told to do so.
- If you are unable to follow these instructions, please notify company emergency response personnel.
- After the hazardous substance has passed through the area you will receive an all clear message from emergency response personnel along with instructions to:
  - Ventilate your building by opening all windows and doors.
  - Turn on fans, turn up thermostats, and furnace circulating fans.
- Once the building is completely ventilated return all equipment to normal.

IGNITION

If safety of the public cannot be assured by evacuation or sheltering, the sour gases escaping from the well will be ignited, this results in the H_2S being burned and converted to sulphur dioxide (SO_2).

- Ignition must take place when one of the following conditions has been met:
- Although required, evacuation of the response zones has not taken place.
- Monitoring results indicate H2S concentrations in excess of 10 ppm over a 3-minute average in un-evacuated parts of the EPZ.
- Monitored H2S concentrations exceed 1 ppm (1-hour average) in urban density developments.
- Monitoring is not taking place due to weather or other unforeseen circumstances.
- The release cannot be brought under control in the short term.

EPZ CALCULATIONS

H_2S EPZ CALCULATIONS:	MIN.	MAX.
Cumulative Release Volumes	0 m^3	0 m^3
H_2S Release Rates	0 m^3/s	0.0138 m^3/s
H_2S Concentrations	0 %	9.97 %
Hazard Planning Zones	0 m	348 m

LEVELS OF EMERGENCY

Level 1 - Moderate Emergency – ERP is activated

There is no immediate danger to the public or environment as no H2S has been released; and the emergency is confined to the lease or company property. A Level 1 Emergency is declared at the earliest sign of difficulty controlling the well and when all problems are contained within the well site area. These problems are usually handled without difficulty using techniques and equipment readily available on site. A Level 1 Emergency creates little or no media interest.

Level 2 – Major Emergency – ERP is activated

There is the potential for risk to the public or environment, as the emergency could extend beyond company property. However, control is still possible. A Level 2 Emergency creates local or regional media interest and outside and provincial agencies must be notified.

Level 3 - Serious Emergency – ERP is activated

There exists an immediate danger to the public or environment as control of the situation has been lost. A Level 3 Emergency creates Provincial or National media interest and immediate multi-agency and provincial government involvement is required.

PUBLIC PROTECTION

In the unlikely event that an emergency situation occurs which causes or creates a potentially dangerous situation to occupants within the EPZ, the best method of public protection would be implemented. Depending on an incident's specifics, Pacific Canbriam will implement the following method(s) of public protection.

EVACUATION

In case of a Level 1 Emergency, those residents/occupants who may require additional time to evacuate or cannot safely shelter in place will be contacted, advised of the situation and informed of the proper reception centre to evacuate to. A list of reception centres is provided at the back of this package.

In the event of a Level 2 or 3 Emergency, all residents/occupants within the EPZ would be contacted and instructed to evacuate immediately to the Reception Centre.

Pacific Canbriam will provide you with the safest route out of the emergency area to the Reception Centre. If you require assistance to evacuate, Pacific Canbriam personnel will be available to assist you. Upon arrival at the Reception Centre, please check in with the Pacific Canbriam representatives as they will be available to answer any questions or concerns you may have.

If you choose not to go the Reception Centre, we ask that you please tell the Pacific Canbriam representative where you are going and provide updated contact information so that we may confirm your safety and keep you informed. You will be advised when it is safe to return home. Pacific Canbriam will provide you with a Claims Form so that you can be reimbursed for reasonable out-of-pocket expenses resulting from the evacuation.

SULPHUR DIOXIDE (SO_2)

- Formed by the combustion of H_2S or sulphur and is non-flammable
- Found as a gas at temperatures above -10°C
- Has the odour that occurs when a wooden match is extinguished
- Highly irritating – dissolves to form sulphuric acid
- At lower concentrations irritates eyes, nose and throat, causes difficulty in breathing and shortness of breath
- Causes pulmonary edema at high concentrations – may be fatal
- Effects on heavy smokers are more severe

GENERAL HEALTH EFFECTS OF SO_2

Concentration	Effects
0.13 ppm	24 hour evacuation level (MWLAP Level B criteria).
0.34 ppm	One hour average evacuation level (MWLAP Level B criteria).
2 ppm	Eight hour Occupational Exposure Limit (WorkSafeBC).
3-5 ppm	Odour threshold.
5 ppm	15 minute Occupational Exposure Limit (WorkSafeBC).
8-12 ppm	Throat irritation, coughing, constriction in chest, tearing and smarting of the eyes.
10-50 ppm	Exposure 5 -15 minutes: increased irritation of the eyes, nose, throat, choking, coughing and in some cases, wheezing as a sign of narrowing of the airway (which increases the resistance of the air-flow).
150 ppm	Short–term endurance lost due to severe eye irritation and because of the effects on the membranes of the nose, throat and lungs.
500 ppm	Highly dangerous after an exposure of 30-60 minutes.
1000-2000 ppm	May be fatal with continued exposure.

CEPA E2

The Canadian Environmental Protection Act, 1999 - Environmental Emergency (CEPA E2) Regulations aim at enhancing the protection of the environment and human health in environmental emergency situations by promoting prevention and ensuring preparedness, response and recovery.

The Regulations contain a list of substances and other hazardous substances which, if they enter the environment as a result of an environmental emergency:

- Have or may have an immediate or long-term harmful effect on the environment or its biological diversity,
- Constitute or may constitute a danger to the environment on which human life depends, or Constitute or may constitute a danger in Canada to human life or health.

Any person in Canada who owns or manages a listed substance in a quantity at or over the prescribed minimum quantity is required to provide Environment and Climate Change Canada (ECCC) with information on the quantity of the substance, along with the facility location, a report that an environmental emergency plan has been prepared and a notice indicating that the emergency plan has been implemented within 90 days, six months and one year of the coming into force of the Regulations, respectively.

The emergency plan will have to address the types of emergencies that might reasonably occur, including both on-site and off-site consequences, and the associated prevention, preparedness, response and recovery issues

SUMMARY OF OPERATING CONDITIONS

CEPA Isolation Zone for a Large Spill	800 m
CEPA Isolation Zone & Evacuation Zone for a Fire	1600 m

PERSONAL INFORMATION & CONFIDENTIALITY

Consultations with residents and others in the EPZ to gather and/or confirm personal information is a BCER requirement for the purpose of preparing and maintaining an ERP. All information requested will be confidential and will be used solely in case of an emergency.

By providing the requested information, response plans can be designed with your particular circumstances in mind and will enhance communication, identify response priorities and improve Pacific Canbriam's ability to respond in the event of an emergency.

EMERGENCY CONTACTS

Thank you for taking the time to review this package. Should you have any further questions or concerns please feel free to contact any of the numbers below.

Pacific Canbriam Contact Information

Pacific Canbriam 24 Hour Emergency Number:	1.877.269.2877
Nauman Rasheed Chief Operating Officer	Bus: 403.817.9041 Ext 2141
Zitin Lamba Manager, Operations	Bus: 403.817.9052 Ext 2152

BC Energy Regulator (BCER)

24-Hr Number Public Inquiry & Emergency Reporting Line	800.500.BCER (2237)
BCER 24 Hour Number Fort St. John	250.794.5200
BCER Emergency Operations Centre Fax Line	250.794.5385

Regional District

Peace River Regional District Dawson Creek Office Fort St. John Office	800.670.7773 250.784.3200 250.785.8084

Reception Centres

Ramada by Wyndham Northern Grand Hotel & Conference Centre	9830 100 Avenue Fort St. John, BC	250.787.0521
Stillwater Inn & Suites	9504 Canyon Drive Hudson's Hope, BC	250.783.5400

CALL OR CLICK BEFORE YOU DIG!
800.474.6886
WWW.BC1C.CA

OVERVIEW

Pacific Canbriam Energy Limited. is committed to protecting public safety and the environment. Our history as a company has demonstrated this commitment and our ability to safely conduct exploration and production operations.

As part of our ongoing safety program, we are contacting you to provide you with important information regarding our operations in your area.

Pacific Canbriam operates sweet and sour (H_2S) wells, pipelines and facilities within the Peace River Regional District of Northeastern British Columbia.

The BC Energy Regulator (BCER) requires Pacific Canbriam to prepare and distribute an information package, detailing their operations, to all persons, residences, local authorities and publicly used facilities within and immediately adjacent to the Emergency Planning Zones associated with their area activities. This package is required to contain information about proposed or existing operations, the procedures in place to respond to an emergency and public protection measures.

EMERGENCY RESPONSE PLAN

An Emergency Response Plan (ERP) is a comprehensive plan designed to protect the public and includes criteria for assessing an emergency situation and procedures for mobilizing response personnel and agencies as well as procedures for establishing communications and the coordination of resources in the event of an incident. The extent of the information contained within the ERP is determined by the identified potential hazards.

The purpose of an ERP is to ensure a timely and effective response to emergencies in order to protect people, the environment, property and business. An ERP addresses the worst case emergency scenarios, potential hazards to the public, and systems required for adequate response.

HAZARD PLANNING ZONE (HPZ)

A HPZ is determined based upon the potential release rate calculated for a proposed well. Once a release rate has been established, a formula is used to determine the corresponding radius of the HPZ. This information is then incorporated into the creation of the ERP to deal with any events that might risk the safety and welfare of those inside the HPZ. The ERP must properly account for all of the individuals and assets found within this radius.

PACIFIC CANBRIAM 24 HOUR EMERGENCY NUMBER: 1.877.269.2877

PACIFIC CANBRIAM

ALTARES / FARRELL CREEK FIELD
2025 ANNUAL UPDATE
PUBLIC INFORMATION PACKAGE

Rge.26W6M | Rge.25W6M | Rge.24W6M

Twp.86 | Twp.85 | Twp.84 | Twp.83 | Twp.82 | Twp.81

HALFWAY RIVER FIRST NATION

RCMP: FORT ST. JOHN

PACIFIC CANBRIAM GAS PROCESSING PLANT b-024-H/094-B-08

TSAA NUNA

G/094-B-08 | H/094-B-08 | E/094-A-05

EMERGENCY PLANNING ZONE

HAYSTACK FSR

CEPA ZONE

KOBES CREEK ROAD

CEPA ZONE

EMERGENCY PLANNING ZONE

PDR

PACIFIC CANBRIAM GAS PROCESSING PLANT b-072-A/094-B-08

B/09 | A/094-B-08 | D/094-A-05

PEACE RIVER REGIONAL DISTRICT

RCMP: HUDSON'S HOPE

NORTHERN HEALTH

BCER: CENTRAL

WCSS: COOP 9

ALTARES CORE ROAD

J/094-B-01 | I/094-B-01 | L/094-A-04

Wapoose Lake

BUTLER RIDGE PARK

EMERGENCY PLANNING ZONE

BERYL PRAIRIE ROAD

FARRELL CREEK ROAD

DISTRICT OF HUDSON'S HOPE

G/094-B-01 | H/094-B-01 | E/094-A-04

BERYL PRAIRIE

BERYL PRAIRIE ROAD

RCMP: CHETWYND

BCER: SOUTH EAST

BCER: SOUTH EAST

Williston Lake

B/094-B-08 | A/094-B-01 | D/094-A-04

BULLHEAD MOUNTAIN RECREATION AREA

CANYON DRIVE

HUDSON'S HOPE

Peace River

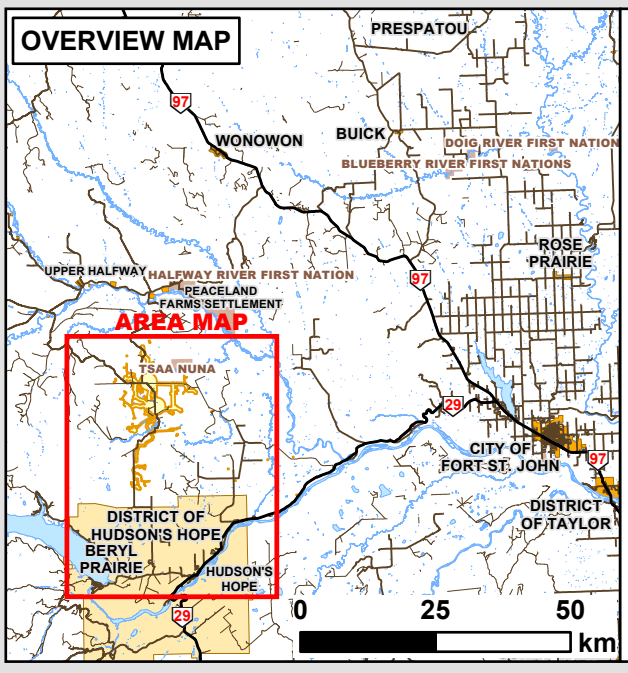
Dinosaur Lake

Boucher Lake

Réné Lake

Rge.26W6M | Rge.25W6M | Rge.24W6M

OVERVIEW MAP



FACILITY TYPE

- GAS PROCESSING PLANT
- CS COMPRESSOR
- PT PIPELINE TERMINAL
- B BATTERY
- WELL - GAS

SURFACE DEVELOPMENT

- STRUCTURE INSIDE OF EPZ
- STRUCTURE OUTSIDE OF EPZ

EMERGENCY RESPONSE

- EPZ (EMERGENCY PLANNING ZONE)
- CEPA ZONE
- EVACUATION / RECEPTION CENTRE
- EVACUATION ROUTE

PIPELINE TYPE

- OIL SOUR - OPERATING
- OIL SWEET - OPERATING
- OIL PRODUCTS - DISCONTINUED
- GAS SOUR - OPERATING
- GAS SWEET - OPERATING
- GAS PRODUCTS - DISCONTINUED
- WATER SOUR - OPERATING
- WATER SWEET - OPERATING
- WATER - DISCONTINUED
- HVP - OPERATING
- HVP - DISCONTINUED
- LVP - OPERATING
- LVP - DISCONTINUED
- STEAM / AIR - OPERATING
- STEAM / AIR - DISCONTINUED
- MISC - OPERATING
- MISC - DISCONTINUED

CULTURE

- HOSPITAL
- MEDICAL CENTER
- SCHOOL
- PLACE OF WORSHIP
- CEMETERY
- RAIL FACILITY
- COMMUNITY CENTRE
- INDUSTRY CAMP
- GRAVEL PIT
- STORAGE YARD
- GOLF COURSE
- CAMPGROUND/CAMPSITE
- DEAD END
- GATED - KEYED ACCESS
- AIRPORT
- AIR STRIP
- TOWER - FORESTRY
- TOWER - COMMUNICATION
- TOWER - OTHER
- SOLAR FARM
- WIND FARM
- HIGHWAY - PRIMARY
- HIGHWAY - SECONDARY
- MAIN ACCESS ROAD
- RAIL
- LOCAL AUTHORITY / MUNICIPAL BOUNDARY
- LAW ENFORCEMENT
- HEALTH AUTHORITY
- REGULATOR AUTHORITY
- PROVINCE
- WATER
- POPULATED AREA
- FIRST NATION / MÉTIS
- RECREATIONAL AREA
- PARK / PROTECTED AREA
- MILITARY AREA

PACIFIC CANBRIAM ENERGY

NEBC FIELD OPERATIONS SUPPLEMENT 2025

ALTARES / FARRELL CREEK AREA MAP

PUBLIC INFORMATION HANDOUT MAP

BEHR Integrated Solutions
www.behrintegrated.com

Drawn By: GS

Scale: 1:150,000 | Project No.: 15006

Map Projection: NAD 83 UTM 10 | Revision: 0 - AUG. 2025

0 2.5 5 7.5 10 km

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2025 ANNUAL ERP UPDATE — ALTARES b-24-H/94-B-8 FACILITY

PACIFIC CANBRIAM ENERGY LIMITED
24 HOUR EMERGENCY LINE: 1.877.269.2877

Pacific Canbriam Energy Limited Head Office	403.269.2874 Fax: 403.269.7637	2100, 215 – 2 Street SW, Calgary, AB T2P 1M4
Fort St. John Field Office	250.785.8322	3, 10799 Finning Frontage Rd Fort St. John, BC

FORT ST. JOHN OFFICE CONTACT NUMBERS

Jeleena Cawley	Bus: 250.785.8322 Ext. 1 → Ext. 2	Cell: 250.948.8386
Reception or Administrative Support	Bus: 250.785.8322 Ext. 1 → Ext. 1	
Conference Room	Bus: 250.785.8322 Ext. 1 → Ext. 4	
SUPERINTENDENTS		
Steve Gonwick	Bus: 250.785.8322 Ext. 4 → Ext. 2	Cell: 250.793.8000
Jake Zepeda	Bus: 250.785.8322 Ext. 4 → Ext. 3	Cell: 587.966.2675
ALTARES b-24-H PLANT		
b-24-H Control Room	Bus: 250.785.8322 Ext. 2 → Ext. 1	
b-24-H Field Office	Bus: 250.785.8322 Ext. 2 → Ext. 2	
b-24-H Conference Room	Bus: 250.785.8322 Ext. 2 → Ext. 3	
b-24-H Camp/On Call	Bus: 250.785.8322 Ext. 2 → Ext. 4	
ALTARES b-73-A CAMP		
b-73-A Camp	Bus: 250.785.8322 Ext. 8	780.940.2434
c-62-A WATER PLANT		
c-62-A Water Hub	Bus: 250.785.8322 Ext. 4	
Water Hub Lead Corey Reschke	Bus: 250.785.8322 Ext. 7	250.783.0603

CORPORATE CONTACTS

Nauman Rasheed	President	403.817.9041 Ext. 2141 403.899.0339
Jeremy Waddell	Manager, HSER and Operational Excellence	403.930.6736 Ext. 2736 587.576.6125
Steve Bernard	Manager, Drilling and Completions	403.300.2434 Ext. 2434 403.519.8442
Zitin Lamba	Manager, Operations	403.817.9052 Local 2152 403.618.6166

FACILITY DESCRIPTION

The Altares facility is located at b-24-H/94-B-8. The Facility is sweet; it produces natural gas, LPG's, and condensate. The Facility is manned 12 hours/day. The plant can also be monitored remotely at the b-72-A control room 24 hours/day. The wells have remote shut down capability. There are a minimum of two operators in the PCE Operations camp available for any call-out's.

The Altares b-24-H plant consists of:
- Inlet separation
- Inlet compression
- 3 sales compressors
- Flare-stack
- Water transfer and storage
- Condensate Storage – 5 tanks each 750 bbl capacity; 1 tank 1,000 bbl capacity
- Office building, control room
- LPG storage – 5 bullets each 2500 design bbl capacity (storage capacity is approximately 80% of tank design capacity ≈ 2000 bbl each)
- Shallow Cut Refrigeration Plant
- Stabilization unit – 1 - 1,000 bbl/day

The Facility handles gas from the immediate area and delivers the gas into the Spectra T-North system at d-28-H/94-B-8.

LPG's (C3+) are separated from the gas stream and are stored on location in five (5) 2500 bbl LPG storage tanks. The LPG is transported via pipeline to Pembina (b-24-H). Produced water is then transferred to the c-62-A water hub via pipeline.

EPZ INFORMATION

The facility has an EPZ of 192 m. A 1.60 km Canadian Environmental Protection Act (CEPA) Hazard Zone has been assigned around the Altares b-24-H plant.

ON-SITE STORAGE

Condensate Storage:
- 5 tanks each 750 bbl capacity
- 1 tank 1,000 bbl capacity

LPG storage:
- 5 bullets each 2500 bbl capacity

NEAREST URBAN CENTRE / DWELLING

The nearest urban centre is the Halfway I.R located 17.50 km.
The nearest occupied dwelling is 0.95 km north of the b-24-H facility.

LAND USE / TERRAIN

Pacific Canbriam's operations are located in forested areas west and north-west of Fort St. John on the eastern slopes of the Rocky Mountains with average elevation of 1200 metres. These areas are predominantly used by trappers, grazing lease holders, forest management and for seasonal recreation such as hunting and fishing.

HYDROLOGY

There are several unnamed creeks are within the area.

HIGHWAYS

No highways intersect with the hazard zone in this field.

SITE ACCESS

Refer to access map on the following pages.

OTHER AREA OPERATORS & TIE-INS

OIL & GAS

Plateau Pipelines / Pembina	800.360.4706

TIE-INS*

There are no tie-ins with the above-mentioned companies.

SAFETY EQUIPMENT

OPERATOR / TRUCK SAFETY EQUIPMENT

Operator field trucks will carry personal protective equipment, first aid kits and fire extinguishers.

NOTIFICATION

Operators attend to the b-24-H facility is manned 12 hours/day. The plant can also be monitored remotely at the b-72-A control room 24 hours/day. The wells have remote shut down capability. There is a minimum of 2 operators in the PCE Operations Camp available for call-out's.

COMMUNICATIONS

Cellular telephones are the primary communication devices to be employed during an emergency. Cellular reception and coverage is good in the Altares and Farrell Creek areas.

RADIO FREQUENCIES

All operators truck radios will be programmed with the Pacific Canbriam Altares Field VHF Radio Frequency. Plant operators will use programmed handheld personal radios for communications within plant boundaries.

Pacific Canbriam Radio Frequencies

b-24-H Plant / Pacific Canbriam Altares Field VHF	TX168.3000	RX162.945
b-72-A Plant UHF	TX459.5000	RX459.5000

Area Radio Frequencies

The frequencies and tones listed below should be programmed into all Pacific Canbriam contractors, representatives, and personnel's mobile radios in order to communicate with repeaters in each area.

Kobes Creek Road from km 24.5 to km 46.3	RR 08 – 150.4400
Beryl Prairie Road (entire length)	RR 03 – 150.1400
Haystack Road (entire length)	RR 13 – 150.530
The Core Road (entire length)	RR 04 – 150.1850
Camp Road	RR 21 – 151.010
The West Altares Road	RR 03 – 150.140
33 Access Road	RR 29

ROADBLOCK KITS / IGNITION KITS

Pacific Canbriam will establish roadblocks at the edge of the 100 m EPZ and evacuate the area in the event of an incident. Roadblocks for pipelines would tend to be short term while the line is shut down and depressurized.
At Pacific Canbriam discretion the setback distance may be reduced if supported by LEL monitoring results.

Roadblock and Mobile Helicopter Landing Pad Kits, if required, would be obtained from **the b-72-A Facility** and dispatched at a Level 1 Emergency. The number of Rovers, Roadblocks and Air Monitors required to be determined at the time of incident. Refer to the ERP cabinet for specific kit locations.

Roadblock Kits

Stop paddle, reflective traffic vest, amber beacon, flashlight with spare batteries, reflective barricade, personal electronic monitor (minimum tri-head), self-contained breathing apparatus, radio (public protection frequency, truck or portable), area map and hard hat.

Mobile Helicopter Landing Pad Kits

Air traffic wands, turbo flares, road flares, reflective flares, reflective PPE & pylons.

AGENCY CONTACTS

IMMEDIATE CONTACT REQUIRED AT ANY LEVEL OF EMERGENCY:

BC Energy Regulator (BCER) – Incident Reporting Line *(via EMCR)*		800.663.3456
Emergency Management and Climate Readiness (EMCR)		
BCER 24 Hour Line	Fort St. John	250.794.5200
WorkSafe BC	Report an Incident	888.621.7233

IMMEDIATE CONTACT REQUIRED IF ANY RESIDENTS ARE CONTACTED AT LEVEL 1 OR HIGHER:

RCMP	Hudson's Hope	911 250.783.5241
Peace River Regional District	Dawson Creek	800.670.7773 250.784.3200
Northern Health Authority	HEMBC On Call	855.554.3622

PROVINCIAL GOVERNMENT CONTACTS

BC 1 Call	Call Before You Dig	800.474.6886
BC Drug & Poison Information Centre	BC DPIC	800.567.8911
BC Ministry of Environment & Parks	Peace Region	250.787.3411
	Report Poachers & Polluters	877.952.RAPP (877.952.7277)
BC Ministry of Forests	Peace Natural Resource District	250.784.1200
BC Ministry of Transportation & Transit	Peace District Office North Peace Contractor	250.787.3237 800.842.4122
CANUTEC	Dangerous Goods Emergencies	888.226.8832 613.996.6666 From Cell: *666
Emergency Response Assistance Canada (ERAC)	(ERP2-0010-364)	800.265.0212
NAV Canada *via Flight Information Centre (FIC)*	Notice to Airmen (NOTAM)	866.WX.BRIEF 866.(992.7433) 866.541.4102
Public Works Association of BC (PWABC)	executivedirector@pwabc.ca	
Technical Safety BC	Report an Incident	866.566.7233
Transportation Safety Board	Rail Occurrence	819.944.3741
	Pipeline Occurrence	819.997.7887
WorkSafe BC	Report an Incident	888.621.7233
BC Wildfire Service	Report a Wildfire	800.663.5555 From Cell: *5555

EMERGENCY SERVICES

AMBULANCES

Air Ambulance (STARS)	Emergency Link	888.888.4567
	#3687 – PCE b-72-A/94-B-08	
BC Ambulance Services	Fort St. John	911 800.461.9911
BC Emergency Health Service	Cell / SAT phone/ Outside BC	250.374.5937
Bailey Helicopters Ltd.	Fort St. John	250.785.2518

HOSPITALS

Chetwynd Hospital and Health Centre	Chetwynd	250.788.2236
Dawson Creek & District Hospital	Dawson Creek	250.782.8501
Fort St. John Hospital and Peace Villa	Fort St. John	250.262.5200
Fort St. John Health Unit	Fort St. John	250.263.6000
Hudson's Hope Health Center	Hudson's Hope	250.783.9991

FIRE DEPARTMENTS

Hudson's Hope Fire & Rescue		911 250.783.9901

2025 ANNUAL ERP UPDATE — ALTARES b-24-H/94-B-8 FACILITY

PACIFIC CANBRIAM ENERGY

SERVICE CONTRACTORS

MOBILE AIR MONITORING		
Firemaster Oilfield Services	Central Dispatch	403.342.7500
HSE Integrated Ltd.	Province Wide	888.346.8260
Trojan Safety Services	Central Dispatch	250.785.9557
OILFIELD FIRE FIGHTING / SAFETY CONTRACTORS / WELL CONTROL SPECIALISTS / IGNITION		
Firemaster Oilfield Services	Central Dispatch	403.342.7500
HSE Integrated Ltd.	Province Wide	888.346.8260
Safety Boss	24 Hour Emergency	800.882.4967
Superior Fire Control Ltd.	24 Hour Emergency	877.882.0035
CRISIS COMMUNICATIONS		
Petron Communications	Fort St. John	250.785.3333
T&T Communications	Fort St. John	250.785.0310
SAFETY SERVICES		
HSE Integrated Ltd.	Province Wide	888.346.8260
Trojan Safety Services	Central Dispatch	250.785.9557
United Safety Ltd.	Central Dispatch	800.432.1809
SPILL RESPONSE		
Emergency Response Assistance Canada (ERAC)	(LPG Spills Only) AB/BC	800.265.0212
Clean Harbors	Province Wide	800.645.8265
Troyer Ventures Ltd.	Fort Nelson Fort St. John	250.774.5332 250.785.5332
Ambipar Response	Fort St. John	866.574.7928
BULK FUEL DELIVERY		
Smith Fuel Services	24/7 Dispatch	250.785.3466
TRUCKING COMPANIES		
Cascade Energy Services LP	24 Hour Dispatch	780.876.8900
CEDA	24 Hour Dispatch	250.784.5151
D.W Wilson Services Ltd.	Fort St. John	250.785.7737
Energetic Services Inc.	Fort St. John	250.785.4761
Fedderly Transportation Ltd.	Fort St. John	250.787.0398
Formula Powell L.P. Trucking	Fort St. John	250.785.4222
Fort St. John Water Inc	Fort St. John	250.785.0862
Maxim Industries Inc.	Fort St. John	250.785.7775
Oculus Transport Ltd	Fort St. John	250.264.2252
Raven Oilfield Rentals	Fort St. John	800.799.7188
Troyer Ventures Ltd.	Fort Nelson Fort St. John	250.774.5332 250.785.5332

SERVICE CONTRACTORS (Continued)

UTILITIES		
ATCO Electric	Province Wide	800.668.5506
BC Hydro	Province Wide	888.769.3766
Telus	Province Wide	310.2255 *611
ELECTRICAL / INSTRUMENTATION CONTRACTOR		
CDN Controls Ltd.	Fort St. John	855.530.8151
Epscan Industries Ltd.	Fort St. John	250.787.9659
Techmation Electric & Controls	Fort St. John	250.261.6532
PTW Energy Services	Fort St. John	250.785.9072
ENVIRONMENTAL SERVICES		
Clean Harbors (WCSS Spill Response Trailer)	Fort St. John	250.785.4577
Roy Northern Land & Environmental	Fort St. John	250.261.6644
Montrose Enviromental	24 Hour Spill Response	877.774.5525
Eco-Web Ecological Consulting	Fort St. John	250.787.1110
EMERGENCY RESPONSE MANAGEMENT		
Behr Integrated Solutions	Calgary	403.444.6940
TRANSPORTATION		
Standard Bus Contracting Ltd	Chetwynd Dispatch	250.788.2415 250.617.7710
Standard Bus Contracting Ltd	Prince George	250.617.7710
Avis Car and Truck Rental	Fort St. John Grande Prairie	250.785.5515 780.539.4101
Driving Force	Fort St. John Grande Prairie	250.787.0634 780.814.9596
HELICOPTER COMPANIES		
Qwest Helicopters	Fort Nelson	250.774.5302
Bailey Helicopters	Fort St. John	250.785.2518
Yellowhead Helicopters	24 Hour Emergency Fort St. John	888.566.4401 250.785.2331
ROAD SERVICES		
Dawson Road Maintenance Ltd.	Fort St. John	800.842.4122
Argo Road Maintenance (South Peace) Inc.	Dawson Creek – Pouce Coupe	800.663.7623
PILOT HOT SHOT AND TRAFFIC CONTROL		
Big League Oilfield Services	Fort St. John	250.787.9812
Peace Hot Shot & Picker Services	Fort St. John	250.785.8432
Energetic Traffic Control	Fort St. John	250.793.3331
PUMPING SERVICES		
BJ Energy Solutions	Clairmont	780.539.5210
Trican Well Service	Fort St. John	888.989.8975

SERVICE CONTRACTORS (Continued)

WCSS **See website for more info (www.wcss.ab.ca)*

COOP 9

24 Hour Emergency Contact	866.541.8888

Regional Custodian

North River Midstream Kaylin Salanski	250.262.3446 250.919.7282

Location: North River Midstream: 13217 Westcoast Frontage, Charlie Lake, BC V0C 1H0, Mile 53 Alaska Hwy

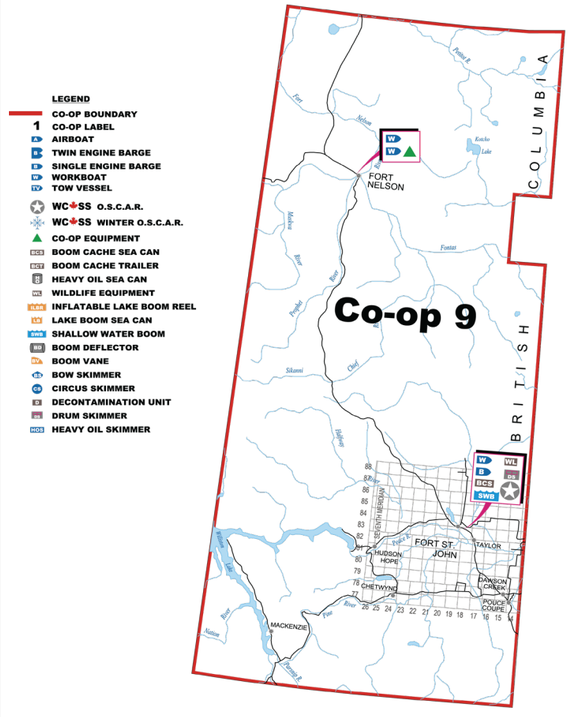
Equipment:
- 52′ OSCAR Trailer (semi-truck)
- 40′ Boom Cache Sea Can (winch tractor/trailer)
- 20′ Wildlife Sea Can (winch tractor/trailer)
- Work Boat (1/2-ton truck w/ 2″ ball hitch)
- Drum Skimmer w/ Power Pak (1/2-ton truck)
- Single Engine Barge (1-ton truck w/ 2-5/16″ ball hitch & electric brakes)
- 400′ Shallow Water Boom (1/2-ton truck)

COOP Custodian

Radar Road Trucking Rick Seidel	250.774.4203 250.775.0036

Location: 4900 - 46 Avenue, Fort Nelson, BC V0C 1R0

Equipment:
- 20′ ISRU Sea Can (winch truck & trailer)
- Work Boats (2) (1/2-ton truck w/ 2″ ball hitch)



RANGE TENURE

ID	COMPANY / NAME	EMERGENCY
RAN073263	Ray Jackson / Frank Miles (Horseshoe Creek Outfitters)	250.783.0561 250.263.1919

TRAPPERS

TRAPPER ID	NAME	EMERGENCY
735T004	Anilee Rose Anderson	250.793.9273
735T004	Allen George Chatten	250.262.1972

GUIDES & OUTFITTERS

ID	COMPANY / NAME	EMERGENCY
750023	Luther Jackson (Horseshoe Creek Outfitters)	250.783.0561

RIGHTS HOLDERS

ID	COMPANY / NAME	EMERGENCY
Forest Tenure	CANFOR	250.782.3302

SURFACE DEVELOPMENT INFORMATION

There are 2 surface developments inside the CEPA Hazard Zone.

In the event of an incident, ensure all members of the public are notified and provided with response information. If required use rovers and roadblocks to clear and isolate the areas in close proximity to the incident.

UNIQUE FEATURES AFFECTING EMERGENCY RESPONSE

None

RECEPTION CENTRES

Northern Grand Hotel	9830 100 Avenue Fort St. John, BC V1J 1Y5	250.787.0521
Stillwater Inn & Suites	9504 Canyon Drive Hudson's Hope, BC V0C 1V0	250.783.5400

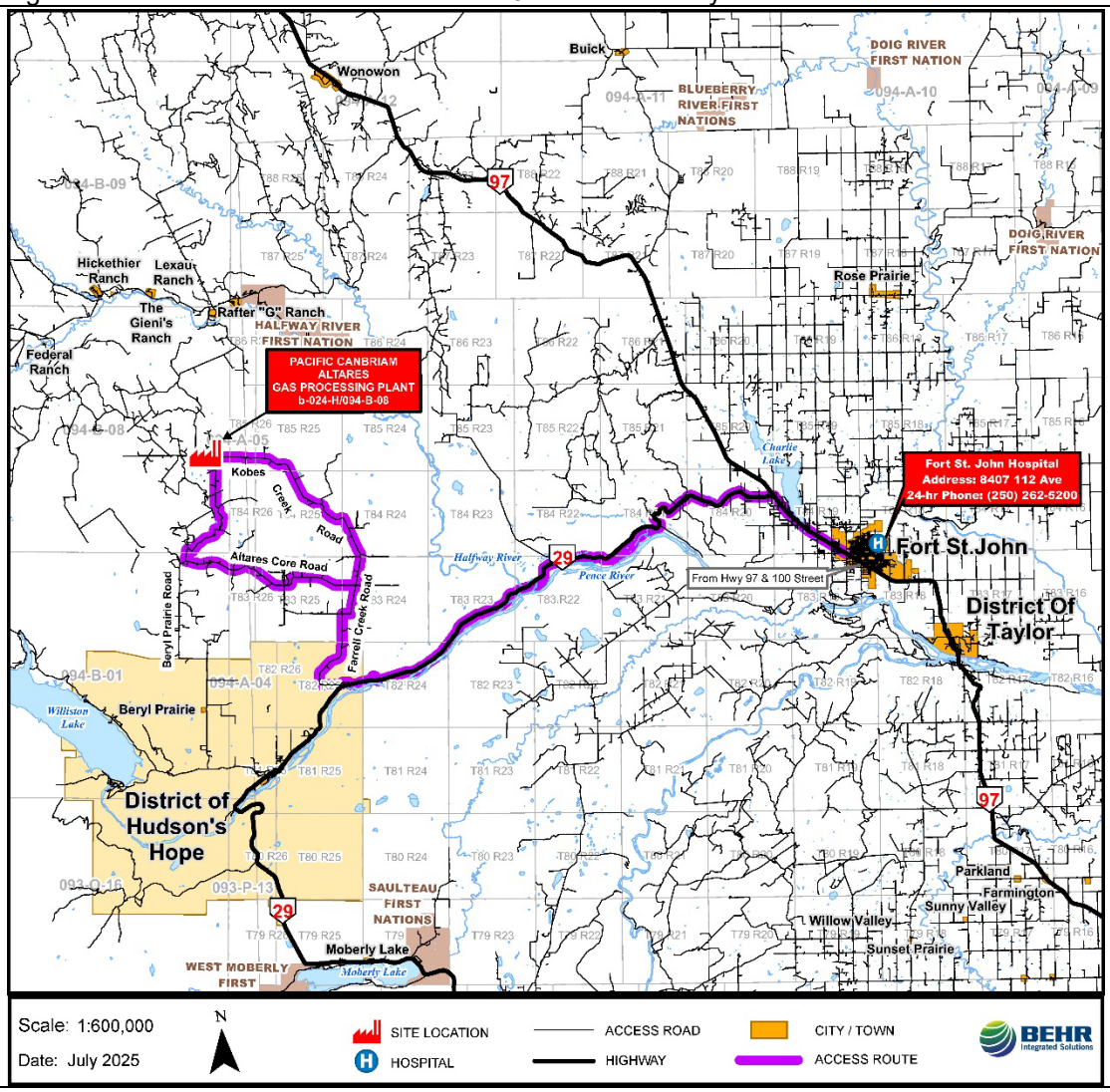
To Altares Gas Plant b-024-H / 94-B-08 – Total Distance 116 km

From Intersection of Hwy 97 and 100th Street, Fort St. John, BC

- Travel northwest on Hwy 97 for 12.5 km to Hwy 29 (Don Phillips Way).
- Turn left and travel southwest on Hwy 29 for 60.8 km.
- Turn right and travel west (then north) on Farrell Creek Road for 23.8 km.
- Continue travelling northwest onto Kobes Creek FSR for 20.5 km (preferred route).
- Turn right onto access road and travel north for 0.2 km into facility.

Or

- Travel northwest on Hwy 97 for 12.5 km to Hwy 29 (Don Phillips Way).
- Turn left and travel southwest on Hwy 29 for 60.8 km.
- Turn right and travel west (then north) on Farrell Creek Road for 17.0 km.
- Turn left and travel west on Altares Core Road for 8.9 km.
- Continue west on Progress Connector for 0.8 km.
- Continue west on PDR 623 Progress Farrell Core Road for 11.5 km.
- Turn right and travel north on Beryl Prairie Road for 5.0 km.
- Continue north on Beryl Prairie FSR for 11.0 km.
- Turn right and travel east on Kobes Creek Road for 0.3 km.
- Turn right onto access road and travel north for 0.2 km into facility.



To Altares Gas Plant b-024-H / 94-B-08 – Total Distance 51.7 km

From Intersection of Hwy 29 and Canyon Drive, Hudson's Hope, BC

- Travel west on Canyon Drive for 8.5 km.
- Turn right and continue north on Beryl Prairie Road for 24.7 km.
- Continue north on PDR 623 Progress Farrell Core Road for 2.6 km.
- Continue north on Beryl Prairie Road for 5.0 km.
- Continue north on Beryl Prairie FSR for 11.0 km.
- Turn right and travel east on Kobes Creek Road for 0.3 km.
- Turn right onto access road and travel north for 0.2 km into facility.

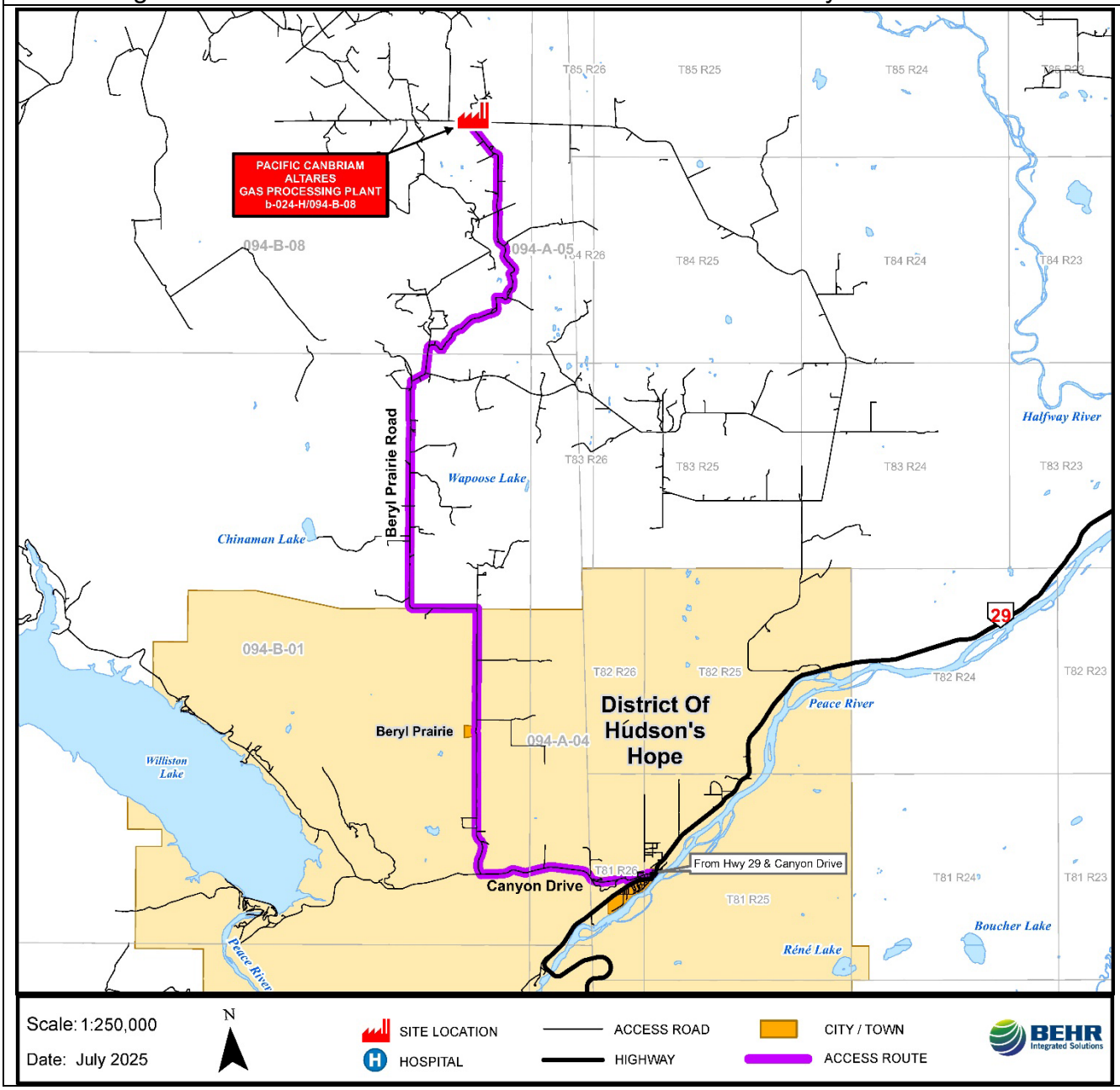


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E2 Substances and Environmental Emergency Response Plan

Background & Purpose

Pacific Canbriam Energy Limited owns / operates work sites where Propane, Condensate and Natural Gas Liquids are produced as a result of their natural gas refining process. It is stored while awaiting shipment to market. The purpose of this Plan is to provide workers with basic information on how to implement The Pacific Canbriam Emergency Response Assistance Plan in the event of an emergency.

Emergency Response Assistance Canada (ERAC)

The mission of ERAC is to provide safe, timely, effective, and compliant services that include the following:

- Dangerous goods response plans, drills and exercises to Plan Participants
- Dangerous goods responder training
- First responder training
- Emergency response

ERAC maintains a dedicated 24 hours, 7 days a week, plan activation telephone number that is answered by experienced Response Managers.

The telephone number to activate the ERAP through ERAC, in the event of an emergency during road transport, is **800.265.0212.**

Emergency Response Assistance Plan (ERAP)

Pacific Canbriam Energy Limited. has a registered ERAP in place with Transport Canada and Emergency Response Assistance Canada (ERAC) for shipments of Natural Gas Liquids (NGL) and Propane by road or rail transport.

ERAP Activation Number: 800.265.0212

ERAP Reference Numbers:
ERP2-0010-364 Valid for UN1075 LPG

The ERAP reference number and the Emergency Response Assistance Canada (ERAC) activation phone number must appear on all dangerous goods shipping documents and on signage at the tank location.

ERAP Response
As soon as you are made aware of an incident involving your dangerous goods, whether by the ERAP incident report or other means, you must decide how you will respond to the release or anticipated release. The person who submitted and received approval for the ERAP (or a

person delegated to do so that has been identified in the plan), is responsible for the implementation of the ERAP. Your options are:

Tier 1: Implementing the ERAP to Tier 1 means that you are responding, generally by telephone, by remotely monitoring the response to the release or anticipated release. None of the emergency response resources found in the ERAP are brought to the site of the incident during Tier 1.

Tier 2: Implementing the ERAP to Tier 2 means that you are responding at the site of the incident by monitoring the response to the release or anticipated release on site or remotely and bringing ERAP emergency response resources (response personnel and/or equipment) to the location of the release or anticipated release. If the incident warrants you to bring emergency response resources to the site immediately, you can skip Tier 1 and implement the plan directly to Tier 2.

A person with an approved ERAP must implement it to Tier 1 or Tier 2 in response to a release or anticipated release of dangerous goods.

ERAP Implementation Report
An ERAP Implementation Report must be made each time the approved ERAP is implemented to either a Tier 1 or Tier 2. You must, as soon as possible, after you addressed a request for technical or emergency response advice, call CANUTEC at 1.888.CANUTEC or 613.996.6666 to make a report.

ERAP Implementation Report	
Date: _____	**Time:** _____
Name: _____	**Number:** _____
Authorized person to use the ERAP (if applicable): _____	
ERAP Reference Number:	**ERP2-0010-364:** Valid for UN1075 LPG
Shipping Name: _____	
UN Number: _____	
What Tier was the ERAP implemented to?	**Tier 1** ☐ **Tier 2** ☐
Measures taken to respond to the release or anticipated release:	

ERAP Incident Report

An ERAP incident report must be made by the person who has the charge, management or control of a means of containment to the person at the ERAP telephone number and must be made after an incident has occurred, which causes a release or anticipated release of the dangerous goods in the course of handling or transporting, and which endangers, or could endanger, public safety.

ERAP Incident Report

Date: _____ **Time:** _____

Location of release: _____

Name: _____ **Number:** _____

ERAP Reference Number: **ERP2-0010-364:** Valid for UN1075 LPG

Shipping Name: _____

UN Number: _____

Mode of transport: _____

Total quantity before release: _____

Quantity estimated to have been released: _____

Description of containment measures: _____

_____

_____

_____

_____

Has means of containment been damaged to the extent that its' integrity could be compromised?

Yes ☐ **No** ☐

Is a transfer of the dangerous goods to another means of containment anticipated or required?

Yes ☐ **No** ☐

Describe the type of incident that led to the release or anticipated release, including a collision, rollover, derailment, overfill, fire, explosion or load-shift:

_____

_____

_____

Liquefied Petroleum Gases (LPG)
Propane is a flammable gas that is sometimes referred to as LP-Gas, LPG, or Liquefied Petroleum Gas. LPG is primarily made up of propane-butane mixtures, but might also contain small percentages of ethane, ethylene, propylene, isobutane, or butylene, all of which can cause slight variations in the LPG properties (eg. flammable range, vapour pressure, etc.).

Physical properties provide responders with knowledge of how LP gases will behave both within and after being released from its container. Physical properties of LP gases include:

- They are tasteless, colorless, and usually odourless. In order to detect propane leaks and reduce gas losses, a commercial odorant called Mercaptan may be added.
- Capable of being either a liquid or gas, however, under ambient conditions, propane will be a gas.
- Most LP gases can be stored and transported as liquids under pressure and can easily vaporize into gas under the proper conditions.
- Under normal outdoor temperatures liquid LP gases expand rapidly into gas. One cubic foot of liquid propane will boil off and produce 270 cubic feet of propane vapour.
- LP gases will expand when heat is applied. If stored inside a container, this expansion will increase the volume of the liquid and the pressure inside the container.
- LP gases are not toxic, but they present possible inhalation hazards. If released in a confined space, propane can displace oxygen and act as a simple asphyxiant.

Boiling Liquid Expanding Vapour Explosion (BLEVE)
A BLEVE may occur when a sealed container of liquefied gas, such as a propane tank, is exposed to a fire. The fire causes the container wall temperature to heat up and the internal tank pressure to rise rapidly. While the pressure vessel may be equipped with a pressure relief valve, the stress applied by the increased pressure and the deterioration of the container wall causes the container to rupture. The super heated liquid is released, expands and vaporizes in seconds, resulting in a catastrophic explosion.

It is important that the vessel is kept cool with water spray and the external fire is controlled and not allowed to come within close distance of the storage tank. Personnel are advised to withdraw immediately if sound from venting devices increases, or tank discoloration is observed.

Approach to Developing a Plan

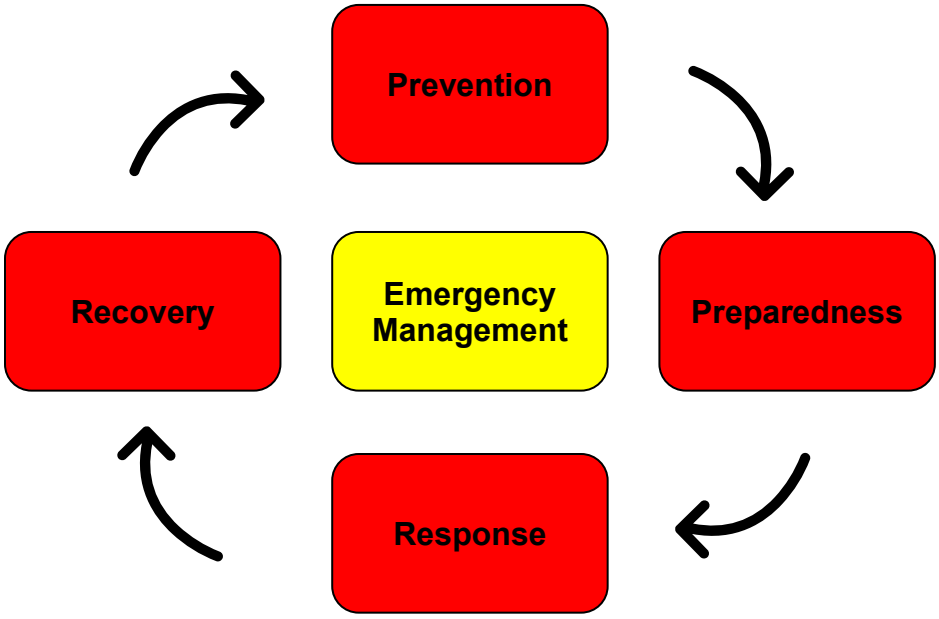
The purpose of emergency planning is to reduce and/or eliminate the risks of natural or human-induced disasters for human life and the environment.

E2 plans should integrate all relevant aspects of risk management. Undesirable events such as the release of hazardous substances could occur as a result of process, procedure or equipment failures. E2 plans should account for these scenarios by providing proactive identification, assessment, and mitigation measures.

A risk assessment conducted at a facility will:

1. Identify multiple scenarios that could occur that would lead to the release of the substance from the facility
2. Assess the probability of such scenarios occurring
3. Predict the impact distances from the scenarios for each substance
4. Describe the consequences of each scenario on human health and the environment.

Prevention, preparedness, response and recovery are the four pillars involved in E2 plan development. Below are some general concepts associated with each of these pillars.



Prevention

Environmental emergencies can be averted, or their severity limited by identifying in advance the cause of their probable frequency, potential consequences, and impacts.

Preventing environmental emergencies begins with evaluating the risks associated with the regulated substance(s) stored at the facility. Studying past spill events at the site and at similar sites in Canada allows for a more accurate prediction of the range of potential scenarios, including worst-case scenarios. This understanding is critical to assessing a facility's capabilities and resources for dealing with a crisis.

Preparedness

In preparing an E2 plan, it is important to involve key people, particularly first responders and representatives of potentially affected stakeholder groups in and around Pacific Canbriam Energy's facilities. Such consultation enhances the level and effectiveness of preparedness. When preparing the E2 plan, you should resolve identified gaps, consider options such as upgrading equipment, expanding staff, and increasing communication with and among neighbouring facilities, community officials, public safety agencies, etc. The communication of risk to surrounding communities is an important component of both prevention and preparedness activities.

Pacific Canbriam Energy Limited must identify and include reference in their plan to adequate training and resources to enable responders to respond to potential emergencies. Preparedness planning should reveal, depending on the significance and possible escalating nature of particular events, a facility's capabilities, and resources to effectively respond to an event adequately.

Response

Response to an environmental emergency is intended to include all aspects of managing the emergency situation until the emergency phase of the event is considered over. These needs can vary greatly in scope, depending on the nature and magnitude of the emergency. Effective emergency response includes, but is not limited to, the following:

- quick activation of the emergency plan
- adequate resource mobilization
- rapid assessment of the probable path and impacts of the emergency
- proper notification of the emergency to first responders and affected parties, including alerting, and warning the public
- maintenance of communication systems between stakeholders
- evacuating, confining, and accounting for personnel and members of the public present at a facility, if needed
- adequate reporting.

Quick and effective response relies on sound planning and pre-established partnerships. Effective emergency response calls for co-operation between industries, communities, local organizations and government through partnerships formed before emergencies occur. Such partnerships can be strengthened through the regular testing of the E2 plan with all of those involved. Communication from the facility to off-site agencies, to the public and among responders is important and necessary for a coordinated and successful response effort.

Recovery

Recovery from an environmental emergency is more than just the recovery of the spilled product. Recovery refers to the restoration of any part of the environment damaged by or during the emergency. Recovery affects both the operating entity itself and the surrounding community. The issue of recovery is best managed through discussions among all involved parties to assess the damage and agree on a restoration plan. The level of environmental restoration is determined by many factors, such as the size, persistence and toxicity, or hazardous nature of a release. Recovery of an area to its natural state is not always possible. Thus, restoration plans are situation-specific and would need to be defined in terms of acceptability to affected stakeholders.

Pacific Canbriam Energy Limited, in consultation with public authorities, should initiate recovery processes as soon as possible, striving for a rapid recovery from environmental damage. Those leading the recovery effort must be aware that rapid response without assessing the risks associated with the recovery effort can lead to increased damage and longer recovery times for the environment. The recovery process can either begin during response or can be initiated in stages until normal operations are restored. Planning for the recovery phase during the preparedness phase will improve recovery time and reduce impacts on the environment.

Emergency Scenarios

While the potential for a liquid petroleum gas release is low, it is important that personnel are familiar with product handling scenarios that may result in an actual emergency.

Possible Emergency Scenarios		
Stationary Tank Product Leak / Spill		
Potential Causes	▪ Loading / unloading incidents ▪ Container degradation ▪ Container rupture	▪ Container damage (due to vandalism, vehicle incident, effects from extreme weather, etc.)
Potential Hazards	▪ Fire / explosion, tank failure, vapour cloud. ▪ Evacuation of operations personnel and local residents.	▪ Local roads closed and traffic and/or business disrupted. ▪ Remote area may hinder prompt arrival of responders.
Potential Risks	▪ Responder injury ▪ Public injury ▪ Environmental damage	▪ Property damage ▪ Loss of revenue
Prevention	▪ Training / exercises ▪ Preventative maintenance ▪ JSA (job safety analyses) ▪ Clean work areas ▪ Personnel on-site daily ▪ Frequent inspections ▪ Frequent testing ▪ Truck loading / unloading procedures	▪ Barriers ▪ Break away valves ▪ Check valves ▪ ESD valves ▪ Positive grounding procedures ▪ Pressure safety valve ▪ Alarms / detectors ▪ Audits
Preparedness	▪ Training / exercises ▪ Warning sirens ▪ Safety equipment maintained and tested	▪ Mutual aid agreements ▪ Member of WCSS
Response	▪ Ensure safety of all personnel. ▪ Assess the need to shut off flow of product to the tank, activate Emergency Shut Down procedures if warranted. ▪ Call emergency services, as required. ▪ Contact Supervisor. ▪ Conduct an assessment of the situation and determine the Level of Emergency. ▪ Mobilize additional resources, as required ▪ Supervisor contacts the Area Manager who makes a decision on whether to enact the Corporate ERP.	▪ The Pacific Canbriam Supervisor contacts the appropriate regulatory agencies. ▪ The Fire Department implements a strategy to control the vapour cloud and bring in additional resources. In the event of a fire, water will be needed to extinguish or cool tanks or equipment ▪ If the emergency escalates, the Fire Department and / or the Incident Commander may call ERAC and implement the ERAP.
Recovery	▪ Incident investigation ▪ Develop a restoration plan ▪ Perform appropriate repairs ▪ Investigate the need to upgrade or improve facility equipment / processes	▪ Keep all affected parties informed of the situation ▪ Restore any part of the environment damaged by or during the emergency

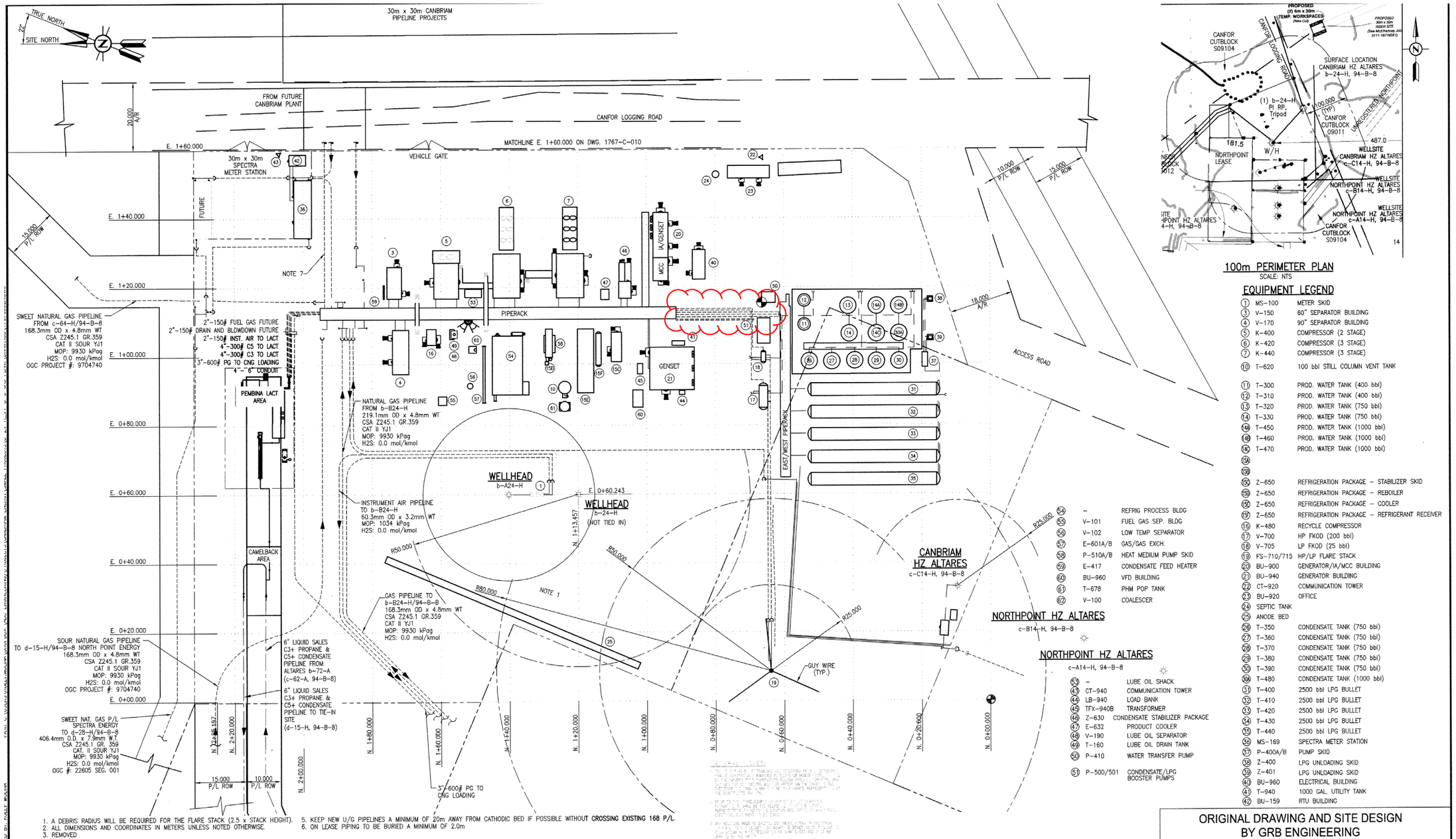
Possible Emergency Scenarios		
Tank Truck Transport Incident		
Potential Causes	▪ Vehicle incident ▪ Severe weather	▪ Driver in medical distress ▪ Driver fatigue
Potential Hazards	▪ Fire / explosion, tank failure, vapour cloud. ▪ Local roads closed and traffic disrupted. ▪ Remote area may hinder prompt arrival of responders.	▪ Potential of transport truck fluids (fuel, oil, etc.) impacting a waterway.
Potential Risks	▪ Responder injury ▪ Public injury ▪ Environmental damage	▪ Property damage ▪ Loss of revenue
Prevention	▪ Training / exercises ▪ Preventative maintenance ▪ JSA (job safety analyses)	▪ Truck loading / unloading procedures ▪ Driver abstract checks
Preparedness	▪ Training / exercises ▪ Safety equipment maintained and tested	▪ Mutual aid agreements ▪ Member of WCSS
Response	▪ The first priority, if it is safe to do so, is to protect the driver, the public and the environment. ▪ If you are first on the scene, call emergency services. ▪ Contact Supervisor. ▪ The Pacific Canbriam Supervisor contacts the appropriate regulatory agencies. ▪ If the incident occurs on a private road owned by Pacific Canbriam, the Pacific Canbriam Supervisor will contact the Area Manager who will make a decision on whether to enact the Corporate ERP.	▪ On a public roadway, the Police or Fire Department will control the scene and may contact CANUTEC, who will notify ERAC. ▪ The Fire Department implements a strategy to control the vapour cloud and bring in additional resources. In the event of a fire, water will be needed to extinguish or cool the transport tank. ▪ If the emergency escalates, the Fire Department and / or the Incident Commander may call ERAC and implement the ERAP.
Recovery	▪ Incident investigation ▪ Develop a restoration plan ▪ Perform appropriate repairs ▪ Investigate the need to upgrade or improve facility equipment	▪ Keep all affected parties informed of the situation ▪ Restore any part of the environment damaged by or during the emergency

Area Specifics

E2 ID	CAS #	UN #	Facility Name	Location	Substance	Hazard Category	Storage Type	Tank Volumes	Maximum Capacity of Largest Vessel	Maximum Quantity Expected on Site	Suggested Spill Evacuation Radius (m)	Suggested Fire Evacuation Radius (m)	Suggested BLEVE Evacuation Radius (m)
4890	64741-48-6	1075	Altares b-24-H Facility	b-24-H/94-B-8	LPG	Explosion Hazard (E)	5 Bullets	397.47 m^3 (2500 bbl)	211 metric tonnes	1055 metric tonnes	**800**	**1600**	**See page 20**
4890	64741-47-5	1268	Altares b-24-H Facility	b-24-H/94-B-8	Condensate	Combustible (C)	5 Tanks	750 bbl	8.73 metric tonnes	2559.60 metric tonnes	**300**	**800**	
4890	64741-47-5	1268	Altares b-24-H Facility	b-24-H/94-B-8	Condensate	Combustible (C)	1 Tank	1000 bbl	213.30 metric tonnes	2559.60 metric tonnes	**300**	**800**	

Note: The suggested evacuation radius for Condensate and LPG is based on the distance listed in the Emergency Response Guidebook (2024).

Sensitive Receptors within the CEPA Response Zones			
Receptor	**Potential Impact**	**Distance from Gas Plant**	**Contact Information**
Trapline 735T004	Public Safety / Environmental	Gas Plant is inside Trapper Boundary	Contact information for Trappers are on the second page of this plan.
Guide / Outfitter 750015	Public Safety / Environmental	Gas Plant is inside Guide / Outfitter Boundary	Contact information for Guides / Outfitters are on the second page of this plan.
Range Tenure RAN073263	Public Safety / Environmental	Gas Plant is inside Range Tenure Boundary	Contact information for Range Tenures are on the second page of this plan.
Manned Oil and Gas Facilities	Public Safety	Nearest surface development is approximately 0.2 km.	Contact information for residents / businesses can be found at the back of this section



100m PERIMETER PLAN

SCALE: NTS

EQUIPMENT LEGEND

1	MS-100	METER SKID
3	V-150	60" SEPARATOR BUILDING
4	V-170	90" SEPARATOR BUILDING
5	K-400	COMPRESSOR (2 STAGE)
6	K-420	COMPRESSOR (3 STAGE)
7	K-440	COMPRESSOR (3 STAGE)
10	T-620	100 bbl STILL COLUMN VENT TANK
11	T-300	PROD. WATER TANK (400 bbl)
12	T-310	PROD. WATER TANK (400 bbl)
13	T-320	PROD. WATER TANK (750 bbl)
14	T-330	PROD. WATER TANK (750 bbl)
14A	T-450	PROD. WATER TANK (1000 bbl)
14B	T-460	PROD. WATER TANK (1000 bbl)
14C	T-470	PROD. WATER TANK (1000 bbl)
15A		
15B		
15C	Z-650	REFRIGERATION PACKAGE - STABILIZER SKID
15D	Z-650	REFRIGERATION PACKAGE - REBOILER
15E	Z-650	REFRIGERATION PACKAGE - COOLER
15F	Z-650	REFRIGERATION PACKAGE - REFRIGERANT RECEIVER
16	K-480	RECYCLE COMPRESSOR
17	V-700	HP FKOD (200 bbl)
18	V-705	LP FKOD (25 bbl)
19	FS-710/715	HP/LP FLARE STACK
20	BU-900	GENERATOR/IA/MCC BUILDING
21	BU-940	GENERATOR BUILDING
22	CT-920	COMMUNICATION TOWER
23	BU-920	OFFICE
24		SEPTIC TANK
25		ANODE BED
26	T-350	CONDENSATE TANK (750 bbl)
27	T-360	CONDENSATE TANK (750 bbl)
28	T-370	CONDENSATE TANK (750 bbl)
29	T-380	CONDENSATE TANK (750 bbl)
30	T-390	CONDENSATE TANK (750 bbl)
30A	T-480	CONDENSATE TANK (1000 bbl)
31	T-400	2500 bbl LPG BULLET
32	T-410	2500 bbl LPG BULLET
33	T-420	2500 bbl LPG BULLET
34	T-430	2500 bbl LPG BULLET
35	T-440	2500 bbl LPG BULLET
36	MS-169	SPECTRA METER STATION
37	P-400A/B	PUMP SKID
38	Z-400	LPG UNLOADING SKID
39	Z-401	LPG UNLOADING SKID
40	BU-960	ELECTRICAL BUILDING
41	T-940	1000 GAL. UTILITY TANK
42	BU-159	RTU BUILDING
43	-	REFRIG PROCESS BLDG
44	V-101	FUEL GAS SEP. BLDG
45	V-102	LOW TEMP SEPARATOR
46	E-601A/B	GAS/GAS EXCH.
47	P-510A/B	HEAT MEDIUM PUMP SKID
50	E-417	CONDENSATE FEED HEATER
51	BU-960	VFD BUILDING
52	T-678	PHM POP TANK
53	V-100	COALESCER
54	-	LUBE OIL SHACK
55	CT-940	COMMUNICATION TOWER
56	LB-940	LOAD BANK
57	TFX-940B	TRANSFORMER
58	Z-630	CONDENSATE STABILIZER PACKAGE
59	E-632	PRODUCT COOLER
60	V-190	LUBE OIL SEPARATOR
61	T-160	LUBE OIL DRAIN TANK
62	P-410	WATER TRANSFER PUMP
150	P-500/501	CONDENSATE/LPG BOOSTER PUMPS

1. A DEBRIS RADIUS WILL BE REQUIRED FOR THE FLARE STACK (2.5 x STACK HEIGHT).
2. ALL DIMENSIONS AND COORDINATES IN METERS UNLESS NOTED OTHERWISE.
3. REMOVED
4. REMOVED
5. KEEP NEW U/G PIPELINES A MINIMUM OF 20m AWAY FROM CATHODIC BED IF POSSIBLE WITHOUT CROSSING EXISTING 168 P/L.
6. ON LEASE PIPING TO BE BURIED A MINIMUM OF 2.0m

ORIGINAL DRAWING AND SITE DESIGN BY GRB ENGINEERING

23	AS BUILT	17360	RPM	2018.06.06		
22	NEW EQUIPMENT FOR PLANT RE-BUILD	17360	RPM	2017.10.10		
21	ISSUED FOR CONSTRUCTION - LACT PUMP INSTALLATION	15228	RPM	2017.05.22		
20	AS BUILT - CNG LOADING U/G LINE AND U/G LINES TO PEMBINA LACT SKID	16255/15228	RPM	2017.05.15		
19	RE-ISSUED FOR CONSTRUCTION, FOR CNG ADDITION AND LACT U/G'S	15228	RPM	2016.12.21		
18	REVISED FOR CNG ADDITION AND LACT U/G'S, ISSUED FOR CONSTRUCTION	16255	ASA	2016.12.06		
17	ISSUED FOR CONSTRUCTION	15185	BP	2015.05.15	EB	2015.05.15
	REVISION	PROJ. No	BY	DATE	CHK	DATE

PERMIT STAMP:
PERMIT TO PRACTICE
ALLARDYCE BOWER CONSULTING INC.
Signature
Date Jun 06, 2018
PERMIT NUMBER: P 11182
The Association of Professional Engineers, Geologists and Geophysicists of Alberta

PROFESSIONAL ENGINEERS AND GEOSCIENTISTS OF ALBERTA — CUNNINGHAM — 33981 — ENGINEER
Jun 06, 2018

GENERAL NOTES:

	BY	DATE
DRN.	RC	2013.12.15
CHK.	AA	2014.07.03
APP'D.	-	-
L.S.D.	b-24-H/94-B-8	

ALLARDYCE BOWER CONSULTING INC.
www.abcengineering.ca

Canbriam

ALTARES b-24-H GAS PRODUCTION FACILITY
SITE PLAN

SCALE	DRAWING NUMBER	REV
1:1000	1767C002A	23

Characteristics and Dangers of Condensate

- Highly flammable.
- Will be easily ignited by heat, sparks or flames.
- Vapours may form explosive mixtures with air.
- Vapours may travel to source of ignition and flash back.
- Most vapours are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Vapour explosion hazard indoors, outdoors or in sewers
- Those substances designated with a **(P)** may polymerize explosively when heated or involved in a fire.
- Runoff to sewer may create fire or explosion hazard.
- Containers may explode when heated.
- Many liquids are lighter than water.
- May cause toxic effects if inhaled or absorbed through skin.
- Inhalation or contact with material may irritate or burn skin and eyes.
- Fire will produce irritating, corrosive and / or toxic gases.
- Vapours may cause dizziness or suffocation.
- Runoff from fire control or dilution water may cause pollution.

Characteristics and Dangers of Liquid Petroleum Gases (LPG)

- Extremely flammable.
- Will be easily ignited by heat, sparks or flames.
- Will form explosive mixtures with air.
- Vapors from liquefied gas are initially heavier than air and spread along ground.
- Vapors may travel to source of ignition and flash back.
- Cylinders exposed to fire may vent and release flammable gas through pressure relief devices.
- Containers may explode when heated.
- Ruptured cylinders may rocket.
- Vapors may cause dizziness or asphyxiation without warning, especially when in closed or confined areas.
- Some vapors may be irritating if inhaled at high concentrations.
- Contact with gas or liquefied gas may cause burns, severe injury and / or frostbite.
- Fire may produce irritating and / or toxic gases.

General First Aid

- Call 911 or emergency medical service.
- Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and avoid contamination.
- Move victim to fresh air if it can be done safely.
- Administer oxygen if breathing is difficult.
- If victim is not breathing:
  - DO NOT perform mouth-to-mouth resuscitation; the victim may have ingested or inhaled the substance.
  - If equipped and pulse detected, wash face and mouth, then give artificial respiration using a proper respiratory medical device (bag-valve mask, pocket mask equipped with a one-way valve or other device).

  - If no pulse detected or no respiratory medical device available, provide continuous compressions. Conduct a pulse check every two minutes or monitor for any signs of spontaneous respirations.
- Remove and isolate contaminated clothing and shoes.
- For minor skin contact, avoid spreading material on unaffected skin.
- In case of contact with substance, remove immediately by flushing skin or eyes with running water for at least 20 minutes.
- For severe burns, immediate medical attention is required.
- Effects of exposure (inhalation, ingestion, or skin contact) to substance may be delayed.
- Keep victim calm and warm.
- Keep victim under observation.
- For further assistance, contact your local Poison Control Center.
- **Note:** Basic Life Support (BLS) and Advanced Life Support (ALS) should be done by trained professionals.

Liquefied Petroleum Gas (LPG)

Gases – Flammable (Including Refrigerated Liquids) – Guide 115 – Taken from the Emergency Response Guidebook 2024

Potential Hazards

FIRE OR EXPLOSION

- **Extremely flammable.**
- May be easily ignited by heat, sparks or flame.
- Will form explosive mixtures with air.
- Vapours from liquefied gas are initially heavier than air and spread along the ground.

CAUTION: Methane is lighter than air and will rise. Hydrogen and Deuterium fires are difficult to detect since they burn with an invisible flame. Use an alternate method of detection (thermal camera, broom handle, etc.)

- Vapours may travel to source of ignition and flashback.
- Cylinders exposed to fire may vent and release toxic and flammable gas through pressure relief devices.
- Containers may explode when heated.
- Ruptured cylinders may rocket.

CAUTION: When LNG – Liquefied natural gas (UN1972) is released on or near water, product may vaporize explosively.

HEALTH

- Vapors may cause dizziness or asphyxiation without warning, especially when in closed or confined areas.
- Some may be irritating if inhaled at high concentrations.
- Contact with gas, liquefied gas or cryogenic liquids may cause burns, severe injury and/or frostbite.
- Fire may produce irritating and/or toxic gases.

Public Safety

- **Call 911. Then call emergency response telephone number on shipping paper.** If shipping paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.
- Keep unauthorized personnel away.
- Stay upwind, uphill and/or upstream.
- Many gases are heavier than air and will spread along the ground and collect in low or confined areas (sewers, basements, tanks, etc.).

PROTECTIVE CLOTHING

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing provides thermal protection **but only limited chemical protection**.
- Always wear thermal protective clothing when handling refrigerated/cryogenic liquids.

EVACUATION

Immediate Precautionary Measure

- Isolate spill or leak area for at least 100 metres (330 feet) in all directions.

Large Spill

- Consider initial downwind evacuation for at least 800 metres (0.5 mile)

Fire

- If tank, rail tank car or highway tank is involved in a fire, ISOLATE for 1600 meters (1 mile) in all directions; also, consider initial evacuation for 1600 meters (1 mile) in all directions.
- In fires involving Liquefied Petroleum Gases (LPG) (UN1075), Butane (UN1011), Butylene (UN1012), Isobutylene (UN1055), Propylene (UN1077), Isobutane (UN1969), and Propane (UN1978), also refer to the "BLEVE – Safety Precautions" section.

Liquefied Petroleum Gas (LPG)

Emergency Response

FIRE
Do not extinguish a leaking gas fire unless leak can be stopped.

SMALL FIRE
- Dry chemical or CO_2.

LARGE FIRE
- Water spray or fog.
- If it can be done safely, move undamaged containers away from the area around the fire.
-

CAUTION: For **LNG - Liquefied natural gas (UN1972)** pool fires, DO NOT USE water. Use dry chemical or high-expansion foam.

FIRE INVOLVING TANKS
- Fight fire from maximum distance or use unmanned master stream devices or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Do not direct water at source of leak or safety devices; icing may occur.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks in direct contact with flames.
- For massive fire, use unmanned master stream devices or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

SPILL OR LEAK
- ELIMINATE all ignition sources (no smoking, flares, sparks or flames) from immediate area.
- All equipment used when handling the product must be grounded.
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- If possible, turn leaking containers so that gas escapes rather than liquid.
- Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
- Do not direct water at spill or source of leak.
- **CAUTION:** For **LNG - Liquefied natural gas (UN1972)**, DO NOT apply water, regular or alcohol-resistant foam directly on spill. Use a high-expansion foam if available to reduce vapors.
- Prevent spreading of vapors through sewers, ventilation systems and confined areas.
- Isolate area until gas has dispersed.

CAUTION: When in contact with refrigerated/cryogenic liquids, many materials become brittle and are likely to break without warning.

FIRST AID
Refer to the "General First Aid" section on Page 14.

Specific First Aid:
- Clothing frozen to the skin should be thawed before being removed.
- In case of contact with liquefied gas, only medical personnel should attempt thawing frosted parts.
- In case of burns, immediately cool affected skin for as long as possible with cold water. Do not remove clothing if adhering to skin.

Condensate

Flammable Liquids (Water – Immiscible / Noxious) – Guide 128 – Taken from the Emergency Response Guidebook 2024

Potential Hazards

FIRE OR EXPLOSION

- **Highly flammable: Will be easily ignited by heat, sparks or flames.**
- Vapors may form explosive mixtures with air.
- Vapors may travel to source of ignition and flash back.
- Most vapors are heavier than air. They will spread along the ground and collect in low or confined areas (sewers, basements, tanks, etc.).
- Vapor explosion hazard indoors, outdoors or in sewers.
- Those substances designated with a **(P)** may polymerize explosively when heated or involved in a fire.
- Runoff to sewer may create fire or explosion hazard.
- Containers may explode when heated.
- Many liquids will float on water.
- Substance may be transported hot.
- For hybrid vehicles, GUIDE 147 (lithium ion or sodium ion batteries) or GUIDE 138 (sodium batteries) should also be consulted.

HEALTH

- Inhalation or contact with material may irritate or burn skin and eyes.
- Fire may produce irritating, corrosive and/or toxic gases.
- Vapors may cause dizziness or asphyxiation, especially when in closed or confined areas.
- Runoff from fire control or dilution water may cause environmental contamination.

Public Safety

- **Call 911. Then call emergency response telephone number on shipping paper.** If shipping paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.
- Keep unauthorized personnel away.
- Stay upwind, uphill and/or upstream.
- Ventilate closed spaces before entering, but only if properly trained and equipped.

PROTECTIVE CLOTHING

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing provides only thermal protection **but only limited chemical protection.**

EVACUATION

Immediate Precautionary Measure

- Isolate spill or leak area for at least 50 metres (150 feet) in all directions.

Large Spill

- Consider initial downwind evacuation for at least 300 metres (1000 feet)

Fire

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 metres (1/2 mile) in all directions; also, consider initial evacuation for 800 metres (1/2 mile) in all directions.

Condensate

Emergency Response

FIRE
Caution: The majority of these products have a very low flash point. Use of water spray when fighting fire may be inefficient.
CAUTION: For mixtures containing alcohol or polar solvent, alcohol-resistant foam may be more effective.

SMALL FIRE
- Dry chemical, CO2, water spray or regular foam. If regular foam is ineffective or unavailable, use alcohol-resistant foam.

LARGE FIRE
- Water spray, fog or regular foam. If regular foam is ineffective or unavailable, use alcohol-resistant foam.
- Avoid aiming straight or solid streams directly onto the product.
- If it can be done safely, move undamaged containers away from the area around the fire.

FIRE INVOLVING TANKS OR CAR / TRAILER LOADS
- Fight fire from maximum distance or use unmanned master stream devices or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- For petroleum crude oil, do not spray water directly into a breached tank car. This can lead to a dangerous boil over.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks in direct contact with flames.
- For massive fire, use unmanned master stream devices or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

SPILL OR LEAK
- ELIMINATE all ignition sources (no smoking, flares, sparks or flames) from immediate area.
- All equipment used when handling the product must be grounded.
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- Prevent entry into waterways, sewers, basements or confined areas.
- A vapor-suppressing foam may be used to reduce vapors.
- Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
- Use clean, non-sparking tools to collect absorbed material.

LARGE SPILL
- Dike far ahead of liquid spill for later disposal.
- Water spray may reduce vapour but may not prevent ignition in closed spaces.

FIRST AID
Refer to the "General First Aid" section on Page 14.

Specific First Aid:
- Wash skin with soap and water.
- In case of burns, immediately cool affected skin for as long as possible with cold water. Do not remove clothing if adhering to skin.

WARNING: The data given is approximate and should only be used with extreme caution. These times can vary from situation to situation. LPG tanks have been known to BLEVE within minutes, therefore, never risk life based on these times.

BLEVE (USE WITH CAUTION)

Capacity		Diameter		Length		Propane Mass		Minimum Time To Failure For Severe Torch	Approximate Time To Empty For Engulfing Fire	Fireball Radius		Emergency Response Distance		Minimum Evacuation Distance		Preferred Evacuation Distance		Cooling Water Flow Rate	
Litres	Gallons	m	ft	m	ft	kg	lb	Minutes	Minutes	m	ft	m	ft	m	ft	m	ft	Litres/min	USgal/min
100	26.4	0.3	1	1.5	4.9	40	88	4	8	10	33	90	295	154	505	307	1007	97	26
400	106	0.61	2	1.5	4.9	160	353	4	12	16	52	90	295	244	801	488	1601	195	52
2000	528	0.96	3.1	3	9.8	800	1764	5	18	28	92	111	364	417	1368	834	2736	435	115
4000	1057	1	3.3	4.9	16.1	1600	3527	5	20	35	115	140	459	525	1722	1050	3445	615	163
8000	2113	1.25	4.1	6.5	21.3	3200	7055	6	22	44	144	176	577	661	2169	1323	4341	870	230
22000	5812	2.1	6.9	6.7	22	8800	19401	7	28	62	203	247	810	926	3038	1852	6076	1443	381
42000	11095	2.1	6.9	11.8	38.7	16800	37038	7	32	77	253	306	1004	1149	3770	2200	7218	1994	527
82000	21662	2.75	9	13.7	45	32800	72312	8	40	96	315	383	1257	1435	4708	2200	7218	2786	736
140000	36984	3.3	10.8	17.2	56.4	56000	123459	9	45	114	374	457	1499	1715	5627	2200	7218	3640	962

Emergency Response Guidebook 2024 – Page 359

Reporting

Canadian Environmental Protection Act (CEPA) Reporting Requirements
These reporting requirements are set out by Environment & Climate Change Canada, however, notification and reporting is made through Emergency Management & Climate Readiness (EMCR) **1.800.663.3456**
Section 201 of CEPA 1999 sets out the obligation to notify the environmental emergencies to the Department. This section requires that, when an environmental emergency occurs in respect of any of the substances listed under the Regulations or interim orders (eg. Schedule 1 of the Regulations), any person who owned or had the charge, management, or control of the substance immediately before the environmental emergency, or any person who caused or contributed to the environmental emergency, must, as soon as possible, notify the regional enforcement or any other person designated by the regulations.
▪ A **verbal notification** is to be made by telephone **as soon as possible** in the circumstances to EMCR **1.800.663.3456**. ▪ A **written report (Schedule 8 Notice)** must be submitted in the online E2 reporting system **as soon as possible** in the circumstances. The system is accessed through the Single Window Information Management (SWIM) system (available at: https://ec.ss.ec.gc.ca). Section 18 of the Regulations clarifies that written reports must be provided only when the environmental emergency meets at least one of the following three criteria: **(a)** has or may have an immediate or long-term harmful effect on the environment; **(b)** constitutes or may constitute a danger to the environment on which human life depends; or **(c)** constitutes or may constitute a danger in Canada to human life or health. If there is any doubt as to whether the incident is a reportable environmental emergency, the incident should be reported, and a written report should be provided.
Environmental emergencies involving substances listed in Schedule 1 of the Regulations are required to be reported as soon as possible. The obligation to report environmental emergencies applies whether or not the quantities of substances or container capacity are met or are above the specified quantity threshold.

Fisheries and Oceans Canada (DFO) Reporting Requirements

If there is a release into a water body of **any** substance deleterious to fish, contact Fisheries and Oceans Canada (DFO) (only if fish bearing waterbody) at **1.800.889.8852.**

Transport Canada Reporting Requirements

If a spill occurs during the transportation or handling of a Transportation of Dangerous Goods regulated product where the volume exceeds those specified in the following table, the spill must be immediately reported to the local police, EMCR at **1.800.663.3456 and** CANUTEC – **1.888.226.8832**

TRANSPORT CANADA REPORTING REQUIREMENTS

Any spill or release that goes off-lease that has caused, is causing, or may cause an adverse effect, must immediately be reported to the local police, EMCR – 1.800.663.3456 and CANUTEC – 1.888.226.8832

Class	Division	Characteristics of Dangerous Goods	Quantity	Packing Group
1 Explosives (Sections 2.9 – 2.12)	1.1	A substance or article with a mass explosion hazard	Any quantity	II – Hazardous Substances
	1.2	A substance or article with a projection hazard but not a mass explosion hazard		
	1.3	A substance or article which has a fire hazard and either a minor blast hazard or a minor projection hazard or both, but does not have a mass explosion hazard		
	1.4	A substance or article which presents no significant hazard beyond the package in the event of ignition or initiation during transport		
	1.5	A very insensitive substance with a mass explosion hazard		
	1.6	Extremely insensitive article with no mass explosion hazard		
2 Gases (Sections 2.13 – 2.17)	2.1	A flammable gas which is easily ignited and burns	Any quantity	Not Applicable
	2.2	A non-flammable, non-toxic, non-corrosive gas		
	2.3	A toxic gas		
3 Flammable Liquids (Sections 2.18 – 2.19)	*	A flammable liquid with a closed-cup flash point less than or equal to 60.0°C	Any quantity (Packing Group I or II) 30 L or 30 kg (Packing Group III)	I – Very Hazardous Substances or II - Hazardous Substances, or III – Moderately Hazardous Substances
4 Flammable Solids (Sections 2.20 – 2.22)	4.1	A flammable solid which is readily combustible and may cause fire through friction or from heat retained from manufacturing	Any quantity (Packing Group I or II) 30 L or 30 kg (Packing Group III)	I – Very Hazardous Substances or II - Hazardous Substances, or III – Moderately Hazardous Substances
	4.2	A spontaneously combustible substance that ignites when exposed to air		
	4.3	A water-reactive substance which emits flammable gas when it comes into contact with water		
5 Oxidizing Substances, Organic Peroxides (Sections 2.23 – 2.25)	5.1	An oxidizing substance which may yield oxygen and contribute to the combustion of other material	Any quantity (Packing Group I or II) 30 L or 30 kg (Packing Group III)	I – Very Hazardous Substances or II - Hazardous Substances, or III – Moderately Hazardous Substances
	5.2	An organic peroxide which releases oxygen readily and may be liable to explosive decomposition, or sensitive to heat, shock or friction		
6 Toxic and Infectious Substances (Sections 2.26 – 2.36)	6.1	A toxic substance that is liable to cause harm to human health	Any quantity (Packing Group I or II) 30 L or 30 kg (Packing Group III)	I – Very Hazardous Substances or II - Hazardous Substances, or III – Moderately Hazardous Substances
	6.2	An infectious substance	Any quantity	A or B
7 Radioactive Materials (Sections 2.37 – 2.39)	None	Radioactive materials as defined in the Packaging and Transport of Nuclear Substance Regulations	A level of ionizing radiation greater than the level established in section 39 of the "Packaging and Transport of Nuclear Substance Regulations 2015"	Not Applicable
8 Corrosive Substances (Sections 2.40 – 2.42)	None	Solids or liquids such as acids or alkalis materials that cause destruction of the skin or corrode metals	Any quantity (Packing Group I or II) 30 L or 30 kg (Packing Group III)	I – Very Hazardous Substances or II - Hazardous Substances, or III – Moderately Hazardous Substances
9 Miscellaneous Products, Substances or Organisms (Sections 2.43 – 2.45)	None	A regulated substance that cannot be assigned to any other class. It includes genetically modified micro-organisms, marine pollutants and substances transported at elevated temperatures	30 L or 30 kg	II – Hazardous Substances or III – Moderately Hazardous Substances, or without packing group

Training and Exercises

Environmental emergency exercises involve a simulation relating to an emergency that can reasonably be expected to occur with substance(s) at the facility that are subject to the Regulations. The simulations are meant to explore, learn from and prepare for scenarios described within the E2 plan that potentially have harmful effects on the environment or human life or health. Exercising the E2 plan provides those who are responsible for the plan with valuable information regarding the facility's readiness to respond to one or multiple elements of their plan. Any lessons learned via the exercise can be used to update and improve the plan.

The Regulations require that E2 plans be exercised on an annual basis. A full-scale exercise must also be conducted every five years. Based on these exercises, the E2 plans must be reviewed and updated, as required. Pacific Canbriam Energy Limited is required to keep a record of the results of these annual and full-scale simulation exercises, including the date and summary of the exercise, the results of the exercise and any modifications made to the plan as a result. Up-to-date exercise records are kept separately from this document within Pacific Canbriam Energy Limited's record management system.

Types of E2 Plan Exercises

Annual Simulation Exercise

This is an exercise that simulates the response to an environmental emergency that involves the release of one Schedule 1 substance from each of the hazard categories present at the facility. Examples that fulfill the requirements include:

Drills
These are supervised activities that allow emergency response team members to validate a specific operation or function, usually focused on one or two key skills such as shutdown procedures or valve operation. Drills can also be used to determine if plans can be executed as designed, to assess whether more training is required, or to reinforce best practices.

Tabletop Exercises
This type of exercise is presented by a facilitator in an informal setting with no hands-on practice or fieldwork. This type of exercise is intended to generate discussion about various issues regarding a hypothetical, simulated emergency. Tabletop exercises can boost general awareness, validate plans and procedures, rehearse concepts, and / or assess the types of systems needed to guide the prevention of, protection from, mitigation of, response to, and recovery from a defined incident.

Functional Exercises
These exercises provide a more realistic simulation of an emergency compared to a tabletop exercise. They are typically conducted in "real-time" in a classroom setting or a designated site for a Command Post. The Command Post Team "takes action" – making decisions, simulating the deployment of resources, and responding to new developments.

In comparison to a full-scale exercise, a functional exercise involves fewer participants, and the movement of personnel and equipment is simulated.

Full-Scale Simulation Exercise
This is an action-based simulation exercise requiring the deployment of personnel, resources, and equipment. The scenario must involve at least one Schedule 1 substance located at the facility. Full-scale exercises are typically the most complex and resource-intensive because they are staged in a realistic field environment with equipment deployment and involve many participants performing assigned tasks in real-time. Full-scale exercises give the team an opportunity to practice and validate their plans, policies, and a wide variety of the skills covered in response team training. Volunteers may play the role of victims and mock injuries can be staged. These exercises may involve other agencies, although role players representing other agencies can be used if desired.

Cycle for Annual Exercises

A different simulation exercise for each hazard category must be carried out annually so that all the environmental emergencies identified in the E2 plan will be exercised over time. If the facility has more than one substance from the same hazard category, you must simulate one environmental emergency identified in the E2 plan for one substance in that hazard category. ECCC recommends rotating substances when available, if applicable.

Example Exercise Cycle		
	Condensate	**LPG**
Hazard Category	Combustible (C)	Explosion (E)
Probable Case	Spill / Leak	Spill / Leak
Worst Case	Fire / BLEVE	Fire / BLEVE
Year 1	Condensate – Flash Fire	LPG – Fire / BLEVE
Year 2	Condensate – Spill / Leak	LPG – Spill / Leak
Year 3	Condensate – Pool Fire	LPG – Fire / BLEVE
Year 4	Condensate – Spill / Leak	LPG – Spill / Leak
Year 5	Full Scale for any (1) of the Hazard Categories – any scenario.	

Training Requirements

Pacific Canbriam Energy Limited is responsible for ensuring the readiness and expertise of their personnel required to activate the E2 Plan.

The following table summarizes the training that has been or will be provided to prepare personnel at the facility who will respond in the event of an environmental emergency.

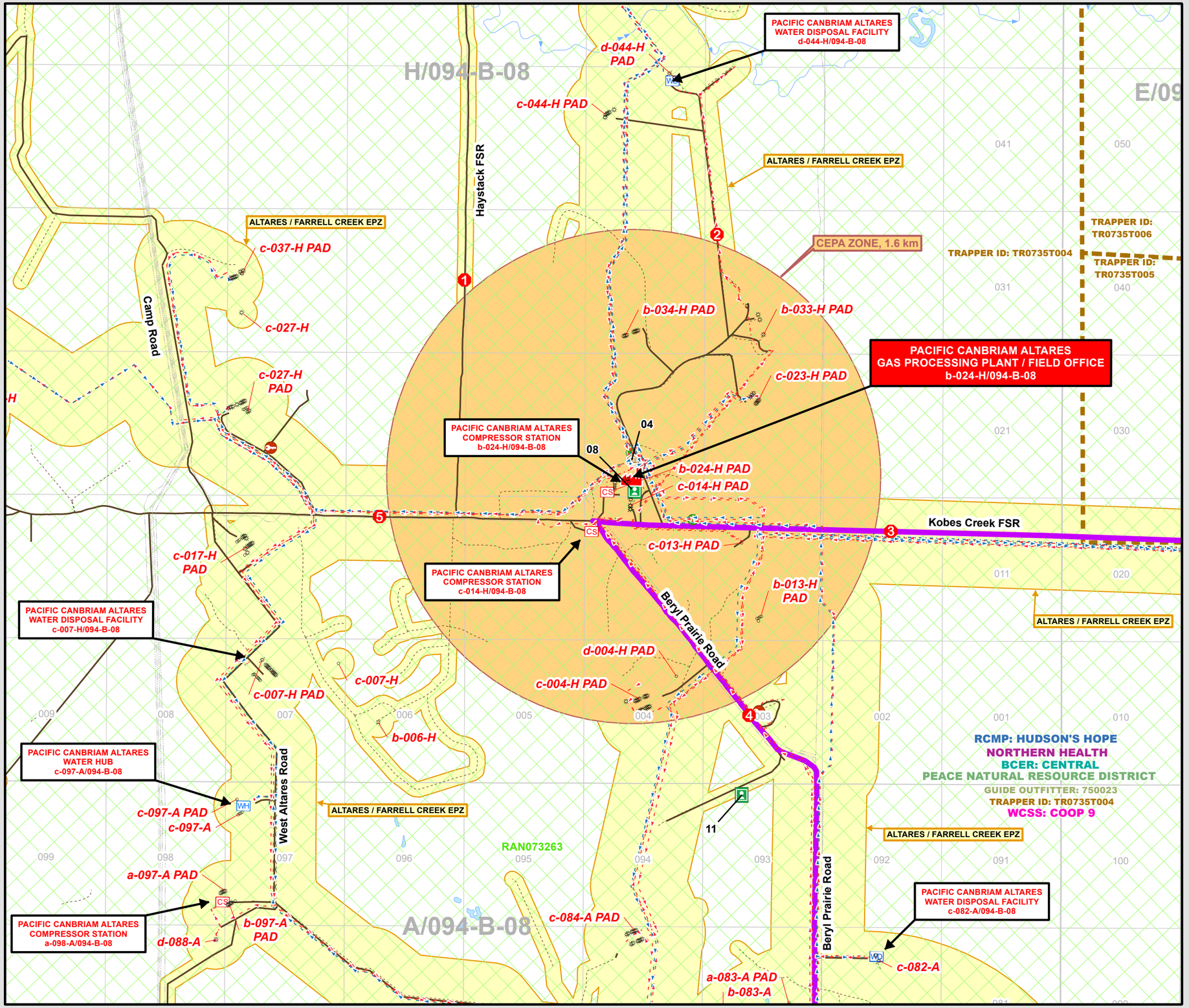
Training Record			
Position	**Training**	**Date**	**Renewal**
Incident Commander	ERP / E2 Plan	Up-to-date training records are kept separately from this document within Pacific Canbriam Energy Limited's record management system.	
	ICS 100		
	ICS 200		
	WHMIS		
	H2S Alive		
Safety Officer	ICS 100		
	ICS 200		
	WHMIS		
Information Officer	ICS 100		
	ICS 200		
	Media Relations Training		
	Public Relations Training		

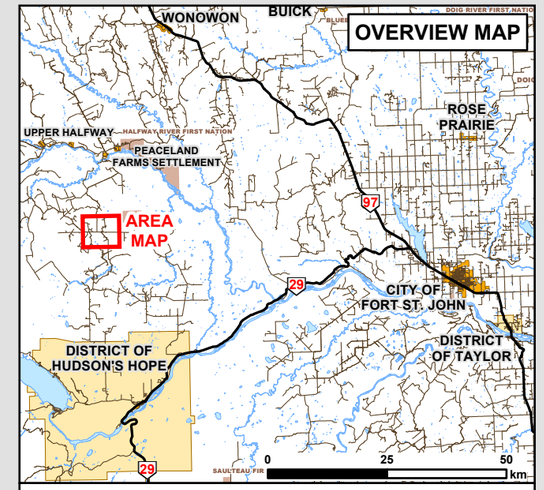
Exercise Record				
Date of Exercise	Location	Hazard Category	Type of Emergency	Annual / Full Scale

Safety Data Sheets (SDS)

The following SDS that are applicable to the Pacific Canbriam b-24-H/94-B-8 Facility are located on Pacific Canbriam Energy Ltd.'s sdsBinders online system:

- Condensate (Sweet)
- LPG (Sweet)
- Natural Gas (Sweet)
- Produced Water (Sweet)





FACILITY TYPE
- GAS PROCESSING PLANT
- CENTRAL TREATMENT PLANT
- CENTRAL PROCESSING FACILITY
- INJECTION PLANT
- COMPRESSOR
- PUMP STATION
- PIPELINE TERMINAL
- DEHYDRATOR
- WASTE PROCESSING
- METER STATION
- HEADER / RISER
- BATTERY
- SATELLITE
- WATER DISPOSAL
- CHECK VALVE
- BLOCK VALVE
- EMERGENCY SHUTDOWN VALVE
- PROPANE BULLET
- TANK

SURFACE DEVELOPMENT
- RESIDENCE OCCUPIED
- BUSINESS OCCUPIED
- RESIDENCE SENSITIVE
- BUSINESS SENSITIVE
- RESIDENCE SEASONAL
- BUSINESS SEASONAL
- PUBLIC FACILITY
- STRUCTURE VACANT
- STRUCTURE ABANDONED
- STRUCTURE OUTSIDE OF EPZ
- OTHER BUILDINGS

PIPELINE TYPE
- OIL SOUR - OPERATING
- OIL SWEET - OPERATING
- OIL PRODUCTS - DISCONTINUED
- GAS SOUR - OPERATING
- GAS SWEET - OPERATING
- GAS PRODUCTS - DISCONTINUED
- WATER SOUR - OPERATING
- WATER SWEET - OPERATING
- WATER - DISCONTINUED
- HVP - OPERATING
- HVP - DISCONTINUED
- LVP - OPERATING
- LVP - DISCONTINUED
- STEAM / AIR - OPERATING
- STEAM / AIR - DISCONTINUED
- MISC - OPERATING
- MISC - DISCONTINUED

WELL TYPE
- WELL - GAS
- WELL - OIL
- WELL - WATER SOURCE
- WELL - WATER INJECTION
- WELL - OBSERVATION
- WELL - LOCATION
- WELL - GAS SUSPENDED
- WELL - OIL SUSPENDED

NON-CLIENT OPERATORS
- GAS PROCESSING PLANT
- FACILITY
- WELL
- PIPELINE

EMERGENCY RESPONSE
- EPZ (EMERGENCY PLANNING ZONE)
- IIZ (INITIAL ISOLATION ZONE)
- CEPA ZONE
- EPZ (OTHER SYSTEM)
- EGRESS
- ERP ACCESS
- HAZARD POINT
- CAUTION POINT
- FLOODING INCIDENT
- WILDFIRE INCIDENT
- INCIDENT COMMAND POST (ICP)
- MUSTER POINT
- STAGING AREA
- ROADBLOCK
- DEAD END
- GATED - KEYED ACCESS
- SPILL CONTROL POINT - WCSS/SK SPILL COOP
- SPILL CONTROL POINT - CRITICAL WCSS/SK SPILL COOP
- SPILL CONTROL POINT - CLIENT
- STARS SITE
- EVACUATION / RECEPTION CENTRE
- EVACUATION ROUTE

CULTURE
- HIGHWAY - PRIMARY
- HIGHWAY - SECONDARY
- MAIN ACCESS ROAD
- OTHER ACCESS ROAD / TRAIL
- RAIL
- LOCAL AUTHORITY / MUNICIPAL BOUNDARY
- LAW ENFORCEMENT
- HEALTH AUTHORITY
- REGULATOR AUTHORITY
- SPILL COOP
- NATURAL RESOURCE DISTRICT (B.C. Only)
- FOREST MANAGEMENT AREA (AB Only)
- WMU / GUIDE OUTFITTER
- TRAPLINE
- PROVINCE
- WATER
- POPULATED AREA
- FIRST NATION / MÉTIS
- RECREATIONAL AREA
- PARK / PROTECTED AREA
- GRAZING / RANGE TENURE (AB & BC)
- LANDOWNER
- RIGHTS HOLDER / ALLOTMENT USER
- OUTBLOCK
- TENURE OPENINGS
- MANAGED LICENCE
- FOREST COVER RESERVATIONS
- SURVEYED PARCELS
- MILITARY AREA
- FENCE
- FENCED AREA
- AIRPORT
- AIR STRIP
- HELI PAD
- TOWER - FORESTRY
- TOWER - COMMUNICATION
- TOWER - OTHER
- AIR MONITORING SITE
- ELECTRICAL SUBSTATION
- SENSITIVE WILDLIFE AREA
- RAIL CROSSING
- HISTORICAL SITE
- WATER CROSSING
- BRIDGE
- DAM
- WCSS EQUIPMENT
- TRAILHEAD
- BOAT LAUNCH
- SOLAR FARM
- WIND FARM
- SPECIAL INTEREST GROUP
- HOSPITAL
- MEDICAL CENTER
- SECURITY CHECKPOINT
- SCHOOL
- PLACE OF WORSHIP
- CEMETERY
- RAI FACILITY
- COMMUNITY CENTRE
- INDUSTRY CAMP
- GRAVEL PIT
- STORAGE YARD
- GOLF COURSE
- CAMPGROUND
- CAMPSITE
- PICNIC / REST AREA
- DUMP / LANDFILL

PACIFIC CANBRIAM ENERGY

NEBC FIELD SUPPLEMENT 2025
ALTARES b-24-H/094-B-08 AREA MAP

BEHR Integrated Solutions
www.behrintegrated.com

Drawn By: GS
Scale: 1:25,000 — Project No.: 15006
Map Projection: NAD 83 UTM 10 — Revision: 0 - AUG 2025

0 0.5 1 1.5 2
Kilometers

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Area Occupant Data

Confidential Data

Confidential data collected during the Public Involvement Program will only be included in manuals labelled as ***Confidential***.

All manuals will contain contact information for publicly listed data for area occupants within the HPZ that may include Trappers, Grazing Lease Holders and Industrial Operators. Refer to each site-specific area in the *Assets and Equipment Section* for this information.

The following reports are only included in copies of the confidential ERP:

Surface Development – Summary Report
- Includes contact information for all surface developments within the HPZ.
- Report sorted by Map Coordinates.

Special Needs Contacts within the EPZ – Summary Report
- Includes residents who have indicated they may require early response actions due to medical needs or communication barriers.
- Report sorted by Map Coordinates.

School / Student – Summary Report
- Includes children who may be in school during an incident.
- Report sorted by Map Coordinates.

Surface Development – Detail Report (per location)
- Includes all information pertaining to a specific location.
- The individual detail reports are sorted by Map Coordinates.

Surface Development – Summary Report (Alphabetical)
- Includes contact information for all surface developments within the HPZ.

Report is sorted Alphabetically.

Public Information Package

A public information package was prepared and delivered to area occupants during the public involvement process. A copy of the public information package is included in all manuals.

EPZ STAKEHOLDER SUMMARY REPORT

Pacific Canbriam Energy/Altares Plant b-24-H/94-B-08

The following report provides an overview of all Stakeholders identified within the Emergency Planning Zone, based on information gathered during the most recent Public Notification and Consultation Campaign, and other situational awareness data gathered during the most recent Emergency Response Plan update.

EMERGENCY PLANNING ZONE (EPZ) OVERVIEW	
Surface Developments within the EPZ	2
Occupants within the EPZ (includes Resident and Non-Resident Land Users)	6
Students attending school who live within the EPZ	0
Surface Developments with Sensitivities (There may be more than one sensitivity per Surface Development)	0

OCCUPANT SENSITIVITIES OVERVIEW (Sensitivities are identified for response activities and for consultation awareness)	
Aboriginal Community Member	0
Evacuation Assistance	0
Language / Comprehension Barrier	0
Not Contacted During Public Notification / Consultation Campaign	0
Other Special Needs	0
Potentially Contentious Occupant	0
Requires Early Notification	0
Sensitive to Industry Development	0

SURFACE DEVELOPMENTS OVERVIEW	
PRIVATE PROPERTY (Locations where people live)	
Residences – Abandoned	0
Residences – Not contacted	0
Residences – Occupied Full Time	0
Residences – Seasonal / Part Time	0
Residences – Vacant	0
Building - Unoccupied	0
Resident Surface Developments within the EPZ	0
Unoccupied Surface Developments within the EPZ	0

PUBLIC FACILITIES (Locations where members of the public may congregate)	
Airport/Airstrip	0
Boat Launch - Recreational	0
Camp site – Off-Road	0
Campground - Official	0
Campsite - Developed	0
Cemetery	0
Community Center	0
Evacuation / Reception Centre	0

Golf Course	0
Helispot	0
Hospital	0
Picnic / Rest Area	0
Place of Worship	0
Public Facility	0
School	0
Public Facility Locations within the EPZ	0

NON RESIDENT LAND USERS (Locations where people may be working)	
Business / Industrial Land Users	
Business	0
Other O&G Operator Battery	0
Other O&G Operator Camp	1
Other O&G Operator Compressor	1
Other O&G Operator Plant	0
Business / Other O&G Operator Locations within the EPZ	2

Other Land Users (Locations where people may be working periodically)	
Air Monitoring Site / Trailer	0
Electrical Sub Station	0
Gravel Pit	0
Guide / Outfitter	0
Landowner	0
Military / Base	0
Registered Trapline / Trapper	0
Rights Holder / Allotment User	0
Security Gate / Checkpoint	0
Solar Farm	0
Special Interest Group	0
Spill Control Point	0
Storage / Laydown Yard	0
Tower - Communication	0
Tower - Forestry	0
Tower - Other	0
Wind Farm	0
Other Non - Resident Land Users within the EPZ (This total does not include Businesses / Industrial Locations above)	0

ABOUT SOUR GAS

Hydrogen Sulphide (H_2S) is a colourless, flammable, toxic gas. It affects people differently depending on concentration and length of exposure. At very low concentrations it has an offensive odour (similar to rotten eggs); however, it is undetectable by odour at higher concentrations. A person can be exposed to H_2S concentrations of up to 1 part per million for up to 8 hours (government exposure limits) without a breathing apparatus.

In the unlikely event of an emergency, the ERP will be activated and the safety of the public will be maximized through evacuation, sheltering or ignition procedures. If you suspect H_2S or SO_2 in the air please remain indoors and contact the Pacific Canbriam 24 hour emergency number on the first and last page of this package.

HYDROGEN SULPHIDE (H_2S)

- Found in decaying organic matter, natural oil and gas, silos and sewers
- Found at gas temperatures above -60°C
- Flammable – burns to form SO_2
- Odour of rotten eggs at low concentrations- kills all sense of smell at higher concentrations
- Will tend to disperse more slowly in sheltered or calm low lying areas
- Extremely toxic
- At lower concentrations (20-50 ppm) irritates mucous membranes (eyes, throat, lungs), causes headaches, dizziness, nausea, may cause pulmonary edema (fluid in the lungs) upon prolonged exposure
- High concentrations (500-1000 ppm) may cause paralysis of the respiratory centre in the brain – breathing stops, suffocation begins

GENERAL HEALTH EFFECTS OF H_2S

Concentration	Effects
0.01-0.3 ppm	Detectable by odour.
1-5 ppm	Moderate to strong offensive odour may cause nausea, tearing of the eyes, headaches or loss of sleep upon prolonged exposure. Effects are moderate.
10 ppm	Ceiling limit. (WorkSafe BC)
20-50 ppm	Slight eye and lung irritation. May cause eye damage after several days of exposure, may cause digestive upset and loss of appetite.
100 ppm	Eye and lung irritation.
150 ppm	Kills sense of smell, severe eye and lung irritation.
500 ppm	Serious damage to eyes within 30 minutes, severe lung irritation, unconsciousness and death within 4 to 8 hours.
1000 ppm	Breathing stops within 1 or 2 breaths.

It is important to note that burning sour gas turns the H_2S to Sulphur Dioxide (SO_2). The heat from the fire will carry the SO_2 and smoke up into the air where it will be dispersed over a large area. By the time the SO_2 comes back to ground level, the concentrations would normally only be detectable with the use of an electronic gas detection monitor. These levels should be well below the levels that provincial environment regulations accept.

EVACUATION - CONTINUED

Evacuation of the public outside the EPZ is mandatory when H_2S levels reach 10 ppm in un-evacuated areas. Pacific Canbriam will provide air monitoring, starting at a Level 1 Emergency, to determine H_2S levels.

As public safety is the primary goal during an incident, primary response efforts will be concentrated on members of the public. Response efforts for livestock and pets will be addressed at the time of incident based on the response needs and responder capabilities.

SHELTER IN PLACE

Shelter in place is the practice of remaining indoors during a sudden outdoor release of a hazardous substance.

Shelter in place is not a viable option for recreational users or transients, due to their inability to safely shelter.

Shelter in Place Instructions

- Immediately gather everyone indoors and remain there.
- Close and lock all windows and outside doors – if possible, tape the gaps around the door frames.
- Extinguish indoor wood burning fires - if possible, close the damper.
- Turn off appliances or equipment that either uses inside air, blows out inside air or sucks in outside air, such as:
  - Stoves
  - Fireplaces
  - Clothes dryers
  - Air conditioners
  - Bathroom and kitchen fans
  - Built in vacuum systems
- Turn off heat and hot water pilot lights.
- Leave all inside doors open.
- Wait in an interior upstairs room.
- Avoid using the telephone, except for emergencies, so that you can be contacted by emergency personnel.
- Stay tuned to local radio for possible information updates or for further instructions.
- Even if you see people outside do not leave until told to do so.
- If you are unable to follow these instructions, please notify company emergency response personnel.
- After the hazardous substance has passed through the area you will receive an all clear message from emergency response personnel along with instructions to:
  - Ventilate your building by opening all windows and doors.
  - Turn on fans, turn up thermostats, and furnace circulating fans.
- Once the building is completely ventilated return all equipment to normal.

IGNITION

If safety of the public cannot be assured by evacuation or sheltering, the sour gases escaping from the well will be ignited, this results in the H_2S being burned and converted to sulphur dioxide (SO_2).

- Ignition must take place when one of the following conditions has been met:
- Although required, evacuation of the response zones has not taken place.
- Monitoring results indicate H2S concentrations in excess of 10 ppm over a 3-minute average in un-evacuated parts of the EPZ.
- Monitored H2S concentrations exceed 1 ppm (1-hour average) in urban density developments.
- Monitoring is not taking place due to weather or other unforeseen circumstances.
- The release cannot be brought under control in the short term.

EPZ CALCULATIONS

H_2S EPZ CALCULATIONS:	MIN.	MAX.
Cumulative Release Volumes	0 m^3	0 m^3
H_2S Release Rates	0 m^3/s	0.0138 m^3/s
H_2S Concentrations	0 %	9.97 %
Hazard Planning Zones	0 m	348 m

LEVELS OF EMERGENCY

Level 1 - Moderate Emergency – ERP is activated

There is no immediate danger to the public or environment as no H2S has been released; and the emergency is confined to the lease or company property. A Level 1 Emergency is declared at the earliest sign of difficulty controlling the well and when all problems are contained within the well site area. These problems are usually handled without difficulty using techniques and equipment readily available on site. A Level 1 Emergency creates little or no media interest.

Level 2 – Major Emergency – ERP is activated

There is the potential for risk to the public or environment, as the emergency could extend beyond company property. However, control is still possible. A Level 2 Emergency creates local or regional media interest and outside and provincial agencies must be notified.

Level 3 - Serious Emergency – ERP is activated

There exists an immediate danger to the public or environment as control of the situation has been lost. A Level 3 Emergency creates Provincial or National media interest and immediate multi-agency and provincial government involvement is required.

PUBLIC PROTECTION

In the unlikely event that an emergency situation occurs which causes or creates a potentially dangerous situation to occupants within the EPZ, the best method of public protection would be implemented. Depending on an incident's specifics, Pacific Canbriam will implement the following method(s) of public protection.

EVACUATION

In case of a Level 1 Emergency, those residents/occupants who may require additional time to evacuate or cannot safely shelter in place will be contacted, advised of the situation and informed of the proper reception centre to evacuate to. A list of reception centres is provided at the back of this package.

In the event of a Level 2 or 3 Emergency, all residents/occupants within the EPZ would be contacted and instructed to evacuate immediately to the Reception Centre.

Pacific Canbriam will provide you with the safest route out of the emergency area to the Reception Centre. If you require assistance to evacuate, Pacific Canbriam personnel will be available to assist you. Upon arrival at the Reception Centre, please check in with the Pacific Canbriam representatives as they will be available to answer any questions or concerns you may have.

If you choose not to go the Reception Centre, we ask that you please tell the Pacific Canbriam representative where you are going and provide updated contact information so that we may confirm your safety and keep you informed. You will be advised when it is safe to return home. Pacific Canbriam will provide you with a Claims Form so that you can be reimbursed for reasonable out-of-pocket expenses resulting from the evacuation.

SULPHUR DIOXIDE (SO_2)

- Formed by the combustion of H_2S or sulphur and is non-flammable
- Found as a gas at temperatures above -10°C
- Has the odour that occurs when a wooden match is extinguished
- Highly irritating – dissolves to form sulphuric acid
- At lower concentrations irritates eyes, nose and throat, causes difficulty in breathing and shortness of breath
- Causes pulmonary edema at high concentrations – may be fatal
- Effects on heavy smokers are more severe

GENERAL HEALTH EFFECTS OF SO_2

Concentration	Effects
0.13 ppm	24 hour evacuation level (MWLAP Level B criteria).
0.34 ppm	One hour average evacuation level (MWLAP Level B criteria).
2 ppm	Eight hour Occupational Exposure Limit (WorkSafeBC).
3-5 ppm	Odour threshold.
5 ppm	15 minute Occupational Exposure Limit (WorkSafeBC).
8-12 ppm	Throat irritation, coughing, constriction in chest, tearing and smarting of the eyes.
10-50 ppm	Exposure 5 -15 minutes: increased irritation of the eyes, nose, throat, choking, coughing and in some cases, wheezing as a sign of narrowing of the airway (which increases the resistance of the air-flow).
150 ppm	Short–term endurance lost due to severe eye irritation and because of the effects on the membranes of the nose, throat and lungs.
500 ppm	Highly dangerous after an exposure of 30-60 minutes.
1000-2000 ppm	May be fatal with continued exposure.

CEPA E2

The Canadian Environmental Protection Act, 1999 - Environmental Emergency (CEPA E2) Regulations aim at enhancing the protection of the environment and human health in environmental emergency situations by promoting prevention and ensuring preparedness, response and recovery.

The Regulations contain a list of substances and other hazardous substances which, if they enter the environment as a result of an environmental emergency:

- Have or may have an immediate or long-term harmful effect on the environment or its biological diversity,
- Constitute or may constitute a danger to the environment on which human life depends, or Constitute or may constitute a danger in Canada to human life or health.

Any person in Canada who owns or manages a listed substance in a quantity at or over the prescribed minimum quantity is required to provide Environment and Climate Change Canada (ECCC) with information on the quantity of the substance, along with the facility location, a report that an environmental emergency plan has been prepared and a notice indicating that the emergency plan has been implemented within 90 days, six months and one year of the coming into force of the Regulations, respectively.

The emergency plan will have to address the types of emergencies that might reasonably occur, including both on-site and off-site consequences, and the associated prevention, preparedness, response and recovery issues

SUMMARY OF OPERATING CONDITIONS

CEPA Isolation Zone for a Large Spill	800 m
CEPA Isolation Zone & Evacuation Zone for a Fire	1600 m

PERSONAL INFORMATION & CONFIDENTIALITY

Consultations with residents and others in the EPZ to gather and/or confirm personal information is a BCER requirement for the purpose of preparing and maintaining an ERP. All information requested will be confidential and will be used solely in case of an emergency.

By providing the requested information, response plans can be designed with your particular circumstances in mind and will enhance communication, identify response priorities and improve Pacific Canbriam's ability to respond in the event of an emergency.

EMERGENCY CONTACTS

Thank you for taking the time to review this package. Should you have any further questions or concerns please feel free to contact any of the numbers below.

Pacific Canbriam Contact Information

Pacific Canbriam 24 Hour Emergency Number:	1.877.269.2877
Nauman Rasheed Chief Operating Officer	Bus: 403.817.9041 Ext 2141
Zitin Lamba Manager, Operations	Bus: 403.817.9052 Ext 2152

BC Energy Regulator (BCER)

24-Hr Number Public Inquiry & Emergency Reporting Line	800.500.BCER (2237)
BCER 24 Hour Number Fort St. John	250.794.5200
BCER Emergency Operations Centre Fax Line	250.794.5385

Regional District

Peace River Regional District Dawson Creek Office Fort St. John Office	800.670.7773 250.784.3200 250.785.8084

Reception Centres

Ramada by Wyndham Northern Grand Hotel & Conference Centre	9830 100 Avenue Fort St. John, BC	250.787.0521
Stillwater Inn & Suites	9504 Canyon Drive Hudson's Hope, BC	250.783.5400

CALL OR CLICK BEFORE YOU DIG!
800.474.6886
WWW.BC1C.CA

OVERVIEW

Pacific Canbriam Energy Limited. is committed to protecting public safety and the environment. Our history as a company has demonstrated this commitment and our ability to safely conduct exploration and production operations.

As part of our ongoing safety program, we are contacting you to provide you with important information regarding our operations in your area.

Pacific Canbriam operates sweet and sour (H_2S) wells, pipelines and facilities within the Peace River Regional District of Northeastern British Columbia.

The BC Energy Regulator (BCER) requires Pacific Canbriam to prepare and distribute an information package, detailing their operations, to all persons, residences, local authorities and publicly used facilities within and immediately adjacent to the Emergency Planning Zones associated with their area activities. This package is required to contain information about proposed or existing operations, the procedures in place to respond to an emergency and public protection measures.

EMERGENCY RESPONSE PLAN

An Emergency Response Plan (ERP) is a comprehensive plan designed to protect the public and includes criteria for assessing an emergency situation and procedures for mobilizing response personnel and agencies as well as procedures for establishing communications and the coordination of resources in the event of an incident. The extent of the information contained within the ERP is determined by the identified potential hazards.

The purpose of an ERP is to ensure a timely and effective response to emergencies in order to protect people, the environment, property and business. An ERP addresses the worst case emergency scenarios, potential hazards to the public, and systems required for adequate response.

HAZARD PLANNING ZONE (HPZ)

A HPZ is determined based upon the potential release rate calculated for a proposed well. Once a release rate has been established, a formula is used to determine the corresponding radius of the HPZ. This information is then incorporated into the creation of the ERP to deal with any events that might risk the safety and welfare of those inside the HPZ. The ERP must properly account for all of the individuals and assets found within this radius.

PACIFIC CANBRIAM 24 HOUR EMERGENCY NUMBER: 1.877.269.2877

PACIFIC CANBRIAM

ALTARES / FARRELL CREEK FIELD
2025 ANNUAL UPDATE
PUBLIC INFORMATION PACKAGE

Rge.26W6M | Rge.25W6M | Rge.24W6M

Twp.86 | Twp.85 | Twp.84 | Twp.83 | Twp.82 | Twp.81

HALFWAY RIVER FIRST NATION

RCMP: FORT ST. JOHN

PACIFIC CANBRIAM GAS PROCESSING PLANT b-024-H/094-B-08

TSAA NUNA

G/094-B-08 | H/094-B-08 | E/094-A-05

EMERGENCY PLANNING ZONE

HAYSTACK FSR

CEPA ZONE

KOBES CREEK ROAD

CEPA ZONE

EMERGENCY PLANNING ZONE

PDR

PACIFIC CANBRIAM GAS PROCESSING PLANT b-072-A/094-B-08

B/09 | A/094-B-08 | D/094-A-05

PEACE RIVER REGIONAL DISTRICT

RCMP: HUDSON'S HOPE

NORTHERN HEALTH

BCER: CENTRAL

WCSS: COOP 9

ALTARES CORE ROAD

J/094-B-01 | I/094-B-01 | L/094-A-04

Wapoose Lake

BUTLER RIDGE PARK

EMERGENCY PLANNING ZONE

BERYL PRAIRIE ROAD

FARRELL CREEK ROAD

DISTRICT OF HUDSON'S HOPE

G/094-B-01 | H/094-B-01 | E/094-A-04

BERYL PRAIRIE

BERYL PRAIRIE ROAD

RCMP: CHETWYND

BCER: SOUTH EAST

BCER: SOUTH EAST

Williston Lake

B/094-B-08 | A/094-B-01 | D/094-A-04

BULLHEAD MOUNTAIN RECREATION AREA

CANYON DRIVE

HUDSON'S HOPE

Peace River

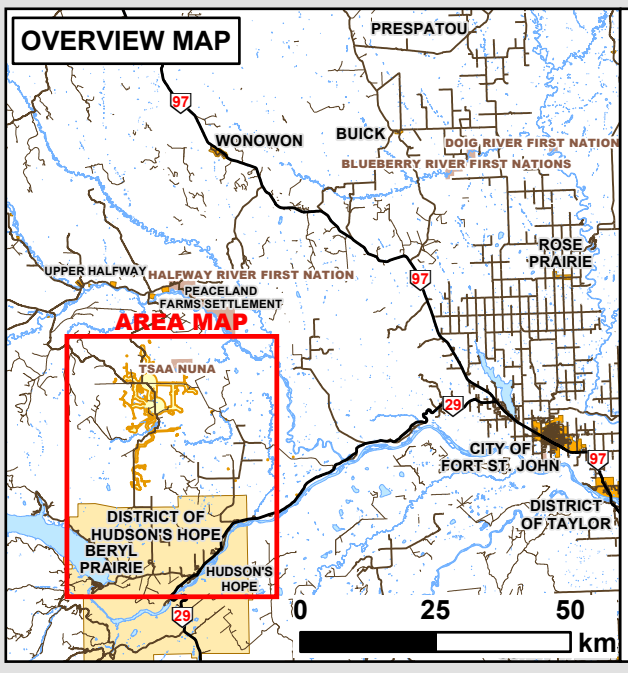
Dinosaur Lake

Boucher Lake

Réné Lake

Rge.26W6M | Rge.25W6M | Rge.24W6M

OVERVIEW MAP



FACILITY TYPE

- GAS PROCESSING PLANT
- CS COMPRESSOR
- PT PIPELINE TERMINAL
- B BATTERY
- WELL - GAS

SURFACE DEVELOPMENT

- STRUCTURE INSIDE OF EPZ
- STRUCTURE OUTSIDE OF EPZ

EMERGENCY RESPONSE

- EPZ (EMERGENCY PLANNING ZONE)
- CEPA ZONE
- EVACUATION / RECEPTION CENTRE
- EVACUATION ROUTE

PIPELINE TYPE

- OIL SOUR - OPERATING
- OIL SWEET - OPERATING
- OIL PRODUCTS - DISCONTINUED
- GAS SOUR - OPERATING
- GAS SWEET - OPERATING
- GAS PRODUCTS - DISCONTINUED
- WATER SOUR - OPERATING
- WATER SWEET - OPERATING
- WATER - DISCONTINUED
- HVP - OPERATING
- HVP - DISCONTINUED
- LVP - OPERATING
- LVP - DISCONTINUED
- STEAM / AIR - OPERATING
- STEAM / AIR - DISCONTINUED
- MISC - OPERATING
- MISC - DISCONTINUED

CULTURE

- HOSPITAL
- MEDICAL CENTER
- SCHOOL
- PLACE OF WORSHIP
- CEMETERY
- RAIL FACILITY
- COMMUNITY CENTRE
- INDUSTRY CAMP
- GRAVEL PIT
- STORAGE YARD
- GOLF COURSE
- CAMPGROUND/CAMPSITE
- DEAD END
- GATED - KEYED ACCESS
- AIRPORT
- AIR STRIP
- TOWER - FORESTRY
- TOWER - COMMUNICATION
- TOWER - OTHER
- SOLAR FARM
- WIND FARM
- HIGHWAY - PRIMARY
- HIGHWAY - SECONDARY
- MAIN ACCESS ROAD
- RAIL
- LOCAL AUTHORITY / MUNICIPAL BOUNDARY
- LAW ENFORCEMENT
- HEALTH AUTHORITY
- REGULATOR AUTHORITY
- PROVINCE
- WATER
- POPULATED AREA
- FIRST NATION / MÉTIS
- RECREATIONAL AREA
- PARK / PROTECTED AREA
- MILITARY AREA

PACIFIC CANBRIAM ENERGY

NEBC FIELD OPERATIONS SUPPLEMENT 2025

ALTARES / FARRELL CREEK AREA MAP

PUBLIC INFORMATION HANDOUT MAP

BEHR Integrated Solutions
www.behrintegrated.com

Drawn By: GS

Scale: 1:150,000 | Project No.: 15006

Map Projection: NAD 83 UTM 10 | Revision: 0 - AUG. 2025

0 2.5 5 7.5 10 km

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2025 ANNUAL ERP UPDATE

ALTARES b-72-A/94-B-8 FACILITY

PACIFIC CANBRIAM ENERGY LIMITED
24 HOUR EMERGENCY LINE: 1.877.269.2877

Pacific Canbriam Energy Limited Head Office	403.269.2874 Fax: 403.269.7637	2100, 215 – 2 Street SW, Calgary, AB T2P 1M4
Fort St. John Field Office	250.785.8322	3, 10799 Finning Frontage Rd Fort St. John, BC

FORT ST. JOHN FIELD CONTACT NUMBERS

FORT ST. JOHN OFFICE		
Jeleena Cawley	Bus: 250.785.8322 Ext. 1 → Ext. 2	Cell: 250.948.8386
Reception or Administrative Support	Bus: 250.785.8322 Ext. 1 → Ext. 1	
Conference Room	Bus: 250.785.8322 Ext. 1 → Ext. 4	
SUPERINTENDENTS		
Steve Gonwick	Bus: 250.785.8322 Ext. 4 → Ext. 2	Cell: 250.793.8000
Jake Zepeda	Bus: 250.785.8322 Ext. 4 → Ext. 3	Cell: 587.966.2675
ALTARES b-72-A PLANT		
b-72-A Camp/On Call	Bus: 250.785.8322 Ext. 3 → Ext. 1	
b-72-A Conference Room	Bus: 250.785.8322 Ext. 3 → Ext. 2	
b-72-A Control Room	Bus: 250.785.8322 Ext. 3400	
Altares b-72-A Plant Operations		
Lyndon Toews	Bus: 250.785.8322 Ext. 4 → Ext. 1	Cell: 250.981.8199
Trevor Bickerstaff	Bus: 250.785.8322 Ext. 4 → Ext. 4	Cell: 780.522.7304
Field Lead Neil Schilling	Bus: 250.785.8322 Ext. 4 → Ext. 3	Cell: 250.401.1085
Field Lead Ryan Sephton		Cell: 604.556.4090
Altares b-72-A Maintenance		
Anthony Corno	Bus: 250.785.8322 Ext. 5 → Ext. 1	Cell: 250.261.1428
Chris Bouwsema	Bus: 250.785.8322 Ext. 5 → Ext. 1	Cell: 780.515.0423
ALTARES b-73-A CAMP		
b-73-A Camp	Bus: 250.785.8322 Ext. 8	780.940.2434
c-62-A WATER PLANT		
c-62-A Water Hub	Bus: 250.785.8322 Ext. 4	
Water Hub Lead Corey Reschke	Bus: 250.785.8322 Ext. 7	250.783.0603

CORPORATE CONTACTS

Nauman Rasheed	President	403.817.9041 Ext. 2141 403.899.0339
Jeremy Waddell	Manager, HSER and Operational Excellence	403.930.6736 Ext. 2736 587.576.6125
Steve Bernard	Manager, Drilling and Completions	403.300.2434 Ext. 2434 403.519.8442
Zitin Lamba	Manager, Operations	403.817.9052 Local 2152 403.618.6166

FACILITY DESCRIPTION

The Altares b-72-A/94-B-8 facility is sweet; it produces natural gas, LPG's, and condensate.

The facility handles gas from the immediate area and delivers the gas into the Spectra T-North system at d-28-H/94-B-8 and the TC Energy North Montney Mainline.

LPG's (C3+) are separated from the gas stream and are stored on location in LPG storage bullets. The LPG is transported via pipeline to Pembina (delivery point into Pembina b-72-A). Produced water is transferred to the c-62-A water hub via pipeline.

The Phase I & II facility production design was 4814 E^3m^3/day (170MMSCFD) inlet gas facility. The current Phase III expansion was commissioned in February 2022 which increased the design capacity from 4814 E^3m^3/day to 8354 E^3m^3/day (295 MMSCFD).

Phase 1 consists of the following major pieces of equipment:
- Inlet separation
- Four (4) compressors
- Flare stack
- Water storage
- Condensate storage – 6 tanks each 2000 bbl capacity
- LPG storage – 5 bullets each 2500 bbl capacity
- Office and control room building, maintenance building
- Shallow cut refrigeration plant
- Condensate Stabilization unit – 3,000 bbl/d
- Four (4) power generators

Phase 2 consists of the following major pieces of equipment:
- Inlet separation
- Four (4) compressors
- Condensate storage – 6 tanks each 2000 bbl capacity
- LPG storage – 5 bullets each 2500 bbl capacity
- Shallow cut refrigeration plant
- Warehouse building
- One (1) power generator

Phase 3 consists of the following major pieces of equipment:
- Two (2) additional inlet separators
- Two (2) additional recycle compressors
- One (1) additional BTEX compressor
- Four (4) additional inlet compressors (CAT 3612)
- Inlet compressors to be equipped with process heat recover exchangers
- Refrigeration package with electric compression
- Condensate stabilizer package
- One (1) additional high pressure flare stack and knockout drum
- One (1) additional process heat medium
- One (1) utility glycol heating system including process heat recovery
- Four (4) additional power generators; Three (3) generators will be operating with one (1) standby
- One (1) Instrument air package

EPZ INFORMATION

The facility has an EPZ of 192 m. A 1.6 km Canadian Environmental Protection Act (CEPA) Hazard Zone has been assigned around the Altares b-72-A plant.

ON-SITE STORAGE

Condensate Storage:	LPG storage:
▪ 12 Tanks each 2000 bbl capacity	▪ 12 bullets each 2500 bbl capacity

NEAREST URBAN CENTRE / DWELLING

The nearest urban centre is the Halfway First Nation Reserve located 21.70 km. The nearest occupied dwelling is 0.5 km north of the b-72-A facility.

LAND USE / TERRAIN

Pacific Canbriam's operations are located in forested areas west and north-west of Fort St. John on the eastern slopes of the Rocky Mountains with average elevation of 1200 metres. These areas are predominantly used by trappers, grazing lease holders, forest management and for seasonal recreation such as hunting and fishing.

HYDROLOGY

There are several unnamed creeks are within the area.

HIGHWAYS

No highways intersect with the hazard zone in this field.

SITE ACCESS

Refer to access map on the following pages.

OTHER AREA OPERATORS & TIE-INS

OIL & GAS

Plateau Pipelines / Pembina	800.360.4706

TIE-INS*

There are no tie-ins with the above mentioned companies.

SAFETY EQUIPMENT

OPERATOR / TRUCK SAFETY EQUIPMENT

Operator field trucks will carry personal protective equipment, first aid kits and fire extinguishers.

NOTIFICATION

Operators attend to the b-72-A facility 24 hours/day The plant can also be monitored remotely. The wells have remote shut down capability. There is a minimum of 2 operators in the PCE Operations Camp available for call-out's.

COMMUNICATIONS

Cellular telephones are the primary communication devices to be employed during an emergency. Cellular reception and coverage is good in the Altares and Farrell Creek areas.

RADIO FREQUENCIES

All operators truck radios will be programmed with the Pacific Canbriam Altares Field VHF Radio Frequency. Plant operators will use programmed handheld personal radios for communications within plant boundaries.

Pacific Canbriam Radio Frequencies

b-24-H Plant / Pacific Canbriam Altares Field VHF	TX168.3000	RX162.945
b-72-A Plant UHF	TX459.5000	RX459.5000

Area Radio Frequencies

The frequencies and tones listed below should be programmed into all Pacific Canbriam contractors, representatives, and personnel's mobile radios in order to communicate with repeaters in each area.

Kobes Creek Road from km 24.5 to km 46.3	RR 08 – 150.4400
Beryl Prairie Road (entire length)	RR 03 – 150.1400
Haystack Road (entire length)	RR 13 – 150.530
The Core Road (entire length)	RR 04 – 150.1850
Camp Road	RR 21 – 151.010
The West Altares Road	RR 03 – 150.140
33 Access Road	RR 29

ROADBLOCK KITS / IGNITION KITS

Pacific Canbriam will establish roadblocks at the edge of the 100 m EPZ and evacuate the area in the event of an incident. Roadblocks for pipelines would tend to be short term while the line is shut down and depressurized.
At Pacific Canbriam discretion the setback distance may be reduced if supported by LEL monitoring results.

Roadblock and Mobile Helicopter Landing Pad Kits, if required, would be obtained from the **b-72-A Facility** and dispatched at a Level 1 Emergency. The number of Rovers, Roadblocks and Air Monitors required to be determined at the time of incident. Refer to the ERP cabinet for specific kit locations.

Roadblock Kits

Stop paddle, reflective traffic vest, amber beacon, flashlight with spare batteries, reflective barricade, personal electronic monitor (minimum tri-head), self-contained breathing apparatus, radio (public protection frequency, truck or portable), area map and hard hat.

Mobile Helicopter Landing Pad Kits

Air traffic wands, turbo flares, road flares, reflective flares, reflective PPE & pylons.

AGENCY CONTACTS

IMMEDIATE CONTACT REQUIRED AT ANY LEVEL OF EMERGENCY:		
BC Energy Regulator (BCER) – Incident Reporting Line *(via EMCR)*		800.663.3456
Emergency Management and Climate Readiness (EMCR)		
BCER	Fort St. John	250.794.5200
WorkSafe BC	Report an Incident	888.621.7233
IMMEDIATE CONTACT REQUIRED IF ANY RESIDENTS ARE CONTACTED AT LEVEL 1 OR HIGHER:		
RCMP	Hudson's Hope	911 250.783.5241
Peace River Regional District	Dawson Creek	800.670.7773 250.784.3200
Northern Health Authority	HEMBC On Call	855.554.3622

PROVINCIAL GOVERNMENT CONTACTS

BC 1 Call	Call Before You Dig	800.474.6886
BC Drug & Poison Information Centre	BC DPIC	800.567.8911
BC Ministry of Environment & Parks	Peace Region	250.787.3411
	Report Poachers & Polluters	877.952.RAPP (877.952.7277)
BC Ministry of Forests	Peace Natural Resource District	250.784.1200
BC Ministry of Transportation & Transit	Peace District Office North Peace Contractor	250.787.3237 800.842.4122
CANUTEC	Dangerous Goods Emergencies	888.226.8832 613.996.6666 From Cell: *666
Emergency Response Assistance Canada (ERAC)	(ERP2-0010-364)	800.265.0212
NAV Canada *via Flight Information Centre (FIC)*	Notice to Airmen (NOTAM)	866.WX.BRIEF 866.(992.7433) 866.541.4102
Public Works Association of BC (PWABC)	executivedirector@pwabc.ca	
Technical Safety BC	Report an Incident	866.566.7233
Transportation Safety Board	Rail Occurrence	819.944.3741
	Pipeline Occurrence	819.997.7887
WorkSafe BC	Report an Incident	888.621.7233
BC Wildfire Service	Report a Wildfire	800.663.5555 From Cell: *5555

EMERGENCY SERVICES

AMBULANCES		
Air Ambulance (STARS)	Emergency Link	888.888.4567
	#3687 – PCE b-72-A/94-B-08	
BC Ambulance Services	Fort St. John	911 800.461.9911
BC Emergency Health Service	Cell / SAT phone/ Outside BC	250.374.5937
Bailey Helicopters Ltd.	Fort St. John	250.785.2518
HOSPITALS		
Chetwynd Hospital and Health Centre	Chetwynd	250.788.2236
Dawson Creek & District Hospital	Dawson Creek	250.782.8501
Fort St. John Hospital and Peace Villa	Fort St. John	250.262.5200
Fort St. John Health Unit	Fort St. John	250.263.6000
Hudson's Hope Health Center	Hudson's Hope	250.783.9991
FIRE DEPARTMENTS		
Hudson's Hope Fire & Rescue		911 250.783.9901

2025 ANNUAL ERP UPDATE

ALTARES b-72-A/94-B-8 FACILITY

SERVICE CONTRACTORS

MOBILE AIR MONITORING		
Firemaster Oilfield Services	Central Dispatch	403.342.7500
HSE Integrated Ltd.	Province Wide	888.346.8260
Trojan Safety Services	Central Dispatch	250.785.9557
OILFIELD FIRE FIGHTING / SAFETY CONTRACTORS / WELL CONTROL SPECIALISTS / IGNITION		
Firemaster Oilfield Services	Central Dispatch	403.342.7500
HSE Integrated Ltd.	Province Wide	888.346.8260
Safety Boss	24 Hour Emergency	800.882.4967
Superior Fire Control Ltd.	24 Hour Emergency	877.882.0035
CRISIS COMMUNICATIONS		
Petron Communications	Fort St. John	250.785.3333
T&T Communications	Fort St. John	250.785.0310
SAFETY SERVICES		
HSE Integrated Ltd.	Province Wide	888.346.8260
Trojan Safety Services	Central Dispatch	250.785.9557
United Safety Ltd.	Central Dispatch	800.432.1809
SPILL RESPONSE		
Emergency Response Assistance Canada (ERAC)	(LPG Spills Only) AB/BC	800.265.0212
Clean Harbors	Province Wide	800.645.8265
Troyer Ventures Ltd.	Fort Nelson Fort St. John	250.774.5332 250.785.5332
Ambipar Response	Fort St. John	866.574.7928
BULK FUEL DELIVERY		
Smith Fuel Services	24/7 Dispatch	250.785.3466
TRUCKING COMPANIES		
Cascade Energy Services LP	24 Hour Dispatch	780.876.8900
CEDA	24 Hour Dispatch	250.784.5151
D.W Wilson Services Ltd.	Fort St. John	250.785.7737
Energetic Services Inc.	Fort St. John	250.785.4761
Fedderly Transportation Ltd.	Fort St. John	250.787.0398
Formula Powell L.P. Trucking	Fort St. John	250.785.4222
Fort St. John Water Inc	Fort St. John	250.785.0862
Maxim Industries Inc.	Fort St. John	250.785.7775
Oculus Transport Ltd	Fort St. John	250.264.2252
Raven Oilfield Rentals	Fort St. John	800.799.7188
Troyer Ventures Ltd.	Fort Nelson Fort St. John	250.774.5332 250.785.5332

SERVICE CONTRACTORS (Continued)

UTILITIES		
ATCO Electric	Province Wide	800.668.5506
BC Hydro	Province Wide	888.769.3766
Telus	Province Wide	310.2255 *611
ELECTRICAL / INSTRUMENTATION CONTRACTOR		
CDN Controls Ltd.	Fort St. John	855.530.8151
Epscan Industries Ltd.	Fort St. John	250.787.9659
Techmation Electric & Controls	Fort St. John	250.261.6532
PTW Energy Services	Fort St. John	250.785.9072
ENVIRONMENTAL SERVICES		
Clean Harbors (WCSS Spill Response Trailer)	Fort St. John	250.785.4577
Roy Northern Land & Environmental	Fort St. John	250.261.6644
Montrose Enviromental	24 Hour Spill Response	877.774.5525
Eco-Web Ecological Consulting	Fort St. John	250.787.1110
EMERGENCY RESPONSE MANAGEMENT		
Behr Integrated Solutions	Calgary	403.444.6940
TRANSPORTATION		
Standard Bus Contracting Ltd	Chetwynd Dispatch	250.788.2415 250.617.7710
Standard Bus Contracting Ltd	Prince George	250.617.7710
Avis Car and Truck Rental	Fort St. John Grande Prairie	250.785.5515 780.539.4101
Driving Force	Fort St. John Grande Prairie	250.787.0634 780.814.9596
HELICOPTER COMPANIES		
Qwest Helicopters	Fort Nelson	250.774.5302
Bailey Helicopters	Fort St. John	250.785.2518
Yellowhead Helicopters	24 Hour Emergency Fort St. John	888.566.4401 250.785.2331
ROAD SERVICES		
Dawson Road Maintenance Ltd.	Fort St. John	800.842.4122
Argo Road Maintenance (South Peace) Inc.	Dawson Creek – Pouce Coupe	800.663.7623
PILOT HOT SHOT AND TRAFFIC CONTROL		
Big League Oilfield Services	Fort St. John	250.787.9812
Peace Hot Shot & Picker Services	Fort St. John	250.785.8432
Energetic Traffic Control	Fort St. John	250.793.3331
PUMPING SERVICES		
BJ Energy Solutions	Clairmont	780.539.5210
Trican Well Service	Fort St. John	888.989.8975

SERVICE CONTRACTORS (Continued)

WCSS **See website for more info (www.wcss.ab.ca)*

COOP 9

24 Hour Emergency Contact	866.541.8888

Regional Custodian

North River Midstream Kaylin Salanski	250.262.3446 250.919.7282

Location: North River Midstream: 13217 Westcoast Frontage, Charlie Lake, BC V0C 1H0, Mile 53 Alaska Hwy

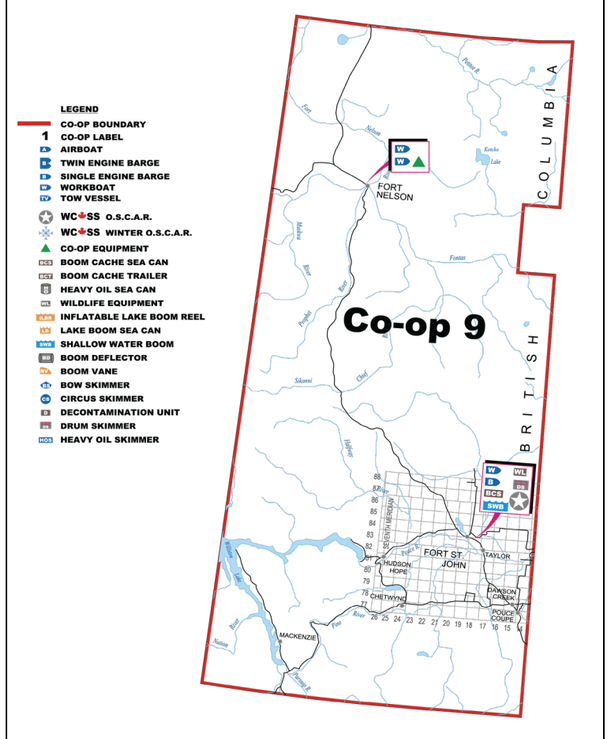
Equipment:
- 52′ OSCAR Trailer (semi-truck)
- 40′ Boom Cache Sea Can (winch tractor/trailer)
- 20′ Wildlife Sea Can (winch tractor/trailer)
- Work Boat (1/2-ton truck w/ 2″ ball hitch)
- Drum Skimmer w/ Power Pak (1/2-ton truck)
- Single Engine Barge (1-ton truck w/ 2-5/16″ ball hitch & electric brakes)
- 400′ Shallow Water Boom (1/2-ton truck)

COOP Custodian

Radar Road Trucking Rick Seidel	250.774.4203 250.775.0036

Location: 4900 - 46 Avenue, Fort Nelson, BC V0C 1R0

Equipment:
- 20′ ISRU Sea Can (winch truck & trailer)
- Work Boats (2) (1/2-ton truck w/ 2″ ball hitch)



RANGE TENURE

ID	COMPANY / NAME	EMERGENCY
RAN073263	Ray Jackson (Horseshoe Creek Outfitters)	250.783.0561 250.263.1919

TRAPPERS

TRAPPER ID	NAME	EMERGENCY
735T004	Anilee Rose Anderson	250.793.9273
735T004	Allen George Chatten	250.262.1972

GUIDES & OUTFITTERS

ID	COMPANY / NAME	EMERGENCY
750023	Luther Jackson (Horseshoe Creek Outfitters)	250.783.0561

RIGHTS HOLDERS

ID	COMPANY / NAME	EMERGENCY
Forest Tenure	CANFOR	250.962.3500
Forest Tenure	Jacobus Haagsman	250.783.5389
Forest Tenure	Louisiana Pacific Canada Ltd.	250.782.3302

SURFACE DEVELOPMENT INFORMATION

There are 6 surface developments inside the CEPA Hazard Zone.

In the event of an incident, ensure all members of the public are notified and provided with response information. If required use rovers and roadblocks to clear and isolate the areas in close proximity to the incident.

UNIQUE FEATURES AFFECTING EMERGENCY RESPONSE

None

RECEPTION CENTRES

Northern Grand Hotel	9830 100 Avenue Fort St. John, BC V1J 1Y5	250.787.0521
Stillwater Inn & Suites	9504 Canyon Drive Hudson's Hope, BC V0C 1V0	250.783.5400

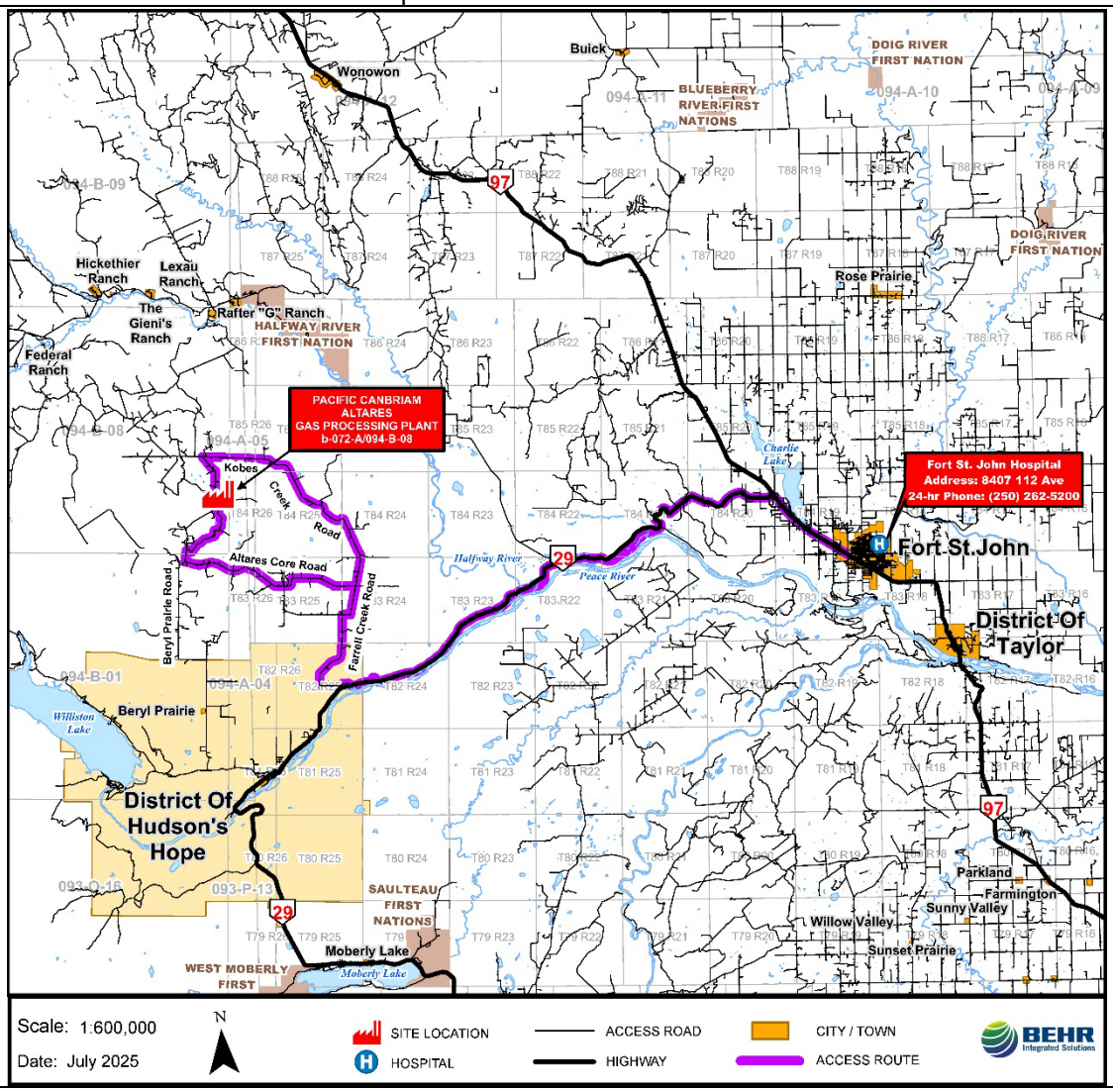
To Altares Gas Plant b-072-A / 94-B-08 – Total Distance 117 km

From Intersection of Hwy 97 and 100th Street, Fort St. John, BC

- Travel northwest on Hwy 97 for 12.5 km to Hwy 29 (Don Phillips Way).
- Turn left and travel southwest on Hwy 29 for 60.8 km.
- Turn right and travel west (then north) on Farrell Creek Road for 23.8 km.
- Continue travelling northwest onto Kobes Creek FSR for 20.8 km (preferred route).
- Turn left and travel south on Beryl Prairie FSR for 4.1 km.
- Turn left onto lease road to arrive into plant area.

Or

- Travel northwest on Hwy 97 for 12.5 km to Hwy 29 (Don Phillips Way).
- Turn left and travel southwest on Hwy 29 for 60.8 km.
- Turn right and travel west (then north) on Farrell Creek Road for 17.0 km.
- Turn left and travel west on Altares Core Road for 8.9 km.
- Continue west on Progress Connector for 0.8 km.
- Continue west on PDR 623 Progress Farrell Core Road for 11.5 km.
- Turn right and travel north on Beryl Prairie Road for 5.0 km.
- Continue north on Beryl Prairie FSR for 6.0 km.
- Turn left onto lease road to arrive into plant area.



To Altares Gas Plant b-072-A / 94-B-08 – Total Distance 46.3 km

From Intersection of Hwy 29 and Canyon Drive, Hudson's Hope, BC

- Travel west on Canyon Drive for 8.5 km.
- Turn right and continue north on Beryl Prairie Road for 24.7 km.
- Continue north on PDR 623 Progress Farrell Core Road for 2.6 km.
- Continue north on Beryl Prairie Road for 5.0 km.
- Continue north on Beryl Prairie FSR for 6.0 km.
- Turn left onto lease road to arrive in plant area.

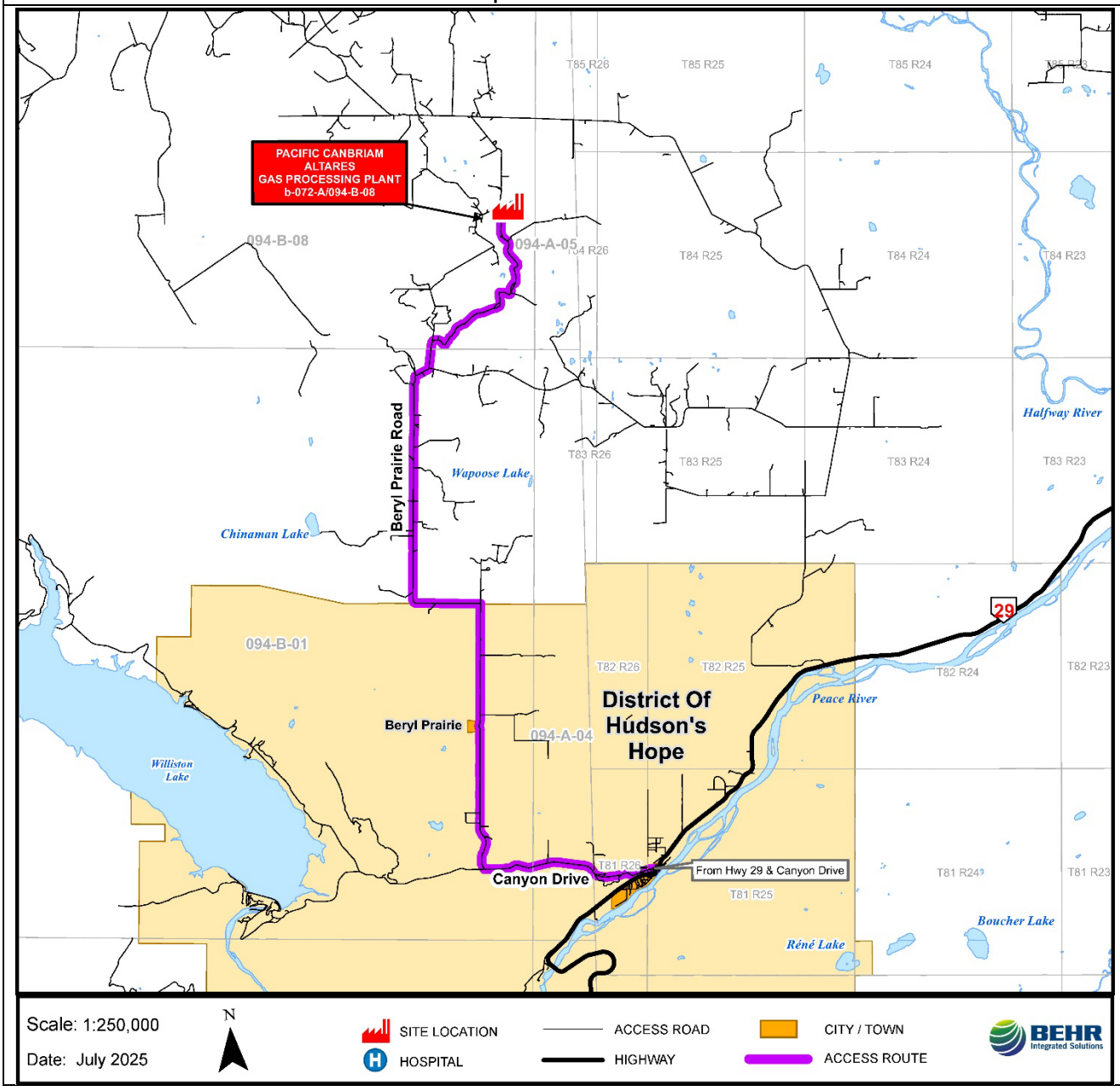


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E2 Substances and Environmental Emergency Response Plan

Background & Purpose

Pacific Canbriam Energy Limited owns / operates work sites where Propane, Condensate and Natural Gas Liquids are produced as a result of their natural gas refining process. It is stored while awaiting shipment to market. The purpose of this Plan is to provide workers with basic information on how to implement The Pacific Canbriam Emergency Response Assistance Plan in the event of an emergency.

Emergency Response Assistance Canada (ERAC)

The mission of ERAC is to provide safe, timely, effective and compliant services that include the following:

- Dangerous goods response plans, drills and exercises to Plan Participants
- Dangerous goods responder training
- First responder training
- Emergency response

ERAC maintains a dedicated 24 hours, 7 days a week, plan activation telephone number that is answered by experienced Response Managers.

The telephone number to activate the ERAP through ERAC, in the event of an emergency during road transport, is **800.265.0212.**

Emergency Response Assistance Plan (ERAP)

Pacific Canbriam Energy Limited. has a registered ERAP in place with Transport Canada and Emergency Response Assistance Canada (ERAC) for shipments of Natural Gas Liquids (NGL) and Propane by road or rail transport.

ERAP Activation Number: 800.265.0212

ERAP Reference Numbers:
ERP2-0010-364 Valid for UN1075 LPG

The ERAP reference number and the Emergency Response Assistance Canada (ERAC) activation phone number must appear on all dangerous goods shipping documents and on signage at the tank location.

ERAP Response
As soon as you are made aware of an incident involving your dangerous goods, whether by the ERAP incident report or other means, you must decide how you will respond to the release or anticipated release. The person who submitted and received approval for the ERAP (or a

person delegated to do so that has been identified in the plan), is responsible for the implementation of the ERAP. Your options are:

Tier 1: Implementing the ERAP to Tier 1 means that you are responding, generally by telephone, by remotely monitoring the response to the release or anticipated release. None of the emergency response resources found in the ERAP are brought to the site of the incident during Tier 1.

Tier 2: Implementing the ERAP to Tier 2 means that you are responding at the site of the incident by monitoring the response to the release or anticipated release on site or remotely and bringing ERAP emergency response resources (response personnel and/or equipment) to the location of the release or anticipated release. If the incident warrants you to bring emergency response resources to the site immediately, you can skip Tier 1 and implement the plan directly to Tier 2.

A person with an approved ERAP must implement it to Tier 1 or Tier 2 in response to a release or anticipated release of dangerous goods.

ERAP Implementation Report
An ERAP Implementation Report must be made each time the approved ERAP is implemented to either a Tier 1 or Tier 2. You must, as soon as possible, after you addressed a request for technical or emergency response advice, call CANUTEC at 1.888.CANUTEC or 613.996.6666 to make a report.

ERAP Implementation Report	
Date: _____	**Time:** _____
Name: _____	**Number:** _____
Authorized person to use the ERAP (if applicable): _____	
ERAP Reference Number:	**ERP2-0010-364:** Valid for UN1075 LPG
Shipping Name: _____	
UN Number: _____	
What Tier was the ERAP implemented to?	**Tier 1** ☐ **Tier 2** ☐
Measures taken to respond to the release or anticipated release:	

ERAP Incident Report

An ERAP incident report must be made by the person who has the charge, management or control of a means of containment to the person at the ERAP telephone number and must be made after an incident has occurred, which causes a release or anticipated release of the dangerous goods in the course of handling or transporting, and which endangers, or could endanger, public safety.

ERAP Incident Report

Date: _____ **Time:** _____

Location of release: _____

Name: _____ **Number:** _____

ERAP Reference Number: **ERP2-0010-364:** Valid for UN1075 LPG

Shipping Name: _____

UN Number: _____

Mode of transport: _____

Total quantity before release: _____

Quantity estimated to have been released: _____

Description of containment measures: _____

_____

_____

_____

_____

Has means of containment been damaged to the extent that its' integrity could be compromised?

Yes ☐ **No** ☐

Is a transfer of the dangerous goods to another means of containment anticipated or required?

Yes ☐ **No** ☐

Describe the type of incident that led to the release or anticipated release, including a collision, rollover, derailment, overfill, fire, explosion or load-shift:

_____

_____

_____

Liquefied Petroleum Gases (LPG)
Propane is a flammable gas that is sometimes referred to as LP-Gas, LPG, or Liquefied Petroleum Gas. LPG is primarily made up of propane-butane mixtures, but might also contain small percentages of ethane, ethylene, propylene, isobutane, or butylene, all of which can cause slight variations in the LPG properties (eg. flammable range, vapour pressure, etc.).

Physical properties provide responders with knowledge of how LP gases will behave both within and after being released from its container. Physical properties of LP gases include:

- They are tasteless, colorless, and usually odourless. In order to detect propane leaks and reduce gas losses, a commercial odorant called Mercaptan may be added.
- Capable of being either a liquid or gas, however, under ambient conditions, propane will be a gas.
- Most LP gases can be stored and transported as liquids under pressure and can easily vaporize into gas under the proper conditions.
- Under normal outdoor temperatures liquid LP gases expand rapidly into gas. One cubic foot of liquid propane will boil off and produce 270 cubic feet of propane vapour.
- LP gases will expand when heat is applied. If stored inside a container, this expansion will increase the volume of the liquid and the pressure inside the container.
- LP gases are not toxic, but they present possible inhalation hazards. If released in a confined space, propane can displace oxygen and act as a simple asphyxiant.

Boiling Liquid Expanding Vapour Explosion (BLEVE)
A BLEVE may occur when a sealed container of liquefied gas, such as a propane tank, is exposed to a fire. The fire causes the container wall temperature to heat up and the internal tank pressure to rise rapidly. While the pressure vessel may be equipped with a pressure relief valve, the stress applied by the increased pressure and the deterioration of the container wall causes the container to rupture. The super heated liquid is released, expands and vaporizes in seconds, resulting in a catastrophic explosion.

It is important that the vessel is kept cool with water spray and the external fire is controlled and not allowed to come within close distance of the storage tank. Personnel are advised to withdraw immediately if sound from venting devices increases, or tank discoloration is observed.

Approach to Developing a Plan

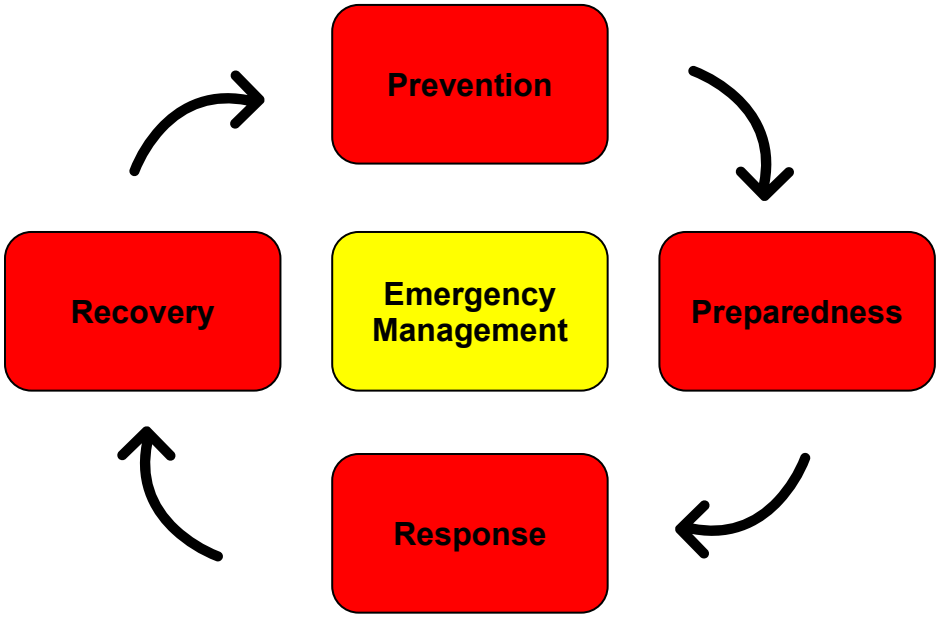
The purpose of emergency planning is to reduce and/or eliminate the risks of natural or human-induced disasters for human life and the environment.

E2 plans should integrate all relevant aspects of risk management. Undesirable events such as the release of hazardous substances could occur as a result of process, procedure or equipment failures. E2 plans should account for these scenarios by providing proactive identification, assessment, and mitigation measures.

A risk assessment conducted at a facility will:

1. Identify multiple scenarios that could occur that would lead to the release of the substance from the facility
2. Assess the probability of such scenarios occurring
3. Predict the impact distances from the scenarios for each substance
4. Describe the consequences of each scenario on human health and the environment.

Prevention, preparedness, response and recovery are the four pillars involved in E2 plan development. Below are some general concepts associated with each of these pillars.



Prevention

Environmental emergencies can be averted, or their severity limited by identifying in advance the cause of their probable frequency, potential consequences, and impacts.

Preventing environmental emergencies begins with evaluating the risks associated with the regulated substance(s) stored at the facility. Studying past spill events at the site and at similar sites in Canada allows for a more accurate prediction of the range of potential scenarios, including worst-case scenarios. This understanding is critical to assessing a facility's capabilities and resources for dealing with a crisis.

Preparedness

In preparing an E2 plan, it is important to involve key people, particularly first responders and representatives of potentially affected stakeholder groups in and around Pacific Canbriam Energy's facilities. Such consultation enhances the level and effectiveness of preparedness. When preparing the E2 plan, you should resolve identified gaps, consider options such as upgrading equipment, expanding staff, and increasing communication with and among neighbouring facilities, community officials, public safety agencies, etc. The communication of risk to surrounding communities is an important component of both prevention and preparedness activities.

Pacific Canbriam Energy Limited must identify and include reference in their plan to adequate training and resources to enable responders to respond to potential emergencies. Preparedness planning should reveal, depending on the significance and possible escalating nature of particular events, a facility's capabilities, and resources to effectively respond to an event adequately.

Response

Response to an environmental emergency is intended to include all aspects of managing the emergency situation until the emergency phase of the event is considered over. These needs can vary greatly in scope, depending on the nature and magnitude of the emergency. Effective emergency response includes, but is not limited to, the following:

- quick activation of the emergency plan
- adequate resource mobilization
- rapid assessment of the probable path and impacts of the emergency
- proper notification of the emergency to first responders and affected parties, including alerting, and warning the public
- maintenance of communication systems between stakeholders
- evacuating, confining, and accounting for personnel and members of the public present at a facility, if needed
- adequate reporting.

Quick and effective response relies on sound planning and pre-established partnerships. Effective emergency response calls for co-operation between industries, communities, local organizations and government through partnerships formed before emergencies occur. Such partnerships can be strengthened through the regular testing of the E2 plan with all of those involved. Communication from the facility to off-site agencies, to the public and among responders is important and necessary for a coordinated and successful response effort.

Recovery

Recovery from an environmental emergency is more than just the recovery of the spilled product. Recovery refers to the restoration of any part of the environment damaged by or during the emergency. Recovery affects both the operating entity itself and the surrounding community. The issue of recovery is best managed through discussions among all involved parties to assess the damage and agree on a restoration plan. The level of environmental restoration is determined by many factors, such as the size, persistence and toxicity, or hazardous nature of a release. Recovery of an area to its natural state is not always possible. Thus, restoration plans are situation-specific and would need to be defined in terms of acceptability to affected stakeholders.

Pacific Canbriam Energy Limited, in consultation with public authorities, should initiate recovery processes as soon as possible, striving for a rapid recovery from environmental damage. Those leading the recovery effort must be aware that rapid response without assessing the risks associated with the recovery effort can lead to increased damage and longer recovery times for the environment. The recovery process can either begin during response or can be initiated in stages until normal operations are restored. Planning for the recovery phase during the preparedness phase will improve recovery time and reduce impacts on the environment.

Emergency Scenarios

While the potential for a liquid petroleum gas release is low, it is important that personnel are familiar with product handling scenarios that may result in an actual emergency.

Possible Emergency Scenarios		
Stationary Tank Product Leak / Spill		
Potential Causes	▪ Loading / unloading incidents ▪ Container degradation ▪ Container rupture	▪ Container damage (due to vandalism, vehicle incident, effects from extreme weather, etc.)
Potential Hazards	▪ Fire / explosion, tank failure, vapour cloud. ▪ Evacuation of operations personnel and local residents.	▪ Local roads closed and traffic and/or business disrupted. ▪ Remote area may hinder prompt arrival of responders.
Potential Risks	▪ Responder injury ▪ Public injury ▪ Environmental damage	▪ Property damage ▪ Loss of revenue
Prevention	▪ Training / exercises ▪ Preventative maintenance ▪ JSA (job safety analyses) ▪ Clean work areas ▪ Personnel on-site daily ▪ Frequent inspections ▪ Frequent testing ▪ Truck loading / unloading procedures	▪ Barriers ▪ Break away valves ▪ Check valves ▪ ESD valves ▪ Positive grounding procedures ▪ Pressure safety valve ▪ Alarms / detectors ▪ Audits
Preparedness	▪ Training / exercises ▪ Warning sirens ▪ Safety equipment maintained and tested	▪ Mutual aid agreements ▪ Member of WCSS
Response	▪ Ensure safety of all personnel. ▪ Assess the need to shut off flow of product to the tank, activate Emergency Shut Down procedures if warranted. ▪ Call emergency services, as required. ▪ Contact Supervisor. ▪ Conduct an assessment of the situation and determine the Level of Emergency. ▪ Mobilize additional resources, as required ▪ Supervisor contacts the Area Manager who makes a decision on whether to enact the Corporate ERP.	▪ The Pacific Canbriam Supervisor contacts the appropriate regulatory agencies. ▪ The Fire Department implements a strategy to control the vapour cloud and bring in additional resources. In the event of a fire, water will be needed to extinguish or cool tanks or equipment ▪ If the emergency escalates, the Fire Department and / or the Incident Commander may call ERAC and implement the ERAP.
Recovery	▪ Incident investigation ▪ Develop a restoration plan ▪ Perform appropriate repairs ▪ Investigate the need to upgrade or improve facility equipment / processes	▪ Keep all affected parties informed of the situation ▪ Restore any part of the environment damaged by or during the emergency

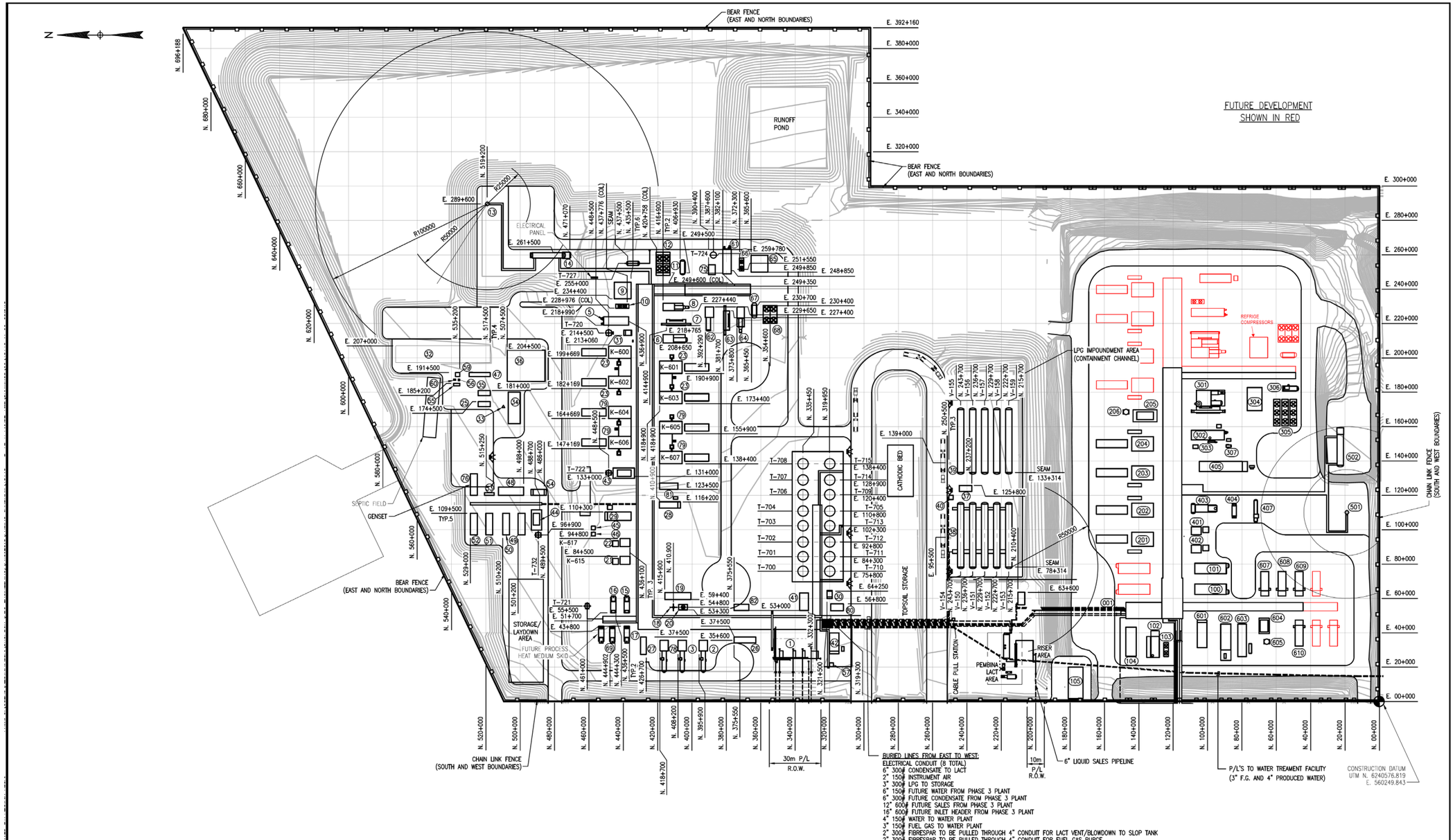
Possible Emergency Scenarios		
Tank Truck Transport Incident		
Potential Causes	▪ Vehicle incident ▪ Severe weather	▪ Driver in medical distress ▪ Driver fatigue
Potential Hazards	▪ Fire / explosion, tank failure, vapour cloud. ▪ Local roads closed and traffic disrupted. ▪ Remote area may hinder prompt arrival of responders.	▪ Potential of transport truck fluids (fuel, oil, etc.) impacting a waterway.
Potential Risks	▪ Responder injury ▪ Public injury ▪ Environmental damage	▪ Property damage ▪ Loss of revenue
Prevention	▪ Training / exercises ▪ Preventative maintenance ▪ JSA (job safety analyses)	▪ Truck loading / unloading procedures ▪ Driver abstract checks
Preparedness	▪ Training / exercises ▪ Safety equipment maintained and tested	▪ Mutual aid agreements ▪ Member of WCSS
Response	▪ The first priority, if it is safe to do so, is to protect the driver, the public and the environment. ▪ If you are first on the scene, call emergency services. ▪ Contact Supervisor. ▪ The Pacific Canbriam Supervisor contacts the appropriate regulatory agencies. ▪ If the incident occurs on a private road owned by Pacific Canbriam, the Pacific Canbriam Supervisor will contact the Area Manager who will make a decision on whether to enact the Corporate ERP.	▪ On a public roadway, the Police or Fire Department will control the scene and may contact CANUTEC, who will notify ERAC. ▪ The Fire Department implements a strategy to control the vapour cloud and bring in additional resources. In the event of a fire, water will be needed to extinguish or cool the transport tank. ▪ If the emergency escalates, the Fire Department and / or the Incident Commander may call ERAC and implement the ERAP.
Recovery	▪ Incident investigation ▪ Develop a restoration plan ▪ Perform appropriate repairs ▪ Investigate the need to upgrade or improve facility equipment	▪ Keep all affected parties informed of the situation ▪ Restore any part of the environment damaged by or during the emergency

Area Specifics

Altares b-72-A/94-B-8 Storage Tanks														
E2 ID	**CAS #**	**UN #**	**Facility Name**	**Location**	**Substance**	**Hazard Category**	**Storage Type**	**Tank Volumes**	**Maximum Capacity of Largest Vessel**	**Maximum Quantity Expected on Site**	**Suggested Spill Evacuation Radius (m)**	**Suggested Fire Evacuation Radius (m)**	**Calculated Evacuation Radius (m)**	**Suggested BLEVE Evacuation Radius (m)**
Altares b-72-A Facility														
4891	64741-48-6	1075	Altares b-72-A Facility	b-72-A/94-B-8	LPG	Explosion Hazard (E)	12 Bullets	397.47 m^3	211 metric tonnes	2110 metric tonnes	**800**	**1600**	**1050**	**See page 20**
4891	64741-47-5	1268	Altares b-72-A Facility	b-72-A/94-B-8	Condensate	Combustible (C)	12 Tanks	2000 bbl	106.70 metric tonnes	506.70 metric tonnes	**300**	**800**	**200**	

Note: The suggested evacuation radius for Condensate and LPG is based on the distance listed in the Emergency Response Guidebook (2024).

Sensitive Receptors within the CEPA Response Zones			
Receptor	**Potential Impact**	**Distance from Gas Plant**	**Contact Information**
Trapline 735T004	Public Safety / Environmental	Gas Plant is inside Trapper Boundary	Contact information for Trappers are on the second page of this plan.
Guide / Outfitter 750015	Public Safety / Environmental	Gas Plant is inside WMU Boundary	Contact information for Guides / Outfitters are on the second page of this plan.
Range Tenure RAN073263	Public Safety / Environmental	Gas Plant is inside Range Tenure Boundary	Contact information for Range Tenures are on the second page of this plan.
Surface Developments - 6	Public Safety	Nearest surface development is approximately 0.5 km.	Contact information for residents / businesses can be found at the back of this section
Manned Oil and Gas Facilities	Public Safety	Nearest surface development is approximately 0.5 km.	Contact information for residents / businesses can be found at the back of this section



NO.	REVISION	PROJ. No.	BY	DATE	CHK.	DATE
B	ADDED LEASE BOUNDARY OVERLAY, ISSUED FOR INFORMATION	–	ASA	2019.01.28		
A	ISSUED FOR INFORMATION	–	ASA	2019.01.16		

PERMIT STAMP:

	BY	DATE
DRN.	ASA	2019.01.16
CHK.		
APP'D.		
L.S.D.	b-72-A & c-02-A/94-B-8	

ALLARDYCE BOWER ABC CONSULTING INC.
www.abcengineering.ca

Canbriam

ALTARES SWEET GAS PLANT (PHASES 1 THRU 4)
PLOT PLAN

SCALE	DRAWING NUMBER	REV
1:1000	13115-A-00-03-01	B

Characteristics and Dangers of Condensate

- Highly flammable.
- Will be easily ignited by heat, sparks or flames.
- Vapours may form explosive mixtures with air.
- Vapours may travel to source of ignition and flash back.
- Most vapours are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Vapour explosion hazard indoors, outdoors or in sewers
- Those substances designated with a **(P)** may polymerize explosively when heated or involved in a fire.
- Runoff to sewer may create fire or explosion hazard.
- Containers may explode when heated.
- Many liquids are lighter than water.
- May cause toxic effects if inhaled or absorbed through skin.
- Inhalation or contact with material may irritate or burn skin and eyes.
- Fire will produce irritating, corrosive and / or toxic gases.
- Vapours may cause dizziness or suffocation.
- Runoff from fire control or dilution water may cause pollution.

Characteristics and Dangers of Liquid Petroleum Gases (LPG)

- Extremely flammable.
- Will be easily ignited by heat, sparks or flames.
- Will form explosive mixtures with air.
- Vapors from liquefied gas are initially heavier than air and spread along ground.
- Vapors may travel to source of ignition and flash back.
- Cylinders exposed to fire may vent and release flammable gas through pressure relief devices.
- Containers may explode when heated.
- Ruptured cylinders may rocket.
- Vapors may cause dizziness or asphyxiation without warning, especially when in closed or confined areas.
- Some vapors may be irritating if inhaled at high concentrations.
- Contact with gas or liquefied gas may cause burns, severe injury and / or frostbite.
- Fire may produce irritating and / or toxic gases.

General First Aid

- Call 911 or emergency medical service.
- Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and avoid contamination.
- Move victim to fresh air if it can be done safely.
- Administer oxygen if breathing is difficult.
- If victim is not breathing:
  - DO NOT perform mouth-to-mouth resuscitation; the victim may have ingested or inhaled the substance.
  - If equipped and pulse detected, wash face and mouth, then give artificial respiration using a proper respiratory medical device (bag-valve mask, pocket mask equipped with a one-way valve or other device).

  - If no pulse detected or no respiratory medical device available, provide continuous compressions. Conduct a pulse check every two minutes or monitor for any signs of spontaneous respirations.
- Remove and isolate contaminated clothing and shoes.
- For minor skin contact, avoid spreading material on unaffected skin.
- In case of contact with substance, remove immediately by flushing skin or eyes with running water for at least 20 minutes.
- For severe burns, immediate medical attention is required.
- Effects of exposure (inhalation, ingestion, or skin contact) to substance may be delayed.
- Keep victim calm and warm.
- Keep victim under observation.
- For further assistance, contact your local Poison Control Center.
- **Note:** Basic Life Support (BLS) and Advanced Life Support (ALS) should be done by trained professionals.

Liquefied Petroleum Gas (LPG)

Gases – Flammable (Including Refrigerated Liquids) – Guide 115 – Taken from the Emergency Response Guidebook 2024

Potential Hazards

FIRE OR EXPLOSION

- **Extremely flammable.**
- May be easily ignited by heat, sparks or flame.
- Will form explosive mixtures with air.
- Vapours from liquefied gas are initially heavier than air and spread along the ground.

CAUTION: Methane is lighter than air and will rise. Hydrogen and Deuterium fires are difficult to detect since they burn with an invisible flame. Use an alternate method of detection (thermal camera, broom handle, etc.)

- Vapours may travel to source of ignition and flashback.
- Cylinders exposed to fire may vent and release toxic and flammable gas through pressure relief devices.
- Containers may explode when heated.
- Ruptured cylinders may rocket.

CAUTION: When LNG – Liquefied natural gas (UN1972) is released on or near water, product may vaporize explosively.

HEALTH

- Vapors may cause dizziness or asphyxiation without warning, especially when in closed or confined areas.
- Some may be irritating if inhaled at high concentrations.
- Contact with gas, liquefied gas or cryogenic liquids may cause burns, severe injury and/or frostbite.
- Fire may produce irritating and/or toxic gases.

Public Safety

- **Call 911. Then call emergency response telephone number on shipping paper.** If shipping paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.
- Keep unauthorized personnel away.
- Stay upwind, uphill and/or upstream.
- Many gases are heavier than air and will spread along the ground and collect in low or confined areas (sewers, basements, tanks, etc.).

PROTECTIVE CLOTHING

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing provides thermal protection **but only limited chemical protection**.
- Always wear thermal protective clothing when handling refrigerated/cryogenic liquids.

EVACUATION

Immediate Precautionary Measure

- Isolate spill or leak area for at least 100 metres (330 feet) in all directions.

Large Spill

- Consider initial downwind evacuation for at least 800 metres (0.5 mile)

Fire

- If tank, rail tank car or highway tank is involved in a fire, ISOLATE for 1600 meters (1 mile) in all directions; also, consider initial evacuation for 1600 meters (1 mile) in all directions.
- In fires involving Liquefied Petroleum Gases (LPG) (UN1075), Butane (UN1011), Butylene (UN1012), Isobutylene (UN1055), Propylene (UN1077), Isobutane (UN1969), and Propane (UN1978), also refer to the "BLEVE – Safety Precautions" section.

Liquefied Petroleum Gas (LPG)

Emergency Response

FIRE
Do not extinguish a leaking gas fire unless leak can be stopped.

SMALL FIRE
- Dry chemical or CO_2.

LARGE FIRE
- Water spray or fog.
- If it can be done safely, move undamaged containers away from the area around the fire.
-

CAUTION: For **LNG - Liquefied natural gas (UN1972)** pool fires, DO NOT USE water. Use dry chemical or high-expansion foam.

FIRE INVOLVING TANKS
- Fight fire from maximum distance or use unmanned master stream devices or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Do not direct water at source of leak or safety devices; icing may occur.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks in direct contact with flames.
- For massive fire, use unmanned master stream devices or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

SPILL OR LEAK
- ELIMINATE all ignition sources (no smoking, flares, sparks or flames) from immediate area.
- All equipment used when handling the product must be grounded.
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- If possible, turn leaking containers so that gas escapes rather than liquid.
- Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
- Do not direct water at spill or source of leak.
- **CAUTION:** For **LNG - Liquefied natural gas (UN1972)**, DO NOT apply water, regular or alcohol-resistant foam directly on spill. Use a high-expansion foam if available to reduce vapors.
- Prevent spreading of vapors through sewers, ventilation systems and confined areas.
- Isolate area until gas has dispersed.

CAUTION: When in contact with refrigerated/cryogenic liquids, many materials become brittle and are likely to break without warning.

FIRST AID
Refer to the "General First Aid" section on Page 14.

Specific First Aid:
- Clothing frozen to the skin should be thawed before being removed.
- In case of contact with liquefied gas, only medical personnel should attempt thawing frosted parts.
- In case of burns, immediately cool affected skin for as long as possible with cold water. Do not remove clothing if adhering to skin.

Condensate

Flammable Liquids (Water – Immiscible / Noxious) – Guide 128 – Taken from the Emergency Response Guidebook 2024

Potential Hazards

FIRE OR EXPLOSION

- **Highly flammable: Will be easily ignited by heat, sparks or flames.**
- Vapors may form explosive mixtures with air.
- Vapors may travel to source of ignition and flash back.
- Most vapors are heavier than air. They will spread along the ground and collect in low or confined areas (sewers, basements, tanks, etc.).
- Vapor explosion hazard indoors, outdoors or in sewers.
- Those substances designated with a **(P)** may polymerize explosively when heated or involved in a fire.
- Runoff to sewer may create fire or explosion hazard.
- Containers may explode when heated.
- Many liquids will float on water.
- Substance may be transported hot.
- For hybrid vehicles, GUIDE 147 (lithium ion or sodium ion batteries) or GUIDE 138 (sodium batteries) should also be consulted.

HEALTH

- Inhalation or contact with material may irritate or burn skin and eyes.
- Fire may produce irritating, corrosive and/or toxic gases.
- Vapors may cause dizziness or asphyxiation, especially when in closed or confined areas.
- Runoff from fire control or dilution water may cause environmental contamination.

Public Safety

- **Call 911. Then call emergency response telephone number on shipping paper.** If shipping paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.
- Keep unauthorized personnel away.
- Stay upwind, uphill and/or upstream.
- Ventilate closed spaces before entering, but only if properly trained and equipped.

PROTECTIVE CLOTHING

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing provides only thermal protection **but only limited chemical protection.**

EVACUATION

Immediate Precautionary Measure

- Isolate spill or leak area for at least 50 metres (150 feet) in all directions.

Large Spill

- Consider initial downwind evacuation for at least 300 metres (1000 feet)

Fire

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 metres (1/2 mile) in all directions; also, consider initial evacuation for 800 metres (1/2 mile) in all directions.

Condensate

Emergency Response

FIRE
Caution: The majority of these products have a very low flash point. Use of water spray when fighting fire may be inefficient.
CAUTION: For mixtures containing alcohol or polar solvent, alcohol-resistant foam may be more effective.

SMALL FIRE
- Dry chemical, CO2, water spray or regular foam. If regular foam is ineffective or unavailable, use alcohol-resistant foam.

LARGE FIRE
- Water spray, fog or regular foam. If regular foam is ineffective or unavailable, use alcohol-resistant foam.
- Avoid aiming straight or solid streams directly onto the product.
- If it can be done safely, move undamaged containers away from the area around the fire.

FIRE INVOLVING TANKS OR CAR / TRAILER LOADS
- Fight fire from maximum distance or use unmanned master stream devices or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- For petroleum crude oil, do not spray water directly into a breached tank car. This can lead to a dangerous boil over.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks in direct contact with flames.
- For massive fire, use unmanned master stream devices or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

SPILL OR LEAK
- ELIMINATE all ignition sources (no smoking, flares, sparks or flames) from immediate area.
- All equipment used when handling the product must be grounded.
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- Prevent entry into waterways, sewers, basements or confined areas.
- A vapor-suppressing foam may be used to reduce vapors.
- Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
- Use clean, non-sparking tools to collect absorbed material.

LARGE SPILL
- Dike far ahead of liquid spill for later disposal.
- Water spray may reduce vapour but may not prevent ignition in closed spaces.

FIRST AID
Refer to the "General First Aid" section on Page 14.

Specific First Aid:
- Wash skin with soap and water.
- In case of burns, immediately cool affected skin for as long as possible with cold water. Do not remove clothing if adhering to skin.

WARNING: The data given is approximate and should only be used with extreme caution. These times can vary from situation to situation. LPG tanks have been known to BLEVE within minutes, therefore, never risk life based on these times.

BLEVE (USE WITH CAUTION)

Capacity		Diameter		Length		Propane Mass		Minimum Time To Failure For Severe Torch	Approximate Time To Empty For Engulfing Fire	Fireball Radius		Emergency Response Distance		Minimum Evacuation Distance		Preferred Evacuation Distance		Cooling Water Flow Rate	
Litres	Gallons	m	ft	m	ft	kg	lb	Minutes	Minutes	m	ft	m	ft	m	ft	m	ft	Litres/min	USgal/min
100	26.4	0.3	1	1.5	4.9	40	88	4	8	10	33	90	295	154	505	307	1007	97	26
400	106	0.61	2	1.5	4.9	160	353	4	12	16	52	90	295	244	801	488	1601	195	52
2000	528	0.96	3.1	3	9.8	800	1764	5	18	28	92	111	364	417	1368	834	2736	435	115
4000	1057	1	3.3	4.9	16.1	1600	3527	5	20	35	115	140	459	525	1722	1050	3445	615	163
8000	2113	1.25	4.1	6.5	21.3	3200	7055	6	22	44	144	176	577	661	2169	1323	4341	870	230
22000	5812	2.1	6.9	6.7	22	8800	19401	7	28	62	203	247	810	926	3038	1852	6076	1443	381
42000	11095	2.1	6.9	11.8	38.7	16800	37038	7	32	77	253	306	1004	1149	3770	2200	7218	1994	527
82000	21662	2.75	9	13.7	45	32800	72312	8	40	96	315	383	1257	1435	4708	2200	7218	2786	736
140000	36984	3.3	10.8	17.2	56.4	56000	123459	9	45	114	374	457	1499	1715	5627	2200	7218	3640	962

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Reporting

Canadian Environmental Protection Act (CEPA) Reporting Requirements
These reporting requirements are set out by Environment & Climate Change Canada, however, notification and reporting is made through Emergency Management & Climate Readiness (EMCR) **1.800.663.3456**
Section 201 of CEPA 1999 sets out the obligation to notify the environmental emergencies to the Department. This section requires that, when an environmental emergency occurs in respect of any of the substances listed under the Regulations or interim orders (eg. Schedule 1 of the Regulations), any person who owned or had the charge, management, or control of the substance immediately before the environmental emergency, or any person who caused or contributed to the environmental emergency, must, as soon as possible, notify the regional enforcement or any other person designated by the regulations.
▪ A **verbal notification** is to be made by telephone **as soon as possible** in the circumstances to EMCR **1.800.663.3456**. ▪ A **written report (Schedule 8 Notice)** must be submitted in the online E2 reporting system **as soon as possible** in the circumstances. The system is accessed through the Single Window Information Management (SWIM) system (available at: https://ec.ss.ec.gc.ca). Section 18 of the Regulations clarifies that written reports must be provided only when the environmental emergency meets at least one of the following three criteria: **(a)** has or may have an immediate or long-term harmful effect on the environment; **(b)** constitutes or may constitute a danger to the environment on which human life depends; or **(c)** constitutes or may constitute a danger in Canada to human life or health. If there is any doubt as to whether the incident is a reportable environmental emergency, the incident should be reported, and a written report should be provided.
Environmental emergencies involving substances listed in Schedule 1 of the Regulations are required to be reported as soon as possible. The obligation to report environmental emergencies applies whether or not the quantities of substances or container capacity are met or are above the specified quantity threshold.

Fisheries and Oceans Canada (DFO) Reporting Requirements

If there is a release into a water body of **any** substance deleterious to fish, contact Fisheries and Oceans Canada (DFO) (only if fish bearing waterbody) at **1.800.889.8852.**

Transport Canada Reporting Requirements

If a spill occurs during the transportation or handling of a Transportation of Dangerous Goods regulated product where the volume exceeds those specified in the following table, the spill must be immediately reported to the local police, EMCR at **1.800.663.3456 and** CANUTEC – **1.888.226.8832**

TRANSPORT CANADA REPORTING REQUIREMENTS

Any spill or release that goes off-lease that has caused, is causing, or may cause an adverse effect, must immediately be reported to the local police, EMCR – 1.800.663.3456 and CANUTEC – 1.888.226.8832

Class	Division	Characteristics of Dangerous Goods	Quantity	Packing Group
1 Explosives (Sections 2.9 – 2.12)	1.1	A substance or article with a mass explosion hazard	Any quantity	II – Hazardous Substances
	1.2	A substance or article with a projection hazard but not a mass explosion hazard		
	1.3	A substance or article which has a fire hazard and either a minor blast hazard or a minor projection hazard or both, but does not have a mass explosion hazard		
	1.4	A substance or article which presents no significant hazard beyond the package in the event of ignition or initiation during transport		
	1.5	A very insensitive substance with a mass explosion hazard		
	1.6	Extremely insensitive article with no mass explosion hazard		
2 Gases (Sections 2.13 – 2.17)	2.1	A flammable gas which is easily ignited and burns	Any quantity	Not Applicable
	2.2	A non-flammable, non-toxic, non-corrosive gas		
	2.3	A toxic gas		
3 Flammable Liquids (Sections 2.18 – 2.19)	*	A flammable liquid with a closed-cup flash point less than or equal to 60.0°C	Any quantity (Packing Group I or II) 30 L or 30 kg (Packing Group III)	I – Very Hazardous Substances or II - Hazardous Substances, or III – Moderately Hazardous Substances
4 Flammable Solids (Sections 2.20 – 2.22)	4.1	A flammable solid which is readily combustible and may cause fire through friction or from heat retained from manufacturing	Any quantity (Packing Group I or II) 30 L or 30 kg (Packing Group III)	I – Very Hazardous Substances or II - Hazardous Substances, or III – Moderately Hazardous Substances
	4.2	A spontaneously combustible substance that ignites when exposed to air		
	4.3	A water-reactive substance which emits flammable gas when it comes into contact with water		
5 Oxidizing Substances, Organic Peroxides (Sections 2.23 – 2.25)	5.1	An oxidizing substance which may yield oxygen and contribute to the combustion of other material	Any quantity (Packing Group I or II) 30 L or 30 kg (Packing Group III)	I – Very Hazardous Substances or II - Hazardous Substances, or III – Moderately Hazardous Substances
	5.2	An organic peroxide which releases oxygen readily and may be liable to explosive decomposition, or sensitive to heat, shock or friction		
6 Toxic and Infectious Substances (Sections 2.26 – 2.36)	6.1	A toxic substance that is liable to cause harm to human health	Any quantity (Packing Group I or II) 30 L or 30 kg (Packing Group III)	I – Very Hazardous Substances or II - Hazardous Substances, or III – Moderately Hazardous Substances
	6.2	An infectious substance	Any quantity	A or B
7 Radioactive Materials (Sections 2.37 – 2.39)	None	Radioactive materials as defined in the Packaging and Transport of Nuclear Substance Regulations	A level of ionizing radiation greater than the level established in section 39 of the "Packaging and Transport of Nuclear Substance Regulations 2015"	Not Applicable
8 Corrosive Substances (Sections 2.40 – 2.42)	None	Solids or liquids such as acids or alkalis materials that cause destruction of the skin or corrode metals	Any quantity (Packing Group I or II) 30 L or 30 kg (Packing Group III)	I – Very Hazardous Substances or II - Hazardous Substances, or III – Moderately Hazardous Substances
9 Miscellaneous Products, Substances or Organisms (Sections 2.43 – 2.45)	None	A regulated substance that cannot be assigned to any other class. It includes genetically modified micro-organisms, marine pollutants and substances transported at elevated temperatures	30 L or 30 kg	II – Hazardous Substances or III – Moderately Hazardous Substances, or without packing group

Training and Exercises

Environmental emergency exercises involve a simulation relating to an emergency that can reasonably be expected to occur with substance(s) at the facility that are subject to the Regulations. The simulations are meant to explore, learn from and prepare for scenarios described within the E2 plan that potentially have harmful effects on the environment or human life or health. Exercising the E2 plan provides those who are responsible for the plan with valuable information regarding the facility's readiness to respond to one or multiple elements of their plan. Any lessons learned via the exercise can be used to update and improve the plan.

The Regulations require that E2 plans be exercised on an annual basis. A full-scale exercise must also be conducted every five years. Based on these exercises, the E2 plans must be reviewed and updated, as required. Pacific Canbriam Energy Limited is required to keep a record of the results of these annual and full-scale simulation exercises, including the date and summary of the exercise, the results of the exercise and any modifications made to the plan as a result. Up-to-date exercise records are kept separately from this document within Pacific Canbriam Energy Limited's record management system.

Types of E2 Plan Exercises

Annual Simulation Exercise

This is an exercise that simulates the response to an environmental emergency that involves the release of one Schedule 1 substance from each of the hazard categories present at the facility. Examples that fulfill the requirements include:

Drills
These are supervised activities that allow emergency response team members to validate a specific operation or function, usually focused on one or two key skills such as shutdown procedures or valve operation. Drills can also be used to determine if plans can be executed as designed, to assess whether more training is required, or to reinforce best practices.

Tabletop Exercises
This type of exercise is presented by a facilitator in an informal setting with no hands-on practice or fieldwork. This type of exercise is intended to generate discussion about various issues regarding a hypothetical, simulated emergency. Tabletop exercises can boost general awareness, validate plans and procedures, rehearse concepts, and / or assess the types of systems needed to guide the prevention of, protection from, mitigation of, response to, and recovery from a defined incident.

Functional Exercises
These exercises provide a more realistic simulation of an emergency compared to a tabletop exercise. They are typically conducted in "real-time" in a classroom setting or a designated site for a Command Post. The Command Post Team "takes action" – making decisions, simulating the deployment of resources, and responding to new developments.

In comparison to a full-scale exercise, a functional exercise involves fewer participants, and the movement of personnel and equipment is simulated.

Full-Scale Simulation Exercise
This is an action-based simulation exercise requiring the deployment of personnel, resources, and equipment. The scenario must involve at least one Schedule 1 substance located at the facility. Full-scale exercises are typically the most complex and resource-intensive because they are staged in a realistic field environment with equipment deployment and involve many participants performing assigned tasks in real-time. Full-scale exercises give the team an opportunity to practice and validate their plans, policies, and a wide variety of the skills covered in response team training. Volunteers may play the role of victims and mock injuries can be staged. These exercises may involve other agencies, although role players representing other agencies can be used if desired.

Cycle for Annual Exercises

A different simulation exercise for each hazard category must be carried out annually so that all the environmental emergencies identified in the E2 plan will be exercised over time. If the facility has more than one substance from the same hazard category, you must simulate one environmental emergency identified in the E2 plan for one substance in that hazard category. ECCC recommends rotating substances when available, if applicable.

Example Exercise Cycle		
	Condensate	**LPG**
Hazard Category	Combustible (C)	Explosion (E)
Probable Case	Spill / Leak	Spill / Leak
Worst Case	Fire / BLEVE	Fire / BLEVE
Year 1	Condensate – Flash Fire	LPG – Fire / BLEVE
Year 2	Condensate – Spill / Leak	LPG – Spill / Leak
Year 3	Condensate – Pool Fire	LPG – Fire / BLEVE
Year 4	Condensate – Spill / Leak	LPG – Spill / Leak
Year 5	Full Scale for any (1) of the Hazard Categories – any scenario.	

Training Requirements

Pacific Canbriam Energy Limited is responsible for ensuring the readiness and expertise of their personnel required to activate the E2 Plan.

The following table summarizes the training that has been or will be provided to prepare personnel at the facility who will respond in the event of an environmental emergency.

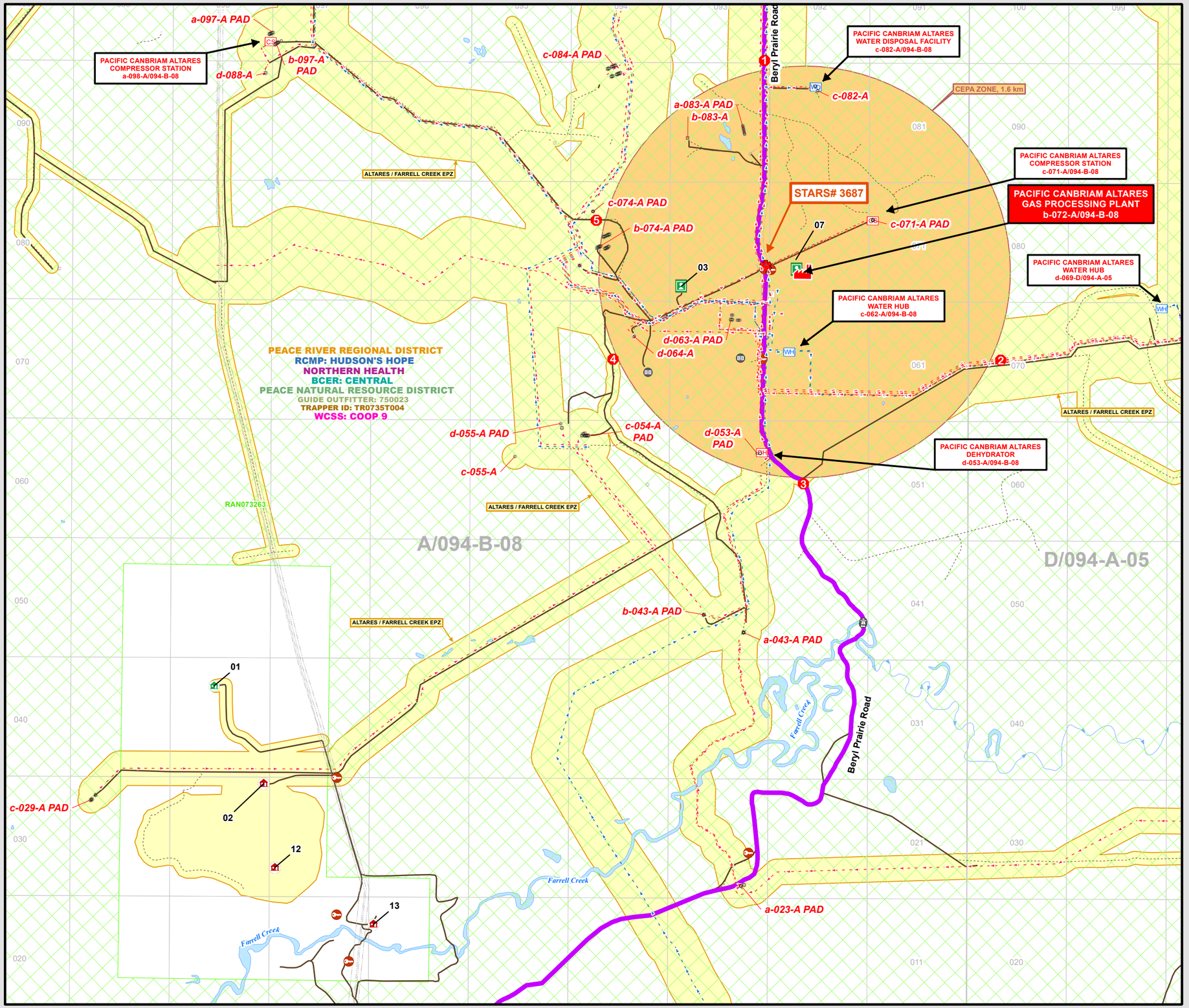
Training Record			
Position	**Training**	**Date**	**Renewal**
Incident Commander	ERP / E2 Plan	Up-to-date training records are kept separately from this document within Pacific Canbriam Energy Limited's record management system.	
	ICS 100		
	ICS 200		
	WHMIS		
	H2S Alive		
Safety Officer	ICS 100		
	ICS 200		
	WHMIS		
Information Officer	ICS 100		
	ICS 200		
	Media Relations Training		
	Public Relations Training		

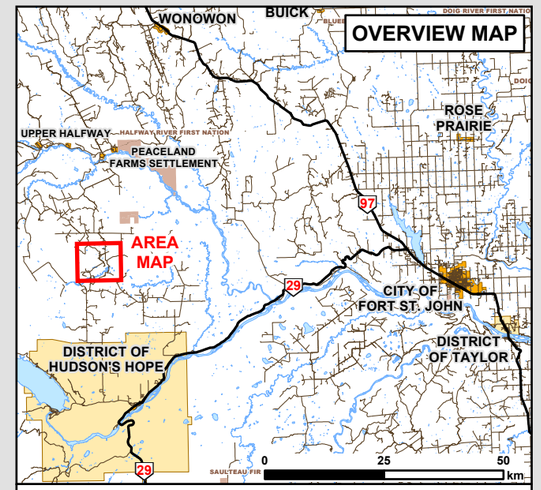
Exercise Record				
Date of Exercise	Location	Hazard Category	Type of Emergency	Annual / Full Scale

Safety Data Sheets (SDS)

The following SDS that are applicable to the Pacific Canbriam b-72-A/94-B-8 Facility are located on Pacific Canbriam's sdsBinders online system:

- Condensate (Sweet)
- LPG (Sweet)
- Natural Gas (Sweet)
- Produced Water (Sweet)





FACILITY TYPE
- GAS PROCESSING PLANT
- CENTRAL TREATMENT PLANT
- CENTRAL PROCESSING FACILITY
- INJECTION PLANT
- COMPRESSOR
- PUMP STATION
- PIPELINE TERMINAL
- DEHYDRATOR
- WASTE PROCESSING
- METER STATION
- HEADER / RISER
- BATTERY
- SATELLITE
- WATER DISPOSAL
- CHECK VALVE
- BLOCK VALVE
- EMERGENCY SHUTDOWN VALVE
- PROPANE BULLET
- TANK

SURFACE DEVELOPMENT
- RESIDENCE OCCUPIED
- BUSINESS OCCUPIED
- RESIDENCE SENSITIVE
- BUSINESS SENSITIVE
- RESIDENCE SEASONAL
- BUSINESS SEASONAL
- PUBLIC FACILITY
- STRUCTURE VACANT
- STRUCTURE ABANDONED
- STRUCTURE OUTSIDE OF EPZ
- OTHER BUILDINGS

PIPELINE TYPE
- OIL SOUR - OPERATING
- OIL SWEET - OPERATING
- OIL PRODUCTS - DISCONTINUED
- GAS SOUR - OPERATING
- GAS SWEET - OPERATING
- GAS PRODUCTS - DISCONTINUED
- WATER SOUR - OPERATING
- WATER SWEET - OPERATING
- WATER - DISCONTINUED
- HVP - OPERATING
- HVP - DISCONTINUED
- LVP - OPERATING
- LVP - DISCONTINUED
- STEAM / AIR - OPERATING
- STEAM / AIR - DISCONTINUED
- MISC - OPERATING
- MISC - DISCONTINUED

WELL TYPE
- WELL - GAS
- WELL - OIL
- WELL - WATER SOURCE
- WELL - WATER INJECTION
- WELL - OBSERVATION
- WELL - LOCATION
- WELL - GAS SUSPENDED
- WELL - OIL SUSPENDED

NON-CLIENT OPERATORS
- GAS PROCESSING PLANT
- FACILITY
- WELL
- PIPELINE

EMERGENCY RESPONSE
- EPZ (EMERGENCY PLANNING ZONE)
- IIZ (INITIAL ISOLATION ZONE)
- CEPA ZONE
- EPZ (OTHER SYSTEM)
- EGRESS
- ERP ACCESS
- HAZARD POINT
- CAUTION POINT
- FLOODING INCIDENT
- WILDFIRE INCIDENT
- INCIDENT COMMAND POST (ICP)
- MUSTER POINT
- STAGING AREA
- ROADBLOCK
- DEAD END
- GATED - KEYED ACCESS
- SPILL CONTROL POINT - WCSS/SK SPILL COOP
- SPILL CONTROL POINT - CRITICAL WCSS/SK SPILL COOP
- SPILL CONTROL POINT - CLIENT
- STARS SITE
- EVACUATION / RECEPTION CENTRE
- EVACUATION ROUTE

CULTURE
- HIGHWAY - PRIMARY
- HIGHWAY - SECONDARY
- MAIN ACCESS ROAD
- OTHER ACCESS ROAD / TRAIL
- RAIL
- LOCAL AUTHORITY / MUNICIPAL BOUNDARY
- LAW ENFORCEMENT
- HEALTH AUTHORITY
- REGULATOR AUTHORITY
- SPILL COOP
- NATURAL RESOURCE DISTRICT (B.C. Only)
- FOREST MANAGEMENT AREA (AB Only)
- WMU / GUIDE OUTFITTER
- TRAPLINE
- PROVINCE
- WATER
- POPULATED AREA
- FIRST NATION / MÉTIS
- RECREATIONAL AREA
- PARK / PROTECTED AREA
- GRAZING / RANGE TENURE (AB & BC)
- LANDOWNER
- RIGHTS HOLDER / ALLOTMENT USER
- CUTBLOCK
- TENURE OPENINGS
- MANAGED LICENCE
- FOREST COVER RESERVATIONS
- SURVEYED PARCELS
- MILITARY AREA
- FENCE
- FENCED AREA
- AIRPORT
- AIR STRIP
- HELI PAD
- TOWER - FORESTRY
- TOWER - COMMUNICATION
- TOWER - OTHER
- AIR MONITORING SITE
- ELECTRICAL SUBSTATION
- SENSITIVE WILDLIFE AREA
- RAIL CROSSING
- HISTORICAL SITE
- WATER CROSSING
- BRIDGE
- DAM
- WCSS EQUIPMENT
- TRAILHEAD
- BOAT LAUNCH
- SOLAR FARM
- WIND FARM
- SPECIAL INTEREST GROUP
- HOSPITAL
- MEDICAL CENTER
- SECURITY CHECKPOINT
- SCHOOL
- PLACE OF WORSHIP
- CEMETERY
- RAIL FACILITY
- COMMUNITY CENTRE
- INDUSTRY CAMP
- GRAVEL PIT
- STORAGE YARD
- GOLF COURSE
- CAMPGROUND
- CAMPSITE
- PICNIC / REST AREA
- DUMP / LANDFILL

PACIFIC CANBRIAM ENERGY

NEBC FIELD SUPPLEMENT 2025
ALTARES b-72-A/094-B-08 AREA MAP

BEHR Integrated Solutions
www.behrintegrated.com

Drawn By: GS
Scale: 1:30,000 — Project No.: 15006
Map Projection: NAD 83 UTM 10 — Revision: 0 - AUG 2025

0 0.5 1 1.5 2 2.5
Kilometers

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Area Occupant Data

Confidential Data

Confidential data collected during the Public Involvement Program will only be included in manuals labelled as ***Confidential***.

All manuals will contain contact information for publicly listed data for area occupants within the HPZ that may include Trappers, Grazing Lease Holders and Industrial Operators. Refer to each site-specific area in the *Assets and Equipment Section* for this information.

The following reports are only included in copies of the confidential ERP:

Surface Development – Summary Report
- Includes contact information for all surface developments within the HPZ.
- Report sorted by Map Coordinates.

Special Needs Contacts within the EPZ – Summary Report
- Includes residents who have indicated they may require early response actions due to medical needs or communication barriers.
- Report sorted by Map Coordinates.

School / Student – Summary Report
- Includes children who may be in school during an incident.
- Report sorted by Map Coordinates.

Surface Development – Detail Report (per location)
- Includes all information pertaining to a specific location.
- The individual detail reports are sorted by Map Coordinates.

Surface Development – Summary Report (Alphabetical)
- Includes contact information for all surface developments within the HPZ.

Report is sorted Alphabetically.

Public Information Package

A public information package was prepared and delivered to area occupants during the public involvement process. A copy of the public information package is included in all manuals.

EPZ STAKEHOLDER SUMMARY REPORT

Pacific Canbriam Energy/Altares Plant b-72-A/94-B-08

The following report provides an overview of all Stakeholders identified within the Emergency Planning Zone, based on information gathered during the most recent Public Notification and Consultation Campaign, and other situational awareness data gathered during the most recent Emergency Response Plan update.

EMERGENCY PLANNING ZONE (EPZ) OVERVIEW	
Surface Developments within the EPZ	6
Occupants within the EPZ (includes Resident and Non-Resident Land Users)	77
Students attending school who live within the EPZ	1
Surface Developments with Sensitivities (There may be more than one sensitivity per Surface Development)	3

OCCUPANT SENSITIVITIES OVERVIEW (Sensitivities are identified for response activities and for consultation awareness)	
Aboriginal Community Member	0
Evacuation Assistance	0
Language / Comprehension Barrier	0
Not Contacted During Public Notification / Consultation Campaign	2
Other Special Needs	0
Potentially Contentious Occupant	1
Requires Early Notification	0
Sensitive to Industry Development	0

SURFACE DEVELOPMENTS OVERVIEW	
PRIVATE PROPERTY (Locations where people live)	
Residences – Abandoned	0
Residences – Not contacted	2
Residences – Occupied Full Time	1
Residences – Seasonal / Part Time	1
Residences – Vacant	0
Building - Unoccupied	0
Resident Surface Developments within the EPZ	4
Unoccupied Surface Developments within the EPZ	0

PUBLIC FACILITIES (Locations where members of the public may congregate)	
Airport/Airstrip	0
Boat Launch - Recreational	0
Camp site – Off-Road	0
Campground - Official	0
Campsite - Developed	0
Cemetery	0
Community Center	0
Evacuation / Reception Centre	0

Golf Course	0
Helispot	0
Hospital	0
Picnic / Rest Area	0
Place of Worship	0
Public Facility	0
School	0
Public Facility Locations within the EPZ	0

NON RESIDENT LAND USERS (Locations where people may be working)	
Business / Industrial Land Users	
Business	0
Other O&G Operator Battery	0
Other O&G Operator Camp	1
Other O&G Operator Compressor	0
Other O&G Operator Plant	1
Business / Other O&G Operator Locations within the EPZ	2

Other Land Users (Locations where people may be working periodically)	
Air Monitoring Site / Trailer	0
Electrical Sub Station	0
Gravel Pit	0
Guide / Outfitter	0
Landowner	0
Military / Base	0
Registered Trapline / Trapper	0
Rights Holder / Allotment User	0
Security Gate / Checkpoint	0
Solar Farm	0
Special Interest Group	0
Spill Control Point	0
Storage / Laydown Yard	0
Tower - Communication	0
Tower - Forestry	0
Tower - Other	0
Wind Farm	0
Other Non - Resident Land Users within the EPZ (This total does not include Businesses / Industrial Locations above)	0

ABOUT SOUR GAS

Hydrogen Sulphide (H_2S) is a colourless, flammable, toxic gas. It affects people differently depending on concentration and length of exposure. At very low concentrations it has an offensive odour (similar to rotten eggs); however, it is undetectable by odour at higher concentrations. A person can be exposed to H_2S concentrations of up to 1 part per million for up to 8 hours (government exposure limits) without a breathing apparatus.

In the unlikely event of an emergency, the ERP will be activated and the safety of the public will be maximized through evacuation, sheltering or ignition procedures. If you suspect H_2S or SO_2 in the air please remain indoors and contact the Pacific Canbriam 24 hour emergency number on the first and last page of this package.

HYDROGEN SULPHIDE (H_2S)

- Found in decaying organic matter, natural oil and gas, silos and sewers
- Found at gas temperatures above -60°C
- Flammable – burns to form SO_2
- Odour of rotten eggs at low concentrations- kills all sense of smell at higher concentrations
- Will tend to disperse more slowly in sheltered or calm low lying areas
- Extremely toxic
- At lower concentrations (20-50 ppm) irritates mucous membranes (eyes, throat, lungs), causes headaches, dizziness, nausea, may cause pulmonary edema (fluid in the lungs) upon prolonged exposure
- High concentrations (500-1000 ppm) may cause paralysis of the respiratory centre in the brain – breathing stops, suffocation begins

GENERAL HEALTH EFFECTS OF H_2S

Concentration	Effects
0.01-0.3 ppm	Detectable by odour.
1-5 ppm	Moderate to strong offensive odour may cause nausea, tearing of the eyes, headaches or loss of sleep upon prolonged exposure. Effects are moderate.
10 ppm	Ceiling limit. (WorkSafe BC)
20-50 ppm	Slight eye and lung irritation. May cause eye damage after several days of exposure, may cause digestive upset and loss of appetite.
100 ppm	Eye and lung irritation.
150 ppm	Kills sense of smell, severe eye and lung irritation.
500 ppm	Serious damage to eyes within 30 minutes, severe lung irritation, unconsciousness and death within 4 to 8 hours.
1000 ppm	Breathing stops within 1 or 2 breaths.

It is important to note that burning sour gas turns the H_2S to Sulphur Dioxide (SO_2). The heat from the fire will carry the SO_2 and smoke up into the air where it will be dispersed over a large area. By the time the SO_2 comes back to ground level, the concentrations would normally only be detectable with the use of an electronic gas detection monitor. These levels should be well below the levels that provincial environment regulations accept.

EVACUATION - CONTINUED

Evacuation of the public outside the EPZ is mandatory when H_2S levels reach 10 ppm in un-evacuated areas. Pacific Canbriam will provide air monitoring, starting at a Level 1 Emergency, to determine H_2S levels.

As public safety is the primary goal during an incident, primary response efforts will be concentrated on members of the public. Response efforts for livestock and pets will be addressed at the time of incident based on the response needs and responder capabilities.

SHELTER IN PLACE

Shelter in place is the practice of remaining indoors during a sudden outdoor release of a hazardous substance.

Shelter in place is not a viable option for recreational users or transients, due to their inability to safely shelter.

Shelter in Place Instructions

- Immediately gather everyone indoors and remain there.
- Close and lock all windows and outside doors – if possible, tape the gaps around the door frames.
- Extinguish indoor wood burning fires - if possible, close the damper.
- Turn off appliances or equipment that either uses inside air, blows out inside air or sucks in outside air, such as:
  - Stoves
  - Fireplaces
  - Clothes dryers
  - Air conditioners
  - Bathroom and kitchen fans
  - Built in vacuum systems
- Turn off heat and hot water pilot lights.
- Leave all inside doors open.
- Wait in an interior upstairs room.
- Avoid using the telephone, except for emergencies, so that you can be contacted by emergency personnel.
- Stay tuned to local radio for possible information updates or for further instructions.
- Even if you see people outside do not leave until told to do so.
- If you are unable to follow these instructions, please notify company emergency response personnel.
- After the hazardous substance has passed through the area you will receive an all clear message from emergency response personnel along with instructions to:
  - Ventilate your building by opening all windows and doors.
  - Turn on fans, turn up thermostats, and furnace circulating fans.
- Once the building is completely ventilated return all equipment to normal.

IGNITION

If safety of the public cannot be assured by evacuation or sheltering, the sour gases escaping from the well will be ignited, this results in the H_2S being burned and converted to sulphur dioxide (SO_2).

- Ignition must take place when one of the following conditions has been met:
- Although required, evacuation of the response zones has not taken place.
- Monitoring results indicate H2S concentrations in excess of 10 ppm over a 3-minute average in un-evacuated parts of the EPZ.
- Monitored H2S concentrations exceed 1 ppm (1-hour average) in urban density developments.
- Monitoring is not taking place due to weather or other unforeseen circumstances.
- The release cannot be brought under control in the short term.

EPZ CALCULATIONS

H_2S EPZ CALCULATIONS:	MIN.	MAX.
Cumulative Release Volumes	0 m^3	0 m^3
H_2S Release Rates	0 m^3/s	0.0138 m^3/s
H_2S Concentrations	0 %	9.97 %
Hazard Planning Zones	0 m	348 m

LEVELS OF EMERGENCY

Level 1 - Moderate Emergency – ERP is activated

There is no immediate danger to the public or environment as no H2S has been released; and the emergency is confined to the lease or company property. A Level 1 Emergency is declared at the earliest sign of difficulty controlling the well and when all problems are contained within the well site area. These problems are usually handled without difficulty using techniques and equipment readily available on site. A Level 1 Emergency creates little or no media interest.

Level 2 – Major Emergency – ERP is activated

There is the potential for risk to the public or environment, as the emergency could extend beyond company property. However, control is still possible. A Level 2 Emergency creates local or regional media interest and outside and provincial agencies must be notified.

Level 3 - Serious Emergency – ERP is activated

There exists an immediate danger to the public or environment as control of the situation has been lost. A Level 3 Emergency creates Provincial or National media interest and immediate multi-agency and provincial government involvement is required.

PUBLIC PROTECTION

In the unlikely event that an emergency situation occurs which causes or creates a potentially dangerous situation to occupants within the EPZ, the best method of public protection would be implemented. Depending on an incident's specifics, Pacific Canbriam will implement the following method(s) of public protection.

EVACUATION

In case of a Level 1 Emergency, those residents/occupants who may require additional time to evacuate or cannot safely shelter in place will be contacted, advised of the situation and informed of the proper reception centre to evacuate to. A list of reception centres is provided at the back of this package.

In the event of a Level 2 or 3 Emergency, all residents/occupants within the EPZ would be contacted and instructed to evacuate immediately to the Reception Centre.

Pacific Canbriam will provide you with the safest route out of the emergency area to the Reception Centre. If you require assistance to evacuate, Pacific Canbriam personnel will be available to assist you. Upon arrival at the Reception Centre, please check in with the Pacific Canbriam representatives as they will be available to answer any questions or concerns you may have.

If you choose not to go the Reception Centre, we ask that you please tell the Pacific Canbriam representative where you are going and provide updated contact information so that we may confirm your safety and keep you informed. You will be advised when it is safe to return home. Pacific Canbriam will provide you with a Claims Form so that you can be reimbursed for reasonable out-of-pocket expenses resulting from the evacuation.

SULPHUR DIOXIDE (SO_2)

- Formed by the combustion of H_2S or sulphur and is non-flammable
- Found as a gas at temperatures above -10°C
- Has the odour that occurs when a wooden match is extinguished
- Highly irritating – dissolves to form sulphuric acid
- At lower concentrations irritates eyes, nose and throat, causes difficulty in breathing and shortness of breath
- Causes pulmonary edema at high concentrations – may be fatal
- Effects on heavy smokers are more severe

GENERAL HEALTH EFFECTS OF SO_2

Concentration	Effects
0.13 ppm	24 hour evacuation level (MWLAP Level B criteria).
0.34 ppm	One hour average evacuation level (MWLAP Level B criteria).
2 ppm	Eight hour Occupational Exposure Limit (WorkSafeBC).
3-5 ppm	Odour threshold.
5 ppm	15 minute Occupational Exposure Limit (WorkSafeBC).
8-12 ppm	Throat irritation, coughing, constriction in chest, tearing and smarting of the eyes.
10-50 ppm	Exposure 5 -15 minutes: increased irritation of the eyes, nose, throat, choking, coughing and in some cases, wheezing as a sign of narrowing of the airway (which increases the resistance of the air-flow).
150 ppm	Short–term endurance lost due to severe eye irritation and because of the effects on the membranes of the nose, throat and lungs.
500 ppm	Highly dangerous after an exposure of 30-60 minutes.
1000-2000 ppm	May be fatal with continued exposure.

CEPA E2

The Canadian Environmental Protection Act, 1999 - Environmental Emergency (CEPA E2) Regulations aim at enhancing the protection of the environment and human health in environmental emergency situations by promoting prevention and ensuring preparedness, response and recovery.

The Regulations contain a list of substances and other hazardous substances which, if they enter the environment as a result of an environmental emergency:

- Have or may have an immediate or long-term harmful effect on the environment or its biological diversity,
- Constitute or may constitute a danger to the environment on which human life depends, or Constitute or may constitute a danger in Canada to human life or health.

Any person in Canada who owns or manages a listed substance in a quantity at or over the prescribed minimum quantity is required to provide Environment and Climate Change Canada (ECCC) with information on the quantity of the substance, along with the facility location, a report that an environmental emergency plan has been prepared and a notice indicating that the emergency plan has been implemented within 90 days, six months and one year of the coming into force of the Regulations, respectively.

The emergency plan will have to address the types of emergencies that might reasonably occur, including both on-site and off-site consequences, and the associated prevention, preparedness, response and recovery issues

SUMMARY OF OPERATING CONDITIONS

CEPA Isolation Zone for a Large Spill	800 m
CEPA Isolation Zone & Evacuation Zone for a Fire	1600 m

PERSONAL INFORMATION & CONFIDENTIALITY

Consultations with residents and others in the EPZ to gather and/or confirm personal information is a BCER requirement for the purpose of preparing and maintaining an ERP. All information requested will be confidential and will be used solely in case of an emergency.

By providing the requested information, response plans can be designed with your particular circumstances in mind and will enhance communication, identify response priorities and improve Pacific Canbriam's ability to respond in the event of an emergency.

EMERGENCY CONTACTS

Thank you for taking the time to review this package. Should you have any further questions or concerns please feel free to contact any of the numbers below.

Pacific Canbriam Contact Information

Pacific Canbriam 24 Hour Emergency Number:	1.877.269.2877
Nauman Rasheed Chief Operating Officer	Bus: 403.817.9041 Ext 2141
Zitin Lamba Manager, Operations	Bus: 403.817.9052 Ext 2152

BC Energy Regulator (BCER)

24-Hr Number Public Inquiry & Emergency Reporting Line	800.500.BCER (2237)
BCER 24 Hour Number Fort St. John	250.794.5200
BCER Emergency Operations Centre Fax Line	250.794.5385

Regional District

Peace River Regional District Dawson Creek Office Fort St. John Office	800.670.7773 250.784.3200 250.785.8084

Reception Centres

Ramada by Wyndham Northern Grand Hotel & Conference Centre	9830 100 Avenue Fort St. John, BC	250.787.0521
Stillwater Inn & Suites	9504 Canyon Drive Hudson's Hope, BC	250.783.5400

CALL OR CLICK BEFORE YOU DIG!
800.474.6886
WWW.BC1C.CA

OVERVIEW

Pacific Canbriam Energy Limited. is committed to protecting public safety and the environment. Our history as a company has demonstrated this commitment and our ability to safely conduct exploration and production operations.

As part of our ongoing safety program, we are contacting you to provide you with important information regarding our operations in your area.

Pacific Canbriam operates sweet and sour (H_2S) wells, pipelines and facilities within the Peace River Regional District of Northeastern British Columbia.

The BC Energy Regulator (BCER) requires Pacific Canbriam to prepare and distribute an information package, detailing their operations, to all persons, residences, local authorities and publicly used facilities within and immediately adjacent to the Emergency Planning Zones associated with their area activities. This package is required to contain information about proposed or existing operations, the procedures in place to respond to an emergency and public protection measures.

EMERGENCY RESPONSE PLAN

An Emergency Response Plan (ERP) is a comprehensive plan designed to protect the public and includes criteria for assessing an emergency situation and procedures for mobilizing response personnel and agencies as well as procedures for establishing communications and the coordination of resources in the event of an incident. The extent of the information contained within the ERP is determined by the identified potential hazards.

The purpose of an ERP is to ensure a timely and effective response to emergencies in order to protect people, the environment, property and business. An ERP addresses the worst case emergency scenarios, potential hazards to the public, and systems required for adequate response.

HAZARD PLANNING ZONE (HPZ)

A HPZ is determined based upon the potential release rate calculated for a proposed well. Once a release rate has been established, a formula is used to determine the corresponding radius of the HPZ. This information is then incorporated into the creation of the ERP to deal with any events that might risk the safety and welfare of those inside the HPZ. The ERP must properly account for all of the individuals and assets found within this radius.

PACIFIC CANBRIAM 24 HOUR EMERGENCY NUMBER: 1.877.269.2877

PACIFIC CANBRIAM

ALTARES / FARRELL CREEK FIELD
2025 ANNUAL UPDATE
PUBLIC INFORMATION PACKAGE

Rge.26W6M | Rge.25W6M | Rge.24W6M

Twp.86 | Twp.85 | Twp.84 | Twp.83 | Twp.82 | Twp.81

HALFWAY RIVER FIRST NATION

RCMP: FORT ST. JOHN

PACIFIC CANBRIAM GAS PROCESSING PLANT b-024-H/094-B-08

TSAA NUNA

G/094-B-08 | H/094-B-08 | E/094-A-05

EMERGENCY PLANNING ZONE

HAYSTACK FSR

CEPA ZONE

KOBES CREEK ROAD

CEPA ZONE

EMERGENCY PLANNING ZONE

PDR

PACIFIC CANBRIAM GAS PROCESSING PLANT b-072-A/094-B-08

B/09 | A/094-B-08 | D/094-A-05

PEACE RIVER REGIONAL DISTRICT

RCMP: HUDSON'S HOPE

NORTHERN HEALTH

BCER: CENTRAL

WCSS: COOP 9

ALTARES CORE ROAD

J/094-B-01 | I/094-B-01 | L/094-A-04

Wapoose Lake

BUTLER RIDGE PARK

EMERGENCY PLANNING ZONE

BERYL PRAIRIE ROAD

FARRELL CREEK ROAD

DISTRICT OF HUDSON'S HOPE

G/094-B-01 | H/094-B-01 | E/094-A-04

BERYL PRAIRIE

BERYL PRAIRIE ROAD

RCMP: CHETWYND

BCER: SOUTH EAST

BCER: SOUTH EAST

Williston Lake

B/094-B-08 | A/094-B-01 | D/094-A-04

BULLHEAD MOUNTAIN RECREATION AREA

CANYON DRIVE

HUDSON'S HOPE

Peace River

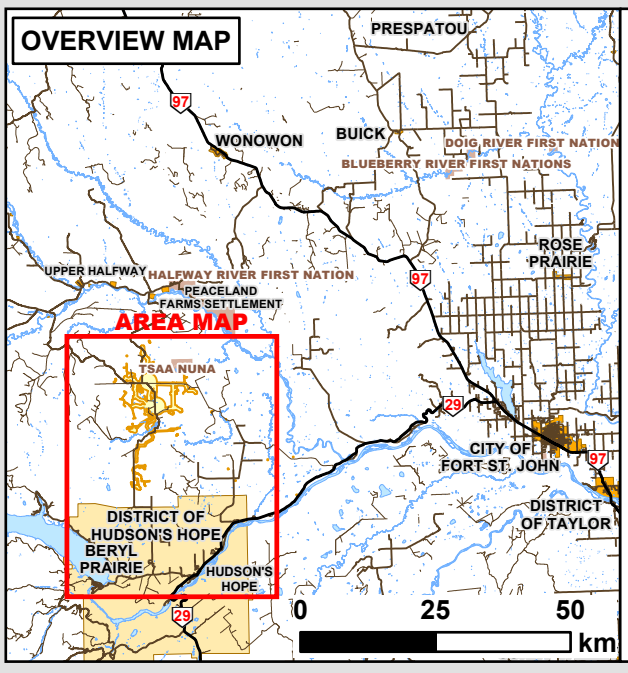
Dinosaur Lake

Boucher Lake

Réné Lake

Rge.26W6M | Rge.25W6M | Rge.24W6M

OVERVIEW MAP



FACILITY TYPE

- GAS PROCESSING PLANT
- CS COMPRESSOR
- PT PIPELINE TERMINAL
- B BATTERY
- WELL - GAS

SURFACE DEVELOPMENT

- STRUCTURE INSIDE OF EPZ
- STRUCTURE OUTSIDE OF EPZ

EMERGENCY RESPONSE

- EPZ (EMERGENCY PLANNING ZONE)
- CEPA ZONE
- EVACUATION / RECEPTION CENTRE
- EVACUATION ROUTE

PIPELINE TYPE

- OIL SOUR - OPERATING
- OIL SWEET - OPERATING
- OIL PRODUCTS - DISCONTINUED
- GAS SOUR - OPERATING
- GAS SWEET - OPERATING
- GAS PRODUCTS - DISCONTINUED
- WATER SOUR - OPERATING
- WATER SWEET - OPERATING
- WATER - DISCONTINUED
- HVP - OPERATING
- HVP - DISCONTINUED
- LVP - OPERATING
- LVP - DISCONTINUED
- STEAM / AIR - OPERATING
- STEAM / AIR - DISCONTINUED
- MISC - OPERATING
- MISC - DISCONTINUED

CULTURE

- HOSPITAL
- MEDICAL CENTER
- SCHOOL
- PLACE OF WORSHIP
- CEMETERY
- RAIL FACILITY
- COMMUNITY CENTRE
- INDUSTRY CAMP
- GRAVEL PIT
- STORAGE YARD
- GOLF COURSE
- CAMPGROUND/CAMPSITE
- DEAD END
- GATED - KEYED ACCESS
- AIRPORT
- AIR STRIP
- TOWER - FORESTRY
- TOWER - COMMUNICATION
- TOWER - OTHER
- SOLAR FARM
- WIND FARM
- HIGHWAY - PRIMARY
- HIGHWAY - SECONDARY
- MAIN ACCESS ROAD
- RAIL
- LOCAL AUTHORITY / MUNICIPAL BOUNDARY
- LAW ENFORCEMENT
- HEALTH AUTHORITY
- REGULATOR AUTHORITY
- PROVINCE
- WATER
- POPULATED AREA
- FIRST NATION / MÉTIS
- RECREATIONAL AREA
- PARK / PROTECTED AREA
- MILITARY AREA

PACIFIC CANBRIAM ENERGY

NEBC FIELD OPERATIONS SUPPLEMENT 2025

ALTARES / FARRELL CREEK AREA MAP

PUBLIC INFORMATION HANDOUT MAP

BEHR Integrated Solutions
www.behrintegrated.com

Drawn By: GS

Scale: 1:150,000 | Project No.: 15006

Map Projection: NAD 83 UTM 10 | Revision: 0 - AUG. 2025

0 2.5 5 7.5 10 km

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2025 ANNUAL ERP UPDATE — GROUNDBIRCH AREA

PACIFIC CANBRIAM ENERGY

PACIFIC CANBRIAM ENERGY LIMITED
24 HOUR EMERGENCY LINE: 1.877.269.2877

Pacific Canbriam Energy Limited Head Office	403.269.2874 Fax: 403.269.7637	2100, 215 – 2 Street SW, Calgary, AB T2P 1M4
Fort St. John Field Office	250.785.8322	3, 10799 Finning Frontage Rd Fort St. John, BC

FORT ST. JOHN FIELD CONTACT NUMBERS

Jeleena Cawley	Bus: 250.785.8322 Ext. 1 → Ext. 2	Cell: 250.948.8386
Reception or Administrative Support	Bus: 250.785.8322 Ext. 1 → Ext. 1	
Conference Room	Bus: 250.785.8322 Ext. 1 → Ext. 4	

SUPERINTENDENTS

Steve Gonwick	Bus: 250.785.8322 Ext. 4 → Ext. 2	Cell: 250.793.8000
Jake Zepeda	Bus: 250.785.8322 Ext. 4 → Ext. 3	Cell: 587.966.2675

ALTARES b-24-H PLANT

b-24-H Control Room	Bus: 250.785.8322 Ext. 2 → Ext. 1	
b-24-H Field Office	Bus: 250.785.8322 Ext. 2 → Ext. 2	
b-24-H Conference Room	Bus: 250.785.8322 Ext. 2 → Ext. 3	
b-24-H Camp/On Call	Bus: 250.785.8322 Ext. 2 → Ext. 4	

ALTARES b-72-A PLANT

b-72-A Camp/On Call	Bus: 250.785.8322 Ext. 3 → Ext. 1	
b-72-A Conference Room	Bus: 250.785.8322 Ext. 3 → Ext. 2	
b-72-A Control Room	Bus: 250.785.8322 Ext. 3400	

Altares b-72-A Plant Operations

Lyndon Toews	Bus: 250.785.8322 Ext. 4 → Ext. 1	Cell: 250.981.8199
Trevor Bickerstaff	Bus: 250.785.8322 Ext. 4 → Ext. 4	Cell: 780.522.7304
Field Lead Neil Schilling	Bus: 250.785.8322 Ext. 4 → Ext. 3	Cell: 250.401.1085
Field Lead Ryan Sephton		Cell: 604.556.4090

Altares b-72-A Maintenance

Anthony Corno	Bus: 250.785.8322 Ext. 5 → Ext. 1	Cell: 250.261.1428
Chris Bouwsema	Bus: 250.785.8322 Ext. 5 → Ext. 1	Cell: 780.515.0423

ALTARES b-73-A CAMP

b-73-A Camp	Bus: 250.785.8322 Ext. 8	780.940.2434

c-62-A WATER PLANT

c-62-A Water Hub	Bus: 250.785.8322 Ext. 4	
Water Hub Lead Corey Reschke	Bus: 250.785.8322 Ext. 7	250.783.0603

CORPORATE CONTACTS

Nauman Rasheed	President	403.817.9041 Ext. 2141 403.899.0339
Jeremy Waddell	Manager, HSER and Operational Excellence	403.930.6736 Ext. 2736 587.576.6125
Steve Bernard	Manager, Drilling and Completions	403.300.2434 Ext. 2434 403.519.8442
Zitin Lamba	Manager, Operations	403.817.9052 Local 2152 403.618.6166

FACILITY DESCRIPTION

Pacific Canbriam owns several wells, and one pipeline in the Groundbirch field (all wells are shut-in and are suspended). The pipeline has been abandoned and blinded. Production is both sweet and sour gas.

EPZ INFORMATION

The maximum expected H_2S concentration for the wells is 0% with a maximum EPZ of 100 m. The maximum expected H_2S concentration for the pipeline is 0.75% with a maximum EPZ of 0 m. The maximum expected facility EPZ is 100 m.

Pacific Canbriam's policy is to assign a 100 m Emergency Planning Zone (EPZ) around any sweet well or pipeline if the pipeline is inactive. If the pipeline is within 100 m of a structure, Pacific Canbriam may model that specific pipeline segment to determine if the EPZ encompasses the structure.

ON-SITE STORAGE

There are no Liquified Petroleum Gas (LPG) bullets in the Groundbirch field.

NEAREST URBAN CENTRE / DWELLING

The nearest urban centre is Groundbirch, BC, 10.70 km west of the Pacific Canbriam wellsite in 10-20-078-18 W6M

LAND USE / TERRAIN

The Groundbirch Area encompasses a rural area containing residences, energy operations, trapping, guiding, and outfitting. The Area encompasses several rivers and creeks.

HYDROLOGY

Coulee Creek, Dinner Creek, Favels Creek, Pine River, Stewart Creek and numerous unnamed creeks and small bodies of water are within the Groundbirch Area.

HIGHWAYS

Highway 97 (John Hart Hwy) runs east / west through the Groundbirch field, but does not intersect with any HPZ's in this field.

SITE ACCESS

Refer to access map on the following pages.

OTHER AREA OPERATORS & TIE-INS

OIL & GAS

Plateau Pipelines / Pembina	800.360.4706
Shell Canada	800.661.7378
Westcoast Energy	800.663.9931

TIE-INS*

There are no tie-ins with other companies in the Groundbirch Field.

SAFETY EQUIPMENT

OPERATOR / TRUCK SAFETY EQUIPMENT

Operator field trucks will carry personal protective equipment, first aid kits and fire extinguishers.

NOTIFICATION

The Groundbirch field is shut-in / abandoned with no operating facilities in the area. Pacific Canbriam Operators check assets annually. A release from explosion, mechanical failure, rupture or well blowout would be discovered by PCE operations staff in the area. The wells are not monitored with an alarm or SCADA system. The foremen and field operators can be called out via cell phones 24 hours a day using the Pacific Canbriam 24 Hour number.

COMMUNICATIONS

Pacific Canbriam or the contractor must provide a means of periodically checking on the well-being of the worker. Checks will be made at such intervals and by such means as are appropriate to the nature, hazard, and circumstances of the employment.

The following communications systems cover all the Groundbirch area operations:
- Blackline Lone Worker with Real-Time Monitoring and two-way voice calling.
- Cellular telephones (Cellular service inside the Pacific Canbriam Groundbirch Field is fair.)

RADIO FREQUENCIES

Some roads inside the Groundbirch field are radio assisted. All personnel using these roads should have a two-way radio in order to communicate with other road users. Due to the terrain and weather conditions, it is important to call location and direction of travel in order to safely meet and pass oncoming traffic. At the beginning of all roads, signs are posted with the road's name, radio frequency and km post.

Radio assisted road communication works as follows. Road users must call the road name, kilometer location and travel direction.

NOTE:
- When traveling "Up" (increasing) the road, call even km's and when traveling "Down" (decreasing) the road, call odd km's.
- When identifying km, call the km the user is entering, exiting or passing.
- When entering a road at km 0, the road user must call "name of road, 0 km, UP". [Example: "Harold Ellis Road, 0 KM, UP".]

When exiting a road (km markers decreasing), the road user must call "name of road, km, DOWN". [Example: "Harold Ellis Road, 0 km, DOWN".] The frequencies and tones listed below should be programmed into all Pacific Canbriam contractors, representatives, and personnel's mobile radios in order to communicate with repeaters in each area.

Area Radio Frequencies

Wrangler Road	RR-22 – 151.300

ROADBLOCK KITS / IGNITION KITS

Pacific Canbriam will establish roadblocks at the edge of the 100 m EPZ and evacuate the area in the event of an incident. Roadblocks for pipelines would tend to be short term while the line is shut down and depressurized.
At Pacific Canbriam discretion the setback distance may be reduced if supported by LEL monitoring results.

Roadblock and Mobile Helicopter Landing Pad Kits, if required, would be obtained from the **b-72-A Facility** and dispatched at a Level 1 Emergency. The number of Rovers, Roadblocks and Air Monitors required to be determined at the time of incident. Refer to the ERP cabinet for specific kit locations.

Roadblock Kits

Stop paddle, reflective traffic vest, amber beacon, flashlight with spare batteries, reflective barricade, personal electronic monitor (minimum tri-head), self-contained breathing apparatus, radio (public protection frequency, truck or portable), area map and hard hat.

Mobile Helicopter Landing Pad Kits

Air traffic wands, turbo flares, road flares, reflective flares, reflective PPE & pylons.

AGENCY CONTACTS

IMMEDIATE CONTACT REQUIRED AT ANY LEVEL OF EMERGENCY:

BC Energy Regulator (BCER) – Incident Reporting Line (via EMCR)		800.663.3456
Emergency Management and Climate Readiness (EMCR)		
BCER	Fort St. John	250.794.5200
WorkSafe BC	Report an Incident	888.621.7233

IMMEDIATE CONTACT REQUIRED IF ANY RESIDENTS ARE CONTACTED AT LEVEL 1 OR HIGHER:

RCMP	Chetwynd	911 250.788.9221
Peace River Regional District	Dawson Creek	800.670.7773 250.784.3200
Northern Health Authority	HEMBC On Call	855.554.3622

PROVINCIAL GOVERNMENT CONTACTS

BC 1 Call	Call Before You Dig	800.474.6886
BC Drug & Poison Information Centre	BC DPIC	800.567.8911
BC Ministry of Environment & Parks	Peace Region	250.787.3411
	Report Poachers & Polluters	877.952.RAPP (877.952.7277)
BC Ministry of Forests	Peace Natural Resource District	250.784.1200
BC Ministry of Transportation & Transit	Peace District Office North Peace Contractor	250.787.3237 800.842.4122
CANUTEC	Dangerous Goods Emergencies	888.226.8832 613.996.6666 From Cell: *666
Emergency Response Assistance Canada (ERAC)	(ERP2-0010-364)	800.265.0212
NAV Canada *via Flight Information Centre (FIC)*	Notice to Airmen (NOTAM)	866.WX.BRIEF 866.(992.7433) 866.541.4102
Public Works Association of BC (PWABC)	executivedirector@pwabc.ca	
Technical Safety BC	Report an Incident	866.566.7233
Transportation Safety Board	Rail Occurrence	819.944.3741
	Pipeline Occurrence	819.997.7887
WorkSafe BC	Report an Incident	888.621.7233
BC Wildfire Service	Report a Wildfire	800.663.5555 From Cell: *5555

EMERGENCY SERVICES

AMBULANCES

Air Ambulance (STARS)	Emergency Link	888.888.4567
BC Ambulance Services	Fort St. John	911 800.461.9911
BC Emergency Health Service	Cell / SAT phone/ Outside BC	250.374.5937
Bailey Helicopters Ltd.	Fort St. John	250.785.2518

HOSPITALS

Chetwynd Hospital and Health Centre	Chetwynd	250.788.2236
Dawson Creek & District Hospital	Dawson Creek	250.782.8501
Fort St. John Hospital and Peace Villa	Fort St. John	250.262.5200
Fort St. John Health Unit	Fort St. John	250.263.6000
Hudson's Hope Health Center	Hudson's Hope	250.783.9991

FIRE DEPARTMENTS

Chetwynd Volunteer Fire Department		911 250.788.2424

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PACIFIC CANBRIAM ENERGY

SERVICE CONTRACTORS

MOBILE AIR MONITORING

Firemaster Oilfield Services	Central Dispatch	403.342.7500
HSE Integrated Ltd.	Province Wide	888.346.8260
Trojan Safety Services	Central Dispatch	250.785.9557

OILFIELD FIRE FIGHTING / SAFETY CONTRACTORS / WELL CONTROL SPECIALISTS / IGNITION

Firemaster Oilfield Services	Central Dispatch	403.342.7500
HSE Integrated Ltd.	Province Wide	888.346.8260
Safety Boss	24 Hour Emergency	800.882.4967
Superior Fire Control Ltd.	24 Hour Emergency	877.882.0035

CRISIS COMMUNICATIONS

Petron Communications	Fort St. John	250.785.3333
T&T Communications	Fort St. John	250.785.0310

SAFETY SERVICES

HSE Integrated Ltd.	Province Wide	888.346.8260
Trojan Safety Services	Central Dispatch	250.785.9557
United Safety Ltd.	Central Dispatch	800.432.1809

SPILL RESPONSE

Emergency Response Assistance Canada (ERAC)	(LPG Spills Only) AB/BC	800.265.0212
Clean Harbors	Province Wide	800.645.8265
Troyer Ventures Ltd.	Fort Nelson Fort St. John	250.774.5332 250.785.5332
Ambipar Response	Fort St. John	866.574.7928

BULK FUEL DELIVERY

Smith Fuel Services	24/7 Dispatch	250.785.3466

TRUCKING COMPANIES

Cascade Energy Services LP	24 Hour Dispatch	780.876.8900
CEDA	24 Hour Dispatch	250.784.5151
D.W Wilson Services Ltd.	Fort St. John	250.785.7737
Energetic Services Inc.	Fort St. John	250.785.4761
Fedderly Transportation Ltd.	Fort St. John	250.787.0398
Formula Powell L.P. Trucking	Fort St. John	250.785.4222
Fort St. John Water Inc	Fort St. John	250.785.0862
Maxim Industries Inc.	Fort St. John	250.785.7775
Oculus Transport Ltd	Fort St. John	250.264.2252
Raven Oilfield Rentals	Fort St. John	800.799.7188
Troyer Ventures Ltd.	Fort Nelson Fort St. John	250.774.5332 250.785.5332

SERVICE CONTRACTORS (Continued)

UTILITIES

ATCO Electric	Province Wide	800.668.5506
BC Hydro	Province Wide	888.769.3766
Telus	Province Wide	310.2255 *611

ELECTRICAL / INSTRUMENTATION CONTRACTOR

CDN Controls Ltd.	Fort St. John	855.530.8151
Epscan Industries Ltd.	Fort St. John	250.787.9659
Techmation Electric & Controls	Fort St. John	250.261.6532
PTW Energy Services	Fort St. John	250.785.9072

ENVIRONMENTAL SERVICES

Clean Harbors (WCSS Spill Response Trailer)	Fort St. John	250.785.4577
Roy Northern Land & Environmental	Fort St. John	250.261.6644
Montrose Enviromental	24 Hour Spill Response	877.774.5525
Eco-Web Ecological Consulting	Fort St. John	250.787.1110

EMERGENCY RESPONSE MANAGEMENT

Behr Integrated Solutions	Calgary	403.444.6940

TRANSPORTATION

Standard Bus Contracting Ltd	Chetwynd Dispatch	250.788.2415 250.617.7710
Standard Bus Contracting Ltd	Prince George	250.617.7710
Avis Car and Truck Rental	Fort St. John Grande Prairie	250.785.5515 780.539.4101
Driving Force	Fort St. John Grande Prairie	250.787.0634 780.814.9596

HELICOPTER COMPANIES

Qwest Helicopters	Fort Nelson	250.774.5302
Bailey Helicopters	Fort St. John	250.785.2518
Yellowhead Helicopters	24 Hour Emergency Fort St. John	888.566.4401 250.785.2331

ROAD SERVICES

Dawson Road Maintenance Ltd.	Fort St. John	800.842.4122
Argo Road Maintenance (South Peace) Inc.	Dawson Creek – Pouce Coupe	800.663.7623

PILOT HOT SHOT AND TRAFFIC CONTROL

Big League Oilfield Services	Fort St. John	250.787.9812
Peace Hot Shot & Picker Services	Fort St. John	250.785.8432
Energetic Traffic Control	Fort St. John	250.793.3331

PUMPING SERVICES

BJ Energy Solutions	Clairmont	780.539.5210
Trican Well Service	Fort St. John	888.989.8975

SERVICE CONTRACTORS (Continued)

WCSS *See website for more info (www.wcss.ab.ca)*

COOP 9

24 Hour Emergency Contact	866.541.8888

Regional Custodian

North River Midstream Kaylin Salanski	250.262.3446 250.919.7282

Location: North River Midstream: 13217 Westcoast Frontage, Charlie Lake, BC V0C 1H0, Mile 53 Alaska Hwy

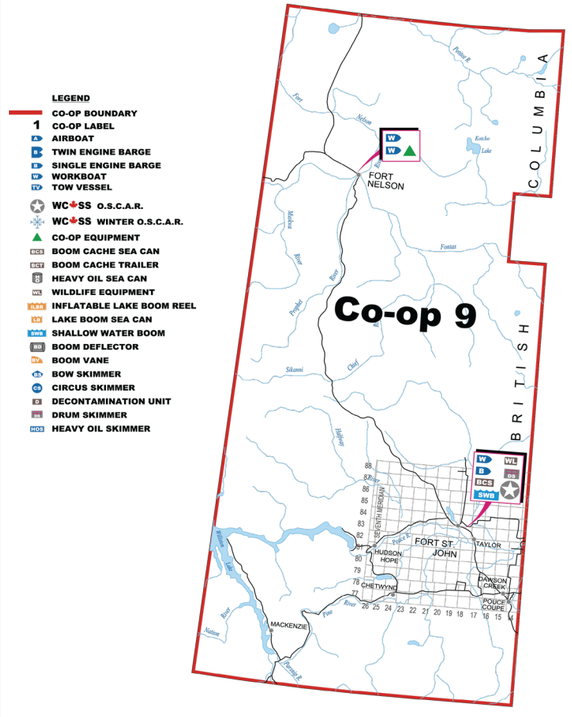
Equipment:
- 52′ OSCAR Trailer (semi-truck)
- 40′ Boom Cache Sea Can (winch tractor/trailer)
- 20′ Wildlife Sea Can (winch tractor/trailer)
- Work Boat (1/2-ton truck w/ 2″ ball hitch)
- Drum Skimmer w/ Power Pak (1/2-ton truck)
- Single Engine Barge (1-ton truck w/ 2-5/16″ ball hitch & electric brakes)
- 400′ Shallow Water Boom (1/2-ton truck)

COOP Custodian

Radar Road Trucking Rick Seidel	250.774.4203 250.775.0036

Location: 4900 - 46 Avenue, Fort Nelson, BC V0C 1R0

Equipment:
- 20′ ISRU Sea Can (winch truck & trailer)
- Work Boats (2) (1/2-ton truck w/ 2″ ball hitch)



GRAZING LEASES

GRAZING ID	NAME	EMERGENCY
RAN78124	Justin Keutzer Mountain Rain Adventures Inc.	250.401.7888

TRAPPERS

TRAPPER ID	NAME	EMERGENCY
732T006	Harley Davis	N/A
732T009	Tom Smith	250.401.8687
732T009	Colden Lukey	250.788.6988
732T010	Vacant	N/A
732T011	Bryce Swier	403.704.5559
732T011	Jason Fickle	250.219.7350
732T011	Cody Wrangler	780.835.8746

GUIDES & OUTFITTERS

ID	COMPANY / NAME	EMERGENCY
750021	Lael Brewster (South Slope Outfitters)	250.788.5611
750021	Dean Keitsch (Certificate Holder)	778.874.9053

RIGHTS HOLDERS

ID	COMPANY / NAME	EMERGENCY
None		

SURFACE DEVELOPMENT INFORMATION

There are 4 surface developments inside the EPZs.

In the event of an incident, ensure all members of the public are notified and provided with response information. If required use rovers and roadblocks to clear and isolate the areas in close proximity to the incident.

UNIQUE FEATURES AFFECTING EMERGENCY RESPONSE

None

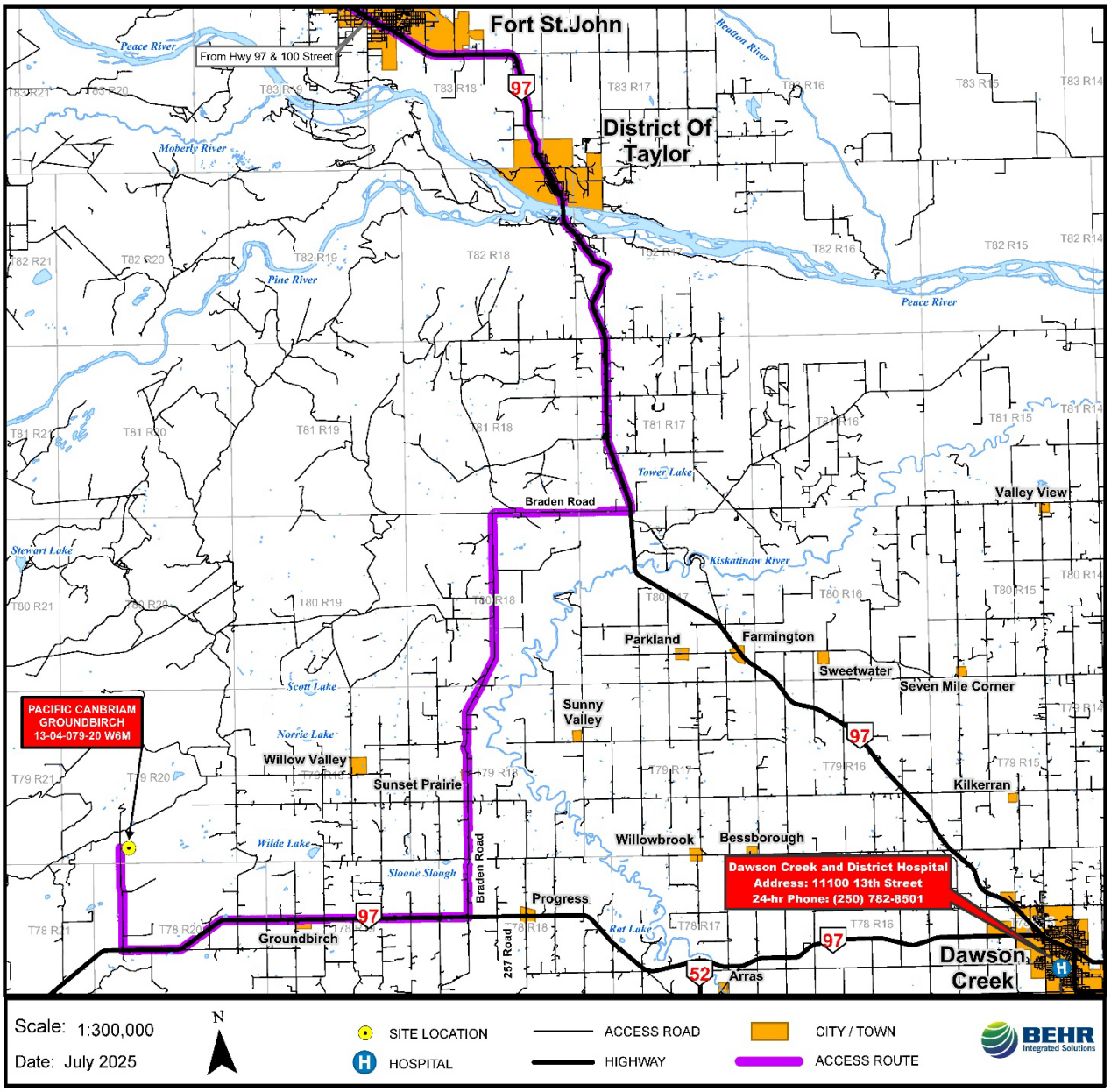
RECEPTION CENTRES

Northern Grand Hotel	9830 100 Avenue Fort St. John, BC V1J 1Y5	250.787.0521
Stillwater Inn & Suites	9504 Canyon Drive Hudson's Hope, BC V0C 1V0	250.783.5400

To Groundbirch Wellsite 13-04-079-20 W6M – Total Distance approx. 94.8 km

From Intersection of Hwy 97 and 100th Street, Fort St. John BC

- Travel east (then south) on Hwy 97 (Alaska Highway) for 36.7 km.
- Turn right and travel west (then south) on Braden Road for 30.8 km.
- Turn right and travel west on Hwy 97 (John Hart Highway) for 19.9 km.
- Turn right and travel north on 283 Road / Rice Road for 5.7 km.
- Turn right and travel east approx. 435 m into wellsite.



Groundbirch - Wells

License	UWI	Surface Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Well Name	Substance	Status	Distance to Nearest Residence (km)	H_2S (ppm)	H_2S Release Rate (m^3/sec)	Assigned HPZ (m)
Not Operating											
024637	100/04-03-079-20W6/02	11-04-079-20 W6M	620783.13	6187549.68	PACIFIC CANBRIAM ET AL HZ GROUNDBIRCH 11-04-079-20	N/A	Suspended	>2		-	100
024637	100/11-04-079-20W6/00	13-04-079-20 W6M	620783.13	6187549.68	PACIFIC CANBRIAM ET AL HZ GROUNDBIRCH 11-04-079-20	N/A	Drilled & Cased	>2		-	100
Abandoned											
017696	100/10-20-078-18W6/00	16-20-078-18 W6M	640886.50	6183264.07	PACIFIC CANBRIAM GROUNDBIRCH 10-20-078-18	Gas	Abandoned	0.738			-
017696	100/10-20-078-18W6/02	16-20-078-18 W6M	640886.50	6183264.07	PACIFIC CANBRIAM GROUNDBIRCH 10-20-078-18	N/A	Abandoned	0.738			-
020083	100/07-33-078-21W6/00	16-33-078-21 W6M	613510.04	6185627.58	PACIFIC CANBRIAM HZ GROUNDBIRCH 07-33-078-21	N/A	Abandoned	>2			-
020083	100/07-33-078-21W6/02	16-33-078-21 W6M	613510.04	6185627.58	PACIFIC CANBRIAM HZ GROUNDBIRCH 07-33-078-21	N/A	Abandoned	>2			-

Comments:

- All operating and suspended wells were assigned a minimum 100 m HPZ to comply with the *All Hazards Approach* utilized in BC.

Groundbirch - Pipelines

License	Line	From Location	From Facility	From Valve	To Location	To Facility	To Valve	Sub-stance	Status	MOP (kPa)	OD (mm)	WT (mm)	L (km)	H_2S (%)	Cumulative H_2S Release Volume (m^3)	Assigned HPZ[1] (km)
Deactivated																
22034	1	11-04-079-20W6	BE		16-35-078-21W6	BE		NG	D	0	114.30	n/av.	4.660	0.75	-	0.010

Footnotes:

1. Pacific Canbriam Energy Limited has confirmed this pipeline segment has been pigged, purged and blind ended.

Pipeline Legend:	
Facility:	PL = Pipeline PT = Plant S = Satellite WE = Well CP = Camp LK = Lake
Substance:	FG = Fuel Gas FW = Fresh Water NG = Natural Gas SNG = Sour Natural Gas
Status:	A = Abandoned D = Deactivated Q = Active
Valve:	CV = Check Valve ESD = Emergency Shut Down Valve
Other:	L = Length OD = Outside Diameter WT = Wall Thickness MOP = Maximum Operating Pressure

Groundbirch - Facilities

Facility Licence #	Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Facility Type	Status	Distance to Nearest Residence or public facility (km)	H_2S Release Volume (m^3)	Assigned HPZ (km)
Not Operating								
0023786	11-04-079-20W6	620780.23	6187560.56	Well Facility	Suspended	>2	-	0.100

Comments:

- All operating and suspended facilities were assigned a minimum 100 m HPZ to comply with the *All Hazards Approach* utilized in BC.

Rge.23W6M | Rge.22W6M | Rge.21W6M | Rge.20W6M | Rge.19W6M | Rge.18W6M

Twp.80 | Twp.79 | Twp.78 | Twp.77

STRATHCONA GAS PROCESSING PLANT 06-19-080-20 W6M

SHELL GAS PROCESSING PLANT 04-15-080-19 W6M

RAN075680 | RAN073690 | RAN073616 | RAN075557 | RAN075490 | RAN074654 | RAN075553 | RAN076149 | RAN076150 | RAN078124 | RAN076154 | RAN074286 | RAN072908 | RAN076295 | RAN0755 | RAN076151 | RAN075508 | RAN075485 | RAN075498 | RAN078125 | RAN075499

Beaver Lake | Graveyard Lake | Big Lake | Scott Lake | Norrie Lake | Favels Lake | Wilde Lake | Sin Lake | Sundance Lakes | Murray River

TRAPPER ID: TR0732T011

PEACE RIVER REGIONAL DISTRICT

NORTHERN HEALTH

BCER: SOUTH EAST

PEACE NATURAL RESOURCE DISTRICT

WCSS: COOP 9

GUIDE OUTFITTER: 701271

TRAPPER ID: TR0732T006

TRAPPER ID: TR0732T007

TRAPPER ID: TR0732T008

TRAPPER ID: TR0732T009

TRAPPER ID: TR0732T010

TRAPPER ID: TR0721T015

TRAPPER ID: TR0722T004

GUIDE OUTFITTER: 750012

TRAIL CONTINUES

STEWART LAKE TRAIL

05 | 02 | 06 | 01

PACIFIC CANBRIAM 13-04-079-20 W6M WELL LOCATION

PACIFIC CANBRIAM 11-04-079-20 W6M WELL LOCATION

RCMP: CHETWYND

RCMP: DAWSON CREEK

WILLOW VALLEY

GROUNDBIRCH

DISTRICT OF CHETWYND

EAST PINE

EAST PINE PARK

PINE RIVER BREAKS PARK

SHELL GAS PROCESSING PLANT 07-34-077-19 W6M

97

OVERVIEW MAP

HALFWAY | HALFWAY RIVER FIRST NATION | PEACELAND FARMS SETTLEMENT | CITY OF FORT ST. JOHN | DISTRICT OF HUDSON'S HOPE | DISTRICT OF TAYLOR | AREA MAP | SUNNY VALLEY | DAWSON CREEK | DISTRICT OF CHETWYND | POUCE COUPE | SAULTEAU FIRST NATIONS | WEST MOBERLY FIRST NATIONS

0 30 60 km

FACILITY TYPE

- GAS PROCESSING PLANT
- CENTRAL TREATMENT PLANT
- CENTRAL PROCESSING FACILITY
- INJECTION PLANT
- COMPRESSOR
- PUMP STATION
- PIPELINE TERMINAL
- DEHYDRATOR
- WASTE PROCESSING
- METER STATION
- HEADER / RISER
- BATTERY
- SATELLITE
- WATER DISPOSAL
- CHECK VALVE
- BLOCK VALVE
- EMERGENCY SHUTDOWN VALVE
- PROPANE BULLET
- TANK

SURFACE DEVELOPMENT

- RESIDENCE OCCUPIED
- BUSINESS OCCUPIED
- RESIDENCE SENSITIVE
- BUSINESS SENSITIVE
- RESIDENCE SEASONAL
- BUSINESS SEASONAL
- PUBLIC FACILITY
- STRUCTURE VACANT
- STRUCTURE ABANDONED
- STRUCTURE OUTSIDE OF EPZ
- OTHER BUILDINGS

PIPELINE TYPE

- OIL SOUR - OPERATING
- OIL SWEET - OPERATING
- OIL PRODUCTS - DISCONTINUED
- GAS SOUR - OPERATING
- GAS SWEET - OPERATING
- GAS PRODUCTS - DISCONTINUED
- WATER SOUR - OPERATING
- WATER SWEET - OPERATING
- WATER - DISCONTINUED
- HVP - OPERATING
- HVP - DISCONTINUED
- LVP - OPERATING
- LVP - DISCONTINUED
- STEAM / AIR - OPERATING
- STEAM / AIR - DISCONTINUED
- MISC - OPERATING
- MISC - DISCONTINUED

WELL TYPE

- WELL - GAS
- WELL - OIL
- WELL - WATER SOURCE
- WELL - WATER INJECTION
- WELL - OBSERVATION
- WELL - LOCATION
- WELL - GAS SUSPENDED
- WELL - OIL SUSPENDED

NON-CLIENT OPERATORS

- GAS PROCESSING PLANT
- FACILITY
- WELL
- PIPELINE

EMERGENCY RESPONSE

- EPZ (EMERGENCY PLANNING ZONE)
- IIZ (INITIAL ISOLATION ZONE)
- CEPA ZONE
- EPZ (OTHER SYSTEM)
- EGRESS
- ERP ACCESS
- HAZARD POINT
- CAUTION POINT
- FLOODING INCIDENT
- WILDFIRE INCIDENT
- INCIDENT COMMAND POST (ICP)
- MUSTER POINT
- STAGING AREA
- ROADBLOCK
- DEAD END
- GATED - KEYED ACCESS
- SPILL CONTROL POINT - WCSS/SK SPILL COOP
- SPILL CONTROL POINT - CRITICAL WCSS/SK SPILL COOP
- SPILL CONTROL POINT - CLIENT
- STARS SITE
- EVACUATION / RECEPTION CENTRE
- EVACUATION ROUTE

CULTURE

- HIGHWAY - PRIMARY
- HIGHWAY - SECONDARY
- MAIN ACCESS ROAD
- OTHER ACCESS ROAD / TRAIL
- RAIL
- LOCAL AUTHORITY / MUNICIPAL BOUNDARY
- LAW ENFORCEMENT
- HEALTH AUTHORITY
- REGULATOR AUTHORITY
- SPILL COOP
- NATURAL RESOURCE DISTRICT (B.C. Only)
- FOREST MANAGEMENT AREA (AB Only)
- WMU / GUIDE OUTFITTER
- TRAPLINE
- PROVINCE
- WATER
- POPULATED AREA
- FIRST NATION / MÉTIS
- RECREATIONAL AREA
- PARK / PROTECTED AREA
- GRAZING / RANGE TENURE (AB & BC)
- LANDOWNER
- RIGHTS HOLDER / ALLOTMENT USER
- CUTBLOCK
- TENURE OPENINGS
- MANAGED LICENCE
- FOREST COVER RESERVATIONS
- SURVEYED PARCELS
- MILITARY AREA
- FENCE
- FENCED AREA
- AIRPORT
- AIR STRIP
- HELI PAD
- TOWER - FORESTRY
- TOWER - COMMUNICATION
- TOWER - OTHER
- AIR MONITORING SITE
- ELECTRICAL SUBSTATION
- SENSITIVE WILDLIFE AREA
- RAIL CROSSING
- HISTORICAL SITE
- WATER CROSSING
- BRIDGE
- DAM
- WCSS EQUIPMENT
- TRAILHEAD
- BOAT LAUNCH
- SOLAR FARM
- WIND FARM
- SPECIAL INTEREST GROUP
- HOSPITAL
- MEDICAL CENTER
- SECURITY CHECKPOINT
- SCHOOL
- PLACE OF WORSHIP
- CEMETERY
- RAIL FACILITY
- COMMUNITY CENTRE
- INDUSTRY CAMP
- GRAVEL PIT
- STORAGE YARD
- GOLF COURSE
- CAMPGROUND
- CAMPSITE
- PICNIC / REST AREA
- DUMP / LANDFILL

EMERGENCY RESPONSE PLAN (ERP) STAKEHOLDERS: GROUNDBIRCH	
REGULATOR AUTHORITY :	BCER: SOUTH EAST
LOCAL AUTHORITY :	PEACE RIVER REGIONAL DISTRICT
FIRST NATION / METIS SETTLEMENT :	N/A
LAW ENFORCEMENT :	RCMP:CHETWYND
HEALTH AUTHORITY :	NORTHERN
SPILL COOP :	WCSS: COOP 9
TRANSPORTATION/HWY/RAIL :	N/A
TRAPPER :	TR0732T006, TR0732T009, TR0732T010, TR0732T011
GUIDE/OUTFITTER :	701271, 750012
GRAZING/RANGE TENURE :	RAN78124
NATURAL RESOURCE DISTRICT :	PEACE NATURAL RESOURCE DISTRICT
PARK :	N/A

PACIFIC CANBRIAM ENERGY

NEBC FIELD SUPPLEMENT 2025
GROUNDBIRCH AREA MAP

BEHR Integrated Solutions
www.behrintegrated.com

Drawn By: GS

Scale: 1:130,000 | Project No.: 15006

Map Projection: NAD 83 UTM 10 | Revision: 0 -AUG. 2025

0 1.5 3 6 9 Kilometers

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Area Occupant Data

Confidential Data

Confidential data collected during the Public Involvement Program will only be included in manuals labelled as ***Confidential***.

All manuals will contain contact information for publicly listed data for area occupants within the HPZ that may include Trappers, Grazing Lease Holders and Industrial Operators. Refer to each site-specific area in the *Assets and Equipment Section* for this information.

The following reports are only included in copies of the confidential ERP:

Surface Development – Summary Report
- Includes contact information for all surface developments within the HPZ.
- Report sorted by Map Coordinates.

Special Needs Contacts within the EPZ – Summary Report
- Includes residents who have indicated they may require early response actions due to medical needs or communication barriers.
- Report sorted by Map Coordinates.

School / Student – Summary Report
- Includes children who may be in school during an incident.
- Report sorted by Map Coordinates.

Surface Development – Detail Report (per location)
- Includes all information pertaining to a specific location.
- The individual detail reports are sorted by Map Coordinates.

Surface Development – Summary Report (Alphabetical)
- Includes contact information for all surface developments within the HPZ.

Report is sorted Alphabetically.

Public Information Package

A public information package was prepared and delivered to area occupants during the public involvement process. A copy of the public information package is included in all manuals.

EPZ STAKEHOLDER SUMMARY REPORT

Pacific Canbriam Energy/Groundbirch

The following report provides an overview of all Stakeholders identified within the Emergency Planning Zone, based on information gathered during the most recent Public Notification and Consultation Campaign, and other situational awareness data gathered during the most recent Emergency Response Plan update.

EMERGENCY PLANNING ZONE (EPZ) OVERVIEW	
Surface Developments within the EPZ	4
Occupants within the EPZ (includes Resident and Non-Resident Land Users)	7
Students attending school who live within the EPZ	0
Surface Developments with Sensitivities (There may be more than one sensitivity per Surface Development)	1

OCCUPANT SENSITIVITIES OVERVIEW (Sensitivities are identified for response activities and for consultation awareness)	
Aboriginal Community Member	0
Evacuation Assistance	0
Language / Comprehension Barrier	0
Not Contacted During Public Notification / Consultation Campaign	0
Other Special Needs	1
Potentially Contentious Occupant	0
Requires Early Notification	1
Sensitive to Industry Development	0

SURFACE DEVELOPMENTS OVERVIEW	
PRIVATE PROPERTY (Locations where people live)	
Residences – Abandoned	0
Residences – Not contacted	0
Residences – Occupied Full Time	3
Residences – Seasonal / Part Time	1
Residences – Vacant	0
Building - Unoccupied	0
Resident Surface Developments within the EPZ	4
Unoccupied Surface Developments within the EPZ	0

PUBLIC FACILITIES (Locations where members of the public may congregate)	
Airport/Airstrip	0
Boat Launch - Recreational	0
Camp site – Off-Road	0
Campground - Official	0
Campsite - Developed	0
Cemetery	0
Community Center	0
Evacuation / Reception Centre	0

Golf Course	0
Helispot	0
Hospital	0
Picnic / Rest Area	0
Place of Worship	0
Public Facility	0
School	0
Public Facility Locations within the EPZ	0

NON RESIDENT LAND USERS (Locations where people may be working)	
Business / Industrial Land Users	
Business	0
Other O&G Operator Battery	0
Other O&G Operator Camp	0
Other O&G Operator Compressor	0
Other O&G Operator Plant	0
Business / Other O&G Operator Locations within the EPZ	0

Other Land Users (Locations where people may be working periodically)	
Air Monitoring Site / Trailer	0
Electrical Sub Station	0
Gravel Pit	0
Guide / Outfitter	0
Landowner	0
Military / Base	0
Registered Trapline / Trapper	0
Rights Holder / Allotment User	0
Security Gate / Checkpoint	0
Solar Farm	0
Special Interest Group	0
Spill Control Point	0
Storage / Laydown Yard	0
Tower - Communication	0
Tower - Forestry	0
Tower - Other	0
Wind Farm	0
Other Non - Resident Land Users within the EPZ (This total does not include Businesses / Industrial Locations above)	0

HYDROGEN SULPHIDE (H_2S) - Continued

It is important to note that burning sour gas turns the H_2S to Sulphur Dioxide (SO_2). The heat from the fire will carry the SO_2 and smoke up into the air where it will be dispersed over a large area. By the time the SO_2 comes back to ground level, the concentrations would normally only be detectable with the use of an electronic gas detection monitor. These levels should be well below the levels that provincial environment regulations accept.

SULPHUR DIOXIDE (SO_2)

- Formed by the combustion of H_2S or sulphur and is non-flammable
- Found as a gas at temperatures above -10°C
- Has the odour that occurs when a wooden match is extinguished
- Highly irritating – dissolves to form sulphuric acid
- At lower concentrations irritates eyes, nose and throat, causes difficulty in breathing and shortness of breath
- Causes pulmonary edema at high concentrations – may be fatal
- Effects on heavy smokers are more severe

GENERAL HEALTH EFFECTS OF SO_2

Concentration	Effects
0.13 ppm	24 hour evacuation level (MWLAP Level B criteria).
0.34 ppm	One hour average evacuation level (MWLAP Level B criteria).
2 ppm	Eight hour Occupational Exposure Limit (WorkSafeBC).
3-5 ppm	Odour threshold.
5 ppm	15 minute Occupational Exposure Limit (WorkSafeBC).
8-12 ppm	Throat irritation, coughing, constriction in chest, tearing and smarting of the eyes.
10-50 ppm	Exposure 5 -15 minutes: increased irritation of the eyes, nose, throat, choking, coughing and in some cases, wheezing as a sign of narrowing of the airways (which increases the resistance of the air-flow).
150 ppm	Short–term endurance lost due to severe eye irritation and because of the effects on the membranes of the nose, throat and lungs.
500 ppm	Highly dangerous after an exposure of 30-60 minutes.
1000-2000 ppm	May be fatal with continued exposure.

PERSONAL INFORMATION & CONFIDENTIALITY

Consultations with residents and others in the EPZ to gather and/or confirm personal information is a BCER requirement for the purpose of preparing and maintaining an ERP. All information requested will be confidential and will be used solely in case of an emergency.

By providing the requested information, response plans can be designed with your particular circumstances in mind and will enhance communication, identify response priorities and improve Pacific Canbriam's ability to respond in the event of an emergency.

EMERGENCY CONTACTS

Thank you for taking the time to review this package. Should you have any further questions or concerns please feel free to contact any of the numbers below.

Pacific Canbriam Contact Information

Pacific Canbriam 24 Hour Emergency Number:	1.877.269.2877
Nauman Rasheed Chief Operating Officer	Bus: 403.817.9041 Ext 2141
Zitin Lamba Manager, Operations	Bus: 403.817.9052 Ext 2152

BC Energy Regulator (BCER)

24-Hr Number Public Inquiry & Emergency Reporting Line	800.500.BCER (2237)
BCER 24 Hour Number Fort St. John	250.794.5200
BCER Emergency Operations Centre Fax Line	250.794.5385

Regional District

Peace River Regional District Dawson Creek Office Fort St. John Office	800.670.7773 250.784.3200 250.785.8084

Reception Centres

Ramada by Wyndham Northern Grand Hotel & Conference Centre	9830 100 Avenue Fort St. John, BC	250.787.0521
Stillwater Inn & Suites	9504 Canyon Drive Hudson's Hope, BC	250.783.5400

CALL OR CLICK BEFORE YOU DIG!
800.474.6886
WWW.BC1C.CA

PUBLIC INFORMATION PACKAGE
2025 ANNUAL UPDATE
GROUNDBIRCH FIELD

PACIFIC CANBRIAM ENERGY

OVERVIEW

Pacific Canbriam Energy Limited is committed to protecting public safety and the environment. Our history as a company has demonstrated this commitment and our ability to safely conduct exploration and production operations.

As part of our ongoing safety program, we are contacting you to provide you with important information regarding our operations in your area.

Pacific Canbriam operates sweet and sour (H_2S) wells, pipelines and facilities within the Peace River Regional District of Northeastern British Columbia.

The BC Energy Regulator (BCER) requires Pacific Canbriam to prepare and distribute an information package, detailing their operations, to all persons, residences, local authorities and publicly used facilities within and immediately adjacent to the Emergency Planning Zones associated with their area activities. This package is required to contain information about proposed or existing operations, the procedures in place to respond to an emergency and public protection measures.

EMERGENCY RESPONSE PLAN

An Emergency Response Plan (ERP) is a comprehensive plan designed to protect the public and includes criteria for assessing an emergency situation and procedures for mobilizing response personnel and agencies as well as procedures for establishing communications and the coordination of resources in the event of an incident. The extent of the information contained within the ERP is determined by the identified potential hazards.

The purpose of an ERP is to ensure a timely and effective response to emergencies in order to protect people, the environment, property and business. An ERP addresses the worst case emergency scenarios, potential hazards to the public, and systems required for adequate response.

HAZARD PLANNING ZONE (HPZ)

A HPZ is determined based upon the potential release rate calculated for a proposed well. Once a release rate has been established, a formula is used to determine the corresponding radius of the HPZ. This information is then incorporated into the creation of the ERP to deal with any events that might risk the safety and welfare of those inside the HPZ. The ERP must properly account for all of the individuals and assets found within this radius.

PACIFIC CANBRIAM 24 HOUR EMERGENCY NUMBER: 1.877.269.2877

IGNITION - CONTINUED

- Monitoring results indicate H2S concentrations in excess of 10 ppm over a 3-minute average in un-evacuated parts of the EPZ.
- Monitored H2S concentrations exceed 1 ppm (1-hour average) in urban density developments.
- Monitoring is not taking place due to weather or other unforeseen circumstances.
- The release cannot be brought under control in the short term.

ABOUT SOUR GAS

Hydrogen Sulphide (H_2S) is a colourless, flammable, toxic gas. It affects people differently depending on concentration and length of exposure. At very low concentrations it has an offensive odour (similar to rotten eggs); however, it is undetectable by odour at higher concentrations. A person can be exposed to H_2S concentrations of up to 1 part per million for up to 8 hours (government exposure limits) without a breathing apparatus.

In the unlikely event of an emergency, the ERP will be activated and the safety of the public will be maximized through evacuation, sheltering or ignition procedures. If you suspect H_2S or SO_2 in the air please remain indoors and contact the Pacific Canbriam 24 hour emergency number on the first and last page of this package.

HYDROGEN SULPHIDE (H_2S)

- Found in decaying organic matter, natural oil and gas, silos and sewers
- Found at gas temperatures above -60°C
- Flammable – burns to form SO_2
- Odour of rotten eggs at low concentrations- kills all sense of smell at higher concentrations
- Will tend to disperse more slowly in sheltered or calm low lying areas
- Extremely toxic
- At lower concentrations (20-50 ppm) irritates mucous membranes (eyes, throat, lungs), causes headaches, dizziness, nausea, may cause pulmonary edema (fluid in the lungs) upon prolonged exposure
- High concentrations (500-1000 ppm) may cause paralysis of the respiratory centre in the brain – breathing stops, suffocation begins

GENERAL HEALTH EFFECTS OF H_2S

Concentration	Effects
0.01-0.3 ppm	Detectable by odour.
1-5 ppm	Moderate to strong offensive odour may cause nausea, tearing of the eyes, headaches or loss of sleep upon prolonged exposure. Effects are moderate.
10 ppm	Ceiling limit. (WorkSafe BC)
20-50 ppm	Slight eye and lung irritation. May cause eye damage after several days of exposure, may cause digestive upset and loss of appetite.
100 ppm	Eye and lung irritation.
150 ppm	Kills sense of smell, severe eye and lung irritation.
500 ppm	Serious damage to eyes within 30 minutes, severe lung irritation, unconsciousness and death within 4 to 8 hours.
1000 ppm	Breathing stops within 1 or 2 breaths.

EVACUATION - CONTINUED

If you choose not to go the Reception Centre, we ask that you please tell the Pacific Canbriam representative where you are going and provide updated contact information so that we may confirm your safety and keep you informed. You will be advised when it is safe to return home. Pacific Canbriam will provide you with a Claims Form so that you can be reimbursed for reasonable out-of-pocket expenses resulting from the evacuation.

Evacuation of the public outside the EPZ is mandatory when H_2S levels reach 10 ppm in un-evacuated areas. Pacific Canbriam will provide air monitoring, starting at a Level 1 Emergency, to determine H_2S levels.

As public safety is the primary goal during an incident, primary response efforts will be concentrated on members of the public. Response efforts for livestock and pets will be addressed at the time of incident based on the response needs and responder capabilities.

SHELTER IN PLACE

Shelter in place is the practice of remaining indoors during a sudden outdoor release of a hazardous substance.

Shelter in place is not a viable option for recreational users or transients, due to their inability to safely shelter.

Shelter in Place Instructions

- Immediately gather everyone indoors and remain there.
- Close and lock all windows and outside doors – if possible, tape the gaps around the door frames.
- Extinguish indoor wood burning fires - if possible, close the damper.
- Turn off appliances or equipment that either uses inside air, blows out inside air or sucks in outside air, such as:
  - Stoves
  - Fireplaces
  - Clothes dryers
  - Air conditioners
  - Bathroom and kitchen fans
  - Built in vacuum systems
- Turn off heat and hot water pilot lights.
- Leave all inside doors open.
- Wait in an interior upstairs room.
- Avoid using the telephone, except for emergencies, so that you can be contacted by emergency personnel.
- Stay tuned to local radio for possible information updates or for further instructions.
- Even if you see people outside do not leave until told to do so.
- If you are unable to follow these instructions, please notify company emergency response personnel.
- After the hazardous substance has passed through the area you will receive an all clear message from emergency response personnel along with instructions to:
  - Ventilate your building by opening all windows and doors.
  - Turn on fans, turn up thermostats, and furnace circulating fans.
- Once the building is completely ventilated return all equipment to normal.

IGNITION

If safety of the public cannot be assured by evacuation or sheltering, the sour gases escaping from the well will be ignited, this results in the H_2S being burned and converted to sulphur dioxide (SO_2).

- Ignition must take place when one of the following conditions has been met:
- Although required, evacuation of the response zones has not taken place.

EPZ CALCULATIONS

H_2S EPZ CALCULATIONS:	MIN.	MAX.
Cumulative Release Volumes	0 m^3	0 m^3
H_2S Release Rates	0 m^3/s	0 m^3/s
H_2S Concentrations	0 %	0.75 %
Hazard Planning Zones	0 m	100 m

LEVELS OF EMERGENCY

Level 1 - Moderate Emergency – ERP is activated

There is no immediate danger to the public or environment as no H2S has been released; and the emergency is confined to the lease or company property. A Level 1 Emergency is declared at the earliest sign of difficulty controlling the well and when all problems are contained within the well site area. These problems are usually handled without difficulty using techniques and equipment readily available on site. A Level 1 Emergency creates little or no media interest.

Level 2 – Major Emergency – ERP is activated

There is the potential for risk to the public or environment, as the emergency could extend beyond company property. However, control is still possible. A Level 2 Emergency creates local or regional media interest and outside and provincial agencies must be notified.

Level 3 - Serious Emergency – ERP is activated

There exists an immediate danger to the public or environment as control of the situation has been lost. A Level 3 Emergency creates Provincial or National media interest and immediate multi-agency and provincial government involvement is required.

PUBLIC PROTECTION

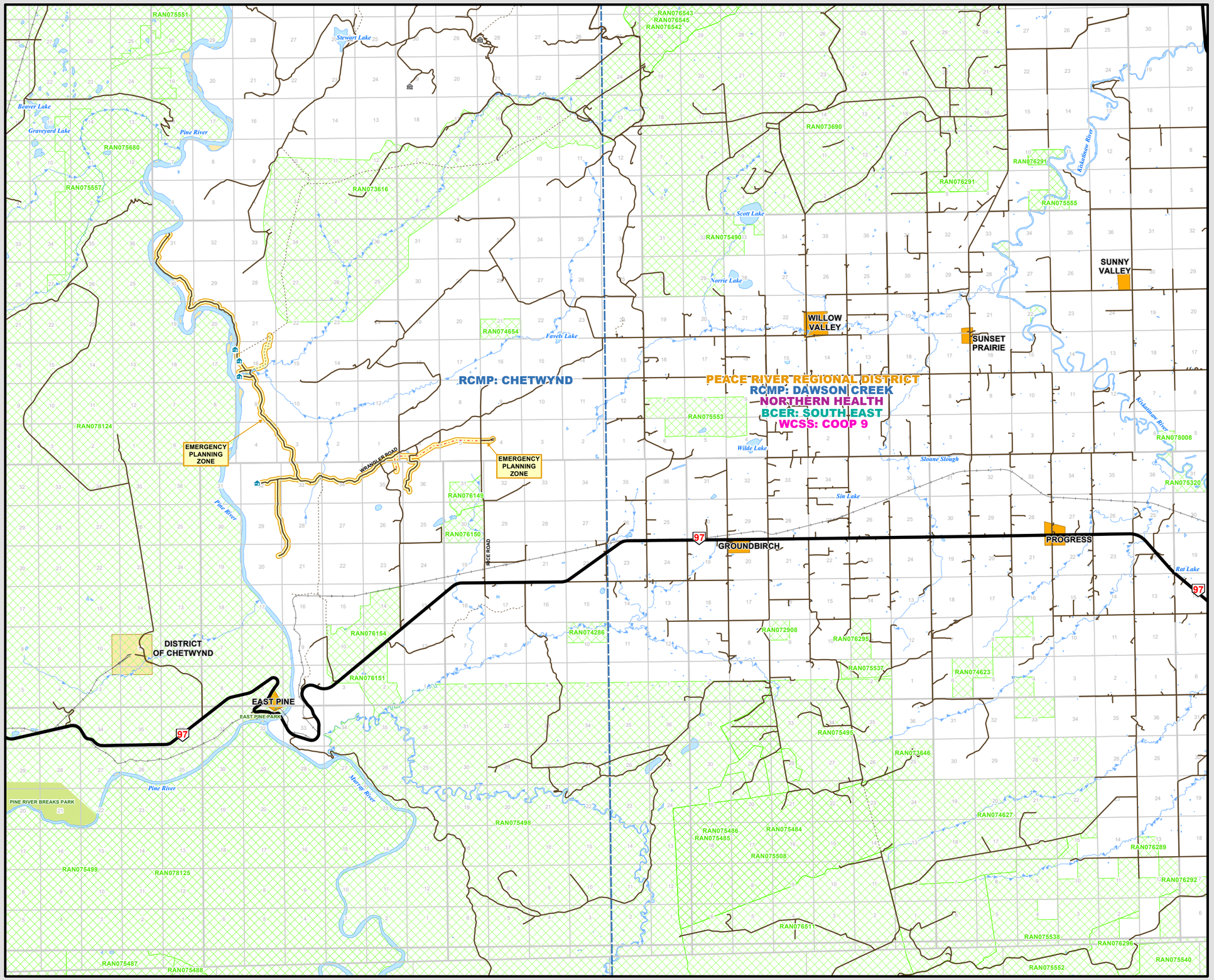
In the unlikely event that an emergency situation occurs which causes or creates a potentially dangerous situation to occupants within the EPZ, the best method of public protection would be implemented. Depending on an incident's specifics, Pacific Canbriam will implement the following method(s) of public protection.

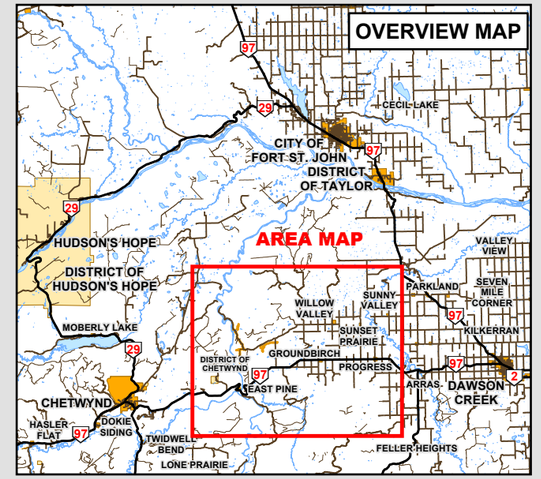
EVACUATION

In case of a Level 1 Emergency, those residents/occupants who may require additional time to evacuate or cannot safely shelter in place will be contacted, advised of the situation and informed of the proper reception centre to evacuate to. A list of reception centres is provided at the back of this package.

In the event of a Level 2 or 3 Emergency, all residents/occupants within the EPZ would be contacted and instructed to evacuate immediately to the Reception Centre.

Pacific Canbriam will provide you with the safest route out of the emergency area to the Reception Centre. If you require assistance to evacuate, Pacific Canbriam personnel will be available to assist you. Upon arrival at the Reception Centre, please check in with the Pacific Canbriam representatives as they will be available to answer any questions or concerns you may have.





FACILITY TYPE

- GAS PROCESSING PLANT
- COMPRESSOR
- PIPELINE TERMINAL
- BATTERY
- WELL - GAS

SURFACE DEVELOPMENT

- STRUCTURE INSIDE OF EPZ
- STRUCTURE OUTSIDE OF EPZ

EMERGENCY RESPONSE

- EPZ (EMERGENCY PLANNING ZONE)
- CEPA ZONE
- EVACUATION / RECEPTION CENTRE
- EVACUATION ROUTE

PIPELINE TYPE

- OIL SOUR - OPERATING
- OIL SWEET - OPERATING
- OIL PRODUCTS - DISCONTINUED
- GAS SOUR - OPERATING
- GAS SWEET - OPERATING
- GAS PRODUCTS - DISCONTINUED
- WATER SOUR - OPERATING
- WATER SWEET - OPERATING
- WATER - DISCONTINUED
- HVP - OPERATING
- HVP - DISCONTINUED
- LVP - OPERATING
- LVP - DISCONTINUED
- STEAM / AIR - OPERATING
- STEAM / AIR - DISCONTINUED
- MISC - OPERATING
- MISC - DISCONTINUED

CULTURE

- HOSPITAL
- MEDICAL CENTER
- SCHOOL
- PLACE OF WORSHIP
- CEMETERY
- RAIL FACILITY
- COMMUNITY CENTRE
- INDUSTRY CAMP
- GRAVEL PIT
- STORAGE YARD
- GOLF COURSE
- CAMPGROUND
- DEAD END
- GATED - KEYED ACCESS
- AIRPORT
- AIR STRIP
- TOWER - FORESTRY
- TOWER - COMMUNICATION
- TOWER - OTHER
- SOLAR FARM
- WIND FARM
- HIGHWAY - PRIMARY
- HIGHWAY - SECONDARY
- MAIN ACCESS ROAD
- RAIL
- LOCAL AUTHORITY / MUNICIPAL BOUNDARY
- LAW ENFORCEMENT
- HEALTH AUTHORITY
- REGULATOR AUTHORITY
- PROVINCE
- WATER
- POPULATED AREA
- FIRST NATION / MÉTIS
- RECREATIONAL AREA
- PARK / PROTECTED AREA
- MILITARY AREA

PACIFIC CANBRIAM ENERGY

NEBC FIELD OPERATIONS SUPPLEMENT 2025
GROUNDBIRCH AREA MAP
PUBLIC INFORMATION HANDOUT MAP

BEHR Integrated Solutions
www.behrintegrated.com

Drawn By: GS
Scale: 1:150,000 — Project No.: 15006
Map Projection: NAD 83 UTM 10 — Revision: 0 - AUG 2025

0 3 6 9 12 km

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2025 ANNUAL ERP UPDATE

KOBES AREA

PACIFIC CANBRIAM ENERGY LIMITED
24 HOUR EMERGENCY LINE: 1.877.269.2877

Pacific Canbriam Energy Limited Head Office	403.269.2874 Fax: 403.269.7637	2100, 215 – 2 Street SW Calgary, AB T2P 1M4
Fort St. John Field Office	250.785.8322	3, 10799 Finning Frontage Rd Fort St. John, BC

FORT ST. JOHN FIELD CONTACT NUMBERS

Jeleena Cawley	Bus: 250.785.8322 Ext. 1 → Ext. 2	Cell: 250.948.8386
Reception or Administrative Support	Bus: 250.785.8322 Ext. 1 → Ext. 1	
Conference Room	Bus: 250.785.8322 Ext. 1 → Ext. 5	
SUPERINTENDENTS		
Steve Gonwick	Bus: 250.785.8322 Ext. 4 → Ext. 2	Cell: 250.793.8000
Jake Zepeda	Bus: 250.785.8322 Ext. 4 → Ext. 3	Cell: 587.966.2675
ALTARES b-24-H PLANT		
b-24-H Control Room	Bus: 250.785.8322 Ext. 2 → Ext. 1	
b-24-H Field Office	Bus: 250.785.8322 Ext. 2 → Ext. 2	
b-24-H Conference Room	Bus: 250.785.8322 Ext. 2 → Ext. 3	
b-24-H Camp/On Call	Bus: 250.785.8322 Ext. 2 → Ext. 4	
ALTARES b-72-A PLANT		
b-72-A Camp/On Call	Bus: 250.785.8322 Ext. 3 → Ext. 1	
b-72-A Conference Room	Bus: 250.785.8322 Ext. 3 → Ext. 2	
b-72-A Control Room	Bus: 250.785.8322 Ext. 3400	
Altares b-72-A Plant Operations		
Lyndon Toews	Bus: 250.785.8322 Ext. 4 → Ext. 1	Cell: 250.981.8199
Trevor Bickerstaff	Bus: 250.785.8322 Ext. 4 → Ext. 4	Cell: 780.522.7304
Field Lead Neil Schilling	Bus: 250.785.8322 Ext. 4 → Ext. 3	Cell: 250.401.1085
Field Lead Ryan Sephton		Cell: 604.556.4090
Altares b-72-A Maintenance		
Anthony Corno	Bus: 250.785.8322 Ext. 5 → Ext. 1	Cell: 250.261.1428
Chris Bouwsema	Bus: 250.785.8322 Ext. 5 → Ext. 1	Cell: 780.515.0423
ALTARES b-73-A CAMP		
b-73-A Camp	Bus: 250.785.8322 Ext. 8	780.940.2434
c-62-A WATER PLANT		
c-62-A Water Hub	Bus: 250.785.8322 Ext. 4	
Water Hub Lead Corey Reschke	Bus: 250.785.8322 Ext. 7	250.783.0603

CORPORATE CONTACTS

Nauman Rasheed	President	403.817.9041 Ext. 2141 403.899.0339
Jeremy Waddell	Manager, HSER and Operational Excellence	403.930.6736 Ext. 2736 587.576.6125
Steve Bernard	Manager, Drilling and Completions	403.300.2434 Ext. 2434 403.519.8442
Zitin Lamba	Manager, Operations	403.817.9052 Local 2152 403.618.6166

FACILITY DESCRIPTION

Pacific Canbriam owns and operates two compressor stations, one water injection facility (currently shut-in), has numerous producing wells and associated pipelines and numerous suspended wells in its Kobes field operations. The wells in the area contain both sweet and sour gas. All of the sour wells in the area are currently shut-in. Remaining sweet production is gathered at the Kobes Main Compressor Station in NTS b-24-A/94-B-9 compressed and dehydrated before it is pipelined to the Enbridge sour pipeline tie-in in NTS d-25-A/94-B-9.

EPZ INFORMATION

The maximum expected H_2S concentration for the wells is 4.32% with a maximum EPZ of 175 m. The maximum expected H_2S concentration for the pipelines is 6.5% with a maximum EPZ of 1.368 km. The maximum expected facility EPZ is 1.368 km.

Pacific Canbriam's policy is to assign a 100 m Emergency Planning Zone (EPZ) around any sweet well or pipeline if the pipeline is inactive. If the pipeline is within 100 m of a structure, Pacific Canbriam may model that specific pipeline segment to determine if the EPZ encompasses the structure.

ON-SITE STORAGE

There are no Liquified Petroleum Gas (LPG) bullets in the Kobes field.

CLOSEST URBAN CENTRE

The nearest urban centre is Wonowon, BC, 27.49 km northeast of the Pacific Canbriam Kobes Main Compressor Station in NTS b-24-A/94-B-9.

LAND USE / TERRAIN

The Kobes Area encompasses a rural area containing residences, energy operations, forestry operations, gravel pit operations, trapping, cattle grazing and guiding and outfitting.

HYDROLOGY

Aikman Creek, Allen Creek, Cameron River, Chiefs Cabin Creek, Cromie Creek, Grayling Creek, Halfway River, Kobes Creek, and numerous unnamed creeks and small bodies of water are within the Kobes Area.

HIGHWAYS

No highways intersect with the HPZ's in this field.

SITE ACCESS

Refer to access map on the following pages.

OTHER AREA OPERATORS & TIE-INS

OIL & GAS

AltaGas Ltd.	866.826.3830	PETRONAS Canada	844.299.2566
CNRL	888.878.3700	TC Energy	888.982.7222
ConocoPhillips	800.661.9525	Tourmaline Oil Corp.	877.504.4252
Pembina Pipeline	800.360.4706	Westcoast Energy	800.663.9931

TIE-INS*

The following tie-in table illustrates the interaction of the tie-ins in the Pacific Canbriam Kobes field. If an emergency occurs and one of the following tie-ins is impacted by the emergency, then Pacific Canbriam will contact the appropriate company:

Tie-in Location	Tie-in Product	Pacific Canbriam Sends/Receives Product at tie-in	Tie-in Company	Tie-in Emergency Response Plan (ERP)
d-25-A/94-B-9	Sweet Gas	Sends	Enbridge	Enbridge Fort St. John Gathering System ERP
d-21-B/94-B-9 (Not in service)	Sweet Gas	Receives	Enbridge	Enbridge Fort St. John Gathering System ERP
c-20-H/94-B-9	Sweet Gas	Receives	Crew Energy	Crew Energy Inc. Kobes Facilities ERP

SAFETY EQUIPMENT

OPERATOR / TRUCK SAFETY EQUIPMENT

Operator field trucks will carry personal protective equipment, first aid kits and fire extinguishers.

NOTIFICATION

The Kobes field is equipped with a Supervisory Control and Data Acquisition (SCADA) system. The SCADA system monitors all the wells in the Kobes field as well as the Kobes Main Compressor Station in NTS b-24-A/94-B-9 and the North Kobes Compressor Station in NTS c-97-G/94-B-9 (shut-in). The information from the SCADA system can be monitored remotely. The SCADA system has the ability to open and close the emergency shutdown (ESD) valves at the two compressor stations and the wells.

SAFETY EQUIPMENT

NOTIFICATION - CONTINUED

The SCADA system is also automated and can close the ESD valves based on the following detection systems:

- Power failure
- The Kobes Main Compressor Station b-24-A/94-B-9 operates on a BC Hydro line power and also has a backup generator.
- The North Kobes Compressor Station c-97-G/94-B-9 (shut-in) operates on a power generator and also has a backup system.
- H_2S detection in the Kobes Main Compressor Station b-24-A/94-B-9, the North Kobes Compressor Station c-97-G/94-B-9 (shut-in) and the a-A87-G/94-B-9 well
- LEL detection in the Kobes Main Compressor Station b-24-A/94-B-9, the North Kobes Compressor Station c-97-G/94-B-9 (shut-in) and the a-A87-G/94-B-9 well
- Fire detection in the Kobes Main Compressor Station b-24-A/94-B-9, the North Kobes Compressor Station c-97-G/94-B-9 (shut-in) and the a-A87-G/94-B-9 well
- High/low process and pipeline pressures
- High/low tank levels

A blue flashing light is used to indicate H_2S over 5 ppm. A red flashing light is used to indicate fire detection, LEL detection and on-site process alarms at the compressor stations.

The SCADA system will warn the control room if there are potential problems or unusual conditions. The b-24-A/94-B-9 compressor station is inspected daily, the c-97-G/94-B-9 compressor is shut in and is not inspected daily. Kobes field operators are on-call after hours.

COMMUNICATIONS

Pacific Canbriam or the contractor must provide a means of periodically checking on the well-being of the worker. Checks will be made at such intervals and by such means as are appropriate to the nature, hazard, and circumstances of the employment.

The following communications systems cover all the Kobes area operations:

- Blackline Lone Worker with Real-Time Monitoring and two-way voice calling.
- Cellular telephones (Cellular service inside the Kobes field is fair.)

RADIO FREQUENCIES

All roads inside the Kobes field are radio assisted. All personnel using these roads should have a two-way radio in order to communicate with other road users. Due to the terrain and weather conditions, it is important to call location and direction of travel in order to safely meet and pass oncoming traffic. At the beginning of all roads, signs are posted with the road's name, radio frequency and km post.

Radio assisted road communication works as follows. Road users must call the road name, kilometer location and travel direction.

NOTE:

- When traveling "Up" (increasing) the road, call even km's and when traveling "Down" (decreasing) the road, call odd km's.
- When identifying km, call the km the user is entering, exiting, or passing.
- When entering a road at km 0, the road user must call "name of road, 0 km, UP". [Example: "Harold Ellis Road, 0 km, UP".]
- When exiting a road (km markers decreasing), the road user must call "name of road, km, DOWN". [Example: "Harold Ellis Road, 0 km, DOWN".]

The frequencies and tones listed below should be programmed into all Pacific Canbriam contractors, representatives, and personnel's mobile radios in order to communicate with repeaters in each area.

Area Radio Frequencies

Haystack Forest Service Road	RR-13 – 150.530
Iron Creek Road	RR 18 – 150.710
Pilsner Road	RR-7 – 150.260
Harold Ellis Road	RR-7 – 150.260
Upper Halfway Road	Mile 95 Road – 153.380

ROADBLOCK KITS / IGNITION KITS

Pacific Canbriam will establish roadblocks at the edge of the 100 m EPZ and evacuate the area in the event of an incident. Roadblocks for pipelines would tend to be short term while the line is shut down and depressurized.

At Pacific Canbriam discretion the setback distance may be reduced if supported by LEL monitoring results.

Roadblock and Mobile Helicopter Landing Pad Kits, if required, would be obtained from the b-72-A Facility and dispatched at a Level 1 Emergency. The number of Rovers, Roadblocks and Air Monitors required to be determined at the time of incident. Refer to the ERP cabinet for specific kit locations.

Roadblock Kits

Stop paddle, reflective traffic vest, amber beacon, flashlight with spare batteries, reflective barricade, personal electronic monitor (minimum tri-head), self-contained breathing apparatus, radio (public protection frequency, truck or portable), area map and hard hat.

Mobile Helicopter Landing Pad Kits

Air traffic wands, turbo flares, road flares, reflective flares, reflective PPE & pylons.

AGENCY CONTACTS

IMMEDIATE CONTACT REQUIRED AT ANY LEVEL OF EMERGENCY:

BC Energy Regulator (BCER) – Incident Reporting Line *(via EMCR)*		800.663.3456
Emergency Management and Climate Readiness (EMCR)		
BCER	Fort St. John	250.794.5200
Halfway River First Nations	Office 24 Hour	250.772.5058 250.329.8911
CANFOR	Office John Rowe Wes Neumeier Carmen Anderson Kristine Bock	250.782.3302 250.261.1886 250.261.9200 250.990.0015 250.321.1784
WorkSafe BC	Report an Incident	888.621.7233

IMMEDIATE CONTACT REQUIRED IF ANY RESIDENTS ARE CONTACTED AT LEVEL 1 OR HIGHER:

RCMP	Emergency Fort St. John Hudson's Hope	911 250.787.8140 250.783.5241
Peace River Regional District	Dawson Creek	800.670.7773 250.784.3200
Northern Health Authority	HEMBC On Call	855.554.3622

PROVINCIAL GOVERNMENT CONTACTS

BC 1 Call	Call Before You Dig	800.474.6886
BC Drug & Poison Information Centre	BC DPIC	800.567.8911
BC Ministry of Environment & Parks	Peace Region	250.787.3411
	Report Poachers & Polluters	877.952.RAPP (877.952.7277)
BC Ministry of Forests	Peace Natural Resource District	250.784.1200
BC Ministry of Transportation & Transit	Peace District Office North Peace Contractor	250.787.3237 800.842.4122
CANUTEC	Dangerous Goods Emergencies	888.226.8832 613.996.6666 From Cell: *666
Emergency Response Assistance Canada (ERAC)	(ERP2-0010-364)	800.265.0212
NAV Canada *via Flight Information Centre (FIC)*	Notice to Airmen (NOTAM)	866.WX.BRIEF 866.(992.7433) 866.541.4102
Public Works Association of BC (PWABC)	executivedirector@pwabc.ca	
Technical Safety BC	Report an Incident	866.566.7233
WorkSafe BC	Report an Incident	888.621.7233
BC Wildfire Service	Report a Wildfire	800.663.5555 From Cell: *5555

EMERGENCY SERVICES

AMBULANCES

Air Ambulance (STARS)	Emergency Link	888.888.4567
BC Ambulance Services	Fort St. John	911 800.461.9911
BC Emergency Health Service	Cell / SAT phone/ Outside BC	250.374.5937
Bailey Helicopters Ltd.	Fort St. John	250.785.2518

HOSPITALS

Chetwynd Hospital and Health Centre	Chetwynd	250.788.2236
Dawson Creek & District Hospital	Dawson Creek	250.782.8501
Fort St. John Health Unit	Fort St. John	250.263.6000
Hudson's Hope Health Center	Hudson's Hope	250.783.9991

FIRE DEPARTMENTS

Hudson's Hope Fire & Rescue		911 250.783.9901

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KOBES AREA

SERVICE CONTRACTORS

MOBILE AIR MONITORING

Firemaster Oilfield Services	Central Dispatch	403.342.7500
HSE Integrated Ltd.	Province Wide	888.346.8260
Trojan Safety Services	Central Dispatch	250.785.9557

OILFIELD FIRE FIGHTING / SAFETY CONTRACTORS / WELL CONTROL SPECIALISTS / IGNITION

Firemaster Oilfield Services	Central Dispatch	403.342.7500
HSE Integrated Ltd.	Province Wide	888.346.8260
Safety Boss	24 Hour Emergency	800.882.4967
Superior Fire Control Ltd.	24 Hour Emergency	877.882.0035

CRISIS COMMUNICATIONS

Petron Communications	Fort St. John	250.785.3333
T&T Communications	Fort St. John	250.785.0310

SAFETY SERVICES

HSE Integrated Ltd.	Province Wide	888.346.8260
Trojan Safety Services	Central Dispatch	250.785.9557
United Safety Ltd.	Central Dispatch	800.432.1809

SPILL RESPONSE

Emergency Response Assistance Canada (ERAC)	(LPG Spills Only) AB/BC	800.265.0212
Clean Harbors	Province Wide	800.645.8265
Troyer Ventures Ltd.	Fort Nelson Fort St. John	250.774.5332 250.785.5332
Ambipar Response	Fort St. John	866.574.7928

BULK FUEL DELIVERY

Smith Fuel Services	24/7 Dispatch	250.785.3466

TRUCKING COMPANIES

Cascade Energy Services LP	24 Hour Dispatch	780.876.8900
CEDA	24 Hour Dispatch	250.784.5151
D.W Wilson Services Ltd.	Fort St. John	250.785.7737
Energetic Services Inc.	Fort St. John	250.785.4761
Fedderly Transportation Ltd.	Fort St. John	250.787.0398
Formula Powell L.P. Trucking	Fort St. John	250.785.4222
Fort St. John Water Inc	Fort St. John	250.785.0862
Maxim Industries Inc.	Fort St. John	250.785.7775
Oculus Transport Ltd	Fort St. John	250.264.2252
Raven Oilfield Rentals	Fort St. John	800.799.7188
Troyer Ventures Ltd.	Fort Nelson Fort St. John	250.774.5332 250.785.5332

SERVICE CONTRACTORS (Continued)

UTILITIES

ATCO Electric	Province Wide	800.668.5506
BC Hydro	Province Wide	888.769.3766
Telus	Province Wide	310.2255 *611

ELECTRICAL / INSTRUMENTATION CONTRACTOR

CDN Controls Ltd.	Fort St. John	855.530.8151
Epscan Industries Ltd.	Fort St. John	250.787.9659
Techmation Electric & Controls	Fort St. John	250.261.6532
PTW Energy Services	Fort St. John	250.785.9072

ENVIRONMENTAL SERVICES

Clean Harbors (WCSS Spill Response Trailer)	Fort St. John	250.785.4577
Roy Northern Land & Environmental	Fort St. John	250.261.6644
Montrose Enviromental	24 Hour Spill Response	877.774.5525
Eco-Web Ecological Consulting	Fort St. John	250.787.1110

EMERGENCY RESPONSE MANAGEMENT

Behr Integrated Solutions	Calgary	403.444.6940

TRANSPORTATION

Standard Bus Contracting Ltd	Chetwynd Dispatch	250.788.2415 250.617.7710
Standard Bus Contracting Ltd	Prince George	250.617.7710
Avis Car and Truck Rental	Fort St. John Grande Prairie	250.785.5515 780.539.4101
Driving Force	Fort St. John Grande Prairie	250.787.0634 780.814.9596

HELICOPTER COMPANIES

Qwest Helicopters	Fort Nelson	250.774.5302
Bailey Helicopters	Fort St. John	250.785.2518
Yellowhead Helicopters	24 Hour Emergency Fort St. John	888.566.4401 250.785.2331

ROAD SERVICES

Dawson Road Maintenance Ltd.	Fort St. John	800.842.4122
Argo Road Maintenance (South Peace) Inc.	Dawson Creek – Pouce Coupe	800.663.7623

PILOT HOT SHOT AND TRAFFIC CONTROL

Big League Oilfield Services	Fort St. John	250.787.9812
Peace Hot Shot & Picker Services	Fort St. John	250.785.8432
Energetic Traffic Control	Fort St. John	250.793.3331

PUMPING SERVICES

BJ Energy Solutions	Clairmont	780.539.5210
Trican Well Service	Fort St. John	888.989.8975

SERVICE CONTRACTORS (Continued)

WCSS *See website for more info (www.wcss.ab.ca)*

COOP 9

24 Hour Emergency Contact	866.541.8888

Regional Custodian

North River Midstream Kaylin Salanski	250.262.3446 250.919.7282

Location: North River Midstream: 13217 Westcoast Frontage, Charlie Lake, BC V0C 1H0, Mile 53 Alaska Hwy

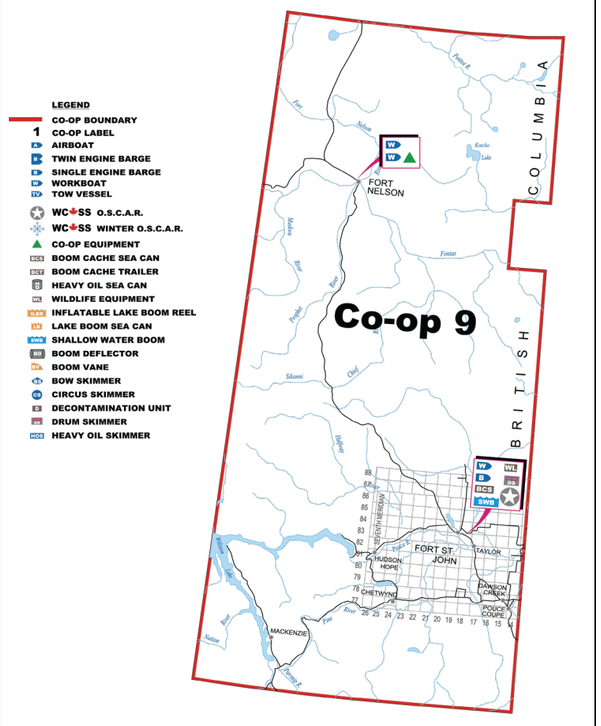
Equipment:
- 52′ OSCAR Trailer (semi-truck)
- 40′ Boom Cache Sea Can (winch tractor/trailer)
- 20′ Wildlife Sea Can (winch tractor/trailer)
- Work Boat (1/2-ton truck w/ 2″ ball hitch)
- Drum Skimmer w/ Power Pak (1/2-ton truck)
- Single Engine Barge (1-ton truck w/ 2-5/16″ ball hitch & electric brakes)
- 400′ Shallow Water Boom (1/2-ton truck)

COOP Custodian

Radar Road Trucking Rick Seidel	250.774.4203 250.775.0036

Location: 4900 - 46 Avenue, Fort Nelson, BC V0C 1R0

Equipment:
- 20′ ISRU Sea Can (winch truck & trailer)
- Work Boats (2) (1/2-ton truck w/ 2″ ball hitch)



RANGE TENURE

ID	COMPANY / NAME	EMERGENCY
RAN073258 RAN074983 RAN076675	Norman (Neil) Ward (Roundup 80 Ranch)	403.512.0518
RAN073263	Ray Jackson / Frank Miles (Horseshoe Creek Outfitters)	250.783.0561 250.263.1919
RAN074995	George & Sarah Weitzel (Crystal Springs Ranch)	250.262.7681 250.262.7328
RAN075019	Bill Stadler Karl Oysmueller (Peaceland Farms Ltd.)	250.261.8646 250.263.3803 250.772.5010

TRAPPERS

TRAPPER ID	NAME	EMERGENCY
735T003	Graham Brooks	250.261.4544
735T004	Anilee Rose Anderson	250.793.9273
735T004	Allen George Chatten	250.262.1972
735T006	Albert Achla	N/A
735T006	John Wokeley	N/A
744T001	Halfway River First Nation	250.785.5058
744T003	Wesley Shaw	250.261.0456
744T004	Terry Hart	250.262.7922
744T004	Robert Armstrong	250.262.6501

GUIDES & OUTFITTERS

ID	COMPANY / NAME	EMERGENCY
750023	Luther Jackson	250.783.0561

RIGHTS HOLDERS

ID	COMPANY / NAME	EMERGENCY
Forest Tenure	AltaGas Holdings Inc.	866.826.3830
Forest Tenure	BC Timber Sales (BCTS) – Peace-Liard	250.784.1200
Forest Tenure	CANFOR	250.782.3302
Forest Tenure	CNRL (Painted Pony Energy)	888.878.3700
Forest Tenure	Louisiana Pacific Canada Ltd.	250.782.3302 ext 227
Forest Tenure	TC Energy (Nova Gas)	888.982.7222
Forest Tenure	Tourmaline Oil Corp.	877.504.4252

SURFACE DEVELOPMENT INFORMATION

There are 7 surface developments inside the EPZs. Note, there is random backcountry camping throughout the EPZ, especially south of the Halfway River. In the event of an incident, ensure all members of the public are notified and provided with response information. If required, use rovers and roadblocks to clear and isolate the areas in close proximity to the incident.

UNIQUE FEATURES AFFECTING EMERGENCY RESPONSE

Entities To Be Contacted During Any Level of Emergency

Halfway River First Nations
- The Halfway River First Nations is a First Nations Settlement located outside the Pacific Canbriam Kobes Field EPZ. Courtesy contact information was gathered about the Halfway River First Nations.

Canadian Forest Products Ltd. (CANFOR)
- CANFOR has active logging, herbicide applications, site preparation, and tree planting ongoing during non-winter months within EPZ. Temporary camp sites entities may be in EPZ for a brief period of time (i.e., less than one week). For all Levels of Emergencies, Pacific Canbriam will contact CANFOR to contact the temporary campsites that are within or near the Kobes EPZ.

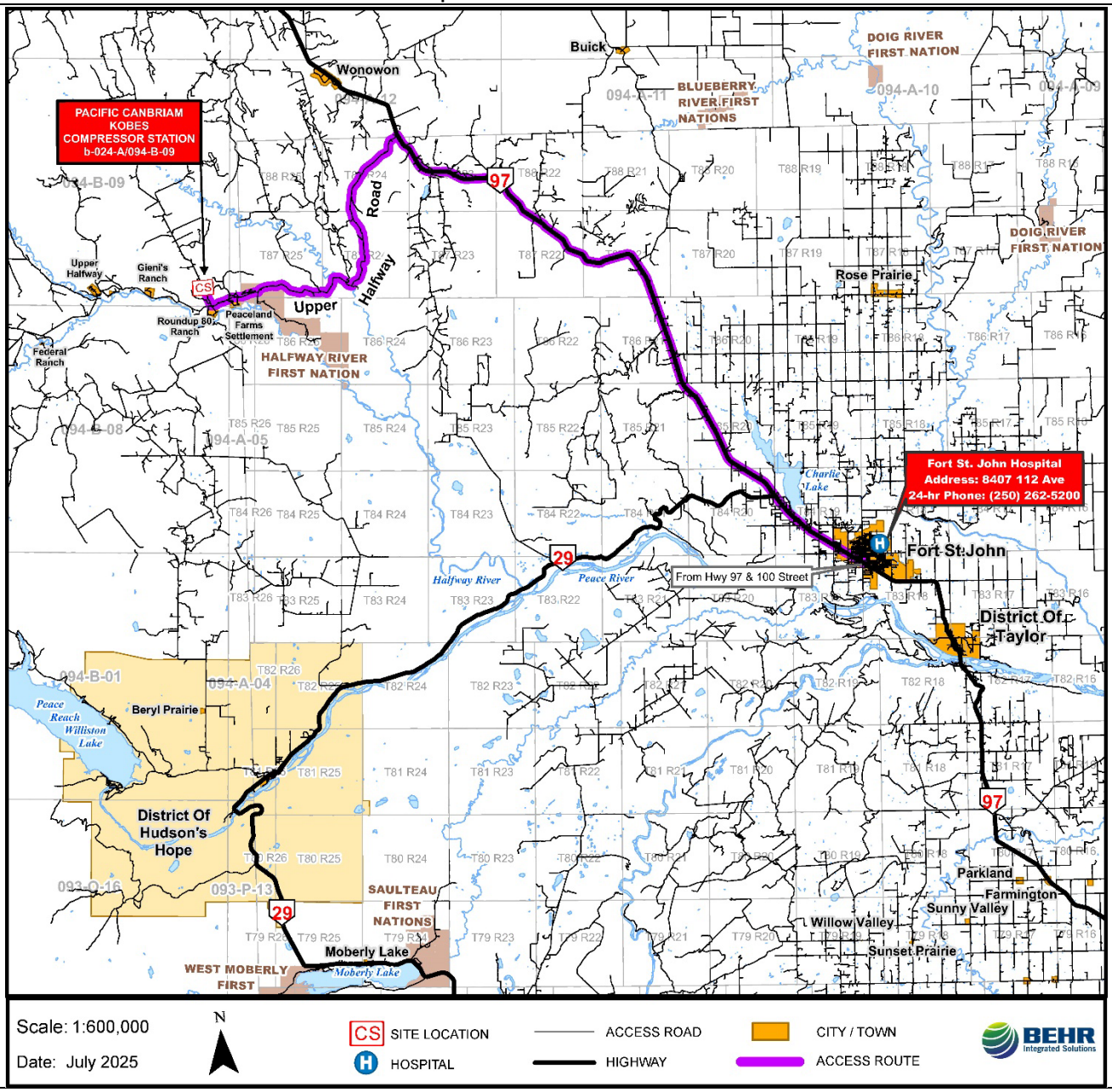
RECEPTION CENTRES

Northern Grand Hotel	9830 100 Avenue Fort St. John, BC V1J 1Y5	250.787.0521
Stillwater Inn & Suites	9504 Canyon Drive Hudson's Hope, BC V0C 1V0	250.783.5400

To Kobes Compressor Station b-024-A / 94-B-09 – Total Distance 118 km

From Intersection of Hwy 97 and 100th Street, Fort St. John, BC

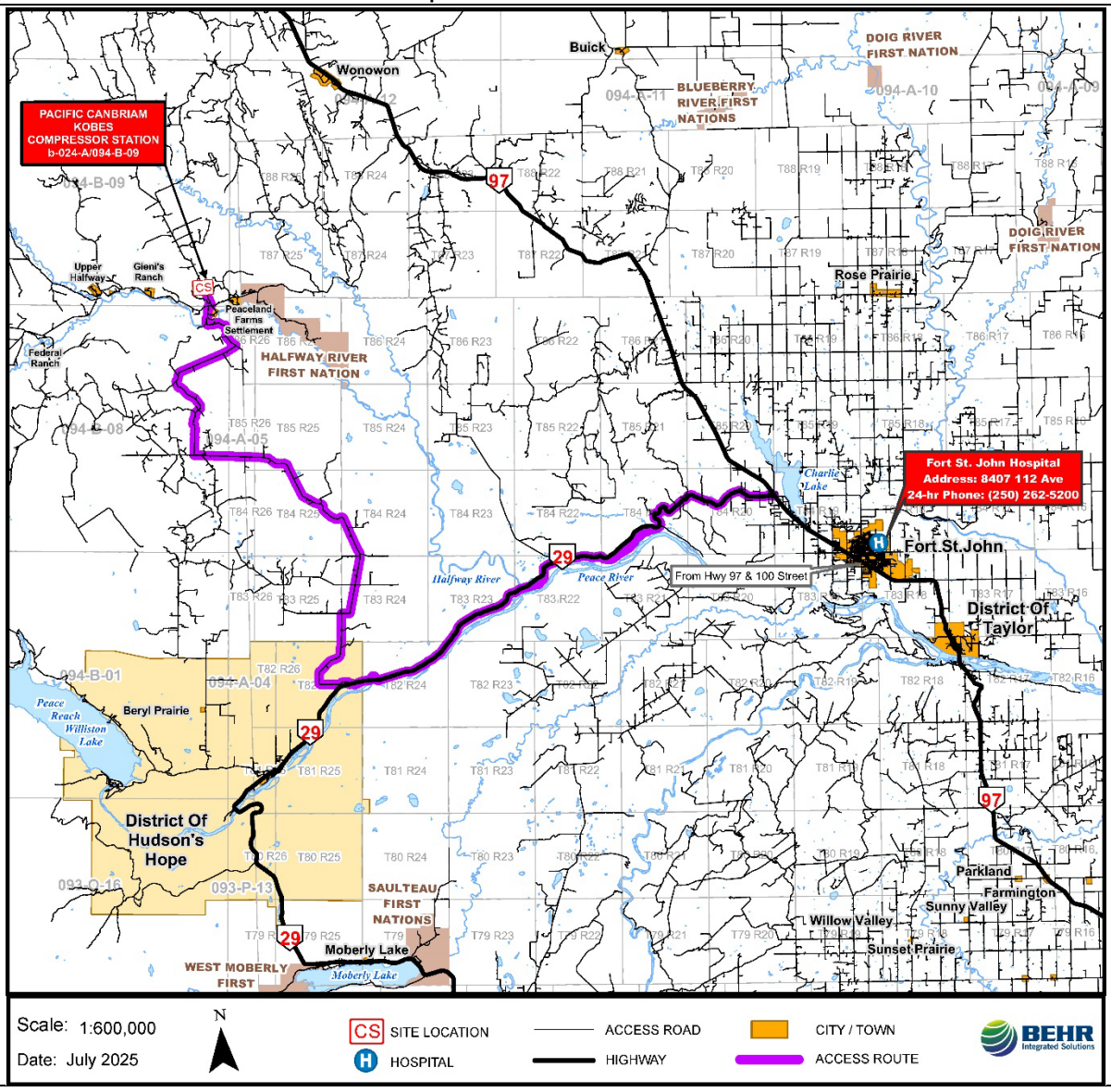
- Travel northwest on Hwy 97 for 75.7 km.
- Turn left and travel southwest on Upper Halfway Road – Mile 95 Road (Radio Frequency 153.380) for 38.9 km.
- Turn right and travel north on Kobes Harold Ellis Road – PDR 277 (Radio Frequency 153.530) for 2.3 km.
- Turn left and travel west into compressor station.



To Kobes Compressor Station b-024-A / 94-B-09 – Total Distance 145 km

From Intersection of Hwy 97 and Hwy 29 (Don Phillips Way), Fort St. John, BC

- Travel southwest on Hwy 29 for 60.7 km.
- Turn right and travel northwest on Farrell Creek Road for 25.1 km.
- Continue northwest onto Kobes Creek FSR for 20.2 km.
- Turn right and travel north on Haystack FSR (Radio Frequency 150.500) for 25.5 km (The Halfway River Bridge is limited to vehicles that are ¾ ton or smaller).
- Turn right and travel east on Upper Halfway Road – Mile 95 Road (Radio Frequency 153.380) for 0.3 km.
- Turn left and travel north on Kobes Harold Ellis Road – PDR 277 (Radio Frequency 153.530) for 2.3 km.
- Turn left and travel west into compressor station.



Kobes - Wells

License	UWI	Surface Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Well Name	Substance	Status	Distance to Nearest Residence (km)	H_2S (ppm)	H_2S Release Rate (m^3/sec)	Assigned HPZ (m)
Operating											
026507	200/D-037-I/094-B-08/00	c-015-I/094-B-08	557779.54	6254686.16	PACIFIC CANBRIAM HZ KOBES C-A015-I/094-B-08	Gas	Producing	>2	0	0.0000	100
028382	200/C-041-J/094-B-08/02	c-029-I/094-B-08	554717.13	6255375.89	PACIFIC CANBRIAM HZ ALTARES C- 029-I/094-B-08	Gas	Producing	>2	0	0.0000	100
027892	200/B-078-I/094-B-08/02	c-057-I/094-B-08	556448.41	6258113.90	PACIFIC CANBRIAM HZ KOBES C- 057-I/094-B-08	Gas	Producing	>2	0	0.0000	100
022651	200/D-068-A/094-B-09/02	d-068-A/094-B-09	555707.00	6268253.84	PACIFIC CANBRIAM KOBES D-A068-A/094-B-09	Gas	Producing	0.629	0	0.0000	100
022651	200/D-068-A/094-B-09/03	d-068-A/094-B-09	555707.00	6268253.84	PACIFIC CANBRIAM KOBES D-A068-A/094-B-09	Gas	Producing	0.629	0	0.0000	100
022651	200/D-068-A/094-B-09/04	d-068-A/094-B-09	555707.00	6268253.84	PACIFIC CANBRIAM KOBES D-A068-A/094-B-09	Gas	Producing	0.629	0	0.0000	100
022651	200/D-068-A/094-B-09/05	d-068-A/094-B-09	555707.00	6268253.84	PACIFIC CANBRIAM KOBES D-A068-A/094-B-09	Gas	Producing	0.629	0	0.0000	100
028380	200/A-052-B/094-B-09/00	c-063-B/094-B-09	551549.31	6268438.34	PACIFIC CANBRIAM HZ KOBES C- 063-B/094-B-09	Gas	Producing	>2	0	0.0000	100
027583	200/C-023-G/094-B-09/00	d-002-G/094-B-09	552825.89	6272205.28	PACIFIC CANBRIAM HZ KOBES D-A002-G/094-B-09	Gas	Producing	>2	0	0.0000	100
029245	200/C-041-F/094-B-09/00	c-029-G/094-B-09	546816.46	6274026.55	PACIFIC CANBRIAM HZ KOBES C-B029-G/094-B-09	Gas	Producing	>2	0	0.0000	100
Not Operating											
028382	200/A-040-I/094-B-08/00	c-029-I/094-B-08	554717.13	6255375.89	PACIFIC CANBRIAM HZ ALTARES C- 029-I/094-B-08	N/A	Drilled & Cased	>2		-	100
023066	200/B-019-A/094-B-09/03	c-019-A/094-B-09	554875.30	6263497.91	PACIFIC CANBRIAM KOBES C-019-A/094-B-09	N/A	Drilled & Cased	0.604		-	100
028381	200/C-029-A/094-B-09/00	c-029-A/094-B-09	554735.36	6264693.45	PACIFIC CANBRIAM HZ KOBES C-029-A/094-B-09	N/A	Drilled & Cased	1.663		-	100
022214	200/D-048-A/094-B-09/00	d-048-A/094-B-09	555772.51	6266478.35	PACIFIC CANBRIAM HZ KOBES D-048-A/094-B-09	N/A	Drilled & Cased	1.795	0	-	100
027449	200/D-002-G/094-B-09/00	d-002-G/094-B-09	552816.85	6272201.16	PACIFIC CANBRIAM KOBES D-002-G/094-B-09	N/A	Drilled & Cased	>2		-	100
000251	200/D-021-G/094-B-09/03	d-021-G/094-B-09	553419.25	6273916.31	PACIFIC CANBRIAM KOBES D- 021-G/094-B-09	N/A	Drilled & Cased	>2		-	100
051145	200/A-015-G/094-B-09/00	c-063-B/094-B-09	551562.54	6268296.79	PACIFIC CANBRIAM HZ KOBES C-A063-B/094-B-09	N/A	Permitted	>2		-	100
051146	202/A-015-G/094-B-09/00	c-063-B/094-B-09	551562.54	6268296.79	PACIFIC CANBRIAM HZ KOBES C-B063-B/094-B-09	N/A	Permitted	>2		-	100
051147	200/B-015-G/094-B-09/00	c-063-B/094-B-09	551562.54	6268296.79	PACIFIC CANBRIAM HZ KOBES C-C063-B/094-B-09	N/A	Permitted	>2		-	100
051148	202/B-015-G/094-B-09/00	c-063-B/094-B-09	551562.54	6268296.79	PACIFIC CANBRIAM HZ KOBES C-D063-B/094-B-09	N/A	Permitted	>2		-	100
051149	203/B-015-G/094-B-09/00	c-063-B/094-B-09	551562.54	6268296.79	PACIFIC CANBRIAM HZ KOBES C-E063-B/094-B-09	N/A	Permitted	>2		-	100
051150	200/B-005-G/094-B-09/00	c-063-B/094-B-09	551562.54	6268296.79	PACIFIC CANBRIAM HZ KOBES C-F063-B/094-B-09	N/A	Permitted	>2		-	100
000141	200/D-094-I/094-B-08/02	d-094-I/094-B-08	559138.94	6261775.59	PACIFIC CANBRIAM KOBES D-094-I/094-B-08	Gas	Suspended	0.772	6600	0.0007	100
000141	200/D-094-I/094-B-08/03	d-094-I/094-B-08	559138.94	6261775.59	PACIFIC CANBRIAM KOBES D-094-I/094-B-08	Gas	Suspended	0.772	9900	0.0021	100
014105	200/B-045-J/094-B-08/00	b-045-J/094-B-08	550296.56	6256766.14	PACIFIC CANBRIAM ET AL ALTARES B-045-J/094-B-08	N/A	Suspended	>2	800	-	100
000489	200/B-024-A/094-B-09/00	b-024-A/094-B-09	558428.79	6264182.07	PACIFIC CANBRIAM KOBES B-024-A/094-B-09	Gas	Suspended	>2	6800	0.0002	100

Kobes - Wells

License	UWI	Surface Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Well Name	Substance	Status	Distance to Nearest Residence (km)	H_2S (ppm)	H_2S Release Rate (m^3/sec)	Assigned HPZ (m)
Not Operating											
022214	200/B-079-A/094-B-09/02	d-048-A/094-B-09	555772.51	6266478.35	PACIFIC CANBRIAM HZ KOBES D-048-A/094-B-09	Gas	Suspended	1.795	0	-	100
022651	200/D-068-A/094-B-09/00	d-068-A/094-B-09	555707.07	6268253.84	PACIFIC CANBRIAM KOBES D-A068-A/094-B-09	Gas	Suspended	0.629	40000	0.0111	147
000314	200/B-098-A/094-B-09/03	a-099-A/094-B-09	555019.82	6270660.16	PACIFIC CANBRIAM KOBES A-099-A/094-B-09	N/A	Suspended	1.862		-	100
000314	200/A-099-A/094-B-09/00	a-099-A/094-B-09	555019.82	6270660.16	PACIFIC CANBRIAM KOBES A-099-A/094-B-09	Gas	Suspended	1.862	43200	0.0150	175
000314	200/A-099-A/094-B-09/02	a-099-A/094-B-09	555019.89	6270660.16	PACIFIC CANBRIAM KOBES A-099-A/094-B-09	Gas	Suspended	1.862		-	100
000314	200/A-099-A/094-B-09/04	a-099-A/094-B-09	555019.89	6270660.16	PACIFIC CANBRIAM KOBES A-099-A/094-B-09	Gas	Suspended	1.862		-	100
017791	200/C-055-G/094-B-09/00	c-055-G/094-B-09	549944.56	6276661.68	PACIFIC CANBRIAM ET AL KOBES C-055-G/094-B-09	Gas	Suspended	>2		-	100
024284	200/A-096-G/094-B-09/02	c-074-G/094-B-09	550769.32	6278268.89	PACIFIC CANBRIAM HZ KOBES C-074-G/094-B-09	Gas	Suspended	>2	0	-	100
013366	200/C-097-G/094-B-09/03	c-097-G/094-B-09	548544.84	6280281.00	PACIFIC CANBRIAM ET AL KOBES C-097-G/094-B-09	N/A	Suspended	>2		-	100
013366	200/C-097-G/094-B-09/04	c-097-G/094-B-09	548544.84	6280281.00	PACIFIC CANBRIAM ET AL KOBES C-097-G/094-B-09	Gas	Suspended	>2		-	100
052121	200/A-001-J/094-B-08/00	c-029-I/094-B-08	554803.15	6255351.96	PACIFIC CANBRIAM HZ ALTARES C-A029-I/094-B-08	N/A	Permitted	>2		-	100
Cancelled / Abandoned											
011440	200/A-056-A/094-B-09/00	c-056-A/094-B-09	557018.31	6267482.41	PACIFIC CANBRIAM KOBES C-A056-A/094-B-09	Gas	Abandoned Zone	0.852			-
011440	200/A-056-A/094-B-09/02	c-056-A/094-B-09	557018.31	6267482.41	PACIFIC CANBRIAM KOBES C-A056-A/094-B-09	Gas	Abandoned Zone	0.852			-
023723	200/A-016-A/094-B-09/00	a-016-A/094-B-09	557338.23	6263440.31	PACIFIC CANBRIAM KOBES A- 016-A/094-B-09	N/A	Abandoned Zone	1.948			-
021791	200/A-022-F/094-B-09/00	a-022-F/094-B-09	544908.61	6273125.36	PACIFIC CANBRIAM PAINT POT A- 022-F/094-B-09	N/A	Abandoned Zone	>2			-
021791	200/A-022-F/094-B-09/02	a-022-F/094-B-09	544908.61	6273125.48	PACIFIC CANBRIAM PAINT POT A- 022-F/094-B-09	N/A	Abandoned Zone	>2			-
021986	200/A-041-G/094-B-09/00	a-041-G/094-B-09	553245.52	6275206.44	PACIFIC CANBRIAM KOBES A-041-G/094-B-09	N/A	Abandoned Zone	>2			-
014126	200/D-077-G/094-B-09/00	a-087-G/094-B-09	548817.82	6278722.34	PACIFIC CANBRIAM ET AL KOBES A-A087-G/094-B-09	Water Disposal	Abandoned Zone	>2			-
014126	200/D-077-G/094-B-09/02	a-087-G/094-B-09	548817.76	6278722.34	PACIFIC CANBRIAM ET AL KOBES A-A087-G/094-B-09	N/A	Abandoned Zone	>2			-
014126	200/D-077-G/094-B-09/03	a-087-G/094-B-09	548817.76	6278722.34	PACIFIC CANBRIAM ET AL KOBES A-A087-G/094-B-09	Gas	Abandoned Zone	>2			-
012176	202/D-094-I/094-B-08/02	a-094-I/094-B-08	559130.06	6261652.90	PACIFIC CANBRIAM KOBES A- 094-I/094-B-08	Gas	Abandoned Zone	0.685			-
012176	202/D-094-I/094-B-08/04	a-094-I/094-B-08	559130.06	6261652.90	PACIFIC CANBRIAM KOBES A- 094-I/094-B-08	Gas	Abandoned Zone	0.685			-
012176	202/D-094-I/094-B-08/05	a-094-I/094-B-08	559130.06	6261652.90	PACIFIC CANBRIAM KOBES A- 094-I/094-B-08	Gas	Abandoned Zone	0.685			-
012176	202/D-094-I/094-B-08/06	a-094-I/094-B-08	559130.06	6261652.90	PACIFIC CANBRIAM KOBES A- 094-I/094-B-08	Gas	Abandoned Zone	0.685			-
023061	200/B-010-H/094-B-09/00	b-010-H/094-B-09	553711.89	6271605.78	PACIFIC CANBRIAM KOBES B-010-H/094-B-09	Gas	Abandoned Zone	>2			-
017993	200/B-019-H/094-B-09/00	b-019-H/094-B-09	554782.86	6272568.35	PACIFIC CANBRIAM KOBES B-019-H/094-B-09	N/A	Abandoned Zone	>2			-

Kobes - Wells

License	UWI	Surface Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Well Name	Substance	Status	Distance to Nearest Residence (km)	H_2S (ppm)	H_2S Release Rate (m^3/sec)	Assigned HPZ (m)
Cancelled / Abandoned											
017993	200/B-019-H/094-B-09/02	b-019-H/094-B-09	554782.86	6272568.35	PACIFIC CANBRIAM KOBES B-019-H/094-B-09	Gas	Abandoned Zone	>2			-
000177	200/B-035-A/094-B-09/00	b-035-A/094-B-09	557752.85	6265050.88	PACIFIC CANBRIAM KOBES B-035-A/094-B-09	Gas	Abandoned Zone	1.769			-
000177	200/B-035-A/094-B-09/02	b-035-A/094-B-09	557752.85	6265050.88	PACIFIC CANBRIAM KOBES B-035-A/094-B-09	Gas	Abandoned Zone	1.769			-
014105	200/B-045-J/094-B-08/02	b-045-J/094-B-08	550296.56	6256766.14	PACIFIC CANBRIAM ET AL ALTARES B-045-J/094-B-08	Gas	Abandoned Zone	>2			-
018174	200/B-098-A/094-B-09/00	b-098-A/094-B-09	555472.34	6270806.02	PACIFIC CANBRIAM KOBES B-098-A/094-B-09	Gas	Abandoned Zone	1.945			-
018174	200/B-098-A/094-B-09/02	b-098-A/094-B-09	555472.34	6270806.02	PACIFIC CANBRIAM KOBES B-098-A/094-B-09	Gas	Abandoned Zone	1.945			-
013237	200/C-015-I/094-B-08/02	c-015-I/094-B-08	557727.59	6254665.19	PACIFIC CANBRIAM KOBES C-015-I/094-B-08	Gas	Abandoned Zone	>2			-
013237	200/C-015-I/094-B-08/03	c-015-I/094-B-08	557727.59	6254665.19	PACIFIC CANBRIAM KOBES C-015-I/094-B-08	Gas	Abandoned Zone	>2			-
027589	200/C-029-G/094-B-09/00	c-029-G/094-B-09	546764.34	6273987.78	PACIFIC CANBRIAM KOBES C-029-G/094-B-09	N/A	Abandoned Zone	>2			-
027892	200/C-057-I/094-B-08/00	c-057-I/094-B-08	556458.60	6258116.60	PACIFIC CANBRIAM HZ KOBES C- 057-I/094-B-08	N/A	Abandoned Zone	>2			-
000299	200/C-073-I/094-B-08/00	c-073-I/094-B-08	559496.00	6260024.27	PACIFIC CANBRIAM KOBES C-073-I/094-B-08	Gas	Abandoned Zone	0.688			-
024284	200/C-074-G/094-B-09/00	c-074-G/094-B-09	550769.32	6278268.89	PACIFIC CANBRIAM HZ KOBES C-074-G/094-B-09	N/A	Abandoned Zone	>2			-
007021	200/C-096-G/094-B-09/00	c-096-G/094-B-09	549104.45	6280296.41	PACIFIC CANBRIAM ET AL TOWNSEND C-096-G/094-B-09	Gas	Abandoned Zone	>2			-
007021	200/C-096-G/094-B-09/02	c-096-G/094-B-09	549104.45	6280296.41	PACIFIC CANBRIAM ET AL TOWNSEND C-096-G/094-B-09	Gas	Abandoned Zone	>2			-
007021	200/C-096-G/094-B-09/03	c-096-G/094-B-09	549104.45	6280296.41	PACIFIC CANBRIAM ET AL TOWNSEND C-096-G/094-B-09	N/A	Abandoned Zone	>2			-
007021	200/C-096-G/094-B-09/04	c-096-G/094-B-09	549104.45	6280296.41	PACIFIC CANBRIAM ET AL TOWNSEND C-096-G/094-B-09	Gas	Abandoned Zone	>2			-
013366	200/C-097-G/094-B-09/00	c-097-G/094-B-09	548544.84	6280281.00	PACIFIC CANBRIAM ET AL KOBES C-097-G/094-B-09	N/A	Abandoned Zone	>2			-
013366	200/C-097-G/094-B-09/02	c-097-G/094-B-09	548544.84	6280281.00	PACIFIC CANBRIAM ET AL KOBES C-097-G/094-B-09	N/A	Abandoned Zone	>2			-
023015	200/D-013-G/094-B-09/00	d-013-G/094-B-09	551774.79	6272833.22	PACIFIC CANBRIAM KOBES D-013-G/094-B-09	Gas	Abandoned Zone	>2			-
006666	200/D-015-A/094-B-09/00	d-015-A/094-B-09	558353.36	6263948.59	PACIFIC CANBRIAM KOBES D- 015-A/094-B-09	Gas	Abandoned Zone	>2			-
022360	200/D-017-A/094-B-09/00	d-017-A/094-B-09	556716.67	6263883.45	PACIFIC CANBRIAM KOBES D- 017-A/094-B-09	N/A	Abandoned Zone	>2			-
000251	200/D-021-G/094-B-09/00	d-021-G/094-B-09	553419.25	6273916.31	PACIFIC CANBRIAM KOBES D- 021-G/094-B-09	Gas	Abandoned Zone	>2			-
000251	200/D-021-G/094-B-09/02	d-021-G/094-B-09	553419.25	6273916.31	PACIFIC CANBRIAM KOBES D- 021-G/094-B-09	Gas	Abandoned Zone	>2			-
017261	200/D-065-A/094-B-09/00	d-065-A/094-B-09	557973.00	6268257.86	PACIFIC CANBRIAM ET AL KOBES D- 065-A/094-B-09	Gas	Abandoned Zone	1.205			-
021931	200/D-079-A/094-B-09/00	d-079-A/094-B-09	554880.03	6269262.93	PACIFIC CANBRIAM KOBES D-079-A/094-B-09	Gas	Abandoned Zone	0.738			-
022977	200/D-090-A/094-B-09/00	d-090-A/094-B-09	554302.38	6270333.59	PACIFIC CANBRIAM KOBES D-090-A/094-B-09	Gas	Abandoned Zone	1.897			-
000372	200/A-003-A/094-B-09/00	a-003-A/094-B-09	559759.26	6262152.78	PACIFIC CANBRIAM KOBES A- 003-A/094-B-09	Gas	Abandoned	0.630			-

Kobes - Wells

License	UWI	Surface Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Well Name	Substance	Status	Distance to Nearest Residence (km)	H_2S (ppm)	H_2S Release Rate (m^3/sec)	Assigned HPZ (m)
Cancelled / Abandoned											
000164	200/A-020-H/094-B-09/00	a-020-H/094-B-09	554206.44	6272471.28	PACIFIC CANBRIAM KOBES A- 020-H/094-B-09	Gas	Abandoned	>2			-
000164	200/A-020-H/094-B-09/02	a-020-H/094-B-09	554206.44	6272471.28	PACIFIC CANBRIAM KOBES A- 020-H/094-B-09	Gas	Abandoned	>2			-
000164	200/A-020-H/094-B-09/03	a-020-H/094-B-09	554206.44	6272471.28	PACIFIC CANBRIAM KOBES A- 020-H/094-B-09	N/A	Abandoned	>2			-
000164	200/A-020-H/094-B-09/04	a-020-H/094-B-09	554206.44	6272471.28	PACIFIC CANBRIAM KOBES A- 020-H/094-B-09	N/A	Abandoned	>2			-
000164	200/A-020-H/094-B-09/05	a-020-H/094-B-09	554206.44	6272471.28	PACIFIC CANBRIAM KOBES A- 020-H/094-B-09	N/A	Abandoned	>2			-
019486	200/A-024-K/094-B-09/00	a-024-K/094-B-09	543256.85	6282743.27	PACIFIC CANBRIAM CAMERON A- 024-K/094-B-09	N/A	Abandoned	>2			-
019531	200/A-057-F/094-B-09/00	a-057-F/094-B-09	541234.46	6276237.49	PACIFIC CANBRIAM KOBES A-057-F/094-B-09	N/A	Abandoned	>2			-
019531	200/A-057-F/094-B-09/02	a-057-F/094-B-09	541234.46	6276237.49	PACIFIC CANBRIAM KOBES A-057-F/094-B-09	N/A	Abandoned	>2			-
011458	200/C-072-I/094-B-08/02	a-083-I/094-B-08	559790.03	6260690.44	PACIFIC CANBRIAM KOBES A- 083-I/094-B-08	Gas	Abandoned	0.321			-
011458	200/A-083-I/094-B-08/00	a-083-I/094-B-08	559790.03	6260690.44	PACIFIC CANBRIAM KOBES A- 083-I/094-B-08	Gas	Abandoned	0.321			-
012176	202/D-094-I/094-B-08/00	a-094-I/094-B-08	559130.06	6261652.90	PACIFIC CANBRIAM KOBES A- 094-I/094-B-08	N/A	Abandoned	0.685			-
012176	202/D-094-I/094-B-08/03	a-094-I/094-B-08	559130.06	6261652.90	PACIFIC CANBRIAM KOBES A- 094-I/094-B-08	N/A	Abandoned	0.685			-
019238	200/B-051-I/094-B-08/00	b-051-I/094-B-08	560855.56	6257860.68	PACIFIC CANBRIAM KOBES B- 051-I/094-B-08	Gas	Abandoned	>2			-
019487	200/C-052-G/094-B-09/00	b-052-G/094-B-09	552221.01	6276380.84	PACIFIC CANBRIAM ET AL KOBES B- 052-G/094-B-09	N/A	Abandoned	>2			-
019487	200/C-052-G/094-B-09/02	b-052-G/094-B-09	552221.01	6276380.84	PACIFIC CANBRIAM ET AL KOBES B- 052-G/094-B-09	N/A	Abandoned	>2			-
019487	200/C-052-G/094-B-09/03	b-052-G/094-B-09	552221.01	6276380.84	PACIFIC CANBRIAM ET AL KOBES B- 052-G/094-B-09	N/A	Abandoned	>2			-
019487	200/C-052-G/094-B-09/04	b-052-G/094-B-09	552221.01	6276380.84	PACIFIC CANBRIAM ET AL KOBES B- 052-G/094-B-09	Gas	Abandoned	>2			-
006667	200/B-062-I/094-B-08/00	b-062-I/094-B-08	560253.00	6258461.66	PACIFIC CANBRIAM KOBES B- 062-I/094-B-08	Gas	Abandoned	>2			-
006667	200/B-062-I/094-B-08/02	b-062-I/094-B-08	560253.00	6258461.66	PACIFIC CANBRIAM KOBES B- 062-I/094-B-08	Gas	Abandoned	>2			-
006667	200/B-062-I/094-B-08/03	b-062-I/094-B-08	560253.00	6258461.66	PACIFIC CANBRIAM KOBES B- 062-I/094-B-08	Gas	Abandoned	>2			-
013224	202/B-062-I/094-B-08/00	b-062-I/094-B-08	560143.90	6258841.28	PACIFIC CANBRIAM KOBES B-A062-I/094-B-08	Gas	Abandoned	1.954			-
013224	202/B-062-I/094-B-08/02	b-062-I/094-B-08	560143.90	6258841.28	PACIFIC CANBRIAM KOBES B-A062-I/094-B-08	Gas	Abandoned	1.954			-
013224	202/B-062-I/094-B-08/03	b-062-I/094-B-08	560143.90	6258841.28	PACIFIC CANBRIAM KOBES B-A062-I/094-B-08	Gas	Abandoned	1.954			-
000496	200/B-082-I/094-B-08/00	b-082-I/094-B-08	560154.61	6260328.47	PACIFIC CANBRIAM KOBES B- 082-I/094-B-08	Gas	Abandoned	0.777			-
013237	200/C-015-I/094-B-08/00	c-015-I/094-B-08	557727.53	6254665.19	PACIFIC CANBRIAM KOBES C-015-I/094-B-08	N/A	Abandoned	>2			-
023066	200/B-019-A/094-B-09/00	c-019-A/094-B-09	554875.30	6263497.91	PACIFIC CANBRIAM KOBES C-019-A/094-B-09	N/A	Abandoned	0.604			-
023066	200/B-019-A/094-B-09/02	c-019-A/094-B-09	554875.30	6263497.91	PACIFIC CANBRIAM KOBES C-019-A/094-B-09	N/A	Abandoned	0.604			-

Kobes - Wells

License	UWI	Surface Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Well Name	Substance	Status	Distance to Nearest Residence (km)	H_2S (ppm)	H_2S Release Rate (m^3/sec)	Assigned HPZ (m)
Cancelled / Abandoned											
017829	200/C-025-A/094-B-09/00	c-025-A/094-B-09	557947.83	6264741.18	PACIFIC CANBRIAM KOBES C- 025-A/094-B-09	Gas	Abandoned	>2			-
006666	200/D-015-A/094-B-09/02	d-015-A/094-B-09	558353.36	6263948.70	PACIFIC CANBRIAM KOBES D- 015-A/094-B-09	Gas	Abandoned	>2			-
006666	200/D-015-A/094-B-09/03	d-015-A/094-B-09	558353.36	6263948.70	PACIFIC CANBRIAM KOBES D- 015-A/094-B-09	Gas	Abandoned	>2			-
006666	200/D-015-A/094-B-09/04	d-015-A/094-B-09	558353.36	6263948.70	PACIFIC CANBRIAM KOBES D- 015-A/094-B-09	N/A	Abandoned	>2			-
002588	200/D-057-A/094-B-09/00	d-057-A/094-B-09	556611.22	6267360.49	PACIFIC CANBRIAM KOBES D- 057-A/094-B-09	Gas	Abandoned	1.079			-
002588	200/D-057-A/094-B-09/02	d-057-A/094-B-09	556611.22	6267360.49	PACIFIC CANBRIAM KOBES D- 057-A/094-B-09	N/A	Abandoned	1.079			-
002588	200/D-057-A/094-B-09/03	d-057-A/094-B-09	556611.22	6267360.49	PACIFIC CANBRIAM KOBES D- 057-A/094-B-09	Gas	Abandoned	1.079			-
002588	200/D-057-A/094-B-09/04	d-057-A/094-B-09	556611.22	6267360.49	PACIFIC CANBRIAM KOBES D- 057-A/094-B-09	N/A	Abandoned	1.079			-
023847	200/D-062-B/094-B-09/00	d-062-B/094-B-09	552745.31	6268151.66	PACIFIC CANBRIAM KOBES D- 062-B/094-B-09	N/A	Abandoned	>2			-
016249	200/D-066-G/094-B-09/00	d-066-G/094-B-09	549364.57	6277431.40	PACIFIC CANBRIAM ET AL KOBES D- 066-G/094-B-09	Gas	Abandoned	>2			-
016249	200/D-066-G/094-B-09/02	d-066-G/094-B-09	549364.57	6277431.40	PACIFIC CANBRIAM ET AL KOBES D- 066-G/094-B-09	Gas	Abandoned	>2			-
016249	200/D-066-G/094-B-09/03	d-066-G/094-B-09	549364.57	6277431.40	PACIFIC CANBRIAM ET AL KOBES D- 066-G/094-B-09	Gas	Abandoned	>2			-
011418	200/D-086-A/094-B-09/02	d-086-A/094-B-09	557167.65	6270401.07	PACIFIC CANBRIAM KOBES D- 086-A/094-B-09	Gas	Abandoned	1.381			-
011418	200/D-086-A/094-B-09/00	d-086-A/094-B-09	557167.59	6270401.07	PACIFIC CANBRIAM KOBES D- 086-A/094-B-09	N/A	Abandoned	1.381			-
017507	200/D-088-G/094-B-09/00	d-088-G/094-B-09	547898.59	6279325.70	PACIFIC CANBRIAM ET AL KOBES D- 088-G/094-B-09	Gas	Abandoned	>2			-
000141	200/D-094-I/094-B-08/00	d-094-I/094-B-08	559138.94	6261775.59	PACIFIC CANBRIAM KOBES D-094-I/094-B-08	N/A	Abandoned	0.772			-

Comments:

- All operating and suspended wells were assigned a minimum 100 m HPZ to comply with the *All Hazards Approach* utilized in BC.

Kobes - Pipelines

License	Line	From Location	From Facility	From Valve	From Valve Easting (Zone 10)	From Valve Northing (Zone 10)	To Location	To Facility	To Valve	To Valve Easting (Zone 10)	To Valve Northing (Zone 10)	Sub-stance	Status	MOP (kPa)	OD (mm)	WT (mm)	L (km)	H_2S (%)	Cumulative H_2S Release Volume (m^3)	Assigned HPZ[1] (km)
Operating																				
9986	1	B-082-I/094-B-08		ESD	557726	6254667	A-026-I/094-B-08		CV	560155	6260330	SNG	Q	9309	219.10	5.60	9.100	0.25	98.6	0.332
23130	1	D-055-G/094-B-09	PL				D-021-G/094-B-09	PL				SNG	Q	4960	168.30	4.80	4.514	6.50	352.4	1.042
1026	3	D-021-G/094-B-09		CV	553513	6273718	A-020-H/094-B-09					SNG	Q	4960	168.30	4.80	1.829	6.50	495.2	1.368
9903	1	A-020-H/094-B-09					D-010-H/094-B-09		CV	554211	6272202	SNG	Q	4960	219.10	6.35	0.320	0.25	1.6	0.198
9903	2	D-010-H/094-B-09					A-035-A/094-B-09					SNG	Q	4960	219.10	5.56	8.203	0.25	44.9	0.156
9903	3	A-035-A/094-B-09					D-025-A/094-B-09		CV	558306	6264784	SNG	Q	4960	219.10	6.35	0.322	0.25	44.9	0.156
25688	1	D-025-A/094-B-09					D-025-A/094-B-09					SNG	Q	7584	114.30	6.02	0.029	0.25	45.1	0.156
9763	2	D-025-A/094-B-09					D-025-A/094-B-09					SNG	Q	7584	168.30	4.80	0.030	0.25	45.1	0.156
6034	1	D-025-A/094-B-09		ESD	558302	6264802	D-025-A/094-B-09					SNG	Q	4960	168.30	6.40	0.046	0.25	1.9	0.120
6034	2	D-025-A/094-B-09					B-024-A/094-B-09		CV	558494	6264210	SNG	Q	4960	168.30	6.40	0.636	0.25	1.9	0.120
1025	8	B-024-A/094-B-09		ESD	558454	6264251	D-025-A/094-B-09		CV	558290	6264677	SNG	Q	7584	168.30	4.80	0.750	0.25	3.6	0.153
19827	1	B-024-A/094-B-09	PL				A-031-B/094-B-09	PL				FG	Q	9930	114.30	4.80	5.326	0.00	na	0.100
22394	1	C-015-I/094-B-08	PL	CV/ESD	557726	6254665	B-082-G/094-B-08	PL	ESD/CV	552418	6250936	NG	Q	9930	168.30	4.80	7.641	0.00	na	0.132
22719	1	D-002-G/094-B-09	WE				A-020-H/094-B-09	PL				NG	Q	4960	114.30	4.00	1.600	0.00	na	0.100
22743	1	C-057-I/094-B-08	WE	CV	556450	6258111	C-015-I/094-B-08	PL	ESD/CV	557726	6254665	NG	Q	9930	168.30	4.80	3.854	0.00	na	0.133
23041	1	C-029-I/094-B-08	WE				B-046-I/094-B-08	PL				NG	Q	4960	114.30	4.00	2.664	0.00	na	0.100
23043	1	C-063-B/094-B-09	WE				D-002-G/094-B-09	PL				NG	Q	9930	114.30	4.00	5.100	0.00	na	0.100
23333	1	C-029-G/094-B-09	WE				D-055-G/094-B-09	PL	ESD	550181	6276410	NG	Q	9930	114.30	4.00	5.650	0.00	na	0.100
25665	1	B-046-I/094-B-08					A-026-I/094-B-08					NG	Q	4960	114.30	4.00	2.089	0.00	na	0.100
Not Operating																				
67	1	D-013-G/094-B-09	BE				D-021-G/094-B-09	BE		553513	6273718	SNG	D	4960	88.90	4.80	2.013	6.50	-	0.100
139	1	B-010-H/094-B-09	BE				A-020-H/094-B-09	BE		554148	6272436	SNG	D	4960	88.90	4.80	1.114	6.50	-	0.100
140	1	D-090-A/094-B-09	BE				A-099-A/094-B-09	BE		555018	6270666	SNG	D	4960	88.90	4.80	0.768	6.50	-	0.100
1025	7	A-014-A/094-B-09	BE				B-024-A/094-B-09	BE	CV	558495	6264179	SNG	D	4960	168.30	4.80	1.266	6.50	-	0.100
1025	10	A-004-A/094-B-09	BE				D-004-A/094-B-09	BE				SNG	D	4960	168.30	4.80	0.569	6.50	-	0.100
1025	11	D-004-A/094-B-09	BE				A-014-A/094-B-09	BE				SNG	D	4960	168.30	6.35	0.348	6.50	-	0.100
1026	1	D-021-G/094-B-09	BE		553513	6273718	D-021-G/094-B-09	BE		553513	6273718	SNG	D	4960	88.90	4.80	0.152	6.50	-	0.100
2993	1	C-056-A/094-B-09	BE		558023	6267496	C-056-A/094-B-09	BE		556923	6267333	SNG	D	4960	114.30	6.02	0.245	6.50	-	0.100
4433	1	C-073-I/094-B-08	BE				A-083-I/094-B-08	BE	ESD	559930	6260358	SNG	D	4960	114.30	4.78	0.542	6.50	-	0.100
4433	2	B-082-I/094-B-08	BE				A-083-I/094-B-08	BE		559757	6260598	SNG	D	4960	88.90	5.49	0.397	6.50	-	0.100

Kobes - Pipelines

License	Line	From Location	From Facility	From Valve	From Valve Easting (Zone 10)	From Valve Northing (Zone 10)	To Location	To Facility	To Valve	To Valve Easting (Zone 10)	To Valve Northing (Zone 10)	Sub-stance	Status	MOP (kPa)	OD (mm)	WT (mm)	L (km)	H_2S (%)	Cumulative H_2S Release Volume (m^3)	Assigned HPZ[1] (km)
Not Operating																				
4433	3	A-083-I/094-B-08	BE	ESD	559786	6260506	D-094-I/094-B-08	BE	CV	559130	6261764	SNG	D	4960	114.30	4.78	1.484	6.50	-	0.100
4433	4	D-094-I/094-B-08	BE	CV	559158	6261852	A-004-A/094-B-09	BE				SNG	D	4960	168.30	5.56	0.340	6.50	-	0.100
4433	7	A-083-I/094-B-08	BE	ESD	559790	6260502	A-083-I/094-B-08	BE	ESD	559930	6260358	SNG	D	4960	114.30	6.02	0.154	6.50	-	0.100
4433	9	A-099-A/094-B-09	BE				B-099-A/094-B-09	BE	CV	555018	6270666	SNG	D	4960	88.90	4.78	0.238	6.50	-	0.100
4531	4	D-015-A/094-B-09	BE		558353	6263950	B-024-A/094-B-09	BE		558427	6264186	SNG	D	4960	114.30	4.78	0.260	6.50	-	0.100
4655	3	B-062-I/094-B-08	BE	ESD	560258	6258465	C-073-I/094-B-08	BE	CV	559492	6260029	SNG	D	4960	88.90	3.96	2.240	6.50	-	0.100
5433	1	B-035-A/094-B-09	BE				D-025-A/094-B-09	BE		558390	6264579	SNG	D	4960	114.30	8.56	0.685	6.50	-	0.100
5433	2	D-025-A/094-B-09	BE				B-024-A/094-B-09	BE				SNG	D	4960	114.30	8.56	0.615	6.50	-	0.100
7851	1	A-083-I/094-B-08	BE		559786	6260667	A-083-I/094-B-08	BE		559719	6260651	SNG	D	4960	114.30	4.76	0.091	6.50	-	0.100
8970	1	D-083-G/094-B-08	BE				B-082-G/094-B-08	BE				SNG	D	9930	114.30	4.80	0.500	1.00	-	0.100
9763	1	C-097-G/094-B-09	BE				D-025-A/094-B-09	BE				SNG	D	9930	168.30	4.80	19.153	6.50	-	0.100
9938	1	C-096-G/094-B-09	BE	ESD	549194	6280096	C-097-G/094-B-09	BE	CV, ESD	548633	6280073	SNG	D	9930	88.90	4.80	0.575	2.30	-	0.100
10286	1	D-086-A/094-B-09	BE		557168	6270401	B-088-A/094-B-09	BE		555373	6269520	SNG	D	9930	88.90	4.80	2.125		-	0.100
10287	1	A-087-G/094-B-09	BE		548916	6278509	C-097-G/094-B-09	BE		548633	6280073	SNG	D	4960	168.30	5.60	1.732	6.50	-	0.100
11910	1	D-066-G/094-B-09	BE				A-087-G/094-B-09	BE		549364.57	6277431.4	SNG	D	4960	168.30	5.60	1.740	6.50	-	0.100
12860	1	D-065-A/094-B-09	BE		557978	6268257	D-057-A/094-B-09	BE		556538	6267590	SNG	D	9930	88.90	4.80	1.790	1.50	-	0.100
13309	1	A-099-G/094-B-09	BE				C-097-G/094-B-09	BE				FG	D	9930	88.90	4.80	1.700	0.00	-	0.100
13428	1	C-025-A/094-B-09	BE		557957	6264744	B-024-A/094-B-09	BE		558434	6264259	SNG	D	9930	114.30	4.80	0.860	1.50	-	0.100
13768	1	B-098-A/094-B-09	BE		555487	6270802	A-099-A/094-B-09	BE		555016	6270661	SNG	D	4960	114.30	4.80	0.550	6.50	-	0.100
14814	1	C-097-G/094-B-09	BE				A-087-G/094-B-09	BE				SW	D	4964	168.30	5.60	1.700	1.00	-	0.100
14814	2	C-097-G/094-B-09	BE				A-087-G/094-B-09	BE				FG	D	1896	88.90	3.20	1.700	0.00	-	0.100
18826	1	D-079-A/094-B-09	BE		554883	6269268	C-078-A/094-B-09	BE		555308	6269494	SNG	D	4960	88.90	4.80	0.510	6.50	-	0.100
19138	1	B-051-I/094-B-08	BE	ESD	560848	6257866	B-062-I/094-B-08	BE	CV	560258	6258465	SNG	D	4960	88.90	5.50	0.983	6.50	-	0.100
19158	1	D-048-A/094-B-09	BE		555769	6266490	D-057-A/094-B-09	BE		556601	6267350	SNG	D	4960	114.30	4.80	1.278	6.50	-	0.100
19565	1	B-019-H/094-B-09	BE		554752	6272557	A-020-H/094-B-09	BE		554148	6272436	SNG	D	4960	88.90	4.80	0.855	6.50	-	0.100
19997	1	D-068-A/094-B-09	BE		555705	6268268	D-068-A/094-B-09	BE		555939	6268352	SNG	D	4960	88.90	4.80	0.270	6.50	-	0.100
21205	1	C-074-G/094-B-09	BE		550782	6278274	D-066-G/094-B-09	BE		549422	6277470	SNG	D	4960	114.30	4.80	1.766	6.50	-	0.100
23041	2	B-046-I/094-B-08	BE				B-051-I/094-B-08	BE				NG	D	4960	114.30	4.00	4.131	0.00	-	0.100
23130	2	D-055-G/094-B-09	BE				D-066-G/094-B-09	BE				SNG	D	0	168.30	4.80	1.486	6.50	-	0.100

Kobes - Pipelines

License	Line	From Location	From Facility	From Valve	From Valve Easting (Zone 10)	From Valve Northing (Zone 10)	To Location	To Facility	To Valve	To Valve Easting (Zone 10)	To Valve Northing (Zone 10)	Sub-stance	Status	MOP (kPa)	OD (mm)	WT (mm)	L (km)	H_2S (%)	Cumulative H_2S Release Volume (m^3)	Assigned HPZ[1] (km)
Abandoned																				
1025	1	B-035-A/094-B-09					D-025-A/094-B-09					SNG	A	8300	88.90	4.88	0.488			-
1025	2	A-099-A/094-B-09					A-099-A/094-B-09					SNG	A	8300	88.90	4.80	0.183			-
1025	3	A-003-A/094-B-09					A-004-A/094-B-09					SNG	A	8300	88.90	4.80	0.640			-
1025	4	D-094-I/094-P-08					D-025-A/094-B-09					SNG	A		38.10	3.70	3.962			-
1025	5	A-003-A/094-B-09					A-004-A/094-B-09					SNG	A		25.40	3.37	0.640			-
1025	6	D-094-I/094-B-08					A-004-A/094-B-09					SNG	A		168.30	4.80	0.375			-
1025	9	D-004-A/094-B-09					A-014-A/094-B-09					SNG	A	4960	168.30	4.80	0.358	6.50		-
1026	2	D-021-G/094-B-09					D-021-G/094-B-09					HVP	A	0	25.40	3.37	0.152	0.00		-
1026	4	D-021-G/094-B-09					A-020-H/094-B-09					HVP	A	0	38.10	4.80	1.829	0.00		-
1040	1	A-083-I/094-B-08					D-094-I/094-B-08					SNG	A	6890	114.30	6.00	1.280			-
1040	2	D-094-I/094-B-08					B-093-I/094-B-08					NG	A	6890	48.30	0.00	0.274			-
1040	3	B-093-I/094-B-08					A-083-I/094-B-08					NG	A	6890	33.40	0.00	1.228			-
1040	4	B-082-I/094-G-08					A-083-I/094-B-08					NG	A	6890	60.30	0.00	0.366			-
1040	5	A-083-I/094-B-08					B-082-I/094-B-08					FG	A	6890	25.40	0.00	0.366			-
1040	6	C-073-I/094-B-08					A-083-I/094-B-08					-	A	6890	60.30	0.00	0.465			-
1040	7	A-083-I/094-B-08					C-073-I/094-B-08					FG	A	6890	25.40	0.00	0.465			-
3106	1	D-057-A/094-B-09					D-057-A/094-B-09					SW	A	11600	60.30	0.00	0.090	2.00		-
4433	5	B-035-A/094-B-09					B-024-A/094-B-09					SNG	A	6895	88.90	4.78	0.675			-
4511	1	A-003-A/094-B-09					A-004-A/094-B-09					SNG	A	6895	88.90	3.96	0.660	1.96		-
13325	1	C-055-G/094-B-09					D-066-G/094-B-09					SNG	A	9930	88.90	4.80	1.340	1.50		-
15016	1	B-052-G/094-B-09					C-055-G/094-B-09					SNG	A	0	114.30	0.00	3.200	1.50		-

Comments:

- All pipelines with a calculated HPZ less than 100 m were assigned a 100 m HPZ to comply with the *All Hazards Approach* utilized in BC.

Footnotes:

1. The Assigned HPZ for the natural gas and sour natural gas pipelines has been taken to be the largest of the calculated EPZ using the nomograph, the LEL/2, or Heat Radiation to 5 kW/m^2 calculations with a minimum HPZ of 0.100 km.

Pipeline Legend:	
Facility:	B = Battery BE = Bind End CS = Compressor Station DH = Dehydrator GP = Gas Plant GS = Gathering System MS = Meter Station PS = Pump Station PL = Pipeline PT = Plant S = Satellite WE = Well CP = Camp LK = Lake
Substance:	FG = Fuel Gas FW = Fresh Water NG = Natural Gas SNG = Sour Natural Gas SW = Salt Water/Sour Water PW = Produced Water FW = Fresh Water HVP = HVP Products
Status:	A = Abandoned D = Deactivated Q = Active NC = Not Constructed UC = Under Construction C = Consturcted
Valve:	CV = Check Valve ESD = Emergency Shut Down Valve
Other:	L = Length OD = Outside Diameter WT = Wall Thickness MOP = Maximum Operating Pressure GLR = Gas to Liquid Ratio

Kobes - Facilities

Facility Licence #	Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Facility Type	Status	Distance to Nearest Residence or public facility (km)	H_2S Release Volume (m^3)	Assigned HPZ (km)
Operating								
0024724	C-015-I/094-B-08	557782.23	6254689.46	Well Facility	Active	>2	na	0.133
0004561	C-015-I/094-B-08	557696.00	6254687.00	Compressor station	Active	>2	na	0.133
0025632	C-029-I/094-B-08	554719.73	6255378.76	Well Facility	Active	>2	na	0.100
0025409	C-057-I/094-B-08	556451.13	6258116.76	Well Facility	Active	>2	na	0.133
0000266	B-024-A/094-B-09	558457.00	6264222.00	Compressor station	Active	>2	3.6	0.153
0008091	A-035-A/094-B-09	557786.99	6265011.48	Gas Sales Meter (BC)	Active	1.81	44.9	0.156
0025631	C-063-B/094-B-09	551552.23	6268441.36	Well Facility	Active	>2	na	0.100
0025269	D-002-G/094-B-09	552829.03	6272208.26	Well Facility	Active	>2	na	0.100
0018075	C-029-G/094-B-09	546827.53	6274035.63	Well Facility	Active	>2	na	0.100
Not Operating								
0021108	B-051-I/094-B-08	560858.33	6257863.46	Well Facility	Not Active	>2	-	0.100
0022566	D-048-A/094-B-09	555775.53	6266481.36	Well Facility	Not Active	1.79	-	0.100
0022747	D-068-A/094-B-09	555710.13	6268256.86	Well Facility	Not Active	0.63	-	0.100
0018400	D-021-G/094-B-09	553421.86	6273919.96	Well Facility	Not Active	>2	495.2	1.368
0018407	C-073-I/094-B-08	559497.90	6260027.93	Well Facility	Suspended	0.69	-	0.100
0018422	B-082-I/094-B-08	560158.08	6260331.15	Well Facility	Suspended	0.78	98.6	0.332
0020685	C-025-A/094-B-09	557950.83	6264744.06	Well Facility	Suspended	>2	-	0.100
0020550	D-065-A/094-B-09	557975.93	6268260.96	Well Facility	Suspended	1.20	-	0.100
0019400	D-086-A/094-B-09	557170.83	6270404.06	Well Facility	Suspended	1.384	-	0.100
0020672	C-055-G/094-B-09	549947.73	6276664.56	Well Facility	Suspended	>2	-	0.100

Kobes - Facilities

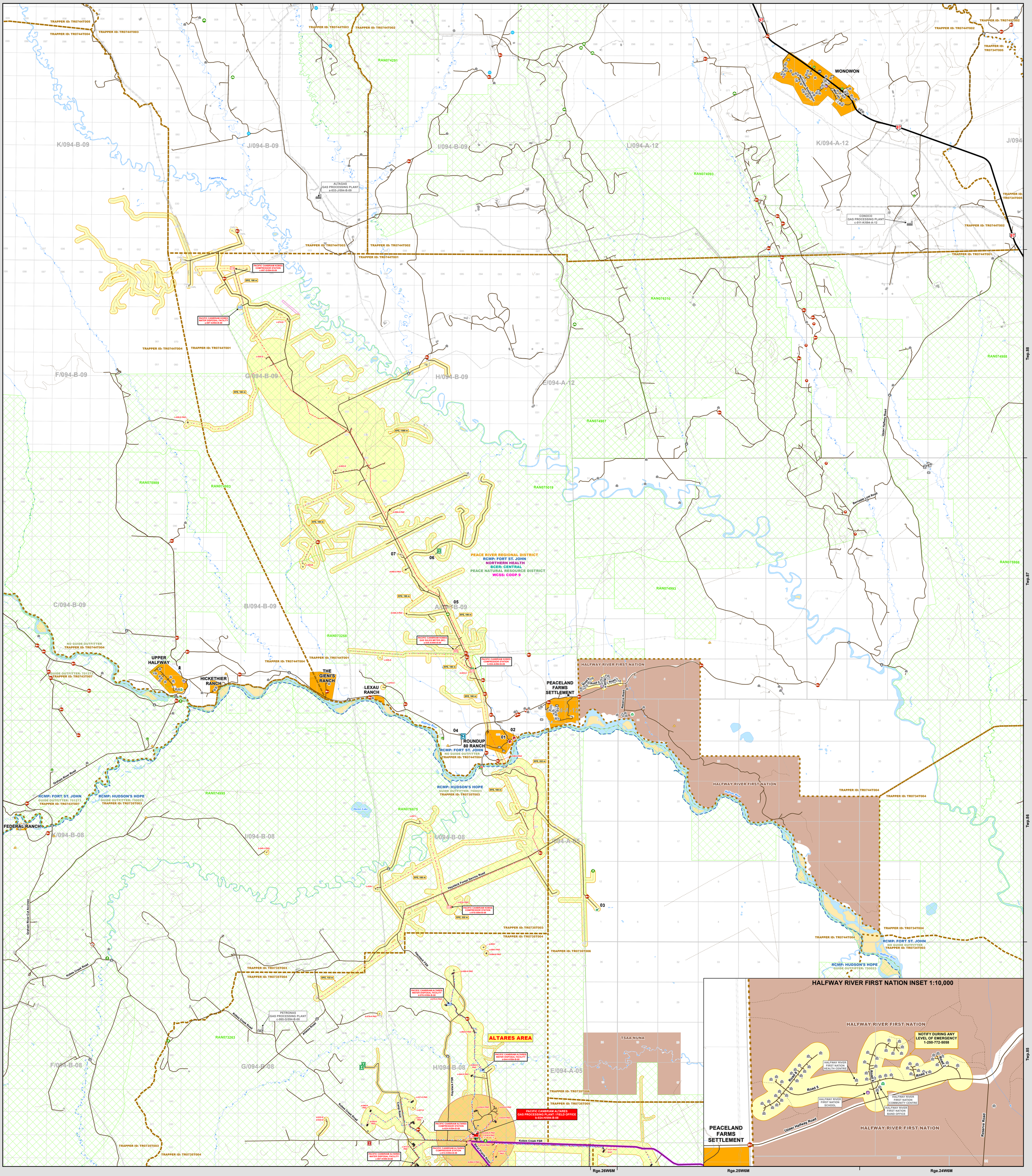
Facility Licence #	Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Facility Type	Status	Distance to Nearest Residence or public facility (km)	H_2S Release Volume (m^3)	Assigned HPZ (km)
Not Operating								
0020231	D-066-G/094-B-09	549367.73	6277434.46	Well Facility	Suspended	>2	-	0.100
0023597	C-074-G/094-B-09	550772.53	6278271.86	Well Facility	Suspended	>2	-	0.100
0019686	C-097-G/094-B-09	548547.83	6280283.96	Well Facility	Suspended	>2	-	0.100
0018375	A-020-H/094-B-09	554209.27	6272473.85	Well Facility	Suspended	>2	495.2	1.368
0018374	D-094-I/094-B-08	559141.74	6261779.19	Well Facility	Not Active	0.773	-	0.100
0018941	D-015-A/094-B-09	558358.62	6263949.29	Well Facility	Not Active	>2	-	0.100
0022441	D-079-A/094-B-09	554883.03	6269265.96	Well Facility	Not Active	0.74	-	0.100
0022894	D-090-A/094-B-09	554305.53	6270336.56	Well Facility	Not Active	1.90	-	0.100
0020789	B-098-A/094-B-09	555475.43	6270808.96	Well Facility	Not Active	1.948	-	0.100
0022909	D-013-G/094-B-09	551777.83	6272836.06	Well Facility	Not Active	>2	-	0.100
0007425	A-087-G/094-B-09	548846.00	6278696.00	Water disposal facility	Not Active	>2	-	0.100
0018979	C-096-G/094-B-09	549106.76	6280298.71	Well Facility	Not Active	>2	-	0.100
0009124	C-097-G/094-B-09	548511.00	6280271.00	Compressor station	Not Active	>2	-	0.100
0022934	B-010-H/094-B-09	553715.13	6271608.86	Well Facility	Not Active	>2	-	0.100
0020732	B-019-H/094-B-09	554785.83	6272571.36	Well Facility	Not Active	>2	-	0.100
Cancelled / Removed								
0023282	A-016-A/094-B-09			Well Facility	Cancelled			-
0022460	A-041-G/094-B-09			Well Facility	Cancelled			-
0019655	B-062-I/094-B-08			Well Facility	Cancelled			-
0018942	B-062-I/094-B-08			Well Facility	Cancelled			-

Kobes - Facilities

Facility Licence #	Location	Easting Coordinates (Zone 10)	Northing Coordinates (Zone 10)	Facility Type	Status	Distance to Nearest Residence or public facility (km)	H_2S Release Volume (m^3)	Assigned HPZ (km)
Cancelled / Removed								
0022635	D-017-A/094-B-09			Well Facility	Cancelled			-
0018087	D-025-A/094-B-09			Gathering Point (BC)	Cancelled			-
0018605	D-057-A/094-B-09			Well Facility	Cancelled			-
0008207	D-057-A/094-B-09			Gathering Point (BC)	Cancelled			-
0021217	B-052-G/094-B-09			Well Facility	Removed			-

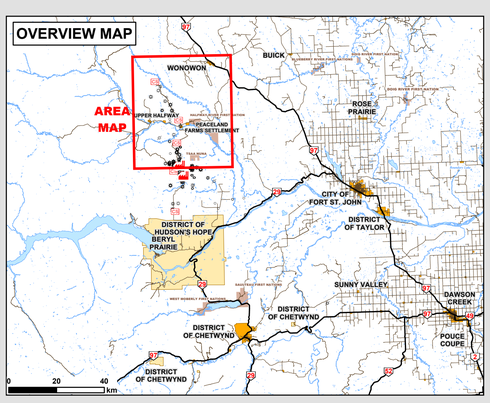
Comments:

- All operating and suspended facilities were assigned a minimum 100 m HPZ to comply with the *All Hazards Approach* utilized in BC.



HALFWAY RIVER FIRST NATION INSET 1:10,000

OVERVIEW MAP



ALTARES / KOBES AREA RADIO ROAD FREQUENCIES	
ROAD NAME	FREQUENCY
Haystack Forest Service Road	RR-12 – 150.500
Iron Creek Road	RR 18 – 150.710
Pilsner Road	RR-7 – 150.260
Harold Ellis Road	RR-7 – 150.260
Upper Halfway Road	Mile 95 Road – 153.380
Kobes Creek Road (km 24.5 to km 46.3)	RR 08 – 150.4400
Beryl Prairie Road (entire length)	RR 03 – 150.1400
The Core Road (entire length)	RR 04 – 150.1850
Camp Road	RR 21 – 151.010
The West Altares Road	RR 03 – 150.1400

EMERGENCY RESPONSE PLAN (ERP) STAKEHOLDERS:KOBES	
REGULATOR AUTHORITY :	BCER: CENTRAL
LOCAL AUTHORITY :	PEACE RIVER REGIONAL DISTRICT
FIRST NATION / MÉTIS SETTLEMENT :	HALFWAY RIVER FIRST NATION
LAW ENFORCEMENT :	RCMP:FORT ST JOHN, HUDSON'S HOPE
HEALTH AUTHORITY :	NORTHERN
SPILL COOP :	WCSS: COOP 9
TRANSPORTATION/HWY/RAIL :	N/A
TRAPPER :	TR0735T003,TR0735T004,TR0735T006,TR0744T001,TR0744T003, TR0744T004
GUIDE/OUTFITTER :	750023
GRAZING/RANGE TENURE :	RAN073258, RAN073263,RAN074983,RAN074995,RAN075019,RAN076675
NATURAL RESOURCE DISTRICT :	PEACE NATURAL RESOURCE DISTRICT
PARK :	N/A

FACILITY TYPE
GAS PROCESSING PLANT; CENTRAL TREATMENT PLANT; CENTRAL PROCESSING FACILITY; INJECTION PLANT; COMPRESSOR; PUMP STATION; PIPELINE TERMINAL; DEHYDRATOR; WASTE PROCESSING; METER STATION; HEADER / RISER; BATTERY; SATELLITE; WATER DISPOSAL; CHECK VALVE; BLOCK VALVE; EMERGENCY SHUTDOWN VALVE; PROPANE BULLET; TANK

SURFACE DEVELOPMENT
RESIDENCE OCCUPIED; BUSINESS OCCUPIED; RESIDENCE SENSITIVE; BUSINESS SENSITIVE; RESIDENCE SEASONAL; BUSINESS SEASONAL; PUBLIC FACILITY; STRUCTURE VACANT; STRUCTURE ABANDONED; STRUCTURE OUTSIDE OF EPZ; OTHER BUILDINGS

PIPELINE TYPE
OIL SOUR - OPERATING; OIL SWEET - OPERATING; OIL PRODUCTS - DISCONTINUED; GAS SOUR - OPERATING; GAS SWEET - OPERATING; GAS PRODUCTS - DISCONTINUED; WATER SOUR - OPERATING; WATER SWEET - OPERATING; WATER - DISCONTINUED; HVP - OPERATING; HVP - DISCONTINUED; LVP - OPERATING; LVP - DISCONTINUED; STEAM / AIR - OPERATING; STEAM / AIR - DISCONTINUED; MISC - OPERATING; MISC - DISCONTINUED

NON-CLIENT OPERATORS
GAS PROCESSING PLANT FACILITY; WELL; PIPELINE

WELL TYPE
WELL - GAS; WELL - OIL; WELL - WATER SOURCE; WELL - WATER INJECTION; WELL - OBSERVATION; WELL - LOCATION; WELL - GAS SUSPENDED; WELL - OIL SUSPENDED

EMERGENCY RESPONSE
EPZ (EMERGENCY PLANNING ZONE); IIZ (INITIAL ISOLATION ZONE); CEPA ZONE; EPZ (OTHER SYSTEM); EGRESS; ERP ACCESS; HAZARD POINT; CAUTION POINT; FLOODING INCIDENT; WILDFIRE INCIDENT; INCIDENT COMMAND POST (ICP); MUSTER POINT; STAGING AREA; ROADBLOCK; DEAD END; GATED - KEYED ACCESS; SPILL CONTROL POINT - WCSS/SK SPILL COOP; SPILL CONTROL POINT - CRITICAL WCSS/SK SPILL COOP; SPILL CONTROL POINT - CLIENT; STARS SITE; EVACUATION / RECEPTION CENTRE; EVACUATION ROUTE

CULTURE
AIRPORT; AIR STRIP; HELI PAD; TOWER - FORESTRY; TOWER - COMMUNICATION; TOWER - OTHER; AIR MONITORING SITE; ELECTRICAL SUBSTATION; SENSITIVE WILDLIFE AREA; RAIL CROSSING; HISTORICAL SITE; WATER CROSSING; BRIDGE; DAM; WCSS EQUIPMENT; TRAILHEAD; BOAT LAUNCH; SOLAR FARM; WIND FARM; SPECIAL INTEREST GROUP; HOSPITAL; MEDICAL CENTER; SECURITY CHECKPOINT; SCHOOL; PLACE OF WORSHIP; CEMETERY; RAIL FACILITY; COMMUNITY CENTRE; INDUSTRY CAMP; GRAVEL PIT; STORAGE YARD; GOLF COURSE; CAMPGROUND; CAMPSITE; PICNIC / REST AREA; DUMP / LANDFILL; WATER PIT

HIGHWAY - PRIMARY; HIGHWAY - SECONDARY; MAIN ACCESS ROAD; OTHER ACCESS ROAD / TRAIL; RAIL; LOCAL AUTHORITY / MUNICIPAL BOUNDARY; LAW ENFORCEMENT; HEALTH AUTHORITY; REGULATOR AUTHORITY; SPILL COOP; NATURAL RESOURCE DISTRICT (B.C. Only); FOREST MANAGEMENT AREA (AB Only); WMU / GUIDE OUTFITTER; TRAPLINE; PROVINCE; WATER; POPULATED AREA; FIRST NATION / MÉTIS; RECREATIONAL AREA; PARK / PROTECTED AREA; GRAZING / RANGE TENURE (AB & BC); LANDOWNER; RIGHTS HOLDER / ALLOTMENT USER; CUTBLOCK; TENURE OPENINGS; MANAGED LICENCE; FOREST COVER RESERVATIONS; SURVEYED PARCELS; MILITARY AREA; FENCE; FENCED AREA

PACIFIC CANBRIAM ENERGY

NEBC FIELD SUPPLEMENT 2025
KOBES AREA MAP

BEHR Integrated Solutions
www.behrintegrated.com

Drawn By: GS
Scale: 1:50,000
Project No.: 15006
Map Projection: NAD 83 UTM 10
Revision: 0 - AUG. 2025

0 1 2 3 4 5 6 km

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Area Occupant Data

Confidential Data

Confidential data collected during the Public Involvement Program will only be included in manuals labelled as ***Confidential***.

All manuals will contain contact information for publicly listed data for area occupants within the HPZ that may include Trappers, Grazing Lease Holders and Industrial Operators. Refer to each site-specific area in the *Assets and Equipment Section* for this information.

The following reports are only included in copies of the confidential ERP:

Surface Development – Summary Report
- Includes contact information for all surface developments within the HPZ.
- Report sorted by Map Coordinates.

Special Needs Contacts within the EPZ – Summary Report
- Includes residents who have indicated they may require early response actions due to medical needs or communication barriers.
- Report sorted by Map Coordinates.

School / Student – Summary Report
- Includes children who may be in school during an incident.
- Report sorted by Map Coordinates.

Surface Development – Detail Report (per location)
- Includes all information pertaining to a specific location.
- The individual detail reports are sorted by Map Coordinates.

Surface Development – Summary Report (Alphabetical)
- Includes contact information for all surface developments within the HPZ.

Report is sorted Alphabetically.

Public Information Package

A public information package was prepared and delivered to area occupants during the public involvement process. A copy of the public information package is included in all manuals.

EPZ STAKEHOLDER SUMMARY REPORT

Pacific Canbriam Energy/Kobes

The following report provides an overview of all Stakeholders identified within the Emergency Planning Zone, based on information gathered during the most recent Public Notification and Consultation Campaign, and other situational awareness data gathered during the most recent Emergency Response Plan update.

EMERGENCY PLANNING ZONE (EPZ) OVERVIEW	
Surface Developments within the EPZ	7
Occupants within the EPZ (includes Resident and Non-Resident Land Users)	24
Students attending school who live within the EPZ	0
Surface Developments with Sensitivities (There may be more than one sensitivity per Surface Development)	3

OCCUPANT SENSITIVITIES OVERVIEW (Sensitivities are identified for response activities and for consultation awareness)	
Aboriginal Community Member	1
Evacuation Assistance	1
Language / Comprehension Barrier	0
Not Contacted During Public Notification / Consultation Campaign	2
Other Special Needs	2
Potentially Contentious Occupant	2
Requires Early Notification	1
Sensitive to Industry Development	0

SURFACE DEVELOPMENTS OVERVIEW	
PRIVATE PROPERTY (Locations where people live)	
Residences – Abandoned	0
Residences – Not contacted	2
Residences – Occupied Full Time	0
Residences – Seasonal / Part Time	0
Residences – Vacant	0
Building - Unoccupied	0
Resident Surface Developments within the EPZ	2
Unoccupied Surface Developments within the EPZ	0

PUBLIC FACILITIES (Locations where members of the public may congregate)	
Airport/Airstrip	0
Boat Launch - Recreational	0
Camp site – Off-Road	0
Campground - Official	0
Campsite - Developed	1
Cemetery	0
Community Center	0
Evacuation / Reception Centre	0

Golf Course	0
Helispot	0
Hospital	0
Picnic / Rest Area	0
Place of Worship	0
Public Facility	0
School	0
Public Facility Locations within the EPZ	1

NON RESIDENT LAND USERS (Locations where people may be working)	
Business / Industrial Land Users	
Business	0
Other O&G Operator Battery	0
Other O&G Operator Camp	1
Other O&G Operator Compressor	0
Other O&G Operator Plant	0
Business / Other O&G Operator Locations within the EPZ	1

Other Land Users (Locations where people may be working periodically)	
Air Monitoring Site / Trailer	0
Electrical Sub Station	0
Gravel Pit	3
Guide / Outfitter	0
Landowner	0
Military / Base	0
Registered Trapline / Trapper	0
Rights Holder / Allotment User	0
Security Gate / Checkpoint	0
Solar Farm	0
Special Interest Group	0
Spill Control Point	0
Storage / Laydown Yard	0
Tower - Communication	0
Tower - Forestry	0
Tower - Other	0
Wind Farm	0
Other Non - Resident Land Users within the EPZ (This total does not include Businesses / Industrial Locations above)	3

HYDROGEN SULPHIDE (H_2S) - Continued

It is important to note that burning sour gas turns the H_2S to Sulphur Dioxide (SO_2). The heat from the fire will carry the SO_2 and smoke up into the air where it will be dispersed over a large area. By the time the SO_2 comes back to ground level, the concentrations would normally only be detectable with the use of an electronic gas detection monitor. These levels should be well below the levels that provincial environment regulations accept.

SULPHUR DIOXIDE (SO_2)

- Formed by the combustion of H_2S or sulphur and is non-flammable
- Found as a gas at temperatures above -10°C
- Has the odour that occurs when a wooden match is extinguished
- Highly irritating – dissolves to form sulphuric acid
- At lower concentrations irritates eyes, nose and throat, causes difficulty in breathing and shortness of breath
- Causes pulmonary edema at high concentrations – may be fatal
- Effects on heavy smokers are more severe

GENERAL HEALTH EFFECTS OF SO_2

Concentration	Effects
0.13 ppm	24 hour evacuation level (MWLAP Level B criteria).
0.34 ppm	One hour average evacuation level (MWLAP Level B criteria).
2 ppm	Eight hour Occupational Exposure Limit (WorkSafeBC).
3-5 ppm	Odour threshold.
5 ppm	15 minute Occupational Exposure Limit (WorkSafeBC).
8-12 ppm	Throat irritation, coughing, constriction in chest, tearing and smarting of the eyes.
10-50 ppm	Exposure 5 -15 minutes: increased irritation of the eyes, nose, throat, choking, coughing and in some cases, wheezing as a sign of narrowing of the airways (which increases the resistance of the air-flow).
150 ppm	Short–term endurance lost due to severe eye irritation and because of the effects on the membranes of the nose, throat and lungs.
500 ppm	Highly dangerous after an exposure of 30-60 minutes.
1000-2000 ppm	May be fatal with continued exposure.

PERSONAL INFORMATION & CONFIDENTIALITY

Consultations with residents and others in the EPZ to gather and/or confirm personal information is a BCER requirement for the purpose of preparing and maintaining an ERP. All information requested will be confidential and will be used solely in case of an emergency.

By providing the requested information, response plans can be designed with your particular circumstances in mind and will enhance communication, identify response priorities and improve Pacific Canbriam's ability to respond in the event of an emergency.

EMERGENCY CONTACTS

Thank you for taking the time to review this package. Should you have any further questions or concerns please feel free to contact any of the numbers below.

Pacific Canbriam Contact Information

Pacific Canbriam 24 Hour Emergency Number:	1.877.269.2877
Nauman Rasheed Chief Operating Officer	Bus: 403.817.9041 Ext 2141
Zitin Lamba Manager, Operations	Bus: 403.817.9052 Ext 2152

BC Energy Regulator (BCER)

24-Hr Number Public Inquiry & Emergency Reporting Line	800.500.BCER (2237)
BCER 24 Hour Number Fort St. John	250.794.5200
BCER Emergency Operations Centre Fax Line	250.794.5385

Regional District

Peace River Regional District Dawson Creek Office Fort St. John Office	800.670.7773 250.784.3200 250.785.8084

Reception Centres

Ramada by Wyndham Northern Grand Hotel & Conference Centre	9830 100 Avenue Fort St. John, BC	250.787.0521
Stillwater Inn & Suites	9504 Canyon Drive Hudson's Hope, BC	250.783.5400

CALL OR CLICK BEFORE YOU DIG!
800.474.6886
WWW.BC1C.CA

EMERGENCY RESPONSE PLAN

An Emergency Response Plan (ERP) is a comprehensive plan designed to protect the public and includes criteria for assessing an emergency situation and procedures for mobilizing response personnel and agencies as well as procedures for establishing communications and the coordination of resources in the event of an incident. The extent of the information contained within the ERP is determined by the identified potential hazards.

The purpose of an ERP is to ensure a timely and effective response to emergencies in order to protect people, the environment, property and business. An ERP addresses the worst case emergency scenarios, potential hazards to the public, and systems required for adequate response.

HAZARD PLANNING ZONE (HPZ)

A HPZ is determined based upon the potential release rate calculated for a proposed well. Once a release rate has been established, a formula is used to determine the corresponding radius of the HPZ. This information is then incorporated into the creation of the ERP to deal with any events that might risk the safety and welfare of those inside the HPZ. The ERP must properly account for all of the individuals and assets found within this radius.

PACIFIC CANBRIAM 24 HOUR EMERGENCY NUMBER: 1.877.269.2877

OVERVIEW

Pacific Canbriam Energy Limited is committed to protecting public safety and the environment. Our history as a company has demonstrated this commitment and our ability to safely conduct exploration and production operations.

As part of our ongoing safety program, we are contacting you to provide you with important information regarding our operations in your area.

Pacific Canbriam operates sweet and sour (H_2S) wells, pipelines and facilities within the Peace River Regional District of Northeastern British Columbia.

The BC Energy Regulator (BCER) requires Pacific Canbriam to prepare and distribute an information package, detailing their operations, to all persons, residences, local authorities and publicly used facilities within and immediately adjacent to the Emergency Planning Zones associated with their area activities. This package is required to contain information about proposed or existing operations, the procedures in place to respond to an emergency and public protection measures.

PUBLIC INFORMATION PACKAGE

KOBES FIELD

2025 ANNUAL UPDATE

PACIFIC CANBRIAM ENERGY

EPZ CALCULATIONS

H_2S EPZ CALCULATIONS:	MIN.	MAX.
Cumulative Release Volumes	0 m^3	495.2 m^3
H_2S Release Rates	0 m^3/s	0.0150 m^3/s
H_2S Concentrations	0 %	6.5 %
Hazard Planning Zones	100 m	1368 m

LEVELS OF EMERGENCY

Level 1 - Moderate Emergency – ERP is activated

There is no immediate danger to the public or environment as no H2S has been released; and the emergency is confined to the lease or company property. A Level 1 Emergency is declared at the earliest sign of difficulty controlling the well and when all problems are contained within the well site area. These problems are usually handled without difficulty using techniques and equipment readily available on site. A Level 1 Emergency creates little or no media interest.

Level 2 – Major Emergency – ERP is activated

There is the potential for risk to the public or environment, as the emergency could extend beyond company property. However, control is still possible. A Level 2 Emergency creates local or regional media interest and outside and provincial agencies must be notified.

Level 3 - Serious Emergency – ERP is activated

There exists an immediate danger to the public or environment as control of the situation has been lost. A Level 3 Emergency creates Provincial or National media interest and immediate multi-agency and provincial government involvement is required.

PUBLIC PROTECTION

In the unlikely event that an emergency situation occurs which causes or creates a potentially dangerous situation to occupants within the EPZ, the best method of public protection would be implemented. Depending on an incident's specifics, Pacific Canbriam will implement the following method(s) of public protection.

EVACUATION

In case of a Level 1 Emergency, those residents/occupants who may require additional time to evacuate or cannot safely shelter in place will be contacted, advised of the situation and informed of the proper reception centre to evacuate to. A list of reception centres is provided at the back of this package.

In the event of a Level 2 or 3 Emergency, all residents/occupants within the EPZ would be contacted and instructed to evacuate immediately to the Reception Centre.

Pacific Canbriam will provide you with the safest route out of the emergency area to the Reception Centre. If you require assistance to evacuate, Pacific Canbriam personnel will be available to assist you. Upon arrival at the Reception Centre, please check in with the Pacific Canbriam representatives as they will be available to answer any questions or concerns you may have.

EVACUATION - CONTINUED

If you choose not to go the Reception Centre, we ask that you please tell the Pacific Canbriam representative where you are going and provide updated contact information so that we may confirm your safety and keep you informed. You will be advised when it is safe to return home. Pacific Canbriam will provide you with a Claims Form so that you can be reimbursed for reasonable out-of-pocket expenses resulting from the evacuation.

Evacuation of the public outside the EPZ is mandatory when H_2S levels reach 10 ppm in un-evacuated areas. Pacific Canbriam will provide air monitoring, starting at a Level 1 Emergency, to determine H_2S levels.

As public safety is the primary goal during an incident, primary response efforts will be concentrated on members of the public. Response efforts for livestock and pets will be addressed at the time of incident based on the response needs and responder capabilities.

SHELTER IN PLACE

Shelter in place is the practice of remaining indoors during a sudden outdoor release of a hazardous substance.

Shelter in place is not a viable option for recreational users or transients, due to their inability to safely shelter.

Shelter in Place Instructions

- Immediately gather everyone indoors and remain there.
- Close and lock all windows and outside doors – if possible, tape the gaps around the door frames.
- Extinguish indoor wood burning fires - if possible, close the damper.
- Turn off appliances or equipment that either uses inside air, blows out inside air or sucks in outside air, such as:
  - Stoves
  - Fireplaces
  - Clothes dryers
  - Air conditioners
  - Bathroom and kitchen fans
  - Built in vacuum systems
- Turn off heat and hot water pilot lights.
- Leave all inside doors open.
- Wait in an interior upstairs room.
- Avoid using the telephone, except for emergencies, so that you can be contacted by emergency personnel.
- Stay tuned to local radio for possible information updates or for further instructions.
- Even if you see people outside do not leave until told to do so.
- If you are unable to follow these instructions, please notify company emergency response personnel.
- After the hazardous substance has passed through the area you will receive an all clear message from emergency response personnel along with instructions to:
  - Ventilate your building by opening all windows and doors.
  - Turn on fans, turn up thermostats, and furnace circulating fans.
- Once the building is completely ventilated return all equipment to normal.

IGNITION

If safety of the public cannot be assured by evacuation or sheltering, the sour gases escaping from the well will be ignited, this results in the H_2S being burned and converted to sulphur dioxide (SO_2).

- Ignition must take place when one of the following conditions has been met:
- Although required, evacuation of the response zones has not taken place.

IGNITION - CONTINUED

- Monitoring results indicate H2S concentrations in excess of 10 ppm over a 3-minute average in un-evacuated parts of the EPZ.
- Monitored H2S concentrations exceed 1 ppm (1-hour average) in urban density developments.
- Monitoring is not taking place due to weather or other unforeseen circumstances.
- The release cannot be brought under control in the short term.

ABOUT SOUR GAS

Hydrogen Sulphide (H_2S) is a colourless, flammable, toxic gas. It affects people differently depending on concentration and length of exposure. At very low concentrations it has an offensive odour (similar to rotten eggs); however, it is undetectable by odour at higher concentrations. A person can be exposed to H_2S concentrations of up to 1 part per million for up to 8 hours (government exposure limits) without a breathing apparatus.

In the unlikely event of an emergency, the ERP will be activated and the safety of the public will be maximized through evacuation, sheltering or ignition procedures. If you suspect H_2S or SO_2 in the air please remain indoors and contact the Pacific Canbriam 24 hour emergency number on the first and last page of this package.

HYDROGEN SULPHIDE (H_2S)

- Found in decaying organic matter, natural oil and gas, silos and sewers
- Found at gas temperatures above -60°C
- Flammable – burns to form SO_2
- Odour of rotten eggs at low concentrations- kills all sense of smell at higher concentrations
- Will tend to disperse more slowly in sheltered or calm low lying areas
- Extremely toxic
- At lower concentrations (20-50 ppm) irritates mucous membranes (eyes, throat, lungs), causes headaches, dizziness, nausea, may cause pulmonary edema (fluid in the lungs) upon prolonged exposure
- High concentrations (500-1000 ppm) may cause paralysis of the respiratory centre in the brain – breathing stops, suffocation begins

GENERAL HEALTH EFFECTS OF H_2S

Concentration	Effects
0.01-0.3 ppm	Detectable by odour.
1-5 ppm	Moderate to strong offensive odour may cause nausea, tearing of the eyes, headaches or loss of sleep upon prolonged exposure. Effects are moderate.
10 ppm	Ceiling limit. (WorkSafe BC)
20-50 ppm	Slight eye and lung irritation. May cause eye damage after several days of exposure, may cause digestive upset and loss of appetite.
100 ppm	Eye and lung irritation.
150 ppm	Kills sense of smell, severe eye and lung irritation.
500 ppm	Serious damage to eyes within 30 minutes, severe lung irritation, unconsciousness and death within 4 to 8 hours.
1000 ppm	Breathing stops within 1 or 2 breaths.

PACIFIC CANBRIAM KOBES COMPRESSOR STATION c-097-G/094-B-09

PEACE RIVER REGIONAL DISTRICT

RCMP: FORT ST. JOHN

NORTHERN HEALTH

BCER: CENTRAL

EMERGENCY PLANNING ZONE

PACIFIC CANBRIAM KOBES COMPRESSOR STATION b-024-A/094-B-09

RCMP: FORT ST. JOHN

RCMP: HUDSON'S HOPE

PACIFIC CANBRIAM KOBES COMPRESSOR STATION c-015-I/094-B-08

WONOWON

PEACELAND FARMS SETTLEMENT

ROUNDUP 80 RANCH

HALFWAY RIVER FIRST NATION

UPPER HALFWAY

THE GIENI'S RANCH

HICKETHIER RANCH

LEXAU RANCH

FEDERAL RANCH

HAROLD ELLIS ROAD

HAYSTACK ROAD

KOBES CREEK ROAD

UPPER HALFWAY ROAD

Blueberry River

Cameron River

Halfway River

Graham River

Davies Lake

Colt Creek

Kobes Creek

Ground Birch Creek

Farrell Creek

RAN074291 RAN074093 RAN076310 RAN074988 RAN074987 RAN074079 RAN075989 RAN074983 RAN075019 RAN074995 RAN073258 RAN074993 RAN075986 RAN076675 RAN073621 RAN074976 RAN074013 RAN073263

K/094-B-09 J/094-B-09 I/094-B-09 L/094-A-12 K/094-A-12 J/094-A-12

F/094-B-09 G/094-B-09 H/094-B-09 E/094-A-12

C/094-B-09 B/094-B-09 A/094-B-09 D/094-A-12

K/094-B-08 J/094-B-08 I/094-B-08 L/094-A-05

F/094-B-08 G/094-B-08 H/094-B-08 E/094-A-05

Twp.88 Twp.87 Twp.86 Twp.85 Twp.84

Rge.26W6M Rge.25W6M Rge.24W6M

OVERVIEW MAP

AREA MAP

WONOWON BUICK UPPER HALFWAY PEACELAND FARMS SETTLEMENT CITY OF FORT ST. JOHN DISTRICT OF HUDSON'S HOPE BERYL PRAIRIE

0 25 50 km

FACILITY TYPE
- GAS PROCESSING PLANT
- COMPRESSOR
- PIPELINE TERMINAL
- BATTERY
- WELL - GAS

SURFACE DEVELOPMENT
- STRUCTURE INSIDE OF EPZ
- STRUCTURE OUTSIDE OF EPZ

EMERGENCY RESPONSE
- EPZ (EMERGENCY PLANNING ZONE)
- CEPA ZONE
- EVACUATION / RECEPTION CENTRE
- EVACUATION ROUTE

PIPELINE TYPE
- OIL SOUR - OPERATING
- OIL SWEET - OPERATING
- OIL PRODUCTS - DISCONTINUED
- GAS SOUR - OPERATING
- GAS SWEET - OPERATING
- GAS PRODUCTS - DISCONTINUED
- WATER SOUR - OPERATING
- WATER SWEET - OPERATING
- WATER - DISCONTINUED
- HVP - OPERATING
- HVP - DISCONTINUED
- LVP - OPERATING
- LVP - DISCONTINUED
- STEAM / AIR - OPERATING
- STEAM / AIR - DISCONTINUED
- MISC - OPERATING
- MISC - DISCONTINUED

CULTURE
- HOSPITAL
- MEDICAL CENTER
- SCHOOL
- PLACE OF WORSHIP
- CEMETERY
- RAIL FACILITY
- COMMUNITY CENTRE
- INDUSTRY CAMP
- GRAVEL PIT
- STORAGE YARD
- GOLF COURSE
- CAMPGROUND/CAMPSITE
- DEAD END
- GATED - KEYED ACCESS
- AIRPORT
- AIR STRIP
- TOWER - FORESTRY
- TOWER - COMMUNICATION
- TOWER - OTHER
- SOLAR FARM
- WIND FARM
- HIGHWAY - PRIMARY
- HIGHWAY - SECONDARY
- MAIN ACCESS ROAD
- RAIL
- LOCAL AUTHORITY / MUNICIPAL BOUNDARY
- LAW ENFORCEMENT
- HEALTH AUTHORITY
- REGULATOR AUTHORITY
- PROVINCE
- WATER
- POPULATED AREA
- FIRST NATION / MÉTIS
- RECREATIONAL AREA
- PARK / PROTECTED AREA
- MILITARY AREA

PACIFIC CANBRIAM ENERGY

NEBC FIELD OPERATIONS SUPPLEMENT 2025
KOBES AREA MAP
PUBLIC INFORMATION HANDOUT MAP

BEHR Integrated Solutions www.behrintegrated.com

Drawn By: GS

Scale: 1:160,000 Project No.: 15006

Map Projection: NAD 83 UTM 10 Revision: 0 - AUG. 2025

0 3 6 9 12 km

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Appendix 1 – Forms

Form #	Form Name	Completed/Used By	Completion Time
1	**ICS 201 Form**	First on scene Incident Commander	At the time of incident.
2	**ICS 202 Form**	Incident Commander	At the time of incident.
3	**Incident Report Form**	First on scene Incident Commander	At the time of incident.
4	**Incident/Event Log**	All responders	Throughout the incident.
5	**Incident Investigation Report**	Incident Commander Safety Officer	After the incident.
6	**Telephone Threat Report**	First on scene First to receive notification	At the time of incident.
7	**Environmental Monitoring Record**	Air Monitoring Leader Air Monitoring Unit	Throughout the incident.
8	**Motor Vehicle Incident Supplementary Report**	First on scene Incident Commander	At the time of incident.
9	**Suspect & Vehicle Identification Worksheet**	First on scene All responders	At the time of incident.
10	**Telephone/Evacuation Contact Log**	Telephone leader Telephoners	Throughout the incident.
11	**Reception Centre Registration Form**	Reception Centre Leader Reception Centre Members	Upon arrival of evacuees at the reception centre.
12	**Roadblock Registration Form**	Roadblock Leader Roadblock Unit	Throughout the incident.
13	**Roadblock Unit Cell Phone List**	Roadblock Leader	Throughout the incident.
14	**Daily Expense Claim Form**	Finance Chief All responders	Throughout the incident.
15	**Voluntary Evacuation Notification – Telephone Script**	Telephone Leader Telephoners	During a Level 1 Emergency as instructed.
16	**Mandatory Evacuation Notification – Telephone Script**	Telephone Leader Telephoners	During a Level 2 or 3 Emergency as instructed.
17	**Resident Shelter Message Form**	Telephone Leader Telephoners	During a Level 1, 2 or 3 Emergency as instructed.

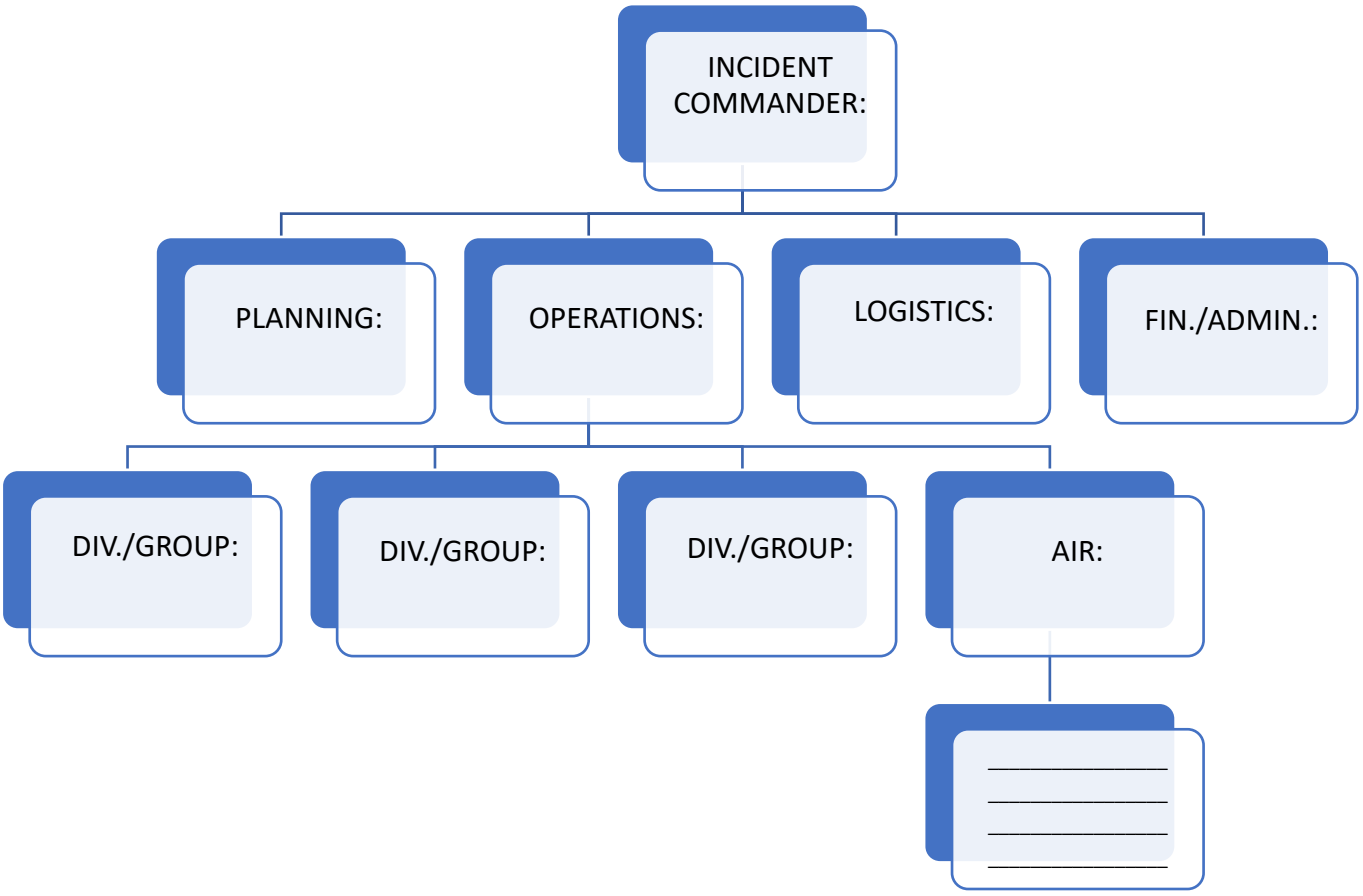
Form #	Form Name	Completed/Used By	Completion Time
18	**Resident Warning Form**	Telephone Leader Telephoners	During a level 1 Emergency as instructed.
19	**Resident Evacuation Message Form**	Telephone Leader Telephoners	During a Level 2 or 3 Emergency as instructed.
20	**Transient Evacuation Message Form**	Telephone Leader Telephoners	During a Level 2 or 3 Emergency as instructed.
21	**Spill Report Form**	First on scene Incident Commander	At the time of incident.
22	**Hazard Assessment**	First on scene Incident Commander	After the incident.
23	**Empty Residence Notice**	Rover Leader Rover Unit	Throughout the incident.
24	**School Children Registration Record**	Reception Centre Leader Reception Centre Unit	Upon arrival of evacuees at Reception Centre.
25	**Preliminary Media Statement**	Information Officer Incident Commander	After Consultation with the BCER and EMCR.
26	**External Agency Post Incident Evaluation**	Liaison Officer Incident Commander	After the incident and all information has been collected.
-	**Form A: BCER Minor Incident Notification Form** ***(This form has been retired by the BCER.)***	First on scene Incident Commander	Must notify the BCER online within 24 hours of the incident using the *Compliance Management Information System (CM-IS)*
-	**Form C: BCER Emergency Incident Form** ***(This form has been retired by the BCER.)***	First on scene Incident Commander	Must notify the BCER online within 1 hour of the incident using the *Compliance Management Information System (CM-IS)*
-	**Form D: BCER Post Incident Report** ***(This form has been retired by the BCER.)***	First on scene Incident Commander	BCER will notify if a Post Incident Report is required, along with a submission due date, using the *Compliance Management Information System (CM-IS)*

ICS 201 FORM

INCIDENT BRIEFING	1. INCIDENT NAME	2. DATE PREPARED	3. TIME PREPARED

4. MAP SKETCH

5. CURRENT ORGANIZATION



ICS 201	PAGE 1 OF 2	6. PREPARED BY (NAME & POSITION)

7. RESOURCES SUMMARY

RESOURCES ORDERED	RESOURCES IDENTIFICATION	ETA	ON SCENE ✓	LOCATION / ASSIGNMENT

8. PRIORITIES

1. LIFE SAFETY 2. ENVIRONMENT 3. PROPERTY 4. COMPANY REPUTATION

9. OBJECTIVES

1.

2.

3.

10. SUMMARY OF CURRENT ACTIONS

ICS 201	**PAGE 2 OF 2**	**11. SIGNATURE:**

ICS 202 FORM

INCIDENT OBJECTIVES	1. INCIDENT NAME	2. DATE	3. TIME

4. OPERATIONAL PERIOD (DATE/TIME)

5. GENERAL CONTROL OBJECTIVES FOR THE INCIDENT (INCLUDE ALTERNATIVES)

6. WEATHER FORECAST

7. GENERAL SAFETY MESSAGE

8. ATTACHMENTS (CHECK IF ATTACHED)

☐ Organization List (ICS 203)	☐ Medical Plan (ICS 206)	☐ _____
☐ Assignment List (ICS 204)	☐ Incident Map	☐ _____
☐ Communications Plan (ICS 205)	☐ Traffic Plan	☐ _____

9. PREPARED BY (PLANNING SECTION CHIEF)	10. APPROVED BY (INCIDENT COMMANDER)

INCIDENT REPORT FORM

CALLER INFORMATION

Reported by:	Tel:		Employer:
Location of Accident/Incident:			Call Back Phone # ( )
Incident Date:	Incident Time:		LSD:
Call Date:	Call Time:	Call Received by:	Tel:

Incident Occurred at: ❑ Company Facility ❑ Client Facility ❑ Company Employees Involved ❑ Contractors Involved

Directions to Facility:

INCIDENT INFORMATION (what happened?)

Incident Type

❑ Personal Injury	❑ Illness	❑ Environmental	❑ Spill/Release	❑ Product Mix
❑ Equipment Damage	❑ Security/Theft	❑ Property Damage	❑ Vehicle Incident	❑ Near Miss
❑ Fire/Explosion	❑ Operation Upset	❑ Contamination	❑ Material Loss	❑ Other
❑ H_2S Exposure	❑ Gas Release	❑ Chemical Exposure	❑ Third Party/Public Involved	

Work Activity/Task Being Completed at Time of Incident

Description of Incident

Injuries: ❑ Yes ❑ No ❑ Employees ❑ Contractors or ❑ Public ❑ Taken to Hospital? Where?

Name: Address: Tel:

Extent of Injuries:

Name: Address: Tel:

Extent of Injuries:

EMERGENCY INFORMATION

Description of Odour: ❑ Rotten Egg ❑ Gas ❑ Other Can you ❑ Hear or ❑ See a Gas Release?

Location is Near: ❑ Residences ❑ Town ❑ Recreational Area ❑ Road/Highway ❑ Other (name):

Any People in Immediate Danger? ❑ No ❑ Yes Emergency Response Plan Implemented? ❑ No ❑ Yes Time:

Is Incident Near a Water Course? ❑ No ❑ Yes: ❑ Creek ❑ River ❑ Lake ❑ Other (name):

Roadblocks in place? ❑ Yes ❑ No Evac Procedures Initiated? ❑ Yes ❑ No
Reception Centre Established? ❑ Yes ❑ No

Air Monitoring Initiated? ❑ No ❑ Yes Time: Initial Monitoring Results: (H_2S) PPM (SO_2) PPM

WEATHER CONDITIONS

Wind Direction: ❑ North ❑ South ❑ West ❑ East | Speed: Air Temp: Other:

AGENCIES CALLER HAS NOTIFIED (Document all calls on Emergency Actions Log)

Fire (tel):	County/District/Municipality (Disaster Services - Name):		Tel:
AER (name):	Tel:	AB. WCB (name):	Tel:
B.C. Oil/Gas Comm. (name):	Tel:	B.C. WCB (name):	Tel:
Sask. Energy/Mines (name):	Tel:	Sask. WCB (name):	Tel:
Other: (name):	Tel:	Other: (name):	Tel:

ACTION TAKEN and ADDITIONAL ACTION REQUIRED

What assistance has caller requested?

What have we advised we will do to assist?

What additional Company action is required? By Whom?

INCIDENT/EVENT LOG

FACILITY NAME & LOCATION: _____ **DATE:** _____

PREPARED BY: _____ **POSITION:** _____

Time	Call To (Name)	Call From (Name)	Telephone Number	Event/Action

Note: Document all key events, conversations, meetings, etc. on this form.

INCIDENT INVESTIGATION REPORT

Employer name:		**Employer WCB number:**	
Employer head office address:			

Incident occurred:			
Address where incident occurred:			
Date of incident:		**Time of incident:**	

Injured person(s):	Last Name	First Name	Job Title	Age	Duration of experience with this employer	Duration of experience at this task/job
1						
2						

Nature of injury/injuries

1	
2	

Witnesses

Last Name	First Name	Address	Telephone

Incident Description (briefly describe what happened, including the sequence of events preceding the incident)
Statement of Causes (list any unsafe conditions, acts or procedures that in any manner contributed to the incident)
Recommendations (identify any corrective actions that have been taken and any recommended actions to prevent similar incidents

Persons Conducting Investigation

Name	Signature	Type of Representative			Date
		Employer	Worker	Other	

INCIDENT INVESTIGATION REPORT

First Name	Last Name	Agency	Phone Number	Time In	Time Out	Documentation Checked?	Signature

TELEPHONE THREAT REPORT

WHEN A THREAT IS RECEIVED:
Listen, carefully.
Be calm and courteous.
Do not interrupt the caller.
Obtain as much information as you can.
Notify Building Security or Police.
Immediately relay the information to your Supervisor and the RCMP.
QUESTIONS TO ASK:
When did / will this, happen? (time)
What does it look like? (if a bomb threat)
Where are you calling from?
What is your name?
Where is it placed? (if a bomb threat)
EXACT WORDING OF THREAT: ***(if possible, have caller REPEAT to avoid mistakes in message)***
IDENTIFYING CHARACTERISTICS:
Gender.
Estimated Age.
Accent (English, French, etc.).
Voice (loud, soft, etc.).
Speech (fast, slow, etc.).
Diction (good, nasal, lisp, etc.).
Manner (calm, emotional, vulgar, etc.).
Expressions (Unique such as “oil patch”).
Background noises.
Voice was familiar (specify).
Caller was familiar with area.
THREAT RECIPIENT’S PARTICULARS:
Name
Section/Branch/Department
Person to contact
Telephone
RECORDED DATA:

Date:	Time: am/pm	Duration of Call:
Recorded by:		

ENVIRONMENTAL MONITORING RECORD

Date: _____ Location of Emergency: _____

Location of Facility: _____ Monitoring/Roadblock Crew: _____

H_2S/SO_2 Measurement Technique: _____
(eg. Detector tube, Electronic monitor)

Prepared By: _____ Position: _____

Time (5 min intervals)	Temp	H_2S (ppm)	SO_2 (ppm)	LEL Level	Wind Direction	Wind Speed

∗Estimate meteorological conditions when accurate readings are not available. ∗

MOTOR VEHICLE INCIDENT SUPPLEMENTARY REPORT

Supplementary Report No.: _____ Reported By: _____

VEHICLE:

Employee: _____ Contractor: _____ Unit No.: _____ License No.: _____

Company Business: _____

DRIVER:

Employee: _____ Contractor: _____ Other: _____

Name: _____ Age: _____

Address: _____ Phone No.: _____

Accident Classification: Preventable: _____ Non-Preventable: _____

Vehicle Outcome Subtype No.: _____ If Pedestrian, at Crosswalk: _____

CONDITIONS:

Light: _____ Weather: _____ Road: _____ Traffic: _____

OTHER VEHICLE/ PROPERTY:

Year: _____ Make: _____ Model: _____ License: _____

Other: _____

OTHER DRIVER:

Name: _____ Phone No.: _____

Address: _____

Driver's License No.: _____ Registered Owner: _____

Insurance Company: _____ Policy No.: _____

POLICE:

Reported: _____ Name of Officer: _____

Liability Admitted: _____ ID No.: _____ Station/ Detachment: _____

WITNESSES:

Name: _____ Address: _____ Phone No.: _____

Name: _____ Address: _____ Phone No.: _____

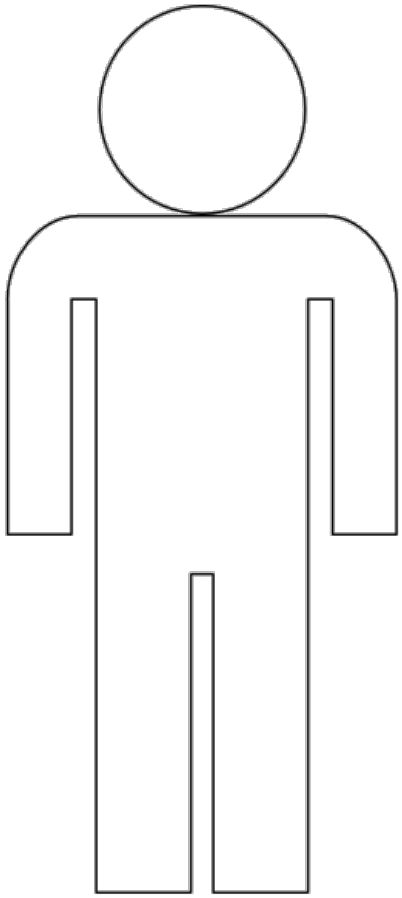
INJURIES:

Name: _____ Address: _____ Phone No.: _____

Name: _____ Address: _____ Phone No.: _____

SUSPECT & VEHICLE IDENTIFICATION WORKSHEET

Gender	Age	Height	Weight	Race
☐ Male ☐ Female				

Hair	**General Appearance**	Hat
Eyes		Coat
Complexion		Shirt
Jewellery		Trousers
Scars/Marks		Shoes
Tattoos		Tie

Facial Appearance	Write below specific facial details that you definitely remember.
Skin/Hair Colour	
Hair Style	
Hair Texture	
Ear Size and Shape	What did the suspect say?
Shape of Eyebrow	
Size/Shape of Eye	
Cheeks (full/sunken)	Tool or weapon seen?
Mouth and Lips	
Moustache or Beard	

Vehicle Information

Colour	Make	Model	License #
Body Style		Damage/Rust	
Antenna	Bumper Sticker	Wheel Covers	
Additional Information			

TELEPHONE/EVACUATION CONTACT LOG

Prepared By: _____ **Date:** _____

Name (List All Persons In The Residence)	**Map Number**	**Contact Time**	**Transportation Or Other Assistance Required**	**Comments** (If not going directly to Reception Centre, give contact number where you can be reached.)

RECEPTION CENTRE REGISTRATION FORM

Prepared By: _____ **Date:** _____

Name (List all persons in the residence)	**Map Number**	**Check in Time**	**Location & Telephone Number** (where they can be reached)	**Comments**

ROADBLOCK REGISTRATION FORM

Prepared By: _____ **Date:** _____

Vehicle Type and License Number	Name Of Driver	Number of Passengers	Time Entering HPZ	Time Exiting HPZ	Comments

Note: Instruct all residents exiting the HPZ to check in at the Reception Centre

ROADBLOCK UNIT CELL PHONE LIST			
Roadblock Unit	**Roadblock Location**	**Cell Phone Numbers**	**Comments**
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

DAILY EXPENSE CLAIM FORM

Incident Location: _____

Name: _____ Date: _____

Address: _____

Location of residences, business, etc: _____

_____

_____

_____

_____

Phone (Residence): _____ While Evacuated: _____

Address (while evacuated): _____

Expenses (please attach receipts): _____

Accommodation (if not pre-arranged): _____

Meals (if not pre-arranged): _____

Transportation (kilometres @ $ /km): _____

Other reasonable daily expenses: _____

_____

_____

_____

_____

_____

Total: _____

Company Contact: _____ Phone: _____

Submitted by: _____

VOLUNTARY EVACUATION NOTIFICATION – TELEPHONE SCRIPT

Date: _____ **Time Posted:** _____

Hello, this is _____ calling Pacific Canbriam Energy Limited

Is this the _____ at _____*?*

Pacific Canbriam Energy Limited is responding to a (potential) <*well/pipeline/facility*> emergency at the _____ location and we may ask you to evacuate the area if the difficulties are not rectified.

If you wish, you may evacuate at this time and proceed to Reception Centre located at _____.

When you arrive at the Reception Centre, please check in with the Reception Centre Unit Leader to register and await further instructions.

If you are not evacuating, please remain near the telephone or provide me with a new number where you may be reached: _____.

Do you understand these instructions? _____.

We will call you again and keep you apprised of the situation.

Is there anything that we need to be aware of in regard to your family, your livestock/pets and/or your property, with a possible evacuation?

Is there any matter that we can provide assistance to you?

Thank you for your patience and understanding. If you have any questions or concerns please contact _____ at _____.

Do you understand these instructions?

If you have urgent questions, call me at _____.

MANDATORY EVACUATION NOTIFICATION – TELEPHONE SCRIPT

Date: _____ **Time Posted:** _____

Hello, this is _____ calling from Pacific Canbriam Energy Limited

Is this the _____ at _____?

I am calling to advise you that we are encountering additional difficulties at our _____ location.

For your safety please evacuate to the Reception Centre located at _____.

When you arrive at the Reception Centre, please check in with the Reception Centre Unit Leader to register and await further instructions.

Do you require assistance to evacuate?

How many people are presently at your house?

Do you understand these instructions? _____.

Is there anything that we need to be aware of in regard to your family, your livestock/pets and/or your property, with a possible evacuation?

Is there any matter that we can provide assistance to you?

Thank you for your patience and understanding. If you have any questions or concerns, please contact _____ at _____.

RESIDENT SHELTER MESSAGE FORM

Note: Record all pertinent information using the <u>Telephone/Evacuation Contact Log</u>

Mr., Mrs., Miss, _____ this is _____ of Pacific Canbriam Energy Limited calling to inform you that we have a problem at our nearby facility that may result in a sour gas release. You are in no immediate danger; however, we are calling as a precautionary measure to inform you of the situation.

How many people are at your home right now?_____

Is there anyone outside that you cannot contact easily? _____ Yes _____No

*(If **YES** determine the location of anyone outside and assure the resident you will send someone to find them as soon as possible.)*

Please:

- Immediately gather everyone indoors and stay there.
- Close and lock all windows and outside doors.
- Extinguish indoor wood burning fires.
- Turn off appliances or equipment that either:
  - Blows out or uses indoor air such as: bathroom and kitchen fans, built in vacuum systems, clothes dryers, gas fireplaces and gas stoves.
  - Sucks in outside air, such as: heating ventilation and air conditioning (HVAC) systems for apartments, commercial or public facilities, fans for heat recovery ventilators or energy recovery ventilators (HVR / ERV).
- Turn down thermostats to the minimum and turn off air conditioners.
- Leave all inside doors open.
- Avoid using the telephone, except for emergencies, so that emergency personnel can contact you. Notify us if you are experiencing symptoms or smelling odours so that we can address your concerns and adjust our response or if you have contacted emergency services (fire / police / ambulance) so that we can conduct a coordinated response.
- Stay tuned to local radio and television for possible information updates.
- Even if you see people outside, do not leave until told to do so.
- After the hazardous substance has passed through the area you will receive an “all clear” message from emergency response personnel along with instructions to ventilate your building by opening all windows and doors, turning on fans and turning up thermostats.
- Once the building is ventilated, return all equipment to normal.
- If you are unable to follow these instructions, please notify us..

My name is_____ and my telephone number is _____.

Do you understand these instructions? Thank you for your cooperation.

Note: If the resident is determined to leave when you are recommending shelter, calmly explain that it is more hazardous to evacuate because the indoor concentrations will be significantly lower than outdoor levels.

RESIDENT WARNING FORM

Note: Record all pertinent information using the <u>Telephone/Evacuation Contact Log</u>

Level 1 Emergency Notification Message

Mr., Mrs., Miss, _____ this is _____ of Pacific Canbriam Energy Limited calling to inform you that we have a problem at our nearby _____ that may result in a sour gas release. You are in no immediate danger; however, we are calling as a precautionary measure to inform you of the situation.

Do you wish to leave your residence/place of business at this time?

IF YES: (person wishes to leave)

How many people are at your residence/place of business?

Do you require transportation or assistance?

YES

Instruct person to stay indoors and a company vehicle will be sent immediately to assist.

Thank you for your cooperation.

NO

Please take the (north, south, east, west) direction to exit the area as this will take you out by the safest route (specify a route which does not take the person closer to, or downwind of, the incident site)

Instruct evacuees to check in with the company representative at the appropriate Reception Centre who will make arrangements for their temporary accommodations and address any questions they may have.

Thank you for your cooperation.

IF NO

Please standby for further contact. Please do not use your telephone for outgoing calls as this may prevent us from contacting others in the area, or contacting you again if the problem becomes worse or when it is eliminated.

Thank you for your cooperation.

Note: If evacuees do not wish to report to the Reception Centre, ask evacuees to tell you where they are going and at what phone number they can be reached.

RESIDENT EVACUATION MESSAGE FORM

Note: Record all pertinent information using the Telephone/Evacuation Contact Log

Level 2 or 3 Emergency Evacuation Message

Mr., Mrs., Miss, _____, this is _____of Pacific Canbriam Energy Limited calling to inform you that we have a serious problem at our nearby facility that has resulted in a harmful release of sour gas. You are in no immediate danger; however, as a safety precaution we request that you evacuate your premises immediately.

Do you require transportation or assistance?

YES

1. For how many?
2. Is anyone outside on the property who you cannot easily contact? (If yes, determine their location and assure the resident you will send someone to notify them.)
3. Please stay indoors and company will send a vehicle immediately.
4. You will be taken to the Reception Centre at _____ where a company will address any concerns you may have and will make arrangements for your temporary accommodations.

   Thank you very much for your cooperation.

Please do not use your telephone for out going calls as this may prevent us from contacting others in the area. A telephone will be made available your use at the Reception Centre.
Thank you very much for your cooperation.

NO

1. Please take the (north, south, east, west) direction to exit the area as this will take you out by the safest route (specify a route which does not take the person closer to, or downwind of, the incident site).
2. Please check in with the company at the Reception Centre to confirm that you have left the area safely.
3. Note: Ask evacuees to tell you where they are going and at what phone number they can be reached if they do not intend to check in at the Reception Centre.
4. The company will address any questions you may have and will make arrangements for your temporary accommodations (as necessary).

   Thank you very much for your cooperation.

ATTENTION

The _____ is experiencing an emergency situation. A Level _____ Emergency may/can be hazardous to people. Presently the wind direction is _____ from the affected site.

The gas is extremely ☐ poisonous ☐ explosive.

Please evacuate immediately to the Reception Centre located at the _____.

Please check in with a company representative once you have arrived and wait for officials to approve your return to the area.

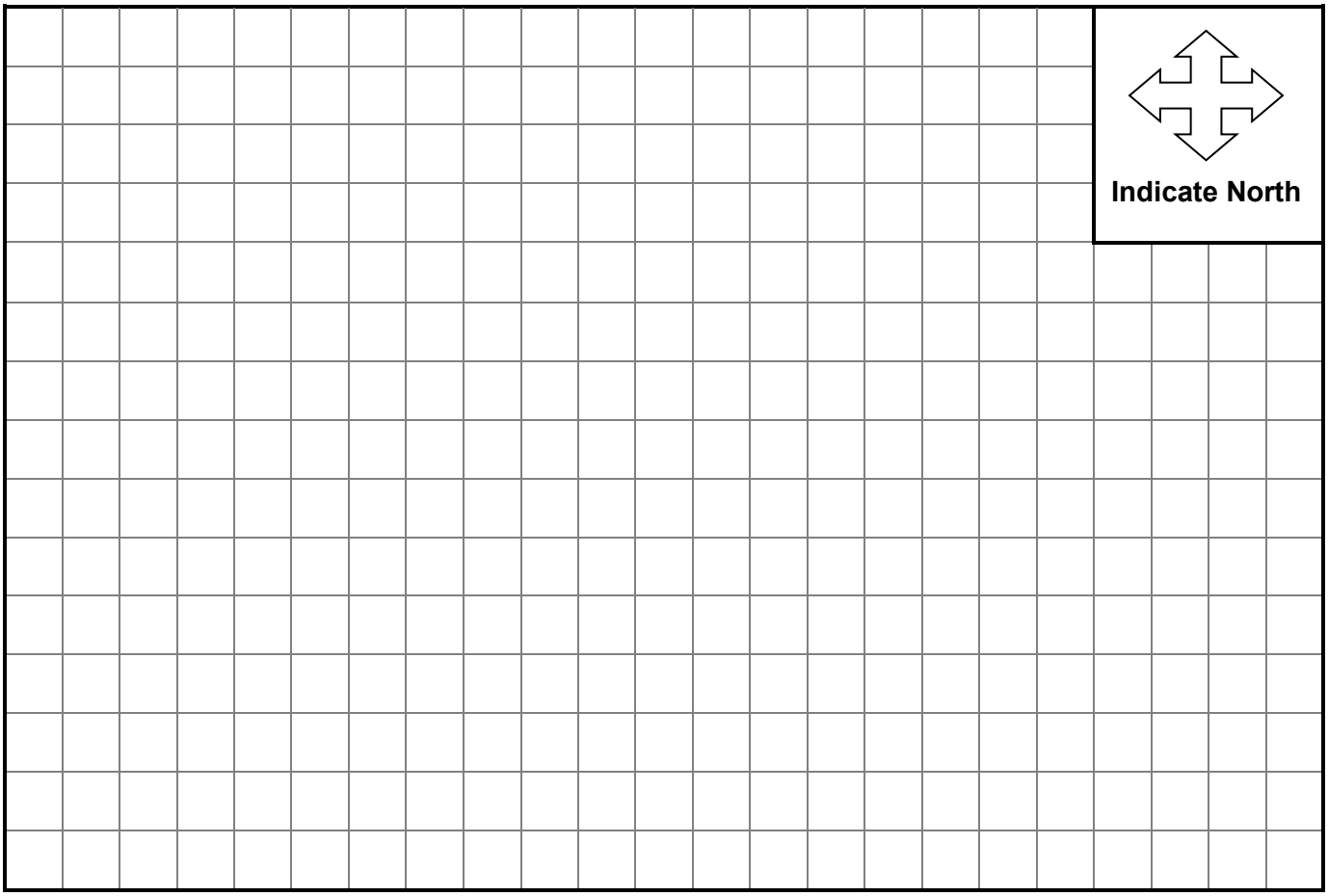
SPILL REPORT FORM

Date:	Time (am/pm):	Legal Description:	
Reporters Name:		Telephone Number:	
Have any other agencies been notified? Yes ☐ No ☐		Specify:	
Size of Spill (cubic meters/barrels)	or Length (m):	Width (m):	Depth (m):
Has the spill migrated beyond the ROW or lease boundaries? Yes ☐ No ☐		Wind Direction:	Temp:
Land Owner's Name:		Telephone Number:	
Describe the area of the incident:			
WELL RELATED SPILL			
Well Type:			
Cause:			
PIPELINE RELATED SPILL			
Pipeline Type:		Segment (where spill occurred):	
Cause:			
FACILITY RELATED SPILL			
Facility Type:		Equipment Type:	
Cause:			
MISCELLANEOUS SPILL (If related to vehicular accident complete Motor Vehicle Incident Supplementary Report)			
LAND SPILL			
Samples Taken? Yes ☐ No ☐			
Soil Texture (sandy loam, loam, silty loam, clay, silty clay):		Soil Permeability (fast, moderate, slow, impermeable):	
Soil Structure (dispersed, normal):	Surrounding Topography (flat, hilly, undulating, etc.):	Vegetation Present:	
Land Use Designation (critical wildlife area, forest, wooded, agricultural, marsh, wetland):		Are any wildlife/livestock in danger?	
WATER SPILL			
Name of watercourse entered:			
Flowrate of the river (slow, moderate, fast):		Is river above normal flow levels? Yes ☐ No ☐	
Is the river frozen, or partially frozen? Yes ☐ No ☐		Has spill migrated to the shoreline? Yes ☐ No ☐	
What is the closest Control Point?:			
Other Comments:			

Spill Report Form continued on next page.

SPILL REPORT FORM CONTINUED
Containment and Recovery: Describe the spill containment and recovery procedures being implemented.

Site Drawing:



On Site Drawing, indicate: waterways, access roads, ROW, slope, pipeline location, test holes, fences, etc.

HAZARD ASSESSMENT

Project # _____

HAZARD ID ☐ NEAR MISS ☐ UNSAFE ACT ☐ POSITIVE REC ☐

Date:_____

Describe the Situation: (who, what, where, when, how):

Worker Name:_____ Signature:_____

Hazard Control Action Plan (what, how, and who implements required corrective action plan)

Risk Level		
Level 1	Minimum Risk	Proceed after considering all elements of risk
Level 2	Moderate Risk	Continue after taking action to manage overall level of risk
Level 3	High Risk - Stop	Do not proceed until sufficient control measures have been implemented to reduce risk to an acceptable level.
Supervisor Signature:_____		Date Completed: _____

What to Report	
Report situations that are not up to standard expected in Pacific Canbriam Energy Limited operations.	
Near Miss:	An incident or occurrence that, under slightly different circumstances, could have resulted in more serious consequences.
Hazard ID:	A condition that, if left uncorrected, could result in an injury, equipment damage, environmental incident, product loss or regulatory infraction.
Unsafe Act:	An Action that could have resulted in an injury, equipment damage, environmental procedure, inappropriate "short cuts', improper PPE, eyes or mind not-on-job, worker complacency, personnel in line of fire, improper positioning, grip or traction, careless driving, etc.

EMPTY RESIDENCE NOTICE

Pacific Canbriam Energy Limited has encountered a well/pipeline control problem at the _____ location. We feel, under the circumstances, that you should evacuate the area until the problem has been corrected. Please proceed immediately to the Reception Centre located at the _____ where company representatives will address your questions or concerns.

For assistance call: _____

Signed by: _____
Pacific Canbriam Energy Limited Representative

Date: _____

Time: _____

SCHOOL CHILDREN REGISTRATION RECORD

FIELD AREA: _____ **PREPARED BY:** _____ **DATE (YY/MM/DD):** _____

EVACUATION CENTRE: _____

School Child's Name	Map Number	School Name	Arrival Time	Departure Time	Destination Phone #	Comments

Note: Schools will be contacted to verify student attendance and advised to hold the children prior to releasing them to a school bus. Confirmation of whether students will be picked up by their parents or whether they should be transported to the Reception Centre to meet them. This form can be used the Telephone Unit and the Reception Centre Unit. Schools should be re-contacted to verify that the children were picked up by their parents.

PRELIMINARY MEDIA STATEMENT

At _____ on _____ a(n) _____ occurred at
(Time) (Date) (Fire/Explosion/Gas Release/Oil Spill)

the _____ location, located approximately ____ kilometres from
(Well/Pipeline/Facility)

_____.
(Urban Centre)

The _____ has been _____ and emergency responders for
(Well/Pipeline/Facility) (Status)

Pacific Canbriam Energy Limited, Local Authorities, Emergency Management and Climate Readiness (EMCR) and the BC Energy Regulator are directing emergency procedures.

The cause of the _____ is not yet known and no estimate of
(Fire/Explosion/Gas Release/Oil Spill)

damage is available.

Public Affairs personnel are available for more details. Please contact

_____ at _____ or at _____.
(Public Information Officer) (Contact Number) (Alternate Contact Number)

EXTERNAL AGENCY POST INCIDENT EVALUATION

Department/Agency:	Telephone:
Representative:	Title:
Incident Location:	
Type of Emergency:	# of Staff Involved:
Duration:	Total # of man hours dedicated to response:

Other resources used (monitoring units, aircraft, buses, etc.):

What worked well during the response?

Areas of improvement?

What was the role of your department/agency during the response?

Was your department/agency able to respond effectively?	Yes ☐ No ☐
Would additional training with company personnel be beneficial?	Yes ☐ No ☐
Do you have a copy of the company's Emergency Response Plan?	Yes ☐ No ☐
If not, do you think a copy would be beneficial?	Yes ☐ No ☐

Please return this form, your business card, and any comments to our main office.

Appendix 2 - Glossary

Adjacent to	For the purpose of this plan refers to the immediate 25 metres.
Air Quality Monitoring	Measures atmospheric concentrations of hazardous substances such as H_2S and SO_2.
Alarm	Refers to an unusual condition that activates sirens and visual alarms. These alarms could be activated by pump protective devices, high or low pressures, high sump, scraper arrival, etc.
Auto-Ignition Temperature	All NGL products are flammable and will flash at extremely low temperatures. An open flame or spark is not necessary to cause ignition. Any hot surface, which exceeds the auto ignition temperature of a product, can cause a fire if the vapours reaching the hot surface are within their flammable range.
Battery	A system or arrangement of tanks or other surface equipment receiving the effluents of one or more wells prior to delivery to market or other disposition and may include equipment or devices for separating the effluents into petroleum, natural gas, or water, and for measurement.
BC Energy Regulator (BCER)	British Columbia regulatory body for the upstream petroleum industry.
Boiling Point	This is the temperature at which a liquid changes to a gaseous state. Water for example changes to the gaseous state at 100ºC (212ºF) and therefore heat must be applied. NGL products change to the gaseous state at extremely low temperatures and will therefore cool the surrounding environment. If the liquid comes in contact with flesh, it immediately reduces the temperature of the flesh to the boiling temperature of the liquid causing severe frostbite. Rapid phase transition or flameless explosions are sometimes heard when an NGL liquid is rapidly transformed to a vapour state. No burning or chemical reaction is involved.
Booster Pump	A small pump that pulls product from the source of supply and pumps it into the suction, or input of the main pump unit.

BOP	Blowout Preventer
Canadian Association of Petroleum Producers (CAPP)	CAPP represents member companies who explore for, develop, and produce natural gas, crude oil etc. CAPP works closely with the government to analyze key oil and gas issues.
Ceiling – Recommended Exposure Limit	The concentration that should not be exceeded during any part of the working exposure. An employee's exposure to a hazardous substance shall at no time exceed the ceiling value.
Closure Order	Also known as a Fire Hazard Order. A closure order is issued to close a specific area to unauthorized personnel. The closure order area is that area within the boundaries described in an order issued by the BCER.
Condensate	A by-product of plants processing natural gas from natural gas wells. Flammable liquid with a strong hydrocarbon odour.
Control Valve	A valve that will automatically maintain a predetermined pressure upstream or downstream of the valve or will maintain a controlled flow rate through the valve.
Corporate Level ERP	A corporate-level ERP is used when a specific ERP is not required and contains preplanned procedures that will allow for effective response to an emergency.
Disaster	An event that results in serious harm to the safety, health, or welfare of people or in widespread damage to property.
Downstream	With reference to a pumping station, indicates the discharge side of that station.
Emergency	A present or imminent event outside the scope of normal operations that requires prompt coordination of resources to protect the health, safety, and welfare of people and to limit damage to property and the environment.
Emergency Awareness Zone (EAZ)	The Emergency Awareness Zone (EAZ) is a distance outside of the HPZ where public protection measures may be required due to poor dispersion conditions of the hazard.

Emergency Operations Centre (EOC)	An operations centre established in a suitable location to manage the larger aspects of the emergency. In a high-impact emergency there may be a number of EOCs established to support the response. These may include the BCER Field Centre, ICS command post, regional and corporate EOCs, a municipal EOC and the Provincial Regional government EOC.
Emergency Planning Zone (EPZ)	A geographical area that encompasses all the hazard planning zones for an oil and gas activity that is the subject of a plan.
Emergency Shut Down Valve (ESD)	A valve that blocks the passage of material from both directions and can automatically close when the amount of material passing through the valve exceeding allowable limits.
Evacuation	Organized, phased, and supervised withdrawal of members of the public from dangerous or potentially dangerous areas, and their reception in safe areas.
Explosimeters	Can detect explosive substances in the atmosphere. May be a hand held device.
Explosive Limits (Lower and Upper)	Each gaseous hydrocarbon substance has a minimum (Lower Explosive Limit or LEL) and a maximum (Upper Explosive Limit or UEL) percentage in the air below or above which combustion will not take place. Explosive limit and flammability limit are used interchangeable. The terms “Too Lean” and “Too Rich” are used for levels outside of the explosive range.
Facility	Any building, structure, installation, equipment, or appurtenance over which the BCER has jurisdiction and that is connected to or associated with the recovery, development, production, handling, processing, treatment, or disposal of hydrocarbon-based resources or any associated substances or wastes. This does not include wells or pipelines.
Flow Rate	The speed in which the product is flowing, computed in cubic meters per second (m^3/s).
Gathering System	The network of pipelines, pumps, tanks, and other equipment, which carry oil and gas to the main pipeline or a processing plant or other separation equipment.

H_2S Release Rate	The rate at which the sour gas escapes into the atmosphere. Usually given in cubic metres per second (m^3/s).
Hazard Planning Zone (HPZ)	A geographical area (a) determined by using the hazard planning distance as a radius, and (b) within which persons, property or the environment may be affected by an emergency.
Hazardous Product	Substances released in quantities that may harm persons, property, or the environment.
High Vapour Pressure (HVP) Pipeline	A pipeline system containing hydrocarbon mixture in the liquid or quasi-liquid state with a vapour pressure greater than 110 kPa absolute at 38ºC. Some examples are liquid ethane, ethylene, propane, butanes, and pentanes plus. HVP lines have a vapour pressure greater than 240 kPa at 38ºC (34.8 PSIG at 100ºF) and include ethane, propane butane, and pentanes plus, either as a mixture or as a single component.
Hydrogen Sulphide (H_2S)	A naturally occurring gas found in a variety of geological formations and also formed by the natural decomposition of organic matter in the absence of oxygen. H_2S is colourless, has a molecular weight that is heavier than air, and is extremely toxic. In small concentrations it has a rotten egg smell and causes eye and throat irritation. Depending on the particular gaseous mixture, gas properties, and ambient conditions, a sour gas release may be: ▪ heavier than air so that the gas cloud will tend to drop towards the ground with time (dense), ▪ lighter than air so the gas cloud will tend to rise with time (buoyant), or ▪ about the same weight as air so that it tends to neither rise nor drop but disperses (neutrally buoyant).
Hyper-susceptible	Persons who may be abnormally reactive to a given exposure to toxins and their reaction may occur in orders of magnitude greater than that of the susceptible population. Hyper-susceptible include those persons with impaired respiratory function, heart disease, liver disease, neurological disorders, eye disorders, severe anaemia, and suppressed immunological function.
Ignition	Process of setting a hydrocarbon release on fire.

Incident	An unexpected occurrence or event, caused by human or natural phenomena, that requires action by upstream and/or emergency personnel, to prevent or minimize the impact on the safety or health of people, property, or the environment.
Incident Command Post (ICP)	A facility at, or near the incident site selected from which to manage response and control procedures in the event of an emergency.
Incident Command System (ICS)	An incident response structure that has the ability to expand or contract based on the needs of an incident.
Incident Response Team (IRT)	Responders at the incident site working to control or rectify the situation.
Isolation	To separate an area or process from the rest of the plant.
Kick	A situation where the formation pressure exceeds the static pressure in the well bore allowing formation fluid to enter.
Level 1 Emergency	There is no danger outside the licensee's property. There will be immediate control of the hazard and there is no threat to the public and minimal environmental impact. The situation can be handled entirely by licensee personnel. There is little or no media interest.
Level 2 Emergency	There is no immediate danger outside of company property or the right-of-way but where there is the potential for the emergency to extend beyond the licensee's property. Outside and provincial agencies must be notified. Imminent control of the hazard is probable but there is moderate threat to the public and/or the environment. There may be local and regional media interest in the event.
Level 3 Emergency	The safety of the public is in jeopardy from a major uncontrolled hazard. There are likely significant and on-going environmental impacts. Immediate multi-agency municipal and provincial government involvement is required
Licensee	A term used to designate the responsible duty holder (e.g., licensee, operator, company, applicant,
Liquefied Petroleum Gas (LPG)	Mixture of heavier, gaseous hydrocarbons (butane and propane), liquefied as a portable source of energy.

Local Authority	(i) council of a city, town, village, or municipal district (ii) in the case of an improvement district or special area, the Minister of Housing and Municipal Affairs (iii) the settlement council of a settlement under the Métis Settlements Act (iv) the band council of an Indian band if an agreement has been entered into with the Government of Canada in which it is agreed that the band council is a local authority for the purposes of the *Disaster Services Act.*
Local State of Emergency	Is authorized for a limited duration and limited geographical area by members of the Municipal or Town Council. Grants extraordinary powers to the authorities, including the forcible removal or prevention of entry into the designated area.
Lower Explosive/Flammable limit (LEL / LFL)	The lowest concentration of gas or vapour (per cent by volume in air) that burns or explodes if an ignition source is present at ambient temperatures.
Major (Full-Scale) Exercise	As described in *CAN/CSA-Z246-2*, an exercise involving the establishment of an Incident Command Post, emergency response agencies, the duty holder, and the deployment of all resources required in a coordinated response to test the duty holder's ERP and intended to provide a realistic simulation of an emergency response.
Mobile Air Quality Monitoring	The use of sophisticated portable equipment capable of measuring meteorological conditions and tracking substances such as H_2S or SO_2 and of measuring very low (ppb) atmospheric concentrations and also capable of being able to record and provide preliminary analysis (eg. averaging values over time) of the monitored readings.
Municipal District (MD)	A governing body similar to a county.
Municipal Emergency Plan	The emergency plan of the local authority required under section 11 of the *Emergency Management Act*.
Mutual Aid	An understanding between two or more public and/or private facilities or operations to provide assistance to the persons of the agreement. Such an agreement is between two or more persons such as oil and gas companies, service companies, and local authorities.
Natural Gas Liquids (NGL)	These are hydrocarbons liquefied under pressure in field facilities or in gas processing plants. Natural gas liquids include ethane, propane, butane, and pentanes plus, and normally occur as a mixture of these compounds.

NAV Canada	NAV Canada is Canada's civil air navigation services. NAV Canada provides air traffic control, flight information, weather briefings, aeronautical information services, airport advisory services and electronic aids to navigation.
NOTAM (Notice to Airmen)	An order requested by the BCER and issued by Transport Canada to close a specific airspace to unauthorized commercial aviation. The dimension of the airspace described is issued by Transport Canada. Also known as a No Fly Zone.
Notification	The act of being informed of an emergency by an outside source.
Off Site	The area beyond the asset property boundary.
On Site	The area within the asset property boundary.
Operating Personnel	Refers to the people working in a given field area.
Partially Controlled Flow	A restricted flow of product at surface that cannot be shut off at the operator's discretion with equipment on site.
Parts Per Million (ppm)	The unit for measuring the concentration of a particular substance equal to one (1) unit combined with 999,999 other units.
Personal Consultation	Consultation through face-to-face visits or telephone conversations with identified parties and providing the required information packages.
Personal Protective Equipment (PPE)	Safety equipment used for an individual's protection.
Plume (Gas Plume)	An elongated mobile column of gas or smoke.
Public	The group of people who may be or are impacted by an emergency (eg. employees, contractors, neighbours, emergency response organizations, regulatory agencies, the media, appointed or elected officials, visitors, customers, etc. as appropriate).
Public Facility	A public building, such as a hospital, rural school, or a major recreational facility, situated outside of an urban centre that can accommodate greater than 50 individuals and/or requires that additional transportation be provided during an evacuation.

Publicly Used Development	Places where the presence of 50 individuals or less can be anticipated. Examples include places of business, cottages, campgrounds, churches, and other locations created for use by the non-resident public.
Pump Unit	Consists of an electric motor or engine connected to a centrifugal pump, either directly as in the case of constant speed units, or through a fluid drive, as in the variable speed pump units.
Reception Centre	A centre established to register evacuees and to assess their needs. The centre is used to register evacuees for emergency shelter or, if temporary shelter is not required because evacuees will stay elsewhere, to ascertain where they can be contacted.
Residence	Full time or part time dwelling.
Resident	Individual living in the area at a fixed location.
Self Contained Breathing Apparatus (SCBA)	Personal protection used for protection from hazardous substances in the air.
Shelter In Place	Remaining indoors for short term protection from exposure to toxic gas releases.
Sour Gas	Natural gas, including solution gas, containing hydrogen sulphide (H_2S).
Sour Pipelines	Convey gas and/or liquid that contains sour gas.
Sour Production Facility	Processes sour gas or liquid.
Sour Well	An oil or gas well expected to encounter sour gas-bearing formations during drilling or any oil or gas well capable of producing sour gas.
Special Sour Well	A designation that reflects the proposed well's proximity to populated centres and its maximum release rate.
Sulphur Dioxide (SO_2)	A colourless, water-soluble, suffocating gas formed by burning sulphur in air; also used in the manufacture of sulphuric acid. SO_2 has a pungent smell similar to a burning match. SO_2 is extremely toxic at higher concentrations. The molecular weight of SO_2 is heavier than air; however, typical releases are related to combustion therefore making the gaseous mixture lighter than air (buoyant).

Sump	An underground tank located at each pump station used to catch products that leak through valves, meters, pump units, seal housing, etc.
Surface Development	Occupied permanent or part-time dwellings, publicly used facilities including campgrounds, places of business, and any other surface development where the public may gather on a regular basis. Surface development includes residences that are required to egress through the EPZ and those immediately adjacent to the EPZ.
Table Top Exercise	As described in *CAN/CSA-Z246-2*, an informal group discussion centered on a scenario generally used to test existing plans, policies, review resource allocation, roles, procedures, and as orientation of new personnel to emergency operations without the stress and time constraints of a full scale exercise and without incurring the cost associated with deploying resources.
Transient	Individual temporarily in the area (eg. camper, cross country skier).
Trapper	Holder of a Provincially Licensed and Registered Trap Line for the purpose of hunting and trapping fur bearing animals.
Uncontrolled Flow	A release of product that cannot be shut off at the company's discretion.
Unrestricted Country Development	Any collection of permanent dwellings situated outside of an urban centre and having more than eight permanent dwellings per quarter section; for the purpose of applying the requirements of *ID 97-6*, includes any similar development that the BCER might so designate.
Upstream Petroleum Industry	Constitutes all facilities, equipment, substances, and operations used in the exploration, recovery, processing and transporting of petroleum within the BCER jurisdiction. Generally, this includes oil and gas operations upstream of a refinery and the storage and transportation of unrefined products by pipeline between oil and gas production facilities or other end points.
Urban Centre	A city, town, new town, village, summer village, hamlet, with no fewer than 50 separate buildings, each of which must be an occupied dwelling, or any similar development the BCER may designate as an urban centre.

Urban Density Development	Any incorporated urban centre, unincorporated rural subdivision, or group of subdivisions with not fewer than 50 separate buildings, each of which must be an occupied dwelling, or any other similar development the BCER may designate.
Vapour Density	A measure of the weight of the gas compared to air (air = 1).
Vapour Pressure	The pressure exerted by the vapour when the rate of evaporation is equal to the rate of condensation of the vapour. All NGL products have vapour pressure greater than atmospheric pressure air and therefore have to be kept under pressure or else they will vaporize.
Workover	The process of re-entering an existing well to perform remedial action that will restore or improve the productivity or injectivity of the target formation.
WorkSafe BC	Non-profit organization that works to reduce injury in the workplace.

Acronyms

BCER	Energy Regulator (BC)
CAPP	Canadian Association of Petroleum Producers
CISD	Critical Incident Stress Debriefing
CISM	Critical Incident Stress Management
EAZ	Emergency Awareness Zone
EMCR	Emergency Management and Climate Readiness British Columbia
EOC	Emergency Operations Centre
EPZ	Emergency Planning Zone
ERP	Emergency Response Plan
ESD	Emergency Shut Down
ETA	Estimated Time of Arrival
H_2S	Hydrogen Sulphide
HPZ	Hazard Planning Zone
HVP	High Vapour Pressure
IAP	Incident Action Plan
ICP	Incident Command Post
IRT	Incident Response Team
JIC	Joint Information Centre
LEL	Lower Explosive Limit
LFL	Lower Flammable Limit
LPGERC	Liquefied Petroleum Gas Emergency Response Corporation
MEP	Municipal Emergency Plan

NGL	Natural Gas Liquids
NOTAM	Notice to Airmen (No Fly Zone)
PPE	Personal Protective Equipment
PPM	Parts Per Million
PREOC	Provincial Regional Emergency Operations Centre
RHA	Regional Health Authority
SITREP	Situation Report
SO_2	Sulphur Dioxide