

Wildboy

Emergency Response Plan



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Revision History

This Emergency Response Plan is effective November 28, 2022. The company's Emergency Response Program Coordinator is responsible for updating this plan annually or as required. Any errors or omissions in the plan should be brought to their attention.

Date of Issue	Section	Reason for Revision	Affected Pages	
November 28, 2022	All Annual Update		All	
November 5, 2021	All	Annual Update	All	
November 12, 2020	All	Annual Update. Regulator name change from NEB to CER	All	
May 31, 2019	All	New ERP style format. Standard yearly minor revisions.	All	
September 12, 2018	All	New ERP Manual	All	

Tidewater Midstream and Infrastructure Ltd.

Wildboy ERP - Distribution List

Manual #	Туре	Res Info	Branch	Title / Agency	Name		
	Corporate						
73904	Binder	None	Calgary	Emergency Operations Centre (EOC)	С		

1 Hard Corporate Manual

	Field						
73905	Binder	None	Grande Prairie	Lead Operator			
73906	Binder	None	Grande Prairie	Operations Superintendent			
73907	Binder	None	Grande Prairie	Operations Superintendent			
73908	Binder	None	Grande Prairie	HSE Coordinator			
73909	Binder	None	Calgary	Erikson National Energy Inc.			

5 Hard Field Manuals

	External						
73910	Digital	None	Calgary	Canada Energy Regulator (CER)			
73911	Binder	None	Calgary	Canada Energy Regulator (CER)			
73912	Binder	None	Fort St. John	BC Oil & Gas Commission			
73913	Digital	None	High Level	AHS - Zone 5			
73914	Digital	None	Prince George	Emergency Management BC			
73915	Digital	None	Fort Nelson	Northern Rockies Regional Municipality			
73916	Digital	None	Fort Vermilion	Mackenzie County			
73917	Digital	None	Fort Nelson	RCMP - Northern Rockies			
73918	Digital	None	High Level	RCMP - High Level			
73919	Binder	None	Calgary	H₂Safety Services Inc.			

3 Hard External Manuals

7 Digital External Manuals



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Section 1: Initial Response

A1 Initial Emergency Report Form

Five Step Initial Response Guide

Step 1 – Level of Emergency

Step 2 – Internal Notification

Step 3 - External Notification

Step 4 – Incident Briefing

Step 5 – Public Safety

A1 Initial Emergency Report Form



First On-Scene Actions

Evacuate		 ☐ Get to a safe area immediately. ☐ Move upwind if release is downwind of you. ☐ Move crosswind if a release is upwind from you. ☐ Move to higher ground if possible. 							
Alarm		Sound bell, ho	Man Down"). orn or whistle, or call by mergencies, call 911.	/ radio.					
Assess			unt, locate any casualt ation below to completo	ies. Consider all of the ha	azards.				
Protect		Put on breathi	ng apparatus before a	ttempting rescue.					
Rescue		Remove victin	n to a safe area.						
First Aid		Follow the sta	ndard first aid protocol	s at worksite. (CPR, etc.)					
Medical Ai	d		port of casualties to menation to Emergency M	edical aid. edical Services (EMS).					
Incident De	etails το	be completed by the	person involved or notified						
Report taken				Date / Time					
Name of person calling				Caller Telephone					
Incident Loca	ation		(LSD / NTS	S)					
Event Summ	nary		(- ,					
Agencies Notified	□ Yes	Who?							
Event	□ No	ent contained or co	ontrolled	☐ Intermittent control pos	sible				
Status		nent control possib		☐ Incident is uncontrolled					
Site Type	□ Well	☐ Pipeline	☐ Tank Farm/Storage	□ Battery/Plant/Facility	☐ Other				
Incident	□ Sour	Gas Release	☐ Sweet Gas Release	☐ Pipeline Break	terrorism)				
Туре		of Containment	☐ Fire/Explosion	☐ Worker Injury/Fatality	☐ Vehicle/Transportation				
	☐ Liquid Spill		☐ Other						

A1 Initial Emergency Report Form



Impacts								
Public Health and S		☐ Could be j			☐ Is jeopar	dized		
Public Protection M	leasures Taken	☐ Notification	n 🗆	Evacuatio	n ☐ Shelter-ir	n-place [⊐ Roadblo	cks
Worker Injuries		☐ First Aid		Hospitaliz	ed □ Fatality	□ Oth	er	
Distance to nearest s	surface developme	ent	km	Distance	e to nearest urbar	n centre		km
Details						1		
Release Impact			oduct_			Amount_		
Gas Readings	H ₂ S	SO ₂ LE	L	Ot	her			
Distance to nearest v	watercourse		km	Weathe	Conditions		360° N	
						270° W W5		ESE ESE 135°
Media Involvement? □		egulator nvolvement?	l Yes	□ No	Public Affairs/Commu Relations Issue	nity es?	□ Yes	□ No
Notes / Instructio	ns Provided:							

Distribute this completed report to all Key Response Personnel

Note: Ensure the First On-Scene Actions have been completed before proceeding to the Five Step Initial Response Guide.

First On-Scene **Actions**

Evacuate Alarm **Assess Protect** Rescue First Aid **Medical Aid**

Refer to A1 Initial **Emergency Report**

Step 1 - Level of Emergency

Determine Level of Emergency:

- □ Alert / Minor
- □ Level 1 Emergency
- □ Level 2 Emergency
- □ Level 3 Emergency

Use the following resources:

- Section 1: Initial Response (Level of Emergency)
- The Emergency Assessment SmartPhone App. (Search H2Safety or Emergency Assessment in the App Store).

Note: The OGC and the AER state that the licensee must use either the Incident Classification Matrix (BC) or the Assessment Matrix for Classifying Incidents (AB) to determine the Level of Emergency. If the incident overlaps more than one level, always choose the highest level.

Step 2 - Internal Notification

- □ Follow the Internal Emergency Notification Flowchart to determine who needs to be notified.
- □ Relay the information in the completed **A1** Initial Emergency Report Form.
- □ Mobilize internal resources to the site, to the Incident Command Post (ICP), to the Corporate Emergency Operations Centre (CEOC), or place them on standby as required.

Use the following resources:

- Section 1: Initial Response (Internal Emergency Notification Flowchart)
- Section 2: Roles & Responsibilities (Response Team Phone List)
- Section 6: Forms (A1)
- Initiate an H2CommandCentre session.

Note: Initial Response

takes place over a

single operational

period (optimally 8 to 12

incidents will be

resolved within the first

operational period.

hours).

. 95% of all

Reactive Phase

Step 3 - External Notification

- □ Follow the External Emergency Notification Flowchart to determine which external agencies need to be notified.

- □ Health Authority / Health Services
- □ Regulatory agency to confirm the Level of Emergency □ Air Monitoring (at all levels of emergency)
- □ Local Authority (Cities, Towns, Villages, Counties, M.D.s, R.D.s, R.M.s, Special Areas, Reserves, etc.)
- □ Use the following resources:
- Section 1: Initial Response (External Emergency Notification Flowchart)
- Section 5: External Agencies (Provincial Notification Matrix)
- Area Specific Information (White tabs)

Step 4 - Incident Briefing

Complete an ICS 201 Incident Briefing Form:

- □ Define incident details and an operational period (page 1).
- Establish the On-Site Command Post (OSCP) and ICP.
- □ Document current incident objectives, strategies and tactics (page 2).
- □ Prioritize objectives (page 2).
- □ Define initial Incident Command Structure (page 3).
- □ Identify required resources and when they'll be available (page 4).

Use the following resources:

- Section 1: Initial Response (ICS 201)
- Section 6: Forms (ICS 201)

Step 5 - Initiate Public Safety

Public Protection Measures

- □ Determine the hazard area; start with Emergency Planning Zone (EPZ) as
- □ Identify the affected surface developments and area users. (Houses, businesses, guides/outfitters, trappers, schools, other oil and gas
- □ Determine the appropriate public protection measure for the affected surface developments and area users. (Evacuation, shelter-in-place and/or
- □ Coordinate evacuation outside of the EPZ with the local authority, if
- □ Utilize broadcast media to notify public outside of the EPZ in immediate evacuation situations

Use the following resources:

- Section 1: Initial Response (Public Protection Measures Flowchart)
- Section 4: Emergency Response Procedures (Public Protection Measures)

Roadblocks

□ Follow safety procedures to safely establish roadblocks wherever a road

□ Record all vehicle encounters and air monitoring readings. Complete the

□ Gain permission from the Public Safety Group Supervisor for response

• Area Specific Information (Map / EPZ calculation tables)

Rovers

- □ Dispatch Rovers to patrol the EPZ.
- □ Follow safety procedures and have appropriate PPE.
- Search the EPZ for transients.
- Assist residences that require evacuation assistance.
- □ Investigate surface developments that are identified as vacant or those who were unable to contact.
- □ Post notices on all outside doors of empty surface developments, vehicles,
- □ Record all contacts, communications and monitoring readings using the following forms: ICS 214, A5, B3 & B5.
- □ Monitor and record air quality readings using the following forms: ICS 214 & A5. (Smoke, plumes, wind, etc.)
- □ Provide status updates to the Public Safety Group Supervisor at established intervals; utilize
- H₂CommandCentre if available.

Use the following resources:

- · Section 2: Roles & Responsibilities (Rovers)
- Area Specific Information (Map)

Telephoners

- □ Establish a Telephoner Team to notify residents to evacuate or shelter-in-
- □ Notify special needs residents at a Level 1 Emergency and provide the option to evacuate voluntarily.
- □ Follow-up phone calls to address resident inquiries.
- □ Record all phone calls and communications using the following forms: ICS 214, B3, B6, B7, & B8.
- □ Provide status updates to the Public Safety Group Supervisor at established intervals; utilize
- H₂CommandCentre if available.

Use the following resources:

- Section 2: Roles & Responsibilities (Telephoners)
- · Section 6: Forms

- · Section 6: Forms

Reception Centre Rep

- the reception centre location.
- □ Meet and register evacuated residents.
- Complete the following forms: ICS 214, B1, B2 & C2.
- □ Regularly provide status updates to the Public Safety Group Supervisor (those who have arrived and those who have not yet arrived); utilize
- H₂CommandCentre if available.

Use the following resources:

Section 2: Roles & Responsibilities (Reception Centre Rep)

- □ Record contact information for those who choose to stay elsewhere.

- . Section 6: Forms

Initial Response □ If residents are evacuated, dispatch a Reception Centre Representative to Guide

Ongoing Response in 2: Roles & Responsibilities

Refer to Section 2

Response

Initial

Step 5

Public Safety

Step 4

Incident Briefing

Step 3

External Notification

Step 2

Internal Notification

Step 1 Level of Emergency

> First On-Scene Actions



Five Step

Use the following resources:

Section 2: Roles & Responsibilities (Roadblocks)

□ Provide status updates to the Public Safety Group

intersects with the EPZ and advise vehicles to reroute.

- · Section 6: Forms
- Area Specific Information (Map)

following forms: ICS 214, A5, B3 & B4.

Supervisor at established intervals; utilize

vehicles to enter the hazard area.

H₂CommandCentre if available

□ Dispatch Air Monitoring personnel to the nearest residence / public facility downwind of the incident □ Follow safety procedures and have appropriate PPE.

Air Monitors

- ☐ Monitor and record air quality readings using the following forms: ICS 214
- & A5. (Smoke, plumes, wind, etc.)
- □ Provide status updates to the Public Safety Group Supervisor at established intervals: utilize H₂CommandCentre if available.

Use the following resources:

- Section 2: Roles & Responsibilities (Air Monitors)
- . Section 6: Forms

Note: This document is to be used as a guide only. It is not meant to replace the use of the ERP and does not eliminate the need for ERP related training.

Step 1 – Level of Emergency





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 <u>Online Minor Incident Reporting System</u>.

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 □ 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

Consequence _____+ Probability _____= Risk Score _____ (this must be completed)

Risk Score	Assessment Result
Minor (1-2)	Notification Only; permit holder must notify the Commission online within 24 hours using the Form A: Minor Incident Notification Form (http://www.bcogc.ca/node/11188/download). In addition to Form A, spills must also be reported to EMBC.
Moderate (3-4)	Level-1 Emergency; immediate notification (call EMBC)
Major (5-6)	Level-2 Emergency; immediate notification (call EMBC)
Serious (7-8)	Level-3 Emergency; immediate notification (call EMBC)



The H_2 Safety Services Inc. Emergency Assessment Smart Phone app is the preferred method for determining the level of emergency. Search H_2 Safety or Emergency Assessment in the Apple or Android app store.



				Probability		
_		4	3	2	1	0
	GC Incident assification Matrix	Uncontrolled, with control unlikely in near term	Escalation possible; under or imminent control	Escalation unlikely; controlled or likely imminent control	Escalation highly unlikely; controlled or imminent control	Will not escalate; no hazard; no monitoring required
	 □ 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
a)	 ☐ 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 ☐ Major on site equipment failure 	Level 3	Level 2	Level 2	Level 1	Level 1
acuenhasuca	 □ 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
	 ☐ 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
(□ No consequential impacts	Level 1	Level 1	Minor Notification Form	Minor Notification Form	No Notification Required

Minor Incidents

- · The permit holder must report the minor incident to the Commission within 24 hours by electronic submission through the Online Minor Incident Reporting System, opened through KERMIT.
- If the minor incident involves a leak or a spill, EMBC must also be called at 1-800-663-3456 so Permit Holders Post-Incident Report that a Dangerous Goods Incident Report (DGIR) number may be issued.

Level 1, 2, or 3 Emergency

• If the incident receives a score of Level 1, 2, or 3, it must be reported immediately (within 1 hour) to the Commission's incident reporting line (EMBC 1-800-663-3456).

Escalating, Downgrading or Standing-Down of Emergency

- The Commission must be notified as soon as possible of any change to the emergency status.
- The permit holder must consult with the Commission for escalating, downgrading or the standing-down of an incident.

The Form D: Permit Holder Post Incident Report Form (https://www.bcogc.ca/node/5771/download) must be submitted by the permit holder to the Commission within 60 days for:

- 1. Any Level 1, 2 or 3 emergency incident: complete Part A-P; or
- 2. Any pipeline incident (including minor notification): complete Part A-U; or
- 3. Upon request by the Commission

This report and accompanying documentation can be found on the Commission's website under Emergency Response and Planning and must be emailed electronically to EMP@bcogc.ca

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

Step 1 – Level of Emergency



Spill Reporting Criteria

Where the permit holder holds or maintains rights, the permit holder must report to the BC Oil and Gas Commission, 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 m³ 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; <u>Spill Reporting Regulation</u>, Schedule "Reporting Levels for Certain Substances" for determining reportable spillage amounts of other substances:

Other Reportable Incidents

The Commission'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 Commission 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:
 - o pit gain of 3 m³ or greater
 - casing pressure 85% of MA
 - 50% out of hole when kicked
 - well taking fluid (LC)
 - o associated spill
 - o general situation deterioration, i.e. leaks, equipment failure, unable to circulate, etc
- All 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

Sour Gas

When a sour gas product is released, any measurement of 10 ppm or greater measured at 1 metre from the source of the leak requires reporting as an incident.

Releases Near Airports

If the emergency involves the release of flammable vapour at the site of an oil and gas activity that is located within 2 kilometres of an airport, immediately notify the operator of the airport.

Step 1 – Level of Emergency



Oil and Gas Road Closures

In emergency situations, permit holders must phone the Commission's 24 hour Incident Reporting line to notify the Commission of needed emergency oil and gas road closures.

Special Sour Wells

During and emergency involving a special sour well, a permit holder must do all of the following:

- 1. Ensure that a person certified in accordance with subsection (4) is available and equipped to ignite the well within the time limits set out in the plan in respect of which the emergency planning zone was determined;
- 2. Ensure that a dual ignition system is on site during:
 - a. Drilling or completion operations, or
 - b. Workover operations being carried out at any time when the wellhead is not in place;
- 3. Ensure that a person authorized to ignite flammable liquids or ignitable vapours released from the well is on site.

For the purposes of subsection (2), a sour well is special if either of the following applies:

- 1. The hydrogen sulphide release rate from the well is equal to or greater than 2.0 m³/s;
- 2. The hydrogen sulphide release rate from the well is less than 2.0 m³/s but greater than 0.5 m³/s and the well is located within a distance that is twice the hazard planning distance from the corporate boundaries of an urban centre.

For the purposes of subsection (2) (a), the person must have vapour plume ignition certificate issued by a training association.

Note: Refer to the Petroleum Industry Spill / Release Reporting Requirements in **Section 4: Emergency Response Procedures** for further spill reporting criteria and the Government Notification Matrix **in Section 5: External Agencies** for other reportable incidents.



Assessment Matrix for Classifying Incidents

Follow these 3 steps to determine the Level of Emergency

	Step 1	Table 1 – Consequence of Incident							
Rank	Category	Example of Consequence in Category							
1	Minor	 □ No worker injuries. □ Nil or low media interest. □ Liquid release contained on site. □ Gas release impact on site only. 							
2	Moderate	 ☐ First Aid treatment required for on-site worker(s). ☐ Local and possible regional media interest. ☐ Liquid release not contained on site. ☐ Gas release impact has potential to extend beyond site. 							
3	Major	 □ Worker(s) requires hospitalization. □ Regional and national media interest. □ Liquid release extends beyond site – not contained. □ Gas release impact extends beyond site – public health / safety could be jeopardized. 							
4	Catastrophic	 ☐ Fatality. ☐ National and international media interest. ☐ Liquid release off site not contained – potential for, or is, impacting water or sensitive terrain. ☐ Gas release impact extends beyond site – public health / safety jeopardized. 							

Under "Example of Consequence in Category" column, select the box with the worst consequence that currently fits the incident. For example, if there is a fatality on site you must select the "Catastrophic" category which would give you a "Rank" of 4.

	Step 2	Table 2 – Likelihood of Incident Escalating *								
Rank	Descriptor	Example of Consequence in Category								
1	Unlikely	The incident is contained or controlled and it is unlikely that the incident will escalate. There is no chance of additional hazards. Ongoing monitoring required.								
2	Moderate	Control of the incident may have deteriorated but imminent control of the hazard by the licensee is probable. In either case, it is unlikely that the incident will further escalate.								
3	Likely	Imminent and/or intermittent control of the incident is possible. The licensee has the capability of using internal and/or external resources to manage and bring the hazard under control in the near term.								
4	Almost Certain or Currently Occurring	The incident is uncontrolled and there is little chance that the licensee will be able to bring the hazard under control in the near term. The licensee will require assistance from outside parties to remedy the situation.								

^{*} What is the likelihood that the incident will escalate, resulting in an increased exposure to public health, safety, or the environment?

Sum the "Rank" from Table 1 and Table 2 to obtain the Risk Level and the Incident Classification

Combine the two rankings from the above tables to obtain the "Risk Level" and "Level of Emergency".

For example, if the "Consequence Rank" is 4 and the "Likelihood Rank" is 1 then the combined score or "Risk Level" is 5.

A "Risk Level" of 5 would be classified as a Level 1 Emergency.

Refer to the appropriate column in Table 4 (reverse of this page) for responses to the Level of Emergency that has been determined.

Note

- In Alberta the licensee must use the Assessment Matrix for Classifying Incidents to classify an incident.
- In Alberta the licensee must contact the Alberta Energy Regulator (AER) after it has communicated and activated internal response resources to confirm the level of emergency and convey the specifics of the incident.
- 3. After contacting the Alberta Energy Regulator (AER), the licensee in Alberta, must notify the local authority, the RCMP/police and the local health authority if the hazardous release goes off site and has the potential to impact the public or if the licensee has contacted members of the public or the media.
- Once the situation improves, the licensee must make the decision to downgrade or stand down an emergency in consultation with the government regulator.

Step 3	Table	3 – Incident Classification				
Risk Lev	el	Assessment Results				
Very Low 2	- 3	Alert				
Low 4 –	5	Level – 1 Emergency				
Medium	6	Level – 2 Emergency				
High 7 –	8	Level – 3 Emergency				

The H₂Safety Services Inc. Emergency Assessment Smart Phone app is the preferred method for determining the level of emergency. Search H₂Safety or Emergency Assessment in the Apple or Android app store.



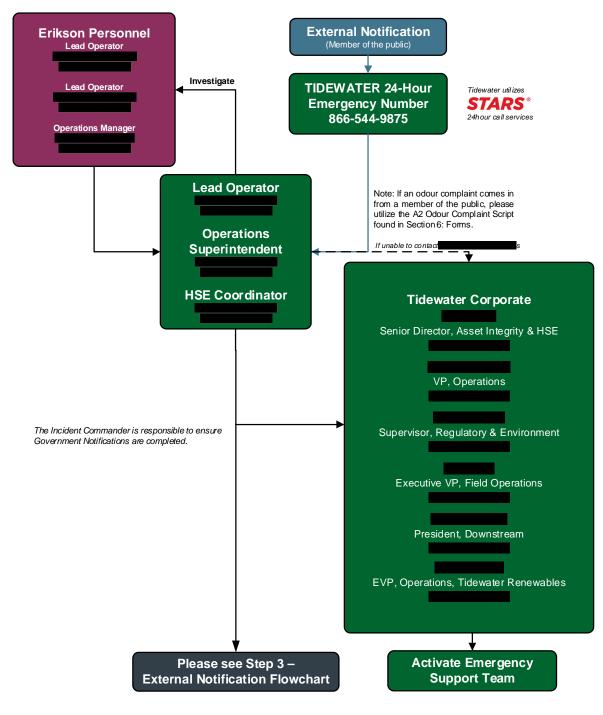
Step 1 – Level of Emergency



Ste	o 4	Table 4 – Incident	Response – Incident Classif	ication		
Responses	Alert	Level – 1 Emergency	Level – 2 Emergency	Level – 3 Emergency		
Communication	15					
Internal	Discretionary, depending on licensee policy.	Notification of off-site management.	Notification of off-site management.	Notification of off-site management.		
External Public	Courtesy, at licensee discretion.	Mandatory for individuals who have requested notification within the EPZ.	Planned and instructive in accordance with the specific ERP.	Planned and instructive in accordance with the specific ERP.		
Media	Reactive, as required.	Reactive, as required.	Proactive media management to local or regional interest.	Proactive-media management to national interest.		
Government	Reactive, as required. Notify AER if public or media is contacted.	Notify government regulator.	Notify government regulator, local authority & health authority.	Notify government regulator, local authority & health authority.		
Actions						
Internal	On site, as required by licensee.	On site, as required by licensee. Initial response undertaken in accordance with the site-specific or corporate-level ERP.	Predetermined public safety actions are under way. Corporate management team alerted and may be appropriately engaged to support on-scene responders.	Full implementation of incident management system.		
External	On site, as required by licensee.	On site, as required by licensee.	Potential for multi agency (operator, municipal, provincial or federal) response.	Immediate multi agency (operator, municipal, provincial or federal) response.		
Resources						
Internal	Immediate and local. No additional personnel required.	Establish what resources would be required.	Limited supplemental resources or personnel required.	Significant incremental resources required.		
External	None.	Begin to establish resources that may be required.	Possible assistance from government agencies and external support services, as required.	Assistance from government agencies and external support services, as required.		
Responses	Alert	Level – 1 Emergency	Level – 2 Emergency	Level – 3 Emergency		
Definition	An incident that can be handled on site by the licensee through normal operating procedures and is deemed to be a very low risk to members of the public.	There is no danger outside the licensee's property, there is no threat to the public, and there is minimal environmental impact. The situation can be handled entirely by licensee personnel. There will be immediate control of the hazard. There is little or no media interest.	There is no immediate danger outside the licensee's property or the right-of-way, but there is the potential for the emergency to extend beyond the licensee's property. Outside agencies must be notified. Imminent control of the hazard is probable but there is a moderate threat to the public and/or the environment. There may be local and regional media interest in the event.	The safety of the public is in jeopardy from a major uncontrolled hazard. There are likely significant and ongoing environmental impacts. Immediate multi agency municipal and provincial government involvement is required.		
	Alert	Level – 1 Emergency	Level – 2 Emergency	Level – 3 Emergency		
Responses	Investigate and escalate level if required initiate control procedures	In addition to Alert level responses: - Isolate the hazard area - Activate the ERP - Conduct public safety actions for special needs residents - If special needs residents decide to voluntarily evacuate, activate a reception centre - Notify appropriate internal personnel and government agencies - Have air monitoring conducted at the site if necessary	In addition to Level-1 responses: - Fully activate emergency response procedures with command centres established or on standby - Inform government agencies of situation and incorporate support (government regulator, local authority, health authority, RCMP) - Identify the hazard and emergency operating areas and take any required action to protect the public through shelter or evacuation Prepare ignition team (butane gas related) - Respond to media, company and public questions - Prepare for the potential of the situation to escalate to a Level-3 - Record activities and keep government and municipal agencies advised, if applicable - Establish roadblocks - Activate the EOC, if it has not already been established at a Level-1 emergency	In addition to Level-2 responses: - Emergency response plan and command centres are fully activated - Company Management has been notified and all internal support positions staffed - Continue to monitor and adjust hazard and emergency operating areas (maintain security) - Mobilize additional people and resources - Ignite a gas release if ignition criteria are met - Continue to advise company and government - Activate the reception centre, if it has not already been established at a Level-1 or Level-2 emergency - Continue to maintain the EOC, once it is activated		



Internal Emergency Notification Flowchart



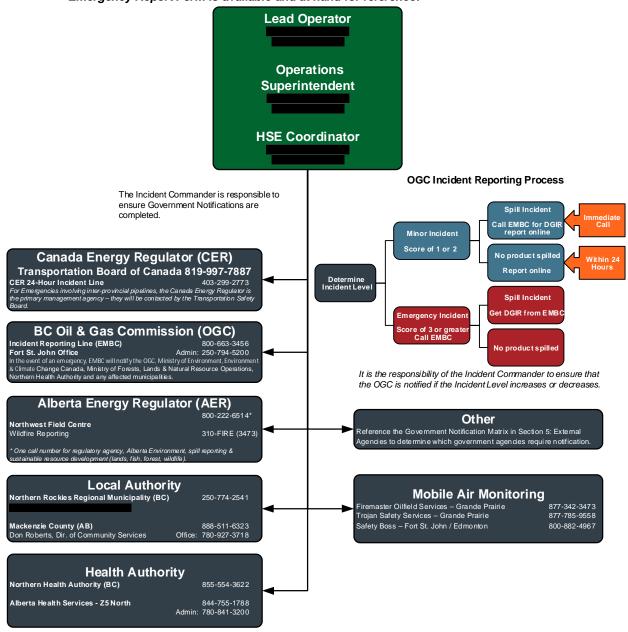
Tidewater Midstream
External Notification
External Agencies
Erikson National Energy

Note: After Initial Notifications are complete, please reference Step 4 – Incident Briefing and begin building the initial Organizational Structure (pg 3) within the ICS 201 Incident Briefing form.



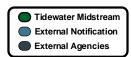
External Emergency Notification Flowchart

Prior to commencing contact of the agencies below, make sure a completed A1 Initial Emergency Report Form is available and at hand for reference.



Refer to Section 5: External Agencies for the Government Notification Matrix, Provincial Lead and Supporting Agencies and Federal Agencies required to be contacted or notified.

Refer to Area Specific Information for a listing of contacts for government agencies and support services.



Note: After Initial Notifications are complete, please reference Step 4 – Incident Briefing and begin building the initial Organizational Structure (pg 3) within the ICS 201 Incident Briefing form.



Incider	Incident Name:																							
Date/Time Initiated:																								
Prepar	Prepared By: ICS Position:																							
Level of Emergency Alert / Minor								Le	evel	1	L	_eve	el 2		Le	vel :	3							
Map S			,																					
Note: I	viaps	s can	be a	iraw	n oi	att	acn	ea r	nere	€.														
Situati	ion S	Summ	ary	: (W	/rite	de	scri	ptic	on c	or a	ttac	h A	1)											
Safety	Brie	efing:																						



Current and Planned Obje	ectives:	
Priorities: (1) Life Safety (2) Incident Stabilization (3) E	invironment/ 'DfcdYflm
1. Ensure Safety of Citizens a	and Response Personnel:	4. Minimize Economic Impacts:
☐ 1a. Identify hazard(s) of relea	sed product.	☐ 4a. Consider tourism and local economic impacts.
☐ 1b. Establish site control (hot security).	zone, warm zone, cold zone, &	☐ 4b. Protect public and private assets, as resources permit.
☐ 1c. Establish an Emergency I Safety Actions.	Response Zone and Initiate Public	☐ 4c. Establish damage claims process.
☐ 1d. Consider evacuations if n	eeded.	5. Keep Stakeholders and Public Informed of Response Activities:
☐ 1e. Establish aircraft restriction	ons.	☐ 5a. Provide forum to obtain stakeholder input and concerns.
☐ 1f. Monitor air in impacted are	eas	☐ 5b. Provide stakeholders with details of response actions.
☐ 1g. Develop site safety plan f briefings are conducted.	or personnel and ensure safety	☐ 5c. Identify stakeholder concerns and issues, and address as practical.
2. Control the Source of the F	Release:	☐ 5d. Provide timely safety announcements.
☐ 2a. Complete emergency shu	itdown.	☐ 5e. Conduct regular news briefings.
☐ 2b. Conduct firefighting.		☐ 5f. Conduct public meetings, as appropriate.
☐ 2c. Initiate temporary repairs.		
3. Manage a Coordinated Res	ponse Effort:	
☐ 3a. Complete or confirm notif	ications.	
☐ 3b. Establish a unified comm. (command post, etc.).	and organization and facilities	
☐ 3c. Ensure mobilization and t personnel and equipment.	racking of resources and account for	
☐ 3d. Complete documentation		
Current and Planned Acti	ons, Strategies and Tactics:	
Time:	Actions:	
HHMM		



nitial Response.	Incident Commander Name Number
	Information Officer Name
	Number
	Liaison Officer Name
	Number Safety Officer
	Name Number
On-Site Group Supervisor Name	Public Safety Group Supervisor Documentation Name
Number	Number Number
Name Number	Air Monitors Name Number
Name Number	Name Number
Name Number	Name Number
Other Name	Name Number
Other Name	Reception Centre Representative Name Number
N. I In m. m.	
Number	Other

Note: Refer to ICS 207 Incident Organization Chart in Section 6: Forms (Blue Tab) for full command structure.



Resources Summar	y:			
Resource(s)	Time Called	ETA	On-Site	Notes (Location/Assignment/Status)
External Notification	ns: (Governmen	it)		
Agency	Time Called			Notes



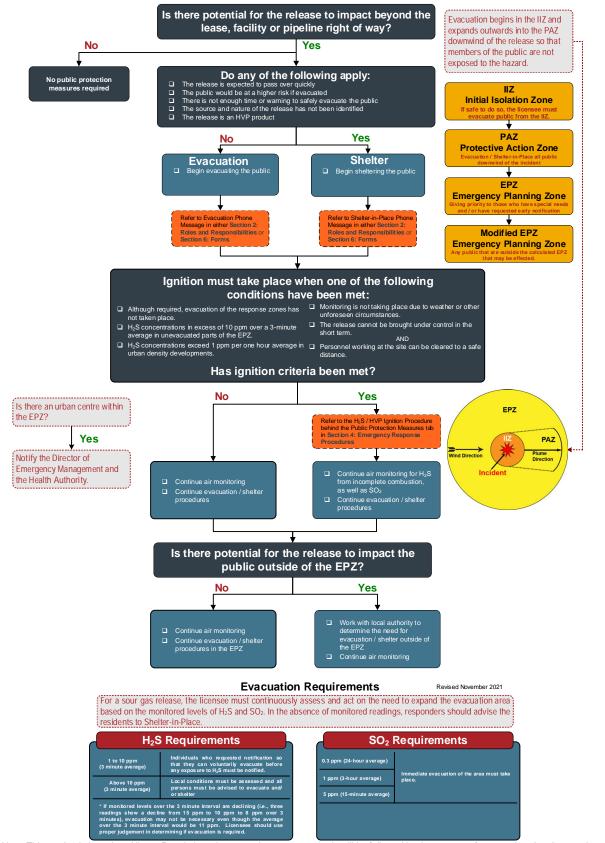
Si	te Safety and Hazard Control Analysis			
Si	te Control			
1.	Is Site Control set-up? ☐ Yes ☐ No	Is there an On-Scene Command Post? If so, where?	□ Yes	□ No
3.	Have all personnel been accounted for? ☐ Yes ☐ No ☐ Don't Know	Injuries: Fatalities: Unaccounted: Trapped:		
4.	Are observers involved or rescue attempts planned? Observers: □ Yes □ No Rescuers: □ Yes □ No	5. Are Decon areas setup? ☐ Yes If so, where?	□ No	
На	azard Identification, immediate signs of: (if yes,	explain in remarks)		
1.	Electrical line(s) down or overhead? \square Yes \square No	2. Unidentified liquid or solid products visible?	□ Yes	□ No
3.	Wind direction across incident: ☐ Towards your position Wind Speed: ☐ Away from your position	4. Is a safe approach possible?	□ Yes	□No
5.	Odours or smells?	6. Vapours visible?	□ Yes	□ No
7.	Holes, ditches, fast water, cliffs, etc. nearby? ☐ Yes ☐ No	8. Fire, sparks, sources of ignition nearby?	□ Yes	□ No
9.	Is local traffic a potential problem? ☐ Yes ☐ No	10. Product placards, colour codes visible?	□ Yes	□ No
11	Other Hazards?	12. As you approach the scene from the upwind s a change in the status of any of the above?	side, do yo □ Yes	ou note □ No
13	Remarks:			
На	azard Mitigation: have you determined the neces	sity for any of the following?		
	Entry Objectives:			
2.	Warning sign(s), barriers, colour codes in place? ☐ Yes	s □ No		
3.	Hazardous material being monitored?			
	3d. Peak reading:			
	3e. Personal exposure monitoring:			
4.	Protective gear / level:	4a. Gloves:		
	4b. Respirators 4d. Boots:	4c. Clothing: 4e. Chemical cartridge change frequency:		
5.	Decon 5a. Instructions: 5b. Decon equipment and materials:	c.		
6.	Emergency escape route established? ☐ Yes ☐ No Route?			
7.	Field responders briefed on hazards? ☐ Yes ☐ No			
8.	Remarks:			
Pro	otective Zones: record initial control perimeters (see Figure 1)			



Evacuation Route Decontamination Station Staging Area Command Post WARM ZONE	1. Is there a Hot Zone established? Yes No If so, Where? 2. Is there a Warm Zone established? Yes No If so, Where? 3. Is there a Cold Zone established? Yes No
WIND DIRECTION Figure 1 Protective Zones	If so, Where? 4. Remarks: (Include any information on evacuation route, etc.)
5. Include any site sketches or photos of the protective zones (if available)	



Public Protection Measures Flowchart





Section 2: Roles and Responsibilities

Field Response Team

Key Response Personnel

General Safety Equipment and Resource Lists

Operator, Truck & Other Safety Equipment

Response Team Structure

Quick Reference Guide – Emergency Support Team (EST)

Field Response Team - Command Staff

Command Staff Roles Chart

Field Response Team - General Staff

Operations Section Roles Chart

Planning Section Roles Chart

Logistics Section Roles Chart

Finance / Admin. Section Roles Chart

Field Response Team - Public Safety Staff

Public Safety Roles Chart

Air Monitors Module

Reception Centre Rep Module

Roadblocks Module

Rovers Module

Telephoners Module

Ongoing Response

Planning "P"

Five Step Ongoing Response Guide

Objectives Meeting

Tactics Meeting

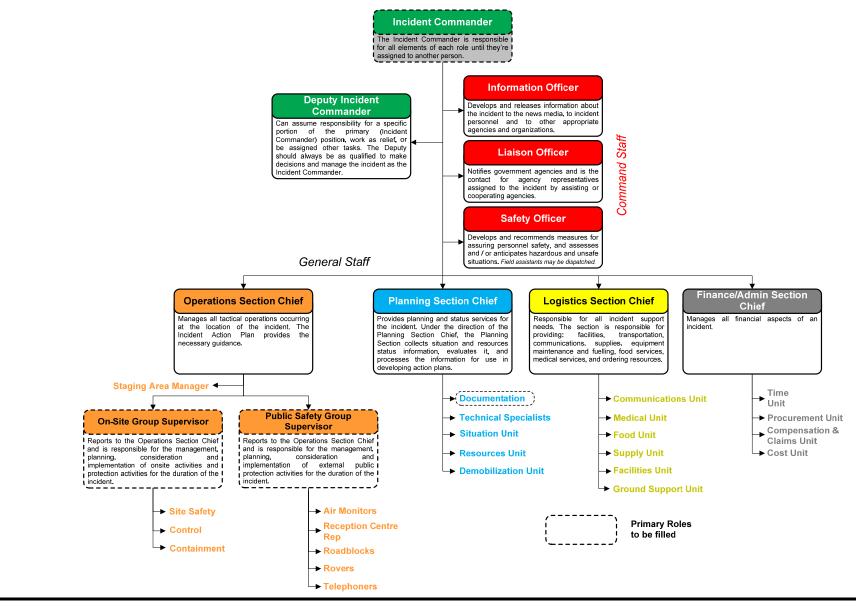
Planning Meeting

Operations Briefing

Response Teams Phone List



Field Response Team



Section 2: Roles and Responsibilities



Key Response Personnel

The following individuals are likely to fill the key response roles identified:

Command Staff	Incident Commander	Area Superintendent Area Foreman	
On-Site	On-Site Group Supervisor	Area Foreman Area Superintendent HSE Coordinator	
	Trained in Ignition (H ₂ S & HVP)	Please see Support Services in AREA SPECIFIC INFORMATION (white tab).	
Public Safety	Public Safety Group Supervisor	Area Foreman Area Superintendent HSE Coordinator	
	Air Monitors / Roadblock / Rovers		
	Telephoners Reception Centre Representative	Area Operators	
Emergency Support Team (EST)	EOC Director	Director, Health, Safety, Environment & Regulatory VP, Operations Director, Operations VP, Operations and Logistics	
	Communications / Media	President & CEO	

Please refer to the Response Teams Phone List (Yellow tabs) or Area Specific Information (White tabs) for the full list of personnel and their contact information.

General Safety Equipment and Resource Lists

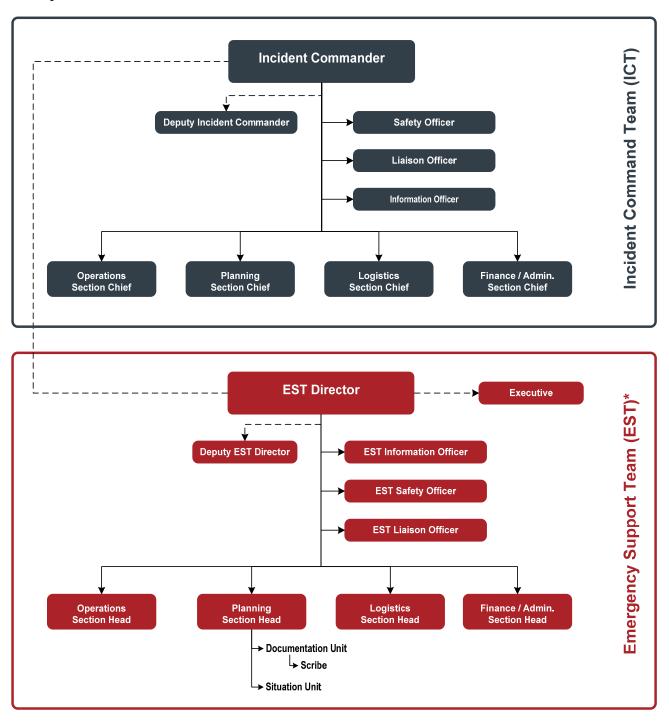
Operator, Truck & Other Safety Equipment

Each operator is required to drive a suitable vehicle (4x4 truck) for their service areas and should carry the following equipment: 20-30lb fire extinguisher, vehicle emergency roadside kit, cell phone and a 4 head monitor.

Refer to **Area Specific Information Section (white tabs)** for further details on specific air monitoring equipment, back-up communication methods, ignition and roadblock kit contents as well as their locations, specialty fire-fighting equipment and/or service companies and their contact information for if the aforementioned equipment is not available.



Response Team Structure





^{*} The detailed role descriptions for the EST can be found in Paramount's Corporate Emergency Support Team Plan, located at Paramount Resources' Calgary Office.



Quick Reference Guide – Emergency Support Team (EST)

(Located at the Corporate Emergency Operations Centre)

The **EOC Director** is responsible for all elements of each role until they're assigned to another person. Below are brief descriptions of each of the key roles that the EOC Director might choose to assign right away.

EOC Director	The EOC Director is responsible for coordination of response efforts from corporate to support the Field Response Team (FRT) and for efforts to ensure business continuity during the incident. The EOC Director determines the level of activation of the Emergency Support Team (EST) and assigns all positions to meet the required level of activation.				
Communications & Media	Serves as the coordination point for all public information, media relations and internal information sources. Communications & Media is responsible for preparing the FRT and the EST to deal successfully with internal and external communication.				
Regulatory / Government Liaison	Provides regulatory guidance and advice to the EST as well as to be a liaison between responding government agencies and the company. The Regulatory / Government Liaison is responsible for providing support to the field Liaison Officer.				
Incident Support Manager	The Incident Support Manager is the main link between the FRT and the EST and is the main informant for the EST. The Incident Support Manager speaks directly with the field Deputy Incident Commander, if assigned, or the field Incident Commander. The Incident Support Manager provides operational, public safety, planning and logistics advice and support to assist the FRT with developing an effective field Incident Action Plan (IAP).				
Business Impact Support Manager	The role of business impact is to identify and work to mitigate all of the negative impacts of the incident on the business as well as to provide business advice and support. The Business Impact Support Manager provides support to the company in the areas of finance / accounting, legal, marketing, risk management and insurance.				
Corporate Admin Support Manager	The Corporate Admin Support Manager provides administrative and technical support to the company in the areas of human resources, information technology, travel, security and reception.				
Health, Safety & Environment Support Manager	The Health, Safety & Environment Support Manager is responsible for providing Health, Safety & Environmental support to the FRT. The Health, Safety & Environment Support Manager is also responsible for managing the health / safety / environmental / planning / documentation activities of the EST.				

Command Staff Roles Incident Commander Deputy Incident Commander Information Officer Liaison Officer Safety Officer The Incident Commander is in charge of overall management of the incident and must be fully qualified to manage the incident. The **Deputy Incident Commander** may assume The Information Officer is responsible The Liaison Officer is responsible for The Safety Officer develops and responsibility for a specific portion of the primary recommends measures for assuring As incidents grow in size or complexity, a more highly qualified Incident Commander may be assigned by the company. for developing and releasing notifying government agencies and is the contact for agency representatives personnel safety, and assesses and / position, work as relief, or be assigned other information about the incident to the Note: The highest ranking authority arriving at the site of the incident (first on-scene) becomes the Incident Commander and tasks. The **Deputy** should always be as qualified news media, to incident personnel and assigned to the incident by assisting or or anticipates hazardous and unsafe establishes command and control. The first on-scene will remain the Incident Commander until there is formal transfer of to make decisions and manage the incident as the to other appropriate agencies and cooperating agencies. command to a more senior company employee and / or qualified personnel. ncident Commander. organizations. Initial Response - *Refer to the 5 Step Initial Response Guide in Section 1: Initial Response* ☐ If no scribe has been assigned to the □ Ensure the site is evacuated if □ Receive incident briefing from □ Complete Regulatory А3 **Incident Commander**, support the the Incident Commander First Call unsafe. Step 1: Level of Emergency **Incident Commander** by documenting before contacting external Communication Form. ☐ Initiate rescue plans if safe to do ☐ If necessary, investigate and confirm the emergency. If the incident involves a release of sour product, the investigation should details of the emergency, focusing on agencies. be conducted in teams of two. Take appropriate safety precautions (PPE, SCBA, etc.). Ensure personal safety at all times. ☐ Refer to Section 5: External activities and decisions made. Prepare regular status updates □ Review the Incident Action Plan Determine the Level of Emergency using the OGC Incident Classification Matrix for BC or AER's Assessment Matrix for **Agencies** for the Government that will be provided to internal Record, update and maintain a Classifying Incidents for all other provinces (e.g. Alert/Minor, Level 1, 2, 3) found in Section 1: Initial Response or using the Notification Matrix. Notify as to identify and correct any Emergency Assessment SmartPhone App. (Search H₂Safety or Emergency Assessment in the App Store). chronological summary of the incident company personnel to keep soon as possible and provide potential occupational and them apprised of the situation. status updates at agreed upon health hazards. Step 2: Internal Notification ☐ Identify and document any ■ Names of personnel in each assigned intervals to: ☐ Follow the Internal Emergency Notification Flowchart outlined in Section 1: Initial Response to contact required field resources. Refer to ☐ Ensure work / rest guidelines media involvement that has the Section 2: Roles and Responsibilities / Response Team Phone List. Relay the information from the A1 Initial Notification Form. position and their location ■ Government regulator are followed. already taken place Mobilize internal resources to the site, to the Incident Command Post (ICP) or place them on standby as required. □ Control and containment measures ■ Local authorities (counties, □ Continuously monitor workers ☐ If the media statement hasn't Contact required company resources and communicate the level of emergency. Refer to Section 2: Roles and Responsibilities / ■ Environmental monitoring information cities, towns, MDs, RDs, for exposure to ensure they are yet been prepared ensure that Response Team Phone List. First Nations Reserves, etc.) wearing the required PPE. ☐ Injuries / deaths / missing persons the generic media statement **Step 3: External Notification** ☐ Take appropriate action to ☐ Health authority from the ERP is communicated Phone calls □ Follow the External Emergency Notification Flowchart in Section 1: Initial Response for communication structure and the Provincial mitigate or eliminate unsafe and being used in the field. Environment Notification Matrix in Section 5: External Agencies to determine which external agencies need to be notified. Reference Section 5: ☐ Actions and decisions conditions, operations, or ■ Assist head office with the External Agencies and the Area Specific Information for the location of the incident. □ Provincial emergency ☐ Status of the public protection actions hazards. preparation of a preliminary management organization Step 4: Incident Briefing ■ Manage the flow of traffic to and ☐ Immediately stop any unsafe media statement if ☐ The following positions are always filled regardless of the size of the incident: Incident Commander, On-Site Group Supervisor and Other agencies communication with the Incident required using the practices. C1 Commander so that he can focus on ☐ Keep track of all government Preliminary Media Conduct a general inspection of Assess the situation, identify the incident source, and consider how to stop the source. Carry out a site assessment that includes the managing the incident. correspondence using Statement form. the facilities, food services and following: identify hazardous materials, evaluate risk to workers and the public, determine the potential for the incident to escalate, СЗ the Government Conduct status update meetings. Document all sanitation services soon after identify safety concerns, determine which other company's facilities are involved. Form ICS 201 Agency Contact Log. communications with they become operational and Provide status to head office. Detail and prioritize the objectives for the next operational period taking into consideration the priorities of (1) Life Safety, (2) C2 the media using the follow up on a periodic basis Obtain cooperating and Incident Stabilization. (3) Property & Environment using the ICS 201 Incident Briefing Form. Deal with some day-to-day decision Media Contact Log. throughout the incident for assisting agency information Assign other positions as required to meet the identified objectives. Review and complete the ICS 207 Incident Organization Form making. compliance to all health and ICS 207 Develop a detailed media Chart in Section 6: Forms. Depending on the scale of emergency, all positions may not be assigned. The Incident that includes: contact Assume duties of the Incident safety standards. Provide a strategy for the incident. Commander assumes responsibility for all unassigned roles until personnel have been assigned to them. information, radio frequencies, Commander, if required. report of deficiencies. cooperative agreements, Designate and prepare media Conduct a role review with each of the positions above to ensure they clearly understand their roles and responsibilities. Maintain communication with the Incident equipment type, number of Document both safe and unsafe briefing rooms away from the Develop detailed plans of action (strategies) to achieve the objectives and determine what tactics and resources are required to Commander. personnel, condition of acts, corrective actions taken on Incident Command Post. implement the strategies (oil spill services, safety services, etc.). equipment and personnel, the scene, accidents or injuries, Organize tours and photo Activate the Incident Command Post (ICP). Refer to the Appendices for Incident Command Post activation guidelines. agency constraints, etc. and ways to improve safety on opportunities if required. **Important** ☐ Ensure the Planning Section posts and updates the status board with incident details. future incidents. □ Conduct appropriate periodic Prior to beginning any activities, each Step 5: Public Safety Maintain communication with briefings to keep agencies person in a role must: ☐ Investigate accidents that have the Incident Commander. Determine the size of the Emergency Planning and Response Zones around the incident. Refer to the EPZ calculation tables and map informed of planning actions. occurred within the incident ☐ Obtain a completed ICS 201 Incident in Area Specific Information. Briefing and ICS 207 Incident ■ Media releases must be □ Coordinate with any Use the Public Protection Measures Flowchart located in Section 1: Initial Response to assist with determining if evacuation / shelter / Organization Chart from the Incident coordinated with applicable government agency ☐ Identify "Hot Zone" and declare ignition are required. regulatory agency. representatives attending the when responders may enter it. ☐ Ensure the affected public are contacted and advised to shelter or evacuate as required. Throughout the duration of the incident, ICP or REOC. ☐ Ensure that responders inside each person in a role must: ☐ If necessary, coordinate with ☐ Establish Air Monitoring, Reception Centre Representatives, Roadblocks, Rovers, and Telephoners as required. Coordinate with mutual aid the "Hot Zone" are accounted and use broadcast media to ☐ Chronologically document all actions, Ongoing Response - *Refer to the Five Step Ongoing Response Guide in Section 2: Ongoing Response* groups. for and initiate search if decisions, contacts and requests on an notify residents in the hazard ☐ Establish a method to track responders and resources to ensure they are accounted for at all times. ICS 214 Activity Log. Copies can be required. area. found in Section 6: Forms. ☐ Monitor implementation of IAP and revise as the situation dictates. Prepare for next operational period. ☐ Prepare a site-specific health ■ Work with Communications / After the incident is over, each person in a □ Support the Operations Section Chief in the preparation of an incident control and containment action plan. and safety plan. Media to develop a role must ☐ Ensure each section chief has adequate staff, is not violating span of control and clearly understands the roles and responsibilities. communications plan that □ Assist with post-incident activities. □ Conduct frequent Command Staff and General Staff meetings and regularly update the Emergency Support Team. includes establishing protocols All forms referenced can be found in ☐ If transfer of command occurs, an incident status briefing must take place. Provide all documentation and review situation status, for responders and all company Section 6: Forms objectives and priorities, current organization and resources, facilities, communications plan, concerns and introductions to staff. personnel as required to ensure As the emergency is brought under control, the decision to downgrade the level and/or stand down the emergency will be based on air incident information remains confidential (i.e. restriction on monitoring readings in consultation with the **Incident Commander** and the applicable government regulator. cell phone usage for ☐ The Demobilization Unit will develop and implement objectives/strategies for demobilization photography, social media, speaking to the media, etc.) All team members are located at the Incident Command Post (ICP), unless otherwise noted. Revised October 201

			General Sta	off Roles – Operations Section	
Operations Section Chief	On-Site Group Supervisor	Staging Area Manager	Site Safety	Control	Containment
The Operations Section Chief is responsible for managing all tactical operations occurring at the location of the incident. The Incident Action Plan provides the necessary guidance. The need to expand the Operations Section is generally dictated by the number of tactical resources involved and is influenced by span of control considerations.	coordinating all activities of Control, Containment and Site Safety at the scene of the emergency / incident.	The Staging Area Manager is responsible for managing all activities within a Staging Area.	Site Safety is responsible for responder safety and safety advice at all times at the scene of the emergency / incident.	Control is responsible for implementing measures designed to bring the incident under control or stop the incident.	Containment is responsible for implementing measures designed to reduce the impact of the incident on and prevent the spread of the incident to the surrounding areas.
 Identify and confirm communication links. Ensure the On-Site Command Post (OSCP) is established. Manage the following positions, as required: On-Site Group Supervisor, Public Safety Group Supervisor. In conjunction with the Incident Commander, the Planning Section Chief, and the Public Safety Group Supervisor, develop and implement an Incident Action Plan (IAP). Ensure responder safety at all times. Oversee control / containment procedures; ensure the hazard is isolated. Determine the current and potential environmental impact of product released, response activities, or waste disposal. Ensure that all environmental laws and regulations are complied with during emergency response operations. Provide technical advice to Incident Commander to determine public protection measures. Assess the requirements for on-site safety supervision, personnel, equipment, and other contract services. Coordinate with Logistics to obtain equipment and resources. Assist the On-Site Group Supervisor in 	 Ensure all personnel are accounted for. Release nonessential personnel from the site. Oversee and maintain control of all on-site personnel. Establish On-Site Command Post (OSCP). Obtain incident briefing and environmental impact information. Coordinate activities of Staging Area Manager, Site Safety, Control and Containment. Report air monitoring to Incident Commander (third party and regulatory). Call police, fire and ambulance as needed. Coordinate with ambulance / fire / RCMP / regulatory agencies / spill co-ops. Conduct meetings with on-site personnel to review action plans, communication and safety. Request additional resources needed to implement on-site response actions. Supervise the execution of the on-site response actions. The On-Site Group Supervisor has the authority to ignite the release if ignition criteria are met. If at all possible, the On-Site Group Supervisor must consult with higher authority individuals within the company (ideally the Operations Section 	☐ Respond to Operations Section Chief or	 □ Assess hazards & potential risks e.g. fire/explosion, toxicity, oxygen deficiency, ignition sources, access/egress. □ Ensure responder safety at all times. □ Ensure that on-site personnel are taking appropriate safety actions: PPE, SCBA / SABA, Safe Work Procedures, proper grounding / bonding procedures, work in teams, etc. □ Maintain security of the site to ensure authorized personnel are allowed access and to protect response personnel. □ Ensure security of any evidence for investigative purposes. □ Ensure workers that show signs of stress, fatigue, and other symptoms are demobilized and sent for treatment if necessary. □ Maintain records of all injuries and onsite medical treatments. □ Conduct responder safety orientations. □ Monitor activities and conduct a head count on a regular basis. □ Continually evaluate risks and stop unsafe activities immediately. 	 Assist with the development of control procedures. Identify immediate response tactics (i.e. offensive / defensive response tactics). Only when safety is assured, take immediate operational actions to bring the incident under control (i.e. shut down, isolate, de-pressure, etc.). Provide or seek technical / engineering advice around all control-related issues. Inform Operations Section Chief of any interactions with regulatory agencies or environmental personnel. 	 Assist with the development of containment procedures. Identify immediate response tactics (i.e. offensive / defensive response tactics). Only when safety is assured, take actions to contain the incident so as to prevent the incident from spreading offsite and to reduce the impact on the public, sensitive terrain, watercourses, etc. Provide or seek technical / engineering advice around all containment-related issues. Secure the scene and restrict access to essential and authorized personnel only. Inform Operations Section Chief of any interactions with regulatory agencies or environmental personnel. Coordinate oil spill cooperative activities (booms, dams, etc.).
determining whether ignition is appropriate. If at all possible, input is to be obtained from the Incident Commander, the EOC Director and the applicable government regulator. Maintain continuous communications with the Incident Commander.	Chief, Incident Commander, EOC Director, etc.) and the applicable government regulator before making the decision to ignite a release. Refer to Section 4: Emergency Response Procedures.	 Maintain and provide status to the Planning Section of all resources in Staging Area. Demobilize or move Staging Area as required. 	□ Recommend alternatives for activities that are considered to be unsafe.	Important Prior to beginning any activities, each person in a role must: Obtain a completed ICS 201 Incident Briefing and ICS 207 Incident Organization Chart from the Incident Commander. Throughout the duration of the incident, each person in a role must: Chronologically document all actions, decisions, contacts and requests on an ICS 214 Activity Log. Copies can be found in Section 6: Forms. After the incident is over, each person in a role must: Assist with post-incident activities. All forms referenced can be found in Section 6: Forms	
					Revised November 2021

General Staff Roles – Planning Section Planning Section Chief Documentation Unit Technical Specialists Unit Situation Unit Resources Unit Demobilization Unit The collection, processing, and organization The Resources Unit is responsible for The **Demobilization Unit** is responsible for The **Planning Section Chief** is responsible The **Documentation Unit** is responsible for Certain incidents or events may require the the maintenance of accurate, up-to-date for providing planning and status services for use of Technical Specialists who have of all incident information. The Situation maintaining the status of all assigned developing the Incident Demobilization Plan. incident files. Duplication services will also the incident. Under the direction of the specialized knowledge and expertise. Unit may prepare future projections of resources at an incident. Planning Section Chief, the Planning be provided by the **Documentation Unit**. Technical Specialists may function within incident growth, maps, and intelligence Section collects situation and resources the Planning Section, or be assigned information. status information, evaluates it, and wherever their services are required. processes the information for use in developing action plans. Dissemination of information can be in the form of the Incident Action Plan, formal briefings, or through map and status board displays. ■ Determine what technical support is ■ Document the Incident Action Plan □ Collect and evaluate information to Monitor the status and location of all ■ Identify and confirm communication links. □ Prepare plan for the demobilization of all available now and in the future. (IAP) strategies using the ICS 201 establish an accurate picture of the incident resources / personnel responding personnel and equipment upon resolution ■ Assign personnel to assume the following ☐ Work with Logistics to determine the key Incident Briefing Form provided in situation and creates a detailed summary. to the incident. of the incident. positions, as required: **Documentation**, locations for the required technical Section 1: Initial Response or Section Use this information to create maps and Technical, Situation, Resources, and Oversee the check-in of all resources. ☐ Ensure resources in available status are support and appropriate time to acquire. 6: Forms and disseminate them to all key projections. Demobilization. still required. Identify surplus resources responders. ☐ Gather data (weather, etc.) and forecast Maintenance of a master list of all Assist with setup of the Incident ☐ Prepare, post, or disseminate resources and probably release time. changes considering incident potential resources, e.g., key supervisory Command Post. ■ Be prepared to document the and situation status information as and develop new or modified response personnel, primary and support resources. Debrief non-required resources and **Incident Commander's** required, including special requests. ☐ Review the details of the incident and strategies. dismiss resources being demobilized. status update meetings using support the **Incident Commander** with Provide photographic services and maps i □ As required, obtain plume dispersion whiteboards. PC or Action ■ May assist in preparing the written Coordinate demobilization with agency the development of a preliminary required. modellina. Incident Action Plan. representatives. response strategy. Ensure consistent documentation. ☐ Identify the need for technical specialists Maintain and post the current status and Develop incident check-out function for all location of all resources. Collect and analyze information on the ■ Ensure timely dissemination of all units. current situation, prepare situation documentation. ☐ Ensure the demobilization process is displays and situation summaries, and organized, safe and cos effective. Participate in planning meetings, capturing develop maps and projections. key information, decisions made. ■ Establish special information collection commitments and status. activities as necessary, e.g., weather, Collect documentation from response environmental, toxics, etc. team members and maintain a consistent □ Provide technical support to the Incident system for organizing the data. Commander and work with Incident **Commander** to develop the Incident Records must be held for a Action Plan (IAP). minimum of 5 years as it may be requested by the regulatory agency ☐ Review any changes to the Incident at any point during that time. Action Plan (IAP) to ensure consistency. □ Assemble information on alternative Form | Form | Form | Form | Form | Form | CS | ICS | I Establish duplication services. strategies. ☐ Incident files will be stored for legal, □ Coordinate with **Logistics** to determine analytical, and historical purposes. current available resources and resource **Important** availability for future plans of action. □ Post and maintain all Emergency Status Prior to beginning any activities, each person in a role must: Boards and other laminated charts in the □ Establish reporting schedules. Obtain a completed ICS 201 Incident Briefing and ICS 207 Incident Organization Chart from the Incident Command Post. ☐ Conduct long-range and / or contingency Throughout the duration of the incident, each person in a role must: planning. ☐ Chronologically document all actions, decisions, contacts and requests on an ICS 214 Activity Log. ■ Develop plans for demobilization. Copies can be found in Section 6: Forms. ■ Maintain continuous communications with After the incident is over, each person in a role must: the Incident Commander.

All team members are located at the Incident Command Post (ICP), unless otherwise noted.

Form | Form | Form | Form | Form | CS | ICS | IC

Revised October 2018

Assist with post-incident activities.

All forms referenced can be found in Section 6: Forms

General Staff Roles – Logistics Section Logistics Section Chief Communications Unit Medical Unit Food Unit Supply Unit Facilities Unit Ground Support Unit All incident support needs are provided The Communications Unit is The **Medical Unit** is responsible for all Responsible for supplying the food The **Supply Unit** is responsible The Facilities Unit is responsible The Ground Support Unit is primarily by the Logistics Section. The section is responsible for developing plans for medical services for incident assigned needs for the entire incident, including ordering, for set-up, maintenance, and responsible for the maintenance, services, and fuelling of all mobile responsible for providing: facilities, the use of incident communications personnel. The unit will develop all remote locations, (e.g., Camps, processing, and storing demobilization of all incident equipment and facilities; installing and procedures for managing major Staging Areas), as well as providing support facilities except staging equipment and vehicles, with the transportation, communications, incident-related resources. testing of communications equipment; medical emergencies; and provide food for personnel unable to leave areas. The Facilities Unit will also exception of aviation resources. The supplies, equipment maintenance and Incident tactical field assignments. The Food provide security services to the unit also has responsibility for the fuelling, food services, medical services, supervision of the medical aid. and ordering resources. Six units may be Communications Centre, Unit interacts with the Facilities Unit incident as needed. ground transportation of personnel, Note: Medical assistance to the public supplies, and equipment. established within the Logistics Section established; and the distribution and for location of fixed-feeding site; the or victims of the emergency is an Supply Unit for food ordering; and and the Logistics Section Chief will maintenance of communications operational function. determine the need to activate or equipment. the Ground Support Unit for deactivate a unit. If a unit is not activated. transporting food. responsibility for that unit's duties will remain with the Logistics Section ☐ Responsible for supplying the food □ Identify and confirm communication Set-up, maintain, and demobilize ☐ Establish the communications plan □ Arrange and provide response □ Order, receive, distribute and ☐ Responsible for the maintenance, personnel with first aid and minor needs for the entire incident. incident support facilities with service and fuelling of all mobile links. for the use of incident track all incident equipment communications equipment and medical services. including all remote locations (e.g., and supplies. the exception of staging areas. equipment and vehicles, with the □ Assign personnel as required. Camps. Staging Areas), as well as exception of aviation resources. □ List and obtain all immediate □ Develop Incident Medical Plan. □ Ordered all off-incident □ Facilities may include: Incident providing food for personnel unable ☐ Install, test, distribute, and maintain resources requested by the Incident resources including: tactical Command Post, Incident Base. Coordinates the transportation of all to leave tactical field assignments. Develop procedures for handling **Commander or Operations Section** all communications equipment. and support resources Camps, and other facilities personnel, supplies, and equipment. serious injuries of responder □ Works with the Planning Section -(including personnel), all within the incident area to be ■ Advise on communications □ Update the **Resources Unit** with the personnel. Resources Unit to anticipate the expendable and nonused for feeding, sleeping and □ Identify anticipated and known status (location and capability) of capabilities and limitations. numbers of personnel to be fed and expendable support supplies. sanitation services. Provide medical aid to personnel. incident service and support transportation vehicles. develop plans for supplying food to ■ Establish telephone. requirements. Management of tool Prepare layout of facilities: ■ Assist the Finance / Administration all incident areas. communication links, and public □ Develop the Incident Traffic Plan as operations, including the inform appropriate unit leaders. □ Maintain continuous communications Section with processing injuryaddress systems. required. Interacts with the Facilities Unit for storage, disbursement, and related claims. with the Incident Commander. ■ Will provide security services to service of all tools and portable location of fixed-feeding site; the ■ Establish clear and widespread the incident as needed. Note: Provision of medical assistance Develop plans to move required Supply Unit for food ordering; and non-expendable equipment. communication throughout the to the public or victims of the resources to site. the Ground and Air Support Units incident. □ Contact local law enforcement emergency is an operational function for transporting food. agencies as required. Confirm spending authorities with the and would be done by the Operations Finance / Admin Section. Obtain necessary equipment and Section and not by the Logistics ■ Investigate and document all supplies and establish cooking Section Medical Unit. If there is a complaints and suspicious ■ Mobilize resources. facilities. requirement for victims of an incident occurrences. ■ Move required resources to site. the local public ambulance service is Order sufficient food and potable ■ Ensure strict compliance with most often utilized. □ Coordinate spending with the Finance water from the Supply Unit. applicable safety regulations. / Admin Section Chief. Maintain inventory of food and □ Provide facility maintenance water. services, e.g., sanitation, lighting, etc. ■ Maintain food services areas. **Important** ensuring that all appropriate health Demobilize base and camp Prior to beginning any activities, each person in a role must: and safety measures and being facilities. Obtain a completed ICS 201 Incident Briefing and ICS 207 Incident Organization Chart from the followed. Supervise caterers, cooks, and Throughout the duration of the incident, each person in a role must: other Food Unit personnel as ☐ Chronologically document all actions, decisions, contacts and requests on an ICS 214 Activity Log. appropriate. Copies can be found in Section 6: Forms. After the incident is over, each person in a role must: Assist with post-incident activities. All forms referenced can be found in Section 6: Forms

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Revised October 2018

General Staff Roles – Finance / Admin Section Finance / Admin Section Chief **Time Unit Procurement Unit Compensation & Claims Unit Cost Unit** The Finance / Administration Section Chief is The **Time Unit** is responsible for ensuring the All financial matters pertaining to vendor contracts. This unit oversees the completion of all forms required The Cost Unit provides all incident cost analysis. It responsible for managing all financial aspects of an accurate recording of daily personnel time, leases and fiscal agreements are managed by the by workers' compensation and local agencies. A file of ensures the proper identification of all equipment and compliance with specific agency time recording incident. The Finance / Administration Section Chief Procurement Unit. The unit is also responsible for injuries and illnesses associated with the incident will personnel requiring payment; records all cost data; will determine the need to activate or deactivate a unit. policies and managing commissary operations if maintaining equipment time records. The Procurement also be maintained and all witness statement will be analyzes and prepares estimates of incident costs; established at the incident. Unit establishes local sources for equipment and obtained in writing. Close coordination with the and maintains accurate records of incident costs. medical Unit is essential. The Compensation & supplies; manages all equipment rental agreements; and processes all rental and supply fiscal document Claims Unit is also responsible for investigating all billing invoices. claims involving property associated with or involved in the incident. ☐ Manage finances relating to vendor contracts, leases Handle all matters relating to compensation for Identify and confirm communication links. ☐ Record daily personnel time, ensure compliance □ Collect and evaluate cost data to establish an with specific agency time recording policies, and and fiscal agreements. injury or property damage due to the incident. ☐ Assign personnel to assume the following positions, accurate picture of the incident costs. manage commissary operations if established at as required: Time Unit, Procurement Unit, ■ Maintain equipment time records. Oversees the completion of all forms required by Create cost summaries, cost estimates, and cost the incident. Compensation & Claims Unit, and Cost Unit. workers' compensation and local agencies. saving recommendations. ☐ Establish local sources for equipment and supplies. ☐ Review legal issues with the **Incident Commander** ☐ Submit cost estimate data forms to Cost Unit as Coordinate with local jurisdiction on plans and supply Maintain a file with all the injuries and illnesses ☐ Prepare resources-use cost estimates for the and EOC Director. required. associated with the incident. Planning Section. ☐ Maintain continuous communications with the ☐ Ensure that all records are current and complete ☐ Manage all equipment rental agreements. Establish Obtain witness statements in writing. ☐ Identify all equipment and personnel requiring **Incident Commander** prior to demobilization. contracts and agreement with supply vendors. payment. ☐ Investigate all claims involving property associated Brief agency administrative personnel on all ☐ Processes all rental and supply fiscal document with or involved in the incident. incident-related financial issues needing attention or billing invoices. follow-up. ■ Ensure the completion of a Resident B2 Prepare and authorize contracts and land use Compensation Log for any out-of-pocket Manage all financial aspects of an incident. agreements, as needed. expenses incurred by evacuees. □ All claims must be submitted to the Finance and Legal departments for processing and disbursement of funds. ☐ If applicable, Finance and Legal will deal with insurers as well as any other extraneous circumstances (affected parties want more, etc.). **Important** Prior to beginning any activities, each person in a role must: Obtain a completed ICS 201 Incident Briefing and ICS 207 Incident Organization Chart from the

Throughout the duration of the incident, each person in a role must: ☐ Chronologically document all actions, decisions, contacts and re-

Chronologically document all actions, decisions, contacts and requests on an ICS 214 Activity Log. Copies can be found in Section 6: Forms.

After the incident is over, each person in a role must:

Assist with post-incident activities

All forms referenced can be found in Section 6: Forms

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Revised October 2018

		Operat	ions Sectio	n - P <u>ublic S</u>	afety Roles
Public Safety Group Supervisor	Air Monitors	Reception Centre Rep	Roadblocks	Rovers	Telephoners
The Public Safety Group Supervisor is responsible for the management, planning, consideration, and implementation of external public protection activities for the duration of the incident.	Air Monitoring personnel are responsible for acquiring and providing air quality readings to the Public Safety Group Supervisor.	Reception Centre Reps are responsible for establishing reception centres, managing evacuee accommodation, communication and documentation for compensation	Roadblock personnel are responsible for restricting unauthorized entry into the hazard areas during an incident that could potentially jeopardize public safety.	Rovers travel to assigned locations to locate the public and personally provide public safety instructions and assistance as required. This may be completed via truck, ATV, boat, helicopter, etc.	
Confirm communication links with the Incident Commander and Operations Section Chief. In conjunction with the Incident Commander: determine the size of the EP2; identify the residents, businesses, industrial operators, and / or transients in the area; and determine the initial public protection measures to be taken. Consider the impact of major highways, navigable water courses, cleared pipeline rights of way 8 railways in the hazard area. Refer to Section 4: Emergency Response Procedures for guidelines on evacuation / shelter, ignition, roadblocks, rovers, public concems, etc. Additional information for Air Monitors, Reception Center Representative, Roadblocks, Rovers, and Telephoners can be found in Section 2: Roles & Responsibilities. In conjunction with the Incident Commander, Planning Section Chief, and Operations Section Chief, develop and implement an Incident Action Plan (IAP). Review resident lists, area user lists, reception centres, and telephone numbers within the ERP. If required, establish a Regional Emergency Operations Centre (RECO). Assign personnel to assume the following positions as required: Air Monitors, Reception Centre Representative, Roadblocks, Rovers, and Telephoners. The Telephoners must have sufficient personnel to accommodate the following ratios when contacting residents: 1 Telephoners to every Tresidences; and 1 Supervisor for every 10 Telephoners. Dispatch Air Monitors at a Level 1 emergency (hand-held and mobile). Dispatch hair Monitors at a Level 1 emergency (hand-held and mobile). Mobilize third party mobile air monitoring units which can measure in parts per billion (ppb) Maintain communication with the applicable government regulator and environment agency regarding air monitoring needs and activities. Consult with the Operations Section Chief to determine the need for evacuation / Seltering. This is based on air monitoring readings at the nearest downwind residence. Prioritize public closest to, downwind, those that have requested early notification, and those	 □ Provide air monitoring readings to assist with decision making (evacuation / shelter / ignition). □ Obtain and check equipment and information (maps, forms, communications, reports, monitors, safety, and breathing equipment). □ Confirm communication links. □ Monitor closest downwind public location or residence. □ Monitor environment for adverse effects. □ Record all readings on the Air Monitoring Log. □ Report all readings at established intervals to the Public Safety Group Supervisor. □ For your own safety, ensure Public Safety Group Supervisor is notified immediately if readings are approaching 10% LEL and / or 10 ppm H₂S. □ Prepare Mobile Monitoring Plan. Prior to beginning any activities, each p	Confirm reception centre is available for use. Establish reception centre. Refer to Section 2: Roles & Responsibilities. Confirm communication links. Receive evacuees and maintain a Reception Centre Registration Log. Arrange for food and accommodations for the evacuees. Provide evacuees with a place to request counselling services, if required. Record and follow up on all evacuees who choose to make their own accommodation arrangements. Arrange for temporary care of livestock (if possible) and the security of evacuated property. Establish and oversee compensation administration activities at the reception centre. Reimburse evacuees for their immediate out-of-pocket expenses and log details on a Resident Compensation Log. Where possible, provide evacuees with information regarding their property, livestock, and the incident. Forward all media and incident inquiries to the Information Officer. Report all names of evacuees who have registered at the reception centre to the Public Safety Group Supervisor. Address resident concerns and forward them to the Public Safety Group Supervisor.	□ In conjunction with the Public Safety Group Supervisor determine the need for and location of roadblocks. □ Pickup and check roadblock kits. □ Proceed to roadblock locations. □ Determine driving directions to assigned roadblock location that does not have you pass through the hazard area. □ Confirm communication links. □ Establish roadblocks to secure the EPZ. □ Follow the scripts and procedures in the ERP. Refer to either Section 2: Roles & Responsibilities or Section 6: Forms. □ If media personnel show up at your roadblock, forward all requests to your direct supervisor who'll direct them to the Information Officer. Monitor area for H₂S and / or LEL with personal monitors and document readings on the Air Monitoring Log. □ Report all H₂S and / or LEL reading changes / increases to the Public Safety Group Supervisor. □ For your own safety, ensure the Public Safety Group Supervisor is notified immediately if readings are approaching 10% LEL and / or 10 ppm H₂S. □ Record all incoming and outgoing traffic, personnel, and equipment on the Roadblock Log. □ Forward information given to you by people passing through your location to the Public Safety Group Supervisor. □ Report any person that insists on going through the roadblock into the hazard area as well as any suspicious activity to the Public Safety Group Supervisor. □ Report any person that insists on going through the roadblock into the hazard area as well as any suspicious activity to the Public Safety Group Supervisor. □ Maintain communication with the Public Safety Group Supervisor. □ Maintain roadblock locations. Do	 □ Confirm resident contact lists are available. □ Confirm communication links. □ Know safe routes in and out of the EPZ. □ Search for residents and transients in the Emergency Response and Planning Zones. □ Check all buildings including barns, shops, sheds, etc. □ Assist, as required, with the notification, evacuation or sheltering of persons within the EPZ. Record all contact with residents using the Resident Contact Log. □ Post Evacuation Notices for residents that are not at their residence. □ Follow the scripts and procedures in the ERP. Refer to Section 2: Roles & Responsibilities or Section 6: Forms. □ Monitor area for H₂S and / or LEL with personal monitors and document readings on the Air Monitoring Log. □ Report all H₂S and / or LEL reading changes / increases to the Public Safety Group Supervisor. □ For your own safety, ensure the Public Safety Group Supervisor is notified immediately if readings are approaching 10% LEL or 10 ppm H₂S. □ Report any suspicious behaviour to 	□ Confirm resident contact lists are available. □ Confirm communication links. □ In conjunction with the Public Safety Group Supervisor, determine who needs to be notifi (residents, businesses, area use etc.). □ Review with the Public Safety Group Supervisor which telephoner scripts to use: Early Notification / Voluntary Evacuation Message, Shelter-in-Place Phone Message, Evacuation Phone Message. □ Contact special needs residents a Level 1 Emergency and provide them with the option to evacuate Contact the other residents and area users in the EPZ and advise them to evacuate or shelter. □ Contact the schools / school bust to make arrangements for school age children (if applicable). □ Advise that buses in the affected area leave immediately and that bus should not enter the area □ Request a school administrator for the reception centre to assist managing the children an releasing them to their guardians. □ Document all resident interactions using the Resident Contact Log and report this information to the Public Safety Group Supervisor about unsuccessful contacts and any residents requiring assistance.
highways. Assess and expand the incident response to include those outside of the EPZ if required by air monitoring readings. Coordinate public protection measures outside the EPZ with the local authority. Ensure security of evacuated homes, at roadblocks, and at the reception centre. Regularly update the Incident Commander. Confirm communication links with: Air Monitors, Reception Centre, Roadblocks, Rovers, and Telephoners. Personnel should check in at scheduled intervals. Review and confirm evacuation of residents, area industrial users, transients, etc. from the area.	 Obtain a completed ICS 201 Incider Organization Chart from the Incider Throughout the duration of the incident Chronologically document all actions an ICS 214 Activity Log. Copies can After the incident is over, each person in Assist with post-incident activities. 	nt Briefing and ICS 207 Incident nt Commander. , each person in a role must: s, decisions, contacts and requests on be found in Section 6: Forms. n a role must:	not leave until requested to do so by the Public Safety Group Supervisor or until relieved by other Roadblock personnel. Note: See Section 2: Roles & Responsibilities for a media script for Roadblock and Rover personnel.		
Request that a Notice to Airmen (NOTAM) is issued to restrict the airspace above the EPZ.	All forms referenced can	be found in Section 6: Forms			Revised November 20
Located at the Incident Command Post (ICP) or the Regional Emergency Operations Centre (REOC).	Location will be assigned.	Location will be the reception centre.	Location will be assigned.	Location will be assigned.	Location will be Incident Command Post (ICP) or Regional Emergency Operations Centre (REOC).

Air Monitor Roles

- □ Obtain and check equipment and information (maps, forms, communications, reports, monitors, safety, and breathing equipment).
- □ Confirm communication links.
- ☐ Monitor closest downwind public location or residence.
- ☐ Monitor environment for adverse effects.

A5

Record all readings on the Air Monitoring Log provided.

□ Report all readings at established intervals to the **Public Safety Group Supervisor**.

□ For your own safety, ensure the **Public Safety Group Supervisor** is notified immediately if readings are approaching the following levels: 10% LEL or 10 ppm H₂S.

- □ Prepare Mobile Monitoring Plan.
- □ Document activities using the ICS 214 Activity Log.
- ☐ Assist with post-incident activities.

□ Monitor H₂S and LEL concentrations along the edge of the EPZ to determine if sheltering and/or evacuation criteria has been met beyond the EPZ.

Air Monitoring Equipment

Air monitoring equipment is used to:

- · Track the plume.
- · Determine if ignition criteria are met.
- Determine whether evacuation and / or shelter-in-place criteria have been met.
- · Determine roadblock locations.
- · Determine concentrations in areas being evacuated to ensure that evacuation is safe.
- Assist in determining when the emergency can be downgraded.

Tips

- ☐ Air monitors should be dispatched at a Level 1 Emergency.
- ☐ Ensure all equipment is operational and the appropriate documentation is available to verify testing and calibration requirements.
- ☐ Use the buddy system where possible.
- ☐ Breathing apparatus be prepared to don apparatus quickly.
- ☐ Ensure all personnel have a personal gas monitor.
- ☐ Speed and direction of wind may vary, therefore, be prepared to track gas plume.
- □ Record all information:
- Concentrations in ppm or ppb
- · Location and time of readings
- · Wind speed and direction

Regulatory Requirements

Drilling & Completions

Critical / Special Sour Wells

If the EPZ includes a portion of urban density development or urban centre:

- · There must be minimum of two mobile air monitors:
 - One to monitor the boundary of the urban density development or urban centre and the other to track the plume.
- Ensure that one unit is in the area during drilling and / or completion, testing, and workover operations in potentially critical sour zones.
- Dispatch a mobile air quality monitoring unit(s) at a level 1 emergency and request additional units as required.
- Dispatch a mobile air quality monitoring unit(s) when it is evident that well control measures are deteriorating and that a sour gas release is likely to
- Prior to conducting operations in the sour zone, determine where the monitoring equipment is located and what the estimated travel time is to the well site.

If the EPZ <u>DOES NOT</u> include a portion of urban density development or urban centre:

- Dispatch a mobile air quality monitoring unit(s) at a level 1 emergency and request additional units as required.
- Dispatch a mobile air quality monitoring unit(s) when it is evident that well control measures are deteriorating and that a sour gas release is likely to occur.
- Prior to conducting operations in the sour zone, determine where the monitoring equipment is located and what the estimated travel time is to the well site.

Continuous Detection Devices

A continuous H₂S/LEL system must be used while in the critical sour zone. The detection system requirements are as follows:

- \cdot A minimum of four sensors able to detect H_2S concentrations of 5 ppm or greater.
- · Audible and visual alarms near the driller's station.
- Set alarms at 10 ppm.
- Locate sensors at the shale shaker, near the bell nipple, on the rig floor, and at the mud mixing unit.

Portable Detection Devices

 One portable H₂S detection device is required while drilling in the critical sour zone.

> Form A5

Production Operations & General Information

Sour Gas Release

- If notified of a release by alarm or by a reported odour, the licensee must investigate the source of the release and dispatch air monitors upon confirmation of the release location or when it is evident that spill control measures are not effective.
- Air quality monitoring occurs downwind with priority being directed to the nearest un-evacuated residence or area where people may be present.
- Air monitors (personal handheld, stationary, and mobile) should be dispatched at a level 1 emergency.
- Dispatch a mobile air quality monitoring unit(s) when it is evident that spill control measures are not effective and that a sour gas release is likely to occur.
- Licensee personnel will monitor and record the concentrations until a mobile air monitoring unit arrives or until the incident is over. At minimum, these readings must include LEL and H₂S.
- If a sour gas release has been ignited, the licensee should continue to monitor response zones for H₂S from incomplete combustion, as well as SO₂.
- The licensee is expected to provide monitored H_2S and SO_2 information on a regular basis throughout a sour gas emergency to the relevant government regulator, environmental agency, health authority, local authorities, and on request to the public.

HVP Product Release

- · Air quality monitoring may occur downwind or upwind depending on how the plume is tracking, with priority being directed to the nearest un-evacuated residence or areas where people may be present.
- The licensee is expected to provide monitored HVP product LEL information on a regular basis throughout the emergency to the relevant government regulator, environmental agency, health authority, local authorities, and on request to the public.

Downgrading Level of Emergency

 The decision to downgrade an incident will be based on the air monitoring results.

Air Monitoring Log - Example

Wind Conditions * LEL (%) SO₂ (ppm) O₂ (%) Time Location of Samples Other Temp (°C) Comments Speed (km/hr) From 19:06 12-05-13-16 W5M 10 19 NW 12 entering lease access. Contacted control room at plant. H₂S reading increased 1 ppm at the 19:15 12-05-13-16 W5M 12 NW 18 11 access point No change in readings. Wind and 19:25 12-05-13-16 W5M 12 17 NW 11 temperature is down.

* Estimate meteorological conditions where accurate readings are not available.

1. Choosing a Position

- Using your map and the current wind conditions, travel downwind, with priority being directed to the nearest un-evacuated residence or area where people may be present.
- 2.Confirm the location with the Public Safety Group Supervisor and make sure you have a safe route to the assigned location that does not cross the hazardous area.

Record Information

Record information on the following forms located within this Section:

Form
Form

☐ Air Monitoring Log☐ ICS 214 Activity Log

A5 | ICS | 214

Reporting and Contacts

Air Monitors report to the Public Safety Group Supervisor.

Name:

Phone Number:

Reception Centre

Location:

Phone Number:

Wind Direction:

Revised November 2021

A5 Air Monitoring Log

				Comments						
			onditions *	Speed From (km/hr)						
Je:			Wind C	From						
			Temn	(c)						
	ition:			Other						
Responder Name:	Responder Position:		Š	90 ₂ (ppm)						
Resp	_ Resp		Ċ	(%)						
			ū.	(%)						
			U I	m ₂ S (ppm)						
	of			Location of Samples						
Date:	Page			Time						

ICS 214 Activity Log

ncident Nam	e:							
Date / Time I	nitiated:							
Prepared by:		Pos	Position / Title:					
Personnel A	ssigned							
	Name	ICS Position	n e	Location				
Activity Log								
Time		Ac	ctions					

Overview

In the event of an emergency in which residents need to be evacuated, a Reception Centre must be established to receive and register the evacuees. A Reception Centre Representative is assigned to manage / coordinate activities at the Reception Centre. The Reception Centre Representative continuously updates the Public Safety Group Supervisor with a list of those who have, and have not, checked in at the Reception Centre.

Reception Centre Rep Roles

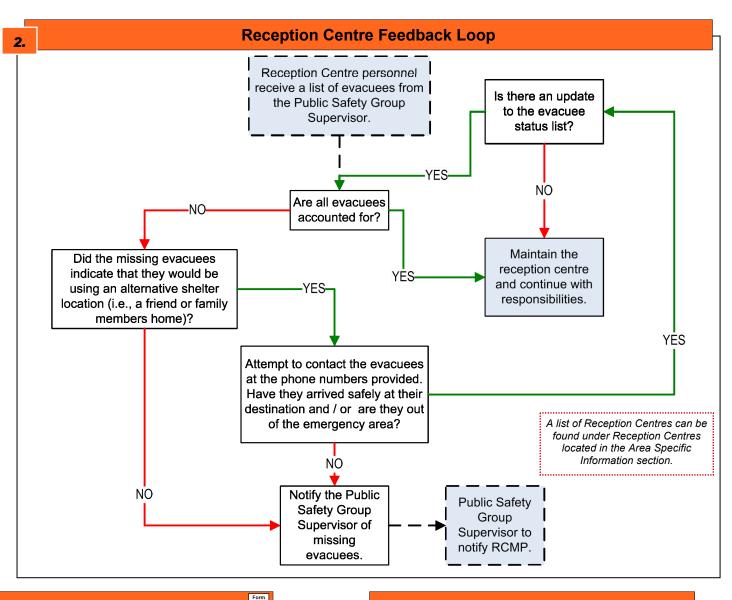
- ☐ Confirm Reception Centre is available for use.
- ☐ Establish Reception Centre.
- ☐ Confirm communication links.
- □ Receive evacuees and maintain a Reception Centre | B1 Registration Log.
- ☐ Arrange for food and accommodations for the evacuees.
- ☐ Provide evacuees with a place to request counselling services, if required.
- □ Record and follow up on all evacuees who choose to make their own accommodation arrangements.
- ☐ Arrange for temporary care of livestock (if possible) and the security of evacuated property.
- ☐ Establish and oversee compensation administration activities at the reception centre.
- □ Reimburse evacuees for their immediate out-of-pocket expenses and log details on a Resident Compensation Log.
- ☐ Where possible, provide evacuees with information regarding their property, livestock, and the incident.
- Form C2 ☐ Forward all media and incident inquiries to the Information Officer.
- □ Report all names of evacuees who have registered at the Reception Centre to the Public Safety Group Supervisor.
- ☐ Document activities using the ICS 214 Activity Log.
- ☐ Assist with post-incident activities.
- □ Confirm information to be released to public with the Information Officer.
- □ Address resident concerns and forward them to the Public Safety Group Supervisor.

Choosing a Reception Centre

- □ Reception Centres are usually located in schools, hotels / motels, or community halls.
- ☐ It may be useful to coordinate the location of the Reception Centre with the local authority (city, town, county, M.D., etc.).
- ☐ See Area Specific Information (white tabs) for pre-identified Reception Centres in your area.
- A Reception Centre should:
- ☐ Have a conference room of some type where a large number of people can gather.
- ☐ Have conferencing services including fax machine, internet access, and phone access.
- ☐ Be large enough to house all of the evacuees.
- ☐ Be outside of the hazard area.
- ☐ Allow residents to evacuate to the Reception Centre without travelling through the hazard area.
- ☐ Allow pets.

Tips

- ☐ Ensure you have enough staff to handle the needs of all of the evacuees.
- ☐ Allow evacuees to vent their emotions.
- ☐ Do not make any promises that cannot be kept.
- ☐ Attempt to reunite families as quickly as possible.
- □ Document the details of anyone who may have trouble coping with the incident so that they can be given proper psychological support.
- ☐ Monitor whether residents that have been contacted by the Telephoners, Rovers, and Roadblock personnel have checked in at the Reception Centre.



В1

Reception Centre Registration Log - Example

Name (List all names in party) **Destination Phon #** # of Depart Number Arrival Resident ID (Where they can be Comments **Occupants** Time Arrived First Last reached) John and his wife arrived safely then left to stay at G124-A John Doe 2 2 19:06 19:21 555-555-5555 a friend's house in Red Deer. Jane and her 2 children arrived safely then left to 555-555-5555 H131-B Jane Doe 3 19:12 19:28 stav with her mother in Bentlev. James, his wife and 1 child arrived safely. The other F122-A 5 3 19:20 555-555-5555 two children are away on a school trip. They will James Doe stay at the reception centre for the night. **Media Statement**

Refer all media inquiries to the Media Representative in Calgary. However, if they insist on a statement, please use the following:

"We are currently dealing with the situation at hand to ensure the safety of the public, our personnel, and the environment. A statement will be released by the company once the facts have been determined. If you would like to leave your business card or phone number, a company representative will provide you with more information as it becomes available."

Note: See Section 3.0 Communication & Media for more information on media

Record Information

Record information on the following forms located within this Section:

- ☐ Reception Centre Registration Log
- ☐ Resident Compensation Log☐ ICS 214 Activity Log

LICS 214 ACTIVITY LOG	
■ Media Contact Log	

Form	Form	Form
ICS 214	B1	B2
2 14		

C2

Reporting and Contac

The Reception Centre Representative. report to the Public Safe
Group Supervisor.

Phone Number:

Reception Centre

Location:

Phone Number:

Wind Direction:

Revised

B1 Reception Centre Registration Log

Date:		Responder Name:				
Page	of	Responder Position:	Responders Phone No.:			

Resident	Name (list all	Name (list all names in party)			Arrival	Depart	Destination	
id	First	Last	# Of Occupants	Number arrived	time	time	phone # (where they can be reached)	Comments

B2 Resident Compensation Log

Approved By: ___

Resident's Name:	Home Address:	Home Telephone #:	Location of Land (LSD):
		Business Telephone #:	
Number of Residents Evacuated:	Evacuated to:	Telephone # While Evacuated:	

No.	Date	Location	Trans.	Accom.	Meals	Phone	Sundry	Total	Details of Expense
									·
	Total Repo	orted Expenses							

ICS 214 Activity Log

Incident Name:						
Date / Time Initiated:						
Prepared by:	Position / Title:	Position / Title:				
Personnel Assigned						
Name	ICS Position	Location				
Activity Log						
Time	Actions					

Overview

In the event of an emergency, roadblock locations and road detours will be established. The company will initially establish and maintain roadblocks until relieved by highway maintenance contractors or the RCMP. Roadblock personnel will be assigned in teams of two, one member to stop approaching traffic, the other will record the information gathered and relay to The Public Safety Group Supervisor. The Public Safety Group Supervisor must be continuously updated by Roadblock personnel so that all vehicles entering and exiting the EPZ are accounted for.

Roadblock Personnel Roles

- ☐ In conjunction with the Public Safety Group Supervisor, determine the need for and location of roadblocks.
- ☐ Pickup and check roadblock kits.
- ☐ Proceed to roadblock locations.
- ☐ Determine driving directions to assigned roadblock location that does not have you pass through the hazard area.
- ☐ Confirm communication links and establish communication interval times.
- ☐ Establish roadblocks to secure the EPZ.
- ☐ Follow the scripts and procedures in the ERP.
- ☐ If media personnel show up at your roadblock, forward all requests to your direct supervisor who'll direct them to the Information officer or Corporate
- ☐ Knowledge and ability to communicate safest route away from hazard.
- ☐ Monitor area for H₂S and / or LEL with personal monitors and document readings on the Air Monitoring Log.
- ☐ Report all reading changes / increases to the Public Safety Group Supervisor.
- ☐ For your own safety, ensure the **Public Safety Group Supervisor** is notified immediately if readings are approaching 10% LEL and / or 10 ppm
- ☐ Move location of Roadblock immediately if readings are approaching 10% LEL and / or 10 ppm H₂S.
- ☐ Record all incoming and outgoing traffic, personnel, and equipment on the Roadblock Log.
- ☐ Forward information given to you by people passing through your location to the Public Safety Group Supervisor.
- ☐ Document activities using the ICS 214 Activity Log.
- ☐ Report any person that insists on going through the roadblock into the hazard area as well as any suspicious activity to the Public Safety Group
- ☐ Maintain communication with the Public Safety Group Supervisor.
- ☐ Maintain roadblock locations. Do not leave until requested to do so by the Public Safety Group Supervisor or until relieved by other Roadblock
- Assist with post-incident activities.

Roadblock Kit Contents - Sample

The roadblock kit may contain the following items:

Recommended

- ☐ Direct communication capability (radio, cell phone, etc.)
- ☐ ERP maps and roadblock forms
- ☐ Flashlight and batteries
- ☐ High visibility / reflective vests
- ☐ Orange traffic cones / reflectors
- ☐ Pens and / or pencils
- ☐ Personal Air Monitoring Device (H₂S, CO, O₂, LEL)
- ☐ Portable rotating emergency light □ SCBA
- ☐ Hand-held stop sign with reflective tape ■ Waterproof bag

Optional

- ☐ Caution tape Rain suit
- □ Road barrier

Tips

- ☐ When talking to motorists at the roadblock, ONLY provide them with the information as directed by the Public Safety Group Supervisor.
- ☐ Ask for identification prior to granting access. ☐ You do not have the legal authority to restrict access to the area
- without an order from the relevant authority. Report any person who chooses to proceed, without permission, through the roadblock. ☐ Check with the motorists and ensure all members of their
- residence are accounted for and documented on the Resident Contact Log. Report any resident that is left behind in the EPZ. ☐ The roadblock should be setup to allow optimal visibility and sufficient
- distance for traffic to come to a safe and complete stop. □ Roadblock personnel should be highly visible on the side of the road and have an escape route in case of an emergency.
- ☐ DO NOT leave your position until you are directed to do so.

Choosing a Roadblock

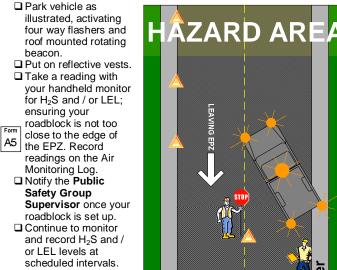
Roadblocks should be established:

- ☐ Approximately where the EPZ intersects any highways / roads.
- ☐ Outside of the hazard area.
- ☐ At a conspicuous location where the **Roadblock** personnel will be visible to approaching traffic, providing them with enough time to safely stop.
- At a location where traffic can easily turn around or detour (consider the potential for larger vehicles such as buses, semi-trailers, drilling rigs, etc.).
- ☐ Where possible at natural roadblock locations (e.g., gates, bridges, junctions, etc).

Before Departure

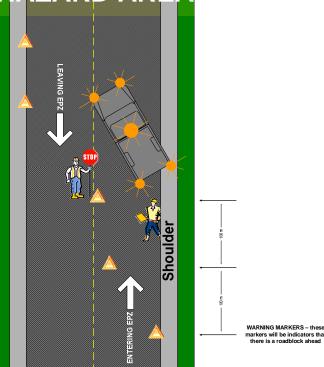
- ☐ Make sure your vehicle is equipped and suitable for the travel conditions.
- ☐ Check roadblock kit to confirm all items are present (see sample of roadblock kit contents to
- ☐ Confirm that your handheld monitor for H₂S and / or LEL is functioning properly.
- ☐ Check all communications devices.
- ☐ Check that the red signaling baton flashlight is working and has spare batteries.
- ☐ Confirm that you have enough copies of the Roadblock Log form.
- □ Confirm the location of the roadblock with the Public Safety Group Supervisor and make sure you have a safe route to the assigned location that does not cross the hazardous area.

Setting up a Roadblock



Report to the Public Safety Group Supervisor at

scheduled intervals. ☐ Maintain roadblock until the emergency is over and the "all clear' message is given or until relieved by other Roadblock personnel



Reporting and Contacts

Roadblock personnel report to the Public Safety Group Supervisor.

Wind Direction:

Name: Phone Number: Reception Centre

Location Phone Number:

□ Visibility □ Distance ☐ Bends in the road ☐ Level of the ground

the local authority.

When establishing a

roadblock consider:

through the declaration of a State of Local Emergency by Remember to:

To give motorists time to prepare to come to a stop, it is

recommended that the Roadblock personnel set up all

available collapsible reflective triangles 100 metres apart, at

Roadblock personnel cannot force an evacuation or restrict

access to the area unless proper authority has been granted. The authority for forced evacuation is gained only

a minimum distance of 200 metres before the roadblock.

Remain calm ☐ Be courteous Record names

☐ Notify the Public Safety Group Supervisor

How to Stop Traffic

- 1. Hold the reflective stop / slow paddle erect and away from your body. Never wave the sign.
- 2. Look directly at the approaching driver.
- 3. Raise your free arm with the palm of your hand exposed to the driver.
- 4. Bring the vehicle to a full stop.
- 5. After the first vehicle has stopped, move to a spot (near the centre line of the roadway) where you can be seen by other approaching vehicles

Because visibility is reduced at night, it is important that you use utmost care when stopping traffic through a roadblock area, and that you protect yourself from injury by:

- ☐ Standing in a safe position on the shoulder of the road.
- ☐ Waving the red signaling baton flashlight back and forth.

Note: The red signaling baton flashlight should only be used in place of the reflective stop / slow paddle at night or in conditions of low / poor visibility.

Roadblock Script

"I am representing [Insert Company Name] and we are presently experiencing control problems ahead. This situation is serious enough to warrant restricted access beyond this point. For your own safety I must ask you not to proceed."

- ◆ Record driver's name, vehicle make, colour, etc. and at least the license plate number of all vehicles approaching your roadblock; also make a note of the time and of the direction the vehicle took when leaving (e.g., east, south, west, north) on your log sheet.
- ♦ Remember you have no legal position to restrict access to the general public. You are there to protect and notify - to protect the health and safety of the people by notifying them of the danger and secondly to protect the property of the residents who have evacuated the area.
- ♦ Should someone continue into the restricted area, regardless of your warning about personal safety, then use the 2-way radio or cell phone to notify the Public Safety Group Supervisor and the matter shall be immediately turned over to the Police.

5b.

Media Statement

If the media arrives at your roadblock location, company personnel may give the following statement:

"We are currently dealing with the situation at hand to ensure the safety of the public, our personnel, and the environment. A statement will be released by the company once the facts have been determined. If you would like to leave your business card or phone number, a company representative will provide you with more information as it becomes available.'

Contact the **Public Safety Group Supervisor** if a media representative arrives at your roadblock.

NEVER offer your opinion of what is happening at the location to a media person or stranger. This can be interpreted as the company's position. DO NOT give statements, other than the above message, regarding the emergency situation to the MEDIA. Refer them to the Information Officer.

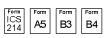
Be courteous but firm.

If the questioning persists, just keep politely repeating word for word the statement above.

Record Information

Record information on the following forms located within this section:

- ☐ Roadblock Log
- □ Resident Contact Log
- ☐ Air Monitoring Log ☐ ICS 214 Activity Log



33	В4	

Possible Scenarios for Roadblock Personnel:

- Motorist obeys request and drives away from the EPZ.
- Motorist is leaving the EPZ and agrees not to return until further notice.
- Emergency responders (service companies, fire, ambulance, etc.) are entering the EPZ to help respond to the incident.
- ♦ Motorist disobeys request to leave the area and enters the EPZ.

In all cases, notify the Public Safety Group Supervisor and log all information.

November 2021

B3 Resident Contact Log

Date:		Responder Name:	
Page	of	Responder Position:	_ Responders Phone No.:

				Number	of people	Assistance or	
Time	Resident name	Resident ID	Shelter / Evacuate	Inside	Outside	transportation required?	Comments
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	

B4 Roadblock Log

Date:		Responder Name:	
Page	of	Responder Position:	Responders Phone No.:

Vehicle type	License plate # and province / state	Name of driver (if available)	# of people in vehicle	Time entering zone	Time Exiting zone	Comments (record all vehicles turned away)
	1		l	l		I.

ICS 214 Activity Log

Incident Name	ə:				
Date / Time In	itiated:				
Prepared by:			Position / Title:		
Personnel As	ssigned				
	Name	ICS Pos	sition	Location	
Activity Log					
Time			Actions		

Rover Personnel Roles	
Novel Felsollilei Noies	
☐ Confirm resident contact lists are available.	
☐ Confirm communication links.	
☐ Know safe routes in and out of the EPZ.	
□ Search for residents and transients in the Emergency Plan and Response Zones.	ning
☐ Check all buildings including barns, shops, sheds, etc.	
☐ Assist, as required, with the notification, evacuation or sheltering of persons within the Emergency Planning Zone. Record all contact with residents using the Resident Contact Log.	Form B3
☐ Post Evacuation Notices for residents that are not at their residence.	Form B5
☐ Follow the scripts and procedures in the ERP.	
☐ Monitor area for H₂S and / or LEL with personal monitors and document readings on the Air Monitoring Log.	Form A5
□ Report all reading changes / increases to the Public Safety Group Supervisor.	, .
☐ For your own safety, ensure the Public Safety Gr Supervisor is notified immediately if readings are approach the following levels: 10% LEL and / or 10 ppm H ₂ S.	
□ Report any suspicious behaviour to the Public Safety Gr Supervisor who will notify the police as required.	oup
☐ Document all activities using the ICS 214 Activity Log.	Form ICS
☐ Maintain communication with the Public Safety Group Supervisor.	214

Media Statement

If a media representative approaches you, company personnel may give the following statement:

■ Assist with post-incident activities.

"We are currently dealing with the situation at hand to ensure the safety of the public, our personnel, and the environment. A statement will be released by the company once the facts have been determined. If you would like to leave your business card or phone number, a company representative will provide you with more information as it becomes available.'

Contact the Public Safety Group Supervisor if a media representative approaches you.

NEVER offer your opinion of what is happening at the location to a media person or stranger. This can be interpreted as the company's position. DO NOT give statements, other than the above message, regarding the emergency situation to the MEDIA. Refer them to the Information Officer.

Be courteous but firm. If the questioning persists, just keep politely repeating word for word the statement above.

Reporting and Contacts	
Rovers report to the Public Safety Group Supervisor.	
Name:	
Phone Number:	
Reception Centre:	
Location:	
Phone Number:	
Wind Direction:	

Evacuation Notice - Example



EVACUATION NOTICE

[Insert Company Name] has an emergency at its nearby location.

As a safety precaution, please leave the area in a (north / east / south / west) direction and proceed to the **Reception Centre located at**

[Insert Company Name] representatives will be available at the Reception Centre to address your questions or concerns.

For assistance, call [Insert Company Name] at

Thank you

Tips

Remember to:

- ☐ Remain calm
- ☐ Be courteous
- □ Document all actions and comments
- ☐ Notify the Public Safety Group Supervisor

Remember to use a handheld H₂S and / or LEL monitor to continually test the atmosphere. Report all H₂S and / or LEL reading changes / increases to the **Public Safety Group Supervisor**.

Response personnel cannot force an evacuation or restrict access to the area unless proper authority has been granted. The authority for forced evacuation is gained only through the declaration of a State of Local Emergency by the local authority.

Before Departure

☐ Protect yourself ☐ Ensure you are equipped with all necessary equipment:

□ Gas monitors

☐ Mobile communications or other form of communication

☐ Forms ☐ Vehicle (4x4) with full tank of fuel

☐ Confirm that your handheld monitor for H₂S and / or LEL is functioning properly.

☐ Confirm that you have enough copies of the Evacuation Notice.

☐ Confirm your assignments with the Public Safety Group Supervisor and make sure you have a safe route to the assigned location that does not cross the hazardous area.

Notifying Residents / Transients

The Public Safety Group Supervisor may request you to patrol the Emergency Planning and Response Zones in search of transients (people passing through the area) and / or residents that couldn't be reached by phone. Make contact with residents / transients and after providing an explanation record their names, contact information, purpose for being in the area (travelling through, live in the area, etc.), current condition, timing of your arrival, and whether or not they require evacuation assistance.

"Hi, I am [Insert Name] representing [Insert Company Name]. The company is presently experiencing control problems at a nearby location. The situation is serious enough that we are evacuating the public in the area. For your own safety I must ask you to leave the area immediately and check in with a company representative at the Reception Centre. Representatives at the Reception Centre will address any questions you may have and will make arrangements for your temporary accommodations.

☐ Ask if they will require evacuation assistance and arrange additional transportation assistance if necessary

☐ Make sure they are all accounted for.

☐ Ensure they gather any supplies they will need for the next 24 hours (medicines, baby food, diapers,

☐ If they are able to transport themselves to the Reception Centre provide them with directions that will keep them away from the hazard.

☐ Ask them if they have any questions.

☐ Provide them with your name and contact information in case they need assistance later.

☐ Report to the Public Safety Group Supervisor.

Requested Evacuation Assistance

The Public Safety Group Supervisor may request you to provide evacuation assistance for residents that have requested it. Ensure you obtain the number of residents requiring assistance, resident's names, location (legal and address), and the reason evacuation assistance is required (medical issue, children home alone, etc). A **Telephoner** should have already contacted and explained the situation to the residents; however, it is a good idea to confirm with the Public Safety Group Supervisor that they know you are coming to assist them. If they have not already been informed, contact the resident to tell them you are on your way and provide an estimated time of arrival.

"Hi, I am [Insert Name] representing [Insert Company Name]. I am here to help you evacuate out of the hazard area and make sure you arrive safely at the Reception Centre. A company representative at the Reception Centre will address any questions you may have and will make arrangements for your temporary accommodations.

☐ Try not to scare them. They are aware you might be coming but don't know what to expect. ☐ Make sure they are all accounted for.

☐ Ensure they gather any supplies they will need for the next 24 hours (medicines, baby food, diapers,

Ask them if they have any questions.

☐ Once you are satisfied that all personnel from the residence are accounted for, deliver them to the Reception Centre.

☐ On the way to the Reception Centre, notify the Public Safety Group Supervisor of your progress and estimated time of arrival at the Reception Centre.

☐ Ensure that the residents check in at the Reception Centre with the Reception Centre Representative before you leave for your next assignment.

Record Information

Record information on the following forms located within this section:

☐ Resident Contact Log

☐ Air Monitoring Log

☐ ICS 214 Activity Log ■ Evacuation Notice

| ICS | A5 | B3 | B5 |

November

B3 Resident Contact Log

Date:			Responder Name:				
Page	of		Responder Position:				Responders Phone No.:
i		:	:	Number	Number of people	Assistance or	
Time	Resident name	Resident ID	Shelter / Evacuate	Inside	Outside	transportation required?	Comments
			O Shelter			O Yes	
			O Evacuate			O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes	
			O Shelter O Evacuate			O Yes	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter			O Yes	

ICS 214 Activity Log

Incident Name:			
Date / Time Initiated:			
Prepared by:	Position	/ Title:	
Personnel Assigned			
Name	ICS Position		Location
Activity Log			
Time	Action	S	

Overview

In the event of an emergency in which residents and area users need to be sheltered and / or evacuated, a team of Telephoners will be established to contact people in the area and provide instructions to ensure their safety. The Public Safety Group Supervisor must be continuously updated with the Telephoners progress so that unsuccessful contact attempts and requests for evacuation assistance can be followed up on immediately.

Telephone Personnel Roles

- ☐ Confirm resident contact lists are available.
- ☐ Confirm communication links.
- ☐ In conjunction with the Public Safety Group Supervisor, determine Form who needs to be notified (residents, businesses, area users, etc.).
- ☐ Review with the Public Safety Group Supervisor the telephoner scripts to be used: Early Notification / Voluntary Evacuation Message, Shelter-in-Place Phone Message, Evacuation Phone Message.
- ☐ Contact special needs residents at a Level 1 Emergency and provide them with the option to evacuate.
- ☐ Contact the other residents and area users in the EPZ and advise them to evacuate or shelter
- ☐ Contact the schools / school buses to make arrangements for school age children (if applicable).
- ☐ Advise that buses in the affected area leave immediately and that buses should not enter the area Request a school administrator for the reception centre to assist in
- managing the children and releasing them to their guardians. □ Document all resident interactions using the Resident Contact Log [and report this information to the Public Safety Group Supervisor. Immediately advise the Public Safety Group Supervisor about ВЗ
- unsuccessful contacts and any residents requiring assistance.
- ☐ Document all activities using the ICS 214 Individual Activity Log.
- ☐ Assist with post-incident activities.

Shelter-In-Place Instructions

- ☐ Immediately gather everyone indoors and stay there. Do not leave even if you see people outside.
- ☐ Close and lock all outside doors and windows. Tape gaps around doors and windows. Leave all inside doors open.
- $oldsymbol{\square}$ Turn off appliances or equipment that blows out indoor air or sucks in
- ☐ Turn down furnace thermostats to the minimum setting and turn off air
- ☐ Extinguish all potential sources of ignition (do not smoke or attempt to start vour vehicle)
- lacksquare Stay off of the phone so that you can be contacted by emergency
- $\hfill \square$ Stay tuned to local radio and television for possible updates.

Note: For the full Shelter-In-Place instructions see page 2 of the Shelter-In-Place Telephoner Text form located in SECTION 6.0: FORMS.

Who to Contact

- Residents
- ☐ Schools / School Bus Transportation
- □ Businesses
- Public Facilities
- ☐ Recreation Areas
- ☐ Urban Centres (contact local authority to coordinate)
- ☐ Area Users (other oil and gas operators, rail, logging, etc.)
- □ Trappers
- ☐ Guides / Outfitters
- ☐ Grazing Lease / Allotment Holders
- Priority is given to:
- ☐ Those closest to the hazard
- ☐ Those downwind of the hazard
- ☐ Those with sensitivity issues (health issues, require assistance, etc.)

Tips

- ☐ Ensure you have enough personnel to quickly and efficiently shelter / evacuate the required residents / area users.
- ☐ A general guideline is to have one **Telephoner** for every seven residences that need to be contacted and one Telephoners Leader for every ten Telephoners.
- ☐ Special needs residents should be contacted at a Level 1 Emergency and given the option to evacuate

Response personnel cannot force an evacuation or restrict access to the area unless proper authority has been granted. The authority for forced evacuation is gained only through the declaration of a Local State of Emergency by the local authority.

Shelter-In-Place Phone Message

Hello this is of Tidewater Midstream (your name) (name) residence at (telephone number) ?

Tidewater Midstream is responding to a (potential) emergency at (location) in your area.

For your safety, it is extremely important that you, and those with you, stay indoors until the potential hazard no longer exists, or you are advised to evacuate.

To help us understand your immediate needs, we need to know:

How many people are at your location now?

Children

Is there anyone in your household that you cannot contact to inform them of the situation and advise them to get in doors or stay out of the area?

☐ Yes ☐ No

IF YES Whom? Location of the person(s)

We will send someone to find them as soon as possible.

Do you have children in school at this time?

☐ Yes ☐ No

IF YES

B7

B8

What school? Children's names

We will contact the school to ensure the safety of your children. Buses will be directed to leave the area immediately. If school is in session, your children will be redirected to the reception centre by their regular bus driver when the school day is over.

Do you have the "Shelter-in-Place" instructions previously provided to you by Tidewater Midstream?

Please follow the Shelter-in-Place instructions located inside the resident pamphlet.

Verbally walk the resident through the Shelter-in-Place instructions on the next page.

Do you understand what I have told you?

Is there an alternate number we can contact you at?

If you have any urgent questions, please contact Tidewater Midstream at (telephone number) Thank you for your cooperation.

(Pass on all information regarding this call to the Public Safety Group Supervisor immediately)

Note: Refer to Shelter-in-Place instructions on page 2 of the Shelter-in-Place Phone Message located in this section.

Telephoner Communication Flow

		→	Shelter-in-Place Message	Provide Public Safety Group — → Supervisor with a list of unsuccessful contacts.	
Telephoners receive a list of residents / area users from the Public Safety Group Supervisor.	Provide appropriate message] - -	Evacuation Message	Provide Public Safety Group Supervisor with a list of unsuccessful contacts and those requiring evacuation assistance. Public Safety Group Supervisor to dispatch Rovers	
		 →	Voluntary Evacuation Message	Provide Public Safety Group Supervisor with a list of unsuccessful contacts, those choosing to evacuate, and those requiring evacuation assistance.	

Evacuation Phone Message

Hello this is of Tidewater Midstream (your name) (name) residence at (telephone number)

Tidewater Midstream is responding to a *(potential)* emergency at (location) in your area. For your safety, it is extremely important that you and your family leave your residence immediately and travel in a north / east / south / west direction to our reception centre located at:

To help us understand your immediate needs, we need to know:

How many people are at your location now?

Is there anyone in your household that you cannot contact to inform them of the situation and advise them to evacuate away from the area?

☐ Yes ☐ No

2b.

IF YES Whom? Location of the person(s)

We will send someone to find them as soon as possible.

Do you have children in school at this time?

☐ Yes ☐ No IF YES What school?

> Children's names We will contact the school to ensure the safety of your children. Buses will be directed to leave the area

immediately. If school is in session, your children will be redirected to the reception centre by their regular

Do you require evacuation / transportation assistance?

bus driver when the school day is over.

IF NO

IF YES We are sending someone to assist you. Please stay indoors and close all doors and windows until a Rover

or the local police arrive to evacuate you.

Provide the resident with: ☐ Directions to safely travel to the reception centre

- ☐ A list of items to bring with them to the reception centre (medications, cell phone, etc.)
- ☐ An idea of how long they may be expected to stay at the reception centre
- ☐ The option to bring their house pets to the reception centre

Please contact Tidewater Midstream if you are unable to make it to the reception centre for any reason. Please keep your phone line free so that we can contact you if necessary.

Is there an alternate number we can contact you at?

A company representative at the reception centre will address any questions you may have and will make arrangements for your temporary accommodations. Do you understand everything I have told you? Are you leaving immediately?

If you have any urgent questions, please contact Tidewater Midstream at ____(telephone number)

Thank you for your cooperation. (Pass on all information regarding this call to the Public Safety Group Supervisor immediately)

3.

Record Information

Record information on the following forms located within this section:

- □ Resident Contact Log
- ☐ ICS 214 Individual Activity Log
- Voluntary Evac Message ☐ Shelter-in-Place Message ■ Evacuation Message

g	100	1 1	1 1	Form B7	1

Reporting and Contacts

Telephoners report to the Public Safety Group Supervisor.

Name: Phone Number:

Reception Centre Location:

Phone Number: ____ Wind Direction:

lephone

Revised February

B3 Resident Contact Log

Date:		Responder Name:		
Page	of	Responder Position:	Responders Phone No.:	

	5	B 11 (18	0. 11. 15. 1	Number	of people	Assistance or	
Time	Resident name	Resident ID	Shelter / Evacuate	Inside	Outside	transportation required?	Comments
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate		•	O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate		ı	O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	

B6 Early Notification / Voluntary Evacuation Phone Message

(Pass on all information regarding this call to the Public Safety Group Supervisor immediately)

Before calling, determine a safe evacuation route for the residents to travel, away from the emergency hazard area, upwind if possible, towards the reception centre.			
Hello, this is <u>(your name)</u> calling from Tidewater Midstream. Is this the <u>(name of residence / business)</u> at <u>(telephone number)</u> ?			
Tidewater is responding to a <i>(potential)</i> emergency at <u>(location)</u> in your area.			
You are in no danger at this time. All efforts are being made to resolve the problem and this phone call is only to inform you and provide you with an early notification.			
To help us understand and your immediate needs we need to know:			
How many people are at your location now? (Adults) (Children)			
Do you wish to leave your residence at this time?			
IF YES Please travel in a a north / east / south / west direction to our reception centre located at:			
IF NO Please standby for further contact. Please do not use your telephone for outgoing calls as this may prevent us form contacting you with updated information or when the problem has been eliminated.			
If you have urgent questions, please contact Tidewater Midsteam at <u>(telephone number)</u> .			
Thank you for your cooperation.			

ICS 214 Activity Log

Incident Name:					
Date / Time Initiated:					
Prepared by:		Position / Title:			
Personnel Assigned					
Name	ICS Pos	ition	Location		
Activity Log					
Time		Actions			



Initial Response:

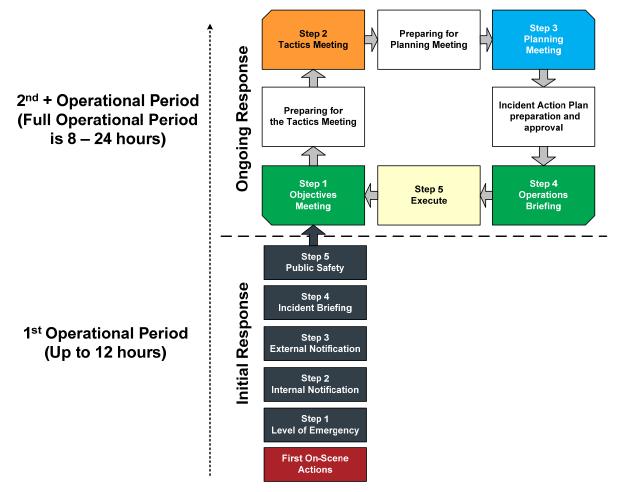
All incidents begin with the initial response (reactive phase) during the first operational period. At the onset of an emergency response an Initial Emergency Report (A1) Form is completed to determine the severity of the emergency and extent of the response. 95% of emergency responses begin and end in the first operational period.

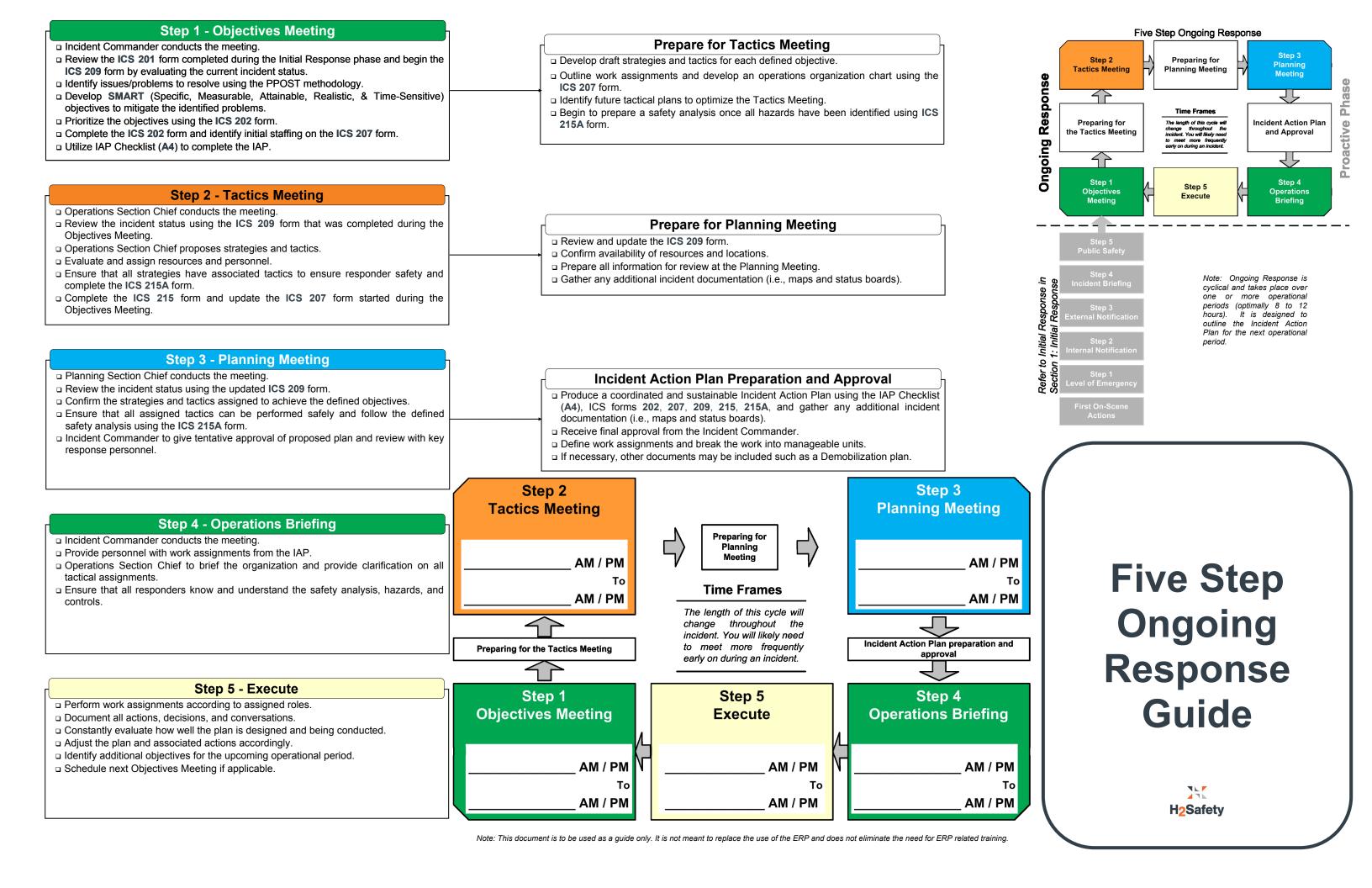
After response personnel ensure their own personal safety by following the First On-Scene Actions, the Five Step Initial Response Guide, and associated tools, provide a structure for the Incident Commander to formulate a response and outlines the steps (key considerations) that need to be addressed and readdressed when evaluating the incident and associated emergency response.

Ongoing Response:

An ongoing response (proactive phase) is required for an extended emergency response that spans over multiple operational periods and revolves around establishing the objectives, strategies, and tactics for the next upcoming operational period. 5% of incidents require an ongoing response, but once engaged emergency responders will circulate through this cycle multiple times.

After the initial response has been completed, the Five Step Ongoing Response Guide and associated tools provide a cycle to plan the next steps of the emergency response. This continual cycle provides a structure for the Command Staff and General Staff to complete the Incident Action Plan (IAP) and associated documents. The ongoing response cycle and an associated IAP must be completed for each operational period until the incident is stood down.





Objectives Meeting



Owner: Incident Commander	Date:	Time:			
Roles belo	ow will attend only	if designated and available			
Attendees:					
☐ Incident Commander:		☐ Planning Section Chief:			
☐ Deputy Incident Commander:		☐ Logistics Section Chief:			
☐ Operations Section Chief:		☐ Finance/Admin. Section Chief:			
☐ Planning Section Chief:		☐ Safety Officer:			
☐ Liaison Officer:		□ Other:			
☐ Information Officer:		□ Other:			
Summary:					
The objectives of this meeting are					
		l attendees (Command and General Staff).			
Establish objectives and prioritie Pagin an ICS 200 Incident State		operational period.			
 Begin an ICS 209 Incident State Begin identifying all required rol 		orm			
 Begin addressing the Incident A 					
Schedule and prepare for the Table					
Resources: ICS 202, 207,	209 forms, and the	IAP Checklist (A4)			
Agenda Items:					
☐ Status Update and review the IC	S 201 Incident Brie	fing form.			
☐ Determine incident priorities. Re	ference the PPOST	methodology.			
	☐ Establish an incident organization that is capable of meeting initial and long-term challenges required to				
	□ Determine the incident response objectives and complete and ICS 202 Incident Objectives form. They must be SMART (Specific, Measurable, Attainable, Realistic, & Time Sensitive).				
☐ Identify initial staffing requireme	nts and begin filling	out the ICS 207 Incident Organizational Chart.			
☐ Identify and select incident supp	ort facilities.				
☐ Review the incident objectives for on the IAP.	☐ Review the incident objectives for the next operational period so your management team can begin work				
☐ Document the incident status to relay to all responding personnel.					
Key Points:					
Ensure that the meeting is do	cumented / record	led. (Utilize the back side of this page.)			
Define the hours of work and or	perational period.				
Utilize Incident Action Plan Che	cklist (A4).				
Identify constraints and limitations.					
Clarify any staff roles and response					
Determine expectations of the to	eam for how all com	nmunications are to be made.			
•		urce ordering, cost accounting, operations security,			
Continue to develop tasks for C	ommand and Gener	ral Staff.			
Agree on division of command v	workload, such as p	ress and agency briefings.			

Objectives Meeting



Notes:	

Tactics Meeting



Owner: Operations Section Chief	Date:	Time:			
Roles below w	rill attend only	/ if designated and available			
Attendees:		<u> </u>			
☐ Incident Commander:		☐ Planning Section Chief:			
☐ Deputy Incident Commander:		□ Logistics Section Chief:			
☐ Operations Section Chief:		☐ Finance/Admin. Section Chief:			
☐ Planning Section Chief:		Safety Officer:			
☐ Liaison Officer:		☐ Other:			
Summary:		Unier.			
The objectives of this meeting are to:					
 Meeting. Have completed ICS 215 and 215 Update the ICS 207 Incident Organization 	5A forms agreed anization Chart. cklist (A4) and co	o meet actions identified during the Objectives upon by all attendees (Command and General Staff). ontinue to add to items accomplished.			
Resources: ICS 209, 215, 215		cklist (A4)			
Agenda Items:	,				
☐ Review ICS 209 Incident Status S	ummary.				
☐ Review incident objectives.	☐ Review incident objectives.				
☐ Define tactics to complete objectives set out during the Objectives Meeting.					
☐ Provide an operational update and	d identify tactics t	o deal with incident.			
☐ Identify roles and responsibilities t		·			
with ICS 215 assignments.	_	anization Chart, check span-of-control, and match up			
Complete the Operational Planning V ☐ Identify work assignments	Vorksheet, ICS 2	15 (Utilize one form for every established objective).			
☐ Identify resources requirements					
☐ Identify overhead staffing need					
☐ Identify specialized equipment and supply needs for each work assignment					
☐ Specify reporting times and loc Complete the Incident Action Plan Sa					
☐ Identify potential hazard types	alety Allalysis, IC	3 2 ISA.			
☐ Identify mitigations for associated hazard types					
☐ Identify support facilities and locat					
Key Points:					
Ensure that the meeting is docu	umented / record	ded. (Utilize the back side of this page.)			
Review planned actions against ir	ncident objectives	s and priorities.			
		as, support facilities, and any key information.			
Discuss any applicable open action		· ·			
Consider contingencies and second					

Tactics Meeting



Notes:	

Planning Meeting

and commitment to the proposed plan.



Owner	: Planning Section Chief	Date:		Time:	
	Roles below w	vill attend only	ı if designated	l and available	
Attend					
□ Inci	dent Commander:		☐ Planning Sec		
	uty Incident Commander:		☐ Logistics Sec		
	rations Section Chief: nning Section Chief:		☐ Finance/Adm	in. Section Chief:	
	son Officer:		☐ Other:	<u>*</u>	
	rmation Officer:		□ Other:		
Summ	ary:				
Final strateSch	tegies outlined from the previ edule and prepare for the Op	in with the nece ous command me erations Briefing.	eetings.	ed on the objectives, tactics, and	
Resou	· ·	(4) and all assoc	iated ICS forms		
Agend	a Items:				
☐ Revi	ew Incident Action Plan forms	s (ICS 202, 207, 2	209, 215, and 215	A).	
☐ Revi	ew Command's incident obje	ctives, priorities, o	decisions, and dire	ection.	
	ride briefing on current situation		isk, weather forec	ast, and incident projections.	
		sed plan includin		cs or work assignments, resource	
commitment, contingencies, organization structure, and needed support facilities. □ Review the proposed plan to ensure that Command direction, priorities, and operational objectives are					
met		saro triat comma	ria airootiori, prior	mos, and operational objectives are	
☐ Delegate assignments and deadlines to appropriate staff members to assure timely and effective IAP development.					
Key Po	oints:				
• Ens	ure that the meeting is doc	umented / record	ded. (Utilize the b	pack side of this page.)	
• Rev	iew IAP Checklist (A4) to ens	sure that all critica	I materials have b	een accounted for in the IAP.	
• Plar	nning Section Chief brings me	eting to order, co	ver ground rules,	and review agenda.	
• Plar	nning Section Chief requests	tacit Command ap	oproval of the plar	n as presented.	
obje	 Planning Section Chief reviews and validates responsibility for any open actions and management objectives. 				
Plan	Planning Section Chief conducts round table of Command and General Staff to solicit their final input				

Planning Meeting



Notes:	
Notes.	

Operations Briefing



	Time:			
Roles below will attend	only if designated and available			
Attendees:				
☐ Incident Commander:	☐ On-Site Group Supervisor			
☐ Deputy Incident Commander:	☐ Public Safety Group Supervisor			
☐ Operations Section Chief:	☐ Air Monitor Team Lead			
☐ Planning Section Chief:	☐ Roadblock Team Lead			
Liaison Officer:	☐ Rover Leam Lead			
☐ Information Officer: ☐ Planning Section Chief:	☐ Telephoner Team Lead ☐ Reception Centre Representatives			
□ Logistics Section Chief:	☐ Other:			
☐ Finance/Admin. Section Chief:	☐ Other:			
☐ Safety Officer:	☐ Other:			
☐ Staging Area Manager:	☐ Other:			
Summary:				
The objectives of this meeting are to:				
• Review a summary of the incident status with	all responders.			
 Relay objectives, tactics, and strategies. 				
 Reinforce/relay the safety message. 				
 Assign roles & responsibilities and tasks for all responders to accomplish. 				
Execute the response.				
	and identify potential problems/issues to address in the			
next operational period.				
Resources:				
Agenda Items:				
☐ Planning Section Chief briefly walks through the	he IAP components and makes changes as needed.			
☐ Operations Section Chief conducts roll call of	the Operation Section Supervisors and provides a briefing			
on emergency response.				
☐ Operations Section Chief briefs supervisory personnel on their assignments along with clarification on				
any of their issues and concerns.				
☐ Safety Officer covers major safety issues.				
□ Logistics Section Chief covers logistical supp medical, etc).	ort of operations (communications, supply, transportation			
☐ Finance / Admin. Section Chief covers time &	Finance / Admin. Section Chief covers time & cost tracking, procurement, and compensation process.			
☐ General Staff to cover issues applicable to Op	perations Section personnel.			
Key Points:				
Ensure that the meeting is documented / re	ecorded. (Utilize the back side of this page.)			
	ground rules, agenda, and conducts roll call of Command			
Establish a briefing and message for all respo	nders			
Review pre-determined public and media state				
 Planning Section Chief solicits final comments 				

Operations Briefing



Notos	
Notes:	

Tidewater - Wildboy Operations Phone List

Foreman / Area	Employee Last Name	Employee First Name	Office Phone	Cell Phone
Wildboy Plant			250-774-4550	-
Operator			-	
Operator			-	
Director, Production Operations			-	
Lead Operator			-	
Coordinator, HSE			-	
Senior Director, Asset Integrity / HSE				
Director, Downstream Field & Terminal Operations				
Environment Coordinator				
Regulatory Coordinator				
Executive VP, Field Operations				
President, Downstream				
H₂Safety Services				

Erikson National Energy Phone List

Corporate Office	Position	Location	Office Number	Mobile
Erikson National Energy - 24 hr Emergency		On Call	1-866-363-6100	
Erikson National Energy - NEBC	Position	Location	Office Number	Mobile
Elikson National Ellergy - NEBO	1 Osition	Location	Office Number	MODILE
Erikson National Energy - Fort St. John B.C.	Position	Office		Mobile
Wildboy Gas Plant	Position	Office		Mobile
Bailey Helicoptors				
Dalley Helicoptors				
North Cariboo Air				
Office Main Numbers				



Section 3: Communications & Media

Media Relations and Generic Media Statement	′
Generic Media Statement	<i>'</i>
Media Management	<i>'</i>
On-Site Media Spokesperson	2
Managing the Media On-Site	2
Internal Communication	3
Communicating with the Public	3
Information Disseminated to the Public	3
Preparing a Preliminary Media Statement	4



Media Relations and Generic Media Statement

Any incident that affects the environment, the health and safety of individuals, or causes extensive property damage could be a news "item". When such an incident occurs, the media should not be avoided. The key is to establish good rapport with the media early in the life of the emergency. Open and honest communication will help to create favourable public opinion and could help to prevent the public from overreacting to the incident.

Media releases are generated and released as significant developments occur. The company is expected to coordinate media releases with the relevant government agencies prior to release to provide consistency and accuracy of information. Information is communicated through written news releases, news conferences, and any other effective means that the company chooses to use. The company must identify a spokesperson to carry out this role and to interact with applicable government agencies.

Media releases will be developed by the Emergency Support Team in conjunction with the applicable regulatory agency. The Emergency Support Team will assign a Corporate Media Spokesperson to deliver the approved messages.

Media at the field level will be coordinated by the Information Officer with the Support of Communications / Media from the Emergency Support Team. If media have arrived at the emergency site and the designated Information Officer is not yet available, only the Incident Commander or their designate can act as the company spokesperson, and will issue only the information below.

Future statements will be prepared by the Emergency Support Team and should be issued only by the designated Corporate Media Spokesperson. All media statements will be reviewed with the regulatory agency's Media Coordinator.

All information that is given to the media should be recorded. See **Section 6: Forms** for the C2 Media Contact Log.

Generic Media Statement

"We are currently dealing with the situation at hand to ensure the safety of the public, our personnel, and the environment. A statement will be released by the company once the facts have been determined. If you would like to leave your business card or phone number, a company representative will provide you with more information as it becomes available."

Media Management

- Do not wait until you are contacted by the media to react to their inquiries. By preparing in advance, the company will appear to be organized, aware, and actively responding to the situation. The essence of effective media management is preparation in advance of any media contact.
- It is important when contacting the media with a news release that you do not favour one media
 organization or agency over another. To minimize the chances of creating a prejudicial situation, deal
 solely with major umbrella press agencies.
- If media representatives are not provided with the basic information, it can be assumed that they will fill the gap with material from less reliable sources.

Be aware at all times that it is possible for the media or others to be monitoring your radio, cellular phone, or telephone conversations.



On-Site Media Spokesperson

Depending on the specific emergency an on-site spokesperson may be required to handle all on-camera activities requested by the media. Only approved and trained spokespeople will be allowed to provide comment to the media. The Emergency Support Team will identify any and all media spokespersons. The Information Officer or Incident Commander may serve as the on-site Media Spokesperson or the Emergency Support Team may send the Corporate Media Spokesperson to the site. This representative will endeavor to maintain a favourable public image on behalf of the company. It is important that they keep in mind the following:

- The Dos and Don'ts of conducting yourself on camera; 75% of information comes from non-verbal actions (gestures, tone, posture, etc.)
- Public appearance, ensuring appropriate and approved wardrobe
- Preparation in communicating the media release in advance so the message feels natural
- How to handle impromptu or "off the record" inquiries from the media

Managing the Media On-Site

Depending upon the size and/or scope of the emergency to the incident site, the media will likely travel to site and attempt to secure coverage of the situation. Usually the size and nature of an emergency will determine the amount of media attention garnered. It is important everyone on-site understands how to properly manage the media and that only designated individuals are to speak to the media. It is recommended that only individuals with adequate media training have even casual interactions with the media.

Media Briefing Areas are to be designated by the Incident Commander if advised by the Communication & Media position. The Information Officer will, if required by the Emergency Support Team and Incident Commander, determine the need for media management at the incident site.

As appropriate, the Information Officer should be designated to oversee local news media management. In order to address the needs of the media at the incident site, the following guidelines should be considered:

- If practical, an information centre will be set up nearby the incident site. All on-site media will be informed that this will be the only place where information is to be released.
- During an emergency situation, media access to company property is strictly prohibited unless prior
 approval has been given by the Emergency Support Team. If the Incident Commander deems the
 situation safe and access is granted to company property, media personnel must be accompanied at
 all times and wearing appropriate personal protective equipment (PPE).
- Ensure that if any media personnel are granted access on-site all potential hazards are identified and handled appropriately prior to their arrival (i.e. all on-site personnel are wearing proper PPE, operating equipment safely, etc.).
- With the exception of providing the initial prepared company statement, any requests by the media for information or interviews should be referred to the Information Officer.
- For an emergency that lasts more than 24 hours, consideration will be given to establishing a newsroom for all required personnel.
 - o Ensure it is located a safe distance away from the incident.
 - Ensure proper internet and telephone access is made available.
 - o Large enough to accommodate all of the potential media personnel.



Internal Communication

Internal communication plans for company personnel must include:

- Identification of primary and secondary communication methods during an incident.
- Procedures to control flow of information*:
 - Ensure facts and relevant information are distributed to key responders
 - o Proper management of sensitive information
 - Camera and cellphone photo restrictions
 - Social media protocol

Communicating with the Public

Communication plans for contacting affected parties must be in place:

- When affected parties are within the Hazard Planning Zone (HPZ) / Emergency Planning Zone (EPZ) at the beginning of drilling and initial completion operations.
- A minimum of 24 hours before drilling operations enter a sour zone.
- At the conclusion of drilling and initial completion operations.
- At the beginning and conclusion of other operations including workovers, flaring, fracking, etc.

Information Disseminated to the Public

The company must make the following information available to the public, while maintaining documentation, as soon as possible during an incident:

- To the affected public at the onset of the incident:
 - Type and status of the incident.
 - o Location and proximity of the incident to people in the vicinity.
 - Public protection measures to follow, evacuation instructions, and any other emergency response measures to consider.
 - Actions being taken to respond to the situation, including anticipated time period.
 - Contacts for additional information.
- To the affected public during the incident:
 - Description of the products involved and their short-term and long-term effects.
 - Effects the incident may have on people in the vicinity.
 - Areas impacted by the incident.
 - o Actions the affected public should take if they experience adverse effects.
 - An explanation of the steps taken to address concerns.
 - o An explanation of the steps to be taken to prevent similar emergencies in the future.

^{*} Note: These procedures are developed by the Information Officer during the incident.



Information Disseminated to the Public, continued

- To the general public during the incident:
 - Type and status of the 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, including anticipated time period.
- To the evacuated or sheltered public post-incident:
 - Status of recovery.
 - Financial reimbursement information.
 - Contacts for additional information.

Preparing a Preliminary Media Statement

This verbal or written statement is the initial information given only to the media by the Information Officer, Incident Commander (or alternate) when the company's designated Media Spokesperson is unavailable, or authorizes a press release at the local level. See **Section 6: Forms** for the C1 Preliminary Media Statement form.

The preliminary statement shall contain:

- What, when, and where the incident occurred:
 - State the general nature and description of the incident.
 - Associate the incident location to the nearest major centre and the exact time the incident began or was discovered.
 - For example: At 11:00 am, today, September 13th, 2012, a warehouse at our battery location northeast of Wainwright caught on fire.
- Injuries / fatalities / damages:
 - Clearly distinguish the severity of the injuries sustained and if any fatalities occurred.
 - State the number of people currently receiving treatment.
 - o Ensure no names are released to the media; it is important to keep this information private until all families and next-of-kin notifications are made.
 - For example: We have confirmed that three employees sustained injuries, two minor and one major. All of the injured casualties have been transported to the nearest care facilities and are receiving treatment.
- The current status of the emergency:
 - o Indicate the nature of the situation; i.e. what is being done by whom.
 - o For example: Emergency crews currently have the fire under control and local authorities are investigating the cause. We are actively notifying the employee's families of the incident.
- When to expect more information:
 - For example: Our designated spokesperson will be issuing a formal statement once we have more information confirmed. Thank you for your cooperation and we will not be accepting any questions at this time.



Preparing a Preliminary Media Statement, continued

What not to do:

- Don't downplay the seriousness of the event or speculate on volumes, damage or timelines.
- Don't point fingers; liability will be determined later by appropriate authorities.
- Primary focus must remain on the company's commitment to addressing the response and recovery effort.
- Attempt to avoid any questions if possible, as designated media personnel should handle all media questions.
- Avoid saying "no comment." It sounds like you're hiding something. If necessary, explain why it is not appropriate or possible for you to answer the question.



Section 4: Emergency Response Procedures

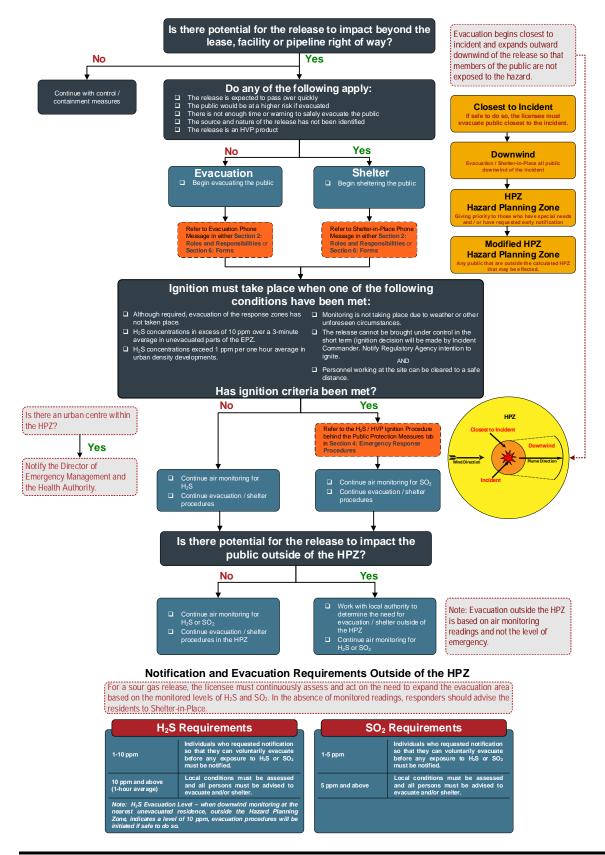
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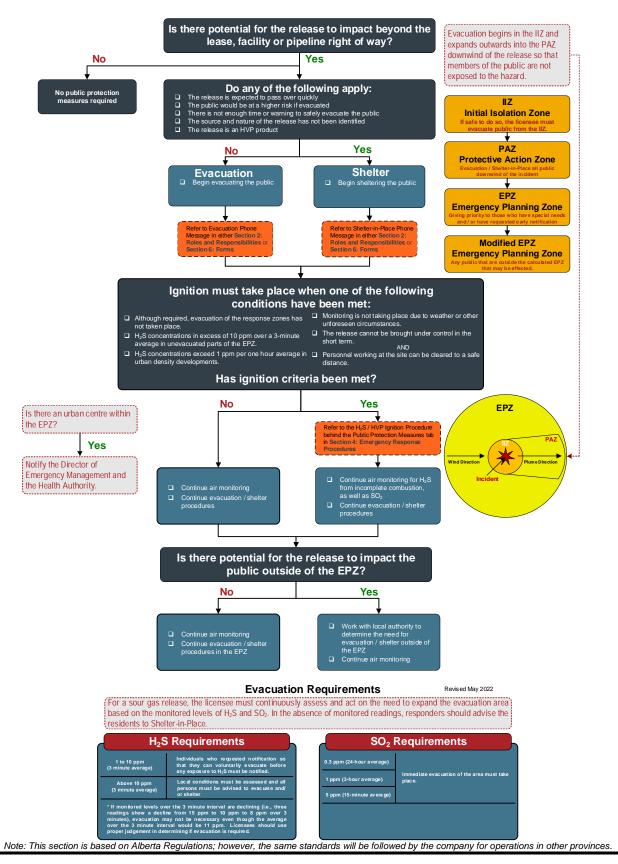


Public Protection Measures – British Columbia





Public Protection Measures - Alberta





Public Protection Measures, continued

There are three primary public protection measures that are used to ensure the safety of the public in the event of an incident: evacuation, shelter-in-place and ignition.

Evacuation

For long-term releases, evacuation is preferred to sheltering if public safety can be assured during the evacuation process.

Evacuation is a viable public protection measure in circumstances when:

- The location of the plume is known, and safe egress routes can be assured
- The release will not likely be contained in the near future
- Visibility and road conditions are good
- The residents clearly understand their directions

Tactical Evacuation: A measure to immediately move people to a safe area as part of emergency response and operations. Does not require approval from local authority but the local authority may enact an evacuation order, if required. The local authority must be advised if a tactical evacuation has occurred. Appropriate methods must be utilized to ensure transients (hunters, trappers, recreational users, non-resident landowners, etc.) within the EPZ are located and evacuated. Refer to Section 5: Forms for Evacuation Scripts for information that should be communicated as part of the evacuation process.

Planned Evacuation: An evacuation coordinated by local government authority that can authorize evacuation alerts and orders.

Residents should also be evacuated during ongoing emergency flaring or burning if their health and safety could be affected by the operation.

Special procedures may be required for evacuating large industrial operations and/or public facilities. If large numbers of people are involved, the licensee must address assistance with transportation. Refer to the Area Specific Information Section for information regarding transportation (e.g., providing school buses) or other changes in the normal notification procedures.

The licensee must continuously assess and act on the need to expand the evacuation area, based on the specifics of the incident, including harmful levels of hazardous substances.

The licensee is expected to monitor the air quality along the edge of the EPZ to determine if sheltering or evacuation criteria have been met outside the EPZ. Evacuation outside of the EPZ must be coordinated with the Local Authority.

Appropriate methods must be utilized to ensure transients (hunters, trappers, recreational users, non-resident landowners, etc.) within the EPZ are located and evacuated. When a tactical evacuation has taken place, the appropriate local authority must be notified.



Public Protection Measures, continued Shelter-In-Place

Shelter-in-place is considered the primary safety measure when the hazard is of a limited duration or the public would be at a higher risk if evacuated. Sheltering within a building creates an indoor buffer to protect affected individuals from higher (more toxic) concentrations that may exist outdoors. The goal is to reduce the movement of air into and out of the building until either the hazard has passed, or other appropriate emergency actions can be taken (such as evacuation).

Sheltering indoors is a viable public protection measure in circumstances when:

- There is insufficient time or warning to safely evacuate the public
- Residents are waiting for evacuation assistance
- The release will be of a limited size and /or duration
- The location of the release has not been identified
- The public would be at a higher risk if evacuated
- Escape routes traverse the hazards

Refer to either **Section 2**: **Roles and Responsibilities** or **Section 6**: **Forms** for the Shelter-in-Place Phone Message script to be used when contacting residents. Residents advised to shelter-in-place will be notified if additional measures are required, and when it is "all-clear".

Sheltering Measures for HVP Product Release

For a flammable or combustible liquid fire to start, a mixture of vapour and air must be ignited. There are many possible ignition sources:

- Sparks from electrical tools and equipment
- · Sparks, arcs, and hot metal surfaces from welding and cutting
- Tobacco smoking
- Open flames from portable torches and heating units, boilers, pilot lights, ovens, and driers
- Hot surfaces such as boilers, furnaces, steam pipes, electric lamps, hot plates, irons, hot ducts and flues, electric coils, and hot bearings
- Embers and sparks from incinerators, foundry cupolas, fireboxes, and furnaces
- Sparks from grinding and crushing operations
- Sparks caused by static electricity from rotating belts, mixing operations or improper transfer of flammable or hot combustible liquids

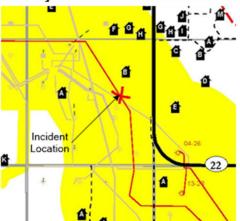
You can eliminate many ignition sources by:

- Removing open flames and spark-producing equipment
- Not smoking around these liquids
- Using approved explosion proof equipment in hazardous areas



Public Protection Measures, continued

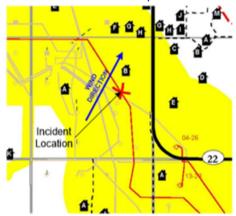
1. Identify the location of the incident on the map:



3. Determine the wind direction

Look for wind direction indications such as flags, windsocks, direction of smoke, etc..

Draw the wind direction on the map with an arrow.



5. Isolate the hazard area with roadblocks

If any residences exist between the optimal roadblock location and the EPZ, expand the EPZ to include those residences.

Additionally, if any residences only route of egress is through the EPZ, expand the EPZ to include those residences.

Legend



2. Determine the size of response zones (hazard areas):

EPZ - Emergency Planning Zone

Closest to Incident

Downwind

You can find this information:

- a) Labeled on the map
- b) In the site specific tables
- c) As the yellow are a on the map

If the incident is at a facility or if you have not yet confirmed the exact location of the incident, you must use the largest EPZ for the area. The largest EPZ for the area is shown in yellow on the map.

4. Draw the zones on map:

- a) EPZ The entire hazard area
- b) Those closest to the hazard
- c) Those downwind of the hazard



Following the appropriate provincial public protection measures chart, initiate public safety activities.

Residents closest to the hazard are the most at risk of being adversely affected.

Residents downwind of the EPZ are the second group to be evacuated / sheltered in place as being downwind of the hazard puts them at a higher risk than the rest of the residences in the EPZ that are upwind or crosswind from the hazard.



Public Protection Measures, continued Ignition

In conjunction with shelter-in-place and evacuation strategies, the release may be ignited at the source in order to reduce public exposure to the hazard. The combustion of the hydrogen sulphide (H_2S) results in the produced sulphur dioxide (SO_2) being carried high into the atmosphere allowing additional time for the public to safely evacuate. If an immediate threat to human life exists and there is not sufficient time to evacuate the hazard area or the Emergency Planning Zone (EPZ) – whichever is bigger – the On-Site Group Supervisor is authorized to ignite the release.

Note: Only those personnel trained in ignition procedures can determine if ignition is required and operate the ignition equipment.

Ignition of an HVP product release should occur only after the position of the plume has been established, after careful deliberation, and when safe to do so.

Until such time that a decision has been made to ignite a release, the licensee should take steps to minimize any chance of unplanned ignition in the area.

Note: Initial location of the plume may be identified by the following methods:

- Visually (i.e.; frost or condensation buildup, white cloud or dust cloud, dead vegetation, bubbling water, etc.)
- Auditory (i.e.; hissing or whistling sound, etc.)
- Smell (i.e.; smell of mercaptan rotten eggs)

When making the decision to ignite, the licensee must take the following into consideration:

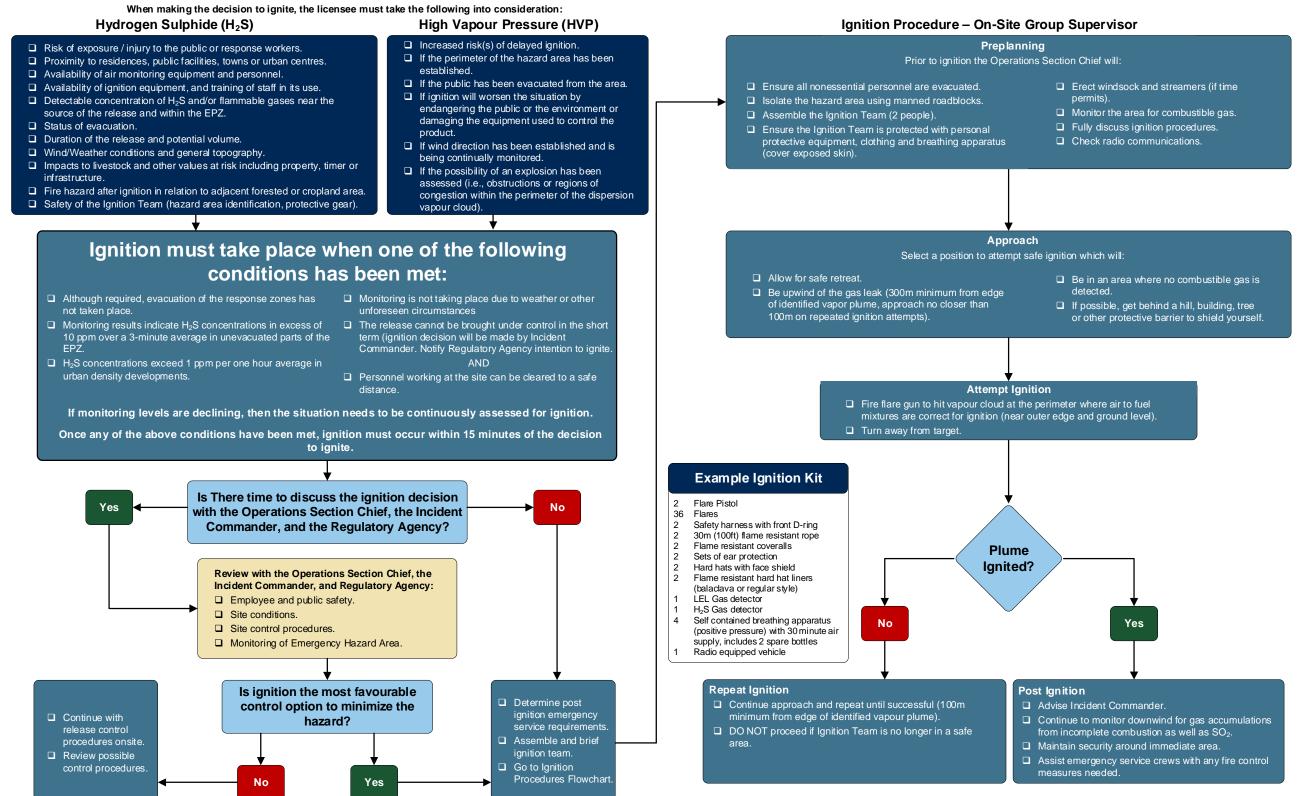
- If personnel are on-site, proceed to muster location for headcount and further instructions. Refer to Five Step Initial Response Guide in **Section 1: Initial Response** for First On-Scene Actions.
- Refer to the H₂S / HVP Ignition Procedure on the following page for further considerations.

If at all possible, the On-Site Group Supervisor must consult with higher authority individuals within the company (ideally the Operations Section Chief, Incident Commander, EOC Director, etc.) and the appropriate government regulator.



H₂S / HVP Ignition Procedure

Pre-Ignition Considerations – On-Site Group Supervisor





Public Protection Measures, continued Road and Airspace Closures

The company should receive authorization from local authorities or the RCMP before establishing roadblocks on public roads. The company must contact the RCMP and the transportation authority to have one-, two- or three-digit highways closed. However, if the safety of the public is in jeopardy, the company must be prepared to quickly restrict access to the area before contacting these agencies.

If warranted, the regulatory agency can issue a Closure Order that provides legal authority to close the area. The local authority may, if warranted, declare a Local State of Emergency. This grants the local authority special powers to do such things as road closures or declare mandatory evacuation.

The public must also be prevented from flying into the airspace above a gas release. It may be necessary to issue a Notice to Airmen (NOTAM) to advise pilots of restrictions in the airspace above the EPZ or to close the airspace for a certain radius from the release (a no-fly zone). NOTAMs are issued by NAV Canada and airspace closures are issued by Transport Canada's Aviation Operations Centre (AVOPS). NOTAMs or airspace closures may be requested by the licensee at a level 2 or level 3 emergency.

Air Monitoring

Air monitoring equipment is used to:

- Track/follow the plume.
- Determine if ignition criteria are met.
- Determine whether evacuation and / or shelter-in-place criteria have been met.
- Determine roadblock locations.
- Determine concentrations in areas being evacuated to ensure that evacuation is safe.
- Assist in determining when the emergency can be downgraded.

As such, H₂S, SO₂, LEL or other toxic substance concentrations will be monitored continuously during the incident response and it is crucial that Air Monitors continuously update their direct supervisor with monitored results.

- Air monitors (personal handheld, stationary and mobile) should be dispatched at a Level 1 Emergency.
- Air quality monitoring occurs downwind, with priority being directed to the nearest un-evacuated residence or area where people may be present.
- Licensee personnel will monitor and record the concentrations until a mobile air monitoring unit arrives
 or until the incident is over. At minimum, these readings must include LEL and H₂S.
- Mobile air quality monitoring units must be dispatched when it is evident that spill control measures are not effective and that a sour product release is likely to occur.
- For HVP releases, monitoring may occur downwind or upwind, depending on how the plume is tracking, with priority being directed to the nearest un-evacuated residence or areas where people may be present. The licensee is expected to provide monitored HVP product LEL information on a regular basis for the duration of the incident.
- If a sour gas release has been ignited, the licensee should continue to monitor response zones for H₂S from incomplete combustion, as well as SO₂.
- Ensure all equipment is operational and the appropriate documentation is available to verify testing and calibration requirements.



Spill Response

The spill response section can be used as a quick reference by first-on-scene responders to select and implement containment and recovery tactics with spill response equipment during the first 48-72 hours of the response. This section contains a collection of inland spill tactics that can be applied using obtainable resources to a liquid product release until additional resources and personnel arrive on site. This section is a reference tool and supplement to prior training, field experience, technical instruction, and equipment operation knowledge. The licensee will rely on the training and judgment of its first-on-scene responders to select only those tactics that can be accomplished safely.

Refer to the Petroleum Industry Release Reporting Requirements chart at the end of this section to determine the TDG and Provincial Reporting Requirements for each class of chemicals (as classified by the TDG Hazard Classification System).

Spill Response Objectives and Strategies

Objectives establish the desired outcomes of an incident and are statements of intent related directly to response priorities. Priorities are situational and influenced by many factors, with life safety always being the highest priority followed by incident stabilization and property and environment. The Incident Commander comes to a consensus on a collective set of objectives with response strategies. The following table contains some standard objectives with example strategies that can be utilized to assist in the first four to six hours of a spill response.

Objectives	Strategies			
	Identify hazard(s) of spilled material.			
	Establish work zones (hot, warm, and cold zones).			
	Establish site perimeter and access controls.			
Ensure the safety of	Consider evacuation or shelter-in-place, as needed.			
citizens and response personnel	Monitor air quality in impacted areas to ensure responders select appropriate Personal Protective Equipment (PPE).			
	Establish aircraft restrictions.			
	Develop a Health and Safety Plan for response personnel.			
	Run air dispersion model to determine potential evacuation zones.			
	Complete emergency shut-down procedures.			
	Eliminate potential flammable vapour ignition sources.			
Control the source of the spill	Initiate temporary repairs to stop the leak.			
σρ	Transfer product to an approved container or facility.			
	Construct barriers to prevent spill from reaching a waterbody.			
	Implement Control Points and pre-designated response strategies.			
	Identify and prioritize the environmentally sensitive areas.			
Maximize protection of	Identify Resources at Risk (RAR) in spill vicinity.			
environmentally sensitive areas	Track oil movement and develop spill trajectories.			
	Conduct visual assessments (e.g., aerial overflights, ground-truthing).			
	Identify, prioritize, and flag areas used as habitat by endangered species.			
	Develop/implement appropriate protection strategies.			



Spill Response, continued

Objectives	Strategies			
	Complete or confirm notifications.			
	Establish Incident Command Post.			
	Ensure local government and Indigenous officials are included in response organization.			
Manage a coordinated response effort	Initiate spill response Incident Action Plan.			
response enon	Ensure mobilization and tracking of response resources.			
	Account for personnel and equipment			
	Maintain, complete, and log all documentation related to the incident.			
	Evaluate planned response objectives vs. actual response.			
	Deploy containment boom at the spill source.			
Contain and recover	Deploy containment boom at appropriate recovery areas.			
spilled material	Conduct open water skimming.			
	Develop disposal plan.			
	Establish oiled wildlife reporting hotline.			
Recover and rehabilitate	Conduct injured wildlife search and rescue operations.			
injured wildlife	Operate wildlife rehabilitation center.			
	Establish team for injured wildlife.			
	Conduct appropriate shoreline cleanup efforts.			
Remove oil from impacted areas	Clean oiled structures.			
impuotod drodo	Clean oiled equipment.			
	Provide forum to obtain stakeholder input and concerns.			
Keep stakeholders	Provide stakeholders with details of response actions.			
informed of response activities	Identify stakeholder concerns and issues and address as practical.			
	Provide regulatory bodies details of response actions.			
	Provide timely safety announcements.			
Keep the public informed	Conduct public meeting, as appropriate.			
of response activities	Conduct regular news briefings.			
	Manage news media access to spill response activities.			

Control Points

The objective of control points is to identify pre-planned locations where spill responders can safely and effectively deploy oil spill response equipment to intercept and limit downstream movement of oil on a watercourse. Depending on the specific conditions at the time of a spill, one or more control points may be implemented as part of a response. Control points are intended to:

- 1. Protect sensitive areas downstream.
- 2. Provide locations for oil removal and collection.



Spill Response, continued

Typically, oil spill response entails multiple parallel and simultaneous activities including:

- 1. Source control (valve closures, clamping and pipeline drain-down)
- 2. Near source response (containment using berms and recovery using pumping and skimming) Downstream response (control points)

Control points are pre-identified points along watercourse's and lakes that provide responders with key tactical information and can greatly reduce planning and implementation of containment, recovery, public protection, and wildlife protection measures during a response to a spill. Control points are typically grouped in the following categories:

- 1. Critical Control Points are established based on the company's asset locations and are based on the following criteria:
 - a. River crossing with easy access and staging areas.
 - b. Upstream of environmentally sensitive areas.
 - c. Upstream or proximity to communities and public infrastructure such as drinking water intakes.
 - d. Downstream of major infrastructure such as pipelines, storage, or facilities.
 - e. In areas of high-volume transportation corridors.
- 2. Non-Critical Control Points may include the following:
 - a. Recreational areas
 - b. Private or public land
 - c. Boat launches

When assessing the location of a control point the following factors should be considered:

- 1. Sites should be located downstream of the watercourse crossing and at distances that can be reached in a two- to four-hour-response time.
- Sites should have reasonable land access.
- 3. Sites should have available working space for staging equipment and personnel.
- 4. Ideally, river flow should be slow or pooled, and/or with back eddies rather than turbulent flow conditions.
- 5. Ideally, sites should have public access, low banks, and should not be heavily vegetated.

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.

For a detailed list of control points, utilize the Western Canadian Spill Services (WCSS) website (http://www.wcss.ab.ca)



Spill Response, continued

Health and Safety

Committed to the protection of the health and safety of all spill response personnel and third parties whether members of the public or contractor personnel. The Site Safety Plan is intended to protect all personnel against potential health and safety hazards by providing information in identifying, evaluating, controlling risks, and explaining procedures to be followed during emergencies.

Provisions have been made to ensure that the health and safety of third parties, particularly members of the general public, is also protected. Third party protection procedures include evacuations, the monitoring of wind direction at the site of the release to determine the direction and spread of hazardous vapours and, if considered appropriate, conducting air monitoring in other areas where responders or third parties could be threatened.

Initial Site Assessment

The initial site assessment, hazard identification, and characterization will normally be performed by a minimum of two qualified persons outfitted in appropriate personal protective equipment. Where possible, a backup team should be immediately available. The information gained during the initial site assessment will be used to determine the site work zones (hot, warm, and cold zones) and in the development of the Site Safety Plan. The Site Safety Plan must be monitored on an ongoing basis and revised to reflect changing conditions. Personnel entering or already on site must be immediately advised of changes. The person responsible for the Site Safety Plan will ensure compliance is monitored whenever any person is within the spill response zones or any area that may be threatened as a result of the spill.

Safety Briefing

Response personnel and others authorized to enter the response area must be briefed on the content of the Site Safety Plan prior to entering the site. The person assigned to be responsible for site safety or their delegate will conduct this briefing. A copy of the Site Safety Plan must be available for reference at the spill site. Responders must also have access to the Safety Data Sheet (SDS) for the spilled product if the SDS does not form part of the Site Safety Plan.

- 1. SDS provide detailed hazard, precautionary, protection, and emergency information on hazardous products and may be obtained from the manufacturer or supplier of the product. Copies of SDS shall be available for all products used or handled at spill sites.
- 2. A copy of the appropriate SDS should be attached to the Site Safety Plan.
- 3. Contractors are required to have SDSs available for all products that they bring to spill sites.
- 4. The appropriate SDS or Emergency Response Guidebook should be referred to for spills or leaks of substances not specifically covered by this plan.

Initial Site Safety and Hazard Control Plan

An Initial Site Safety and Hazard Control Plan should be completed as soon as possible by one of the initial responders and updated as required. When completing the Initial Site Safety and Hazard Control Plan, some of the information may not apply during the initial stages of the response but may change within a short period, thereby altering the PPE and/or other requirements.



SPILL RESPONSE, continued

The Initial Site Safety and Hazard Control Plan:

- 1. Aids the initial first responders in assessing hazards related to the incident.
- 2. States the required PPE to be used.
- 3. Documents important health and safety information.
- 4. Serves as an interim "Plan" until a Site Safety Plan is developed.
- 5. Assigns responsibilities.
- 6. Identifies "site set-up" features that may be required.
- 7. Upon the completion and delivery of the Site Safety Plan, the Initial Site Safety and Hazard Control Plan becomes "void".

Western Canadian Spill Services (WCSS)

WCSS maintains spill contingency plans and provides spill response equipment to all member companies that do not maintain their own full spill response plans.

WCSS - http://www.wcss.ab.ca/

Spill Contingency Plan - http://www.wcss.ab.ca/contingency-manual.shtml

Live Equipment Report - http://wcss.ab.ca/emis

British Columbia Petroleum Industry Release Reporting Requirements

All spills exceeding the spill/release quotas listed in the table on the following page MUST be reported immediately to the appropriate regulatory agency.

appropriate regulatory agency.							
Agency	Reportable Spills	Report Type	Report to				
	Report when: 1) If a spill/release occurs or is at imminent risk of occurring. 2) Any Minor Incident through KERMIT. **See Note**	Verbal	24 Hour Number 800-663-3456 (Within 1 hour of a level 1, 2 or 3 emergency)				
Emergency Management	 3) When a sour gas product is released, any measurement of 10 ppm or greater measured at 1 metre from the source of the leak. 4) All spills or releases of any amount of material which impacts or may impact a body of water. 	Written	Electronic submission through the Online Minor Incident Reporting System, operated through KERMIT (Within 24 hours of a Minor incident)				
BC (EMBC) BC Oil & Gas Commission (OGC)	 5) All spills or releases of hazardous substances which are not provincially regulated (such as radioactive substances). 6) All pipeline incidents, such as spills during construction phase or failure (without release) of any pressure control or ESD device. 7) All Substances spilled/released, or likely to be spilled/released when quantities are equal to or exceed the quantities listed in the Environment Reporting Requirements column in the Release Reporting Thresholds table on the following page. Response to land based spills: 	Written	Minister of Environment Initial Report - as soon as possible on request of the minister Follow-up Report - at least once every 30 days after the spill began (if continuing) and any time the previously reported information has become inaccurate or incomplete				
	 During the day must be initiated within 6 hours from time of discovery. During the weekend or night must be initiated within 12 hours from time of discovery. 		End of Spill Report - 30 days after spillage has been contained and eliminated.				
	Environmental emergencies if: 1) The emergency involves any of the substances identified in Environment & Climate Change Canada's E2 List of regulated substances. See the website	Verbal	OGC / EMBC 24 Hour Number 800-663-3456				
Canadian Environmental	link at the bottom of the following page for more information. Note: CEPA has not identified specific reporting thresholds; however, CEPA has suggested that existing provincial reporting thresholds or TDG reporting thresholds are acceptable for use. A Schedule 8 written report through SWIM must be completed in the case of:		As soon as possible, submit a Schedule 8 through the SWIM				
Protection Agency (CEPA)	 An environmental emergency involving the release of a hazardous substance that: 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 c) Constitutes or may constitute a danger in Canada to human life or health 2) The reasonable likelihood of an occurrence of an environmental emergency 	Written	(Single Window Information Manager) system				
Transportation of Dangerous Goods (TDG)	Substances regulated by Transportation of Dangerous Goods if: 1) A release is anticipated, or the release meets or exceeds the reporting threshold in the TDG Reporting Requirements column in the Release	Verbal	911 Local Authority Dangerous Goods OGC / EMBC 800-663-3456				
	Reporting Thresholds table on the following page.	Written	Within 30 days				
Canadian Transport Emergency Centre (CANUTEC)	Loss and theft reporting: 1) CANUTEC - all loss or theft of dangerous goods materials 2) Natural Resources Canada Inspector - Class 1 explosive materials only	Verbal	1) 888-226-8832 or 613-996-6666 2) 613-995-5555 3) 613-995-0479				
,	3) Canadian Nuclear Safety Commission - Class 7 radioactive materials only	Written	Within 30 days				
Department of Fisheries and Oceans (DFO)	Department of Fisheries nd Oceans (DFO) 1) A release of any substance deleterious to fish into a fish bearing water body.		OGC / EMBC 24 Hour Number 800-663-3456 Via Transportation Safety Board				
Canada Energy Regulator	Immediately reportable and near-miss events as defined in the Event Reporting Guidelines: 1) An incident that harms people or the environment,	Verbal	(TSB) Reporting Hotline 819-997-7887				
(CER)	2) A rupture, or	Written	PipelineNotifications@tsb.gc.ca				
& Transportation Safety Board (TSB)	3) A toxic plume Note: Immediately reportable incidents must be reported within 3 hours to both	Written	CER Online Event Reporting System (OERS) https://apps.cer-rec.gc.ca/ers/home/index				
	the TSB Reporting Hotline and CER's OERS. If applicable, refer to the Federal Roles & Responsibilities chart in SECTION 5: EXTERNAL AGENCIES and the CER site section behind the AREA SPECIFIC INFORMATION tab for further	Written	CER - Within 21 days after the day of incident/near-miss				
	regulations, definitions and reporting guidelines.	Written	TSB - Within 30 days after the day of the incident/near-miss				
Canadian Nuclear Safety	All radioactive releases must be reported immediately.	Verbal	613-995-0479				
Commission (CNSC)	Immediately reportable events on First Nation reserve lands only:	Written	Within 21 days				
Indian Oil & Gas (IOGC)	 Any health or environment-threatening emergency or off-lease spills. On-lease spills greater than 1m³. 	Verbal	IOGC Tsuu T'ina Office 403-292-5625				

**Note: The permit holder must report any minor incident (both spill and non-spill related) to the OGC within 24 hours by electronic submission through the Online Minor Incident Reporting System, opened through KERMIT (Form A). In addition to Form A, minor spills and leaks must also be reported immediately to EMBC so that a Dangerous Goods Incident Report (DGIR) number may be issued.

Lead Agency Contact Numbers					
British Columbia					
Emergency Management BC (EMBC) 800-663-3456					
BC Oil & Gas Commission (OGC)	800-003-3430				
Canada					
CANUTEC					
All Provinces 888-CAN-UTEC (888-226-8832) 613-996-6666					
Canada Energy Regulator (CER) / Transportation Safety Board of Canada (TSB)					
TSB Reporting Hotline (Pipelines) 819-997-7887					

Note: Spills must be reported promptly to avoid possible prosecution.

OGAA S.37 - Spillage

- 1) A permit holder and a person carrying out an oil and gas activity must
 - (a) Prevent spillage, and
 - (b) Promptly report to the commission any damage or malfunction likely to cause spillage that could be a risk to public safety or the environment
- 2) If spillage occurs, a permit holder or person carrying out an oil and gas activity must promptly do all of the following:
 - (a) Remedy the cause or source of the spillage;
 - (b) Contain and eliminate the spillage:
 - (c) Remediate any land or body of water affected by the spillage;
 - (d) If the spillage is a risk to public safety or the environment, report to the commission:
 - (i) The location and severity of the spillage, and $% \left(x\right) =\left(x\right) +\left(x\right)$
 - (ii) Any damage or malfunction causing or contributing to the spillage.
- 3) A person who is aware that spillage is occurring or likely to occur must make reasonable efforts to prevent or assist in containing or preventing the spillage.

Please refer to the BC Environmental Management Act; <u>Spill Reporting Regulation</u>, Schedule "Reporting Levels for Certain Substances" for determining reportable spillage amounts of other substances not listed here.

Even though some spills are not reportable, the requirement to clean up the spill is still mandatory. Spills of reportable amounts which occur in a secondary containment are still a reportable incident.

British Columbia Petroleum Industry Release Reporting Requirements

All spills exceeding the spill/release quotas listed in the table on the following page MUST be reported immediately to the appropriate regulatory agency.

appropriate regulatory agency.						
Chemical Class	Substance / Example	T.D.G. Ro Road. Rail or Marine	eporting Requirements Loss or Theft	B.C. (OGC / EMBC) Reporting Requirements		
	Hydrogen Sulphide (H ₂ S)	Any quantity	Any quantity	10 ppm or greater		
	Hydraulic Oil	No TDG F	Reporting Requirements	100 L on-site		
	Methanol	S	ee Class 3 & 6.1	Any release off-site		
	Crude Oil / Emulsion		See Class 3	100 L on-site / Any release off-site		
Other Released	Produced / Salt Water	No TDG	Reporting Requirements	200 L / Any release off-site		
Substances	Drilling or Invert Mud	No TDG	Reporting Requirements	4001 " / 4 1 " "		
	Condensate		See Class 3	100 L on-site / Any release off-site		
	Glycol	No TDG Reporting Requirements		200 kg or 200 L		
	Fresh Water			10,000 L		
	Any fluid with toxic substances	No TDG	Reporting Requirements	25 L		
Class 1 Explosives	Ammunition Nitro-glycerine	Any quantity of Packing Group II	Any quantity in Class 1.1, 1.2, and 1,3 Total quantity of 450 kg or more in Class 1.4 (except 1.4S), 1.5, or 1.6	50 kg, or less if the substance poses danger to public safety		
Class 2.1 Flammable Gases	Methane Propane Butane Natural Gas (see line 25 below)		Total quantity of 450 kg or more	10 kg		
Class 2.2 Non-Flammable Gases	Compressed Air O ₂ N ₂ CO ₂	Any quantity	No TDG Reporting Requirements	10 kg		
Class 2.3 Toxic Gases poisonous or corrosive)	SO ₂ Hydrogen Cyanide Nitric Acid Anhydrous Ammonia		Any quantity	5 kg		
Class 3 Flammable Liquids	Gasoline Diesel Methanol Demulsifiers Scale Inhibitors		Total quantity of 450 kg or more of desensitized explosives Any quantity of UN1261, Nitromethane	100 L		
	Lube Oil			100 L		
Class 4.1 Flammable Solids	Calcium Resinate Naphthalene Crude	Total qua alcium Resinate aphthalene Any quantit than 20%				
Class 4.2 Spontaneously Combustible	Activated Carbon Potassium Sulphide Phosphorus		Wetted, with not less than 10% water by mass Total quantity of 450 kg or more in Packing Groups I or II			
Class 4.3 Dangerous when Wet	Molten Sulphur Calcium Carbide Sodium Activated Carbon		Total quantity of 450 kg or more in Packing Groups I or II			
Class 5.1 Oxidizing Substances	Calcium Nitrate Ammonium Nitrate Bleaches	Any quantity of Packing Group I or II More than 30 L or 30 kg of Packing Group III	Total quantity of 450 kg or more in Packing Groups I or II Any quantity of UN1485, Potassium Chlorate; UN1486, Potassium Nitrate; UN 1487, Potassium Nitrate and Sodium Nitrate Mixture; UN1489, Potassium Perchlorate; UN1495, Sodium Chlorate; UN1498, Sodium Nitrate; UN1499 Sodium Nitrate and Potassium Nitrate Mixture; UN1511, Urea Hydrogen Peroxide; UN1942 Ammonia Nitrate, with not more than 0.2% combustible substances, including any organic substance calculated as carbon, to the exclusion of any other added substances; UN2014 Hydrogen Peroxide, Aqueous Solution with not less than 20% but not less than 60% hydrogen peroxide (stabilized as necessary); UN2015, Hydrogen Peroxide, Stabilized; UN2031, Nitric Acid, other than red fuming; UN3149, Hydrogen Peroxide and Peroxyacetic Acid Mixture with acid(s), water and not more than 5% peroxyacetic acid, stabilized	50 kg or 50 L		
Class 5.2 Organic Peroxides	Methyl Ethyl Ketone Peroxide Succinic Acid Peroxide		Any quantity in Class 5.2, Type B, liquid or solid, temperature controlled	1 kg or 1 L		
Class 6.1 Poisonous Toxic Substances	Arsenic Lead Acetate Mercuric Oxide Methanol Toxic Pesticides		Any quantity of Packing Group I	5 kg or 5 L		
Class 6.2 nfectious Substances	Infectious Substances affecting Humans / Animals	Any quantity of Category A or B	Any quantity	1 kg or 1 L, or less if the waste pose a danger to public safety or the environment		
Class 7 Radioactive Substances	Uranium Plutonium Naturally Occurring Radioactive Materials (N.O.R.M.)	For packages being transported under exclusive use: (i) 10 mSv/h on the external surface (ii) 2 mSv/h on the surface of the conveyance, and (iii) 0.1 mSv/h at a distance of 2 m from the surface For packages not being transported under exclusive use: (i) 2 mSv/h on the external surface (ii) 0.1 mSv/h at a distance of 1 m from the package, (iii) 2 mSv/h on the surface of the conveyance, and (iv) 0.1 mSv/h at a distance of 2 m from the surface of the conveyance.	Any quantity	Any quantity that could pose a dang- to public safety and an emission level greater than the emission level established in section 20 of the "Packaging and Transport of Nuclea Substance Regulations"		
Class 8 Corrosives	Acids Bases Batteries Caustic Amine	Any quantity of Packing Group I or II 30 L or 30 kg of Packing Group III	Total quantity of 450 kg or more in Packing Group I or II Any quantity of UN1796, Nitrating Acid Mixture with more than 50% nitric acid; UN1826, Nitrating Acid Mixture, Spent, with more than 50% nitric acid; UN2032, Nitric Acid, Red Fuming	5 kg or 5 L		
Class 9 Miscellaneous Products, Substances & Organisms, Environmentally Hazardous Substances	P.C.B. Asbestos Substances not regulated by the Transportation of Dangerous Goods Act	30 L or 30 kg of Packing Group II or III, or without Packing Group	No TDG Reporting Requirements	25 kg or 25 L of Packing Group II o III, or without Packing Group		

	Other items in the BC Spill Reporting Regulation that are applicable to the petroleum industry but do not fit in the above table format.					
Item	Substance Spilled	Specified Amount				
14	Waste containing dioxin as defined in Section 1 of the Hazardous Waste Regulation	1 k or 1 L, or less if the waste poses a danger to public safety or the environment				
15	Leachable toxic waste as defined in Section 1 of the Hazardous Waste Regulation	25 kg or 25 L				
16	Waste containing polycyclic aromatic hydrocarbons as defined in Section 1 of the Hazardous Waste Regulation	5 kg or 5 L				
17	Waste asbestos as defined in Section 1 of the Hazardous Waste Regulation	50 kg				
18	Waste oil as defined in Section 1 of the Hazardous Waste Regulation	100 L				
20	PCB wastes as defined in Section 1 of the Hazardous Waste Regulation	25 kg or 25 L				
23	A hazardous waste as defined in Section 1 of the Hazardous Waste Regulation and not covered under items 1 to 22 (built into above table)	25 kg or 25 L				
24	A substance, not covered by items 1 to 23 (built into above table) that can cause pollution	200 kg or 200 L				
25	Natural Gas	10 kg, if there is a breakage in a pipeline or fitting operated above 100 psi that results in a sudden and uncontrolled release of natural gas				

Alberta Petroleum Industry Release Reporting Requirements

All spills exceeding the spill/release quotas listed in the table on the following page MUST be reported immediately to the appropriate regulatory agency.

Report Type Alberta Energy Regulator AER 24 Hour Number 1) Any release that has caused, is causing, or may cause an adverse affect* Verbal 800-222-6514 (AER) - Oil & Gas Regulation 2) Any pipeline release regardless of volume 3) Any release greater than 2m3 on-site 4) Any release off-site 5) Any release into a water body (as defined in the Water Act) or a watercourse, groundwater, or surface water (as stated in the Release Next business day following verbal report Reporting Regulation) of spill, the AER forwards a copy of the 6) Any spill while substance is being transported from a well or facility to the Release Report form to the company to **Alberta Energy Regulator** intended destination. (AER) - Environment Written complete. The form is to be submitted 7) Any release of substance listed as toxic, prohibited or restricted by CEPA with supporting documentation within 7 Regulation 8) Any release that meets or exceeds the reporting threshold in the days to the local field centre (if the Environment Reporting Requirements column in the Release Reporting release caused adverse affect)* Thresholds table on the following page. Note: The AER Table of Reportable Releases found below further breaks down release types by industry activity. AER 24 Hour Number Environmental emergencies if: Verbal 800-222-6514 1) The emergency involves any of the substances identified in Environment & Climate Change Canada's E2 List of regulated substances. See the website link at the bottom of the following page for more information. Note: CEPA has not identified specific reporting thresholds; however, CEPA has suggested that existing provincial reporting thresholds or TDG reporting thresholds are acceptable for use. **Canadian Environmental** A Schedule 8 written report through SWIM must be completed in the case of: As soon as possible, submit a Schedule **Protection Agency (CEPA)** Written 1) An environmental emergency involving the release of a hazardous 8 through the SWIM (Single Window substance that: Information Manager) system a) Has or may have an immediate or long-term harmful effect on the environment Constitutes or may constitute a danger to the environment on which human life depends c) Constitutes or may constitute a danger in Canada to human life or health 2) The reasonable likelihood of an occurrence of an environmental emergency 911 Substances regulated by Transportation of Dangerous Goods if: Alberta Transportation -Local Authority 1) A release is anticipated, or the release meets or exceeds the reporting Environmental and Dangerous Goods Verbal **Environmental and Dangerous** threshold in the TDG Reporting Requirements column in the Release Emergencies (EDGE) **Goods Emergencies (EDGE)** Reporting Thresholds table on the following page. 1-800-272-9600 1) 888-226-8832 or 613-996-6666 Loss and theft reporting: **Canadian Transport** Verbal 2) 613-995-5555 1) CANUTEC - all loss or theft of dangerous goods materials **Emergency Centre** 3) 613-995-0479 2) Natural Resources Canada Inspector - Class 1 explosive materials only (CANUTEC) Written Within 30 days Canadian Nuclear Safety Commission - Class 7 radioactive materials only AER 24 Hour Number Department of Fisheries and Verbal 1) A release of any substance deleterious to fish into a fish bearing water body

Immediately reportable and near-miss events as defined in the Event

Note: Immediately reportable incidents must be reported within 3 hours to both

the TSB Reporting Hotline and CER's OERS. If applicable, refer to the Federal

Roles & Responsibilities chart in SECTION 5: EXTERNAL AGENCIES and the CER site section behind the AREA SPECIFIC INFORMATION tab for further

1) An incident that harms people or the environment,

regulations, definitions and reporting guidelines.

On-lease spills greater than 1m³

All radioactive releases must be reported immediately.

Immediately reportable events on First Nation reserve lands only:

1) Any health or environment-threatening emergency or off-lease spills.

ıtion.

Reporting Guidelines:

2) A rupture, or

3) A toxic plume

Oceans (DFO)

(CER)

(TSB)

Canada Energy Regulator

Transportation Safety Board

Canadian Nuclear Safety

Indian Oil & Gas (IOGC)

Commission (CNSC)

Note: Spills must be reported promptly to avoid possible prosecu					
Lead Agency Contact Numbe	rs				
Alberta					
Alberta Energy Regulator (AER) Field C	Offices				
Spill Reporting Line	800-222-6514				
Canada					
Alberta Transportation - Environmental and Dangerous Goods B	Emergencies (EDGE)				
Province Wide	800-272-9600				
CANUTEC					
888-CAN-UTEC All Provinces (888-226-8832) 613-996-6666					
Canada Energy Regulator (CER) / Trans Canada (TSB)	sportation Safety Board of				
TSB Reporting Hotline (Pipelines)	819-997-7887				
* Definition of Adverse Affect					
Is defined by the Environmental Protection & Enhancement Act (EPEA) as "impairment of or damage to the environment, human health or safety, or property."					
For the purpose of reporting, the industry shall use the following guidelines to assess whether the release may cause, is causing or has caused an adverse affect.					
Any third party impact (off-lease), e.g. crop damage, vegetation damage or livestock impact					
Unrecovered spilled substance likely to contaminate surface or groundwater					
Contaminated groundwater and / or surface water					

 Release or spill has potential for offsite odour complaints · Toxic or flammable release to air going off-site

AER Table of Reportable Releases							
Reportable Release	Oil & Gas	Mining - Oil Sands	In Situ - Oil Sands	Pipelines	Pipeline Installations	Pipeline- Related Activities & Equipment	
Any leak or break from a pipeline				Х			
Release of a substance that has caused, is causing, or may cause an adverse effect	Х	х	Х	Х	Х	X	
Release of a substance into a water body (as defined in the Water Act)	Х	Х	Х	Χ	Х	Х	
Release of a substance into a watercourse, groundwater, or surface water (as stated in the <i>Release Reporting Regulation</i>)	Х	Х	Х	Х	Х	Х	
Release of oil, water or unrefined product off-site	Х	Х	Х	Х	Х	Х	
Release of oil, water, or unrefined product exceeding 2 cubic metres (m³) on-site	Х	Х	Х	Х	Х	Х	
A liquid spill (as defined in the Oil Sands Conservation Rules)		Х	Х				
Release of a liquid hydrocarbon exceeding 2 m ³		Х	Х	Х	Х	X	
Uncontrolled gas release of more than 30,000 m ³	Χ	Х	Х	Χ	Х		
Release of gas or gas equivalent exceeding 30,000 m ³		Х	Х	Х	Х		
Well flowing uncontrolled	Х	Х	Х				

Verbal

Written

Written

Written

Written

Verbal

Written

Verbal

See following page for spill / release quotas.

800-222-6514

Via Transportation Safety Board (TSB)

Reporting Hotline

819-997-7887

CER Online Event Reporting System

(OERS)

https://apps.cer-rec.gc.ca/ers/home/index

CER - Within 21 days after the day of

incident/near-miss TSB - Within 30 days after the day of the

incident/near-miss 613-995-0479

Within 21 days

IOGC Tsuu T'ina Office

403-292-5625

Alberta Petroleum Industry Release Reporting Requirements

All spills exceeding the spill/release quotas listed in the table on the following page MUST be reported immediately to the appropriate regulatory agency. **Chemical Class** Road, Rail or Marine Hvdraulic Oil No TDG Reporting Requirements Refined products follow TDG requirements Methanol See Class 3 & 6.1 Natural Gas See Class 2.1 30,000 m³ Crude Oil / Emulsion See Class 3 (Unrefined) Produced / Salt Water No TDG Reporting Requirements Any release off-site (Report to AER and notify landowner) Other Released (Unrefined) Substances Condensate (Unrefined) See Class 3 Any release that has caused, is causing, or may cause an adverse effect Ammonia Glycol No TDG Reporting Requirements Any release into a water body, Drilling Waste (Unrefined) groundwater, or surface water Oilfield Waste (Unrefined) Any quantity in Class 1.1, 1.2, and 1.3 Ammunition Nitro-glycerine All releases which could pose Any quantity of Packing Group II Explosives Total quantity of 450 kg or more in Class 1.4 (except 1.4S), 1.5, or 1.6 All releases which could pose a danger, or any sustained release of 10 minutes or more Methane Class 2.1 Propane Total quantity of 450 kg or more Flammable Gases Butane Natural Gas Compressed Air Class 2.2 $\begin{array}{c} O_2 \\ N_2 \\ CO_2 \end{array}$ No TDG Reporting Requirements $30,000 \text{ m}^3$ Any quantity Non-Flammable Gases H₂S SO₂ Class 2.3 Hydrogen Cyanide Nitric Acid Toxic Gases Any quantity (poisonous or corrosive) Anhydrous Ammonia Bitumen (Unrefined) Gasoline Diesel Total quantity of 450 kg or more of desensitized explosives Class 3 Methanol Flammable Liquids Any quantity of UN1261, Nitromethane Demulsifiers Scale Inhibitors Lube Oil Total quantity of 450 kg or more of desensitized explosives Calcium Resinate Class 4.1 Any quantity of UN1357, Urea Nitrate, with not less than 20% water, by mass; UN3370, Urea Nitrate, Wetted, with not less than 10% water Naphthalene Flammable Solids by mass > 2m³ on-site Activated Carbon Potassium Sulphide Total quantity of 450 kg or more in Packing Groups I or II Any release off-site (Report to AER and notify landowner) Spontaneously Combustible Phosphorus Molten Sulphur Class 4.3 Calcium Carbide Any release that has caused, Total quantity of 450 kg or more in Packing Groups I or II Dangerous when Wet is causing, or may cause an adverse effect Sodium Activated Carbon Total quantity of 450 kg or more in Packing Groups I or II Any release into a water body, or a watercourse, groundwater, or surface water Any quantity of UN1485, Potassium Chlorate; UN1486, Potassium Nitrate; UN 1487, Potassium Nitrate and Sodium Nitrate Mixture; UN1489, Potassium Perchlorate; UN1495, Sodium Chlorate; Any quantity of Packing Group I or II UN1498, Sodium Nitrate; UN1499 Sodium Nitrate and Potassium Nitrate Mixture; UN1511, Urea Hydrogen Peroxide; UN1942 Ammonia Nitrate, with not more than 0.2% combustible substances, Calcium Nitrate More than 30 L or 30 kg of Packing Group III Class 5.1 Ammonium Nitrate Oxidizing Substances Bleaches including any organic substance calculated as carbon, to the exclusion of any other added substances; UN2014 Hydrogen Peroxide, Aqueous Solution with not less than 20% but not less than 60% hydrogen peroxide (stabilized as necessary); UN2015, Hydrogen Peroxide, Stabilized; UN2031, Nitric Acid, other than red fuming; UN3149, Hydrogen Peroxide and Peroxyacetic Acid Mixture with acid (s), water and not more than 5% peroxyacetic acid, stabilized Methyl Ethyl Ketone Peroxide Class 5.2 Any quantity in Class 5.2, Type B, liquid or solid, temperature 1 kg or 1 L Succinic Acid Organic Peroxides > 2 m³ on-site local AER office and notify landowner) Lead Acetate Mercuric Chloride Class 6.1 Any quantity of Packing Group I Any release that has caused. Poisonous Toxic Substances Mercuric Oxide is causing, or may cause an adverse effect Toxic Pesticides Any release into a water body, or a watercourse, groundwater, or surface water Class 6.2 Infectious Substances affecting Any quantity of Category A or B Any quantity All releases Infectious Substances For packages being transported under exclusive use: (i) 10 mSv/h on the external surface (ii) 2 mSv/h on the surface of the conveyance, and (iii) 0.1 mSv/h at a Uranium distance of 2 m from the surface Discharge or radiation level exceeding 10 mSv/h at package surface & 200 u Sv/h, Naturally Occurring Radioactive Materia For packages not being transported under exclusive Any quantity Radioactive Substances (i) 2 mSv/h on the external surface (ii) 0.1 mSv/h at a distance of 1 m from the package, (iii) 2 mSv/h on the (N.O.R.M.) surface of the conveyance, and (iv) 0.1 mSv/h at a distance of 2 m from the surface of the conveyance. > 2 m³ on-site Any release off-site (Report to local AER office and notify landowner) Acids Bases Total quantity of 450 kg or more in Packing Group I or II Any quantity of UN1796, Nitrating Acid Mixture with more than 50% nitric acid; UN1826, Nitrating Acid Mixture, Spent, with more than 50% nitric acid; UN2032, Nitric Acid, Red Fuming Any quantity of Packing Group I or II Class 8 **Batteries** Corrosives is causing, or may cause an adverse effect 30 L or 30 kg of Packing Group III Caustic Any release into a water body, or a watercourse, groundwater, or surface water Miscellaneous Products P.C.B. Asbestos 30 L or 30 kg of Packing Group II or III, or without Substances & Organisms 25 kg or 25 L No TDG Reporting Requirements **Packing Group** Environmentally Hazardous Substances Other Any well flowing uncontrolled, any burning of effluent from a well or facility and any fire where loss exceeds 2m³ of oil, or 30,000m³ of gas where damage to well head occurs



Containment and Recovery

Understanding Environments – Ground and Water

A spill can occur in several different environments. The type of environment will influence the most appropriate technique to be used for the response strategy, while the fate of oil will be influenced by many other situational and local factors. The response can be complicated due to geophysical and environmental factors that can affect the oil spill's behavior.

	Gre	ound
	Permeable Ground	Impermeable Ground
Understand oil behavior:	Oil on permeable ground will flow in both horizontal and vertical directions. Penetration of ground will depend on the oil type and the porosity and permeability of the surface materials.	Oil on impermeable ground will either remain relatively static on the terrain or follow the path of least resistance if a slope is present. It is likely to collect in depressions and watercourses.
Identify resources at risk:	 Examples of resources needing protection include: Non-vegetated: mud/silt; sand; pebble/boulders. Vegetated: grassland; forest; wetland. 	Examples of resources needing protection include: • Drainage systems • Watercourses • Utilities
Response Considerations:	 Penetration of soil below the uppermost layer must be minimized. Prevent oil from entering areas with ground water. Drains and inlets should be blocked. 	 Oil should be contained as soon as possible. Any flowing oil should be intercepted quickly to prevent further contamination of the surface. Drains and inlets should be blocked.

Permeable Ground

Impermeable Ground







	W	ater
	Static Water	Moving Water
Understand oil behavior:	Oil on static water will float, spreading to form a thin surface layer. Water is rarely truly "static", with wind-induced waves causing spilled oil to drift.	Oil can be rapidly transported by moving water, following the direction of both wind and currents. The oil generally spreads to form a thin surface layer and will also be subjected to significant weathering processes.
Identify resources at risk:	Examples of resources needing protection include: Ponds Lakes Reservoirs	Examples of resources needing protection include: Rivers Streams Water intakes Fishing areas
Response Considerations:	 Prevent oil from spreading beyond the water body and contaminating further surfaces. Consider impact of oil moving into vegetated areas such, as reed beds. This will act to trap oil making it more difficult to recover. 	 Oil should be contained as soon as possible and collected. Intercept oil flowing downstream to prevent further contamination, while protecting resources at risk.

Static Water



Moving Water





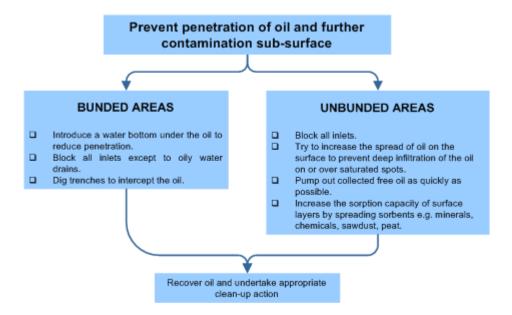
Containment and Recovery, continued Containment of Spilled Product

On Permeable Ground

Permeable ground will pose challenges to the containment of oil as it flows in both a horizontal and vertical direction and will travel with the direction of groundwater flow once it is reached.

1. Response Priorities

When responding to a spill on permeable surfaces, it is important to minimize the amount of oil that can penetrate below the surface; this should require the oil to be spread over a large surface area in the attempt to reduce head pressure on the surface to prevent penetration. This may well be the preferable option compared to long-term operations of subsoil and groundwater clean-up.



2. Retention Capacities in Permeable Surfaces

Each type of permeable surface will allow oil to permeate at different rates and will retain oil at varying capacities. Although the pore spaces in coarser soils are larger, oil will flow through more readily (due to gravity) thus giving a lower retention capacity.

Finely packed sediments retain the oil in two ways; first, the oil molecules cannot pass so easily between the particles due to their size and secondly because the forces associated with capillary action hold the oil in the pore spaces.

Surface area is also a factor in retention capacities; small grain sediments have a higher surface area and therefore hold more oil on the surface of the grains than larger grained sediments.



Surface Type	Capacity (Itrs/m³)		
Stones / Coarse Gravel	5		
Gravel / Coarse Sand	8		
Coarse Sand / Medium Sand	15		
Medium Sand / Fine Sand	25		
Fine Sand / Silt	40		

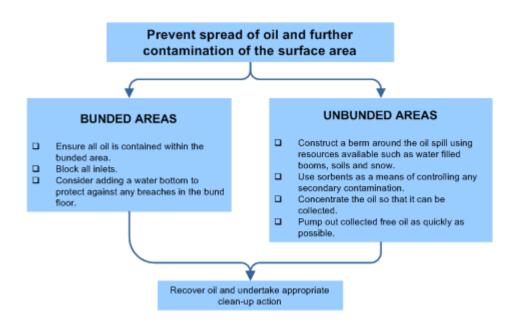
Note: Groundwater movement is very slow, usually between 0.5 m and 1.5 m per day. If oil reaches below subsurface layers, a study of the underlying hydrogeology to identify the most optimal location for the recovery of oil. Different recovery methods can then be put in place, preventing both the further spread of the oil, and flushing from the groundwater system.

On Impermeable Ground

Spill on impermeable ground will remain static until it is recovered, unless a gradient is present that may cause it to spread.

1. Response Priorities

If spills on impermeable ground, the response should first prevent the oil from further spreading and potentially contaminating other surface areas. Once contained, the oil will then need to be recovered through either manual or mechanical methods.





2. Spills in Urban Areas

Urban and built-up areas will contain a vast amount of man-made surface areas sitting alongside natural environments. These man-made surface areas will often be impermeable in nature, so prevention of spread and containment remains the main priority, however, urban areas also pose a significant health and safety risk.

Urban areas are likely to feature intricate drainage and sewage systems, therefore important to prevent the spread of oil to these highly sensitive areas where there is a risk of either contamination with sewage treatment plants and/or watercourses by:

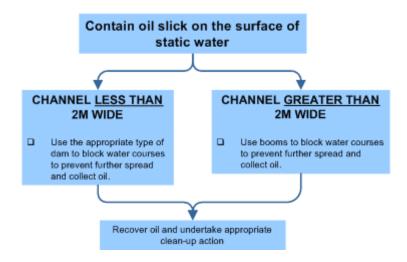
- Using dams formed from soil, sandbags, or sorbents to protect inlets.
- Seal drain gratings with plastic bags filled with water and sand.

Oil and the associated fumes can also be highly volatile. As the vapours are heavier than air, it will gather in underground lines, wells, and troughs. This leads to an increased explosion risk; therefore, it is essential to minimize the potential of ignition, ensuring that:

- Traffic is stopped and other ignition sources are extinguished.
- Any affected system operators such as utilities, telephone and railways are informed.

On Static Water

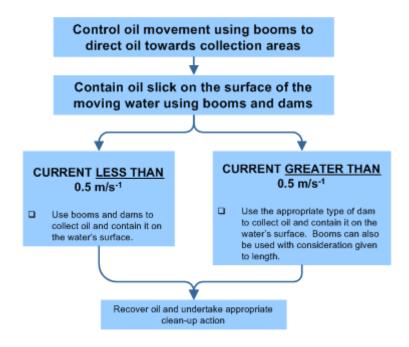
On larger areas of static water, boom can be used to contain the floating oil. The water bodies can be subject to wind-induced wave action, causing the oil to drift, therefore making it necessary to prioritize the containment to prevent further spreading. Where lakes etc. are fed and drained by watercourses, their inlets and outlets need to be protected, methods described in oil on moving water can be utilized.





On Moving Water

For spills that occur in rivers with currents more than 0.5 m/s, various techniques, and equipment, including booms and dams, have been developed to suit the relevant environmental conditions. In currents faster than 1 m/s, it is advisable to use techniques that allows water to flow freely subsurface while containing the oil solely on the surface of the water, such as a sorbent fence, inverted weir, culvert block, water gate or turner valley gate.





Containment and Recovery, continued **Containment to Recovery Process for Moving Water**

Booms can be used to direct the flow of oil, limit any further spread, and then contain it on the water's surface ready for recovery. Different techniques can be employed depending on the quantity of oil spilled and the surrounding operational and environmental conditions, such as the width and windings in the channel of a river, stream, or other watercourse.

If there are pre-determined control point tactical plans this will also guide the location, personnel and equipment required to implement the containment to recovery process.

1. CHOOSE AN ACCESSIBLE AREA TO CARRY **OUT RECOVERY**

- Position collection areas where there are natural collection points, or where water movement is slowest, such as the inside of the river bend, or where access allows.
- Ensure there is safe access for personnel and vehicles, including temporary storage areas.

2. IDENTIFY AND ANTICIPATE OPERATIONAL AND ENVIRONMENTAL CONDITIONS

- Estimate river speed and plan to deploy boom out at the correct angle
- Use weather forecasts to predict future conditions.

DO NOT EXCEED THE MAXIMUM ANGLE FOR THE CURRENT. SEE **GRAPH ON BOOMING TECHNIQUE**

CONDUCT RECOVERY **OPERATIONS**

4. DEPLOY BOOM AND ANCILLARY **EQUIPMENT**

- Deploy booms to deflect oil from the fast side to the slow side of the river and into the collection areas.
- Deploy booms to deflect oil from the fast side to the slow side of the river and into the collection areas.
- Deploy backup deflector and containment booms to ensure all oil is collected.
- Ensure distance between booms are sufficient to allow for oil resurfacing.

PLAN BOOM DEPLOYMENT METHOD

EQUIPMENT

- Draw out booming plans
- Lay out booms ready to deploy upstream of the planned
- In currents of more than 1 m/s⁻¹, shorter lengths of booms should be used to provide more anchor points at the
- Identify anchorage points in the river or on the banks.
 - Prepare boom ancillaries and moorings.



Containment and Recovery, continued Recovery of Spilled Product

A range of response strategies are available to the responder, dependent on resources accessibility. Each strategy will require a level of expertise, coordination and is likely to generate waste. These factors should also be considered when deciding on the most appropriate clean-up method to use.

Natural Recovery

In some areas, it may be less environmentally damaging to allow the area to recover naturally. Natural recovery is a slow process; however, it may be the only course of action from a safety and operational perspective.



Manual Clean Up

Manual recovery is a laborintensive strategy that utilizes large numbers of people collecting stranded oil with the necessary tools; shovels, buckets, etc.



Mechanical Recovery

Oil can be removed from the surface using a multitude of machinery, including pumps and vacuum equipment, scrapers, graders, and oil skimmers.



Use of Water

Flooding can cause the oil to float on the water, this allows it to be recovered later by pumps and skimmers. Flushing can be used to remobilize the oil from the soil and/or wash it from the surface. Both techniques should be used carefully, and containment boom in place to prevent further spread.



Sorbents

Sorbents, made of oleophilic materials; natural (straw) and synthetic (polypropene), can be introduced to the area to selectively absorb the oil while repelling water.



In-Situ Burn

In-situ burning may be considered when physical recovery is not feasible. It is best used in remote areas, especially where roots are protected by high water levels. Some environments may recover from burning more readily than if left oiled without treatment.





Containment and Recovery, continued Recovery Techniques

Technique	Description	Equipment / Resources	Applicability	Environmental Impacts
Manual Clean Up	Hand tool (scrapers, wire brushes, shovels, cutting tools, wheelbarrows, etc.) are used to scrape oil off surfaces or recover oiled sediments, vegetation, or debris where oil conditions are light or sporadic and/ or access is limited.	Shovels Buckets Sorbents (10-20) labourers	Can be used on all habitat types Light to moderate oiling conditions for stranded oil or heavy oils that have formed semi-solid to solid masses In areas where roosting or birthing animals cannot or should not be disturbed.	Sediment disturbance and erosion potential.
Mechanical Removal	Mechanical earthmoving equipment is used to remove oiled sediments and debris from heavily impacted areas with suitable access.	 Motor grader, Backhoe Dump truck Elevating scrapers (2-4) labourers Equipment operators 	On land, wherever surface sediments are accessible to heavy equipment Large amounts of oiled materials.	Removes upper 5 to 30 cm of sediments.
Sorbent Use	Sorbents are applied manually to oil accumulations, coatings, sheens, etc. to remove and recover the oil.	 Hand tools Sorbents (2-10) labourers	Can be used on all habitat types Free-floating oil close to shore or stranded on shore, secondary treatment method after gross oil removal Sensitive areas where access is restricted.	Sediment disturbance and erosion potential Trampling of vegetation and organisms Foot traffic can work oil deeper into soft sediments.
Vacuum / Pumps / Skimmers	Pumps, vacuum trucks, skimmers are used to remove oil accumulations from land or relatively thick floating layers from the water.	(1-2) - 50 to 100 bbl vacuum trucks w/ hoses (1-2) nozzle screens or skimmer heads (2-6) labourers truck operators	Can be used on all habitat types Stranded oil on the substrate Shoreline access points.	Typically, does not remove all oil Can remove some surface organisms, sediments, and vegetation.
Flooding	High volumes of water at low pressure are used to flood the oiled area to float oil off and out of sediments and back into the water or to a containment area where it can be recovered. Frequently used with flushing.	(1-5) - 380 to 750 lpm pumping systems (1) – 100 ft perforated header hose per system (1-2) – 200 ft containment booms per system (1) oil recovery device per system (6-8) labourers per system	All shoreline types except steep intertidal areas Heavily oiled areas where the oil is still fluid and adheres loosely to the substrate Where oil has penetrated gravel sediments Used with other washing techniques.	 Can impact clean down gradient areas Can displace some surface organisms if present Sediments transported into water can affect water quality.



Technique	Description	Equipment / Resources	Applicability	Environmental Impacts
Flushing	Water streams at low to moderate pressure, and possibly elevated temperatures, are used to remove oil from surface or near-surface sediments through agitation and direct contact. Oil is flushed back into the water or a collection point for subsequent recovery. May also be used to flush out oil trapped by shoreline or aquatic vegetation.	(1-5) - 189 to 380 lpm / 689 kpa pumping systems with manifold (1-4) - 30 m hoses and nozzles per system (1-2) - 60 m containment booms per system (1) oil recovery device per system (8-10) labourers per system	Substrates, riprap, and solid man-made structures Oil stranded onshore Floating oil in shallow areas.	Can impact clean down gradient areas Will displace many surface organisms if present Sediments transported into water can affect water quality Hot water can be lethal to many organisms Can increase oil penetration depth.
High Pressure Washing	High pressure water streams are used to remove oil coatings from hard surfaces in small areas where flushing is ineffective. Oil is directed back into water or collection point for subsequent recovery.	(1-5) - 1,200 to 4,000-psi units with hose and spray wand (1-2) - 30 m containment booms per unit (1) oil recovery device per unit (2-4) labourers per unit	Bedrock, man-made structures, and gravel substrates When low-pressure flushing is not effective Directed water jet can remove oil from hard-to-reach sites.	Will remove most organisms if present Can damage surface being cleaned Can affect clean down gradient or nearby areas.
Sediment Tilling	Mechanical equipment or hand tools are used to till lightly to moderately oiled surface sediments to maximize natural degradation processes.	(1) tractor fitted with tines, dicer, ripper blades, etc., or (1-4) rototillers hand tools (2-10) labourers	Any sedimentary substrate that can support heavy equipment Sand and gravel beaches with subsurface oil Where sediment is stained or lightly oiled Were oil is stranded above normal high waterline.	Significant amounts of oil can remain on the shoreline for extended periods of time Disturbs surface sediments and organisms.
Log / Debris Burning	Oiled logs, driftwood, vegetation, and debris are burned to minimize material handling and disposal requirements. Material should be stacked in tall piles and fans used to ensure a hot, clean burn.	(1) set of fire control equipment (2-4) fans (1) supply of combustion promoter (2-4) labourers	On most habitats except dry muddy substrates where heat may impact the biological productivity of the habitat Where heavily oiled items are difficult or impossible to move Many potential applications on ice.	Heat may impact local near-surface organisms Substantial smoke may be generated Heat may impact adjacent vegetation.
Natural Recovery	No action is taken, and oil is allowed to degrade naturally	None required	All habitat types When natural removal rates are fast Oiling is light Access is severely restricted or dangerous to cleanup crews When cleanup actions will do more harm than natural removal.	Oil may persist for significant periods of time Remobilized oil or sheens may impact other areas Higher probability of impacting wildlife.

SORBENTS

N2Safety

Sorbents can be used to recover oil product that can not be easily recovered using mechanical methods. They are predominately single-use products. When allowed to come in contact with oil on water, they will absorb or adsorb the oil over time.

Objectives

- Prevent further migration of released products.
- Recover released product in areas that it may be difficult to reach.



Safety

- Identify hazards and complete a site safety plan.
- Consider toxic and flammable vapours.
- Adjacent infrastructure such as powerlines, pipelines, and underground services.
- Waders, safety harness, line and PDF may be required.



Environmental Consideration

- Utilize existing access and routes to minimize disturbance of soils. Consider environmental sensitivities such as vegetation soil types and wildlife/fish habitat.
- Ensure decontamination areas have been established to minimize transfer of released product during site assessment and site preparation activities.
- Consider air quality issues and proximity of stakeholders.



Equipment / Resources

- Sorbents
- Waste disposal bags
- Gloves



Personnel

- Supervisor / lead
- Site safety
- Labourers

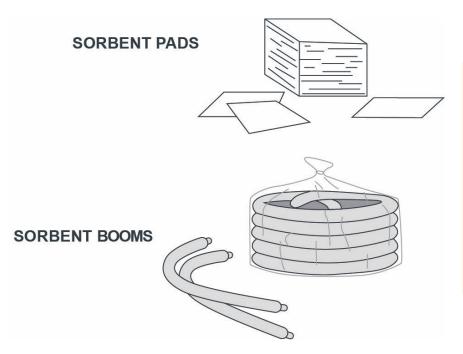


- Use sorbents to soak up and recover released product.
- Place used sorbents in waste bags for off-site disposal.









Sorbent Pads

Generally smaller in size. Useful for spot cleaning by hand.

Sorbent Booms

- Sorbent booms are easily deployed in low current environments.
- Usually sausage-shaped, with a few inches of height above the water when floating.

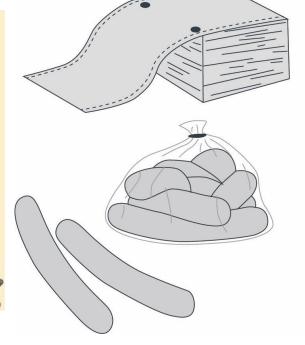


Sorbent Sweeps

- Long, narrow sheets of sorbent material with an integral tension member.
- Sorbent sweeps can be used in place of sorbent booms for managing and recovering sheens.

Sorbent Socks

- A smaller, more compact version of sorbent booms.
- Useful for building small containment walls around storm drains, sumps, bilges or sewer entries.



SORBENT SWEEPS

SORBENT SOCKS



BERMS

1 H2Safety

Berms can be constructed using any nonporous material using mechanical or hand equipment. They can be used to prevent migration of released product as well as used to divert surface flow from areas that have been impacted by a spill. They are used in conjunction with other containment and recovery methods such as trenches, bell holes and inverted weirs.

Objectives

- To halt the advance of spilled product and allow for the recovery of the spilled product.
- Contain and prevent further migration of released products by channeling the spill in a particular direction
- Create a pooled area for recovery of released product.
- Diversion of surface flows from impacted area.

Safety

- Identify hazards and complete a site safety plan. \Diamond
- \Diamond Consider toxic and flammable vapours.
- \Diamond Adjacent infrastructure such as powerlines, pipelines, and underground services.
- Establish communications in remote areas.
- Be cautious of wildlife.



Environmental Consideration

- Utilize existing access and routes to minimize disturbance of soils. Consider environmental sensitivities such as vegetation soil types and wildlife/fish habitat.
- If possible, remove and conserve topsoil for reclamation activities. Avoid constructing berms with topsoil material.
- Ensure decontamination areas have been established to minimize transfer of released product during construction of berm.
- Handle and dispose of contaminated wastes in an approved manner.

Equipment / Resources

- Shovels and/or earth moving equipment
- Plastic sheeting
- Sorbents
- Vacuum truck / portable vacuum unit

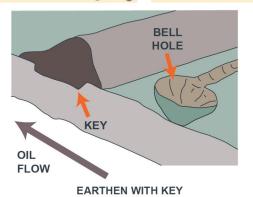
Personnel

- Supervisor / lead
- Site safety
- Labourers
- Vacuum truck operator

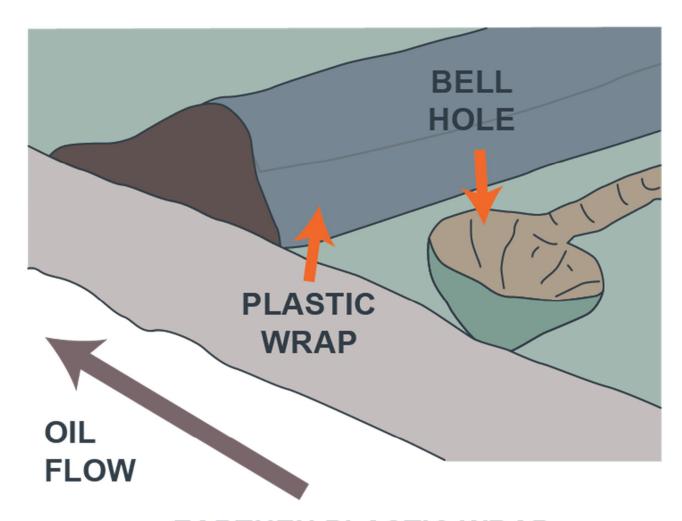
- Lay plastic on ground, across expected route of spill travel.
- Pile non-porous materials on downstream side of plastic (away from approaching oil).
- Flip upstream side of plastic sheet over berm to prevent contamination of berm contents.
- Hand dig small bell hole upstream of berm recovery.
- Ensure waste disposal bags and tags if sorbents are to be used.



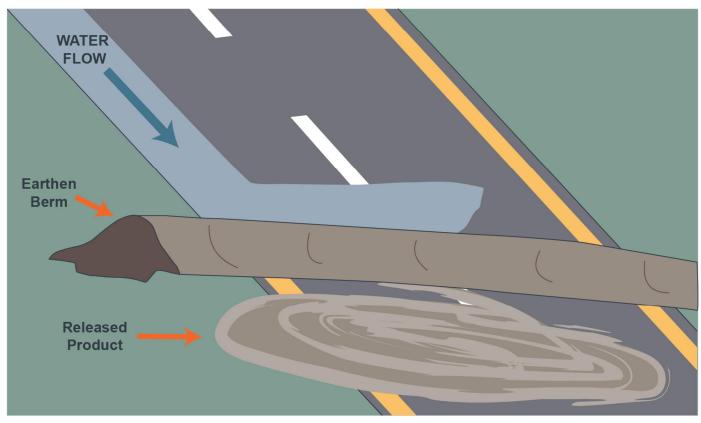








EARTHEN PLASTIC WRAP



SURFACE FLOW DIVERSION

TRENCHES AND BELL HOLES

H2Safety

Trenches can be excavated to contain a spill and used most commonly with bell holes to allow recovery of fluids and released product via vacuum unit or transfer pumps. For additional containment, the materials excavated from the trench can be used to construct berms downgradient of the trench. For larger spills, skimmers can be considered for recovery of released products.

Objectives

- To halt the advance of the spilled product and allow for recovery while reducing potential for environmental damage.
- Provide capacity to recover released product and ensure containment.
- To stop spilled product where a significant containment capacity is required on a slope.



Safety

- Identify hazards and complete a site safety plan.
- ♦ Consider toxic and flammable vapours.
- Adjacent infrastructure such as powerlines, pipelines, and underground services.
- Consider ground disturbance requirements.



Environmental Consideration

- Utilize existing access and routes to minimize disturbance of soils. Consider environmental sensitivities such as vegetation soil types and wildlife/fish habitat.
- Utilize low lying areas to minimize depth of excavations.
- ♦ Keep trench depth at a minimum to prevent further sub-surface or groundwater impacts.
- Stockpile clean materials for reclaiming area of trenches and bell holes.
- Ensure decontamination areas have been established to minimize transfer of released product during construction of trenches and bell holes.



Equipment / Resources

- Shovels / earth moving equipment
- Plastic sheeting
- ♦ Vacuum truck / vacuum unit
- Transfer pump / skimmer
- ♦ Temporary storage
- Containment booms
- ♦ Sorbents
- ♦ Hand lines



Personnel

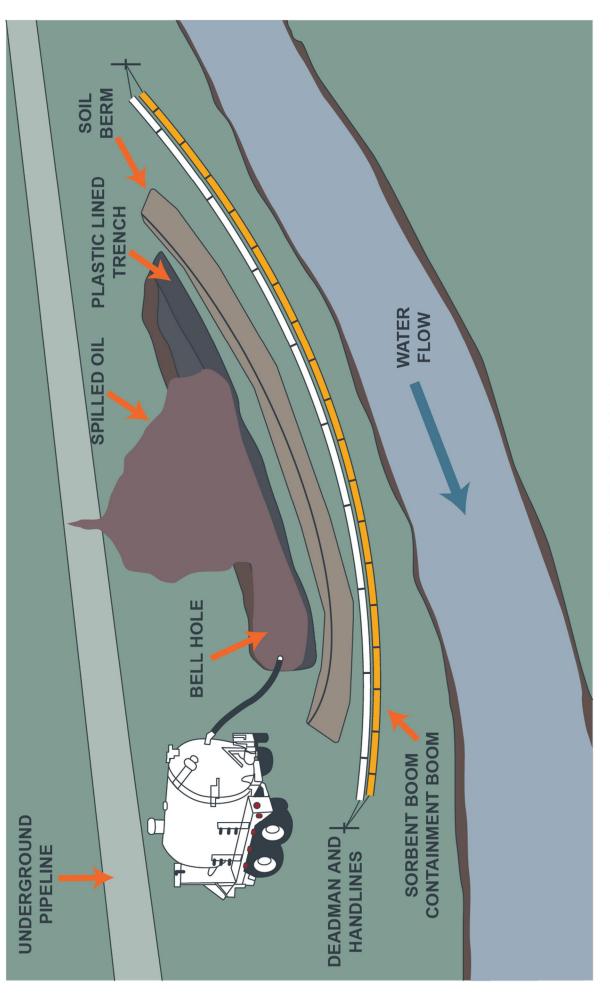
- ♦ Supervisor / Lead
- ♦ Site Safety
- ♦ Labourers
- Vacuum truck operator



- Excavate shallow trench downstream and ensure berm is on downstream side of trench. Line the trench and berm with plastic sheeting to prevent contamination of berm contents.
- ♦ Excavate bell hole at low end of trench for the collection of fluids.
- Recover collected fluids using vacuum truck / vacuum unit or transfer pump into temporary storage.







TRENCH AND BELL HOLE

AQUADAM

Aquadam's are made up of multiple parallel chambers called fill tubes which give it a level of stability against shifting. While slightly more complicated to place and fill than a simple bladder, in many cases it does not require external anchors. Use in slow moving shallow watercourses.

H2Safety

Objectives

- Contain and facilitate recovery of a water-borne spill from a ditch, creek or stream.
- Contain and prevent further migration of released products.
- Provide capacity to recover released product and impacted fluids.



Safety

- ♦ Identify hazards and complete site safety plan.
- Onsider toxic and flammable vapours.
- Adjacent infrastructure such as powerlines, pipelines, and underground services.
- Establish communications in remote areas.
- Be cautious of wildlife.



Environmental Consideration

- ♦ Maintain control of damming materials to avoid introducing foreign substances into the watercourse.
- Utilize existing access routes to minimize disturbance of soils and care should be taken to minimize disturbance of watercourse and banks. Consider environmental sensitivities such as vegetation soil types and wildlife/fish habitat.
- Ensure decontamination areas have been established to minimize transfer of released product during setup.
- Handle and dispose of contaminated wastes in an approved manner.

Equipment / Resources

- Aquadam / water bags
- ♦ Water source
- ♦ Trash pump / hose
- ♦ Suction hose
- ♦ Vacuum unit
- ♦ Skimmer



Personnel

- Supervisor / lead
- ♦ Site Safety
- ♦ Labourers
- Vacuum truck operator

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- Set up trash pump/hose.
- Prepare area by removing any sharp debris that could puncture or damage the aquadam.
- Unroll aquadam across the area of desired containment.
- Fill aquadam using trash pump and hose.
- Recover released product using skimmer / vac unit.







AQUADAM

CULVERT BLOCK

H₂Safety

Culverts that allow a watercourse to pass under or through obstacles present an opportunity for controlling the spread of oil. If water flows are sufficiently low, they can be blocked entirely with boards or plywood to contain oil above the culvert. In higher flow situations, partial culvert blocks can be installed to create underflow dams.

Objectives

- Contain and prevent further migration of released products using sandbags / plywood.
- Create pooled area to allow recover of released product.



Safety

- Identify hazards and complete a site safety plan.
- Onsider toxic and flammable vapours.
- Adjacent infrastructure such as powerlines, pipelines, and underground services.
 - Establish communications in remote areas.



Environmental Consideration

- Utilize existing access and routes to minimize disturbance of soils. Consider environmental sensitivities such as vegetation soil types and wildlife/fish habitat.
- Ensure decontamination areas have been established to minimize transfer of released product during site assessment and site preparation activities.
- Consider air quality issues and proximity of stakeholders.
- Manage board level to allow water to pass through culvert, reducing flooding upstream and maintain downstream flow.



Equipment / Resources

- ♦ Track hoe
- ♦ Sorbents
- ♦ Shovels
- Earthen materials or sandbags
- Vacuum truck / portable vacuum unit
- ♦ Skimmer
- ♦ Temporary storage
- Plywood, stakes, nails



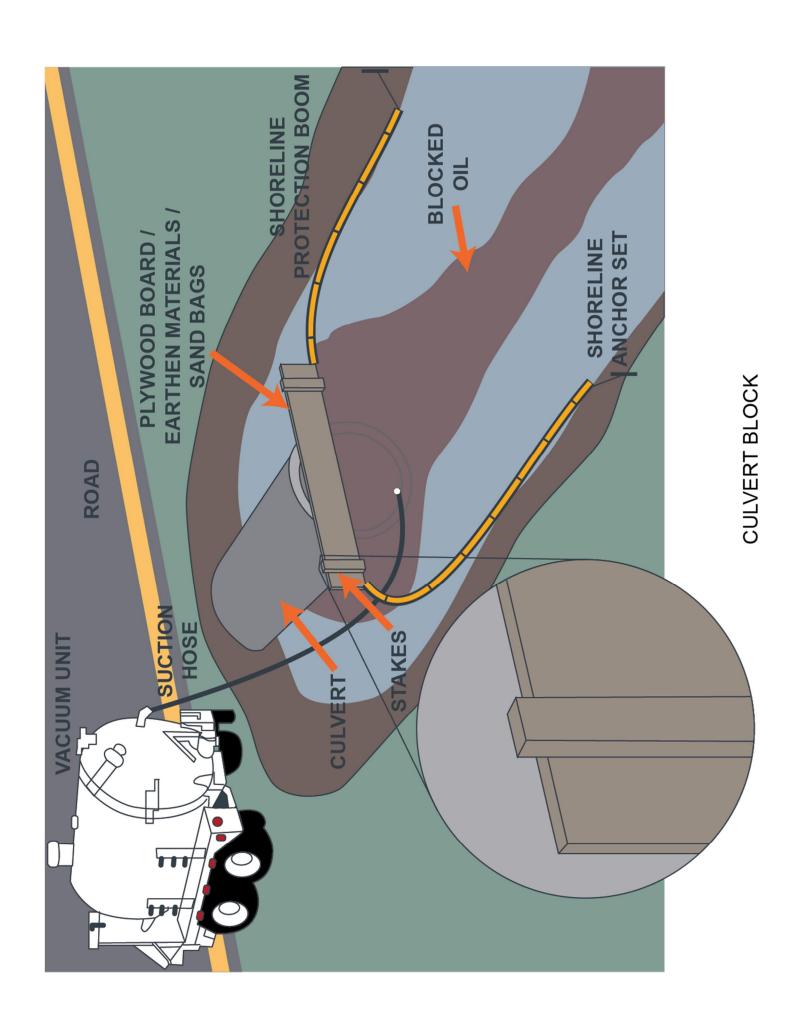
Personnel

- Track hoe operator
- ♦ Vacuum operator
- ♦ Supervisor / lead
- Site safety
- ♦ Labourers



- Using earthen materials or sandbags, completely block the culvert or,
- Using plywood on upstream side of culvert. Secure in place with two stakes driven into bed of ditch, creek or stream. Raise board enough to allow passage of water under the board's lower edge. Secure in place with driving nails through stakes into the plywood.
- Monitor water levels to ensure sufficient flow and to prevent washouts.
- Utilize vacuum unit or skimmer to recover pooled fluids and dispose at appropriate location.
- Utilize containment boom to protect banks from oil impacts.





BOOM DEPLOYMENT

H₂Safety

Larger watercourses are those where any combination of water depth, river or stream width, or current velocity would make the installation of bottom-founded or rigid fixtures impractical. The tactics that follow rely on the installation of flexible, floating barriers to redirect or divert surface contaminants.

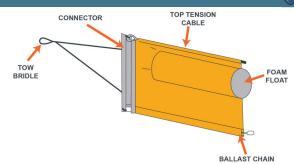
Objectives

- Divert surface contaminants from sensitive resources.
- Divert surface contaminants to areas of quiet water where velocities are slower and contaminants may be collected.



Floating Containment Boom

- Identified by the overall height of the boom or by the diameter of the float and the depth of the skirt.
- Shallow shirts are advised for fast moving waters, because their reduced drag makes them easier to deploy and secure. Deeper skirts are advised where waves may be encountered.

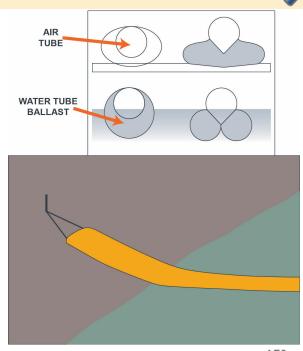


Boom Property	Static Water	Moving Water
Overall height (in)	6 - 24	8 - 32
Minimum gross buoyancy to weight ratio	3:1	4:1
Minimum total tensile strength (lbs)	1,500	5,000

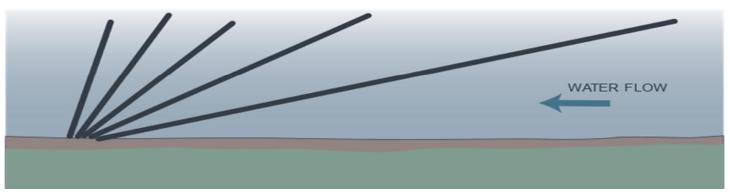
75° 60° 45° 1.4 kph 1.6 kph 2.0 kph 0.9 mph 1.0 mph 1.2 mph 30° 2.8 kph 1.7 mph

Shore Seal Boom

- Provides an effective barrier to control the spread of oil in the critical region where water meets the shoreline.
- ♦ A floating barrier with integral water bags that provide an effective seal when grounded.
- A smaller tube is fitted into a larger tube. The larger outer tube is filled with water and the smaller inner tube is filled with air.
- Shore seal boom can adjust to fluctuating water levels.



15° 5.4 kph 3.3 mph



Time in seconds stick travels 30 m (100 ft)	Current km/hr	Current mph	Current (metres per second)	Current (feet per second)	Boom angle (degrees to current)
216	0.5	0.31	0.14	0.46	30 degrees
108	1.0	0.62	0.28	0.92	
72	1.5	0.93	0.42	1.38	
54	2.0	1.25	0.56	1.84	
43	2.5	1.5	0.69	2.26	20 degrees
36	3.0	1.9	0.83	2.72	
31	3.5	2.2	0.97	3.18	
27	4.0	2.5	1.11	3.60	
24	4.5	2.8	1.25	4.10	15 degrees
22	5.0	3.1	1.39	4.56	
18	6.0	3.7	1.67	5.48	
15	7.0	4.3	1.94	6.36	10 degrees
14	8.0	5.0	2.22	7.28	
12	9.0	5.6	2.50	8.20	
11	10.0	6.2	2.78	9.12	

Considerations

When determining the type of containment operation to be utilized on a watercourse, the following should be considered:

- The slower the current and deeper the water, the more effective the containment and recovery operations will be.
- Chose a location where the current is directed towards the recovery area.
- Consider access and staging when selecting a recovery location.
- On larger watercourses chose a location that is on the side as the spill.
- Observe Boom should be a straight as possible to defect oil to recovery areas.
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- In faster moving water, consider additional containment boom downstream to capture any flow through.
- If not feasible to boom entire channel, select as site that will capture most of the released product and consider further downstream containment and recovery areas.
- Select boom anchoring methods considering the following:
 - ♦ Shoreline Pins can be used on narrow slow-moving watercourses and installed along the banks and include drive pin, screw, wing pin anchors, trees, or large rocks.
 - Trolley Line can be deployed across large, moderate to fast moving watercourses and can be used with split pulley to deploy and adjust the boom angle.
 - Bridge Pier Bridle can be installed on large, moderate to fast moving watercourse with the use of workboats
 - In-Stream anchors and chain sets can be deployed within the watercourse by workboat crews and include sarca, danforth and rake anchors.
 - Soom Vane can be deployed from shore and utilizes the instream current and mooring lines to set boom angles.

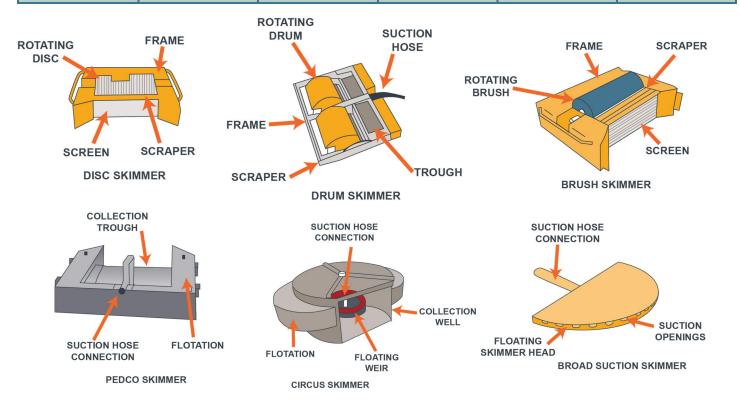
SKIMMERS, VACUUM UNITS, TEMPORARY STORAGE

Recovery will involve the use of equipment as determined by plans and the scope of the incident.

Skimmers

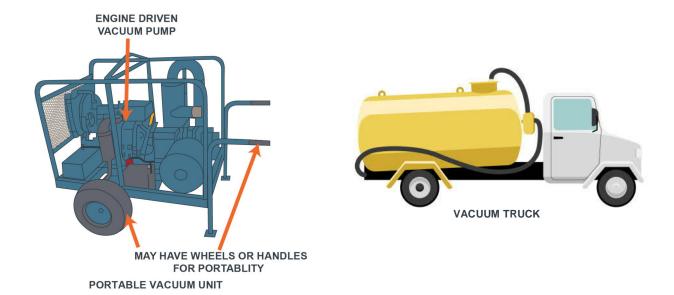
- Selective skimmers rely on oleophilic material that can be passed through the oil-interface. Selective skimmers collect a higher concentration of oil in the recovered fluid stream than non-selective skimmers.
- Non-selective skimmers are usually weir or suction devices that recover fluid indiscriminately.

Skimmer Type	Oil Type	Mode	Debris Tolerance	Wave Tolerance	Currents
Drum (selective)	Wide range of oil viscosities	Stationary	Debris must be managed to allow flow of oil to skimmer	Low sensitivity to waves with height less than diameter of drum	Not generally used in currents
Disc (selective)	Low to medium viscosity	Stationary	Debris must be managed to allow flow of oil to skimmer	Low sensitivity to waves with height less than diameter of disc	Not generally used in currents
Brush (selective)	Medium to high viscosity	May be operated in stationary mode if current is present	Effective in most forms of small debris	Low sensitivity to waves	May be operated in stationary mode if current is present
Pedco (non-selective)	Wide range of oil viscosities	Stationary	Debris must be managed to allow flow of oil to skimmer	Low sensitivity to waves	Used in currents typically river, streams and creeks
Circus (non-selective)	Wide range of oil viscosities	Stationary and advancing	Debris must be managed to allow flow of oil to skimmer	Good wave-following characteristics in nonbreaking waves	Used in currents typically river, streams and creeks
Broad Suction (non-selective)	Wide range of oil viscosities	Powered by vacuum or pump	Works around debris	Low sensitivity to waves	Static water conditions



Vacuum Units

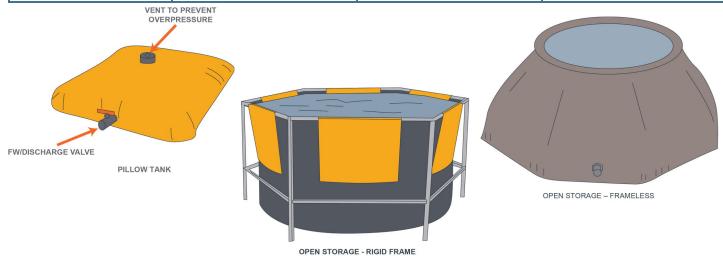
- Operate on the same principle as an industrial vacuum cleaner
- A suction pump pulls large quantities of air through a hose and into a large-volume receptacle. The sudden velocity drop that occurs in the receptacle causes liquids and solids to fall out of the airstream and collect. This process may be aided by internal baffles in the receptacle.
- May be used in place of pumps to operate pedco or broad suction skimmers or to transfer collected oil from disc or drum skimmers.



Temporary Storage

- Recovered oil can be critical to the success of a spill response. Temporary storage tanks are usually fabric, for storage and portability.
- Depending on the type, they may or may not have a rigid frame
- Note that open storage devices do not have positive vapor control. Hence, they may not be suitable for storage of highly volatile products.

Storage Type	Vapor Control	Capacity	Storage Length
Pillow Tank	Yes	750 - 19,000 L	Temporary and long-term
Open Storage - Rigid Frame	No	900 - 75,000 L	Temporary
Open Storage - Frameless	No	750 - 19,000 L	Teporary





Post-Incident

Ensure all statements, event logs, forms and documentation on the incident remain securely stored following the incident. Records must be held for a minimum of 5 years as it may be requested by the regulatory agency at any point during that time.

Call Down Notification

After consultation with a senior company representative or the appropriate Regulatory Agency, Provincial Emergency Management or local County / Municipality, the Incident Commander will:

- 1. Give the "all clear" signal. Prior to the "all-clear" signal, the Incident Commander will confirm that all evacuated areas are safe to re-enter. This may involve such activities as:
 - o Ensuring all equipment and locations are free of any pockets of fire, smoke and / or toxic gases.
 - o Ensuring all equipment and debris are removed from offices and / or public areas.
 - Cordoning off the incident area to isolate any remaining hazards.
 - o Checking low-lying areas and basements for contamination, if a toxic leak has occurred.

After the "all-clear" message has been given, the Incident Commander will be responsible for:

- Ensuring all evacuees are promptly notified once the call down is given.
- Coordinating the return of any evacuees to the area. Ensure the public and employees receive any assistance they may require.
- Maintaining security in any evacuated areas until the evacuees have returned and the businesses in the area have again become occupied.
- Coordinate the deactivation of all emergency response operations, personnel, equipment and incident areas.
- Ensure all previous contacts, including other companies; government agencies, etc. are notified of the emergency status call down.
- 4. Advise all response team members to document their call down notification calls.
- 5. Prepare and release an "all clear" statement to the media in conjunction with the Regulatory Agency.
- Organize debriefing meetings for advisory personnel involved. In the case of incidents that have involved a death or serious injury, consult with Human Resources personnel about arranging critical incident counselling.
- 7. Notify and debrief Joint Interest Partners and Insurance company representatives.

Note: Ensure all statements, event logs, forms and documentation on the incident remain securely stored following the incident.

Public Care and Assistance

The decision to recall evacuees will be coordinated by the regulatory agency in consultation with other applicable government agencies and the licensee. Ensure the following tasks are completed as required:

- 1. Ensure all evacuees are promptly notified once the call down is given.
- 2. Coordinate the return of any evacuees to the area. Ensure the public and employees receive any assistance they may require.
- 3. Maintain security in any evacuated areas until the evacuees have returned and the businesses in the area have again become occupied.
- 4. Ensure homes and businesses are ventilated and checked for gas pockets before allowing the occupants to enter. Rovers must check each room, office and public area.



Post-Incident, continued

- 5. Ensure members of the Response Teams and other key participants in the emergency are debriefed as soon as possible.
- 6. Designate a senior company representative to act as the company Liaison with the public and other companies.
- 7. Ensure the affected employees and public are provided with post-incident company contact names and telephone numbers. If the emergency has impacted a large number of the public or has caused significant damage to private property or the environment, a temporary Public Relations Office should be established in the affected area.
- 8. Schedule a follow-up meeting with the public to clearly explain the cause of the incident and to address their concerns. Organize critical incident counselling as required.
- 9. Ensure public expense / damage claims have been collected and are processed in a timely manner.

Clean-up and Repair

If a serious injury or death has occurred, the scene must be left undisturbed, as much as possible, until an investigation of the site can be completed by the appropriate authorities.

Ensure the following tasks are completed as required:

- Ensure the incident site is not disturbed if there has been a fatality or a serious injury until police, regulatory officials and company representatives complete necessary investigations.
- Ensure that site clean-up continues.
- Ensure that the correct procedures are developed and implemented for the decontamination of equipment.
- Ensure the On-Site Group Supervisor disposes of all hazardous waste according to applicable regulations (confer with the safety support personnel, the Response Team or other company safety personnel).

Note: The position of On-Site Group Supervisor during the remediation phase may be best filled by an Environmental Specialist.

- Ensure that priority is given to clearing debris and restoring the site to normal operating conditions after the government and company investigations are complete.
- Ensure that all safety equipment is demobilized, cleaned and inspected for contamination.
- Ensure all roadblocks, staging area and detour equipment is demobilized.
- Ensure that all clean-up and repair actions follow the companies safety and environment policies and safe-work procedures.

Third Party Investigations

The Incident Commander will coordinate and observe all site investigations. Third party investigators such as police, government agencies and insurance companies may be required to investigate an incident site. It is important to co-operate with third party investigators. However, company personnel should be aware of the corresponding corporate guidelines.

• Obtain the name, title, address and telephone number of all inspectors and immediately inform the Incident Commander before proceeding with the investigation.



Post-Incident, continued

- Ensure a company representative accompanies the inspector at all times. Never leave an inspector unattended.
- Give the inspectors the information they request, the facts only, no speculative information. Always tell the truth.

Document all items of evidence that the inspector has retained. Where possible, keep copies of the evidence provided to the Inspectors.

Wait until legal counsel is present before answering questions where the inspector indicates that any statements may be used as evidence or indicates that you have the right to counsel.

Review and Debriefing

The effectiveness of the ERP shall be reviewed after the end of the emergency. In some situations, a formal debriefing may be held. The objective of the debriefing should be to improve emergency preparedness and response by identifying areas of success and areas requiring improvement (a debriefing should not be a fault-finding mission). If one is held, all groups that responded to the emergency should be represented. The representatives should come prepared with complete details of their activities during the emergency and, where possible, provide supporting documentation. Common elements of an effective debriefing include:

- a) A facilitator;
- b) A secretary to record the proceedings;
- c) A review of the sequence of events, including timing and actions taken; and
- d) Identification of those portions of the ERP that were effective and those that require improvement.

Action items identified during the debriefing should be documented and assigned with completion timelines, key lessons learned from emergency outcome should be shared with the appropriate parties, and the ERP should be revised as necessary. Separate debriefings may be held with different groups that participated in the emergency (e.g., emergency services organizations, the media, etc.).

Critical Incident Stress Debriefing (CISD)

Responders are often under a great deal of stress. They must act quickly, often in the face of pain and fear, to assess the situation, determine priorities and begin rescuing others who are in danger. They may have experienced a serious injury themselves or witnessed the death of co-workers or the public.

If necessary, the Incident Commander will request that the company's Human Resource personnel dispatch specially trained counselors to meet with responders, preferably within 24 to 48 hours, to provide support and reassurance to those affected by an emergency. Team members should include a mental health professional and trained peer support personnel (fire-fighters, paramedics, police, military, etc.).

CISDs allow individuals to express the circumstances they were confronted with, how they felt at the incident and what their reactions were after the incident. The participants must understand that the meetings are strictly confidential and are not intended to judge or lay blame on an individual's actions. Recording devices and note taking should be prohibited. Meetings should be limited to a maximum of 20 individuals. Individuals who are perceived to be responsible for the incident should be excluded from group meetings and met on a one-on-one basis.

These sessions provide the responders with a supportive environment that helps them deal with their emotions. It also provides them with information about stress and its effects (severe agitation, emotional upset, inability to sleep, etc.) and it educates them about stress management techniques.



Post-Incident, continued

Post-Incident / Accident Investigation

Once the emergency status has been removed, a senior company representative will appoint a subcommittee to investigate the event. This subcommittee will consist of appropriate management and technical specialists as required.

The objective of the investigation will be to analyze and evaluate the event in order to establish a cause, to provide advice on how to prevent a reoccurrence of the event, and to make recommendations on procedures that will improve the company's emergency response efforts in the future.

The post-incident / accident investigation should include:

- A review of the events leading up to the incident / accident.
- An analysis of the on-site remedial procedures, including an evaluation of the safety standards that were applied.
- An appraisal of the company's shelter-in-place / evacuation response for the affected public.
- An evaluation of the effectiveness of the notification and communication systems between the incident site and the head office, as well as within the company.
- An appraisal of the effectiveness of any media or public relations efforts.
- An assessment of any potential legal or environmental issues that may be raised as a result of the event or as a result of the company's response efforts.
- A summary of current and future costs.
- Completed appropriate event report forms and applicable attachments.
- An assessment of the strengths and weaknesses of the company's response.

This report will be directed to the attention of a senior company representative. It will be his / her responsibility to ensure all recommendations for improvements to the Corporate and Field Emergency Response Plans are incorporated where applicable and promptly communicated to the appropriate company personnel.

All documentation recorded during and following an emergency must be retained for up to five years in the event the Regulatory Agency requests it.



Medical Emergencies

DISCLAIMER: The information contained in this section does not replace formal First Aid, CPR & AED training. The company makes no guarantee as to, and assumes no responsibility for, the correctness, sufficiency or completeness of such information or recommendations. A First Aid provider is someone who has completed formal first aid training from a recognized provider. Training can be obtained from the Canadian Red Cross (www.redcross.ca) or St. John Ambulance (www.sja.ca).

The 3 basic steps to follow in any emergency:

Remember: stay calm, look for dangers, never risk your own safety

CHECK the person

- Does the person want your help? If the person is unable to answer, assume you have consent to give first aid.
- Check the person's ABCs (Airway, Breathing, and Circulation).



CALL EMS/9-1-1

- If the person responds, find out if there is a need to call EMS/9-1-1.
- If the person does not respond, call for help and EMS/9-1-1.



CARE for life-threatening conditions first

 Reduce the risk of disease transmission by using protective equipment, such as disposable gloves and a barrier device.



Canadian Red Cross (2013). Check, Call, Care First Aid Poster. Retrieved February 2013, from Canadian Red Cross Web site: http://www.redcross.ca/cmslib/general/tp_fa_poster_checkcallcare_web.pdf



First Aid Information

CPR

The simplified Adult Basic Life Support algorithm includes five steps. The algorithm diagram provided by the American Heart Association emphasizes the following:

- 1. Assess the victim's responsiveness. If a victim is not breathing, or is not breathing normally (i.e., gasping), initiate CPR. Health care professionals should be trained to recognize cardiac arrest that presents as seizure-like activity or with agonal respirations.
- 2. Activate EMS (Emergency Medical Response) by calling 911.
- 3. Retrieve a defibrillator, usually an automatic external defibrillator (AED).
- 4. The algorithm proceeds in a loop of CPR and rhythm checks with defibrillation.
- **5.** Check PULSE before chest compressions for at least five seconds and no more than ten seconds. If in doubt, begin compressions
- **6.** CPR: push hard and fast. Begin chest compressions before ventilation. Chest compressions allow blood flow to the heart and brain. Delays in chest compressions result in diminished survival. Be sure to allow the chest to recoil between compressions. The chest should be compressed 100-120/min to a depth of 2"-2.4" (5-6cm)
- 7. For effective breathing, watch for chest rise and avoid excessive ventilation. 10 BREATHS should be delivered each minute, or one breath every six seconds. Each breath should be delivered over 1 second. Observe visible chest rise.
- 8. Avoid gastric inflation, as it may result in aspiration, pneumonia or vomiting.
- 9. The ratio of chest compressions to breaths is 30 to 2.
- **10.** After the defibrillator becomes available, check rhythm. Use the AED when indicated and available. The victim should receive a shock that is repeated every two minutes or 5 cycles.

Burns

The American Red Cross recommends these steps to care for minor burns.

- Stop the burning. Put out the flames or remove the victim from the source of the burn.
- Cool the burn. Use large amounts of water to cool the burned area. DO NOT use ice or ice water other than on small superficial burns. Ice causes body heat loss. Use whatever resources are available: tub, shower or garden hose. You can apply soaked towels, sheets or other wet cloths to a burned face or other areas that cannot be immersed. Be sure to keep cloths cool by adding more water.
- Cover the burn. Use dry, sterile dressings or a clean cloth to cover a burn. Loosely bandage them in place. Covering the burn helps keep air out and reduces pain. Covering the burn also prevents infection. If the burn covers a large area of the body, cover it with clean, dry sheets or other cloth.

For minor burns and burns with open blisters that are not serious enough to need medical care, wash the areas with soap and water. Keep it clean. Put on an antibiotic ointment. Watch for signals of infection.



Burns, continued

Critical burns will need immediate medical attention. Call 911 or your emergency number if any one of the following instances occurs:

- Victim is having difficulty breathing.
- More than one part of the body is burned.
- There are burns to the head, neck, hands, feet or genitals.
- A child or an elderly person has been burned.
- Chemicals, electricity or explosions have caused the burns.

Chemical Exposure Guidelines

- In the event of chemical exposure, emergency services or poison control centre should be contacted as soon as possible.
- The eye may be irrigated using copious amounts of clean water, preferably using an eyewash bottle, eyewash station or shower.
- First aid providers may use continuous, large volumes of clean water for irrigation of chemical injuries where chemical exposure has occurred to other parts of the body.

Wounds & Abrasions Guidelines

- Superficial wounds and abrasions should be irrigated with clean water, preferably tap water because
 of the benefit of pressure.
- First aid providers may apply antibiotic ointment to skin abrasions and wounds to promote faster healing with less risk of infection.
- First aid providers may apply an occlusive dressing to wounds and abrasions with or without antibiotic ointment
- The use of triple antibiotic ointment may be preferable to double- or singleagent antibiotic ointment or cream.
- If antibiotic is not used, antiseptic could be used.
- There is some evidence that traditional approaches, including applying honey, are beneficial and may be used on wounds by first aid providers.
- People with wounds that develop redness, warmth or become painful or with wounds where the person develops fever should seek assessment from a healthcare provider.



Bleeding Guidelines

- First aid providers must control external bleeding by applying direct pressure.
- The use of pressure points and elevation is NOT recommended.
- When direct pressure fails to control life-threatening external limb bleeding or is not possible (e.g.
 multiple injuries, inaccessible wounds, multiple casualties), tourniquets could be considered in special
 circumstances (such as disaster, war-like conditions, remote locations or in instances where specially
 trained first aid providers are providing care).
- Localized cold therapy with or without pressure may be beneficial in haemostasis for closed bleeding in extremities. Caution is advised when applying this recommendation to children due to a potential for hypothermia.
- The out-of-hospital application of a topical haemostatic agent to control lifethreatening bleeding not controlled by standard techniques and in situations where standard techniques could not be applied could be considered with appropriate training.

Source: www.redcross.ca/crc/documents/1303501_FirstAid-2016_Guidelines_LR-PDF.pdf



Next-of-Kin Notification

When an employee, contractor or member of the public is seriously injured, missing, or pronounced dead, the next-of-kin must be notified as promptly as possible. Keep in mind the following policies before notifying any next-of-kin:

- Death is never presumed, and first aid must be administered until relieved by a paramedic.
- No telephone or radio discussion is to take place regarding the name(s) of the injured.
- Notification is not to occur until the casualty has been pronounced dead by a medical doctor or medical examiner.

If an employee, contractor or member of the public is injured or killed as a result of company operations; notifications will be coordinated through local RCMP / municipal police and designated company personnel.

Before Notifying the Next-of-Kin

- Never release the names of the injured, missing, or persons pronounced dead before the next-of-kin are notified.
- Triple-check the identity of any casualty.
- If the casualty is conscious, document concerns. Do not make promises that cannot be kept.
- Confirm the casualty's relationship with the people being notified.
- Be prepared to support the next-of-kin. Provide assistance such as transportation, child care, alternative accommodation, reimbursements for daily expenses, and the temporary care of the family home if required.

During the Notification of the Next-of-Kin

- Make the notification in person, not by telephone or through an intermediary.
- Provide the relatives with as much information as possible; too few details can cause excessive worry. Present only the facts; do not speculate.
- Do not discuss personal views of liability or fault.
- Allow the next-of-kin to vent their emotions.
- Attempt to support and reunite families as quickly as possible.
- Offer assistance; document key issues and concerns. Do not make promises that cannot be kept.
 Follow up on relatives' requests.
- Document the details of anyone who appears to be having trouble coping with the incident so that he
 / she can be given prompt psychological support.



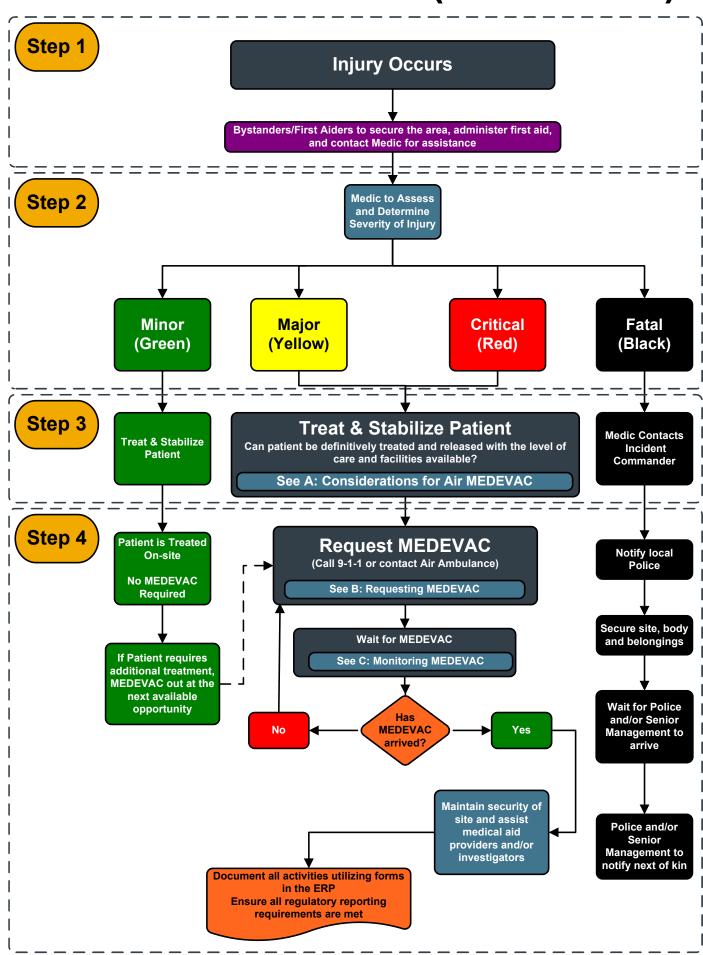
During the Notification of the Next-of-Kin, continued

- Do not leave the next-of-kin alone.
- Offer to contact a neighbour, friend, relative, minister, doctor, or counsellor.
- Leave your name and telephone number with family members.
- Ensure the next-of-kin are protected from media harassment as required.

Follow-Up

- The same representative who conducted the initial notification should continue to contact and support the next-of-kin.
- If required, a senior company representative will ensure that a trained psychologist conducts critical
 incident stress debriefing sessions with next-of-kin, friends and company employees involved or
 affected by the tragedy.
- Advise the employee's family that a senior company representative will be contacting them to discuss
 any immediate needs and to provide information on insurance coverage and benefits support. Follow
 up on this commitment.

Medical Evacuation (MEDEVAC) Procedure



In the event of any injury or illness the following steps shall be followed:

1) Survey the scene and ask yourself the following questions:

- Is it safe for me to help?
- What happened?
- How many people are injured?

2) Call for help:

- 1) Activate Emergency Responders and/or call 9-1-1
- 2) Identify your location
- 3) Follow the direction of the Medic and administer First Aid if required and you are trained to do so
- 4) Review Step 1

Patient Priority Colour Code

The practice of colour coding patients is a useful tool to prioritize patients into categories depending on their medical condition. This colour code system allows ease of communicating the condition of the patient to those involved in the care and transportation of the patient.

<u>Green</u> – Patients with minor injuries or illnesses who are usually walking. Medical care can be delayed beyond 2 hours.

For example:

- Minor burns
- Sprains and strains
- Colds and flu symptoms

<u>Yellow</u> – Patients with major injuries or illnesses that should be treated within 20 minutes to 2 hours.

For example:

- Open fractures
- Large lacerations

<u>Red</u> – Patients with critical, life threatening injuries or illnesses that require treatment as soon as possible.

For example:

- > Airway problems
- > Severe hemorrhage
- Severe burns
- Failing vital signs

<u>Black</u> – Death is obvious. Note: resuscitation / treatment must continue until directed otherwise by a qualified medical provider. Await Police.

A: Considerations for Air MEDEVAC

Consider air transport when:

- Patient requires critical care life support during transport that is not available locally.
- Patient's condition requires that time spent in transport be as short as possible.
- Potential delays associated with ground transport (road obstacles or conditions traffic, distance) are likely to worsen the patient's condition.
- Patient is located in an area inaccessible to regular ground transport.
- The use of medical transportation resources would leave the local area or worksite without adequate medical coverage.

B: Requesting MEDEVAC

When requesting MEDEVAC, be prepared to supply the following information:

- Location of patient pickup (facility, airport, road intersection, GPS)?
- Who will be meeting MEDEVAC crew (radio callsign / frequency, cell number)?
- Will the patient meet the MEDEVAC crew at the pickup location or will the MEDEVAC crew need to be transported to the patient?
- Any special equipment required (ventilator, bariatric transport equipment, etc.)?
- Will any additional personnel be necessary (physician, nurse)?
- Is there an intended destination (major hospital, community)?
- Has any consultation with medical providers at the intended destination been done?

Do not delay launch / dispatch of MEDEVAC, provide the following information once available:

- Mechanism of injury (and time of injury if known)
- Injury or illness sustained
- Symptoms and vital signs
- Treatment given

C: Monitoring MEDEVAC

When requesting MEDEVAC, ensure that you are monitoring the transport and are aware of who to contact for updates and in case changes to plan are required.

When is MEDEVAC transport scheduled to arrive?:

What number should be contacted if something in the plan needs to be changed?

If transport doesn't arrive, or if no updates are heard, what time will we contact MEDEVAC for an update?

Emergency MEDEVAC Phone Numbers

PROVINCIAL AIR AMBULANCE:

Alberta 800-661-3822

 British Columbia
 911

 Manitoba
 800-689-6559

 Saskatchewan
 888-782-8247

STARS (AB, BC, SK, MB): 24 Hour Emergency: 888-888-4567

Note: When a medical evacuation is complete all personnel must report to the Incident Commander for a debriefing session.



Security Incidents

A security incident is a security-related occurrence, threat or action that has adversely affected people, the environment, assets and economic stability, or could potentially do the same.

General Notes on Prevention of Security Incidents

As defined in the CSA Standard Security Management for Petroleum and Natural Gas Industry Systems (Z246.1-21), a Security Management Program should be implemented to ensure security incidents and threats are identified and managed with appropriate safeguards and response procedures in place.

This documented security risk management process should incorporate threat, vulnerability, risk assessment and asset characterization. Asset characterization, in particular, identifies and ranks any assets that could result in adverse consequences if damaged or destroyed.

To minimize the possibility of threats within a company property, an adequate physical security system must be in place. This should include the following:

- Perimeter fencing and gates to protect against unauthorized entry into a facility gates should be closed when not in use and locked when unoccupied
- Appropriate signage at the perimeter and entrances
- Intrusion detection systems / alarm systems
- Sufficient lighting in darkness or areas of poor visibility
- Pedestrian access control
- Security guard force, both static and mobile
- Employee awareness

Types of Security Threats

Security-related threats have the intent to cause harm and could include bomb threats, suspicious packages, terrorism, vandalism, trespassing and cyber-attacks.

Responding to Threats

Should any facility or office be the subject of a threat, or be advised of the potential of a terrorist attack, or of the potential of an attack to an adjoining facility being operated by another company, the person receiving the initial threat should remain calm, document all information in writing and notify his supervisor immediately. The supervisor should make an immediate assessment of the circumstances then:

- Obtain all data from the person who received the threat.
- If there is clear and imminent danger, the plant should be immediately evacuated, and the Field Response Team activated from a remote location.
- Contact local police / Royal Canadian Mounted Police (RCMP).
- Notify the Regulatory Agency and the EOC Director.



Once the Field Response Team is activated, the Field Response Team Incident Commander and a senior company representative will consider the threat and options available to respond to the threat. There are a myriad of potential short and long term responses available and they will be dependent on the evaluation of the threat, time available to respond, resources available locally or that can be brought in a reasonable time, and police and military resources available.

• If the threat is considered possible, the Canadian Security Advisor recommends that the following immediate/short term responses should be considered:

Field Operations:

- Establish intelligence liaison with local authorities (e.g. police).
- Report all suspicious activity to Corporate Security.
- Discontinue all site tours and visits.
- Restrict vehicle access to specifically authorized vehicles only.
- ID all visitors seeking access.
- Assign a person to patrol the perimeter of the facility at the beginning of each operational shift and note any deficiencies; look for signs of attempted break and enter.
- Conduct an evacuation exercise.

Remotely Operated Facilities (also applies to any facility operated by a single person):

- Establish full lock down on fences and assets on the lease/site everything that can be secured and locked is secured and locked.
- Conduct a fence perimeter patrol before entering the site look for signs of illegal entrance.
- Conduct a full exterior building patrol before entering a building look for signs of unlawful entrance (doors pried, windows open, broken glass etc.).
- When working, lock the gates upon entering and leaving the facility, and rigidly adhere to the work alone guidelines.

Bomb Threats

Bomb threats are delivered in a variety of ways. The majority of threats are called in to the target, though occasionally these calls are through a third party. Sometimes a threat is communicated in writing, or by a recording.

Persons making bomb threats generally have one of two motivations:

- The caller has definite knowledge or believes that an explosive or incendiary bomb has been, or will be, placed. He or she wants to minimize personal injury or property damage. The caller may be the person who placed the device or someone who has become aware of such information.
- 2. The caller wants to create an atmosphere of anxiety and panic which will, in turn, result in a disruption of the normal activities at the location where the device is purportedly placed.

While most bomb threats are unfounded, some are not. As such, each one must be dealt with as though it is real and handled seriously and calmly.



Bomb Appearance

Bombs can be constructed to look like almost anything, and can be placed or delivered in any number of ways. The probability of finding a bomb that looks like the stereotypical bomb is almost non-existent. Most bombs are homemade, and are limited in their design only by the imagination and resources available to the bomber.

Remember, when searching for a bomb, suspect anything that looks unusual. Ultimately, however, let a trained bomb technician determine what is or is not a bomb.

Responding to Bomb Threats over the Phone

Most threats or implied threats are received by telephone, generally at a publicized or switchboard number. Should that occur, obtain as much information as possible, filling out the Threatening Call / Bomb Threat form (Section 6: Forms).

If a bomb threat is received over the telephone, the employee receiving the phone call should take the following actions:

- Stay calm and keep their voice calm.
- Pay close attention to details. Write information down as the caller says it. Attempt to get the following information from the caller:
 - o What type of bomb is being used?
 - Did you place the bomb?
 - o Who is the target?
 - o Where has the bomb been placed?
 - What time is the bomb set to explode?
 - o Why was the bomb placed?
 - o What type of container is the bomb placed in?
 - o What does it look like?
 - o What is the bomber's name?
 - o What is the bomber's address?
- While the first employee is dealing with the threatening phone call, they should have a co-worker or another person contact the police (dial 911) using another telephone, and as covertly as possible. As the first employee writes down answers to the questions above, these answers should be relayed to the police.
- The call recipient should attempt to keep the caller on the phone.
- The call recipient should note the caller's:
 - Age and gender
 - Emotional state (angry, agitated, calm, etc.)
 - o Speech patterns (accent, tone)
 - o Background noise (traffic, people talking and accents, music and type, etc.)

Responding to Bomb Threats Received in Writing

If a threat has been received in writing, minimize the handling of the document to ensure preservation of forensic evidence - DO NOT PHOTOCOPY.



Supervisor Responsibilities after Receiving a Bomb Threat

The supervisor should then:

- · Obtain all data from the person who received the threat
- Activate the ERP if the situation warrants
- Contact local police / Royal Canadian Mounted Police (RCMP) if this has not already been done
- Notify the Regulatory Agency
- Decide on partial or total evacuation (if needed)
- Decide on partial or total search of the facility (if needed)

Evacuating the Facility

If it seems prudent to evacuate the building:

- Have all employees briefly check their work areas for unfamiliar items.
- Instruct all employees not to touch suspicious items, but simply to report them to their supervisors (taking pictures if feasible).
- Instruct all employees not to take personal belongings when they leave.
- · Leave doors and windows open
- Do not to turn light switches on or off.
- Do not activate the fire alarm.
- Use stairs only; do not use elevators.
- Use of radio communications should be restricted as the signal could detonate a device.
- All evacuees should report to an outside pre-designated muster area for accountability.

IED Evacuation Distances

Improvised Explosive Device (IED) SAFE STAND OFF DISTANCE

	Threat Description	Explosives Mass (TNT equivalent)¹		Building Evacuation Distance ²		Outdoor Evacuation Distance ³	
High Explosives (TNT Equivalent)	Pipe Bomb	5 lbs	2.3 kg	70 ft	21 m	850 ft	259 m
	Suicide Belt	10 lbs	4.5 kg	90 ft	27 m	1,080 ft	330 m
	Suicide Vest	20 lbs	9 kg	110 ft	34 m	1,360 ft	415 m
	Briefcase/Suitcase Bomb	50 lbs	23 kg	150 ft	46 m	1,850 ft	564 m
	Compact Sedan	500 lbs	227 kg	320 ft	98 m	1,500 ft	457 m
	Sedan	1,000 lbs	454 kg	400 ft	122 m	1,750 ft	534 m
	Passenger/Cargo Van	4,000 lbs	1 814 kg	640 ft	195 m	2,750 ft	838 m
	Small Moving Van/ Delivery Truck	10,000 lbs	4 536 kg	860 ft	263 m	3,750 ft	1 143 m
	Moving Van/Water Truck	30,000 lbs	13 608 kg	1,240 ft	375 m	6,500 ft	1 982 m
	Semitrailer	60,000 lbs	27 216 kg	1,570 ft	475 m	7,000 ft	2 134 m



Bomb Search Guidelines

Employees must not touch anything - only law enforcement explosive disposal units or qualified private consultants are qualified to search for a bomb or suspicious package.

In the event of a search, however, employees may be called upon to unlock drawers, cabinets, and the like for the search crew, and to identify any strange or unfamiliar objects.

Explosive Device Located

If a device or suspected device is located:

- Do not touch or move the object.
- Evacuate the immediate area.
- If possible, take steps to minimize effects of an explosion in the vicinity by evacuation or isolation of the area.
- Ensure RCMP are apprised of the location so explosive disposal unit can be called.

If there is an Explosion

- Have employees take cover under sturdy furniture, or leave the building if directed to do so by emergency responders.
- Stay away from windows.
- Do not light matches.
- Move well away from the site of the hazard to a safe location.
- Use stairs only; do not use elevators.
- Call 911 if no one has called.

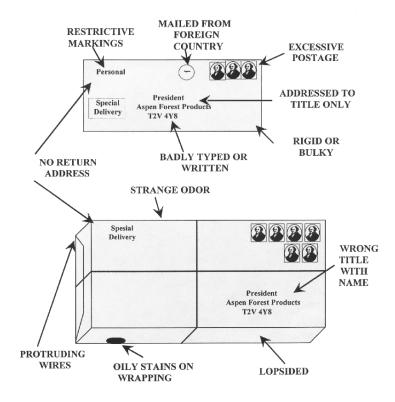
Suspicious Packages

The likelihood of receiving a bomb in the mail is remote. Unfortunately, however, a small number of explosive devices have been mailed over the years resulting in death, injury and destruction of property.

A bomb can be enclosed in either a parcel or an envelope, and its outward appearance is limited only by the imagination of the sender. However, mail bombs have unique characteristics that may assist in identifying suspect packages.



Appearance of Suspicious Packages



- Mail bombs may display restricted endorsements such as "Personal" or "Private". This factor is important when the addressee does not usually receive personal mail.
- Addressee's name / title may be inaccurate.
- Return address may be fictitious.
- Mail bombs may reflect / distort handwriting or the name and address may be prepared with homemade labels or cut-and-paste lettering.
- Cancellation or postmark may show a different location than the return address.
- Mail bombs may have excessive postage.
- Mail bombs may feel rigid or appear uneven or lopsided and may have an irregular shape, soft spots or bulges.
- Parcel bombs may be unprofessionally wrapped with several combinations of tape used to secure the package and may be endorsed "Fragile Handle With Care" or "Rush Do Not Delay".
- Parcel bombs may have a buzzing or ticking noise or a sloshing sound.
- Pressure or resistance may be noted when removing contents from an envelope or parcel.



Dealing with Suspicious Packages

If an employee is suspicious of a mailing and is unable to verify the contents with the addressee or sender:

- Do not open the article.
- Isolate the item and evacuate the immediate area.
- Do not put the package or envelope in water or a confined space such as a desk drawer or filing cabinet.
- If possible, open windows in the immediate area to assist in venting potential explosive gases.

If an employee suspects a harmful chemical or biological substance is in a package already on company property they should:

- Cover the package or envelope with a plastic sheet, raincoat, etc.
- Evacuate the room closing all doors and windows.
- Call their supervisor who will contact the local police.
- Isolate the area where the package is.
- Isolate themselves in another area that has a telephone and wait for the emergency responders to arrive.

If an employee has touched a package that possibly contains a harmful substance or got some on their clothes, they should:

- Wash their hands well.
- Shower with their clothes on
- Undress and seal their clothes in a plastic bag.
- Shower again and put on fresh clothes.

If an employee has any reason to believe a letter or parcel is suspicious, they should never take a chance or worry about possible embarrassment if the item turns out to be innocent.

Trespassing

Any person who enters land where entry is prohibited or does not leave land immediately after being directed to do so by the owner or occupier of the land is guilty of trespassing.

Dealing with Trespassing

If any personnel encounter a trespasser:

- Ask the trespasser to leave the unauthorized area.
- Give the trespasser a reasonable amount of time to leave peacefully.
- If the trespasser refuses to leave, call the RCMP / local authority.



Vandalism

Vandalism is the willful damaging or defacing of property belonging to another person or to the public. Acts of vandalism can include:

- Defacing removing, marking or damaging a part of an object to draw attention to it.
- Criminal damage willful and unlawful destruction of other people's property.
- "Tagging" or graffiti gangs use "tags" to mark their territory and usually spray-paint walls and doors of homes and business establishments.

Vandalism can happen at any time of the day or night and in any season, but it most often occurs:

- In the evening during summer and fall
- On weekday evenings
- At night when fewer people are around and the property isn't under as much scrutiny
- Where building design and lighting offers concealment and anonymity
- In areas frequented by young people such as schools, parks, shopping plazas and public buildings
- In unoccupied buildings, open spaces or parked vehicles where minimum surveillance is given to property

Dealing with Vandalism

- Report all incidents of vandalism to a supervisor
- Do not paint over vandalism and graffiti until the police department gives clearance to do so.

Terrorism

Terrorism is the use of violence and threats against persons or property for the purposes of intimidation, coercion or ransom. The direct targets of violence are not the main targets of a terrorist but a means to draw the attention of the local populace, the government and the world to their cause. A terrorist group commits acts of violence to:

- Produce widespread fear
- Obtain worldwide, national, or local recognition for their cause by attracting the attention of the media
- Destroy facilities or disrupt lines of communication in order to create doubt that the government can provide for and protect its citizens
- Discourage foreign investments, tourism or assistance programs that can affect the target country's economy and support of the government in power
- Influence government decisions, legislation or other critical decisions
- Satisfy vengeance

Acts of terrorism include threats of terrorism, assassinations, kidnappings, hijackings, bomb scares and bombings, cyber-attacks, and the use of chemical, biological, nuclear and radiological weapons.



Examples of Petroleum Assets Subject to Risk

- Buildings: Administration offices, corporate offices, control rooms
- Equipment: Process units and associated control systems, product storage tanks, surge vessels, boilers, turbines, process heaters, sewer systems
- Support Systems: Utilities such as natural gas lines, electrical power grid and facilities (including back-up power systems), water-supply systems, wastewater treatment facilities
- Transportation Interfaces: Railroad lines and railcars, product loading racks and vehicles, pipelines entering and leaving facility, marine vessels and dock area, off-site storage areas
- Cyber systems and information technology: Computer systems, networks, all devices with remote maintenance ports, SCADA systems, laptops, PDAs and cell phones.

Dealing with Terrorism

All threats and incidents should be reported to the RCMP Terrorism Tip Line at 1-800-420-5805.

In order to deal with threats of terrorism, it is important to establish a security management system to effectively manage security risks. This system should include a security risk management process incorporating asset characterization, threat assessment, vulnerability assessment, risk assessment, risk mitigation, communication and recommendations.

This system should be reviewed at regular intervals and updated as necessary.

Cyber-Attacks

Cyber-attacks are computer-to-computer attacks that undermine confidentiality, integrity or availability of a computer or the information contained.

Cyber-attacks can make computer systems malfunction or result in a disrupted flow of data and have the potential to create extreme economic damage.

This threat includes a risk to SCADA and DCS systems, which collect, display and store information in support of controlling equipment, devices and facilities.

Preventing Cyber-Attacks

Steps that can be taken to enhance your cyber security:

- Know who owns and operates the IT system and its operating framework.
- Map the network include all internal/external connections, configuration control, etc.
- Develop a security policy structure and implement compliance monitoring.
- Apply as much security and hardening as appropriate.
- Accredit the IT system and follow a risk management approach.
- Know the system's possible vulnerabilities.
- Patch the system in a timely manner the longer this is delayed, the longer the system is vulnerable.
- Reduce Internet access points.
- Reduce or eliminate potential sources of infection USB flash drives (thumb drives, USB keys, etc.), flash media, etc.



• Communicate, train and educate staff and users.

Source: 10 IT Security "Commandments" - Communications Security Establishment Canada

Dealing with Cyber-Attacks

In the event of a cyber-incident:

• After obtaining corporate approval, local police or RCMP should be notified.

Serious cyber incidents:

• Should be reported to Public Safety Canada by email at contact@cyber.gc.ca or by phone at 1-833-292-3788.



Section 5: External Agencies

Provincial Notification Matrix - British Columbia
Provincial Notification Matrix - Alberta
Provincial Lead Agency Roles - British Columbia
Provincial Lead Agency Roles - Alberta
Government Consultation Summary
Specific Government Agency Roles
Health Services
Local Authority
Provincial Supporting Agency Roles - British Columbia
Provincial Supporting Agency Roles - Alberta

Federal Agency Roles



Phone numbers for the agencies listed above are located in the Area Specific Information

✓ Compulsory contact

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

** Refer to the British Columbia Petroleum Release Reporting Requirements chart included in the ERP.

_ Technical Safety BC only requires reporting of rail related accidents, incidents and spills. No other transportation related emergencies need to be reported.

EMBC to notify the OGC for all incident types including fire/explosion incidents, pressure vessel incidents, spills and releases, or electrical incidents occurring at facilities approved by the OGC.

EMBC to notify the Ministry of Environment for any incident which affects the water, air, or land environment, or any white or green space in the province.

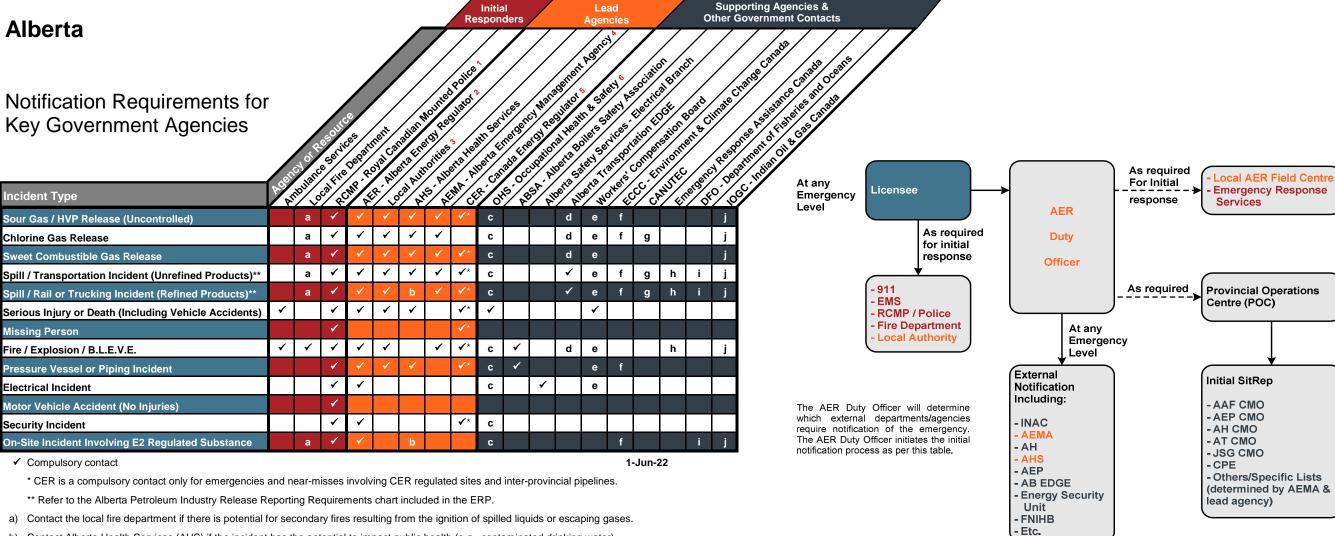
EMBC to notify Environment & Climate Change Canada (ECCC) of all oil and gas incidents in time, but immediately as required for incidents involving regulated substances at E2 registered facilities, incidents involving PCBs or any spills on First Nations lands,

in National Parks, into river or lake systems containing fish, or onto railway right-of-way.

EMBC to notify Ministry of Forests, Lands and Natural Resources Operations, Northern Health Authority, affected municipalities and all other level of government and industry; depending on the ECC code level in their SOPs.

- a) Contact the local fire department if there is potential for secondary fires resulting from the ignition of spilled liquids or escaping gases.
- b) Contact the Northern Health Authority if the incident affects public health, e.g., contaminated drinking water.
- c) Contact the Ministry of Transportation and Infrastructure (MOTI) and the RCMP if the emergency intersects with a 1, 2 or 3 digit Provincial or Secondary highway (e.g., Hwy 2, Hwy 47, Hwy 837). MOTI and RCMP have the authority to shut down highways.
- d) Contact Public Services and Procurement Canada (PSPC) and the RCMP if the emergency intersects with the Alaska Highway (97) north of mile 83.5 all the way to the Yukon border. PSPC and RCMP have the authority to shut down this portion of the Alaska highway.
- e) Contact the Canadian Transport Emergency Centre (CANUTEC) when a highway is shut down, there is an injury or fatality, there is lost, stolen or unlawfully interfered with dangerous goods (except Class 9), the incident involves infectious substances, there is an accidental release from a cylinder that has suffered a catastrophic failure, where the shipping documents display CANUTEC's telephone number, where a railway vehicle, ship, aircraft aerodrome or an air cargo facility is involved, when a facility is closed, evacuation/shelter-in-place procedures take place as a result of the transportation of dangerous goods, containment has been damaged and integrity compromised, or the centre/stub sill of a tank car is broken or there is a crack in the metal ≥ 15cm(6"). CANUTEC can also provide guidance on handling procedures for toxic material releases
- f) Emergency Response Assistance Canada will only respond to transportation incidents and only incidents that involve the following UN numbers: 1075 (Propane, Butane, etc.) and 1010 (Butadiene); and those products have tank storage capacity of 450 litres or greater.
- g) Indian Oil & Gas (IOGC), the First Nation and the provincial authority must be notified immediately in the event of any health or environment-threatening emergency or off-lease spills on First Nation reserve lands. On-lease spills greater than 1m3 must be reported to IOGC immediately.
- 1 In the event of a fatality, request that the RCMP contact the Medical Examiner. The RCMP must be notified in the case of lost, stolen or misplaced explosives, radioactive materials or infections substances.
- 2 Notify Emergency Management BC (EMBC) for all spill and non-spill incidents to receive a Dangerous Goods Incident Report (DGIR) number. EMBC will notify the OGC and Ministry of Environment, and will provide a representative to coordinate the provincial response.
- 3 Contact the OGC for any spills or release of hazardous substances that are not provincially regulated (such as radioactive materials), 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, drilling kicks when any of the following occur: pit gain of 3m³ or greater, casing pressure 85% of MA, 50% out of hole when kicked, well taking fluid (LC), associated spill or general situation deterioration such as leaks, equipment failure or unable to circulate etc., major damage to oil and gas roads or road structures and security related issues which are relatively minor; such information may be required for tracking and monitoring purposes only. The OGC must also be notified of needed emergency oil and gas road closures. The OGC may request a NOTAM order upon request from operator.
- 4 Local authorities include regional district disaster services, national park authorities and the local police.
- 5 Contact the Canada Energy Regulator (via the Transportation Safety Board of Canada) for all emergencies and near misses involving CER regulated sites and inter-provincial pipelines. The CER regulates all inter-provincial pipelines and other facilities and sites located in Frontier lands (Northern Canada).
- 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 requirement to immediately report a serious injury or fatality is separate from the requirement to report injuries for claims purposes. Failure to immediately notify WorkSafeBC will be considered a breach of section 172 of the Workers Compensation Act. The employer must immediately report the following incidents, injury or not: Any incident that kills, causes risk of death, or seriously diving incident or decompression sickness, a major leak or release of a dangerous substance, a major structural failure or collapse of a structure, equipment, construction support system or excavation, or any serious mishap. Must also report incidents that requires the employee to seek medical attention or cause time-loss from work.
- 7 Ministry of Environment was formerly known as Ministry of Water, Land and Air Protection.
- 8 Technical Safety BC is to be notified immediately in cases of Boilers, Pressure Vessels, Piping and Fittings, Electrical & Gas incidents resulting in a moderate, major or severe property damage. All other incidents must be reported within 24 hours (or as soon as practical). Rail accidents where a person sustains a serious injury or is killed as a result of being on board or getting on or off the rolling stock, or coming into contact with any part of the rolling stock or its contents, or the rolling stock is involved in a grade crossing collision or a derailment, sustains damage that affects its safe operations, or causes or sustains a fire or explosion, or causes damage to the railway, that poses a threat to the safety of any person, property or the environment, or any dangerous good is released.





- b) Contact Alberta Health Services (AHS) if the incident has the potential to impact public health (e.g., contaminated drinking water).
- c) Contact Occupational Health & Safety and report when: an injury or accident results in death; an injury results in a worker being admitted to a hospital; a potentially serious incident (PSI) where a reasonable and informed person would determine that under slightly different circumstances, there would be a high likelihood for a serious injury to a person; there is an unplanned or uncontrolled explosion, fire or flood that causes a serious injury; there is a collapse or upset of a crane derrick or hoist or; there is a collapse or failure of any component of a building or structure necessary for its structural integrity.
- d) Alberta Transportation EDGE (Environmental and Dangerous Goods Emergencies) is the first call for all transportation related spills/incidents. If spill is contained on-site, Alberta Transportation will contact the AER. If the spill moves off-site or into a waterbody, Alberta Transportation will contact Alberta Environment and Parks (AEP) and/or Environment & Climate Change Canada (ECCC). Contact Alberta Transportation or the RCMP if an oil & gas emergency affects a highway designated by 1, 2, or 3 digits (e.g., Hwy 2, Hwy 47, Hwy 837). Alberta Transportation and RCMP have the authority to shut down highways.
- e) Contact the Workers' Compensation Board 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.
- f) ECCC will be notified by AER as required for incidents involving regulated substances at E2 registered facilities, incidents involving PCBs or any spills on first national Parks, into river or lake systems containing fish, or onto railway right-of-way.
- g) Contact the Canadian Transport Emergency Centre (CANUTEC) when a highway is shut down, there is an injury or fatality, there is lost, stolen or unlawfully interfered with dangerous goods (except Class 9), the incident involves infectious substances, there is an accidental release from a cylinder that has suffered a catastrophic failure, where the shipping documents display CANUTEC's telephone number, where a railway vehicle, ship, aircraft aerodrome or an air cargo facility is involved, when a facility is closed, evacuation/shelter-in-place procedures take place as a result of the transportation of dangerous goods, containment has been damaged and integrity compromised, or the centre/stub sill of a tank car is broken or there is a crack in the metal ≥ 15cm(6"). CANUTEC can also provide guidance on handling procedures for toxic material releases.
- h) Emergency Response Assistance Canada 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.
- i) Contact the Department of Fisheries and Oceans Canada to report an oil spill that occurs in or around fresh and marine waters.
- i) Indian Oil & Gas (IOGC), the First Nation and the provincial authority must be notified immediately in the event of any health or environment-threatening emergency or off-lease spills on First Nation reserve lands. On-lease spills greater than 1m³ must be reported to IOGC immediately.
- 1 In the event of a fatality, request that the RCMP contact the Medical Examiner. The RCMP must be notified in the case of lost, stolen or misplaced explosives, radioactive materials or infections substances.
- 2 Alberta Energy Regulator is designated as the lead agency (single window approach) to implement the Gov't of Alberta Emergency Response Support Plan for a Petroleum Industry Incident.
- 3 Local Authorities include: cities, towns, villages, counties, municipal districts, improvement districts, special areas, Métis settlements, and first nations reserves.
- 4 Request that Alberta Emergency Management Agency identify the affected local authorities and implement Emergency Services. The Emergency Management Field Officer may provide assistance in contacting some or all of the local authorities.
- 5 Contact the Canada Energy Regulator (via the Transportation Safety Board of Canada) for emergencies and near-misses involving CER regulated sites and inter-provincial pipelines.
- 6 Occupational Health and Safety see c) for further details on this agency's role



Receive and review Post-Incident reports. ☐ Complete a "lessons learned" process based on the scope of involvement and provide

Before the Incident

The Emergency Response and Safety Department is the lead department responsible for emergency management within the Commission. The Department oversees the administration of the EMR. This includes:

- ☐ Reviewing industry emergency management programs and plans
- ☐ Participating in permit holder emergency response exercises
- ☐ Providing 24 hour Emergency Officer services
- ☐ Leading emergency and incident follow-up and investigation
- ☐ Administering incident and complaint response services
- ☐ The Commission uses a combination of reviews, assessments, and field inspections.
- To ensure permit holders maintain compliance with the requirements detailed in the Emergency Management Regulation and the Oil and Gas Activities Act. The audit and inspection program objectives are to ensure permit holders have adequate processes and procedures in place.
- Participate in selected licensee ERP exercises.
- ☐ Maintain a 24 hour telephone contact where petroleum industry incidents can be reported
- $\hfill \square$ Assist the OGC with planning initiatives regarding petroleum industry emergency response as requested by the OGC.
- ☐ EMBC Northeast Region receives Industry Facility Emergency Response Plans.
- Participate in selected licensee ERP exercises when requested as time permits.
- ☐ Maintain a 24 "800" telephone contact where petroleum industry spill incidents can be
- ☐ Maintain 24 hour emergency contact numbers for local governments and provincial emergency responders
- ☐ Set up and maintain an emergency management organization which can include an executive committee, emergency program management committee, emergency program coordinator or emergency social services director.
- Develop and maintain a Hazard, Risk and Vulnerability Analysis (HRVA) to identify potential emergencies and disasters in its jurisdictional area.
- ☐ Educate community residents and business owners about the need for personal emergency preparedness.
- ☐ Prepare for emergencies and disasters through mitigation, preparedness, response and recovery planning
- Conduct training and exercises for all emergency response staff.
- ☐ Establish procedures for implementing, reviewing and revising response and recovery 0
 - Complete periodic reviews and updating of the local emergency plan.
 - Respond to emergencies when required

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- eg ☐ Establish procedures for notifying persons threatened by emergencies or impending disasters
- ☐ Identify procedures for obtaining emergency resources.
- ☐ Establish priorities for restoring essential services.
- □ Work with volunteer groups to plan for the provision of food, clothing and shelter to
- Participate in industrial operators' preparatory training and exercises where possible.
- Maintain 24 hour emergency contact numbers.

The first level of emergency response is provided by fire and/or police services and may involve the activation of the Emergency Operations Centre (EOC). Other first responders, such as the RCMP and British Columbia Ambulance Service, have a provincial mandate but with a local presence through detachments or stations. These agencies are usually accessed through 9□1□1 and have internal dispatch arrangements

- ☐ First responders work at the site level of an event and include police, fire and ambulance. Activities of first responders include medical response, firefighting and managing crowds or evacuation zones.
- ☐ When a local authority EOC is activated, police and fire first responder agencies provide situational awareness to the local authority and submit requests for support to the local authority EOC.
- ☐ First response services provided by a fire department are determined by the local authority responsible, and may include hazardous material incident response, road rescue, and medical rescue.
- ☐ The BC Ambulance Service (BCAS) operates under the authority of the Emergency and Health Services Commission (EHSC) and is tasked with the provision of pre-hospital emergency care and transport of patients across the province.
- BCAS staff actively participates in emergency planning, mock emergency exercises and other joint training initiatives to ensure emergency preparedness and response resources are identified and deployed quickly and effectively when they are needed
- Participate in industrial operators' exercises where possible. ပ
 - ☐ Maintain 24 hour emergency contact numbers.

During the Incident

During emergencies the Oil and Gas Commission (OGC) acts as a liaison between industry operators and the provincial emergency management structure to provide situation updates related to threatened oil and gas assets.

- Oversee operator's response to an incident
- ☐ Notified by EMBC of incidents within OGC's jurisdiction (on lease).
- ☐ Establish communication with operator.
- ☐ Confirm incident level with operator.
- ☐ Confirm downgrade of incident level. Issue road closure order upon request from operator.
- Request NOTAM order upon request from the operator.
- ☐ May send an OGC representative to operator's On-Site Command Post and / or Evacuation Centre.
- ☐ May establish a government EOC at the OGC office.
- ☐ Confirm ignition decision with operator if time permits.
- ☐ Confirm media releases to be sent out by operator.
- □ ECC Victoria will notify the OGC 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 OGC), depending on the code level Standard Operating Procedures (SOPs) in ECC will determine who is notified.
- Provide representatives to help coordinate provincial response as required.
- ☐ Provides the local government response for rural and crown areas.
- Assesses the situation
- ☐ Provides support to the first responders, including resources.
- ☐ Provides public information, including media briefings.
- ☐ Coordinates the provision of food, clothing, shelter and transportation.
- ☐ Liaises with volunteer groups
- ☐ Provides situation reports to the PREOC.
- □ Tracks finances.
- ☐ Coordinates recovery of essential services.
- ☐ Coordinates community recovery efforts
- ☐ During emergencies and disasters the local authority's primary link to the provincial emergency management structure is the PREOC.
- ☐ When a local authority EOC is activated, police and fire first responder agencies provide situational awareness to the local authority and submit requests for support to the local authority EOC.
- ☐ Establish contact with the industrial operator in order to:
 - ☐ Obtain additional hazard information
 - ☐ Determine where roadblocks should be or are established.
 - ☐ Determine the direction of approach to the incident.
 - ☐ Determine if there are any injuries.
 - ☐ Find out what response and public protection actions have been taken.
 - ☐ Identify the location of the On-site Command Post (OSCP) and any Emergency Operations Centres (EOCs).
- ☐ Activate the MEP, when required.
- ☐ Manage the Local Authority's emergency response.
- ☐ Activate the emergency public warning system to alert people to life threatening hazards, as required.
- ☐ Activate the Municipal EOC (MEOC), as required. ☐ May dispatch a representative to the Government EOC (GEOC), when it is established, to coordinate the response, if requested.
- ☐ If necessary, declare a local State of Emergency.
- ☐ When possible, work with all other responders to establish a single Regional EOC (REOC).
- $\hfill \square$ Inform EMBC and the public when the emergency is over.

RCMP

- ☐ Maintain law and order and assist the operator with security.
- ☐ Assist with mobilization of additional resources as directed by EMBC.
- ☐ Assist with traffic control, evacuation, and residence security.
- ☐ Assist with setting up and maintaining roadblocks or closures of 1, 2 and 3 digit Provincial or Secondary highways.
- ☐ Establish and maintain communications with industrial operator.
- ☐ Dispatch a representative to the off-site Regional Emergency Operations Centre, when established, to coordinate the response.
- ☐ Coordinate with the industrial operator both the establishment and the administration of reception centres for evacuees.
- ☐ Maintain a 24 hour emergency contact number where resources can be accessed for a response related to Emergency Response Plans.

- Respond to and assess emergency incident to the scope of their abilities.
- ☐ Establish a unified OSCP / ICP (On-site Command Post / Incident Command Post).
- ☐ Communicate to MEOC and provide site reps as required.
- ☐ Assist with fire protection where trained personnel are available.
- ☐ Provide emergency medical assistance, as required. ☐ Coordinate news releases with the licensee, if required.

- ☐ Respond to and assess emergency incident to the scope of their abilities.
- ☐ The BC Ambulance Service provides and coordinates ambulance service s within British Columbia, including triage, treatment, transportation
- ☐ The BC Ambulance Service provides situational awareness and coordinates resources through the PREOCs and PECC.
- ☐ Provide medical aid and transportation of ill or injured workers to a medical facility during high risk operations as required under the WCB Act and WSBC Regulations.
- ☐ Provide emergency medical assistance, as required.

☐ Complete a "lessons learned" process based on the scope of involvement and provide

After the Incident

any feedback to the industrial operator Participate in multi-agency debriefings.

any feedback to the industrial operator.

☐ Participate in multi-agency debriefings.

☐ Close FOC if established

May audit licensee records

☐ As requested by OGC

Participate in event debriefings.





Northern Health Authority

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Before the Incident

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).

☐ 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.

The Police and Community Safety Branch of the Ministry of Justice will work with EMBC to:

☐ Prepare, promulgate and implement orders relating to law enforcement and internal security.

☐ Provide through the jurisdictional police force:

☐ Advice to local authorities respecting the maintenance of law and

☐ Reinforcement of local police services

☐ Security control of emergency areas; and

☐ Traffic and crowd control

☐ The Ministry of Justice provides legal services to the government. Policy direction and legislative changes are made in consultation with the Ministry of Justice. During emergencies or disasters the Ministry of Justice may be called on to assist with risk management and provide expertise. This could include providing advice to provincial ministries and government corporations on legal matters relating to the preparation and promulgation of emergency orders, regulations, declarations and contractual arrangements.

During the Incident

- ☐ Activate internal emergency response management plans related to ongoing provision of its services
- ☐ Provide acute care and emergency services at existing Northern Health hospitals/health centres.
- Uvork 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.

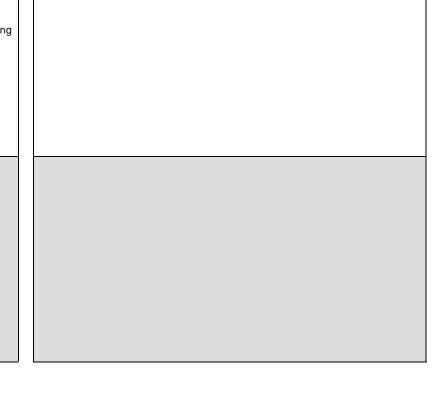
- Provide advice/information to the stakeholders on the existing or potential public health effects of an incident (including drinking water safety, air quality, environmental contaminants, communicable disease prevention, re-occupancy of evacuated areas,
- ☐ Provide advice/information on the best methods 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.
- ☐ Jurisdictional police forces to task search and rescue services for missing persons on land and in inland waters.
- ☐ Before, during and after an emergency the Ministry of Justice could be called upon to provide expertise, technical advice and/ or policy direction regarding police and correctional services.
- ☐ The Minister of Justice has overall responsibility for emergency management in the province. In the event of a disaster, the Minister may:

☐ Declare a provincial state of emergency

☐ Make a formal written request for federal assistance or aid from the Government of Canada

☐ Direct the establishment of M-DEC

- ☐ Inform his/her colleagues of the situation, and
- ☐ Be available for media interviews



After the Incident

During the Incident

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Before the Incident

After the Incident

Before the Incident

The first level of emergency response is provided by fire and/or police services and may involve the activation of the Emergency Operations Centre (EOC). Other first responders, such as the RCMP and Emergency Medical Services, or EMS, have a provincial mandate but with a local presence through detachments or stations. These agencies are usually accessed through 911 and have internal dispatch arrangements.

- ☐ First responders work at the site level of an event and include police, fire and ambulance. Activities of first responders include medical response, firefighting and managing crowds or evacuation zones
- □ When a local authority EOC is activated, police and fire first responder agencies provide situational awareness to the local authority and submit requests for support to the local authority EOC
- ☐ First response services provided by a fire department are determined by the local authority responsible, and may include hazardous material incident response, road rescue, and medical rescue
- Emergency Medical Services, or EMS, operates under the authority of the Alberta Health Services. No matter where an emergency happens in Alberta, AHS EMS can transport patients by either a ground ambulance or air ambulance – fixed wing airplane or helicopter.
- □ AHS EMS staff actively participates in emergency planning, mock emergency exercises and other joint training initiatives to ensure emergency preparedness and response resources are identified and deployed quickly and effectively when they are needed most
- ☐ Maintain readiness status for emergency notification
- ☐ Participate in industrial operators' exercises where possible
- ☐ Maintain 24 hour emergency contact numbers

During the Incident

MP

- □ RCMP or local police would also become involved if there are fatalities, as they are required to participate in the investigations. This could be through the medical examiner.
- ☐ Maintain law and order and assist the operator with local security but would require discussion with the local police at the time.
- ☐ The Office of the Fire Commissioner (OFC) has a working relationship with the RCMP and the RCMP may conduct selected duties of the Fire Commissioner where the fire's impact is not significant.
- ☐ Assist with traffic control, crowd control, evacuation, and residence security.
- ☐ Typically would not be involved in setting up or maintaining roadblocks unless the emergencies impacted or required the closure of 1, 2 and 3 digit Provincial or Secondary highways.
- ☐ Establish and maintain communications with industrial operator.
- ☐ Dispatch a representative to the off-site Regional Emergency Operations Centre, when established, to coordinate the response.
- ☐ Coordinate with the industrial operator both the establishment and the administration of reception centres for evacuees.
- ☐ Maintain a 24 hour emergency contact number where resources can be accessed for a response related to Emergency Response Plans.

Fire

- ☐ Respond to and assess emergency incident to the scope of their abilities.
- ☐ Establish a unified OSCP / ICP (On-site Command Post / Incident Command Post).
- ☐ Communicate to MEOC and provide site reps as required.
- ☐ Assist with fire protection where trained personnel are available.
- ☐ Provide emergency medical assistance, as required.
- ☐ Coordinate news releases with the licensee, if required.

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- ☐ Respond to and assess emergency incident to the scope of their abilities.
- ☐ The Alberta Health Services provides and coordinates ambulance services within Alberta, including triage, treatment, transportation and care of casualties
- □ Provide emergency medical assistance, as required. Emergency Medical Technicians (EMT) or Emergency Medical Responders (EMR) provide basic patient assessment and treatment including obtaining vital signs, administering oxygen and splinting extremities.
- □ ALS ambulances have at least one paramedic with expanded training, scope of practice, and can provide advanced treatment in airway management and medication administration.

After the Incident

Complete a "lessons learned" process based on the scope of involvement and provide any feedback to the industrial operator.
 Participate in multi-agency debriefings.





Government Consultation Summary



Type of Agency	Agency Name	Provided Specific Roles	Agreed to Generic Roles	Unable to Contact	Willing to consider a single REOC	Evacuation outside of the EPZ	Location of EOC	Suggested Reception Centres	Notes
Emergency Management	Emergency Management BC – Prince George	Х			-	-	-	-	-
Health Authority	Northern Health Authority	х			Yes, where possible	-	-	-	Current roles on website
	Alberta Health Services – Zone 5	Х			Yes, where possible	With assistance from the licensee	Virtual	None	-
Local Authority	Northern Rockies Regional Municipality	х			Yes, where possible	With assistance from the licensee	5319 50 th Ave South Fort Nelson, BC	Northern Rockies Regional Recreation Centre 5500 Alaska Hwy, Fort Nelson, BC	-
	Mackenzie County	Х			Yes, where possible	Yes	4511 – 46 Ave, Fort Vermilion, AB	-	-
First Responders	BC Ambulance Service	-	-	Х	-	-	-	-	-
	AB High Level Ambulance	-	-	Х	-	-	-	-	-
	BC RCMP – Northern Rockies		Х		Yes, where possible	-	Fort Nelson	-	-
	AB RCMP – High Level		Х		Yes, where possible	Yes	10203 100 Ave High Level, AB	-	-





EMERGENCY MANAGEMENT BC

EMERGENCY RESPONSE ROLES & RESPONSIBILITIES

Before An Emergency

- Assist the OGC with planning initiatives regarding upstream petroleum industry emergency response as requested by the OGC
- EMBC 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 OGC 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 OGC); 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 OGC.





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 Authority (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 activate its emergency response management plan(s).

NH Roles & responsibilities - PREPAREDNESS (PRE-EVENT):

- 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);

Author(s): Northern Health Emergency Management Issuing Authority: Northern Health Chief Medical Health Officer Date Issued (I), REVISED (R) Reviewed (r) (I) July 5, 2016,; (R) Oct 5, 2016,; (r) Sept, 2018,; (R) Feb, 2019.





NH Roles & responsibilities - RESPONSE:

- 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

Contact information:

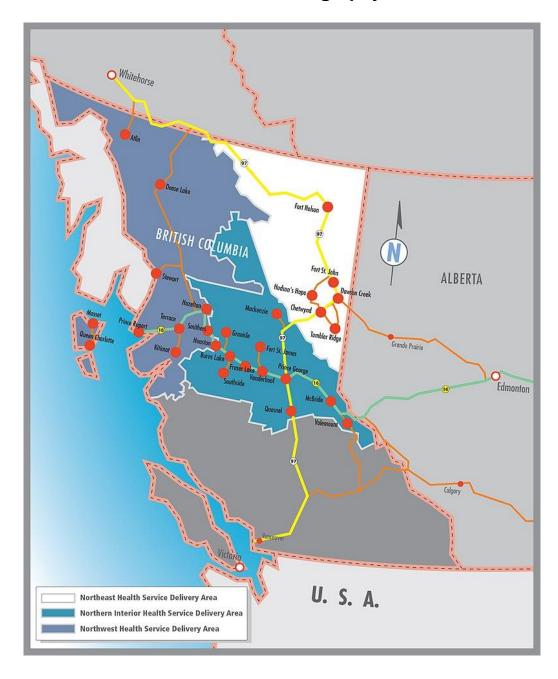
- For Emergency events that require immediate connection with Northern Health, please call:
 - •
- HEMBC will notify/activate the appropriate Northern Health programs (i.e. Public Health, Acute Care, etc.) based on the nature of the event/emergency.
- Please include this number in industry ERPs, for the use of permit holders in contacting Northern Health on an emergency basis.
- 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.
- For non-urgent requests or emergency exercise planning/information, contact
 - HEMBC@northernhealth.ca
- Please note that Northern Health does not review or approve emergency response plans (ERPs) unless there is a request made from the regulators or governing agencies (e.g. Oil and Gas Commission, National Energy Board, Ministry of Environment, Environmental Assessment Office, etc.). Northern Health also does not require that general stakeholder consultation/notification packages be sent to Northern Health.
- Please make your site and project ERPs available to Northern Health in the event of an emergency to: <u>HEMBC@northernhealth.ca</u>
- 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





Appendix II

Northern Health Geography



Oil & Gas Industry Emergency Preparedness and Response

Alberta Health Services (AHS) - Environmental Public Health (EPH) roles and responsibilities in public health emergency preparedness and response to the oil and gas industry are outlined below. The provision of services during an emergency depends upon our assessment of legislative responsibilities, impact to services, and business continuity.

EPH will endeavor to:

- Participate with the Licensee in the development of their Emergency Response Plans as it relates to the Environmental Public Health Program's role and responsibility.
- Provide the AHS Zone Single-Point-of-Contact (SPOC) emergency phone number to enable the Licensee to notify and alert the Zone of an emergency. From the initial notification or alert, AHS emergency response will fan out to and coordinate with other AHS programs and facilities as necessary. The 911 EMS services remain independent of the Zone SPOC notification/alert process.
- Participate with stakeholders in preparedness training and exercises associated with a Licensee's simulated activation of an Emergency Response Plan in which EPH has a role and responsibility.
- Participate in public information sessions during the Licensee's Emergency
 Response Plan development process when appropriate and as resources allow.
- Provide guidance to stakeholders and local municipal authorities in identifying sites suitable for establishing and operating an evacuation centre and/or reception centre, including operational requirements.
- Provide guidance to stakeholders on substances that may affect public health in consultation with the Zone Medical Officer of Health (MOH), including Alberta Health Acute Exposure Health Effects for Hydrogen Sulphide and Sulphur Dioxide information.
- Conduct assessments, inspections and give regulatory direction, when appropriate, to ensure the requirements of provincial legislation and EPH program areas of responsibilities for public health protection and disease prevention are maintained.

Notify the Zone Medical Officer of Health of any incident affecting or potentially affecting other AHS programs or facilities. The Zone MOH will notify and coordinate emergency response in other program areas and facilities as necessary.



Oil and Gas Industry Emergency Preparedness and Response | 2

- Establish EPH emergency management operations, when appropriate, to support regional response efforts and liaise with the Government Emergency Operations Centre, Municipal Emergency Operations Centre and/or Industry Emergency Operations Centre, if needed.
- Assist the Zone Medical Officer of Health, local municipal authority, and Public Information/Communication officers in the development, issuance, and rescinding of public health, public evacuation and shelter-in-place advisories.
- Provide guidance to stakeholders on matters relating to evacuation of the public and/or public facilities, and the re-occupancy of those evacuated areas or facilities.
- Record and respond to health complaints or concerns from the public during and following an incident.
- Participate in stakeholder debriefings as necessary.

24 Hour Emergency Notification

Phone: 1-844-755-1788

Email: edp@ahs.ca

Use the phone number and email for all notifications across Alberta.

Contact us at 1-833-476-4743 or submit a request online at ahs.ca/eph.

PUB-0055-201711

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LOCAL AUTHORITY - NORTHERN ROCKIES REGIONAL MUNICIPALITY

Resources would be provided in support of an upstream emergency on an "as available" basis and in accordance with Local Authority Policy.

Before	the Event		
	Work with the upstream operator to effectively prepare for an upstream petroleum industry incident. Provide input to the industrial operator's site-specific plan to ensure it is compatible with the Municipal Emergency Plan (MEP) where feasible. Participate in industrial operators' preparatory training and exercises where possible. Train personnel to carry out functions as assigned by MEP or procedures.		
	Maintain 24-hour emergency contact numbers.		
Upon	the Notification of and during an Event		
	Respond to and assess the emergency incident only in the Northern Rockies Regional Municipality fire protection area for fires.		
	Response to rescue & hazard incidents anywhere within the municipality, where feasible.		
	Establish contact with the industrial operator in order to:		
	Obtain additional hazard information.		
	□ Determine where roadblocks should be or are established.		
	Determine the direction of approach to the incident.		
	Determine if there are any injuries.		
	☐ Find out what response and public protection actions have been taken by the		
	upstream operation.		
	☐ The location of the On-site Command Post (OSCP) and any Emergency		
	Operations Centres (EOCs).		
	Activate the MEP, when required.		
	Manage the Local Authority's emergency response.		
	Activate the Municipal EOC (MEOC), as required.		
	If necessary, declare a State of Local Emergency.		
	Establish a public information service, including the use of the news media to inform and instruct the public of the emergency and of any protective actions to be taken.		
	Inform EMBC and the public when the emergency is over.		
After t	he Event		
	Complete a "lessons learned" process based on the scope of involvement and provide any feedback to the industrial operator.		
	Participate in multi-agency debriefings.		



Emergency Services (as managed / operated by the Local Authority)

Emergency Services will also, as a general rule, provide resources in support of a petroleum incident, on an "as available" basis.

Before the Event			
	Maintain readiness status for emergency notification.		
	Participate in industrial operators' exercises where possible. Maintain 24-hour emergency contact numbers.		
During the Event			
	Respond to and assess emergency incident to the scope of their abilities.		
	Establish a unified OSCP / ICP (On-site Command Post / Incident Command Post).		
	Communicate to MEOC and provide site reps as required.		
	Assist with fire protection where trained personnel are available.		
	Provide emergency medical assistance, as required.		
	Coordinate news releases with the licensee, if required.		
After the Event			
	Complete a "lessons learned" process based on the scope of involvement and provide any feedback to the industrial operator.		
	Participate in multi-agency debriefings.		



LOCAL AUTHORITY - MACKENZIE COUNTY

Resources would be provided in support of a petroleum emergency on an "as available" basis and in accordance with Local Authority Policy.

Before	the Even	t	
	Work with the licensee to effectively prepare for a petroleum industry incident. Provide input to the licensee's site-specific plan to ensure it is compatible with the Municipal Emergency Plan (MEP) where feasible.		
	Participa	te in licensee's preparatory training and exercises where possible.	
	Maintain	24-hour emergency contact numbers.	
Upon 1	the Notific	eation of and during an Event	
	Respond to and assess the emergency incident with the licensee.		
	Establish contact with the licensee in order to obtain emergency status information such as:		
		Additional hazard information	
		Roadblock locations and if assistance is required to set up and maintain	
		Direction of approach to the incident	
		Determine the extent of any injuries.	
		Find out what response and public protection actions have been taken	
		The location of the On-site Command Post (OSCP) and any Emergency Operations Centres (EOCs).	
	Activate the Municipal Emergency Plan (MEP) and establish a Municipal Emergency Operations Centre (MEOC) if required.		
	When possible work with all other responders to establish a single Regional EOC (REOC) or have a representative present at the licensee's EOC.		
	If necessary, declare a State of Local Emergency.		
	Activate t	the emergency public warning system to alert people to life threatening hazards, as required.	
After t	he Event		
	Complete	e a "lessons learned" process and provide any feedback to the licensee.	
	Participa	te in multi-agency debriefings.	



Emergency Services (as managed / operated by the Local Authority)

Emergency Services will also, as a general rule, provide resources in support of a petroleum incident, on an "as available" basis.

Before	the Event
	Maintain readiness status for emergency notification.
	Participate in licensees' exercises where possible.
After th	ne Event
	Complete a "lessons learned" process and provide any feedback to the licensee.
	Participate in multi-agency debriefings.



EMERGENCY SERVICE - BC AMBULANCE SERVICE

Resources would be provided in support of a petroleum emergency on an "as available" basis and in accordance with Local Authority Policy.

Before	the Even	t	
	Work with the licensee to effectively prepare for a petroleum industry incident. Provide input to the licensee's site-specific plan to ensure it is compatible with the Municipal Emergency Plan (MEP) where feasible.		
	☐ Participate in licensee's preparatory training and exercises where possible.		
	Maintain 24 hour emergency contact numbers.		
Upon t	he Notific	cation of and during an Event	
	Respond	to and assess the emergency incident with the licensee.	
	Establish contact with the licensee in order to obtain emergency status information such as:		
		Additional hazard information	
		Roadblock locations and if assistance is required to set up and maintain	
		Direction of approach to the incident	
		Determine the extent of any injuries.	
		Find out what response and public protection actions have been taken	
		The location of the On-site Command Post (OSCP) and any Emergency Operations Centres (EOCs).	
	Activate the Municipal Emergency Plan (MEP) and establish a Municipal Emergency Operations Centre (MEOC) if required.		
	When possible work with all other responders to establish a single Regional EOC (REOC) or have a representative present at the licensee's EOC.		
	If necessary, declare a State of Local Emergency.		
	Activate the emergency public warning system to alert people to life threatening hazards, as rec		
	Initiate public protection measures, as necessary.		
	The licensee will coordinate notification and shelter in place or evacuation within the Emergency Planning Zone (EPZ). If the hazard area extends beyond the EPZ, the county will coordinate, with t licensee; evacuation of the public.		
	Coordinate with the licensee establishment and maintenance of reception centre(s).		
	Establish a public information service, including the use of the news media to inform and instruct t public of the emergency and of any protective actions to be taken.		
	Coordina	te news releases with the licensee, if required.	
After th	ne Event		
	Complete	e a "lessons learned" process and provide any feedback to the licensee.	



☐ Participate in multi-agency debriefings.

Emergency Services (as managed / operated by the Local Authority)

Emergency Services will also, as a general rule, provide resources in support of a petroleum incident, on an "as available" basis.

asis.		
Before the Event		
Maintain readiness status for emergency notification. Participate in licensees' exercises where possible.		
During the Event		
Respond to and assess emergency incident to the scope of their abilities. Establish a unified OSCP / ICP (On-site Command Post / Incident Command Post). Communicate to MEOC and provide site reps as required. Assist with fire protection, to scope of ability where trained personnel are available. Provide emergency medical assistance, as required. Coordinate news releases with the licensee, if required.		
After the Event		
Complete a "lessons learned" process and provide any feedback to the licensee. Participate in multi-agency debriefings.		



EMERGENCY SERVICE - AEROMEDICAL EMERGENCY SERVICES

Resources would be provided in support of a petroleum emergency on an "as available" basis and in accordance with Local Authority Policy.

Before	the Even	t	
		h the licensee to effectively prepare for a petroleum industry incident. Provide input to the s site-specific plan to ensure it is compatible with the Municipal Emergency Plan (MEP) asible.	
	Participa	te in licensee's preparatory training and exercises where possible.	
	Maintain	24 hour emergency contact numbers.	
Upon t	he Notific	eation of and during an Event	
	Respond	to and assess the emergency incident with the licensee.	
	Establish contact with the licensee in order to obtain emergency status information such as:		
		Additional hazard information	
		Roadblock locations and if assistance is required to set up and maintain	
		Direction of approach to the incident	
		Determine the extent of any injuries.	
		Find out what response and public protection actions have been taken	
		The location of the On-site Command Post (OSCP) and any Emergency Operations Centres (EOCs).	
		the Municipal Emergency Plan (MEP) and establish a Municipal Emergency Operations MEOC) if required.	
	When possible work with all other responders to establish a single Regional EOC (REOC) or have a representative present at the licensee's EOC.		
	If necessary, declare a State of Local Emergency.		
	Activate t	the emergency public warning system to alert people to life threatening hazards, as required	
	Initiate public protection measures, as necessary.		
	The licensee will coordinate notification and shelter in place or evacuation within the Emergency Planning Zone (EPZ). If the hazard area extends beyond the EPZ, the county will coordinate, with t licensee; evacuation of the public.		
	Coordina	te with the licensee establishment and maintenance of reception centre(s).	
	Establish a public information service, including the use of the news media to inform and instruct the public of the emergency and of any protective actions to be taken.		
	Coordina	te news releases with the licensee, if required.	
After t	ne Event		
	Complete	e a "lessons learned" process and provide any feedback to the licensee.	



☐ Participate in multi-agency debriefings.

Emergency Services (as managed / operated by the Local Authority)

Emergency Services will also, as a general rule, provide resources in support of a petroleum incident, on an "as available" basis.

asis.		
Before the Event		
Maintain readiness status for emergency notification. Participate in licensees' exercises where possible.		
During the Event		
Respond to and assess emergency incident to the scope of their abilities. Establish a unified OSCP / ICP (On-site Command Post / Incident Command Post). Communicate to MEOC and provide site reps as required. Assist with fire protection, to scope of ability where trained personnel are available. Provide emergency medical assistance, as required. Coordinate news releases with the licensee, if required.		
After the Event		
Complete a "lessons learned" process and provide any feedback to the licensee. Participate in multi-agency debriefings.		



EMERGENCY SERVICE - RCMP HIGH LEVEL

Resources would be provided in support of a petroleum emergency on an "as available" basis and in accordance with Local Authority Policy.

Before	the Even	ıt	
		h the licensee to effectively prepare for a petroleum industry incident. Provide input to the s site-specific plan to ensure it is compatible with the Municipal Emergency Plan (MEP) asible.	
	Participa	te in licensee's preparatory training and exercises where possible.	
	Maintain	24 hour emergency contact numbers.	
Upon t	he Notific	cation of and during an Event	
	☐ Respond to and assess the emergency incident with the licensee.		
	Establish contact with the licensee in order to obtain emergency status information such as:		
		Additional hazard information	
		Roadblock locations and if assistance is required to set up and maintain	
		Direction of approach to the incident	
		Determine the extent of any injuries.	
		Find out what response and public protection actions have been taken	
		The location of the On-site Command Post (OSCP) and any Emergency Operations Centres (EOCs).	
		the Municipal Emergency Plan (MEP) and establish a Municipal Emergency Operations MEOC) if required.	
	When possible work with all other responders to establish a single Regional EOC (REOC) or have a representative present at the licensee's EOC.		
	If necessary, declare a State of Local Emergency.		
	Activate the emergency public warning system to alert people to life threatening hazards, as require		
	Initiate public protection measures, as necessary.		
	The licensee will coordinate notification and shelter in place or evacuation within the Emergency Planning Zone (EPZ). If the hazard area extends beyond the EPZ, the county will coordinate, with the licensee; evacuation of the public.		
	Coordinate with the licensee establishment and maintenance of reception centre(s).		
		a public information service, including the use of the news media to inform and instruct the the emergency and of any protective actions to be taken.	
	Coordina	ate news releases with the licensee, if required.	
After th	ne Event		
	Complete	e a "lessons learned" process and provide any feedback to the licensee.	



☐ Participate in multi-agency debriefings.

Emergency Services (as managed / operated by the Local Authority)

Emergency Services will also, as a general rule, provide resources in support of a petroleum incident, on an "as available" basis.

asis.		
Before the Event		
Maintain readiness status for emergency notification. Participate in licensees' exercises where possible.		
During the Event		
Respond to and assess emergency incident to the scope of their abilities. Establish a unified OSCP / ICP (On-site Command Post / Incident Command Post). Communicate to MEOC and provide site reps as required. Assist with fire protection, to scope of ability where trained personnel are available. Provide emergency medical assistance, as required. Coordinate news releases with the licensee, if required.		
After the Event		
Complete a "lessons learned" process and provide any feedback to the licensee. Participate in multi-agency debriefings.		



EMERGENCY SERVICE - RCMP NORTHERN ROCKIES / FORT NELSON

Resources would be provided in support of a petroleum emergency on an "as available" basis and in accordance with Local Authority Policy.

Before	the Even	t	
		h the licensee to effectively prepare for a petroleum industry incident. Provide input to the s site-specific plan to ensure it is compatible with the Municipal Emergency Plan (MEP) asible.	
	Participa	te in licensee's preparatory training and exercises where possible.	
	Maintain	24 hour emergency contact numbers.	
Upon t	he Notific	eation of and during an Event	
	Respond	to and assess the emergency incident with the licensee.	
	Establish contact with the licensee in order to obtain emergency status information such as:		
		Additional hazard information	
		Roadblock locations and if assistance is required to set up and maintain	
		Direction of approach to the incident	
		Determine the extent of any injuries.	
		Find out what response and public protection actions have been taken	
		The location of the On-site Command Post (OSCP) and any Emergency Operations Centres (EOCs).	
		the Municipal Emergency Plan (MEP) and establish a Municipal Emergency Operations MEOC) if required.	
	When possible work with all other responders to establish a single Regional EOC (REOC) or have a representative present at the licensee's EOC.		
	If necessary, declare a State of Local Emergency.		
	Activate t	the emergency public warning system to alert people to life threatening hazards, as required	
	Initiate public protection measures, as necessary.		
	The licensee will coordinate notification and shelter in place or evacuation within the Emergency Planning Zone (EPZ). If the hazard area extends beyond the EPZ, the county will coordinate, with t licensee; evacuation of the public.		
	Coordina	te with the licensee establishment and maintenance of reception centre(s).	
	Establish a public information service, including the use of the news media to inform and instruct the public of the emergency and of any protective actions to be taken.		
	Coordina	te news releases with the licensee, if required.	
After t	ne Event		
	Complete	e a "lessons learned" process and provide any feedback to the licensee.	



☐ Participate in multi-agency debriefings.

Emergency Services (as managed / operated by the Local Authority)

Emergency Services will also, as a general rule, provide resources in support of a petroleum incident, on an "as available" basis.

asis.		
Before the Event		
Maintain readiness status for emergency notification. Participate in licensees' exercises where possible.		
During the Event		
Respond to and assess emergency incident to the scope of their abilities. Establish a unified OSCP / ICP (On-site Command Post / Incident Command Post). Communicate to MEOC and provide site reps as required. Assist with fire protection, to scope of ability where trained personnel are available. Provide emergency medical assistance, as required. Coordinate news releases with the licensee, if required.		
After the Event		
Complete a "lessons learned" process and provide any feedback to the licensee. Participate in multi-agency debriefings.		

After the Incident **Before the Incident During the Incident** ☐ Provide regulatory oversight and monitor the situation to ensure that the Before, during and after an emergency the Ministry of Environment could be called upon to provide expertise, technical advice Responsible Party (RP) is taking appropriate actions. and/or policy direction regarding: ☐ Environmental emergency response (including hazardous materials) Can liaise with MFLNRO to provide: ☐ Air, land and water quality standards ☐ Species and ecosystem protection policy. ☐ Pollution prevention and waste management Environ ■ Water protection and sustainability policy ☐ Water and air monitoring and reporting Conservation and resource management enforcement □ Environmental assessment □ Environmental monitoring ☐ Parks, wilderness and protected areas. ☐ Provide regulatory oversight and monitor the situation to ensure that the Responsible Party (RP) is taking appropriate actions. ☐ May provide a representative to the Incident Command Centre, the Off-Site Command EOC and the OGC Emergency Ministry of 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 RP 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. ☐ May provide assistance with hazardous waste management. May conduct sampling for monitoring and enforcement purposes. ☐ Five key agencies are housed within the Ministry of Forests. Lands Before, during and after an emergency the Ministry of Forests, Lands and Natural Resource Operations could be called upon Participate in event debriefings. ☐ Complete a "lessons-learned" process based on the scope of their involvement and Natural Resource Operations: Wildfire Management Branch, Dam to provide expertise, technical advice and/or policy direction regarding: and the outcome. Safety, Flood Safety, GeoBC and the River Forecast Centre. ☐ Forest stewardship policy ☐ Develop, deliver and promote innovative and effective wildfire management ☐ Land use planning ☐ Water use planning and authorizations practices to clients. ■ Maintain a 24 hour emergency contact number where resources can be □ Drought management accessed for a response related to Emergency Response Plans. ☐ Dam and dike safety and regulation ☐ The Ministry of Forests, Lands and Natural Resource Operations is identified to ☐ Flood plain management provide personnel, equipment, supplies, telecommunications equipment, ☐ GeoBC and information management aviation support and weather information to assist in emergency response ☐ Pests, disease, invasive plants and species □ Wildfire management operations ☐ The Ministry of Forests and Range is the designated key agency for wildfires. ☐ Maintain a 24 hour emergency contact number where resources can be Before, during and after an emergency the Ministry of Transportation and Infrastructure (MoTI) could be called upon to provide □ Work with appropriate local and federal entities to facilitate the restoration of accessed for a response related to Emergency Response Plans. expertise, technical advice and/or policy direction regarding: roadways and utilities. ☐ In the event of an emergency, the Highway Department's Operations, ☐ Highway construction and maintenance Maintenance and Re- construction team plays an important role to ensure the ☐ Safety and protection of provincial road and bridge infrastructure public is safe and transportation routes are available for accessing emergency ☐ Transportation planning and policy services. ■ MoTI can: ☐ Ministry of Transportation and Infrastructure oversees provincial highways ☐ Authorize the closure of provincial transportation routes, including highways and inland ferries, where the safety of identified as emergency response routes - a network of pre-identified routes the public is at risk. that can best move emergency services and supplies to where they are needed ☐ Assist in public notification through the DriveBC website, as well as posting advisories on overhead message in response to a major disaster. boards along designated routes. ☐ Disaster Response Routes (DRRs) are a critical part of the overall emergency ☐ Coordinate and arrange for transportation, engineering and construction resources. transportation system. ☐ Rebuild and restore provincial highways that are impacted by an emergency. Responsible for the construction, maintenance and operation of public roads. In conjunction with the BC Ministry of Transportation & Infrastructure (MOTI), PSPC, and the provincial maintenance contractor The Roles & Responsibilities listed below for Public Services and Procurement ☐ Work with appropriate local and federal entities to facilitate the restoration and Canada (PSPC) are only in relation to the Alaska Highway (97) in British may be called upon to: re-opening of the Alaska Highway. ☐ Complete a "lessons learned" process based on the scope of involvement and Columbia, north of mile 83.5 (km 133) to the border of British Columbia and ☐ Provide expertise, technical advice and/or policy direction regarding: Yukon Territories at km 968. ☐ Highway construction and maintenance provide any feedback to the industrial operator ☐ Safety and protection of provincial road and bridge infrastructure ☐ Provide a summary of transportation impacts during the post incident review In conjunction with the BC Ministry of Transportation & Infrastructure (MOTI) and ☐ Transportation planning and policy process the provincial maintenance contractor, PSPC may: ☐ Play an important role to ensure the public is safe and transportation routes are available for accessing emergency services. ☐ Participate in multi-agency debriefings. ☐ Maintain a 24 hour emergency contact number where resources can be ☐ Assist in the coordination of roadblock locations along the highway. accessed for a response related to Emergency Response Plans. ☐ Authorize closure of the Alaska Highway where the safety of the public is at risk. ☐ Hold responsibility for the acquisition of contracts for the maintenance and ☐ Assist in public notification of an emergency through the MOTIs DriveBC website, as well as posting advisories on overhead operation of the Alaska Highway. message boards along designated routes. Oversee Alaska Highway response routes - a network of pre-identified routes Coordinate and arrange for transportation, engineering and construction resources. ☐ Handle inter-departmental communication as needed during energy resources industry emergencies. that can best move emergency services and supplies to where they are needed in response to a major disaster. ☐ Maintain ability to process calls for new emergencies. ☐ Provide information on the impacts to transportation routes. ☐ Provide response support if dangerous goods are released. □ Technical Safety BC (formerly BC Safety Authority) is an independent, self-□ Technical Safety BC tracks and investigates incidents and hazards that are ☐ Technical Safety BC implements a business continuity plan in the event of a natural disaster. This plan ensures that Technical funded organization mandated to oversee the safe installation and operation of Safety BC resumes safety services as soon as possible. reported to inform awareness and prevention initiatives technical systems and equipment across the province. ☐ Though Technical Safety BC is not a first responder, they will provide technical support including inspection services to the Technical Safety BC does not investigate all reported incidents and may not ☐ In addition to issuing permits, licenses and certificates, we work with industry to recovery team relating to the technical equipment and systems covered by the Safety Standards Act (e.g., gas, electrical, elevating follow-up with a notification unless there is an intention to investigate. reduce safety risks through assessment, education and outreach, enforcement, devices, boiler and pressure vessel technologies) after first ensuring the safety of its employees. ☐ Technical Safety BC will contact duty holders within 24 hours of the next 🗖 Starting in the planning phase and through collaboration with other agencies, Technical Safety BC can provide most value to the regular business day following the report of an incident if more information is and research. public and best support the other agencies. required or an investigation is planned to occur.



*MOTI - Ministry of Transportation and Infrastructure

Health

of

WorksafeB

Health

☐ Maintain a 24-hour emergency/on call contact number for notification and

activation of the health system in Northern BC.

After the Incident **Before the Incident During the Incident** ☐ Provide public health measures, including epidemic control and Before, during and after an emergency the Ministry of Health could be called upon to provide expertise, technical advice and/or ☐ Participate in event debriefings. policy direction regarding: □ Complete a "lessons-learned" process based on the scope of their immunization programs. ☐ Provide and coordinate ambulance services and triage, treatment, ☐ Health service delivery involvement and the outcome. ☐ Public health planning and response ☐ Continue with public health and environmental health monitoring as required. transportation and care of casualties. ☐ Provide the continuity of care for patients evacuated from hospitals or other ☐ Community and home support services Continue to address the psychosocial aspects of recovery. health institutions and for medically dependent patients from other care ☐ Mental health ☐ Communicable disease prevention facilities. ☐ During an emergency the Ministry of Health will provide the continuity of care both for patients evacuated from hospitals or ☐ Provide standard medical units consisting of emergency hospitals, advanced treatment centres, casualty collection units and blood donor other health institutions and for medically dependent patients from other care facilities; The Ministry will also provide emergency psychosocial services. packs. ☐ Ensure appropriate Health entities have been notified of the incident. Monitor potable water supplies. ☐ Inspect and regulate food quality with the assistance of the Minister of ☐ Ensure appropriate Executive and Public Health personnel have been notified of the incident. ☐ Carry out evacuation of medically dependent and vulnerable populations, as needed. Agriculture. ☐ Provide critical incident stress debriefing and counselling services. ☐ Transport incident casualties as required. ☐ Provide support services for physically challenged or medically disabled ☐ Triage and provide medical care to incident casualties as required. people affected by an emergency. ☐ Decontaminate incident casualties that present to health care facilities, as needed. ☐ Maintain a 24 hour emergency contact number where resources can be ☐ Relay health hazard information to the public. accessed for a response related to Emergency Response Plans. ☐ Monitor water and air quality, as it relates to public health. ☐ Provide input on public health issues related to a petroleum incident. ☐ Coordinate the public health response to the incident. ☐ Address the psychosocial aspects of the aftermath of an event. ☐ Arrange with Health Canada and the Public Health Agency of Canada for federal support, if needed. WorkSafeBC is the BC Health and Safety Regulator. In addition to providing a As required by the Workers Compensation Act (WCA Sec 68), employers must immediately report the following types of Prompt investigation of incidents must be conducted to identify causation and no-fault insurance system and providing when work-related injuries or incidents to WorkSafeBC at 1-888-621-7233 (whether there is an injury or not): prevent recurrence. The WCA (sec 69) requires preliminary investigations to be ☐ Any incident that kills or seriously injures a worker conducted within 48 hours and full investigations completed within 30 days of diseases occur compensation and support to workers in their recovery, rehabilitation, and safe return to work; WorkSafeBC assists workers in ☐ A major leak or release of a dangerous substance the following types of incidents: creating and maintaining healthy and safe work workplaces, with Proactive ☐ A major structural failure or collapse of a structure, equipment, construction support system, or excavation is required to be reported under section 68 (specified above), resulted in injury to a worker requiring medical treatment, roles which include: ☐ A fire or explosion that had a potential for causing serious injury to a worker ☐ Providing health and safety information to employers, workers, and the ☐ Any blasting accident that results in injury, or unusual event involving explosives (required by regulation) did not involve injury to a worker, or involved only minor injury not requiring ☐ A diving incident that causes death, injury, or decompression sickness requiring treatment (required by regulation) medical treatment, but had a potential for causing serious injury to a worker, ☐ Establishing standards and guidelines for occupational health and safety was an incident required by regulation to be investigated. ☐ Educating employers, supervisors, and workers on prevention of work-This requirement is in addition to the requirement of reporting workplace injuries or disease for claims purposes. related injury and illness. ☐ Conducting work site inspections to help employers comply with health and The investigation process must be carried out by persons knowledgeable about safety regulations. the type of work involved and, if they are reasonably available, with the ☐ Collaborating with provincial and federal agencies and ministries on matters participation of the employer or a representative of the employer and a worker of occupational health and safety representative. Full investigations must be submitted to WorkSafeBC. ☐ Providing access to prevention resources for workers and employers Emergency management support roles for all hazards (upon request of Local The designated lead provincial ministry for planning and response before, during and after an emergency for: Authority, First Nation, EMBC, or other requesting agency): Diseases and epidemics as specified below: ☐ Provide advice to farmers, aqua-culturalists and fishers on the ☐ Animal diseases Ministry of Agriculture protection of crops, livestock and provincially managed fish and □ Plant diseases marine plant stocks. □ Pest infestations □ Coordinate the emergency evacuation and care of poultry and livestock. ☐ Inspect and regulate food quality. ☐ Identify food and potable water supplies. ☐ Assist the Minster of Health in the inspection and regulation of food Health Emergency Management BC (HEMBC) is a program under the ☐ For emergency events that require immediate connection with Northern Health, please call HEMBC on call (24/7) -Provincial Health Services Authority (PHSA). HEMBC provides the expertise. 855-554-3622. HEMBC will notify / activate the appropriate Northern Health programs (ie. Public Health, Acute Care etc.) education, tools, and support specifically for the BC Health Sector to effectively based on the nature of the event / emergency. Please include this number in industry ERPs for the use of permit holders in mitigate, prepare for, respond to, and recover from the impacts of emergency contacting Northern Health on an emergency basis. events: ensuring the continuity of health services. There is a HEMBC team in □ Notify/activate the appropriate Northern Health programs (i.e. Public Health, Acute Care, etc.) based on the nature of the each BC health authority. HEMBC-North deals specifically with Northern

incident/emergency event.



*AT - Alberta Transportation

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Alberta.

transparent processes.

☐ Make decisions based on evidence, law and policy and fair, impartial and

☐ Encourage safer workplaces and promote disability management.

Before the Incident **During the Incident** After the Incident □ Maintain 24 hour emergency contact numbers and duty officer where resources can be accessed for a response related to this plan. □ Maintain emergency response resources. □ Maintain a specialty air monitoring team and equipment used to oversee and verify air monitoring during incident response. □ Act as SME. □ Prepare to act as lead agency when appropriate. Compile and maintain environment/emergency related records Monitor environmental recovery, when required. ☐ Ensure that non-energy industry resources environmental impacts are mitigated. Provide expertise to mitigate the impacts of non-energy resources industry liquid releases on land and into watercourses. Provide technical assistance related to emergency drinking water supply engineering. Notify Fish and Wildlife staff in the area of the emergency. ☐ Compensates injured workers for lost income, health care and other costs The Workers' Compensation Board is a statutory corporation created by government under the Workers' Compensation Act to administer a system of workplace insurance for the workers and employers of the province of Alberta. Employer must report to WCB 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 related to a work-related injury. Safely restores injured workers through return-to-work services to a level of □ Saley restores injured workers through return-to-work services to a level of competitive employability. □ Take reasonable measures to maintain a reasonable quality of life for severely injured workers through the provision of services allowed by legislation and policy. ☐ Death or permanent disability (amputation, hearing loss, etc.) ☐ A disabling or potentially disabling condition caused by occupational exposure or activity (poisoning, infection, respiratory disease, dermatitis, etc.) □ WCB has the overall responsibility for the administration of the workers' compensation system in Alberta. □ Be a neutral and autonomous administrator of the worker's compensation ☐ The need for medical treatment beyond first aid (assessment by a physician or chiropractor, physiotherapy, etc.) ☐ Medical aid expenses (dental treatment, eyeglas's repair/replacement, prescription medications, etc.) system. Strive to balance the interests of workers and employers. Delivery of workers' compensation services to the workers and employers of

Note: Immediately report fatalities and serious injuries to the OHS Contact Centre 1-866-415-8690.

☐ Determines whether the injury or illness is caused by work. Responds to all client inquiries forwarded by the Minister and all other elected officials.

H₂Safety

Revised November 2021

Environment & Climate Change Canada's Environmental Emergencies Program During an environmental emergency, The National Environmental Emergencies Centre (NEEC) is the focal point for ECCC. ☐ ECCC can conduct post-emergency assessments. (EEP) protects Canadians and their environment from the effects of environmental ☐ Provide specialized advice in shoreline clean-up assessment techniques (SCAT). ECCC's services during an environmental emergency: emergencies through provision of science-based expert advice and regulations. The key Acts and Regulations that govern ECCC's role in environmental ☐ Provide Advise on mitigation and cleanup measures.. ☐ Collaborate with federal, provincial, territorial and international environmental protection agencies to enable rapid sharing of information emergencies that allow it to deliver its mandate are: *ECCC ☐ Canadian Environmental Protection Act, 1999 ☐ Convene and chair a Science Table of experts and stakeholders to develop consensus based advice to the Lead Agency. ☐ Identify environmentally sensitive areas and priorities (sensitivity and resource at risk mapping). ☐ Fisheries Act—Pollution Prevention Provisions: ☐ Advise on mitigation and cleanup measures. ☐ Migratory Birds Convention Act, 1994; ☐ Provide support and guidance in the assessment of oiled shorelines to prioritize their protection and cleanup (Shoreline Cleanup ☐ Statutory Notification Requirements—EC's Environmental Notification Assessment Technique (SCAT)). Advice on the fate and behavior of the spilled product. ☐ Environmental Emergencies Regulations. ☐ Advice on sampling and laboratory analysis. ☐ Provide weather forecasting and spill dispersion modelling to identify where these substances are likely to move in the environment. ☐ Provided expertise on the migratory bird resources and species at risk, including on-site assessment and determination of wildlife impact. ☐ Can conduct post-emergency assessments. ☐ Work closely with ECCC, The Canadian Coast Guard and other provincial The Canadian Coast Guard is the lead federal agency for ensuring appropriate ☐ Any amount of hydrocarbons entering a waterway frequented by fish or occupied by waterfowl is deemed to be in contravention of the response to all ship-source and unknown mystery spills in Canadian waters and Federal Fisheries Act and must be reported to the Department of Fisheries and Oceans. environmental agencies waters under international agreements. □ Work together with provincial environment protection agencies and may be initially notified by ECCC. ☐ Establishes appropriate and nationally consistent level of preparedness and ☐ May send personnel to the site if there has been or could potentially be an impact to fish or fish habitat. response services in Canadian waters. ☐ Monitors and investigates all reports of marine pollution in Canada in conjunction with other federal departments. ☐ Design and develop related regulations, policies, strategies and tools. ☐ Maintains communications with the program's partners, including Transport Canada and ECCC, to ensure a consistent coordinated ☐ Review, assess and monitor activities associated with fish habitat to ensure approach to marine pollution incident response. their compliance with the Fisheries Act and Species at Risk Act. ☐ Aids in search and rescue operations. ☐ Conduct environmental assessments under the Canadian Environmental Assessment Act. ☐ Design, develop and implement communication and education strategies. NAV Canada is a private company who coordinates the safe and efficient ☐ As requested by the oil and gas company, the Flight Information Centre will issue a NOTAM (Notice to Airmen). ☐ Rescind the NOTAM. movement of aircraft in Canadian domestic airspace and international airspace ☐ To close air space beyond an airport (e.g. above a sour gas release), Refer to Transport Canada on back side of this page. assigned to Canadian control. Flight Information Centre (FIC) - FIC Services Each Flight Information Centre is responsible for providing its particular service area with the following services, which pilots rely upon for safe flight planning and operations: ☐ Emergency ☐ Aviation Weather Briefing ☐ Flight Planning ☐ En-route Flight Information Services ☐ Remote Aerodrome Advisory Services (RAAS) ☐ Sets national standards to keep the environment healthy, keep water and air During a health emergency or disaster, Health Canada and the Public Health Agency of Canada are responsible for supporting □ Work collaboratively with the provinces and territories to test ways in which the pollution low and Canadians safe emergency health and social services in the provinces and territories. Canadian health care system can be improved and ensure its sustainability for the ☐ Maintains a nationwide network of radiation monitoring stations and can act if ☐ Under Chemicals Management Plan, assess health risks from chemicals used in manufacturing and agriculture and require users to prove they actually need the chemicals to make their products ☐ Sets strict rules on how chemicals are used in order to limit human exposure. ☐ Preparedness exercises are designed to test how well the plans and procedures work during simulated emergency situations. Such exercises help the government identify strengths as well as any problems or inadequacies in preparedness plans and procedures so that these can be addressed before, not after, an actual emergency. The Centre for Emergency Preparedness and Response (CEPR) is responsible ☐ In an emergency situation, the Office of Emergency Response Services (OERS) is responsible for supporting emergency health and ☐ Work with Health Canada to test ways in which the Canadian health care system social services in the provinces, territories or abroad. It manages the National Emergency Stockpile System (NESS), which includes can be improved and ensure its sustainability for the future. c Health of Canada ☐ Developing and maintaining national emergency response plans for the medical, pharmaceutical and related emergency supplies. The Office is responsible for the federal response to emergencies that have Public Health Agency of Canada and Health Canada. health repercussions; this includes the deployment of health emergency response teams (HERT). ☐ Assessing public health risks during emergencies. ☐ If a public health emergency grows beyond one province and/or territory, the Public Health Agency of Canada usually gets involved. ☐ Contribution to keeping Canada's health and emergency policies in line by collaborating with other federal and international health and security agencies. ☐ The health authority in the Government of Canada on bioterrorism, emergency health services and emergency response. Agency ☐ Strengthen intergovernmental collaboration on public health and facilitate national approaches to public health policy and planning. ☐ Manages emergency preparedness and emergency response plans and keeps them up to date. Develops and runs exercises to train emergency workers. ☐ Develops and delivers training courses that teach health workers how to respond to emergencies.

During the Incident



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After the Incident

Before the Incident

Before the Incident

Maintain a 24 hour emergency telephone service.

*CANUTEC

☐ Regulate the handling, offering for transport and the transport of dangerous goods by all modes in order to ensure public safety.

- ☐ Federal regulations require that CANUTEC be contacted in the event of an incident or accident involving dangerous goods and infections substances.
- ☐ Maintains records of over 3 million Safety Data Sheets (SDS).

Aviation Operations Centre (AVOPS)

- ☐ Federal regulations require that AVOPS be contacted if there is imminent and immediate threat to aviation and public safety.
- ☐ Public Safety Canada works with provincial and territorial officials to ensure first responders and emergency management personnel are well-prepared through education, support and exercises.
- Responsible for promoting and coordinating the preparation of departmental emergency management plans as well as coordinating the government's response to an emergency through the Government Operations Centre (GOC).

During the Incident

*CANUTEC

- ☐ Assist emergency response personnel in handling dangerous good emergencies including advice on
 - ☐ Chemical, physical and toxicological properties and incompatibilities of the dangerous goods
 - ☐ Health hazards and first aid
 - ☐ Fire, explosion, spill or leak hazards
 - Remedial actions for the protection of life, property and the environment
 - □ Evacuation distances
 - ☐ Personal protective clothing and decontamination
- □ CANUTEC staff does not go to the site of an incident, however, should on-site assistance be required, CANUTEC can assist in the activation or industry emergency response plans.
- ☐ Provide communication links with the appropriate industry, government or medical specialists.

Aviation Operations Centre (AVOPS)

- ☐ To close air space beyond an airport in a defined area (e.g. above a sour gas release), AVOPS can be contacted by the oil and gas
- ☐ Public Safety Canada houses the Government Operations Centre at the hub of the national emergency management system. It's an advanced centre for monitoring and coordinating the federal response to an emergency.

After the Incident

*CANUTEC

☐ Maintain voice communication and written information records for two years for the protection of all parties.

Aviation Operations Centre (AVOPS)

☐ Rescind the NOTAM and re-open air space that was closed due to emergency.

☐ In the event of a large-scale natural disaster where response and recovery costs exceed what individual provinces and territories could reasonably be expected to bear on their own, PS provides financial assistance to the provincial and territorial governments through the Disaster Financial Assistance Arrangements (DFAA). Assistance is paid to the province or territory - not directly to individuals or communities. The provincial or territorial governments design, develop and deliver disaster financial assistance, determining the amounts and types of assistance that will be provided to those who have experienced losses.

*Canada Energy Regulator Roles & Responsibilities

The CER's top priority in any emergency is to make sure that people are safe and secure, and that property and the environment are protected. Any time there is a serious incident, CER inspectors may attend the site to oversee a company's immediate response. The CER will require that all reasonable actions are taken to protect employees, the public and the environment. Further, the CER will verify that the regulated company conducts adequate and appropriate clean-up and remediation of any environmental effects caused by the incident.

As lead regulatory agency, the CER:

- ☐ Monitors, observes and assesses the overall effectiveness of the company's emergency response in terms of:
 - Emergency Management
 - Safety
 - Security
 - Environment
 - · Integrity of operations and facilities; and
 - Energy Supply.
- Investigates the event, either in cooperation with the Transportation Safety Board of Canada, under the Canada Labour Code, or as per the Canada Energy Regulator Act or Canada Oil & Gas Operations Act (whichever is applicable)
- Inspects the pipeline or facility
- Examines the integrity of the pipeline or facility
- Requires appropriate repair methods are being used
- Appropriate environmental remediation of contaminated areas is conducted
- Coordinate stakeholder and Aboriginal community feedback regarding environmental clean-up and remediation
- Confirms that a company is following its Emergency Procedures Manual (s), commitments, plans, procedures, and CER regulations and identifies non-compliances
- Initiates enforcement actions as required
- Approves the restart of the pipeline.

If applicable; refer to the CER site section behind the blue Area Specific Information tab for further regulations, definitions and, reporting guidelines for CER related incidents specific to this ERP.

*Transportation Safety Board Mandate

The Canadian Transportation Accident Investigation and Safety Board Act provides the legal framework that governs TSB activities. Our mandate is to advance transportation safety in the marine, pipeline, rail and air modes of transportation by:

- □ conducting independent investigations, including public inquiries when necessary, into selected transportation occurrences in order to make findings as to their causes and contributing factors;
- identifying safety deficiencies, as evidenced by transportation occurrences:
- making recommendations designed to eliminate or reduce any such safety deficiencies; and
- reporting publicly on our investigations and on the findings in relation thereto.

As part of its ongoing investigations, the TSB also reviews developments in transportation safety, and identifies safety risks that they believe the government and the transportation industry should address to reduce injury and loss.

To instill confidence in the public regarding the transportation accident investigation process, it is essential that an investigating agency be independent and free from any conflicts of interest when investigating accidents, identifying safety deficiencies, and making safety recommendations. As such, the TSB is an independent agency, separate from other government agencies and departments, that reports to Parliament through the President of the Queen's Privy Council for Canada. Our independence enables us to be fully objective in making findings as to causes and contributing factors, and in making transportation safety recommendations.

In identifying the causes and contributing factors of a transportation incident, it is not the function of the Board to assign fault or determine civil or criminal liability. However, the Board does not refrain from fully reporting on the causes and contributing factors merely because fault or liability might be inferred from the Board's findings. No finding of the Board should be construed as assigning fault or determining civil or criminal liability. Findings of the Board are not binding on the parties to any legal, disciplinary, or other proceedings.

/tsb-bst.gc.ca/eng/qui-about/index.html

*Indigenous Services Canada, Regional Operations and First Nations and Inuit Health Branch

Since the Government of Canada's renewed commitment to a stronger relationship with Indigenous peoples in Canada, measures were initiated to effect a shift in the way the Government delivers services to Indigenous peoples. This included the creation of two new departments, which was announced on December 4, 2017. The two newly created departments, Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) and Indigenous Services Canada (ISC), are intended to improve the delivery of services while accelerating movement towards self-government and self-determination of Indigenous

As part of the departmental transition, both the former Regional Operations (RO) part of Indigenous and Northern Affairs Canada (INAC) and all of First Nations and Inuit Health Branch (FNIHB) of Health Canada have been absorbed into the newly created Indigenous Services Canada (ISC). RO and FNIHB work closely and collaborate towards the provision of emergency preparedness and response activities to First Nations communities in Canada

In regards to First Nations emergency management, the role of RO is to liaise, communicate, cooperate, coordinate and collaborate with First Nations and public, private, and non-government sector partners in support of on reserve emergency management service delivery. ISC-RO supports First Nations in the four pillars of emergency management through service agreements with partners such as provincial emergency management agencies and the Red Cross

FNIHB carries out the public health preparedness and response activities related to natural and man-made disasters. This includes Communicable Disease Control and Environmental Public Health Services. In addition, FNIHB administers Non-Insured Health Benefits to First Nations clients, which includes extended coverage for medical transportation, pharma-care, medical devices and mental health supports. During an emergency, FNIHB works with First Nations leadership and health service providers to ensure health needs of First Nations communities are met.

Provincial specific FNIHB roles & responsibilities will be found in this section of the ERP, if applicable or as appropriate

*Indian Oil & Gas Canada

IOGC is an organization committed to managing and regulating oil and gas resources on First Nation reserve lands. It is a special operating agency within Indigenous Services Canada.

IOGC is responsible for oil and gas on First Nation reserve lands across Canada, but only a handful of reserves exist north of the 60th parallel. Therefore, practically all of IOGCs work is south of the 60th parallel, with most of that in the Western Canada Sedimentary Basin.

IOGC's general responsibilities are to:

☐ identify and evaluate oil and gas resource potential on Indian reserve lands:

necourage companies to explore for, drill and produce these resources through leasing activity:

ensure equitable production, fair prices and proper collection of royalties on behalf of First Nations; and

secure compliance with and administer the regulatory framework in a fair manner.

IOGC operates pursuant to the Indian Oil and Gas Act, 2009, and its associated Indian Oil and Gas Regulations, 2019, as well as other relevant legislation and guidelines (see Acts and Regulations) which came into force and became law on August 1, 2019. Oil and gas activity on First Nation reserve lands depends on agreements involving First Nation band councils, oil and gas companies, and Indian Oil and Gas Canada.

Additional information is available at: http://www.pgic-iogc.gc.ca/eng/11001100104048/1100110010464 Acts and Regulations: https://www.pgic-iogc.gc.ca/eng/1100110010438/100110010438





Section 6: Forms

Documentation During and After an Incident

Form Descriptions

Incident Command System (ICS) Forms

ICS 201 Incident Briefing

ICS 202 Incident Objectives

ICS 203 Organization Assignment List

ICS 204 Assignment List

ICS 207 Incident Organization Chart

ICS 208 Safety Message / Plan

ICS 209 Incident Status Summary

ICS 211 Check-In / Out List

ICS 214 Activity Log

ICS 215 Operational Planning Worksheet

ICS 215A IAP Safety Analysis

ICS 221 Demobilization Checkout

ICS 230 Meeting Schedule

ICS 231 Meeting Summary

ICS 233 Incident Open Action Tracker

Emergency Forms

A1 Initial Emergency Report Form

A2 Odour Complaint Script

A3 Regulatory First Call Communication - BC

A3 Regulatory First Call Communication - AB

A4 Incident Action Plan Checklist

A5 Air Monitoring Log

A6 Threatening Call / Bomb Threat

A7 STARS Landing Zone Card

Resident Forms

B1 Reception Centre Registration Log

B2 Resident Compensation Log

B3 Resident Contact Log

B4 Roadblock Log

B5 Evacuation Notice

B6 Early Notification / Voluntary Evacuation Phone Message

B7 Shelter-In-Place Phone Message

B8 Evacuation Phone Message

Media Forms

C1 Preliminary Media Statement

C2 Media Contact Log

C3 Government Agency Contact Log

C4 Media Centre Site



Documentation During and After an Incident

It is imperative that accurate documentation is kept throughout the duration of an incident for record keeping purposes. Records kept may be used for legal, investigation, audits, historical and/or analytical purposes. All documentation must be held for a minimum of 5 years as it may be requested by the regulatory agency at any point during that time.

It is the Documentation Units responsibility to collect documentation (forms, checklists, event logs, etc.) from response team members and maintain a consistent system for organizing the data.

Form Descriptions

The Incident Command System uses a series of standard forms and supporting documents that convey directions for the accomplishment of the objectives and distributing information. Listed below are the standard ICS form titles and descriptions of each form utilized.

Further ICS forms can be found through the ICS Canada website: http://www.icscanada.ca/en/forms.html.

Standard ICS Form Title	ICS Form Description
ICS 201 Incident Briefing	Provides the Incident Command and General Staffs with basic information regarding the incident situation and the resources allocated to the incident. This form also serves as a permanent record of the initial response to the incident.
ICS 202 Incident Objectives	Describes the basic strategy and objectives for use during each operational period.
ICS 203 Organization Assignment List	Provides ICS personnel with information on the units that are currently activated and the names of personnel staffing each position.
ICS 204 Assignment List	Informs Division and Group supervisors of incident assignments.
ICS 207 Incident Organization Chart	A complete picture of the organizational structure for the incident.
ICS 208 Safety Message / Plan	Expands on the Safety Message and Site Safety Plan.
ICS 209 Incident Status Summary	Summarizes incident information for staff members and external parties, and provides information to the Public Information Officer for preparation of media releases.
ICS 211 Check-In/Out List	Used to check in personnel and equipment arriving at or departing from the incident. Check-in / out consists of reporting specific information that is recorded on the form.
ICS 214 Activity Log	Provides a record of unit activities. Unit Logs can provide a basic reference from which to extract information for inclusion in any afteraction report.
ICS 215 Operational Planning Worksheet	Documents decisions made concerning resource needs for the next operational period. The Planning Section uses this Worksheet to complete Assignment Lists, and the Logistics Section uses it for ordering resources for the incident. This form may be used as a source document for updating resource confirmation on other ICS forms such as the 209 Incident Status Summary.
ICS 215A Incident Action Plan Safety Analysis	Used to communicates to the Operations and Planning Section Chiefs the potential hazards identified by the Safety Officer. It identifies mitigation measures to address the identified hazards.



Form Descriptions, continued

Standard ICS Form Title	ICS Form Description			
ICS 221 Demobilization Checkout	Ensures that resources checking out of the incident have completed all appropriate incident business, and provides the Planning Section information on resources released from the incident.			
ICS 230 Meeting Schedule	To record information about the daily scheduled meeting activities.			
ICS 231 Meeting Summary	Provides more detailed information concerning the attendees and notes from a particular meeting.			
ICS 233 Incident Open Action Tracker	Used by Command Staff to track time sensitive tasks / actions assigned to incident personnel.			

Emergency Form Title	Emergency Form Description
A1 Initial Emergency Report Form	Used by recipient of a phone call from either a member of the public or other company personnel to record detailed information about incident.
A2 Odour Complaint Script	Used to record odour information from a member of the public as well as scripts to follow.
A3 Regulatory First Call Communication	A regulatory required form used to send detailed information to the regulator about an emergency used for assessment, historical, and analytical purposes following an incident.
A4 Incident Action Plan Checklist	A checklist of other forms and information required to accurately create an incident action plan.
A5 Air Monitoring Log	A form used by designated Air Monitor personnel to log information about air quality readings.
A6 Threatening Call / Bomb Threat	Detailed point driven form used to document incoming phone calls pertaining to personnel threats and bomb threats.
A7 Stars Landing Zone Card	An information card utilized if medical evacuation is required via STARS Air Ambulance.

Resident Form Title	Resident Form Description
B1 Reception Centre Registration Log	Log used by Reception Centre Rep to record information from evacuees being received at the reception centre. Can also be faxed to reception centre in case a representative has not been identified or cannot make it before evacuees start arriving.
B2 Resident Compensation Log	Detailed spreadsheet for expenses incurred by evacuees so that compensation may be properly dealt with.
B3 Resident Contact Log	A log used by various company personnel to record contact made with residents, whether they're sheltered / evacuated and if assistance is required.
B4 Roadblock Log	A log used by designated Roadblock personnel to identify details about vehicles and persons entering or exiting a hazard area.
B5 Evacuation Notice	A document to be left in doors / windows of surface developments that are unable to be contacted as a way to issue evacuation instructions



Form Descriptions, continued

Resident Form Title	Resident Form Description			
B6 Early Notification/Voluntary Evacuation Message	A script and document filled out by Telephoner personnel issuing calls to residents for early notification and voluntary evacuation purposes.			
B7 Shelter-In-Place Message	A script and document filled out by Telephoner personnel issuing calls to residents with shelter-in-place instructions.			
B8 Evacuation Phone Message	A script and document filled out by Telephoner personnel issuing calls to residents with evacuation instructions.			

Media Form Title	Media Form Description			
C1 Preliminary Media Statement	A generic script used by the Media Spokesperson to issue media statements until which time more detailed information is known and can be issued.			
C2 Media Contact Log	A log used to identify what media outlets/persons have contacted the company and their contact information.			
C3 Government Agency Contact Log	A log used to identify what government agencies have been notified about the incident.			
C4 Media Centre Site	A document to distribute to media outlets/persons about the location for further media enquiries and press releases as well as details to get there.			



Incid	Incident Name:																								
Date	Date/Time Initiated:																								
Prep	ared	Ву:												IC	SP	ositi	ion:								
Leve	l of E	me	rger	псу		-	Aler	: / M	lino	r			Le	evel	1			Leve	el 2		Le	vel	3		
Мар																									
Note	: Ma	ps c	an I	be c	iraw	n oi	r att	acn	ed r	nere															
Situa	ation	Su	mm	ary	: (W	/rite	e de	scri	ptio	on c	or at	ttac	h A	1)											
Safe	ty B	riefi	ng:																						

Section 6: Forms



Current and Planned Object	tives:								
Priorities: (1) Life Safety (2) Incident Stabilization (3) Environment & Property									
Ensure Safety of Citizens and	Response Personnel:	4. Minimize Economic Impacts:							
☐ 1a. Identify hazard(s) of released	d product.	☐ 4a. Consider tourism and local economic impacts.							
☐ 1b. Establish site control (hot zo security).	ne, warm zone, cold zone, &	☐ 4b. Protect public and private assets, as resources permit.							
☐ 1c. Establish an Emergency Res Safety Actions.	sponse Zone and Initiate Public	☐ 4c. Establish damage claims process.							
☐ 1d. Consider evacuations if need	ded.	5. Keep Stakeholders and Public Informed of Response Activities:							
☐ 1e. Establish aircraft restrictions		☐ 5a. Provide forum to obtain stakeholder input and concerns.							
☐ 1f. Monitor air in impacted areas	3	☐ 5b. Provide stakeholders with details of response actions.							
☐ 1g. Develop site safety plan for p briefings are conducted.	personnel and ensure safety	☐ 5c. Identify stakeholder concerns and issues, and address as practical.							
2. Control the Source of the Rele	ease:	☐ 5d. Provide timely safety announcements.							
☐ 2a. Complete emergency shutdo	own.	☐ 5e. Conduct regular news briefings.							
☐ 2b. Conduct firefighting.		☐ 5f. Conduct public meetings, as appropriate.							
☐ 2c. Initiate temporary repairs.									
3. Manage a Coordinated Respo	onse Effort:								
☐ 3a. Complete or confirm notificat	tions.								
☐ 3b. Establish a unified command (command post, etc.).	d organization and facilities								
☐ 3c. Ensure mobilization and trac personnel and equipment.	king of resources and account for								
☐ 3d. Complete documentation.									
Current and Planned Action	s, Strategies and Tactics:								
Time: A	Actions:								
HHMM									
HHMM									
HHMM									
HHMM									
HHMM									
HHMM									
ННММ									
ННММ									
HHMM									

Section 6: Forms Page 2 of 6



nitial Response.	Incident Con	nmander	
	Name		
	Number		
		Information Officer	
		Name Number	
		Liaison Officer Name	
		Number	
		Safety Officer Name	
		Number	
On-Site Group Supervisor Name	Publi Name	c Safety Group Supervisor	Documentation Name
Number	- Numb	per	Number
SITE SAFETY	\neg	Air Monitors	
Name	- Name	-	
Number	- Numb	per	
Control	Nama	Roadblocks	
Name	- Name Numb		
Number	- Numb	Jeti	
Containment Name	Name	Rovers	
Number	Numb		
Other Name	Name	Telephoners	
Number	Numb	per	
Other	Recep Name	otion Centre Representative	
Name	. -	nor .	
Name Number	Numb) CI	
	- Numb	Other	

Note: Refer to ICS 207 Incident Organization Chart in Section 6: Forms (Blue Tab) for full command structure.



Resources Summar	ry:			
Resource(s)	Time Called	ETA	On-Site	Notes (Location/Assignment/Status)
External Notificatio	ns: (Governmen	it)		
Agency	Time Called			Notes



Si	te Safety and Hazard Control Analysis			
Si	te Control			
	Is Site Control set-up? ☐ Yes ☐ No	Is there an On-Scene Command Post? If so, where?	□ Yes	□ No
3.	Have all personnel been accounted for? ☐ Yes ☐ No ☐ Don't Know	Injuries: Fatalities: Unaccounted: Trapped:		
4.	Are observers involved or rescue attempts planned? Observers: □ Yes □ No Rescuers: □ Yes □ No	5. Are Decon areas setup? ☐ Yes If so, where?	□ No	
Ha	azard Identification, immediate signs of: (if yes,	explain in remarks)		
1.	Electrical line(s) down or overhead? \square Yes \square No	2. Unidentified liquid or solid products visible?	□ Yes	□ No
3.	Wind direction across incident: ☐ Towards your position Wind Speed: ☐ Away from your position	4. Is a safe approach possible?	□ Yes	□ No
5.	Odours or smells?	6. Vapours visible?	☐ Yes	□ No
7.	Holes, ditches, fast water, cliffs, etc. nearby? ☐ Yes ☐ No	8. Fire, sparks, sources of ignition nearby?	□ Yes	□ No
9.	Is local traffic a potential problem? ☐ Yes ☐ No	10. Product placards, colour codes visible?	☐ Yes	□ No
11	. Other Hazards? ☐ Yes ☐ No	12. As you approach the scene from the upwind a change in the status of any of the above?	side, do y □ Yes	ou note □ No
13	Remarks:			
Н	azard Mitigation: have you determined the neces	ssity for any of the following?		
	Entry Objectives:			
2.	Warning sign(s), barriers, colour codes in place? ☐ Ye	s □ No		
3.	Hazardous material being monitored?			
4.	Protective gear / level:	4a. Gloves:		
	4b. Respirators	4c. Clothing:		
	4d. Boots:	4e. Chemical cartridge change frequency:		
5.	Decon 5a. Instructions: 5b. Decon equipment and materials:			
6.	Emergency escape route established?			
7.	Field responders briefed on hazards? ☐ Yes ☐ No			
8.	Remarks:			



Protective Zones: record initial control perimeters (see Figure 1)						
	Is there a Hot Zone established? ☐ Yes ☐ No If so, Where?					
Evacuation Route Decontamination Station HOT	Is there a Warm Zone established? ☐ Yes ☐ No If so, Where?					
Decontamination Station Staging Area Command Post WARM ZONE COLD	3. Is there a Cold Zone established? ☐ Yes ☐ No					
COLD	If so, Where?					
WIND DIRECTION Figure 1 Protective Zones	Remarks: (Include any information on evacuation route, etc.)					
5. Include any site sketches or photos of the protective zones (if available):						

ICS 202 Incident Objectives



Incident Name:						
Date / Time Initiated:						
Prepared by:		ICS Position:				
Genera	I Control Objectives for the Incident:					
1						
2						
3						
4						
5						
Weathe	er Forecast:					
Genera	l Safety Message:					
Note: Create and prioritize SMART (Specific, Measureable, Attainable, Realistic, & Time-Sensitive) objectives that address the incident issues and utilize the solutions identified on the Operations Briefing page.						

ICS 202 Incident Objectives



ICS 203 Organization Assignment List



Incident Name			Operational Period (Date/Time)				
			From:				
Incident	Commander(s	;)		From: To: Operations Section			
Agency IC Deputy			Chief				
7.901109			<u> </u>	Deputy			
				Staging Area I			
				Judging / i. ea .mainage.			
				On-Site Group			
				Su			
S	afety Officer		1		Lead		
	Assistant				Lead		
Inform	ation Officer				Lead		
	Assistant				Lead		
Lia	aison Officer				Lead		
	Assistant						
				Public Safety Gro	up		
					pervisor		
Agency Representatives			Lead				
Agency	Name				Lead		
					Lead		
					Lead		
					Lead		
				Branch - Division			
			Branch				
Planning Section		Deputy Division/Group Lead					
Chief			Division/Group Lead				
	Deputy			Division/Group Lead			
Resources Unit				Division/Group	Lead		
Situation Unit				Division/Group	Lead		
Environmental Unit							
Documentation Unit		Branch – Division / Group					
Demobilization Unit			Branch				
Technica	al Specialists			Deputy			
				Division/Group	Lead		
				Division/Group	Lead		
Logistics				Division/Group	Lead		
Chief				Division/Group	Lead		
	Deputy			Division/Group	Lead		
	Supply Unit						
	acilities Unit			Finance / Admin Section			
Ground Support Unit		Chief					
Communications Unit		Deputy					
Medical Unit		Time Unit					
Food Unit		Procurement Unit					
		Compensation / Claims Unit Cost Unit					
			(
Prepared	By: (Resource	es Unit)				Date/Time	

ICS 203 Organization Assignment List

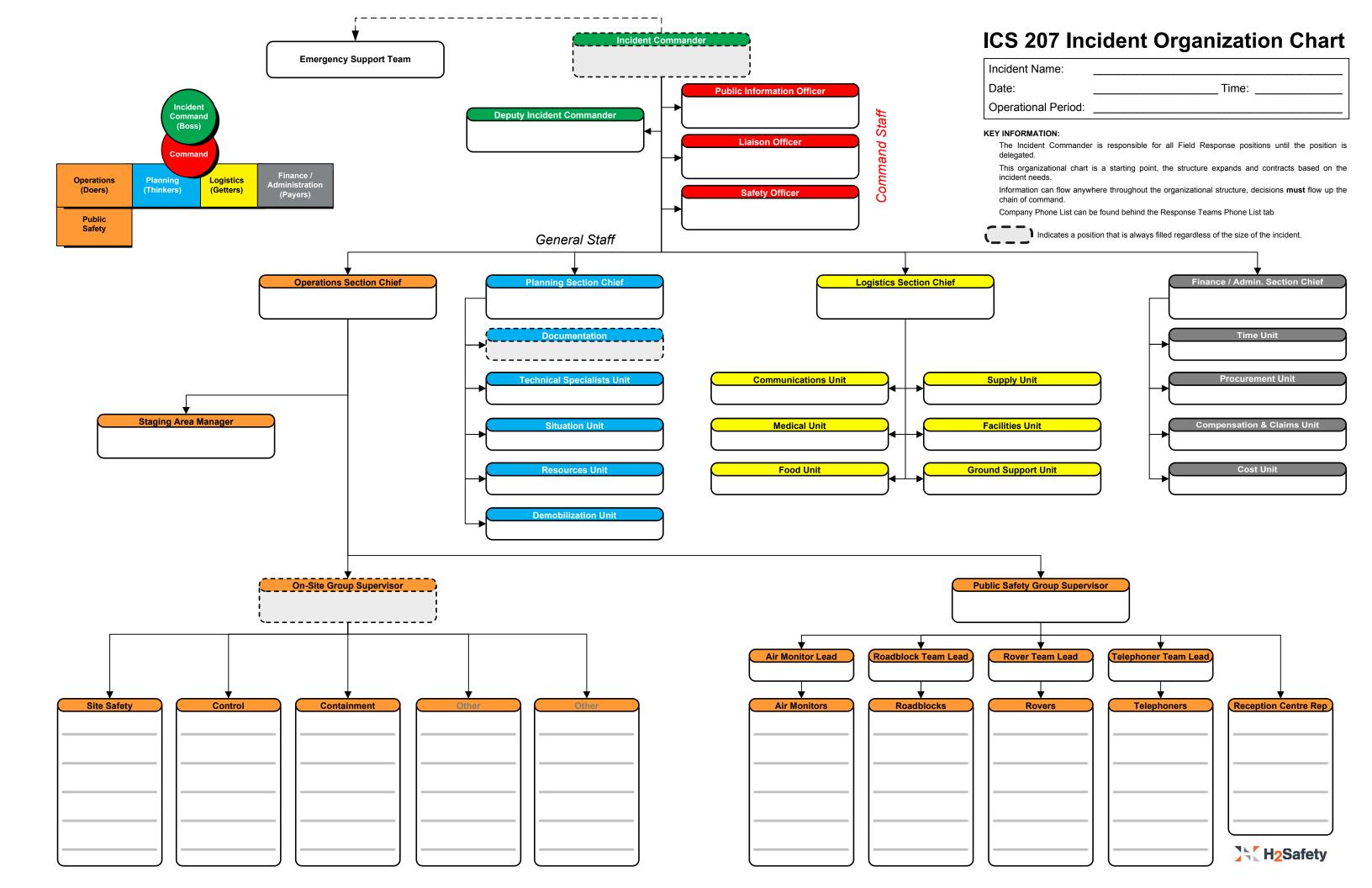


ICS 204 Assignment List



Branch:					Division / Group / Staging:					
				Emoisily Group / Glaging.						
Incident Nam	ue.				Operational Period:					
mouent Name.					From: Date		Tin	ne		
							ne			
Division / Gro	29			TO. DateTI			<u> </u>			
	-	ig			Division/Group Supervisor					
Branch Direct					Staging Area Manager_					
		o This Period			Stagning Area Manager					
Resour	ce	Leader	No. of		Contact Reporting Location, Special					
Identifi	er	Leauer	Persons	Cel	Cell #, radio freq. Etc. Equipmen		Equipment and	Supplies, R	lemarks	
Work Assign	ments:									
Work / toolgir	monto.									
Special Instr	uctions:									
		munications Summa								
Funct		Frequencies	System	Chan.	Funct		Frequencies	System	Chan.	
Command	Local Repeat				Local Repeat Ground to Air					
Div. / Group						-				
Prepared By:							Date:	Time:		
(Resource Unit Leader)								-		
Signature:										





ICS 208 Safety Message / Plan



L:	O.,	- d.
Incident Name:	Operational Peri	od:
	From: Date	Time
	To: Date	Time
Safety Message/Expanded Safety Message, Safety	Plan. Site Safety	Plan:
Outory incoorage, Expanded editory modelage, editory	rian, one carety	
Site Safety Plan Required? ☐ Yes ☐ No		
Approved Site Safety Plan(s) Located At:		
Prepared By: (Name and Position)		Date Prepared:
(rame and roomon)		·
Signature:		Time Prepared:

ICS 208 Safety Message / Plan





Incident Name:		Location of Incident:	f Incident:				
Date / Time Initiated:			(LSD / NTS)				
Prepared by:		ICS Position					
Incident Details:							
Gas readings: H ₂ S		SO ₂	LEL				
Level of Emergency:							
Incident Severity: ☐ A	lert / Minor	□ Level 1 □	Level 2 🗆 Level 3				
Affect Medium: (Check all that app	-						
	Soil 🗆 (Other – Specify:					
Site Type: (Select only 1)	□ Mall (Abore	dene d'Overe en de d'	D Demote Comm				
☐ Well (Active)	,	doned/Suspended)	☐ Remote Sump				
☐ Well (Drilling & Completions): Rig							
☐ Riser (Pipeline)	L Talik Fallili	Storage	☐ Pipeline				
☐ Road or Road Structure	Name:		Location on Road:				
☐ Other – Specify:	ivaille.		Location on Road:				
Incident Type: (Check all that apply	v)						
☐ Sour Gas Release	☐ Sweet Gas	Release	☐ Liquid Spills				
☐ Natural Disaster/Weather	☐ Fire/Explosi	on	☐ Drilling Kick				
☐ Worker Injury/Fatality	☐ Security (the	eft, threat, terrorism)	☐ Induced Seismicity				
☐ Well Bore Communication	☐ Pipeline Bor	ring	☐ Vehicle/Transportation				
☐ Equipment/Structural Damage	☐ Pipeline Bre	eak	☐ Well Control				
☐ Other – Specify:	1						
Activity: (Check all that apply)							
☐ Construction (Road, Lease, Pipe)	☐ Drilling/Expl	oration	☐ Waste Management				
☐ Processing	☐ Well Fractur	ring	☐ Servicing				
☐ Repair	☐ Flaring (Em	ergency)	☐ Well Testing				
☐ Pressure Testing	☐ Transportati	ion					
☐ Other – Specify:							



Consequence or Impacts: (Check all that apply, if none, leave blank)											
□ Worker Safety (Injuries, Fatalities) □ Property											
☐ Economic (Loss of and/or damage to equipment or infrastructure, loss of production, work stoppage)											
□ Other – Specify:											
Material Information:											
Is spill off lease? ☐ Yes - Estimated spill quantity: ☐ No											
☐ Liquid Hydrogen (Cru	ıde, Oil, Die	sel, Fuel)	Liquid (>'	1% Different Toxins)							
☐ Acid	☐ Emulsio	n (Oil, Gas, Water)) □ Sw	eet Nat	ural Gas	☐ Salt Water					
☐ Methanol	□ Non-Tox	kic Liquids	□Fre	esh Wat	er						
☐ Sour Natural Gas	☐ Sour Liq	uids (<1% H ₂ S)	□ Ot	her – Sp	ecify:						
☐ Non-Toxic Gases (Ni	trogen, Carl	bon Dioxide, Inert	Gases)								
Area Information:											
Land Type: ☐ Priva	ate Land	☐ Crown Lar	nd Field	Name:							
Area Type: ☐ Fore	st 🗆	Muskeg □ Fa	armland	□ Res	idential	□ Other					
Access: ☐ Helio	copter 🗆	ATV □ 4V	WD	□ 2W	D	□ Unknown					
Name of road the asset	is located c	on:									
KM where the incident of	occurred:										
Distance to nearest res	idence/publi	c facility:									
Nearest City/Town/Ope	n Camp:										
Weather Conditions:											
Weather Conditions	☐ Clear	☐ Cloudy	☐ Oth	er:							
Wind Direction	N NE	NW E	SE	S	SW	W					
Wind Strength	□ Calm	☐ Moderate	□ Stro	ng	☐ Gust	у					
Temperature	°C										
Public / Worker Injurie	s / Medical	Emergencies:									
☐ First Aid ☐ Hospi	talization	☐ Fatality	□ Other	– Speci	fy:						
Notification: (Notify al	l agencies	as required)									
☐ 911 (Police/RCMP, Fire, EMS)		gy Regulator C, AER*, etc.)	☐ Local	Authorit y, Town		☐ Health Authority					
☐ Canada Energy	☐ Occu	pational Health	☐ Emer	gency		☐ Ministry of					
Regulator (CER) Workers'		fety (OH&S) rgency Response		gement		Transportation					
Compensation Board (WCB)		tance Canada	☐ Weste Spill S		adian (WCSS)	□ CANUTEC					
☐ Transportation Dangerous Goods (TDG)	□ Othe	r	□ Other	*		□ Other					
□ Other	□ Othe	r	□ Othei			□ Other					
*Request that the AER notify (ECCC) and the Department	/ Alberta Envir	ronment & Parks (Fore	estry/Fish/Wi	ldlife/Land	ls), Environi	ment & Climate Change Canada					
			External	Agenci	es Conta	ct List or Area Specific					
	T COMMON TO SECURE	ion commission lies	0 0 0 0 0	00 KO OH	THE PARTY OF THE P						



Agency Notification										
Agency Nar		Contact Nan	ne	Contact Number	Notified					
					(Y/N)					
Collect all compl	leted C3 Gov	ernment Agency Conta	ct Logs fron	n responders for full docume	ntation.					
Notes:										
Roadblock Location	ns:									
Roadblock Location	is:	Name		Location/LSD						
	is:	Name		Location/LSD						
Roadblock	ns:	Name		Location/LSD						
Roadblock	ns:	Name		Location/LSD						
Roadblock	ns:	Name		Location/LSD						
Roadblock	ns:	Name		Location/LSD						
Roadblock	ns:	Name		Location/LSD						
Roadblock	ns:	Name		Location/LSD						
Roadblock	ns:	Name		Location/LSD						
Roadblock	ns:	Name		Location/LSD						
Roadblock Number			rom respon		on.					
Roadblock Number			rom respon	Location/LSD	on.					
Roadblock Number			rom respon		on.					
Roadblock Number			rom respon		on.					
Roadblock Number			rom respon		on.					
Roadblock Number			rom respon		on.					
Roadblock Number			rom respon		on.					
Roadblock Number			rom respon		on.					



Air Monitor Locations	s:		
Air Monitor Number	Name	Locat	ion/LSD
Collect all cor	mpleted A5 Air Monitoring Logs	from responders for fu	II documentation.
Notes:			
Reception Centres			
Name	Lo	ocation	Phone Number
			to C. II. In a constant of
Notes:	ted B1 Reception Centre Registrati	on Logs from responders t	or full documentation.
Notes:			

ICS 211 Check-In / Out List



Incident Name:	Incident Name:												
Date / Time Initiated:													
Prepared by:				ICS Position:									
Check-in Location		Staging Area		ICS Res. Unit Other:									
Name of Company	Date of Check-in	Supervisor Name	Total # of Personnel	Incident Assignment	Assigned	Available	Date of Check-out						
Notes:			<u>'</u>										

ICS 211 Check-In / Out List



ICS 214 Activity Log



Incident Name:										
Date / Time Ir	nitiated:									
Prepared by:			Position / Title:							
Personnel As	ssigned									
	Name	ICS Pos	sition	Location						
Activity Log										
Time			Actions							



Activity Log,	continued
Time	Actions

ICS 215 Operational Planning Worksheet



Incident Name:						Ор	Operational Period:												
							To:	To: Date Time			To:	To: Date		Time					
Branch	Division, Group, or Other	Work Assignments & Special Instructions	Resources													Overhead Position(s)	Special Equipment & Supplies	Reporting Location	Requested Arrival Time
			Req.																
			Have	ļ							<u></u>	<u> </u>	<u> </u>		<u> </u>				
			Need										<u>.</u>		<u>.</u>				
			Req.	<u> </u>						<u> </u>	<u>.</u>								
			Have	<u> </u>	·	-			: 		<u> </u>		: 	: : :	: 				
			Need	ļ									<u>.</u>		·				
			Req.									<u> </u>							
			Have																
			Need	ļ								<u> </u>			<u> </u>				
			Req.						: 			<u> </u>	<u></u>						
			Have	ļ															
			Need	ļ								<u></u>			<u></u>				
			Req.								<u>.</u>	<u>:</u>	<u>.</u>		<u>.</u>				
			Have								<u>.</u>	<u>.</u>	<u>.</u>	: : :	<u>.</u>				
			Need	<u> </u>	·				.		<u>.</u>	<u>.</u>	<u>.</u>		<u>.</u>				
			Req.									<u> </u>							
			Have										<u></u>		<u></u>				
			Need	<u> </u>															
			Req.						- 			<u> </u>			<u>.</u>				
			Have	<u> </u>															
			Need																
		Total Resources Requir	red:														Prepared b	y:	
		Total Resources - Have Hand:	on														Name: Position/Tit		
		Total Resources Need to Order:	to														Date/Time: Signature:		

ICS 215 Operational Planning Worksheet



ICS 215a Incident Action Plan Safety Analysis



Incident Name:							Date / Time Initiated:			
Prepared by:							ICS Position:			
Division or Group	Potential Hazards							Controls (e.g., PPE, buddy system, escape routes)		
	Type of Hazard	Type of Hazard	Type of Hazard	Type of Hazard	Type of Hazard	Type of Hazard	Type of Hazard	Type of Hazard	Type of Hazard	

ICS 215a Incident Action Plan Safety Analysis



ICS 221 Demobilization Checkout



Incident Na	ame / Num	ber:					Date / Time:		Demob. Number:			
Unit/Persor	nnel Relea	sed:										
Transporta	ition Type /	Number:										
Actual Rele	ease Date	/ Time:							Manifest Completed?	□ Yes □ No		
Destination	า:		•	Notify:	□HQ	☐ Agency	☐ Region	☐ Area		Dispatch		
				Name:								
				Date:								
Unit Leade collecting	er respons performa	sible for nce rating										
	Unit / Personnel											
You and yo	our resourc	es have been	released	subject to Sigi	n-Off from the foll	lowing:						
Demobiliza	ation Unit L	eader – Chec	k the appro	opriate box								
Logistics S	Section											
☐ Supply U	Jnit											
□ Commur	nications U	Init										
☐ Facilities	s Unit											
☐ Ground	Support U	nit Leader										
Planning S	Section											
☐ Demobil	lization Uni	t										
Finance/A	dmin Sect	tion										
☐ Time Un	nit											
Other												
Remarks:												
			Prepared	d By:				Signature:				
Page	of			and Position)								

ICS 221 Demobilization Checkout



ICS 230 Meeting Schedule



Incident Name	 :		Operational Period:					
			From: Date Time					
Meeting Sche	dule (Commonly-held	meetings are inc	luded)					
Date / Time	Meeting Name	Purpo	se	Attendees	Location			
Prepared by: (Situation Unit Leader)			Date / Time:				

ICS 230 Meeting Schedule



ICS 231 Meeting Summary



Incident Name:	Meeting Date / Time:
Meeting Name:	
Meeting Location:	
Meeting Facilitator:	
Attendees:	
Notes: (with summary of decisions and action items)	
Prepared by:	Date / Time:

ICS 231 Meeting Summary



ICS 233 Incident Open Action Tracker



Page 1 of 2

Incide	ent Name:						
No.	Item	For	Status	Start Date	Briefed	Target Date	Actual Date
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

Section 6: Forms

ICS 233 Incident Open Action Tracker



No.	ltem	For	Status	Start Date	Briefed	Target Date	Actual Date
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							

A1 Initial Emergency Report Form



First On-Scene Actions

Evacuate		 ☐ Get to a safe area immediately. ☐ Move upwind if release is downwind of you. ☐ Move crosswind if a release is upwind from you. 						
		☐ Move to higher ground if possible.						
Alarm		□ Call for help ("Man Down").□ Sound bell, horn or whistle, or call by radio.□ For medical emergencies, call 911.						
Assess		☐ Take head count, locate any casualties. Consider all of the hazards.☐ Fill out information below to complete assessment.						
Protect		☐ Put on breathi	ing apparatus before a	ttempting rescue.				
Rescue		☐ Remove victim to a safe area.						
First Aid		☐ Follow the sta	ndard first aid protocol	s at worksite. (CPR, etc.)				
Medical Ai	a	•	port of casualties to menation to Emergency M	edical aid. ledical Services (EMS).				
		To be completed by the	person involved or notified	Data / Time				
Report taker	т бу			Date / Time				
Name of person calling				Caller Telephone				
Incident Loca	ation							
			(LSD / NTS	3)				
Event Summ	nary							
Agencies	□ Ye	s Who?						
Notified	□ No							
Event Status	☐ Incident contained or controlled ☐ Imminent control possible		☐ Intermittent control pos☐ Incident is uncontrolled					
Site Type	□ We	ell 🗆 Pipeline	☐ Tank Farm/Storage	☐ Battery/Plant/Facility	□ Other			
	□ So	ur Gas Release	☐ Sweet Gas Release	☐ Pipeline Break	☐ Security (theft, threat, terrorism)			
Incident Type	□ Los	ss of Containment	☐ Fire/Explosion	☐ Worker Injury/Fatality	☐ Vehicle/Transportation			
	☐ Liquid Spill ☐ Other		□ Other					

A1 Initial Emergency Report Form



Impacts											
Public Health a	nd Safe	ety		□ Could	be jeop	ardi	zed	□ Is jeopard	lized		
Public Protection	n Mea	sures Take	n	□ Notific	ation		Evacuatio	n □ Shelter-in	-place	□ Roadbl	ocks
Worker Injuries				☐ First A	∖id		Hospitaliz	ed □ Fatality	□ Ot	her	
Distance to near	est surf	ace develop	ment		kı	m	Distance centre	e to nearest urban	ı		km
Details							Cernie				
Release Impact] On-Lease	ПС	Off-Lease	Produc	ot.			Amoun	•	
								hor	Amoun	·	
Gas Readings	J	12S	SO ₂	<u> </u>	LEL			her		0° 360°	
Distance to near Details	est wat	ercourse			kr	n	Weathe	r Conditions	315 NW	N	45° NE
										NNW NN	E
									270° W	VNW	ENE E 90°
									(- v	vsw	ESE
									SW 225	ssw ssi	SE 135°
									220	S 180°	
Media Involvement?	□ Ye	s □ No	Regu Invol	ılator vement?	□ Ye	s	□No	Public Affairs/Commun Relations Issue	nity s?	□ Yes	□No
Details	ļ	· · · · · · · · · · · · · · · · · · ·	-		*			Troidino locac	<u>. </u>	•	
Notes / Instruc	ctions	Provided:									

Distribute this completed report to all Key Response Personnel

Note: Ensure the First On-Scene Actions have been completed before proceeding to the Five Step Initial Response Guide.

A2 Odour Complaint Script



.							
Date:			Prepared by:				
Time:	a.m. p.m. Duration of call:						
To help us	understand your immediat	e needs, we r	need to know:				
	lomo.						
	ame:						
	ontact number:						
D	escription of the concerr	1:					
-							
How man	y people are you with rig	ht now?					
A	dults	Children					
Can you	provide the location of th	e incident?					
L	ocation of the incident (a	ddress, lega	l, landmark, etc.):				
_							
Where ar	e you right now?						
_	Home/Work	In a Vehicle	Outside	☐ Other			
If	the resident is at home /	work/outsi	de tell them:				
go inside (i.e. clothe	and stay inside. Close all	doors and wir air (i.e. heati	ndows and turn off any	e that you may be with need to appliances that blow out indoor air o not go outside or attempt to start			
If	the resident is in a vehic	ele and canno	ot shelter-in-place tell	them:			
get inside heat. If y	the vehicle and stay inside ou see or hear anything th of the hazard; otherwise, co	e. Keep all do at might indic	ors and windows closed ate where the incident	e that may be with you need to d and shut off the air conditioning / is occurring, travel in the opposite rse which will likely take you out of			
	will call you back with ou. If you have any urge			off of the phone so that we can at			

A2 Odour Complaint Script



A3 First Call Communication



	Regulatory Contact						Field Centre					
	Caller									Phor	ne	
10	Notification	Date		Time		Rele		art Time		End	Time	☐ Ongoing
Contact Details	Licensee					l				Phor	ne	
ntact	Location					Neare	est Town					
ပိ	Nearest Resident		Distanc	e/Direction	1	I				Phor	ne	
	Media Involvement?	•	☐ Loca			Nationa Interna		Media	Contac	t		
	Operator									Phor	ne	
	Public Health and Safety		Could b	e jeopardi rdized	ized		Worker I	njuries		irst A lospita	id alization	☐ Fatality
Public Impact	Emergency Assessi Matrix completed w licensee					-	ERP Activ	ated?		ite Sp ield/A		☐ Corporate
ublic I	EPZ Size (2 km if unl	known)	Numb	ers and T	ypes of	Public i	n EPZ		EOC	/ICP I	_ocation	
а.	Public Protection Measures Notification Shelter						☐ Roadb		Num	ber E	vacuated	
	Release Impact					H ₂ S Cond	centration	า				
be	☐ Sensitive Environi	ment	En	vironment	Affected	d	☐ Air ☐ Land		☐ Sta	-	Water Vater	Water Body Name
Release Type	Area Affected (m³)	☐ Proper	ty Dama	age	☐ Eq	uipmen	t Loss	□ w	/ildlife /	Livest	ock Affecte	ed
Relea	Gas Release	☐ Sweet		☐ Sour			Volum					
	Liquid Release	Oil		☐ Water		☐ Efflu	ient		Volume	/Rate		
	☐ Release Point Dete	ermined										
돧	Third Party / Outsid Required	e Assistan	ce	☐ Incide			or controlle possible	ed			t control p is unconti	
Containment	Company						WCSS (Со-ор				
ā	Well Licence No.		Т	ype of Inci	ident	□к	ick	☐ Blo	owout		Loss o	f Circulation
ıs Typ	Well Status	☐ Drilling ☐ Standir		☐ Servicin	g	□P □S	roducing	☐ Inj ☐ Cr	ection		Susper	nded
Operations Type	Pipeline License No.			ine No.		□ч		☐ Le			☐ Ruptur	e
odo	Production Facility Lie	cense No.		☐ Gas			as Plant	□ Cd	ompress	or	AENV App	oroval No.
				_ U			att o i y		1101			

A3 First Call Communication



g	☐ License Air Monit	oring Occurring	☐ Mobile	☐ Handheld	Estimated Time or	f Arrival		
orin	Initial Readings / Loc	ation	□ РРВ	☐ PPB ☐ On Site				
nite			□РРМ	☐ Off Site				
Air Monitoring	Contractor Name		Phone		AMU Phone			
4	Direction Speed Wind		Meteorological Condi	tions	AER AMU ETA			
	Communications cor	npleted by Licens	see and /or Regu	latory Agency				
				ncy Management	□TDG	☐ OH&S	☐ WCB	
SI	☐ Ambulance	☐ Local Author	ity	of Transportation	☐ CANUTEC	☐ DFO	☐ wcss	
Communications	Fire	☐ Health Autho	ority	ment & Climate Change CCC)	⁹ □ ERAC	Other	Other	
nic	☐ CER	☐ First Nations	☐ Indian C	Oil & Gas	Other	Other	Other	
Com								
	Incident Cause	☐ Natural	☐ Huma	n-Induced unintentional	al Human-Induced Intentional			
	☐ First Nations Ban ☐ Metis Settlement	d Band / Settle	ement Name / Co	ontact	Phone	,		
	On and all all	Local						
on	Complaints	☐ Large are	ea					
Other Information	Private Land Title holder				Phone			
Info	Additional Informatio	n			ļ			
:her								
Ō								

A3 First Call Communication



This form is to be used when taking information for spills/releases. It will assist in consistent gathering of data and should be attached to the FIS record.

General Incident Information							
AER contact:		Field centre:					
Licensee:		Caller: Phone:					
E-mail address for release report:							
Licence #:		Pipeline line #:			Approval	#:	
Incident location:/		W M					
Emergency level:							
Serious event? ☐ Yes ☐ No							
If yes, what kind of serious event?	Blowou	t Explosion		Fire	oss 🗌 F	Fracking	
Land type (jurisdiction): Freeho	old 🗌 Fi	rst Nations	Vlétis	CFB Crov	wn – Dispos	ition #:	
Agencies notified:					Date	e:	
FIRST duty office (DO) contacted:	☐ Yes	☐ No If yes, dat	te & t	time DO was contacted:			
DO contact name:							
Release Details							
Volumes							
Substance*	Released	(m ³ /10 ³ m ³)		Recovered (m ³ /10 ³ m	1 ³)	Disposal/storage location	
		` '		•	,		
* For emulsion, break down oil & water	if possible.						
Description of how the release vol		etermined and verifie	ed (in	ıcluding calculations; e.ç	g., spill lengt	h × width × depth):	
			Ţ				
Area affected (length × width):	m ²						
How was the area affected determined? (Aerial survey, perimeter walk, range finder, samples taken,etc.):							
Who delineated the spill area (env	rironmental t	technologist, operato	or, et	c.) and what process wa	as used?		

Reminded licensee to update the AER immediately if release volumes or area changes from what was originally reported.
Asked for the immediate submission of photos of the entire spill site to the AER and communicated that photos of the cleanup will need to be submitted with the release report.
Cause of release (suspected or actual):
Impact
Release off lease? ☐ Yes ☐ No (pipeline right-of-way is off lease)
If yes, was the landowner notified?
Release within disposition boundary?
Outside disposition – was leaseholder notified?
☐ If outside disposition, reminded licensee that they will need a TFA.
Actual incident H ₂ S concentration (if applicable): % / ppm / mol/kmol
Nearest town: Distance and direction to town:
Environment affected: Air Land Water
Distance of release to the nearest water body, watercourse, or waterway:
How was this distance determined?
Wildlife/waterfowl/livestock affected: None Habitat affected Animals injured/killed
Notes/description:
Confirm how the release has been or will be contained:
Confirm how the release has been or will be cleaned up:
Evacuees (#): People injured (#): Fatalities (#):
Were members of the public affect? \[\text{Yes} \] No
If yes, indicate if they were
□ notified □ instructed to shelter in place □ advised to evacuate

Notes/description:						
Media interest? ☐ None ☐ Local ☐ Regional ☐ National						
Damage to public property? ☐ Minor/no damage ☐ Substantial	(home covered in oil)					
Pipeline Specific						
Hit? ☐ Yes ☐ No Line #:	Test failure? ☐ Yes ☐ No					
Normal operating pressure: kPa	Maximum operating pressure: kPa					
Is the pipeline shut in, depressured, and isolated?						
If yes, date & time:						
What is the total volume of liquid in the pipeline?						
Are there isolation valves?	en activated?					
Are there any other pipelines that tie into the failed line?	o If yes, have they been shut in/isolated?					
☐ Reminded the company to contact the AER before excavating the	pipeline.					
Reminded, advised, or directed the company that the pipeline is no	ot to be returned to service without the AER's permission.					
Right-of-way (ROW)						
☐ Licensee has confirmed when the pipeline ROW and well were last	checked. Date:					
How was the ROW surveillance conducted (from the air, by quad, on fo	ot, using infrared, etc.)?					
Requested that daily production volumes for the well/pipeline be submitted within 24 hours.						
Investigation information						
What operations are currently taking place (containment, sampling, line repair, site access, EM survey, etc.)?	locating, retaining contractors/consultants, pipeline excavation,					

A4 Incident Action Plan Checklist



IAP Checklist Items:	Comments:
☐ ICS 202 – Incident Objectives	
☐ ICS 207 – Incident Organizational Chart	
☐ ICS 209 – Incident Status Summary	
☐ ICS 215 – Operational Planning Worksheet	
☐ ICS 215A – IAP Safety Analysis	
☐ ICS 230 – Meeting Schedule	
☐ ICS 233 – Incident Open Action Tracker	
□ Map:	
□ Map:	
□ Other:	
□ Other:	
□ Other:	
Notes:	

A4 Incident Action Plan Checklist



A5 Air Monitoring Log



Date:		Responder Name:	
Page	of	Responder Position:	

		H ₂ S (ppm)	LEL (%)	O ₂ (%)	SO ₂ (ppm)	Other	Temp (°C)	Wind C	onditions *	
Time	Location of Samples							From	Speed (km/hr)	Comments

^{*}Estimate meteorological conditions where accurate readings are not available.

A5 Air Monitoring Log



	Location of Samples	H₂S (ppm)	LEL (%)	O ₂ (%)	SO ₂ (ppm)	Other	Temp (°C)	Wind C	onditions *	
Time								From	Speed (km/hr)	Comments

^{*}Estimate meteorological conditions where accurate readings are not available.

A6 Threatening Call / Bomb Threat



Date:				Time Call Rece	eived:		Time Call Reported:				
Person Receiving Call:					What	What/Whom Call Directed To:					
Caller's Sex: ☐ Male ☐ Female ☐ Unknown Approximate Age:											
-	Accent: Yes No Type: Familiar voice: Yes No Who:										
Threa	Threat (Exact Wording):										
Listen carefully and remain calm. Do not interrupt caller. Attempt to keep caller talking. Attempt to ask questions below. Obtain as much information as you can while call is in progress. Signal someone to call your supervisor; give him / her this information. Do not hang up or disconnect your phone, even after the caller hangs up. For telephone tracing, call the local telephone company and local police.											
If bon	nb threat, ask th	ne follov	wing que	stions:							
	When will the bomb go off? (date and time)										
Where	e is it located?										
Why o	lid you place it?										
What	kind of bomb is i	t?									
What	does it look like?)									
What	is your name?										
Where	e are you calling	from?									
Was t	he caller familiar	with co	mpany fa	cilities, or empl	oyees? (e.g.: nickna	mes	, familiarity witl	n staff, etc	:.)□ Yes □ No	
Did ca	ıller appear famil	liar with	huildina /	facility by the o	lescrintic	n of the ho	mh la	ocation?	□Yes	□No	
	fying Characte			idenity by the c	accorrptic	11 01 410 20		Journal 11			
ideiit	Voice	131103	Speecl	1	Langua	ao		Manner		Background	
	Loud		Fast		Excelle	_		Calm		Office Machines	
	Soft		Slow		Good			Angry		Factory	
00000	High Pitched Deep Raspy Pleasant Intoxicated		Distinct Distorted Stutter Nasal Slurred	d	Fair Poor Foul La Accent	nguage		Rational Irrational Coherent Incoherent Deliberate / Serious Emotional	_ _ _ _	Machines Street Traffic Airplanes Trains Animals Party	
	moxicatou	_	Ciarroa	_						Atmosphere Music	
Notify proper authorities as soon as possible. Have employees take a look around their immediate work stations for unusual packages. Evacuate building if necessary.									_ 0	Voices Quiet	
Name	Name of the supervisor first notified:										

A6 Threatening Call / Bomb Threat







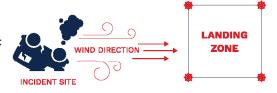


STEP 1

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 72 metres (or 236 feet, or 72 paces) from the incident site.



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



帯 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







* STEP 1

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

* 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 2

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

* STEP 5

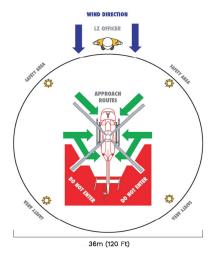
Communicate the wind direction and approximate speed.

* STEP 3

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

* 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, knees 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 **www.stars.ca**



INDUSTRY EMERGENCY LINE 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.

WE ARE ALL STARS

B1 Reception Centre Registration Log



Due to travel and time constraints, the company may not always be able to have a company employee at the Reception Centre before evacuees begin arriving. In this case this cover page can be included with the forms on the next 2 pages and sent to a representative at the Reception Centre to provide them with guidance on how to register and track evacuees until a company representative arrives.

Evacue	e registration guidelines								
Tidewat	er requires your assistance with receiving evacuees at the fo	following Reception Centre:							
Your co	our company contact is:								
Name:	Position:	Contact Number:	Fax Number:						
1) 2) 3) 4) 5)	Record all evacuees as they arrive on the forms provided. Provide all evacuees with the statement below and any oth Provide the evacuees with food and lodging as required. Record if any evacuees choose to leave the Reception Cer Continually update the company of any residences arriving	her status updates as provided by your company entre (name, contact number, where are they goin	ng, etc.).						

B1 Reception Centre Registration Log



Date:		Responder Name:	
Page	of	Responder Position:	Responders Phone No.:

Resident	Name (list all	Name (list all names in party)		Number	Arrival	Donart	Destination	
ID	First	Last	# Of Occupants	arrived	time	Depart time	phone # (where they can be reached)	Comments

B2 Resident Compensation Log



Resident's Name:		Home Address:				Home T	elephone #	ŧ	Location of Land (LSD):
						s Telephor	ne #:		
Number of Resider	Evacuated to:				Telepho	ne # While	Evacuated:		
No. Date	Location	Trans.	Accom.	Meals	Phone	Sundry	Total	De	etails of Expense
Total Repo	orted Expenses								

Section 6: Forms Page 1 of 2

B2 Resident Compensation Log



side	ent's Name:		Home A	Address:			Home T	elephone #	Home Telephone #:		
Number of Residents Evacuated:								s Telephor	ne #:		
			Evacuated to:				Telepho	ne # While	Evacuated:		
D.	Date	Location	Trans.	Accom.	Meals	Phone	Sundry	Total	D	etails of Expense	
	Total Repo	orted Expenses									

Section 6: Forms Page 2 of 2

B3 Resident Contact Log



Date:		Responder Name:	
Page	of	Responder Position:	Responders Phone No.:

 -	Built de la constant	D (1D	Shalter / Evecuete	Number	of people	Assistance or	0
Time	Resident name	Resident ID	Shelter / Evacuate	Inside	Outside	transportation required?	Comments
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			ShelterEvacuate			O Yes O No	
			ShelterEvacuate			O Yes O No	
			ShelterEvacuate			O Yes O No	
			ShelterEvacuate			O Yes O No	
			ShelterEvacuate			O Yes O No	
			ShelterEvacuate			O Yes O No	
			ShelterEvacuate			O Yes O No	
			ShelterEvacuate			O Yes O No	
			ShelterEvacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	

Section 6: Forms Page 1 of 2



				Number	of people	Assistance or	
Time	Resident name	Resident ID	Shelter / Evacuate	Inside	Outside	transportation required?	Comments
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			ShelterEvacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			ShelterEvacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	

B4 Roadblock Log



Date:		Responder Name:	
Page	of	Responder Position:	_ Responders Phone No.:

Only emergency responders should be allowed to enter the Emergency Planning Zone (EPZ).

Vehicle Type	License plate # and province / state	Name of driver (if available)	# of people in vehicle	Time entering Zone	Time Exiting Zone	Comments (record all vehicles turned away)

B4 Roadblock Log



Vehicle type	License plate # and province / state	Name of driver (if available)	# of people in vehicle	Time entering zone	Time Exiting zone	Comments (record all vehicles turned away)

Section 6: Forms Page 2 of 2



DATE:		
TIMF.		

EVACUATION NOTICE

Tidewater has an emergency at its nearby location.

As a safety precaution, please leave the area in a (north / east / south / west) direction and proceed to the Reception Centre located at

Tidewater representatives will be available at the Reception Centre to address your questions or concerns.

For assistance, call Tidewater at

Thank you for your cooperation.

B5 Evacuation Notice



B6 Early Notification / Voluntary Evacuation Phone Message



Before calling, determine a safe evacuation route for the residents to travel, away from the emergency hazard area, upwind if possible, towards the reception centre.

Hello, this	s is(your name)calling from Tidewater.									
Is this the	(name of residence / business) at (telephone number) ?									
Tidewate	Tidewater is responding to a <i>(potential)</i> emergency at (<i>location)</i> in your area.									
	n no danger at this time. All efforts are being made to resolve the problem and this phone call is form you and provide you with an early notification.									
To help u	s understand and your immediate needs we need to know:									
How mar	ny people are at your location now?									
	Adults									
	Children									
Do you w	vish to leave your residence at this time?									
If Yes	Please travel in a <u>north / east / south / west</u> direction to our reception centre located at:									
If No	Please standby for further contact. Please do not use your telephone for outgoing calls as this may prevent us from contacting you with updated information or when the problem has been eliminated.									
If you have urgent questions, please contact Tidewater at(telephone number)										
Thank you for your cooperation.										

(Pass on all information regarding this call to the Public Safety Group Supervisor immediately)

B6 Early Notification / Voluntary Evacuation Phone Message



B7 Shelter-In-Place Phone Message



Hello, th	is is of Tidewater.							
Is this th	e <u>(name)</u> residence at <u>(telephone number)</u> ?							
Tidewate	er is responding to a (<i>potential</i>) emergency at(<i>location</i>)in your area.							
	safety, it is extremely important that you, and those with you, stay indoors until the potential no longer exists, or you are advised to evacuate.							
To help	us understand your immediate needs, we need to know:							
How ma	any people are at your location now?							
	Adults							
	Children							
	anyone in your household that you cannot contact to inform them of the situation and advise them doors or stay out of the area?							
	☑ Yes ☑ No							
If Yes	Whom?							
	Location of the person(s)							
	We will send someone to find them as soon as possible.							
Do you	have children in school at this time?							
	☑ Yes ☑ No							
If Yes	What school?							
	Children's names							
	We will contact the school to ensure the safety of your children. Buses will be directed to leave the area immediately. If school is in session, your children will be redirected to the reception centre by their regular bus driver when the school day is over.							
Do you	have the "Shelter-in-Place" instructions previously provided to you by Tidewater?							
	☐ Yes ☐ No							
If Yes	Please follow the Shelter-in-Place instructions located inside the resident pamphlet.							
If No	If No Verbally walk the resident through the Shelter-in-Place instructions on the next page.							
Do you understand what I have told you?								
Is there an alternate number we can contact you at?								
If you have any urgent questions, please contact Tidewater at								
Thank y	Thank you for your cooperation.							

(Pass on all information regarding this call to the Public Safety Group Supervisor immediately)

B7 Shelter-In-Place Phone Message



Shelter-In-Place Instructions

For your safety:

- Immediately gather everyone indoors and stay there
- Close and lock all windows and outside doors
 - If convenient, tape the gaps around the exterior door frames
- Leave open all inside doors
- Extinguish indoor wood burning fires
 - If possible, close flue dampers
- Turn off appliances or equipment that either:
 - Blows out or uses indoor air, such as:
 - Bathroom and kitchen exhaust fans
 - Built-in vacuum systems
 - Clothes dryers
 - Gas fireplaces and gas stoves
 - Sucks in outside air, such as:
 - Heating, ventilation and air conditioner (HVAC) systems for apartments, commercial or public facilities
 - Fans for heat recovery ventilators or energy recovery ventilators (HRV / ERV)
- Turn down furnace thermostats to the minimum setting and turn off air conditioners
- Avoid using the telephone, except for emergencies, so that you can be contacted by company emergency response personnel
- Call the company emergency numbers you have been provided:
 - If you are experiencing symptoms or smelling odours (so that we can address your concerns and adjust our response priorities)
 - If you have contacted fire, police or ambulance (so that we can coordinate our response)
- Stay tuned to local radio and television for possible information updates
- Do not leave your residence, even if you see people outside, until you are told to do so
- After the hazardous substance has passed through the area you will receive an "all-clear" message from the company emergency response personnel. You may also receive, if required, instructions to:
 - Ventilate your building by opening all windows and doors; turning on fans and turning up thermostats. During this time the air outside may be fresher and you may choose to leave your building while ventilating.
 - Once the building is completely ventilated return all equipment to normal settings & operation.
- Do not leave your sheltered location or attempt to start any vehicle until a company representative advises you that the area is safe.

If you are unable to follow these instructions, please notify company emergency response personnel.

B8 Evacuation Phone Message



Before calling, determine a safe evacuation route for the residents to travel, away from the emergency hazard area, upwind if possible, towards the reception centre.

	is is <u>(your name)</u> of T	
Is this th	e residence at	t <u>(telephone number)</u> ?
	er is responding to a <i>(potential)</i> emergency at	
	safety, it is extremely important that you and you a <u>north / east / south / west</u> direction to our rece	
To help	us understand your immediate needs, we need to	know:
How ma	ny people are at your location now?	
	Adults	-
	Children	_
	anyone in your household that you cannot contac ate away from the area?	ct to inform them of the situation and advise them
	☐ Yes ☐ No	
If Yes	Whom?	
	Location of the person(s)	
	We will send someone to find them as soon as	possible.
Do you	have children in school at this time?	
	☐ Yes ☐ No	
If Yes	What school?	
	Children's names	
	We will contact the school to ensure the safety of the area immediately. If school is in session, you centre by their regular bus driver when the school	our children will be redirected to the reception
Do you	require evacuation / transportation assistance	9?
	☐ Yes ☐ No	
If Yes	We are sending someone to assist you. Please until a Rover or the local police arrive to evacua	
If No	Provide the resident with:	
	☐ Directions to safely travel to the recepti	ion centre
	☐ A list of items to bring with them to the etc.)	reception centre (medications, cell phone,
	☐ An idea of how long they may be expec	ted to stay at the reception centre
	☐ The option to bring their house pets to	the reception centre
	contact Tidewater if you are unable to make it to the one line free so that we can contact you if necessa	
Is there	an alternate number we can contact you at?	
arranger	any representative at the reception centre will add ments for your temporary accommodations. Do yo mmediately?	dress any questions you may have and will make ou understand everything I have told you? Are you
	ave any urgent questions, please contact Tide	ewater at <u>(telephone number)</u> .

(Pass on all information regarding this call to the Public Safety Group Supervisor immediately)

B8 Evacuation Phone Message



C1 Preliminary Media Statement



Date:(YY/MM/DD)	Responder Name:						
Responder Position:	Responder Phone No.:						
This is the information I can give you so far:							
At <u>(time – 24hr local clock)</u> on (date), <u>a(n) (fire, entropy)</u> the Company's <u>(location name)</u> site, located <u>north / south)</u> of <u>(nearest town or city)</u>	xplosion, gas release, spill) occurred at (distance) kilometres (east / west /						
Presently, (number of personnel) workers are being treather injured cannot be released until their families have been							
The (well site, plant, pipeline, office, drilling location) still flowing)	has been (shut down, isolated, or is						
Company staff have been activated and are directing empublic, our workers and the environment.	nergency response procedures to protect the						
The cause of the(fire, explosion, gas release, spill) is available. As information becomes available, news release							
Any further inquiries should be directed to the Emergency So a later time.	upport Team, who will issue a press release at						
Contact:							
Offic	e:						
Fa	ıx:						
specific information to the public or the media. Refer to page	Note: Only the Media Spokesperson designated by the Emergency Support Team is to provide any specific information to the public or the media. Refer to page 3 of Section 3: Communications & Media for the generic media statement to be used by all other response personnel.						

C1 Preliminary Media Statement



C2 Media Contact Log



Date:		Responder Name:	
Page	of	Responder Position:	Responders Phone No.:
If you feel	you are not the app	ropriate person to be answering the media agencies questions,	use the following series of statements.
		"Tidewater has an Information Officer to answe	er all media questions."
	"	May I request the following information to expedite your re	equest?" (complete the form below).
	"Thank you	u. Tidewater appreciates your cooperation and I will pass o	n this information to the appropriate person."

Time	Call To	Call From	Media Outlet	Reporter / Contact Name	Telephone Work	Numbers Fax	Remarks / Information Required

C2 Media Contact Log



Document all key events, conversations, and meetings on this form. Where lengthy notes are necessary, use additional copies or the back of the page.

Time	Call To	Call From	Media Outlet	Reporter / Contact Name	Telephone Work	Numbers Fax	Remarks / Information Required

C3 Government Agency Contact Log



Date:		Responder Name:	
Page	of	Responder Position:	Responders Phone No.:
If you feel y	ou are not the app	propriate person to be answering the media agencies questions,	use the following series of statements.
		"Tidewater has a Government Liaison to answe	er all media questions."
		"May I request the following information to expedite your re	quest?" (complete the form below).
	"Thank yo	ou. Tidewater appreciates your cooperation and I will pass o	n this information to the appropriate person."

Time	Call To	Call Ta		Contact Name	Telephone Numbers		Bamarka / Cammanta
Time	Call 10	Call From	Agency	Contact Name	Work	Fax	Remarks / Comments
	1	ı	1	I	î.	1	

C3 Government Agency Contact Log



Document all key events, conversations, and meetings on this form. Where lengthy notes are necessary, use additional copies or the back of the page.

Time	Call To	Call From	Agency	Contact Name	Telephone Work	Numbers Fax	Remarks / Comments

C4 Media Centre Site



Location:	
Address:	
Map or Direction	s to Site:





Appendices

Appendix A: ERP Scope, Training and Plan Maintenance	······································
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Appendix A: ERP Scope, Training and Plan Maintenance Scope

This plan defines the emergency response process related to all hazards affecting petroleum operations. This Emergency Response Plan (ERP) outlines the process for an Alert/Minor, Level-1, Level-2, or Level-3 emergency for any jurisdiction or incident type.

Plan Objectives

The primary objective of this Emergency Response Plan (ERP) is to define the incident management system and organizational structure, process and tools to respond effectively to all incidents regardless of size or complexity. It has been designed to be intuitive and have natural process flow utilizing the Incident Command System (ICS) and to comply with applicable regulations, standards, and industry best practices.

Purpose

This ERP clearly defines emergency response team roles, functions and duties to protect people, environment, and assets during an incident. This plan clarifies the following:

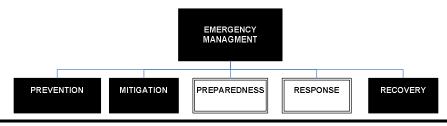
- Overall Incident Command System (ICS) response organization.
- Incident Command System (ICS) Roles and responsibilities.
- Guidance to determine the Alert or Emergency Level.
- Mechanisms to activate the ERP.
- Notification /communication requirements to stakeholders (public /government /responders).
- Documentation tools for accurate records management of events and decisions during an event.
- Guidance for post-emergency actions.

The intent of this Emergency Response Plan (ERP) is to define effective measures in place to:

- Notify and protect the workers and the public.
- Minimize environmental impact.
- Minimize asset and property loss.
- Regain steady state of operations.
- Minimize emergency response time.
- Maximize response effectiveness.
- Coordinate with government agencies and stakeholders.
- Minimize business and reputational impact.

This manual outlines the framework, tools and reference materials to facilitate a prompt, safe, efficient and properly managed response to all incidents regardless of size or complexity. Therefore this plan provides employees and contractors with practical tools that will guide them through the Preparedness and Response principles of Emergency Management.

Emergency Management Process Flow





Appendix A: ERP Scope, Training and Plan Maintenance, continued

Training Requirements

Frequency / Action	As Required	Semi- Annually	Annually*	Every Three (3) Years**	Every Five (5) Years***	
Training						
Employee Orientation New / Transfer	✓					
On-the-job Training	✓					
Response Discussion During Pre-Job Meetings	✓					
Drills	✓					
Tabletop Exercise			✓ one of these			
Communication / Partial Mobilization Exercises			exercises			
Major (Full Scale) Exercise				✓	✓	
Post Incident (Actual) Review	✓					
ERP Review / Self Audit		✓				

^{*} Must be held annually.

^{**} CSA Z246.2-18, CER, OGC & AER requires Major Exercises be held every three (3) years.

^{***} Environment & Climate Change Canada (ECCC) requires Major Exercises be held every five (5) years for facilities with E2 required substances.



Appendix A: ERP Scope, Training and Plan Maintenance, continued

Plan Maintenance

Responsibility

The licensee is responsible to ensure that an ERP is created for all provincial and federally regulated oil and gas activities (i.e. sour operations, HVP pipelines, cavern storage facilities, etc.), they are maintained regularly, and any updates are disseminated to the regulatory agency and other plan holders as required. In order for this to occur the following responsibilities are designated:

- Each individual plan holder is responsible for ensuring their assigned manuals are current, all updates are applied / downloaded / inserted, and any errors or omissions are reported to a supervisor.
- Each Area Manager is responsible for ensuring that a semi-annual review of their ERP is conducted.
 The ERP Revision Request Form is located in this section and can be used to track this information and provide documentation in the case of an ERP assessment.
- Any requests for revisions to this plan should be forwarded to the applicable Area Manager for review. These revisions will be discussed with the company's Emergency Response Program Coordinator and H₂Safety Services Inc. Any significant changes including those resulting from exercises and incidents will require immediate updates sent out to all plan holders; less significant changes will be implemented during the ERP's next annual update.
- The company's Emergency Response Program Coordinator is responsible for ensuring that the plans and distribution lists are updated, training is performed, and new projects are included in the plan. Information in this plan will be verified and updated at least once a year.
- Old manuals must be sent to H₂Safety Services Inc. or destroyed. If a plan holder no longer requires their manual (job changes, position changes, etc.), it must be returned to the company's Emergency Response Program Coordinator to be tracked, reassigned, or destroyed.

The licensee must distribute changes in information that are instrumental to implementing the ERP to all required plan holders.

Errors identified in the ERP by the regulatory agency, licensee, and other party must be corrected immediately upon identification.

Modifications to New or Existing Operations

The licensee must submit a supplement for review and approval to the regulatory agency for all newly added wells, pipelines, well / pipeline tie-ins, facilities and operating areas prior to commencement of operations if there are new surface developments within the Emergency Planning Zone. For example, the EPZ for a new pipeline tie-in does not fall entirely within the existing Emergency Planning Zone and impacts a new residence / public facility / trapper cabin / etc. that was not previously included in the Emergency Response Plan. The licensee must conduct a public involvement program for all new members of the public. Before any new or major modifications to an existing facility / pipeline are brought on-stream, any additions or changes will be added to the Emergency Response Plan. If required, a site specific Emergency Response Plan will be developed. Meetings to review response plan requirements must be held before major facility modifications are commissioned.



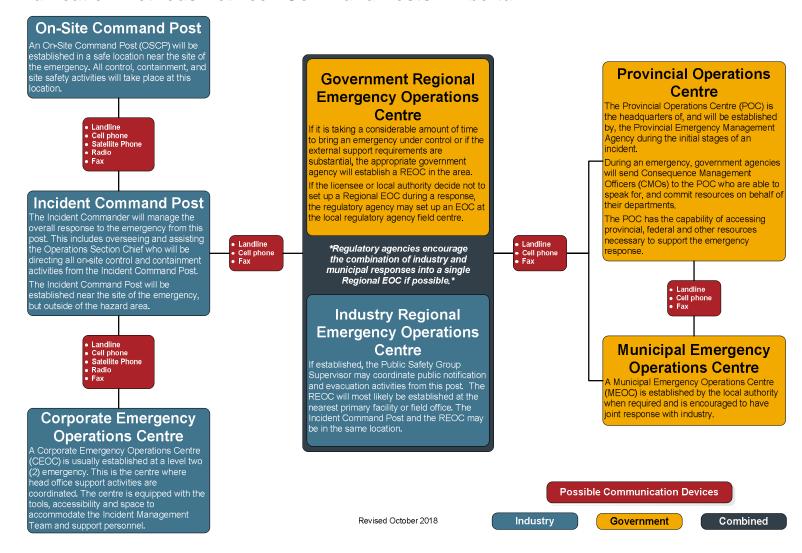
Appendix A: ERP Scope, Training and Plan Maintenance, continued

ERP Revision Request Form

Plan Holder Name / Title / Company:
ERP Name:
Manual Number:
If any of the following items have changed, please check the box beside it and provide a description of the change in the space provided:
 □ Company information □ Mapping information □ Resident contact information □ Response staff information or capacity changes □ Facility additions, such as well or pipeline tie-ins □ Other
Description of the change: Please attach additional pages and/or support documentation as required.
Please return the completed checklist to: H ₂ Safety Services Inc. 210, 7260 – 12 Street SE Calgary, AB T2H 2S5 Email: erp@h2safety.ca Fax: 403-313-9180



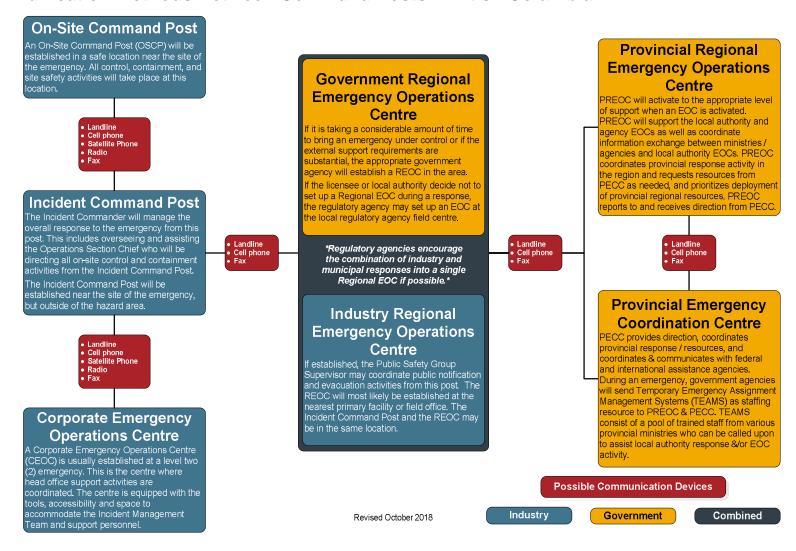
Appendix B: Incident Command Post (ICP) Communication Methods Between Command Posts - Alberta



Appendices Page 5



Appendix B: Incident Command Post (ICP), continued Communication Methods Between Command Posts - British Columbia



Appendices Page 6



Appendix B: Incident Command Post (ICP), continued ICP Activation and Setup

The Incident Command Post is activated by the Incident Commander.

The following tasks must be addressed once the ICP has been activated:

Position	Task			
Incident Commander	 Establish briefings with the Field Response Team (FRT). Ensure staffing is adequate for the task(s). Consider the time difference, if applicable, and determine how time will be communicated throughout the incident. 			
Safety Officer	 □ Ensure the room / floor / building is secure. □ Ensure a safe work area, i.e. remove clutter or cords causing slips, trips, falls, etc. 			
Information Officer	 Notify the receptionist that there is an incident. Provide details of what message should be given out to the public and media, as well as where to direct incoming calls. Ensure inbound and outbound calls received or made are centrally logged. Ensure responders have their office phones forwarded to their cell phones. 			
Logistics / IT Support	 □ Turn on all computers; ensure the relevant systems are operational and that they all have internet/email access. □ Bring up any ERP related electronic tools (ie; H₂CommandCentre) and ensure they are working and that they can all be displayed on various projectors / screens as required. □ Check that printers are connected to the computers and working. Print a test page to confirm. □ Check that the fax machine is setup and working. □ Check that any phone conferencing systems are set up and working. □ Ensure that telephone lines are available and active. □ Ensure TVs are working properly and set up to local news or CNN. □ Obtain any additional equipment as required. 			
Logistics / Security	 Ensure the room/floor/building is secure. Arrange for additional security if required. If the location of the Incident Command Post is closed to general staff, provide a list of staff needing access clearance to the meeting area. The following supplies should be available: notepaper, pens, printer cartridges and paper, documentation forms, dry erase markers, staplers and staples, spare power bars and extension cords, etc. Arrange for refreshments (coffee, food, water, etc.) for those working there, as well as sleeping space if required. Ensure there are sufficient tables and chairs for the team. 			



Appendix B: Incident Command Post (ICP), continued ICP Activation and Setup, continued

Position	Task			
Planning / Documentation	□ Determine which emergency response plans and other ERP tools are needed and pull them out to be readily accessible.			
	☐ Determine what laminated maps and charts are going to be utilized and put them up on the wall with dry erase markers. Set up the white boards and roles chart.			
	☐ Ensure clocks are displaying the correct time, including any clocks with a different time zone.			
	☐ As each person arrives: provide them with a vest, provide them with a print out of the Initial Emergency Report Form, ensure they synchronize their watches and ensure they check in with their assigned supervisor.			
	☐ As team members arrive, write their name in the appropriate position on the Field			
	Response Team Assignment Chart.			
	☐ Pass out documentation forms and provide an overview of the documentation process.			
	☐ Ensure the latest contact list for Field Response Team members are available.			
	□ Begin documenting all actions, decisions and major events. Start-up H ₂ CommandCentre if available.			
	☐ Continually update the laminated maps and charts as information becomes available (Field Response Team Assignment Chart, Emergency Status Board, etc.).			
	☐ Post a schedule of events, including shift changes and status updates.			

Incident Command Post Briefings

Once the ICP has been activated and team members arrive, the Incident Commander or Deputy needs to conduct an initial briefing to provide the team with the status of the situation, establish operational periods for the ICP, establish a meeting schedule for both a planning meeting and periodic briefings and outline broad goals to guide the ICP throughout the emergency.

In additional to periodic briefings for status updates, the Incident Commander also has to conduct a meeting once the approved Incident Action Plan is in place. This meeting will outline the planned objectives and tasks and will ensure that resources required for implementation of the action plan are in available or en route.

At the end of each operational period, all departing members of the Field Response Team will be debriefed and must brief their replacements.

Documentation

It is critical to ensure that all ICP documentation is compiled, properly stored and readily available after the event. Proper documentation will aid in investigations, inquiries, debriefs and support for financial claims and budgets. Everything that happens during the Response/Recovery Operations should be recorded at the ICP. The forms at the back of this manual are designed to aid in this process



Appendix C: Toxic Gases Hydrogen Sulphide (H₂S)

Background

Hydrogen sulphide (H₂S) is a flammable, colourless gas with a characteristic odour of rotten eggs that people can smell at low levels. It is also known as hydrosulphuric acid and sewer gas. H₂S occurs naturally in crude petroleum, natural gas, volcanic gases and hot springs. It can also result from bacterial breakdown of organic matter. Industrial sources include emissions from industrial paper plants; combustion of coal, fuel oil and natural gas (including gas flares); kraft paper mills; tanneries; and emissions from sewers and waste treatment facilities. Cigarette smoke is also a source of hydrogen sulphide.

H₂S is released primarily as a gas and spreads in the air. Its residence time in the atmosphere ranges from about one day to more than 40 days, depending on ambient temperature and other atmospheric variables, including humidity, sunshine and presence of other pollutants. The decreased temperatures and decreased levels of hydroxyl ions in northern regions in winter increase the residence time. When released H₂S gas is ignited, it will change into sulphur dioxide (SO₂), be carried into the atmosphere and dispersed over a larger area at lower concentrations.

Signs and Symptoms

Exposure to hydrogen sulphide may cause irritation to the eyes, nose or throat. It may also cause difficulty in breathing for some asthmatics. Brief exposures to high concentrations of hydrogen sulphide can cause a loss of consciousness and possibly death. In most cases, the person appears to regain consciousness without any other effects. However, in some individuals, there may be permanent or long-term effects such as headaches, poor attention span, poor memory and poor motor function. No health effects have been found in humans exposed to typical environmental concentrations of hydrogen sulphide (0.00011-0.00033 ppm).

Acute Exposure Effects

The effects on humans will vary depending on the duration and H₂S concentration of exposure. The health effects of acute exposure to H₂S are shown in the following table. Acute exposure reflects a range from a few seconds up to several weeks.

Hydrogen Sulphide Toxicity Table (BC Regulations)

Concentration (ppm)	Effects
Less than 1	Most people smell "rotten eggs".
3 – 5	Odour is strong.
20 – 150	Nose and throat feel dry and irritated. Eyes sting, itch or water and "gas eye" symptoms may occur. Prolonged exposure may cause coughing, hoarseness, shortness of breath and runny nose.
150 – 200	Sense of smell is blocked (olfactory fatigue).
200 – 250	Major irritation of the nose, throat and lungs, along with headache, nausea, vomiting and dizziness. Prolonged exposure can cause fluid buildup in the lungs (pulmonary edema), which can be fatal.
300 – 500	Symptoms are the same as above, but more severe. Death can occur within 1-4 hours of exposure.
Above 500	Immediate loss of consciousness. Death is rapid, sometimes immediate.

Adapted from Hydrogen Sulfide in Industry, WorkSafe BC February 2010



Appendix C: Toxic Gases, continued

Acute Health Effects of Hydrogen Sulphide (AB Regulations)

Concentration in Air (ppm)	Description of Potential Health Effects
1	A noticeable odour that may be offensive to some individuals. People may temporarily experience mild symptoms of discomfort, including nausea, headache, and irritability due to the odour. Asthma symptoms may worsen.
10 – 20	An obvious offensive odour. Temporary eye irritation may occur after a single exposure and last several hours. Symptoms include mild itchiness, dryness, increased blink reflex and slight watering. Some people may experience headaches, nausea and vomiting. Symptoms of asthma, bronchitis or other forms of chronic respiratory disease may worsen.
50	A strong, intense offensive odour that may irritate eyes and breathing passages. Eyes may be itchy, stinging, and red with increased blinking, tearing and tendency to rub eyes. Breathing passages could feel tingly or sting, with increased tendency to clear throat and cough. Symptoms of pre-existing respiratory disease may worsen. No permanent injury to eyes or breathing passages is expected unless exposure is prolonged. Odour–sensitive individuals may experience headaches, nausea, vomiting and diarrhea.
100	Initially there is a strong objectionable odour that lessens with prolonged exposure due to olfactory "fatigue." Eyes and breathing passages are often irritated within one hour of exposure. Eyes may be sore, stinging, burning, tearing, redness, swelling of eyelids, and possible blurred vision. Respiratory irritation may include sore throat, cough, soreness or stinging of breathing passages, and wheezing. The symptoms of asthma, bronchitis or other forms of chronic respiratory disease will worsen. Odour may cause headache, nausea, vomiting and diarrhea.
250	There may or may not be an odour present due to olfactory paralysis. Eyes and breathing passages will become irritated within minutes of exposure, and the irritation will worsen with longer exposure. The outer surface of the eyes and inner eyelids will be inflamed, red and sore. Eyes will begin watering and tearing immediately and vision may be blurred. Eyes may be permanently harmed if exposure is prolonged. Respiratory irritation will include sore throat, cough, difficulty breathing, soreness of chest, and wheezing. Asthma symptoms will worsen. People may experience "systemic" effects, including headache, nausea and vertigo depending on duration of exposure.
500	No odour is present due to olfactory paralysis. Severe irritation and possible permanent injury to the eyes and breathing passages within 30 minutes of exposure. Lung and breathing passage damage may cause 'chemical pneumonia' following exposure if the exposure was prolonged. Systemic effects involving the central nervous system may occur within one hour of exposure and include headache, anxiety, dizziness, loss of coordination and slurred speech. People may lose consciousness or collapse suddenly, and die if exposure persists.



Appendix C: Toxic Gases, continued

Acute Health Effects of Hydrogen Sulphide (AB Regulations), continued

Concentration in Air (ppm)	Description of Potential Health Effects
750	No odour is present due to olfactory paralysis. Central nervous system effects will be most obvious, and could include anxiety, confusion, headache, slurred speech, dizziness, stumbling, loss of coordination, and other signs of motor dysfunction. People may lose consciousness, collapse suddenly and possibly die, if exposure continues for more than a few minutes. Lung and breathing passage damage will likely cause 'chemical pneumonia' among survivors.
1000	Immediate "knock-down" and loss of consciousness. Death within moments to minutes. Immediate medical attention needed if victim is to survive.

Adapted from: Technical Advisory Committee on Public Health and the Oil and Gas Industry, Environmental Public Health Manual for Oil and Gas Activities in Alberta, 2007

Source: Alberta Health Services, Environmental Public Health http://www.albertahealthservices.ca/assets/wf/eph/wf-eh-alberta-health-acute-exposure-health-effects-of-hydrogen-sulphide-and-sulphur-dioxide.pdf



Appendix C: Toxic Gases, continued Sulphur Dioxide (SO₂)

Background

Sulphur Dioxide (SO₂) belongs to the family of sulphur oxide gases (SO₂). Sulphur is prevalent in raw materials including crude oil and coal, as well as in ore that contains common metals. Sulphur oxide gases form when fuels containing sulphur are burned and when gas is processed or metals are extracted from ore. Like other sulphur oxide gases, SO₂ dissolves in water or water vapour to form acid, and interacts with other gases and particles in the air to form sulphates and other products.

Sulphur dioxide is a colourless gas that is about 2.5 heavier than air. It has a sweet pungent odour, and can be detected by taste and smell at concentrations as low as 300 parts per billion (ppb). Acids that are formed when SO₂ (and nitrogen oxides) react with other substances in the air may be carried great distances before falling to earth as rain, fog, snow or dry particles. Acid rain damages forests and crops, changes the chemical make-up of soils, and increases the acidity of lakes and streams. Continued long-term exposure will affect the natural variety of plants and animals in an ecosystem. As well as contributing to smog, SO₂ emissions cause aesthetic damage and accelerate the decay of building materials and paints.

General guidelines dictate evacuation where SO₂ concentrations reach 5 ppm averaged over a 15 minute period. However, as a precaution, evacuation will be established under the criteria when the SO₂ level reaches 1 ppm for two to three hours, or averages 0.3 ppm over twenty-four hours.

Signs and Symptoms

Sulphur dioxide causes a wide variety of health and environmental impacts because of the way it reacts with other substances in the air. Acute and chronic exposure to SO_2 affects the respiratory system. Acute exposure effects, with increasing exposure, include irritation of the eye, nose and throat, choking, coughing, bronchitis and pneumonia. Exposure to low concentrations can aggravate chronic pulmonary diseases, such as asthma and emphysema. Co-exposure to cold or dry air may further exacerbate the respiratory effects of SO_2 on sensitive asthmatics. Particularly sensitive groups include children, the elderly and those with existing heart or lung disease.

Sulphur Dioxide Toxicity Table (BC Regulations)

Concentration (ppm)	Effects
0.13	24 hour level (MWLAP Level B Criteria).
0.34	One hour average evacuation level (MWLAP Level B criteria).
2	Eight hour occupational Exposure Limit (BC WCB)
3 – 5	Odour threshold.
5	15 minute Occupational Exposure Limit (BC WCB)
8 – 12	Throat irritation, coughing, constriction in chest, tearing and smarting of the eyes.
10 – 50	5 – 15 minutes exposure produces increased irritation of eyes, nose, and throat, choking, coughing, and in some cases wheezing due to narrowing of the airways (which increases the resistance of the air flow).
150	Short-term endurance lost due to the severe eye irritation and because of the effects on the membranes of the nose, throat, and lungs.
500	Highly dangerous after exposure of 30 – 60 minutes.

Adapted from the Canada Safety Council Data Sheet "Sulphur Dioxide" No. B-4 Oil and Gas Commission November 2003.



Appendix C: Toxic Gases, continued

Acute Health Effects of Sulphur Dioxide (AB Regulations)

Concentration (ppm)	Acute Health Effects
0.1	Transient bronchoconstriction ¹ in sensitive exercising asthmatic individuals that ceases when exposure ceases. ²
0.3 – 1	Possible detection by taste or smell.
0.75	Transient lung function changes in healthy, moderately exercising, non-asthmatic individuals.
1 - 2	Lung function changes in healthy non-asthmatics. Symptoms in asthmatics would likely increase in severity. There may be a shift to clinical symptoms from changes detectable only via spirometry.
3	Easily detected odour.
6 – 12	May cause nasal and throat irritation.
10	Upper respiratory irritation, some nosebleeds.
20	Definitely irritating to the eyes; chronic respiratory symptoms develop; respiratory protection is necessary.
50 – 100	Maximum tolerable exposures for 30-60 minutes.
Greater than 100	Immediate danger to life (NIOSH recommendation).

¹ At low levels, bronchoconstriction was generally observed as changes in airway conductance detectable by spirometry rather than as clinical symptoms.

Adapted from: Technical Advisory Committee on Public Health and the Oil and Gas Industry, Environmental Public Health Manual for Oil and Gas Activities in Alberta, 2007

Source: Alberta Health Services, Environmental Public Health http://www.albertahealthservices.ca/assets/wf/eph/wf-eh-alberta-health-acute-exposure-health-effects-of-hydrogen-sulphide-and-sulphur-dioxide.pdf

² It should be noted that clinical studies on humans are generally designed to elicit a response and consequently subject study volunteers to challenging conditions such as exercising, mouth breathing, cold, dry air, etc. Real-life responses in asthmatics should be viewed as being individual-specific dependent on severity of asthma, whether the individuals are medicated or not, how cold and/or dry the air is, mouth breathing (vs. nose breathing, which can act as an effective scrubber mechanism) and exercise.



Appendix D: ERP Reference Material Acronyms

Acronym	Meaning	Acronym	Meaning
ABSA	Alberta Boilers Safety Association	INAC	Indigenous and Northern Affairs Canada
AEMA	Alberta Emergency Management Agency	LA	Local Authority
AER	Alberta Energy Regulator	LBV	Line Block Valve
AH	Alberta Health	LEL	Lower Explosive Limit
AHS	Alberta Health Services	LPG	Liquefied Petroleum Gas
AT	Alberta Transportation	MARS	Mapping and Response System
BLEVE	Boiling Liquid Expanding Vapour Explosion	MD	Municipal District
CANUTEC	Canadian Transport Emergency Centre	MEP	Municipal Emergency Plan
CAPP	Canadian Association of Petroleum Producers	MER	Ministry of Energy and Resources
CEPA	Canadian Environmental Protection Act	MOP	Maximum Operating Pressure
CERC	Corporate Emergency Response Centre	CER	Canada Energy Regulator
CISD	Critical Incident Stress Debriefing	NGL	Natural Gas Liquids
CPE	Communications and Public Engagement	NOTAM	Notice to Airmen
CSA	Canadian Standards Association	OGC	Oil & Gas Commission
DFO	Department of Fisheries and Oceans	OHS	Occupational Health and Safety
EAZ	Emergency Awareness Zone	OSCAR	Oil Spill Containment and Recovery
ECCC	Environment & Climate Change Canada	OSCP	On-Site Command Post
EMBC	Emergency Management BC	PAD	Protective Action Distance
EMO	Emergency Measures Organization	PAZ	Protective Action Zone
EOC	Emergency Operations Centre	POC	Provincial Operations Centre
EPZ	Emergency Planning Zone	PPB	Parts Per Billion
ERAC	Emergency Response Assistance Canada	PPE	Personal Protective Equipment
ERP	Emergency Response Plan	PPM	Parts Per Million
ESD	Emergency Shut Down	RCMP	Royal Canadian Mounted Police
ESDV	Emergency Shut-Down Valve	RD	Rural District
ETA	Estimated Time of Arrival	REOC	Regional Emergency Operations Centre
FH Order	Fire Hazard Order	RHA	Regional Health Authority
FNIHB	First Nations and Inuit Health Branch – Health Canada	RM	Rural Municipality
GEOC	Government Emergency Operations Centre	SABA	Supplied Air Breathing Apparatus
HPZ	Hazard Planning Zone	SCBA	Self-Contained Breathing Apparatus
HVAC	Heating Ventilation Air Conditioning	SDS	Safety Data Sheet
HVP	High Vapour Pressure	SHA	Saskatchewan Health Authority
HVPL	High Vapour Pressure Liquid	SO ₂	Sulphur Dioxide
H ₂ S	Hydrogen Sulphide	STARS	Shock Trauma Air Rescue Society
IAP	Incident Action Plan	TDG	Transportation of Dangerous Goods
ICS	Incident Command System	WCSS	Western Canadian Spill Service
IIZ	Initial Isolation Zone	WHMIS	Workplace Hazardous Materials Information System



Appendix D: ERP Reference Material, continued Glossary of Terms

Adjacent to

Within 25 m.

Air Quality Monitoring

Measurement of atmospheric concentrations of a hazardous substance, such as H₂S or SO₂.

Alberta Energy Regulator (AER)

The AER ensures the safe, efficient, orderly, and environmentally responsible development of hydrocarbon resources over their entire life cycle. This includes allocating and conserving water resources, managing public lands, and protecting the environment while providing economic benefits for Albertans.

Alert (Alberta specific)

An incident that can be handled on-site by the licensee through normal operating procedures and is deemed to be a very low risk to members of the public.

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.

Best practices

A technique or methodology that, through experience and research, has proven to reliably lead to a desired result. A commitment to using the best practices in any field is a commitment to using all the knowledge and technology at one's disposal to ensure success.

Body of water

Streams, lakes, and rivers.

Boiling Liquid Expanding Vapour Explosion (BLEVE)

Boiling Liquid Expanding Vapour Explosion, which is associated with natural gas liquids and high vapour pressure liquids.

Boiling point

This is the temperature that a liquid changes to a gas. NGL products change to a gas at extremely low temperatures and will absorb heat from the surrounding environment during the phase change. Therefore, caution must be used when working with NGLs because contact with flesh can reduce the temperature of the flesh to the NGL boiling point and cause severe frostbite.

British Columbia Oil and Gas Commission (OGC)

The OGC is the lead agency for all regulated oil and gas related activities within British Columbia.

British Columbia Emergency Management (EMBC) (British Columbia specific)

Aids local governments in analyzing hazards and risks, develop and test emergency plans, train and organize emergency staff and volunteers. EMBC also manages all agencies in the event of an emergency or disaster, which cannot be handled locally.

Businesses

Industrial operators, retail outlet operators, suppliers, residents, outfitters, foresters and other entities that normally operate within the Emergency Planning Zone, but do not necessarily reside in the Emergency Planning Zone.



Glossary of Terms, continued

Closure order (British Columbia specific)

When the OGC believes that, because of hazardous conditions in a field or at a well, it is necessary or expedient to close an area and to shut out all persons except those specifically authorized, the commission may make an order in writing setting out and delimiting the closed area. For Alberta see Fire Hazard (FH) Order.

Corporate Emergency Response Plan

This Emergency Response Plan is to facilitate a co-ordinated response by company executive and management personnel to an emergency situation, which may affect the company or its affiliated companies. The Corporate Emergency Response Plan is an integral part of all site-specific company Emergency Response Plans and procedures.

Critical Incident Stress Debriefing (CISD)

Critical Incident Stress Debriefing is a specially structured counselling process between the debriefers and those who are directly involved and/or impacted by an incident.

Critical sour well (Alberta specific)

A well with an H₂S release rate greater than 2.0 m3/s or wells with lower H₂S release rates in close proximity to an urban centre as defined in ID 97-6: Sour Well Licensing and Drilling Requirements.

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 Operations Centre (EOC)

An Emergency Operations Centre is a designated facility in a suitable location (i.e. head office, regional office, etc.) established by the permit holder to support Incident Command and to manage the larger aspects of an emergency. In a high-impact emergency, there may be a number of EOCs established to support the response. They may include the Incident Command Post, regional and corporate EOCs, a municipal EOC (MEOC), and the provincial government EOC (POC).

Emergency Awareness Zone (EAZ) (British Columbia specific)

A distance outside of the EPZ where public protection measures may be required due to poor dispersion of the hazard. This area is twice the radius of the Emergency Planning Zone (EPZ).

Emergency Planning Zone (EPZ)

The geographical area that surrounds a well, pipeline or facility containing hazardous product that requires specific emergency response planning by the licensee.

Emergency Response Plan (ERP)

A comprehensive plan to protect the public that includes criteria for assessing an emergency situation and procedures for mobilizing response personnel and agencies and establishing communication and coordination among the parties.

Emergency Support Team (EST)

Provides advice and logistical support to the Field Response Team and Incident Commander in particular. The team is comprised of head office personnel and any contract emergency experts.

EOC Director

The EOC Director activates the Corporate Emergency Operations Centre with staff to provide advice and support to the Incident Commander (Field Response Team).



Glossary of Terms, continued

EOC Director, continued

Note: If the emergency happens outside an area that has a site specific Emergency Response Plan, only then will the EOC Director assume or appoint the role of Incident Commander and dispatch a Field Response Team to the incident site.

ERCBH2S (Alberta specific)

A software program that calculate site-specific EPZs using thermodynamics, fluid dynamics, atmospheric dispersion modelling and toxicology.

Evacuation

Organized, phased, and supervised withdrawal of members of the public from dangerous or potentially dangerous areas to safe areas.

Tactical Evacuation – A measure to immediately move people to a safe area as part of emergency response and operations. Does not require approval from local authority but the local authority may enact an evacuation order, if required, and local authority must be advised if a tactical evacuation has occurred.

Planned Evacuation – An evacuation coordinated by local government authority that can authorize evacuation alerts and orders.

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 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 that is connected to or associated with the recovery, development, production, handling, processing, treatment, or disposal of hydrocarbon-based resources or any associated substance or wastes. This does not include wells or pipelines.

Field Response Team (FRT)

Company and contractor personnel directly involved in controlling the incident at the emergency site and from the EOC.

Fire Hazard (FH) Order (Alberta specific)

An order issued by the AER during an emergency to restrict public access to a specified area.

Functional Exercise

As described in CAN/CSA Z246.2-18, an activity designed to evaluate capabilities and multiple functions using simulated response. A functional exercise will simulate the deployment of resources and rapid problem solving. Participants will evaluate management of the command and coordination centres and assess the adequacy of emergency response plans and resources.

Gathering system

The network of pipelines, pumps, tanks, and other equipment that carries oil and gas to a processing plant or to other separation equipment.

Hazard

A situation with potential to harm persons, property, or the environment.



Glossary of Terms, continued

Hazard Planning Zone (HPZ) (British Columbia specific)

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. Defined in Emergency Management Regulation.

Hazardous product

A substance released in quantities that may harm persons, property, or the environment.

High Vapour Pressure Liquids (HVPLs)

HVPLs have a vapour pressure greater than 240 kPa at 38°C (34.8 PSIG @ 100°F) and include ethane, propane, butane, and pentanes plus, either as a mixture or as a single component. Note: Comparisons

Gasoline - Vapour pressure between 55 and 100 kPa at 38°C (8 - 14.5 PSIG @ 100°F).

Condensate - Often a component of a propane/butane mixture, has a vapour pressure of 59 to 72 kPa at 38°C (8.6 - 10.4 PSIG @ 100°F).

High Vapour Pressure (HVP) plume dispersion geometry

An uncontrolled release of NGL product on flat terrain will form a vapour plume as it disperses. If the vapour plume formed at the leak site has not been ignited, it will most likely reach its maximum size within the first half hour of the leak occurrence. Two unique features of an NGL plume are:

The downwind edge of the plume tends to spread out significantly forming a broad frontal edge.

Under certain conditions, the plume will travel upwind for a short distance.

High Vapour Pressure (HVP) pipeline

A pipeline system conveying hydrocarbons or hydrocarbon mixtures in the liquid or quasi-liquid state with a vapour pressure greater than 110 kilopascals absolute at 38°C. Some examples are liquid ethane, ethylene, propane, butanes, and pentanes plus.

High Vapour Pressure (HVP) products

HVP products have a vapour pressure greater than 240 kPa at 38°C (34.8 PSIG at 100°F) and include ethane, propane, butane and pentanes plus, either as a mixture or as a single component. A leak from a vessel or pipe containing HVP products can result in a BLEVE.

Hydrogen sulphide (H₂S)

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. H₂S 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 irritations. Depending on the particular gaseous mixture, gas properties, and ambient conditions, a sour gas release may be:

Heavier than air (dense), so it will tend to drop towards the ground with time,

Lighter than air (buoyant), so it will tend to rise with time, or

About the same weight as air (neutrally buoyant), so it will tend to neither rise nor drop but with time disperse.

Hydrogen sulphide (H₂S) release rate

The rate that sour gas escapes into the atmosphere is often calculated for sour gas wells. It is usually defined in cubic metres per second (m^3/s). The size of the emergency planning zone is estimated from the H₂S release rate.



Glossary of Terms, continued

Hydrogen sulphide (H₂S) release volume

The volume of sour gas that escapes into the atmosphere is often calculated for facilities that have a defined retention volume, usually defined in cubic metres. Emergency planning zone sizes are often estimated using the volume of H₂S that may be released from a facility. More sophisticated models may also incorporate the rate at which the release could occur and the nature of the gas and the atmospheric conditions when determining the emergency planning zone size.

Hyper-susceptible

A person or persons who may be abnormally reactive to a given exposure to toxins and whose reaction may occur in orders of magnitude greater than that of the susceptible population. Hypersusceptibles include those persons with impaired respiratory function, heart disease, liver disease, neurological disorders, eye disorders, severe anemia, and suppressed immunological function.

Ignition

Process of setting a hydrocarbon release on fire.

Ignition Team

Consists of at least two personnel trained in plume ignition.

Incident

An unexpected occurrence or event that requires action by emergency personnel to prevent or minimize the impacts on people, property, and the environment.

Incident classification

A system that examines the risk level to members of the public following an incident and assigns a level of emergency based on the consequence of the incident and the likelihood of the incident escalating.

Incident Command Post (ICP)

A designated place where the Incident Commander and staff is located. The ICP should be located outside of the hazard area, but close to the incident. The ICP may be a vehicle, trailer, fixed facility or any location suitable to accommodate the function.

Incident Commander

Manages the overall response to emergency incidents. The Incident Commander is responsible for: developing objectives, strategies and tactics that guide the response; assigning personnel to fill necessary positions; ensuring the safety of all personnel; keeping internal and external stakeholders updated; coordinating with other response agencies.

Incident Command System (ICS)

A standardized, on-scene, all-hazard incident management system. The Incident Command System (ICS) is flexible in that it can be adapted for large and small incidents.

Initial Isolation Zone (IIZ)

An area in close proximity to a continuous hazardous release where indoor sheltering may provide limited protection due to proximity of release.

Incident Management System

A system used to coordinate preparedness and incident management.

Isolating the release

Ensuring access to the hazard area is controlled.



Glossary of Terms, continued

Level 1 Emergency (Alberta specific)

There is no danger outside the licensee's property, there is no threat to the public, and there is minimal environmental impact. The situation can be handled entirely by licensee personnel. There will be immediate control of the hazard. There is little or no media interest.

Level 1 Emergency (British Columbia specific)

There is no immediate danger to the public or environment as no H₂S has been released; the emergency is confined to the lease or company property.

Level 2 Emergency (Alberta specific)

There is no immediate danger outside the licensee's property or the right-of-way, but there is the potential for the emergency to extend beyond the licensee's property. Outside agencies must be notified. Imminent control of the hazard is probable but there is a moderate threat to the public and/or the environment. There may be local and regional media interest in the event.

Level 2 Emergency (British Columbia specific)

There is potential risk to the public or environment, as the emergency could extend beyond company property. However, control is still possible.

Level 3 Emergency (Alberta specific)

The safety of the public is in jeopardy from a major uncontrolled hazard. There are likely significant and ongoing environmental impacts. Immediate multi agency municipal and provincial government involvement is required.

Level 3 Emergency (British Columbia specific)

An immediate danger to the public or environment exists; control of the situation has been lost.

Licensee

The responsible duty holder as specified in legislation.

Liquid to gas expansion

NGL products will expand greatly when released to the atmosphere. For example, propane expands 272 times its liquid volume. Other products expand at different rates, but all have a high gas to liquid ratio.

Liquefied Petroleum Gas (LPG)

Mixture of heavier, gaseous hydrocarbons (butane and propane), liquefied as a portable source of energy.

Local Authority

A local authority is considered to be:

- 1) The council of a city, town, village or municipal district;
- 2) in the case of an improvement district or special area, the Minister of Municipal Affairs;
- 3) for a national park, the park superintendent or the par superintendent's delegate;
- 4) the settlement council of a Métis settlement; or
- 5) the band council of a First Nations Reserve.

Local State of Emergency

See State of local emergency.

Lower Explosive Limit (LEL)

The lowest concentration of gas or vapour (per cent by volume in air) that explodes if an ignition source is present at ambient temperatures.



Glossary of Terms, continued

Manitoba Growth, Enterprise & Trade - Petroleum Branch

The Manitoba Growth, Enterprise & Trade – Petroleum Branch administers The Mines and Minerals Act and related regulations governing the exploration, development, production, transportation and storage of crude oil and natural gas.

M.D.

Municipal District

Major (full-blown) exercise

As described in CAN/CSA Z246.2-18, a multi-agency, multi-jurisdictional activity involving actual deployment of resources in a coordinated response, as if a real emergency had occurred. The full-scale exercise includes the mobilization of units, personnel, and equipment. Participants will assess plans and procedures and evaluate coordinated responses under crisis conditions.

Maximum Operating Pressure (MOP)

The maximum licensed operating pressure for a vessel or pipeline or a section of it.

Ministry of Energy and Resources (MER)

MER is the lead regulatory agency for the upstream petroleum industry in Saskatchewan.

Mobile air quality monitoring

Use of sophisticated portable equipment to track substances such as H_2S or SO_2 at very low parts per billion atmospheric concentrations.

Municipality

See local authority.

Municipal Emergency Operations Centre (MEOC)

The centre from which responsible municipal officials manage and support emergency operations within their jurisdiction, as well as formulate protective actions and provide public information. The centre has adequate workspace, maps, status boards, and communications capability.

Municipal Emergency Plan (MEP)

The emergency plan of the local authority.

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.

Physical Properties of NGL Products:

Colour - NGL products are colourless except when they include a condensate component, which gives them a light-yellow appearance. Releases during winter conditions can discolour snow. NGL products may appear as a white cloud when released to the atmosphere. This white cloud is formed by the condensing of moisture in the air.

Odour - Most NGL products have a mild petroleum odour. During pipeline transport NGL products are almost odourless.

Vapour Density - A measure of the mass per unit volume of the vapour (i.e. kg/m3). All NGL products transported by the company have a vapour density greater than air or a relative vapour density greater than 1.0.



Glossary of Terms, continued

NAV Canada

Canada's civil air navigation services provider, with operations coast to coast. NAV Canada provides air traffic control, flight information, weather briefings, aeronautical information services, airport advisory services, and electronic aids to navigation.

Notice to Airmen (NOTAM)

An order issued by Transport Canada restricting access to airspace in a defined area.

Notification

The distribution of project-specific information to participants that may be directly and adversely affected by the proposed energy development.

Odour complaint

A report that someone smells an offensive odour (may be sour gas) in the area.

Oil Spill Containment and Recovery Unit (OSCAR)

Trailer containing oil spill equipment for containment and recovery.

On-site command post (OSCP)

An emergency operations centre established in the immediate vicinity of the incident to provide immediate and direct response to the emergency and initially staffed by licensee personnel.

Partially controlled flow

A restricted flow of product at surface that cannot be shut off at the licensee's discretion with equipment onsite.

Personal consultation

Consultation through face-to-face visits or telephone conversations with all requisite individuals.

Petroleum industry

Refers to all petroleum industry operations.

Plume (gas plume)

An elongated mobile column of gas or smoke.

Protective Action Zone (PAZ)

An area downwind of a hazardous release where outdoor pollutant concentrations may result in life threatening or serious and possibly irreversible health effects on the public.

Protective Action Distance (PAD)

The distance from the incident to the EPZ outer boundary.

Provincial Operations Centre (POC)

An operations centre with the capacity to accommodate representatives from each government department.

Public

The group of people who may be or are impacted by an emergency (e.g., employees, contractors, neighbours, emergency response organizations, regulatory agencies, the media, appointed or elected officials, visitors, customers, etc., as appropriate).



Glossary of Terms, continued

Public facility (Alberta specific)

A public building, such as a hospital, rural school, or major recreational facility, situated outside of an urban centre that can accommodate more than 50 individuals and/or that requires additional transportation to be provided during an evacuation.

Public protection measures

The use of sheltering, evacuation, ignition, and isolation procedures to mitigate the impact of a hazardous release on members of the public.

Public Safety Group Supervisor

Member of the field response team. Individual charged with the responsibility of co-ordinating the evacuation or shelter of people in the emergency hazard Area. The Public Safety Group Supervisor reports to and may be located in the same location as the Incident Commander.

Publicly used development (Alberta specific)

Places where the presence of 50 individuals or less can be anticipated (e.g., places of business, cottages, campgrounds, churches, and other locations created for use by the non-resident public).

Publicly used facility (British Columbia specific)

Places where the presence of people can be anticipated. Examples include places of business, cottages, campgrounds, churches, and other locations created for use by the public. Includes any similar development the OGC may designate as a public facility.

Publicly used facility

Places where the presence of people can be anticipated. Examples include places of business, cottages, campground, churches, and other locations created for use by the public.

Reception centre

A centre established to register evacuees for emergency shelter, to assess their needs, and, if temporary shelter is not required because evacuees will stay elsewhere, to ascertain where they can be contacted.

Regional Emergency Operations Centre (REOC)

An operations centre established in a suitable location to manage the larger aspects of the emergency that is manned jointly by government and industry staff.

Residence

A dwelling that is occupied full time or part time.

Resident

Individual living in the area at a fixed location.

Resident data record

Form used to track the contact made with residents, businesses and transients.

Response zones (Alberta specific)

The Initial Isolation Zone (IIZ), Protective Action Zone (PAZ) and Emergency Planning Zone (EPZ).

Roadblock Crew

Personnel responsible for controlling access to the Emergency Hazard Area, reporting to the Public Safety Group Supervisor.



Glossary of Terms, continued

Rover

Member of the field response team. Individual responsible for assisting in the evacuation of the Hazard Area, reporting to the Public Safety Group Supervisor. May also be directed to shut-in / shut down equipment that may cause future safety hazards.

Rover Kit

A briefcase containing maps, forms, supplies and instructions needed by the Rover to carry out their duties.

S.A.B.A.

Supplied Air Breathing Apparatus.

S.C.B.A.

Self Contained Breathing Apparatus.

Serious injury

A serious injury includes the following:

- an injury that results in death;
- fracture of a major bone;
- amputation other than a portion of a finger or toe;
- loss of sight in an eye;
- · internal haemorrhage;
- third degree burns;
- unconsciousness:
- An injury that results in paralysis (permanent loss of function).

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 (H₂S).

Sour gas release

An uncontrolled release of natural gas containing hydrogen sulphide (H₂S).

Sour multiphase product (British Columbia specific)

Any liquid that contains H₂S in the gas phase.

Sour multiphase pipeline (British Columbia specific)

A pipeline that transmits a multiphase product that contains more than 10 moles of H₂S per kilomole of natural gas in the gas phase.

Sour pipeline

Pipeline that conveys gas and/or liquid that contains sour gas.

Sour production facility

Facility that processes gas and/or liquid that contains sour gas

Sour well



An oil or gas well expected to encounter during drilling formations bearing sour gas or any oil or gas well capable of producing sour gas.

Appendix D: ERP Reference Material, continued

Glossary of Terms, continued

Special needs

Those persons for whom early response actions must be taken because they require evacuation assistance, requested early notification, do not have telephones, require transportation assistance, have a language or comprehension barrier, or have specific medical needs. Special needs also include those who decline to give information during the public consultation process and any residences or businesses where contact cannot be made.

Special sour well (British Columbia specific)

A designation that reflects the proposed well's proximity to populated centers and its maximum potential H₂S release rate during the drilling state. The casing or open-hole flow configuration is used in arriving at this designation.

Standing well

A well that has been drilled and cased but not perforated. A company is generally allowed to leave the well as standing for up to one year.

State of local emergency

A declaration by a local authority providing the necessary authority, resources, and procedures at the municipal level to allow an emergency to be resolved effectively and efficiently.

Sulphur dioxide (SO₂)

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, which makes the gaseous mixture lighter than air (buoyant).

Surface development

Dwellings that are occupied full-time or part-time, publicly used development, public facilities, including campgrounds and places of business, and any other surface development where the public may gather on a regular basis. Surface development includes residences immediately adjacent to the EPZ and those from which dwellers are required to egress through the EPZ.

Susceptible

The subpopulation of persons who may be considered more sensitive to the effects of H₂S and SO₂, including the elderly, pregnant women, and the very young, particularly preschool-aged children.

Tabletop exercise

As described in CAN/ CSA Z246.2-18, an informal exercise generally used to review resource allocations and roles and responsibilities of personnel and to familiarize new personnel with emergency operations without the stress and time constraints of a major exercise.

Technically complete Emergency Response Plan (ERP)

A plan that meets all applicable requirements.

Telephoners

Telephoners place calls to residents as directed by the Public Safety Group Supervisor.

Threatening telephone call

Any communication that threatens the well-being of company personnel or property. A form is provided in the manual to capture data from or about a person who calls with a threatening message.



Transient

An individual that is temporarily in the area (e.g. camper, cross-country skier).

Appendix D: ERP Reference Material, continued

Glossary of Terms, continued

Trapper

The holder of a provincial licensed and registered trapline for the purpose of hunting and trapping fur bearing animals.

Uncontrolled flow

A release of product that cannot be shut off at the licensee's discretion.

Urban centre

A city, town, village, summer village, or hamlet with no fewer than 50 separate buildings, each of which must be an occupied dwelling, or any similar development.

Unrestricted country development

Any collection of permanent dwellings situated outside of an urban centre and having more than eight permanent dwellings per quarter section.

Urban density development

Any incorporated urban centre, unincorporated rural subdivision, or group of subdivisions with no fewer than 50 separate buildings, each of which must be an occupied dwelling.

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.

Vapour-air plume / vapour cloud

When released to atmosphere, products form a vapour-air plume that is colourless, heavier than air and has a faint gasoline odour. Depending on the product released and the atmospheric conditions, water vapour may condense to form a cloud.

Water body

Natural or manmade; contains or conveys water continuously, intermittently, or seasonally. A natural water body is any location where water flows or is present, whether the flow or the presence of water is continuous, seasonal, intermittent, or occurs only during a flood. This includes, but is not limited to, the bed and shore of a river, stream, lake, creek, lagoon, swamp, marsh, slough, muskeg, or other natural drainage, such as ephemeral draws, wetlands, riparian areas, floodplains, fens, bogs, coulees, and rills. Examples of a manmade water body include, but are not limited to, a canal, drainage ditch, reservoir, dugout or other manmade surface feature.

Well servicing

The maintenance procedures performed on a producing or injecting well after the well has been completed and operations have commenced. Well servicing activities are generally conducted to maintain or enhance well productivity or injectivity.

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.

Grande Prairie AB

(Or other nearby location, determined at time of incident)

Corporate Emergency Operations Centre (CEOC)

Calgary Head Office Suite 900, 222 - 3 Avenue SW Calgary, AB T2P 0B4

Alternate CEOC

H₂Safety Office 210, 7260 - 12 Street SE Calgary, AB T2H 2S5

KEY RESPONSE PERSONNEL

WILDBOY d-75-A/94-P-11 GAS PLANT

Erikson - Lead Operator	George Wollen	Cell: 250-925-1210
Erikson - Lead Operator	David Harrison	Cell: 250-793-3210
Erikson - Operations Manager	Wade Thesen	Cell: 403-460-7077
Lead Operator	Andrew Wright	Cell: 780-831-9449
Operations Superintendent	Jamie Thibault	Cell: 780-832-1517
HSE Coordinator	Tavis Morrison	Cell: 780-814-0958
Senior Director, Asset Integrity / HSE	Merv Wirth	Cell: 780-898-6165

For a detailed contact list, refer to the Incident Management Team Phone List yellow tab, behind the Section 2.0: Roles and Responsibilities blue tab.

OPERATIONS SUMMARY

Tidewater owns a portion of the Wildboy sales pipeline (b-33-A/94-P-10 to 01-34-120-12 W6M). The full pipeline stretches 34 km between the provinces of British Columbia and Alberta

Gas is transported through the pipeline from the Wildboy Gas Plant at d-75-A/94-P-11 to a TransCanada meter station located approximately 1.5 km east of the Alberta border at 01-34-120-12 W6M. The full pipeline is third party contract operated by Erikson National Energy Inc.

EPZ Information

The pipeline has a licensed H₂S of 0% however based on the hazards of thermal radiation there is an assigned pipeline EPZ of 195 m.

On-Site Storage

There is no on-site storage within the Wildboy field.

Closest Urban Centre

The community of Fort Nelson, BC is located approximately 146 km southwest of the pipeline EPZ and has a population of +/- 3,366.

Hydrology

There are numerous water bodies and creeks that intersect the pipeline EPZ, including Zeues Creek and various other unnamed creeks.

There are no highways that run through the pipeline EPZ.

SURFACT DEVELOPMENT INFORMATION

Surface Development Information has not been gathered for this field. In the event of an incident, assign Rovers to patrol the area.

SAFETY EQUIPMENT

Operator / Truck Safety Equipment

Erikson National Energy carries the safety equipment that is standard for its

Notification

Erikson National Energy attends to the pipeline periodically. The Wildboy Gas Plant is equipped with an alarm that result in operators being notified on a 24/7 basis and result in on-call operators responding to the pipeline

Communications

The primary methods of communications are cellular phone and two way radio.

Roadblock Kits

Erikson National Energy has roadblock kits that are standard for their company.

** Due to the remoteness of the Wildboy field, informal mutual aids have been established with many third party operators in the area and can be contacted to utilize their equipment. As well, if any of the above mentioned safety equipment is insufficient, Tidewater personnel will contact a local safety company who will be asked to provide additional equipment.*

AREA USERS / TRANSIENTS

Note: All numbers,	uniess otnerwise i	ndicated, are 24 nours.

Oil and Gas

Canadian Natural Resources Ltd. 888-878-3700 Erikson National Energy Inc. 866-363-6100 888-982-7222 TC Energy

Tidewater's ERP does not cover emergencies for other operations.

Trapper ID	Name	Numbe

Guides & Outfitters - Wildlife Management Unit (WMU) #539

Company Name	Name	Emergenc

Rights Holders

No Rights Holders have been identified within the pipeline EPZ.

Forestry Management Units (F20)
F20 - No forest management agreement has been assigned to the forest management unit within the pipeline EPZ.

EMERGENCY SERVICES

		011

RCMP BC - Northern Rockies / Fort Nelson 250-774-2777 AB - High Level 780-926-2226

Fire Departments The Northern Rockies Fire Rescue only covers the fire protection boundary located within/near the city of Fort Nelson. Fires must be handled by Tidewater, mutual aid partners or contract oilfield fire fighting services. Local fire departments will only respond to motor vehicle accidents and medical accordances unless specifically dispatched by EMBC or the Local Authority.

Ciriorgenoics unicos specifically dispatched by Elvibo of the	c Local Additionty.
Ambulance	911
BC - Air Ambulance	250-374-5937
BC - Ambulance Service (Fort Nelson)	800-461-9911
AB - High Level Ambulance - Aeromedical Emergency Serv	vice 780-926-2166

Hospitals BC - Fort Nelson General Hospital AB - High Level Northwest Health Centre 250-774-8121 780-841-3288

AD - Marining Community Fleatur Centre	700-030-3391
BC Drug & Poison Information Centre	800-567-8911
BC One-Call	800-474-6886 www.bconecall.ca

Alberta Poison & Drug Information Service	800-332-1414
Alberta One-Call	800-242-3447 www.albertaonecall.com

GOVERNMENT AGENCIES

FEDERAL AGENCIES

Canada Energy Regulator (CER) Online Reporting System	Pipeline Emergency: 819-997-7887 All other Emergencies: 403-299-2773 https://apps.cer-rec.gc.ca/ers/home/index
CANUTEC Toll-Free From Cell Phone Information	613-996-6666 888-226-8832 *666 613-992-4624
Emergency Response Assistance Ca ERP # 2-0010-110	anada (ERAC) 800-265-0212
Environment and Climate Change Ca	anada (ECCC)

BC: 604-664-9385 Department of Fisheries & Oceans (DFO) Pacific Region Office: 604-666-0384

Air Traffic Control	
NAV Canada*	866-541-4102
Transport Canada**	877-992-6853
* If flight information or a NOTAM advisory is required, contact NAV Canada. ** If a NOTAM is required for airspace closure, contact the Transport Canada A	viation Operations Centre.

AM is required for airspace closure, contact the Transport Canada Aviation Operations Centre.
BRITISH COLUMBIA

AB: 780-951-8907

On Call, 055 554 2622

BC Oil & Gas Commission (OGC)	800-663-345 Admin: 250-794-520
Emergency Management BC (EMBC) Heather MacRae, Regional Manager	800-663-345 Admin: 250-612-417
Northern Rockies Regional Municipality	250-774-254

Northern Health Authority SE DO (LIEMPO)

Maalaaaia 6aaaa

Meteorological Services

nealth Emergency Management BC (neMBC)	On Call: 855-554-3622
WorkSafe BC - Fort St. John	888-621-7233

riediti Emergency Management DC (FEMDO)	Off Call. 000-004-0022
WorkSafe BC - Fort St. John	888-621-7233
Public Works Association of BC (PWABC) Municipal Safety Association BC	778-278-3435
Transportation of Dangerous Goods	800-663-3456
BC Ministry of Transportation & Infrastructure Peace District, Fort St. John	866-707-7862 Admin: 250-787-3237
Dawson Road Maintenance	800-842-4122

BC Ministry of Environment - Peace Region EMBC: 800-663-3456

Ministry of Forests, Lands & Natural Resource Operations Forest Fire Reporting 800-663-5555 Fort Nelson District Admin: 250-774-5511 Chris Cooper, Operations Manager Office: 250-774-5510

Technical Safety BC 866-566-7233

ALBERTA

Alberta Energy Regulator (AER)	800-222-6514
Northwest Field Centre	

Wildfire Reporting 310-FIRE (3473) * One call number for regul (lands, fish, forest, wildlife). tory agency, Alberta environment, spill reporting & sustain

Mackenzie County	888-311-6323
Alberta Health Services (AHS) - Z5 North	844-755-1788
Alberta Emergency Management (AEMA) - Northwest	866-618-2362

AB Environmental & Dangerous Goods Emergencies (EDGE)	800-272-9600
Alberta Boilers Safety Association (ABSA)	780-437-9100
Alberta Safety Services - Electrical Branch Adm	nin: 866-421-6929
Alberta Ministry of Transportation	800-828-3908
Peace River District Adm	in: 780-624-6280

1 Gado Tavor Biothot	710111111111111111111111111111111111111
Alberta Occupational Health & Safety (OHS)	866-415-8690

Workers' Compensation Board (WCB) Admin: 866-922-9221

SUPPORT SERVICES

877-342-3473
250-785-9558
800-882-4967

Olifield Fire Fighting / Safety Contractors"	
Safety Boss - Fort St. John	800-882-4967
Firemaster Oilfield Services - Grande Prairie	877-342-3473

HSE Integrated - Grande Prairie 888-346-8260

Ignition Services* Safety Boss - Fort St. John 800-882-4967 HSE Integrated - Grande Prairie 888-346-8260 Firemaster Oilfield Services - Grande Prairie 877-342-3473

*Due to the remote area, Support Services response times vary (5 - 10 hours), depending on the location where the support is coming from. Dispatch at a Level 1 Emergency.

Emergency Response Management

Admin: 403-212-2332 H₂Safety Services - Calgary Toll Free: 888-216-2332

Spill Response

SWAT Consulting - Grande Prairie	866-610-7928
Clean Harbors Energy & Industrial Services - Grande Prairie	800-645-8265

Helicopter Companies

Coop Custodian:

Yellowhead Helicopters - Prince George	250-963-988
Qwest Helicopters - Fort Nelson	250-774-530
Delta Helicopters - High Level	800-665-3564
Heli-Source Ltd.	855-876-8716

WCSS - Co-op 8* 866-541-8888

Husky Energy Admin: 780-956-8052 Coop Custodian:

Equipment Location	Equipment Summary
Husky Oil Operations Yard	1 - 20' ISRU Sea Can (haul with winch
Rainbow Lake SE. AB	tractor/trailer)
10-10-9-08 W6M	1 - Drum Skimmer w/ Power Pak

(1/2 ton truck) Cell: 780-926-9797

Equipment Location Equipment Summary

Muzzy's Contracting

1072 Aspen Drive 1 - 20' ISRU Sea Can (winch tractor/trailer) Zama City, AB

WCSS - Co-op 9 866-541-8888

Regional Custodian: Clean Harbors Production Svc. Admin: 250-785-4577

Equipment Location Equipment Summary

1 - 52' OSCAR Trailer (semi-truck) Clean Harbors Surface Rentals 6715 - 85th Avenue 1 - 40' Boom Cache Sea Can Fort St. John, BC (winch tractor/trailer) 1 - 20' Wildlife Sea Can

(winch tractor/trailer) 1 - Single Engine Barge (1-ton truck w/ 2-5/16" ball hitch & electric brakes)

1 - Work Boat (1/2 ton truck w/ 2" ball hitch) 1 - Drum Skimmer w/ Power Pak

(1/2 ton truck) 1 - 400' Shallow Water Boom (1/2 ton truck)

Coop Custodian: Troyer Ventures Ltd. 24 Hr: 250-774-5332 **Equipment Location Equipment Summary**

1 - 20' ISRU Sea Can (winch truck/trailer) 4850 - 46 Avenue Fort Nelson, BC 2 - Work Boat (1/2 ton truck w/ 2" ball hitch)

*See website for more info (http://www.wcss.ab.ca

Reception Centres **Northern Rockies Recreation Centre**

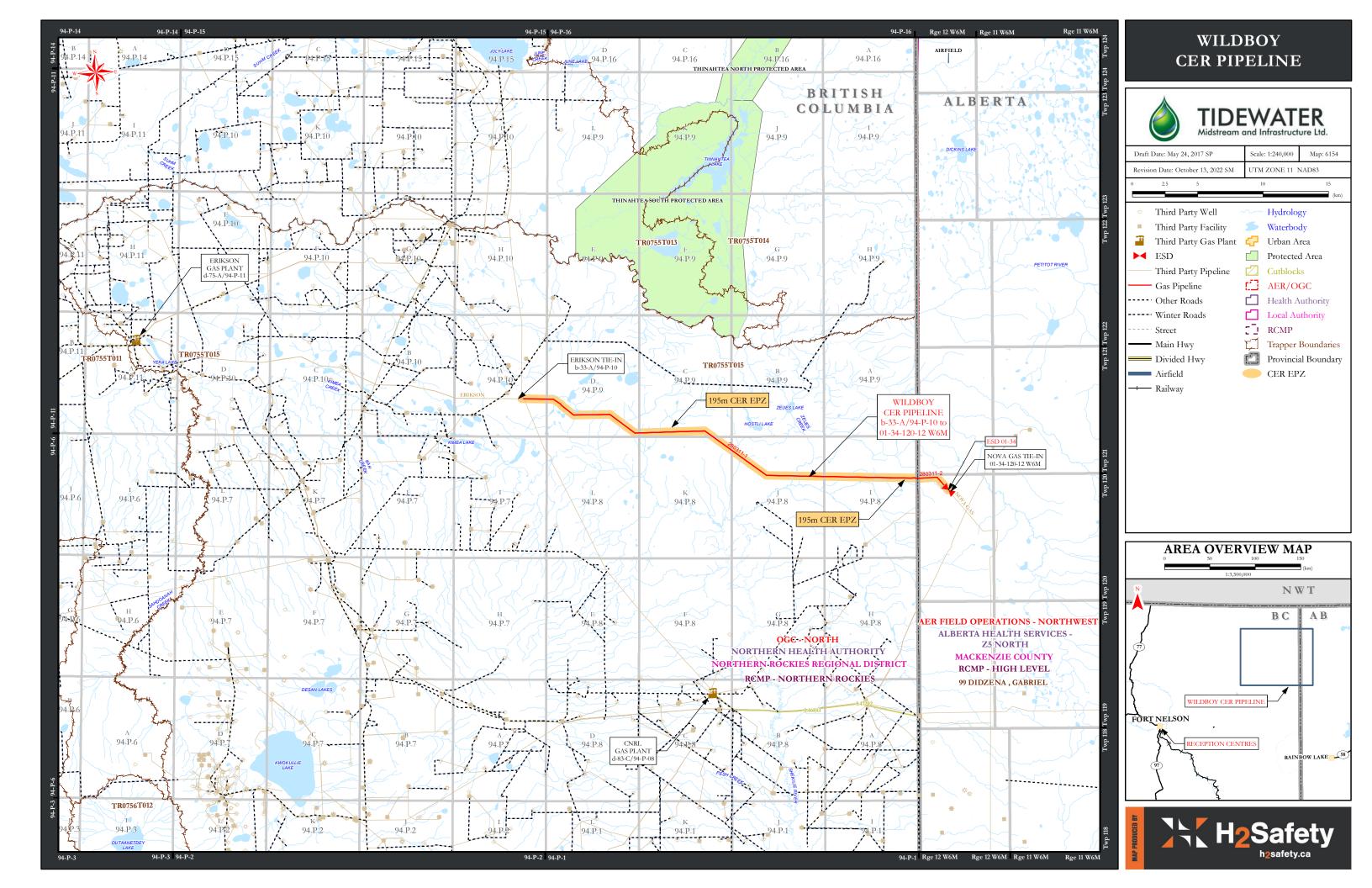
Northern Rockies Recreation Centre 5500 Alaska Highway, Fort Nelson, BC	Admin: 250-774-2541 ext: 2080
Super 8 Motel 4503 - 50th Avenue South, Fort Nelson, BC	250-233-5025
Fort Nelson Hotel 5110 - 50th Avenue North, Fort Nelson, BC	Admin: 250-774-6971
Blue Bell Inn 4203 - 50th Avenue South, Fort Nelson, BC	Admin: 250-774-6961

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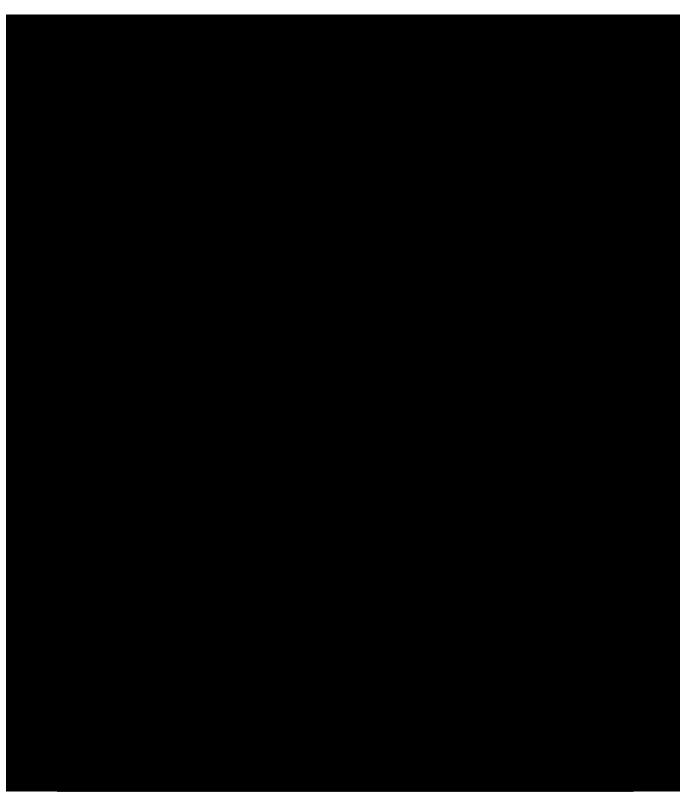






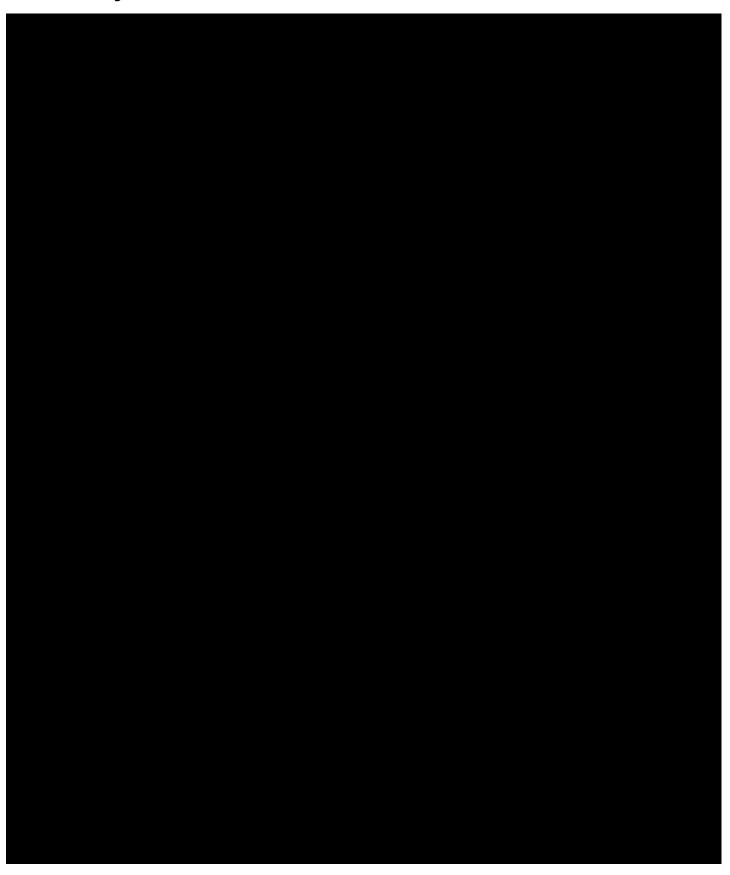


Wildboy Field Access





Wildboy Field Access



Wildboy - CER Sweet Pipeline

	LICENSEE	W ATER CROSS	FROM		то		LICENSE NO.	LINE NO.	SUB	OD (mm)	SEGMENT LENGTH (km)	W ALL (mm)	LICENSED PRESSURE (kPa)	H2S (%)	STATUS	EPZ (m)
			TIDEW AT	ER SV	WEET OPERATING - CER											
Ī	TIDEWATER MIDSTREAM & INFRASTRUCTURE LTD.	-	B-033-A/094-P-10	PL	01-34-120-12W6	MS	280311	1	NG	323.9	34.00	7.9	9,930	0	0	195

LEGEND

Facility: B=Battery BE=Blind End CS=Compressor Station DH=Dehydrator GP=Gas Plant GS=Gas Gathering System IP=Injection Plant PN=Plant LH=Line Heater

MS=Meter Station PL=Pipeline PS=Pump Station S=Satellite WE=Well HD=Header JN=Junction UG=Underground cap or tie-in WF=Well Facility

Substance: AG=Acid Gas CO=Crude Oil FW=Fresh Water HV=High Vapour Pressure LV=Low Vapour Pressure NG=Natural Gas OE=Oil Effluent SG=Sour Gas

FG=Fuel Gas ST=Sweet Gas SW=Salt Water SE=Sour Oilwell Effluent SC=Sour Crude MG=Miscellaneous Gases OM=Oil Emulsion WS=Sour Water PW=Produced Water UN=Unknown ML=Miscellaneous Liquids

Status: A=Abandoned D=Discontinued N=Not Constructed/Approved O=Operating P=To Be Constructed U=Unknown Q=Active I=Inactive S=Suspended R=Removed

T=New V=Deactivated Z=Approved J=Out of Jurisdiction

Other: WALL=Wall Thickness OD=Outside Diameter



Wildboy CER Regulated Pipelines

Emergency Contact Information

For Emergencies involving inter-provincial pipelines, the Canada Energy Regulator is the primary management agency – they will be contacted by the Transportation Safety Board.

**A pipeline is CER-regulated due to the fact that it crosses a provincial or federal border. **

This must be your first call					
Transportation Safety Board (TSB) –	24 Hr Incident Line	819-997-7887			
for pipeline incidents	Facsimile	819-953-7876			
	Email	PipelineNotifications@tsb.gc.ca			

Call the TSB 24 Hr Incident Line when an incident meets the Immediately Reportable Events (see page 2 for criteria) for all Canada Energy Regulator (CER) regulated pipelines and facilities.

Both the phone notification and the input of information into the

CER's Online Event Reporting System (OERS): https://apps.cer-rec.gc.ca/ers/home/index are required to occur as soon as possible and no later than three hours of the incident being discovered. For all other events (non-immediate) companies are only required to input the information via the OERS.

Secondary Calls						
Contact as needed AFTER contacting the TSB and CER.						
Alberta Energy Regulator (AER)	24 Hr	800-222-6514				
BC Oil & Gas Commission (OGC)	24 Hr	800-663-3456				

Hazardous occurrences (under Part XVI of the Canada Oil and Gas Occupational Safety and Health Regulations) and incidents requiring medical evacuations are to be reported to the CER immediately.



Canada Energy Regulator Régie de l'énergie du Canada



Definition of an Emergency

CAN /CSA Z246.2-18 defines an emergency as "an event or imminent event, outside of the scope of normal operations that requires prompt coordination of resources to protect people, the environment, and property".

Emergencies can result from numerous causes including pipeline and equipment failure, human error and natural perils such as tornadoes, hurricanes, floods, or earthquakes and terrorism or other criminal activities. Multi-hazard emergencies such as an earthquake causing pipeline breaks, fires and explosions, which result in injury and further property damage, can also occur.

Companies must consider all probable emergencies and have applicable procedures in place to deal with potential effects and threats to people, property and the environment, as determined through a formal hazard assessment.

CER Immediately Reportable Events (Significant Incident)

Section 52 of the Onshore Pipeline Regulations (OPR) requires companies to notify the CER of all incidents relating to the construction, operation, or abandonment of their pipelines.

A significant incident is an acute event that results in:

- death:
- missing person (as reportable pursuant to the Canada Oil and Gas Drilling and Production Regulations (DPR) under the Canada Oil and Gas Operations Act (COGOA) or the Oil and Gas Operations Act (OGOA));
- 3. a serious injury (as defined in the OPR or TSB regulations);
- 4. a fire or explosion that causes a pipeline or facility to be inoperative;
- 5. a LVP hydrocarbon release in excess of 1.5m3 that leaves company property or the right of way;
- 6. a rupture; or
- 7. a toxic plume as defined in CSA Z662.

Note: A "rupture" is an instantaneous release that immediately impairs the operation of a pipeline segment such that the pressure of the segment cannot be maintained.

Companies are required to report a death or serious injury to a person only where the death or injury is a result of an occurrence that relates to the construction, operation, or abandonment of a "pipeline". Whether a death or injury is related to the construction, operation, or abandonment of a pipeline will depend on whether the person who was killed or injured was working at the time of the incident and/or whether the work was a cause or contributing factor to the incident. It is important to note that, unlike the Canada Labour Code (CLC), the OPR does not differentiate between different types of "persons". Therefore, companies must report all deaths or serious injuries to any person that occur relating to pipeline construction, operation, or abandonment regardless of whether or not that person was directly employed by the company.

The definition of "serious injury" in the OPR is not exhaustive and contains multiple injuries that qualify as serious, including "the fracture of a major bone". The CER uses the following definition of "major bone": skull, mandible, spine, scapula, pelvis, femur, humerus, fibula, tibia, radius, and ulna.

TSB Immediately Reportable Events

Call the TSB as soon as possible after discovery of any of the following occurrences:

- An occurrence that results in;
 - o a death;
 - o a serious injury (as defined in the OPR or TSB regulations):
 - an unintended or uncontrolled LVP hydrocarbon release in excess of 1.5 m³ that leaves company property or occurs on or off the right of way;
 - o an unintended or uncontrolled sweet natural gas or HVP release >30,000 m³;



- o any unintended or uncontrolled release of sour natural gas or hydrogen sulfide;
- o a significant adverse effect on the environment (a release of any chemical or physical substance at a concentration or volume sufficient to cause an irreversible, long-term, or continuous change to the ambient environment in a manner that causes harm to human life, wildlife, or vegetation)
- a fire, ignition, or explosion that poses a threat to the safety of any person, property, or the environment.

A rupture:

o an instantaneous release that immediately impacts the operation of a pipeline segment such that the pressure of the segment cannot be maintained.

A Toxic Plume:

 a band of service fluid or other contaminant (e.g. hydrogen sulfide or smoke) resulting from an incident that causes people, including employees, to take protective measures (e.g. muster, shelter-in-place or evacuation).

Where an event meets any of the above definitions, companies are required to notify the TSB Reporting Hotline at (819) 997-7887. Subsequently, the company is required to input the details required by both the TSB (see TSB regulations) and the CER into the OERS. The phone notification and the input of information into OERS are required to occur as soon as possible and no later than three hours of the incident being discovered. The goal of the initial phone notification is to allow the relevant agencies to mobilize a response to an incident, if required. Note that OERS will automatically determine whether the event meets the definition of an "Incident that Harms People or the Environment", however the company will be responsible for specifically indicating whether the incident meets the definitions of "Rupture" and "Toxic Plume".

For all other events that do not meet any of the definitions in this section, companies are not required to phone the TSB Reporting Hotline but must report the event as soon as possible and no later than twenty-four hours after the event was discovered.

Multiple Incident Types

It is possible that a single occurrence may result in multiple incident types. If multiple incident types occur as a result of a single occurrence, companies are expected to report those incident types under a single incident report.

Examples of situations where this might be the case include but are not limited to:

- A pipeline rupture (occurrence) where there is a release of gas (incident type) and an explosion (incident type);
- An industrial accident (occurrence) that causes a death (incident type), a serious injury (incident type) and a fire (incident type);
- An operational malfunction (occurrence) that causes an overpressure (incident type) and a release of product (incident type); or
- An operational malfunction (occurrence) that causes several concurrent or immediately consecutive overpressures (incident types).

In cases where an incident has occurred, and a second incident occurs during the response to the initial incident (e.g. a fire occurs during the clean-up of a spill), the second incident is considered distinct and should be reported separately.

The events that are reportable using the online reporting system are:

- incidents under the OPR, PPR, and DPR/Oil and Gas Drilling Regulations;
- emergency burning or flaring under the PPR;
- hazard identification under the PPR;
- suspension of operations under the PPR;
- near-misses under the DPR;



- serious accidents or incidents under the Canada Oil and Gas Geophysical Operations Regulations/Oil and Gas Geophysical Operations Regulations;
- emergencies or accidents under the Canada Oil and Gas Installation Regulations/Oil and Gas Installation Regulations; and
- accidents, illnesses, and incidents under the Canada Oil and Gas Diving Regulations/Oil and Gas Diving Regulations.

In the event that OERS is unavailable, companies are directed to report events to the TSB Reporting Hotline at 819-997-7887.

Reporting Timelines

Section 52 of the OPR requires companies to immediately notify the CER of any incident. Section 52 of the OPR also requires the submission of a Preliminary Incident Report (PIR) and a Detailed Incident Report (DIR) "as soon as is practicable". Generally, companies' initial notification of an incident will satisfy the PIR requirements. The information required for a DIR must be submitted within 12 weeks of reporting an incident. For complex incidents, companies may request an extension for submission of a DIR.

The CER and the TSB have adopted a single window reporting approach. However, in some areas, the TSB reporting requirements are somewhat different than the CER requirements. For additional details on the TSB reporting requirements, companies should refer to the TSB website (http://www.bst-tsb.gc.ca/eng/incidents-occurrence/index.asp).

Transportation Safety Board of Canada Place du centre, 4th Floor 200 Promenade du Portage Hull, Quebec K1A 1K8 Facsimile 819-953-7876

Supporting Information

The table below indicates the location of CER supporting documentation in this emergency response plan.

Supporting Information	Found in
CER Distribution	Foreword: Distribution List Page 3
Company 24/7 Emergency Number	Binder Cover, Title Page and Area Specific Information
Area Map of CER Regulated Facilities	Area Specific Information
TSB Roles & Responsibilities	Section 5: External Agencies Federal Roles Chart
CER Roles & Responsibilities Section 5: External Agencies Federal Roles Chart	
Safety data sheets (SDS)	Area Specific Information
Health and Safety Plan	Please refer to the company's Health & Safety Plan located at the corporate head office.



Emergency Preparedness & Response Policy

Emergency Management Expectations

An effective emergency management program includes being prepared for emergencies, responding in the event of an emergency and ensuring that operations are able to continue safely and can recover in a timely, efficient manner.

Emergency management is critical to ensuring that people, the environment, the public, the organization's assets and reputation are protected in the event of an unanticipated hazard event, be it natural, technological or human-induced.

Emergency Management Preparedness

Emergency preparedness is a continuous process of all-hazards planning and coordination in order to effectively minimize the adverse effects and consequences inherent in any emergency incident. Through the use of such tools as exercises, proactive resource management and capability analysis, preparedness is one of the key pillars with which to ensure the adaptation of comprehensive approaches for the company's emergency management strategy. The emergency management process must include the following:

- Hazard Risk and Vulnerability Assessment
- Public Involvement
- Communications Planning
- Situational Awareness
- Crisis Management Plans
- Emergency Response Plans
- Emergency Management Resources
- Competence, Training and Awareness
- Exercises and Drills
- Record Keeping
- Distributions Lists (Internal and External)
- Continuous Improvement

Emergency Response Plans should contain:

- Communication procedures
- Emergency contacts
- Evacuation and Rescue plans
- Equipment locations and supply companies
- Spill response and containment (where required)
- Meet regulatory requirements
- Event classification
- Activation and Stand Down Levels
- Guidelines for medical emergencies
- Defined roles and responsibilities
- Maps and Emergency Planning Zones
- Mutual Aid Understandings (where applicable)

Confidential ERPs will be available at the field Incident Command Post and the Corporate Emergency Response Centre.



Extended Emergencies

In an extended emergency, company responders will develop an Incident Action Plan utilizing forms found within ERP, which may include:

- ICS Form 201 Incident Briefing
- ICS Form 202 Incident Objectives
- Form A1 Initial Emergency Report
- Form A4 Incident Action Plan (IAP) Checklist

Emergency Response, Continuity and Recovery

In the event of an emergency, each business unit shall determine the level of emergency as per established protocols and respond according to their respective emergency response plans. Response includes the mobilization and ongoing management of resources, people, equipment and assets to manage the effects of an incident; functions inclusive of the Incident Command System (ICS), the company's primary response platform.

Each business unit shall establish, implement and maintain procedures for communicating information related to emergency management, including:

- Communication of plans and procedures to employees, operating partners, contractors, the supply chain, regulators and local communities; and
- Emergency and crisis communications to stakeholders, including emergency responders, regulators, the media, family members and the public.

Emergency Management Monitoring, Assessment and Continuous Improvement

Lessons learned and knowledge generated from monitoring results should be used to develop "improved practices", which are then shared widely. After emergencies or disasters occur, a systematic approach is used to learn lessons from the experience, increase effectiveness and improve emergency management practices and processes.

Manual Updating Procedures and Schedule

The company's Corporate and Site-Specific ERPs are to be updated annually and submitted to the CER on or before April 1st of each year, or when significant changes (either operational or identified from exercises/incidents and resulting debriefs) occur or are identified. If an update occurs outside of the January 1st to April 1st period, a letter must be submitted to the CER indicating that there have been no changes to operations since the ERP was last submitted. ERP updates are performed by a third-party company (H2Safety), whose expertise in the field provides company personnel with the education, training, and resources to excel in Emergency Response. Approvals for ERP updates will be carried out by the company's Emergency Management Coordinator.



Debriefing

Internal Debriefing

The Incident Commander, in consultation with the Lead Agency and/or other regulatory body, will order "Return to Normal" status.

- All response team members and on-site personnel, including contract personnel and emergency services, will be notified.
- All previous contacts including public, workers, landowners, government and industrial operators must also be notified of the end of the emergency.
- Ensure a media statement is prepared and delivered by Senior Management.
- Debriefing meeting(s) with company personnel (including insurance, legal, and human resources as appropriate) must be conducted.
- Debriefing meeting(s) to review effectiveness of the Emergency Response Plan must be conducted.
 Feedback and comments as a result of the debrief must be incorporated into the ERP revision and procedures. This feedback should be submitted to the ERP provider.
- Debriefing meeting(s) with residents, landowners, Lead Agency and other government agencies and all other impacted parties may be conducted.
- Document all "Return to Normal" activities.
- Complete response debriefing for all response teams. Submit, in writing, response findings and recommendations to the Incident Commander when applicable, which will be submitted to the overall report writer.

Public Debriefing

When the public has been impacted, company operations should provide the public information as soon after the emergency as possible, to answer any questions or concerns. This should be done by a senior company representative, a trained Media Advisor, or by the Incident Commander.

After an emergency, a number of additional items should be considered:

- Debriefings, as mentioned above.
- Crisis management for company personnel and for other members of the public that may have been significantly affected by the emergency.
- If the emergency is of a level where it has impacted the public, an information center may be established
 within the community where the emergency occurred to answer any questions posed by the public.
- Establish a means of compensating citizens who may have had out-of-pocket expenses (such as meals and lodging costs) as a result of the emergency.
- Through the media, provide details of the investigation into the incident that are pertinent to the public, as it becomes available.

Health and Safety Plan

The company's extensive Health and Safety program is to be implemented at all times during and after an incident. Training is provided to all company employees and contractors; all information and documentation can be found in the Health and Safety Manual.

Site Specific Control Points and Response

In the event of an incident (reported from an external source and/or confirmed by a drop in pressure), an operator would be sent out to visually confirm the need to shut down operations. Tidewater operators have the ability to manually trip the ESDs at the risers on the CER line. The operator would then immediately contact his/her supervisor and the TSB, and then work with internal support and outside agencies to determine a plan of action for resolving the source of the release.



Hazard Assessment



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1.0 Introduction

The objective of the hazard assessment process is to identify, assess, and quantify the consequential emergency events which may result from Tidewater Midstream's specific oil and gas activities. This is achieved by identifying all relevant oil and gas substances currently under process / storage containment within a defined area. From that, the realistic worst-case scenario resulting from an incident which could directly or indirectly impact public safety has been determined.

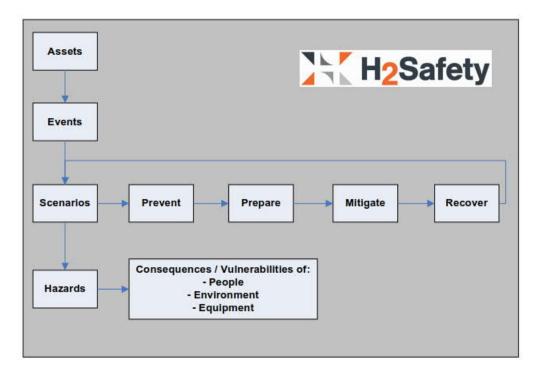
Utilizing best practices in the field of emergency management and with consideration of CSA Z246.2-18 Emergency Preparedness and Response for Petroleum and Natural Gas Industry Systems, this hazard assessment process will permit Tidewater Midstream to deliver an effective and timely response protocol for each identified consequential emergency event in order to protect the public, the environment and assets.

This document also intends to meet the following regulations:

- BC Oil & Gas Commission Emergency Management Manual; August 2018; Version 2.1
- Canada Energy Regulator Onshore Pipeline Regulations SOR/99-294
- Canadian Environmental Protection Act, 1999

2.0 Hazard Risk Vulnerability Assessment (HRVA)

The first step in our hazard assessment is to complete a Hazard Risk Vulnerability Assessment (HRVA) for the area which includes the following steps:



Assets – a complete list of assets in a geographical area.

Events – these are triggers that start an emergency. These can be natural (earthquake, flood) or manmade (human error, equipment failure).

Scenarios – the event then triggers an emergency scenario to occur. We then review these scenarios to look at Prevention, Preparation, Mitigation, and Recovery.

Hazards – the various scenarios then create a hazard that can affect people, the environment, or property.

2.1 Scenarios

Included below is a list of most probable scenarios that could occur at an oil and gas location. This would include wellsite's, pipelines, pipeline risers, or at a facility. Scenarios are then reviewed from the following perspectives:

- Preventative steps taken to reduce the occurrence of a scenario happening
- Preparation ensuring preparedness if a scenario occurs
- Response steps taken to reduce impacts if a scenario does occur
- Recovery actions taken after the scenario has been resolved

Emergency Scenario	Preventative Measures	Preparation Measures	Response Actions	Recovery Actions
Fire	 Engineering Controls Administrative Controls Training / exercises Grounding procedures for vessels and trucks 	Emergency response plan preparation, training, and exercising	See ERP for Response Actions	- Repair / Replace damaged equipment
Container Rupture	 Engineering Controls Administrative Controls Training / exercises Preventative maintenance procedures Operator present daily Pressure Safety Valve (PSV) PSV serviced regularly Secondary containment Berms 	Emergency response plan preparation, training, and exercising	See ERP for Response Actions	 Incident investigation Recover Product Environmental and/or wildlife cleanup and rehabilitation
Loading / unloading incident	 Engineering Controls Administrative Controls Training / exercises Operator present daily Secondary containment Berms Truck loading / unloading procedures Positive grounding procedures Driver competency check 	Emergency response plan preparation, training, and exercising	See ERP for Response Actions	 Incident investigation Environmental and/or wildlife cleanup and rehabilitation
Physical Container Damage	 Engineering Controls Administrative Controls Training / exercises Operator present daily Restricted areas Physical barriers Tank farm design Signage Check Valves Secondary containment 	Emergency response plan preparation, training, and exercising	See ERP for Response Actions	 Incident investigation Recover Product Repair / Replace equipment

Emergency Scenario	Preventative Measures	Preparation Measures	Response Actions	Recovery Actions
Container Degradation	 Engineering Controls Administrative Controls Training / exercises Operator present daily External inspections Vessel coating Asset integrity program 	Emergency response plan preparation, training, and exercising	See ERP for Response Actions	 Incident investigation Recover Product Repair / Replace equipment
Environmental Impacts (freezing, excess heat, etc)	 Engineering Controls Administrative Controls Training / exercises Preventative maintenance procedures Operator present daily Pressure Safety Valve (PSV) PSV serviced regularly Secondary containment Berms 	Emergency response plan preparation, training, and exercising	See ERP for Response Actions	 Incident investigation Recover Product Environmental and/or wildlife cleanup and rehabilitation
Pipe System Failure	 Engineering Controls Administrative Controls Training / exercises Preventative maintenance procedures Operator present daily Equipment and lines clearly identified Check Valves Manual Block Valves Automatic or remote Emergency Shutdown Valve (ESD) Asset Integrity program Technical Safety BC compliance 	Emergency response plan preparation, training, and exercising	See ERP for Response Actions	 Incident investigation Recover Product Environmental and/or wildlife cleanup and rehabilitation

2.2 Hazards

Based on typical oil and gas products and the scenarios above, we can typically classify hazards into the following categories:

- Physical Hazard: Flammable, Combustible, or Oxidizing Substances
- Physical Hazard: Potential for Pool Fires
- Human Health Hazard: Inhalation Toxicity
- Human Health Hazard: Carcinogenicity
- Human and Environmental Health Hazard: Corrosive Substances
- Environmental Health Hazard: Persistent, Bioaccumulative, or Aquatically Toxic

These hazards have the potential to result in the following consequences:

Impacted	Potential Consequences
Company Employees	 Fatality Permanent Disability Lost time Injury Illness Medical Aid Low to no potential consequences
Other Workers in the Area	 Fatality Permanent Disability Lost time Injury Illness Medical Aid Low to no potential consequences Evacuation / restricted access / road closures
General Public	 Fatality Permanent Disability Lost time Injury Illness Medical Aid Low to no potential consequences Evacuation / restricted access / road closures
Environment	 Release into atmosphere / plume Release of flammable gas / liquid Release of corrosive liquid Liquid spill on land and negative impacts to plant life Liquid spill into water body and negative impacts to water and plant life Negative impacts to wildlife (illness, injury, disability, or fatality)
Equipment	Equipment failure / damageComplete loss of equipmentLost revenues

3.0 Hazard Planning Zones

The purpose of the Hazard Assessment is to determine zones for emergency planning purposes. Hence, actual response zones may be smaller or larger than the planning zones based on real world air monitoring, terrain impacts, weather, etc.

The Hazard Assessment considers hazards from primary sources only. Cascading events (one BLEVE event leading to another) and chemical reactions are not considered in the Hazard Planning Zone (HPZ) calculations.

To quantify the hazards described above, we must determine how an HPZ is defined. This is typically done by determining what endpoint is used in the modeling. Modeling endpoints are often based on a Level of Concern (LOC) which is a threshold that relates a modeling endpoint to a human health effect.

Hazard	Endpoint	Units	Health Effects		
Thermal Radiation	5.00	kW/m ²	2 nd degree burns within 60 seconds		
Overpressure	3.50	Psi	Serious injury likely		
Toxic Effects	Dependent on substance released				

- Thermal radiation high temperatures associated with the burning of gas can cause significant burns or even death to individuals that are too close to the heat source.
- Overpressure is the pressure above atmospheric pressure that is caused by the shock wave created from an explosion. Overpressure can result in structural damage leading to public harm or directly by damaging hollow organ systems such as auditory, respiratory, and gastrointestinal systems.
- Toxic Effects Various substances will have different effects

Thermal Radiation and Overpressure LOC's are from ALOHA; which is an air hazard modeling program developed jointly by NOAA and the Environmental Protection Agency (EPA). Toxic Effect HPZ's are determined utilizing numerous methods and LOC's depending on the substance, but are generally completed using one of the following:

- BC Oil & Gas Commission Emergency Management Manual; August 2018; Version 2.1
- Alberta Energy Regulator (AER) ERCBH2S Dispersion Model
- Transport Canada 2016 Emergency Response Guidebook
- ALOHA Dispersion Model

3.1 Deactivated Pipelines

In accordance with the BCOGC Oil and Gas Activities act – Pipeline Regulation, all pipelines being re-licensed to Deactivated status must be deactivated in accordance with CSA Z662. CSA Z662 states under section 10.15.1.1 Deactivation of piping:

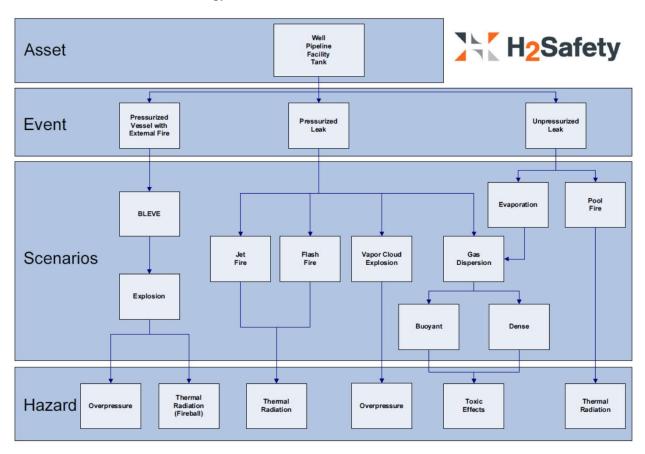
Operating companies deactivating piping shall

- a) Isolate the piping, using blind flanges, weld caps, or blanking plates suitable for the pressure from which the deactivated piping is being isolated;
- b) Where required, provide a pressure-relief system; and
- c) Fill the piping with a suitable medium, having regard for the intended duration of the deactivation, the effects of the medium on the integrity of the piping, and the potential consequences of a leak.

As a corrosion inhibitor may be utilized in deactivated pipelines, a hazard planning zone (HPZ) of 10 meters has been assigned to all deactivated pipelines to represent the pipeline right-of-way.

4.0 Methodology

Included below is the methodology used to determine HPZ's.



5.0 Asset Tables

For asset tables, refer to the back of the applicable supplement area (white tabs). Each set of asset tables will include their associated Hazard Planning Zones (HPZ's).

6.0 Health Effects

Included below is a list of most probable health effects that could occur at an oil and gas location.

Hazardous Product	General Description	Health Effects			
Natural Gas	 Extremely flammable. Will be easily ignited by heat, sparks or flames. Will form explosive mixtures with air. Vapours from liquefied gas are initially heavier than air and spread along ground. 	 Hydrogen sulphide gas and hydrocarbon vapours may: Cause irritation of eyes, nose and throat, dizziness and drowsiness. At higher concentrations, sever irrigation of eyes, nose, throat and lungs may occur. Unconsciousness and respiratory failure may happen without warning. Death may result if not promptly revived. Contact with skin may cause irritation and possibly dermatitis. Hydrocarbons are absorbed through intact skin. Contact of liquid with eyes may cause sever irritation. 			
Carbon Dioxide	 Vapours from liquefied gas are initially heavier than air and spread along ground. 	 Vapours may cause dizziness or asphyxiation without warning. Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite. 			
Hydrogen Sulphide	 Flammable - explosive when mixed with air – forms SO₂ 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. 	 Initial odour of H₂S detected at about 0.1 ppm. Gas/vapour may cause irritation of eyes, nose and throat, dizziness and drowsiness. H₂S may cause a loss of sense of smell at 100 ppm. At higher concentrations, severe irritation of eyes, nose, throat and lungs, dizziness. Headache, nausea, unconsciousness and respiratory failure may occur. Death may result if not revived promptly. Contact with skin may cause irritation and possibly dermatitis. Absorbed through intact skin. Contact of liquid with eyes may cause severe irritation and possible damage. 			

Hazardous Product	General Description	Health Effects			
Oil or Condensate	 Colourless/straw coloured liquid, hydrocarbon and rotten eggs odour. Material will ignite at normal temperatures. 	 Gas/vapour may cause irritation of eyes, nose and throat, dizziness and drowsiness. H₂S may cause a loss of sense of smell at 100 ppm. At higher concentrations, severe irritation of eyes, nose, throat and lungs, dizziness. Headache, nausea, unconsciousness and respiratory failure may occur. Death may result if not revived promptly. Contact with skin may cause irritation and possibly dermatitis. Absorbed through intact skin. Contact of liquid with eyes may cause severe irritation and possible damage. 			
Nitrogen	- Containers may explode when heated. Ruptured cylinders may rocket.	 Vapours may cause dizziness or asphyxiation without warning. Vapours from liquefied gas are initially heavier than air and spread along ground. 			
Compressed Air	- High pressure air	- Possible burns, abrasions and skin irritation.			
Steam	- High pressure, high temperature air/water	- Possible burns and skin irritation.			
Emissions	- Carbon monoxide	 Very toxic. Can harm the blood (decreased ability to carry oxygen). Symptoms may include headache, nausea, dizziness, drowsiness and confusion May cause permanent damage to organs including the brain and heart. Symptoms of mild frostbite include numbness, prickling and itching. Symptoms of more severe frostbite include a burning sensation and stiffness. The skin may become waxy white or yellow. Blistering, tissue death and infection may develop in severe cases. 			
	- Sulphur Dioxide	 Very toxic if inhaled. Causes severe skin burns and eye damage Corrosive to the respiratory tract. 			

Hazardous Product	General Description	Health Effects
Produced Water	Clear to dirty grey liquid.Flammable liquid and vapour.	 Can be fatal if inhaled. Causes serious eye irritation. May cause skin irritation. May cause gastrointestinal irritation.
Diesel	Bright, oily liquid; clear to yellow in colour with mild petroleum-like odour.Flammable liquid and vapour.	 May be fatal if swallowed and enters airways. Causes skin irritation. Harmful if inhaled. May cause damage to organs through prolonged or repeated exposure.
Gasoline	 Clear to slightly yellow or green liquid with Gasoline odour. Extremely flammable liquid and vapour. 	 May be fatal if swallowed and enters airways. Causes skin irritation. May cause drowsiness or dizziness. May cause cancer. May cause damage to organs through prolonged or repeated exposure.
Lube Oil	- Yellow liquid with petroleum oil like odour.	 May cause skin and eye irritation. Repeated or long term exposure may cause dizziness or drowsiness.
Propane	 Colourless, liquefied gas. Extremely flammable and may explode when heated. Will be easily ignited by heat, sparks or flames. Will form explosive mixtures with air. Vapours from liquefied gas are initially heavier than air and spread along ground. 	 May displace oxygen and cause rapid suffocation. May cause respiratory irritation. Contact with rapidly expanding or liquefied gas may cause irritation and/or frostbite. May cause eye and skin irritation.
Corrosion Inhibitor	 Black liquid. Highly flammable liquid and vapour. 	 Harmful if swallowed or in contact with skin. Causes skin irritation. Causes serious eye damage. Toxic if inhaled. May cause drowsiness or dizziness. May cause kidney damage through prolonged or repeated exposure.

Hazardous Product	General Description	Health Effects			
Scale Inhibitor	Colourless liquid.Flammable liquid and vapour.	 Harmful if swallowed. May cause damage to eyes. May cause damage to kidneys through prolonged or repeated exposure. 			
Paraffin Inhibitor	 Clear liquid. Hydrocarbon-like odour. Flammable liquid and vapour. 	 Harmful in contact with skin and can cause skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness. May cause cancer or genetic defects. May cause damage to nervous system through prolonged or repeated exposure. May be fatal if swallowed and enters airways. 			
Biocide	Colourless liquid.Pungent odour.Flammable liquid and vapour.	 Causes serious eye damage. Causes severe skin burns. May cause allergic skin reaction. Harmful if swallowed. Causes digestive tract burns. May cause allergic respiratory tract irritation. Toxic if inhaled. 			
Demulsifier / Emulsion Breaker	 Clear amber liquid. Highly flammable liquid and vapour. Hydrocarbon-like odour. 	 Harmful if swallowed. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness. May cause genetic defects. 			
Ethylene Glycol	- Clear, colourless, viscous liquid.	 May cause eye irritation. May be harmful if inhaled. Causes respiratory tract irritation. May be harmful if absorbed through skin. Causes skin irritation. May be harmful if swallowed. 			

Hazardous Product	General Description	Health Effects
Natural Gas Liquids (NGL)	 Colourless, liquefied gas. Extremely flammable and may explode when heated. Will be easily ignited by heat, sparks or flames. Will form explosive mixtures with air. Vapours from liquefied gas are initially heavier than air and spread along ground. 	 May displace oxygen and cause rapid suffocation. May cause respiratory irritation. Contact with rapidly expanding or liquefied gas may cause irritation and/or frostbite. May cause eye and skin irritation.
Liquefied Petroleum Gas (LPG)	 Colourless, liquefied gas. Extremely flammable and may explode when heated. Will be easily ignited by heat, sparks or flames. Will form explosive mixtures with air. Vapours from liquefied gas are initially heavier than air and spread along ground. 	 May displace oxygen and cause rapid suffocation. May cause respiratory irritation. Contact with rapidly expanding or liquefied gas may cause irritation and/or frostbite. May cause eye and skin irritation.
Methanol	Clear, colourless liquid.Alcohol-like odour.Highly flammable in liquid and vapour.	 Toxic if swallowed. Toxic in contact with skin. Toxic if inhaled. Causes damage to organs.
Jet Fuel (Jet B or Avgas)	 Clear to straw-coloured liquid. Highly flammable liquid and vapour. Gasoline-like odour. 	 May be fatal if swallowed and enters airways. Causes skin irritation. May cause drowsiness or dizziness. May cause cancer. May cause damage to organs through prolonged or repeated exposure.
Amine (MEA)	Clear, colourless liquid.Amine-like odour.Combustible at high temperatures.	 Harmful if swallowed, in contact with skin or inhaled. Causes severe skin burns and eye damage. May cause respiratory irritation. May cause damage to organs through prolonged or repeated exposure if swallowed.

Hazardous Product	General Description	Health Effects		
H2S Scavenger	- Clear liquid. - Soluble in Water.	 Irritating to eyes and skin. Irritating to respiratory system. May cause severe irritation burns. May cause allergic skin reaction. May be harmful if swallowed. 		
Other	- At facilities, well-sites, risers, etc., other hazardous materials are likely to be present. Refer to SDS sheets and Transportation Canada Emergency Guidebook for a description and health effects of unlisted hazardous products.			



Natural Gas (pipeline quality)

SECTION 1. IDENTIFICATION

Product Identifier Natural Gas (pipeline quality)

Recommended Use

Manufacturer Tidewater Midstream and Infrastructure Ltd., 900, 222-3rd Avenue SW, Calgary, AB T2P 0B4

Tidewater Midstream and Infrastructure Ltd.,

Emergency Phone No. 1-866-544-9875, 24 Hours

Date of Preparation December 02, 2015

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable gas - Category 1; Gas under pressure - Compressed gas; Aspiration hazard - Category 1 GHS Label Elements







H220 Extremely flammable gas.

H280 Contains gas under pressure; may explode if heated.

H303 + H313 + H333 May be harmful if swallowed, in contact with skin or if inhaled.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat, sparks, open flames, and hot surfaces. – No smoking.

P260 Do not breathe gas.

P282 Wear cold insulating gloves/face shield/eye protection.

P304 + P341 IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	%	Other Identifiers
Natural gas	8006-14-2	100	

Notes

May contain small amounts of benzene, carbon dioxide, nitrogen, and other inert gases. May contain Petroleum Distillates (sweet condensate), please refer to that SDS for further information.

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. For those providing assistance, avoid exposure to yourself or others. If not breathing, if breathing is irregular, or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical advice/attention if you feel unwell or are concerned.

Skin Contact

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Contact with rapidly expanding gas may cause burns or frostbite. Immediately wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 15-20 minutes. Remove contaminated clothing. Launder contaminated clothing before reuse. If skin irritation or rash occurs, get medical advice/attention. Eve Contact

Check for and remove any contact lenses. Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice/attention. Ingestion

Not applicable (gas).

First-aid Comments

If fumes are suspected to be present, the rescuer should were an appropriate mask or self contained breathing apparatus (SCBA). No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wear gloves when washing contaminated clothing. Contact poison treatment specialist if large quantities have been inhaled. If exposed or concerned, get medical advice/attention.

Most Important Symptoms and Effects, Acute and Delayed

If inhaled: symptoms may include coughing, shortness of breath, difficult breathing and tightness in the chest. Aspiration hazard.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Water fog, foam, carbon dioxide, and dry chemical.

Specific Hazards Arising from the Chemical

Oxides of sulfur. Oxides of carbon. Sulfur compounds. Vapours may form explosive mixtures with air.

Special Protective Equipment and Precautions for Fire-fighters

Stop leak before attempting to put out the fire. Product could form an explosive mixture and reignite. Before entry, especially into confined areas, use an appropriate monitor to check for: flammable or explosive atmosphere, sufficient oxygen. Fire-fighters should use standard protective equipment and in enclosed spaces, Self-Contained Breathing Apparatus (SCBA) operating in positive pressure mode.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Immediately contact emergency personnel. No action shall be taken involving any personal risk or without suitable training. Evacuate area immediately. Isolate the hazard area. Keep untrained and unprotected personnel out of spill area. Avoid contact with material. Do not breathe vapour. Increase ventilation to the affected space. Before entry, especially into confined areas, check atmosphere with an appropriate monitor. Use personal protective equipment as recommended in Section 8. Review Section 2 for Hazard Identification. Review Section 4 for First Aid advice.

Environmental Precautions

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk. It is good practice to prevent releases into the environment. Inform the relevant authorities if the product has caused environmental pollution.

Methods and Materials for Containment and Cleaning Up

Immediately contact emergency personnel. Stop leak if you can do so without risk. Use spark-proof and explosion-proof equipment. Review Section 13 for disposal instructions.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Avoid breathing in this product. Do not get in eyes, on skin or on clothing. Put on appropriate personal protective equipment, see Section 8. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored, and processed. Remove contaminated clothing and protective equipment before entering eating areas. Only use where there is adequate ventilation. Immediately report leaks, spills or failures of the safety equipment (e.g. ventilation system). In the event of a spill or leak, exit the area immediately. If used in a confined space, check for

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oxygen deficiency before worker entry and during work. Eliminate heat and ignition sources such as sparks, open flames, hot surfaces and static discharge. Post "No Smoking" signs.

Conditions for Safe Storage

Store in accordance with local regulations. Store in a cool, dry, well ventilated area. Separate from incompatible materials (see Section 10: Stability and Reactivity).

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

	ACGIH	TLV®	OSHA	\ PEL	AIHA '	WEEL
Chemical Name	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Natural gas	Not established	Not established				

Always wash after handling the material. Routinely wash work clothing and protective equipment to remove contaminants. Discard clothing that cannot be cleaned. It is important to note that this chemical contains minimal oxygen content and at elevated concentrations can displace oxygen, causing asphyxiation.

Appropriate Engineering Controls

Do not allow product to accumulate in the air in work or storage areas, or in confined spaces. Use a local exhaust ventilation and enclosure, if necessary, to control amount in the air.

Individual Protection Measures

Eye/Face Protection

Wear safety glasses with side shields.

Skin Protection

Always wear insulated protective clothing, if contact is possible.

Respiratory Protection

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance Colourless.
Odour Odourless

Melting Point/Freezing Point Not available (melting); Not available (freezing)

Initial Boiling Point/Range Not available

Flash Point -188 °C (-306 °F) (open cup) Upper/Lower Flammability or 15% (upper); 5% (lower)

Explosive Limit

Vapour Pressure 552 kPa (4140 mm Hg) at 20 °C (68 °F)

Vapour Density (air = 1) 0.554

Solubility Slightly soluble in water

Auto-ignition Temperature 540 °C (1004 °F)

Other Information

Physical State Gas

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

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Creates a combustible atmosphere when mixed with air. May explode in the presence of strong oxidizing agents. May ignite spontaneously when mixed with chlorine dioxide. Under normal conditions, hazardous polymerization will not occur.

Conditions to Avoid

Open flames, sparks, static discharge, heat and other ignition sources. Uncontrolled explosive mixtures. Avoid contamination with reactive substances.

Incompatible Materials

Strong oxidizing agents (e.g. perchloric acid), halogens (e.g. chlorine), combustible materials.

Hazardous Decomposition Products

Oxides of sulfur. Oxides of Carbon. Hydrogen sulfide. Aldehydes. Irritating vapours may evolve upon decomposition.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity

LC50: No information was located.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

Acts as an asphyxiant by displacing oxygen in the air. Displacement of air by the gas may lead to shortness of breath, unconsciousness, and death from hypoxemia.

SECTION 12. ECOLOGICAL INFORMATION

Environmental information was not located.

Toxicity

Studies were not located.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions, and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
Canadian TDG	1971	Natural gas, compressed (Natural gas)	2	I

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

WHMIS Classification





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Class A Class B1

A - Compressed Gas; B1 - Flammable Gas

SECTION 16. OTHER INFORMATION

NFPA Rating Health - 2 Flammability - 4 Instability - 1

SDS Prepared By EHS Partnerships Ltd.
Date of Preparation December 02, 2015

Disclaimer To the best of our knowledge, the information contained herein is accurate. However, neither

the above-mentioned supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. Although certain hazards are

described herein, we cannot guarantee that these are the only hazards that exist.

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