

# Grande Prairie Emergency Response Plan

24 Hour Emergency Numbers: Ovintiv - 403-645-3333 Alberta Energy Regulator - 888-222-6514

> Ovintiv 500 Centre Street SE Calgary, AB T2P 2S5 Bus: 403-645-2000

H<sub>2</sub>Safety Services Inc. 210-7260 12 Street SE Calgary, AB T2H 2S5 Bus: 403-212-2332





## **Revision History**

This Emergency Response Plan is effective November 2023. The company's Senior Emergency Response Program Advisor 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	Reason for Revision	Section	Affected Pages	
		Foreword	All	
			Section 1: Initial Response	All
		Section 2: Roles and Responsibilities	All	
November 2023	November 2023	Annual Update D71 Regulatory Updates	Section 5 – External Agencies	All Pages
			Section 6: Forms	Form 0ICS-201 0ICS209 A1 – Initial Emergency Report A5 – Air Monitoring
	opulies			Section 7: Appendices
				Area Overview all pages
				Wembley / Pipestone all pages
		Area Specific Information	ties All All Pages All Pages All Pages Form 0ICS-201 0ICS209 A1 – Initial Emergency Report A5 – Air Monitoring Appendix A: HSE Policy, Training Requirements Appendix B: - ICP – Alberta Appendix F – Acronyms / Glossary Area Overview all pages Wembley / Pipestone all pages Sexsmith / Valhalla all pages	
			Hythe all pages	



## **Revision History**, continued

Date of Issue	Reason for Revision	Section	Affected Pages		
Date of Issue	Annual Update	Foreword	Cover Page Revision History Distribution List Table of Contents		
		Section 1 - Initial Response	Step 2 - Internal Notification Flowchart Step 3 -External Notification Flowchart Step 5 - Public Protection Flowchart		
		Section 4 – Emergency Response Procedures	Table of Contents Public Protection Measures Section Spill Response Section		
		Section 5 – External Agencies	All Pages		
		Section 7 – Appendices	Pages 3-4 (HSE Policy)		
		Site Specific Information Wembley/Pipestone Sexsmith/Valhalla Hythe / CER	All Pages		
October 2021	October 2021 Annual Update	Foreword	Cover Page Revision History Distribution List Table of Contents		
		Section 1 – Initial Response	Ovintiv Risk Matrix Step 2 Internal Notification Flowchart Step 3 External Notification Flowchart		
		Section 3 – Communications & Media	Preliminary Media Stmt.		
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October 2020	Annual Update	Site Specific Information Wembley/Pipestone Sexsmith/Valhalla Hythe / CER Kaybob	All Pages	
			Conversion of ERP from Encana to Ovintiv	All pages
October 2019	Annual Update	Foreword	Cover Page Revision History Distribution List	
		Section 1 – Initial Response	Step 2 Internal Notification Flowchart Step 3 External Notification Flowchart	
		Section 4 – Spill Response	All Pages	
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			Area Overview Section	All Pages
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December 2018		Foreword	Cover Page Revision History Distribution List		
		Section 1 – Initial Response	Step 2 Internal Notification Flowchart Step 3 External Notification Flowchart		
	Annual Update	Section 5 – External Agencies	All Pages		
		Area Overview Section	All Pages		
		Site Specific Information Wembley/Pipestone Sexsmith/Valhalla Hythe Kaybob	All Pages		
March 2018	Update to pipeline & residents	Wembley Pipestone Site Section	EPZ calc table, resident sheets, supplemental maps		
November 2017	Annual Update	All	All		

### OVINTIV GRANDE PRAIRIE AREA ERP

### **Distribution List**

Manual #	Туре	Res Info	Branch	Title / Agency	Name
				Corporate	•
83545	Binder	Full	Calgary	Senior Emergency Response Advisor	Tanner Strangway
83546	Binder	Full	Calgary	43rd Floor Bow Tower	EOC
83547	Binder	Full	Calgary	43rd Floor Bow Tower	Secondary EOC
83548	Binder	None	Calgary	Senior Drilling Technician	Sharron Winter
83549	Binder	None	Calgary	Drilling & Completions Spare	c/o Sharron Winter
83550	Binder	None	Grande Prairie	Rig Copy #1 (Core)	c/o Kodi Deutsch
83551	Binder	None	Grande Prairie	Rig Copy #2 (Core)	c/o Kodi Deutsch
83552	Binder	None	Grande Prairie	Rig Copy #3 (Core)	c/o Kodi Deutsch
83553	Binder	None	Grande Prairie	Rig Copy #4 (Core)	c/o Kodi Deutsch
83554	Binder	None	Grande Prairie	Rig Copy #5 (Core)	c/o Kodi Deutsch
83555	Binder	None	Grande Prairie	Completions Copy #1 (Core)	c/o Kodi Deutsch
83556	Binder	None	Grande Prairie	Completions Copy #2 (Core)	c/o Kodi Deutsch
83557	Binder	None	Grande Prairie	Completions Copy #3 (Core)	c/o Kodi Deutsch
83558	Binder	None	Grande Prairie	Completions Copy #4 (Core)	c/o Kodi Deutsch
83559	Binder	None	Grande Prairie	Completions Copy #5 (Core)	c/o Kodi Deutsch
83560	Binder	None	Grande Prairie	Lead, Operations Control Centre (OCC)	Kenn McLeod
83561	Binder	Full	Grande Prairie	Operations Control Centre (OCC)	ОСС Сору
83562	Binder	Full	Grande Prairie	Incident Command Post (ICP)	ІСР Сору
83563	Binder	Full	Dawson Creek	Community Relations Advisor	Adam Rolick

#### 19 Hard Corporate Manuals

	Field				
83564	Binder	None	Grande Prairie	Field Coordinator, Pipestone	Brian Antonio
83565	Binder	None	Grande Prairie	Hythe Field Office	c/o Brian Antonio
83566	Binder	None	Grande Prairie	Pipestone Field Office (10-10)	c/o Brian Antonio
83567	Binder	None	Grande Prairie	Coordinator, Pipestone Processing Facility	Jordan Wenzel
83568	Binder	None	Grande Prairie	Pipestone Processing Facility	c/o Jordan Wenzel
83569	Binder	None	Grande Prairie	Coordinator, Sexsmith Gas Plant	Chris Carter
83570	Binder	None	Grande Prairie	Control Room, Sexsmith Gas Plant	c/o Chris Carter
83571	Binder	None	Grande Prairie	Sexsmith Gas Plant Emergency Kit	c/o Chris Carter

#### 8 Hard Field Manuals

	External					
83572	E-Submission	Full	Calgary	Alberta Energy Regulator	EPA Group	
83573	Binder	Full	Calgary	Canada Energy Regulator	Secretary of the Board	
83574	Digital	Full	Calgary	Canada Energy Regulator	Secretary of the Board	
83575	Digital	None	High Level	Alberta Health Services - North Zone 5	Shane Hussey	
83576	Digital	None	Edmonton	Indigenous Services Canada - First Nations & Inuit Health	Simon Sihota	
83577	Digital	None	Clairmont	County of Grande Prairie No. 1	Trevor Grant	
83578	Binder	None	Hythe	Horse Lake First Nation	Dale Horseman	
83579	Digital	None	Spirit River	Saddle Hills County	Brice Daly	
83580	Digital	None	Valleyview	M.D. of Greenview	Wayne Brown	
83581	Digital	None	Wembley	Town of Wembley	Noreen Zhang	
83582	Digital	None	Grande Prairie	GPREP Program Coordinator	Jennifer Wood	
83583	Digital	None	Grande Prairie	Alberta Agriculture & Forestry	Tyler Pinnock	
83584	Digital	None	Beaverlodge	RCMP - Beaverlodge	NCO in Charge	
83585	Digital	None	Grande Prairie	RCMP - Grande Prairie	NCO in Charge	
83586	Digital	None	Spirit River	RCMP - Spirit River	NCO in Charge	
83587	Binder	None	Steeprock	Veresen - Steeprock Gas Plant	Lane Flaten	
83588	Binder	None	Hythe	Veresen - Hythe Gas Plant	Darby DeSchipper	

### OVINTIV GRANDE PRAIRIE AREA ERP

### **Distribution List**

Manual #	Туре	Res Info	Branch	Title / Agency	Name
83589	Digital	None	Calgary	Pembina Pipeline Corporation	Judy Scott
83590	Binder	None	Calgary	Keyera Corporate	Marty Cuffe
83591	Binder	None	Calgary	Keyera Corporate	Marty Cuffe
83592	Digital	None	Calgary	Keyera Corporate	Marty Cuffe
83593	Digital	None	Calgary	Tykewest Ltd.	Tim Tycholis
83594	Binder	Full	Calgary	H <sub>2</sub> Safety Services	Library Copy

1 E-Submission External Manuals

7 Hard External Manuals

15 Digital External Manuals



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|--|

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Area Overview Wembley/Pipestone Site Section Sexsmith/Valhalla Site Section CEPA E2 Supplement Hythe Site Section Bridging Document CER



## **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



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#### First On-Scene Actions

Evacuate	<ul> <li>Get to a safe area immediately.</li> <li>Move upwind if release is downwind of you.</li> <li>Move crosswind if a release is upwind from you.</li> <li>Move to higher ground if possible.</li> </ul>
Alarm	<ul> <li>Call for help ("Man Down").</li> <li>Sound bell, horn or whistle, or call by radio.</li> <li>For medical emergencies, call 911.</li> </ul>
Assess	<ul> <li>Take head count, locate any casualties. Consider all of the hazards.</li> <li>Fill out information below to complete assessment.</li> </ul>
Protect	Put on breathing apparatus before attempting rescue.
Rescue	Remove victim to a safe area.
First Aid	□ Follow the standard first aid protocols at worksite. (CPR, etc.)
Medical Aid	<ul> <li>Arrange transport of casualties to medical aid.</li> <li>Provide information to Emergency Medical Services (EMS).</li> </ul>

For a la forme	Petalls to be completed by the	person involved or notified		
Report take	n by		Date / Time	
Name of person calling			Caller Telephone	
Incident Lo	cation	(LSD / NTS	1	
Event Sum	mary			
Agencies Notified	□ Yes Who? □ No			
Agencies Notified Event Status	Yes Who? No Incident contained or contained	controlled	Intermittent control pos Incident is uncontrolled	sible
Agencies Notified Event Status Site Type	Yes Who? No Incident contained or o Imminent control possi Well Pipeline	controlled ible □ Tank Farm/Storage	Intermittent control pos Incident is uncontrolled Battery/Plant/Facility	ssible 1 □ Other
Agencies Notified Event Status Site Type	<ul> <li>☐ Yes Who?</li> <li>☐ No</li> <li>☐ Incident contained or of</li> <li>☐ Imminent control possi</li> <li>☐ Well ☐ Pipeline</li> <li>☐ Sour Gas Release</li> </ul>	controlled ible □ Tank Farm/Storage □ Sweet Gas Release	Intermittent control pos Incident is uncontrolled Battery/Plant/Facility Pipeline Break	osible ☐ Other ☐ Security (theft, threat, terrorism)

## A1 Initial Emergency Report Form



#### **GRANDE PRAIRIE EMERGENCY RESPONSE PLAN**

Impacts				
Public Health and S	Safety	Could be jee	opardized	□ Is jeopardized
Public Protection Measures Taken		□ Notification	Evacuatio	on □ Shelter-in-place □ Roadblocks
Worker Injuries		First Aid	Hospitaliz	red
Distance to nearest	surface developmen	t	km Distance	e to nearest urban centrekn
Details				
Release Impact	On-Lease	Off-Lease Proc	duct	Amount
Gas Readings	H <sub>2</sub> S S0	02 LEL	Ot	ther
Details				270° W WNW SSW 223° SSW 55W 55W 55W 55W 55W 55W 55W 55W 55W
Media Involvement?	Yes DNo Rei	gulator	Yes 🗆 No	Public Affairs/Community
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.

	Step 1 - Level of Emergency	Step 2 - Internal Notification
First On-Scene Actions Evacuate Alarm Assess Protect Rescue First Aid Medical Aid Refer to A1 Initial Emergency Report Form	Determine Level of Emergency:         Alert / Minor         Level 1 Emergency         Level 2 Emergency         Level 3 Emergency         Level 3 Emergency         Use the following resources:         • Section 1: Initial Response (Level of Emergency)         • The Emergency Assessment SmartPhone App. (Search H <sub>2</sub> Safety or Emergency Assessment in the App Store).         Note: The BCER 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.	<ul> <li>Follow the Internal Emergency Notification Flowchart to determine who needs to be notified.</li> <li>Relay the information in the completed A1 Initial Emergency Report Form.</li> <li>Mobilize internal resources to the site, to the Incident Command Post (ICP), or place them on standby a Use the following resources:         <ul> <li>Section 1: Initial Response (Internal Emergency Notification Flowchart)</li> <li>Section 2: Roles &amp; Responsibilities (Response Team Phone List)</li> <li>Section 6: Forms (A1)</li> <li>Initiate an H<sub>2</sub>CommandCentre session.</li> </ul> </li> </ul>
	Step 3 - External Notification	Step 4 - Incident Briefing
Follow the External Employed External External Employed External Employed External Employed External Employed External External External Employed External External External Employed External Employed External External External Employed External Externa	ergency Notification Flowchart to determine which external agencies need to be notified.	Complete an ICS 201 Incident Briefing Form:

- □ 911 (police, fire, ambulance)
- 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)

- · 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)

H2CommandCentre

#### Step 5 - Initiate Public Safety

Rovers

Investigate surface developments that are identified as vacant or those

Post notices on all outside doors of empty surface developments, vehicles,

Record all contacts, communications and monitoring readings using the

Monitor and record air quality readings using the following forms: ICS 214

#### Public Protection Measures

- Determine the hazard area; start with Emergency Planning Zone (EPZ) as default.
- Identify the affected surface developments and area users. (Houses, businesses, guides/outfitters, trappers, schools, other oil and gas operators etc.)
- Determine the appropriate public protection measure for the affected surface developments and area users. (Evacuation, shelter-in-place and/or ignition)
- Coordinate evacuation outside of the EPZ with the local authority, if required.
- 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)

Roadblocks

Follow safety procedures to safely establish roadblocks wherever a road

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

Gain permission from the Public Safety Group Supervisor for response

- Measures) Area Specific Information (Map / EPZ calculation tables)

intersects with the EPZ and advise vehicles to reroute.

· Section 2: Roles & Responsibilities (Roadblocks)

Provide status updates to the Public Safety Group Supervisor at established intervals; utilize

 Section 6: Forms Area Specific Information (Map)

following forms: ICS 214, A5, B3 & B5.

Provide status updates to the Public Safety

Group Supervisor at established intervals; utilize

· Section 2: Roles & Responsibilities (Rovers)

& A5. (Smoke, plumes, wind, etc.)

H<sub>2</sub>CommandCentre if available.

Use the following resources:

Dispatch Rovers to patrol the EPZ.

Search the EPZ for transients.

who were unable to contact.

etc

Follow safety procedures and have appropriate PPE.

Assist residences that require evacuation assistance.

#### Air Monitors

- Dispatch Air Monitoring personnel to the nearest residence / public facility downwind of the incident.
- Follow safety procedures and have appropriate PPE.
- □ 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 CommandCentre H<sub>2</sub>CommandCentre if available.

#### Use the following resources:

H2CommandCentre

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

#### Telephoners

- Establish a Telephoner Team to notify residents to evacuate or shelter-inplace as required.
- 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 11/2 CommandCentre H<sub>2</sub>CommandCentre if available.

#### Use the following resources:

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

#### **Reception Centre Rep**

- □ If residents are evacuated, dispatch a Reception Centre Representative to the reception centre location.
- Meet and register evacuated residents.
- Record contact information for those who choose to stay elsewhere. Complete the following forms: ICS 214, B1, B2 & C2.
- Regularly provide status updates to the Public

Safety Group Supervisor (those who have arrived 14 H2CommandCentre and those who have not yet arrived); utilize H<sub>2</sub>CommandCentre if available.

#### Use the following resources:

- Section 2: Roles & Responsibilities (Reception Centre Rep)
- Section 6: Forms

Area Specific Information (Map)

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

vehicles to enter the hazard area.

H<sub>2</sub>CommandCentre if available

Use the following resources:

Section 6: Forms



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## Step 1 – Level of Emergency

Regulator 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	<ul> <li>□ No worker injuries.</li> <li>□ Nil or low media interest.</li> <li>□ Liquid release contained on lease.</li> <li>□ Gas release impact on lease only.</li> </ul>	
2	Moderate	<ul> <li>□ First Aid treatment required for on-site worker(s).</li> <li>□ Local and possible regional media interest.</li> <li>□ Liquid release not contained on lease.</li> <li>□ Gas release impact has potential to extend beyond site.</li> </ul>	
3	Major	<ul> <li>Worker(s) requires hospitalization.</li> <li>Regional and national media interest.</li> <li>Liquid release extends beyond lease – not contained.</li> <li>Gas release impact extends beyond lease – public health / safety could be jeopardized.</li> </ul>	
4	Catastrophic	<ul> <li>Fatality.</li> <li>National and international media interest.</li> <li>Liquid release off lease not contained – potential for, or is, affecting water or sensitive terrain.</li> <li>Gas release impact extends beyond lease – public health / safety jeopardized.</li> </ul>	

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 *		Table 2 – Likelihood of Incident Escalating *
Rank	Descriptor	Example of Consequence in Category
1	Unlikely	The incident is contained or controlled, and is unlikely to 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 duty holder is probable. It is unlikely that the incident will escalate.
3	Likely	Imminent or intermittent control of the incident is possible. The duty holder has the capability of using internal and 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 duty holder will be able to bring the hazard under control in the near term. The duty holder 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 duty holder must use the Assessment Matrix for Classifying Incidents to classify an incident.
- In Alberta, the duty holder 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 duty holder in Alberta, must notify the local authority, the RCMP/police and the local health authority if the hazardous release goes off lease and has the potential to impact the public or if the duty holder has contacted members of the public or the media.
- Once the situation improves, the duty holder must make the decision to downgrade or stand down an emergency in consultation with the government regulator.

Step 3 Ta	le 3 – Incident Classification		
Risk Level	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 H<sub>2</sub>Safety Services Inc. Emergency Assessment Smart Phone app is the preferred method for determining the level of emergency. Search H<sub>2</sub>Safety or Emergency Assessment in the Apple or Android app store.



## Step 1 – Level of Emergency

Ste	p 4	Table 4 – Incident	Response – Incident Classif	ication
Responses	Alert	Level – 1 Emergency	Level – 2 Emergency	Level – 3 Emergency
Communicatio	ns			
Internal	Discretionary, depending on the duty holder policy.	Notification of off-site management.	Notification of off-site management.	Notification of off-site management.
Public	Courtesy, at duty holder's discretion.	Mandatory for individuals in the EPZ who have requested notification.	Planned and instructive in accordance with the specific ERP.	Planned and instructive in accordance with the specific ERP.
Media	Reactive	Reactive, as required.	Proactive media management to local or regional interest.	Proactive media management to national interest.
Government	Reactive. Notify AER if public or media is contacted.	Notify local AER field centre. Call local authority and health authority if public or media is contacted.	Notify local AER field centre, local authority & health authority.	Notify local AER field centre, local authority & health authority.
Actions				
Internal	On site, as required by duty holder.	On site, as required by the duty holder. Initial response is in accordance with the AER- approved ERP or corporate ERP.	Predetermined public safety actions are under way. Corporate management team alerted and may be engaged to support on-scene responders.	Full implementation of incident command system.
External	On site, as required by the duty holder.	On site, as required by the duty holder.	Potential for multiagency response (i.e., operator, municipal, provincial, federal).	Immediate multiagency response (i.e., operator, municipal, provincial, federal).
Resources				
Internal	Immediate and local. No additional personnel required.	Establish what resources are required.	Limited supplemental resources or personnel are required.	Significant resources are required.
External	None.	Begin to establish resources that may be required.	Possible assistance from government agencies and external support services.	Assistance from government agencies and external support services are required.
Responses	Alert	Level – 1 Emergency	Level – 2 Emergency	Level – 3 Emergency
Definition	An incident that can be handled on site by the duty holder through normal operating procedures and is deemed-a very low risk to the public.	The incident presents no danger outside the duty holder's property or threat to the public and has a minimal environmental impact. Duty- holder personnel can manage the incident themselves with immediate control of the hazard. There is little or no media interest.	The incident presents no immediate danger outside the duty holder's property but could potentially extend beyond the duty holder's property. Outside agencies must be notified. Imminent control of the hazard is probable, but there is a moderate threat to the public or the environment or both. 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 multiagency 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

## **Ovintiv Operational Risk Matrix**



Level	Health and Safety	Environment	Asset (\$)	Regulatory
4 Critical	<ul> <li>Fatality.</li> <li>Long-term health impact.</li> <li>Life-threatening or life- altering.</li> <li>Evacuation of a community.</li> </ul>	<ul> <li>Persistent, severe environmental damage that will lead to a loss of commercial, recreational use.</li> <li>Loss of natural resources over a wide area.</li> </ul>	<ul> <li>Production, equipment, property, schedule interruption.</li> <li>Damage greater than US \$10 MM.</li> </ul>	<ul> <li>Action resulting in regulatory and/or legal prosecution or suspension of operations.</li> <li>Prolonged national/ international media/ public attention.</li> </ul>
3 Serious	<ul> <li>Serious injury/illness.</li> <li>Lost time injury.</li> <li>Short-term health impact.</li> <li>Evacuation of a facility and immediate area.</li> </ul>	<ul> <li>Severe environmental damage that will require extensive measures to restore beneficial use of the environment.</li> <li>Serious impact to public.</li> </ul>	<ul> <li>Production, equipment, property, schedule interruption.</li> <li>Damage greater than US \$1 MM.</li> </ul>	<ul> <li>Regulatory and/or legal action resulting in fines or punitive action.</li> <li>Prolonged national/ regional media/public attention.</li> </ul>
2 Moderate	<ul> <li>Restricted work/medical aid injury/illness.</li> <li>Evacuation of job site.</li> </ul>	<ul> <li>Limited, persistent environmental damage that will require clean-up.</li> </ul>	<ul> <li>Production equipment, property, schedule interruption.</li> <li>Damage greater than US \$100,000.</li> </ul>	<ul> <li>Regulatory and/or legal action resulting in administrative response.</li> <li>Brief local/regional media/public attention.</li> </ul>
1 Minor	• First Aid injury or illness.	<ul> <li>Localized, short term environmental damage with no lasting impact.</li> </ul>	<ul> <li>Production, equipment, property, schedule interruption.</li> <li>Damage less than US \$100, 000.</li> </ul>	<ul> <li>Minor regulatory action.</li> <li>Brief or no media/public attention.</li> </ul>

#### STEP 2: Estimate Likelihood of Occurrence

Level	Description	Likelihood
D Common	Expected to occur several times during the life cycle of an operation or facility.	~50 times per year 25-100% chance
C Likely	Expected to occur once during the life cycle of an operation or facility.	~10 times per year <25% chance
B Unlikely	May happen less than once during the life cycle of an operation or facility.	One time in 10+ years <10% chance
A Rare	Remote or extremely remote chance of occurring.	One time in 100 years <1% chance

#### **STEP 3: Determine Risk Level**



Likelihood Consequence x Likelihood = Risk level

#### STEP 4: Assess Risk Level

**Extreme**: Activity under assessment cannot proceed until risk is reduced to a lower level.

High: Risk control measures must be implemented or OA VP & GM approval is required to allow assessed activity to proceed. Efforts to reduce risk to a MEDIUM level should be undertaken.

Medium: Complete assessed activity in this target risk zone.

Low: Risk is within tolerance.

#### **STEP 5: Take Action**

Ensure all controls/mitigation measures and established procedures are understood and communicated prior to starting work. Obtain any approvals required.



## Ovintiv Operational Risk Matrix-Reference Page



Heath and Safety Consequence Examples		Environment Consequence Exam	nples
Critical		Critical	
• Life-threatening injury: Requires immediate life- preserving rescue action. If action is not applied in an immediate fashion, would likely result in death. Usually requires the intervention of emergency response personnel. Some common examples include significant blood loss, damage to brain or spinal cord, use of CPR or AED, chest or abdominal trauma affecting vital organs and serious burns.	• Life-altering injury: Results in permanent and significant loss of a major body part or organ function that permanently changes or disables that person's normal life. Some examples include significant head injuries, spinal cord injuries, paralysis, major amputations, catastrophic bone fractures and serious burns.	<ul> <li>Persistent, severe environmental damage that will lead to a loss of commercial, recreational use or loss of natural resources over a wide area.</li> </ul>	<ul> <li>Spill resulting in pollution of a large part of river estuary and extensive clean-up and remediation measures.</li> <li>Contamination to useable potable water source.</li> </ul>
Serious		Serious	
• Serious Injury: An injury with an internally determined severity score of >0.35; contact EH&S for more information.	• Lost time incident: Lost time incidents: are work- related injuries that render the injured person temporarily unable to perform any regular job or restricted work activity on any day (including normal days off, holidays, etc.) after the day on which the injury occurred.	<ul> <li>Severe environmental damage that will require extensive measures to restore beneficial use to that environment.</li> <li>Spill that impacts land areas (beaches, wetlands, etc.) requiring clean up operations.</li> <li>Offsite groundwater contamination over an extensive area.</li> </ul>	<ul> <li>Significant deployment of spill response equipment.</li> <li>Highly mobile groundwater contamination onsite or offsite.</li> <li>Significant offsite soil impacts requiring extensive measures to remediate.</li> </ul>
Moderate		Moderate	
• Restricted work: Occurs when, as the result of a work-related injury, a physician or other licensed health care professional (whose practice includes medical diagnosis) recommends that the employee not perform one or more of the routine functions of his or her job or not work the full workday that he or she would otherwise have been scheduled to work.	<ul> <li>Medical aid: Management and care of an injured or ill worker by a physician or other licensed health care professional for the purpose of managing a work- related injury or illness/exposure, that involves any treatment beyond first aid. Some examples include removal of foreign bodies embedded in the eye, physical therapy or chiropractic treatment and an injury requiring sutures.</li> </ul>	<ul> <li>Limited environmental damage that will persist or require clean-up.</li> <li>Spill that migrates off lease requiring clean up.</li> <li>Spill that results in onsite groundwater contamination.</li> </ul>	<ul> <li>Observed off-site effects or damage (e.g., fish kill or damaged vegetation).</li> <li>Significant onsite soil impacts requiring remediation.</li> </ul>
Minor		Minor	
<ul> <li>Work activities with only a limited injury potential (e.g., first aid).</li> </ul>	• First aid: Common examples include using wound coverings such as bandages, Band-Aids™, gauze pads. Also, cleaning, flushing or soaking wounds on the surface of the skin and using hot or cold therapy.	<ul> <li>Localized and short term impacts but no lasting effect.</li> </ul>	<ul> <li>Small spill that is contained on lease.</li> </ul>
Considerations for Using the Operational Risk M	latrix		
Field-based application—use the operational risk matr	ix when:	Office-based application-use the op	erational risk matrix when:
<ul> <li>You need to deviate from an established procedure.</li> <li>Swapping or changing out equipment or parts with something other than an "identical replacement" (different make, model, capacity, function).</li> <li>Unplanned simultaneous operations are required.</li> </ul>	<ul> <li>Unplanned or unanticipated event occurs that result in a STOP the job.</li> <li>A short service worker is brought on to a job or task.</li> <li>You are uncertain as to your work responsibilities.</li> <li>A job site analysis or safe work permit does not cover the task or job step.</li> </ul>	<ul> <li>Assessing or revising a development plan.</li> <li>Designing or revising a procedure (P&amp;A, drilling, completions etc.).</li> <li>Considering acquisitions or divestitures.</li> </ul>	<ul> <li>Conducting a formal or informal management of change.</li> <li>Performing process hazard analysis, design review, P&amp;ID reviews.</li> <li>Developing EH&amp;S and regulatory compliance strategies.</li> </ul>





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### **EXTERNAL EMERGENCY NOTIFICATION FLOWCHART (AB)**



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.



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.



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GRANDE	PRAIRIE	EMERGENCY	RESPONSE	PLAN

and the second		10000			-
repared By:		ICS Posi	tion:		
evel of Emergency	Alert / Minor	Level 1	Level 2	Level 3	
ap Sketch:	u de la compañía de l				
lote: Maps can be d	rawn or attached here.		1 1 1 1		1
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#### GRANDE PRAIRIE EMERGENCY RESPONSE PLAN

Current and Flanne	ed Objectives:	
Priorities: (1) Life S	afety (2) Incident Stabilization (3) I	Environment & Property
1. Ensure Safety of C	itizens and Response Personnel:	4. Minimize Economic Impacts:
□ 1a. Identify hazard(s	) of released product.	□ 4a. Consider tourism and local economic impacts.
1b. Establish site co security).	ntrol (hot zone, warm zone, cold zone, &	□ 4b. Protect public and private assets, as resources permit.
1c. Establish an Em Safety Actions.	ergency Response Zone and Initiate Public	4c. Establish damage claims process.
1d. Consider evacuation	ations if needed.	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 imp	acted areas	□ 5b. Provide stakeholders with details of response actions.
1g. Develop site safe briefings are conduct	ety plan for personnel and ensure safety ted.	5c. Identify stakeholder concerns and issues, and address as practical.
2. Control the Source	of the Release:	5d. Provide timely safety announcements.
2a. Complete emerg	ency shutdown.	5e. Conduct regular news briefings.
2b. Conduct firefight	ing.	□ 5f. Conduct public meetings, as appropriate.
2c. Initiate temporar	y repairs.	
3. Manage a Coordin	ated Response Effort:	]
□ 3a. Complete or con	firm notifications.	
3b. Establish a unific (command post, etc.)	ed command organization and facilities ).	
3c. Ensure mobilizat personnel and equip	ion and tracking of resources and account for ment.	
3d. Complete docum	nentation.	
Current and Planne	ed Actions, Strategies and Tactics:	
Time:	Actions:	
HHMM		
HERMIN		
HHRVIN		
HHMM		
HHMM		





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



#### GRANDE PRAIRIE EMERGENCY RESPONSE PLAN

sources Summ	ary:			
Resource(s)	Time Called	ETA	On-Site	Notes (Location/Assignment/Status)
	1			
		h		
ernal Notificati	ions: (Governmer	it)	* **	
Agency	Time Called			Notes
	1	-		
		-		



-	te Control					
1.	Is Site Control set-up?  ☐ Yes  ☐ No		2. Is there an On-Scene Comman If so, where?	nd Post?	□ Yes	
3.	Have all personnel been accounted for?		Injuries: I Unaccounted:	Fatalities: Trapped:		
4.	Are observers involved or rescue attempts planned' Observers:  Yes No Rescuers: Yes No	,	5. Are Decon areas setup? If so, where?	□ Yes	□ No	
Ha	zard Identification, immediate signs of	(if yes,	explain in remarks)			
1.	Electrical line(s) down or overhead?  Yes N	0	2. Unidentified liquid or solid prod	lucts visible?	□ Yes	
3.	Wind direction across incident:          Towards you          Wind Speed:          Away from you	ur position ur position	4. Is a safe approach possible?		□ Yes	
5.	Odours or smells?		6. Vapours visible?		□ Yes	
7.	Holes, ditches, fast water, cliffs, etc. nearby?		8. Fire, sparks, sources of ignition	n nearby?	□ Yes	
9.	Is local traffic a potential problem?  Yes N	0	10. Product placards, colour codes	visible?	□ Yes	
11.	Other Hazards?		12. As you approach the scene from a change in the status of any o	m the upwind f the above?	side, do y	you no
Ha 1.	Entry Objectives:	he neces	ssity for any of the following	]?		
Ha 1. 2. 3.	Entry Objectives: Warning sign(s), barriers, colour codes in place? Hazardous material being monitored?	he neces U Ye es D No	s INO	j?		
Ha 1. 2. 3.	Entry Objectives: Warning sign(s), barriers, colour codes in place? Hazardous material being monitored? 3a. Sampling equipment: 3b. Sampling location(s): 3c. Sampling frequency: 3d. Peak reading: 3e. Personal exposure monitoring:	he neces □ Ye es □ No	ssity for any of the following s □ No	J?		
Ha 1. 2. 3.	Entry Objectives: Warning sign(s), barriers, colour codes in place? Hazardous material being monitored? Ya 3a. Sampling equipment: 3b. Sampling location(s): 3c. Sampling frequency: 3d. Peak reading: 3e. Personal exposure monitoring: Protective gear / level:	he neces	s INO	j?		
Ha 1. 2. 3.	Entry Objectives: Warning sign(s), barriers, colour codes in place? Hazardous material being monitored? Ya 3a. Sampling equipment: 3b. Sampling location(s): 3c. Sampling frequency: 3d. Peak reading: 3e. Personal exposure monitoring: Protective gear / level: 4b. Respirators Ad. Reptr:	he neces □ Ye es □ No	s ☐ No 4a. Gloves: 4c. Clothing:	J?		
Ha 1. 2. 3. 4.	Entry Objectives: Warning sign(s), barriers, colour codes in place? Hazardous material being monitored? Ya 3a. Sampling equipment: 3b. Sampling location(s): 3c. Sampling frequency: 3d. Peak reading: 3e. Personal exposure monitoring: Protective gear / level: 4b. Respirators 4d. Boots: Decon 5a. Instructions: 5b. Decon equipment and materials:	he neces □ Ye es □ No	s I No 4a. Gloves: 4c. Clothing: 4e. Chemical cartridge change fr	g?		
1. 1. 2. 3. 4.	Zaro Mitigation: have you determined to         Entry Objectives:         Warning sign(s), barriers, colour codes in place?         Hazardous material being monitored?         3a. Sampling equipment:         3b. Sampling location(s):         3c. Sampling frequency:         3d. Peak reading:         3e. Personal exposure monitoring:         Protective gear / level:         4b. Respirators         4d. Boots:         Decon         5a. Instructions;         5b. Decon equipment and materials:         Emergency escape route established?         Ya	Pes I No	Aa. Gloves: 4a. Clothing: 4e. Chemical cartridge change fr	requency:		
Ha 1. 2. 3. 4. 5. 6. 7.	Zaro Mitigation: have you determined to         Entry Objectives:         Warning sign(s), barriers, colour codes in place?         Hazardous material being monitored?         3a. Sampling equipment:         3b. Sampling location(s):         3c. Sampling frequency:         3d. Peak reading:         3e. Personal exposure monitoring:         Protective gear / level:         4b. Respirators         4d. Boots:         Decon         5a. Instructions;         5b. Decon equipment and materials:         Emergency escape route established?         Field responders briefed on hazards?	he neces	s INO 4a. Gloves: 4c. Clothing: 4e. Chemical cartridge change fi	requency:		
Ha 1. 2. 3. 4. 5. 7. 3.	Zaro Mitigation: have you determined to         Entry Objectives:         Warning sign(s), barriers, colour codes in place?         Hazardous material being monitored?         Ja. Sampling equipment:         3b. Sampling location(s):         3c. Sampling frequency:         3d. Peak reading:         3e. Personal exposure monitoring:         Protective gear / level:         4b. Respirators         4d. Boots:         Decon         5a. Instructions:         5b. Decon equipment and materials:         Emergency escape route established?         Field responders briefed on hazards?         Ya         Remarks:	es IN0	s INO 4a. Gloves: 4c. Clothing: 4e. Chemical cartridge change for	requency:		









### **Public Protection Measures Flowchart**



Section 1: Initial Response



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# **Section 2: Roles and Responsibilities**

# **Field Response Team**

#### **Emergency Response Organizational Chart**

# Key Response Personnel

General Safety Equipment and Resource Lists

#### Key Response Personnel, continued

Command Staff Roles & responsibilities

# Key Response Personnel, continued

Command Staff Roles & responsibilities, continued

# 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



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# Field Response Team





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# EMERGENCY RESPONSE ORGANIZATIONAL CHART





# Legend

-- Communication

Command

\* The detailed role descriptions for the Field Response Team can be found in the applicable field ERPs located at Ovintiv's Calgary Office.



# Key Response Personnel

COMMAND STAFF	Incident Commander	OCC Lead Drilling Superintendent (Back Up Incident Commander)
ON-SITE	On-Site Group Supervisor	Lead Field Operators Please see the RESPONSE TEAMS PHONE LIST (yellow tab) or AREA SPECIFIC INFORMATION (white tabs) for a list of Lead Operators.
	Trained in Ignition (H <sub>2</sub> S & HVP)	Emergency Manager Operations Chief / Incident Commander
1	Public Safety Group Supervisor	Public Protection Chief Lead Field Operators
	Air Monitors / Roadblock / Rovers	Field Operators Please see the RESPONSE TEAMS PHONE LIST (yellow tab) or AREA SPECIFIC INFORMATION (white tabs) for a list of Area Operators.
PUBLIC SAFETT	Telephoners	Operations Technician
	Reception Centre Representative	Community Relations Advisor Please see the RESPONSE TEAMS PHONE LIST (yellow tab) or AREA SPECIFIC INFORMATION (white tabs) for a list of Area Operators.

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

Please refer to the PHONE LIST in the AREA SPECIFIC INFORMATION section (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.



# Key Response Personnel, continued

# **Command Staff Roles & responsibilities**

# **EMERGENCY MANAGER**

Provides Corporate support with resources and business decisions

# Level 1 Emergency

- DOCUMENT all activities on Time and Event Log
- Establish communications with Emergency Operations Advisor and Business Lead to discuss safety and technical support requirements
- Provide assistance with regulatory agency notifications if requested

# Level 2 & 3 Emergency

- DOCUMENT all activities
- Monitor all phases of the emergency control operations
- Liaison with the Incident Commander regarding Ignition
- Direct the Incident Commander to implement Ignition immediately the Ignition Criteria are met
- Notify and maintain contact with appropriate government agencies' head or supplemental offices
- Update Emergency Operations Advisor and Business Lead and ensure technical, operational and business decision support is provided
- Ensure that the Senior Management Team is advised of the situation by the Business Lead
- Coordinate field level media support
- Update the **Emergency Operations Advisor** and **Business Lead**, who will activate the Senior Management Team if not already initiated, and provide additional technical, operational and media support
- Update and maintain contact with the appropriate government agencies
- Note: for a Level 1 Emergency, the Emergency Manager or the Incident Commander, in consultation with the OGC are the only Ovintiv representatives with the authority to terminate an emergency.
- For a Level 2 or 3 Emergency, only the Emergency Manager, in consultation with the OGC and the local and/or provincial disaster service authorities, has the authority to terminate an emergency.



# Key Response Personnel, continued

# **Command Staff Roles & responsibilities, continued**

# **EMERGENCY OPERATIONS ADVISOR** (On Call Position)

Provides Corporate support with resources and business decisions

# Level 1 Emergency

- DOCUMENT all activities on Time and Event Log
- Establish communications with Emergency Manager and Incident Commander
- Make the Incident Commander aware of services and expertise available to assist

# Level 2 & 3 Emergency

- DOCUMENT all activities
- Identify government and other agencies related to the incident, and ensure that notifications are done, and maintained
- Provide specialized resources and technical expertise in the areas of environment, media, community relations, and insurance
- Identify affected contractors, and confirm whether the contractors' head office(s) have been notified
- Coordinate meetings between government agencies and Company personnel as required
- Notify corporate level of environment, community relations, insurance, etc. and advise of the situation
- Ensure all documentation is being collected at all response levels.

# **BUSINESS LEAD**

# Level 1, 2 & 3 Emergency

- DOCUMENT all activities on Time and Event Log
- If a level of emergency is skipped, ensure procedures for a lower level emergency have been completed
- Advise and update the Senior Management Team if any of the crisis notification criteria are met
- Reassign resources within the business unit, (e.g., financial, physical, technical) to support the response
- Assess Corporate exposure and participate in strategic planning
- Redirect all media inquiries to the Media Spokesperson

# **Post-Incident**

- Notify the **Senior Management Team** of the emergency call down status
- Instruct any business unit responders to forward their related documentation to the Emergency Operations Advisor in preparation of the Post-Incident reporting

			Command	<b>Staff Roles</b>
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. As incidents grow in size or complexity, a more highly qualified Incident Commander may be assigned by the company. Note: The highest ranking authority arriving at the site of the incident (first on-scene) becomes the Incident Commander and establishes command and control. The first on-scene will remain the Incident Commander until there is formal transfer of	The <b>Deputy Incident Commander</b> may assume responsibility for a specific portion of the primary position, work as relief, or be assigned other tasks. The <b>Deputy</b> should always be as qualified to make decisions and manage the incident as the	The Information Officer is responsible for developing and releasing information about the incident to the news media, to incident personnel and to other appropriate agencies and	The Liaison Officer is responsible for notifying government agencies and is the contact for agency representatives assigned to the incident by assisting or cooperating agencies.	The <b>Safety Officer</b> develops and recommends measures for assuring personnel safety, and assesses and / or anticipates hazardous and unsafe situations.
command to a more senior company employee and / or qualified personnel.           Initial Response - "Refer to the 5 Step Initial Response Guide in Section 1: Initial Response"           Step 1: Level of Emergency           I' macessary, investigate and confirm the emergency. If the incident involves a release of sour product, the investigation should be conducted in learns of the Dire province (e.g. AlertMinor, Level 1, 2, 3) found in Section 1: Initial Response or using the ECR Incident Classification Matrix for BC or AER's Assessment Matrix for Classifying incidents for all other provinces (e.g. AlertMinor, Level 1, 2, 3) found in Section 1: Initial Response or using the Energency Assessment SmattPhone App. (Search H-Salety or Emergency Assessment in the App Store).           Step 2: Internal Notification         Feasoponse Team Phone List. Response Team Phone List. Response Team Phone List. Response Team Phone List. Response Team Phone List.           Step 3: External Notification         Feasoponse Team Phone List.           Step 4: Incident Breingency Volification Flow.thart in Section 1: Initial Response for communication structure and the Provincial Avoitication Network in Section 5: External Agencies on the Ave 3 specific Information for the Actional agencies need to be notified. Reference Section 5: External Agencies on the Ave 3 specific Information for the colution of the incident Commander, On-Site Group Supervisor and Documentation           Assess the stuation, identify the incident source, and consider how to stop the source. Canry out a site assessment that incident section 5: Feasopara Section 2: Or Incident Commander, On-Site Group Supervisor and Documentation.           Assess the statuation, identify the incident source, and consider how to stop	If no scribe has been assigned to the Incident Commander.          If no scribe has been assigned to the Incident Commander, support the Incident Commonader, support the Incident activities and decisions made.         Record, update and maintain a chronological summary of the incident including:       Names of personnel in each assigned position and their location         Control and containment measures       Environmental monitoring information         Injuries / deaths / missing persons       Phone calls         Actions and decisions       Status of the public protection actions         Manage the flow of traffic to and communication with the Incident Commander so that he can focus on managing the incident.         Conduct status update meetings.         Provide status to head office.         Deal with some day-to-day decision making.         Assume duties of the Incident Commander, if required.         Maintain communication with the Incident Commander.         Prior to beginning any activities, each person in a role must:         Obtain a completed ICS 201 Incident Briefing and ICS 207 Incident Briefing and ICS 207 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:	<ul> <li>bite appropriate agencies and organizations.</li> <li>Receive incident briefing from the Incident Commander before contacting external agencies.</li> <li>Prepare regular status updates that will be provided to internal company personnel to keep them apprised of the situation.</li> <li>Identify and document any media involvement that has already taken place</li> <li>If the media statement hasn't yet been prepared ensure that the generic media statement from the ERP is communicated and being used in the field.</li> <li>Assist head office with the preparation of a preliminary media statement form the ERP is communicated and being used in the field.</li> <li>Assist head office with the preparation of a preliminary media Contact Log.</li> <li>Document all communications with the media using the Media Contact Log.</li> <li>Develop a detailed media strategy for the incident.</li> <li>Designate and prepare media briefing rooms away from the Incident Commander.</li> <li>Maintain communication with the Incident Commander.</li> <li>Media releases must be coordinated with applicable regulatory agency.</li> <li>If necessary, coordinate with and use broadcast media to notify residents in the hazard area.</li> <li>Work with Communications / Media to develop a communications plan that includes establishing protocols for responders and all company personnel as required to ensure incident information remains confidential (i.e. restriction on continues of the statement or continues of the statement or continues of the continues of the statement or continues of the statement or continues of the statement or continues of the statement form the incident or contact oremains confidential (i.e. rest</li></ul>	<ul> <li>Cooperating agencies.</li> <li>Complete Regulatory First Call</li> <li>Communication Form.</li> <li>Refer to Section 5: External Agencies for the Government Notification Matrix. Notify as soon as possible and provide status updates at agreed upon intervals to:</li> <li>Government regulator</li> <li>Local authorities (counties, cities, towns, MDs, RDs, First Nations Reserves, etc.)</li> <li>Health authority</li> <li>Environment</li> <li>Provincial emergency management organization</li> <li>Other agencies</li> <li>Keep track of all government correspondence using the Government Log.</li> <li>Obtain cooperating and assisting agency information that includes: contact information, radio frequencies, cooperative agreements, equipment type, number of personnel, condition of equipment and personnel, agency constraints, etc.</li> <li>Conduct appropriate periodic briefings to keep agencies informed of planning actions.</li> <li>Coordinate with any government agency representatives attending the ICP or REOC.</li> <li>Coordinate with mutual aid groups.</li> </ul>	<ul> <li>Situations.</li> <li>Ensure the site is evacuated if unsafe.</li> <li>Initiate rescue plans if safe to do so.</li> <li>Review the Incident Action Plan to identify and correct any potential occupational and health hazards.</li> <li>Ensure work / rest guidelines are followed.</li> <li>Continuously monitor workers for exposure to ensure they are wearing the required PPE.</li> <li>Take appropriate action to mitigate or eliminate unsafe conditions, operations, or hazards.</li> <li>Immediately stop any unsafe practices.</li> <li>Conduct a general inspection of the facilities, food services and sanitation services soon after they become operational and follow up on a periodic basis throughout the incident for compliance to all health and safety standards. Provide a report of deficiencies.</li> <li>Document both safe and unsafe acts, corrective actions taken on the scene, accidents or injuries, and ways to improve safety on future incidents.</li> <li>Investigate accidents that have occurred within the incident area.</li> <li>Identify "Hot Zone" and declare when responders may enter it.</li> <li>Ensure that responders inside the "Hot Zone" are accounted for and initiate search if required.</li> <li>Prepare a site-specific health and safety plan.</li> </ul>
		photography, social media, speaking to the media, etc.).		

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**Revised March 2023** 

# **General Staff Roles – Operations Section**

<b>Operations Section Chief</b>	On-Site Group Supervisor	Staging Area Manager	Site Safety	Control	Containment
The <b>Operations Section Chief</b> 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 <b>Operations Section</b> is generally dictated by the number of tactical resources involved and is influenced by span of control considerations.	On-Site Group Supervisor is responsible for 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.	<b>Control</b> is responsible for implementing measures designed to bring the incident under control or stop the incident.	<b>Containment</b> 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.
<ul> <li>Identify and confirm communication links.</li> <li>Ensure the On-Site Command Post (OSCP) is established.</li> <li>Manage the following positions, as required: On-Site Group Supervisor, Public Safety Group Supervisor.</li> <li>In conjunction with the Incident Commander, the Planning Section Chief, and the Public Safety Group Supervisor, develop and implement an Incident Action Plan (IAP)</li> <li>Ensure responder safety at all times.</li> <li>Oversee control / containment procedures; ensure the hazard is isolated.</li> <li>Determine the current and potential environmental impact of product released, response activities, or waste disposal.</li> <li>Ensure that all environmental laws and regulations are complied with during emergency response operations.</li> <li>Provide technical advice to Incident Commander to determine public protection measures.</li> <li>Assess the requirements for on-site safety supervision, personnel, equipment, and other contract services. Coordinate with Logistics to obtain equipment and resources.</li> <li>Assist the On-Site Group Supervisor in</li> </ul>	<ul> <li>Ensure all personnel are accounted for. Release nonessential personnel from the site</li> <li>Oversee and maintain control of all on-site personnel.</li> <li>Establish On-Site Command Post (OSCP).</li> <li>Obtain incident briefing and environmental impact information.</li> <li>Coordinate activities of Staging Area Manager, Site Safety, Control and Containment.</li> <li>Report air monitoring to Incident Commander (third party and regulatory).</li> <li>Call police, fire and ambulance as needed.</li> <li>Coordinate with ambulance / fire / RCMP / regulatory agencies / spill co-ops.</li> <li>Conduct meetings with on-site personnel to review action plans, communication and safety.</li> <li>Request additional resources needed to implement on-site response actions.</li> <li>Supervise the execution of the on-site response actions.</li> <li>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 Onerations Section</li> </ul>	<ul> <li>Establish a staging area near the incident site and outside of the EPZ. When choosing a site for the staging area ensure the following conditions are met:         <ul> <li>Adequate sized site that is stable and level with suitable access roads</li> <li>No entry problems such as narrow approach ways, gates, power lines, buried pipelines, etc.</li> <li>Approval has been received from landowner</li> <li>Reception of communication equipment is adequate</li> <li>Erect staging area information and directional signs to the staging area, if required.</li> <li>Flag the perimeter of the staging area.</li> <li>Obtain an office trailer and emergency lighting, if required.</li> <li>Coordinate traffic and maintain a log of personnel and services dispatched to, or arriving from the site of the emergency. Communicate this information to the Logistics Section Chief.</li> <li>Respond to Operations Section Chief or Incident Commander requests for resources.</li> <li>Confirm all workers have required training before they are dispatched to the incident.</li> </ul> </li> </ul>	<ul> <li>Assess hazards &amp; potential risks e.g. fire/explosion, toxicity, oxygen deficiency, ignition sources, access/egress.</li> <li>Ensure responder safety at all times.</li> <li>Ensure that on-site personnel are taking appropriate safety actions: PPE, SCBA / SABA, Safe Work Procedures, proper grounding / bonding procedures, work in teams, etc.</li> <li>Maintain security of the site to ensure authorized personnel are allowed access and to protect response personnel.</li> <li>Ensure security of any evidence for investigative purposes.</li> <li>Ensure workers that show signs of stress, fatigue, and other symptoms are demobilized and sent for treatment if necessary.</li> <li>Maintain records of all injuries and onsite medical treatments.</li> <li>Conduct responder safety orientations.</li> <li>Monitor activities and conduct a head count on a regular basis.</li> <li>Continually evaluate risks and stop unsafe activities immediately.</li> </ul>	<ul> <li>Assist with the development of control procedures.</li> <li>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.).</li> <li>Provide or seek technical / engineering advice around all control-related issues.</li> <li>Inform Operations Section Chief of any interactions with regulatory agencies or environmental personnel.</li> </ul>	<ul> <li>Assist with the development of containment procedures.</li> <li>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.</li> <li>Provide or seek technical / engineering advice around all containment-related issues.</li> <li>Secure the scene and restrict access to essential and authorized personnel only.</li> <li>Inform Operations Section Chief of any interactions with regulatory agencies or environmental personnel.</li> <li>Coordinate oil spill cooperative activities (booms, dams, etc.).</li> </ul>
<ul> <li>determining whether ignition is appropriate. If at all possible, input is to be obtained from the Incident Commander and the applicable government regulator.</li> <li>Maintain continuous communications with the Incident Commander.</li> </ul>	Chief, Incident Commander, etc.) and the applicable government regulator before making the decision to ignite a release. Refer to Section 4: Emergency Response Procedures.	<ul> <li>Maintain and provide status to the Planning Section of all resources in Staging Area.</li> <li>Demobilize or move Staging Area as required.</li> </ul>	Recommend alternatives for activities that are considered to be unsafe.	<ul> <li>Prior to beginning any activities, each person in</li> <li>Obtain a completed ICS 201 Incident Briefin Incident Commander.</li> <li>Throughout the duration of the incident, each</li> <li>Chronologically document all actions, decise Copies can be found in Section 6: Forms.</li> <li>After the incident is over, each person in a role</li> <li>Assist with post-incident activities.</li> <li>All forms referenced</li> </ul>	mportant n a role must: ng and ICS 207 Incident Organization Chart from the person in a role must: ions, contacts and requests on an ICS 214 Activity Log. must: <b>can be found in Section 6: Forms</b>
					Revised November 2021
Located at the Incident Command Post (ICP)	Located at the On-Site Command Post (OSCP)	Located at the Staging Area	Located at the On-Site Command Post (OSCP)	Located at the On-Site Command Post (OSCP)	Located at the On-Site Command Post (OSCP)

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# **General Staff Roles – Planning Section**

	Planning Section Chief	Documentation Unit	Technical Specialists Unit	Situation Unit	Reso
Th fo th PI Se st pr de int Ac	the <b>Planning Section Chief</b> is responsible r providing planning and status services for e incident. Under the direction of the <b>anning Section Chief</b> , the Planning ection collects situation and resources atus information, evaluates it, and occesses the information for use in eveloping action plans. Dissemination of formation can be in the form of the Incident ction Plan, formal briefings, or through map ad status board displays.	The <b>Documentation Unit</b> is responsible for the maintenance of accurate, up-to-date incident files. Duplication services will also be provided by the <b>Documentation Unit</b> .	Certain incidents or events may require the use of <b>Technical Specialists</b> who have specialized knowledge and expertise. <b>Technical Specialists</b> may function within the Planning Section, or be assigned wherever their services are required.	The collection, processing, and organization of all incident information. The <b>Situation</b> <b>Unit</b> may prepare future projections of incident growth, maps, and intelligence information.	The <b>Resources</b> maintaining the resources at an inc
	<ul> <li>Identify and confirm communication links.</li> <li>Assign personnel to assume the following positions, as required: Documentation, Technical, Situation, Resources, and Demobilization.</li> <li>Assist with setup of the Incident Command Post.</li> <li>Review the details of the incident and support the Incident Commander with the development of a preliminary response strategy.</li> <li>Identify the need for technical specialists.</li> <li>Collect and analyze information on the current situation, prepare situation displays and situation summaries, and develop maps and projections.</li> <li>Establish special information collection activities as necessary, e.g., weather, environmental, toxics, etc.</li> <li>Provide technical support to the Incident Commander to develop the Incident Action Plan (IAP).</li> <li>Review any changes to the Incident Action Plan (IAP) to ensure consistency.</li> <li>Assemble information on alternative strategies.</li> <li>Coordinate with Logistics to determine forment available resources and resource availability for future plans of action.</li> <li>Establish reporting sc hedules.</li> <li>Develop plans for demobilization.</li> <li>Maintain continuous communications with the Incident Commander.</li> </ul>	<ul> <li>Document the Incident Action Plan (IAP) strategies using the ICS 201 Incident Briefing Form provided in Section 1: Initial Response or Section 6: Forms and disseminate them to all key responders.</li> <li>Be prepared to document the Incident Commander's status update meetings using whiteboards, PC or Action Logs.</li> <li>Ensure consistent documentation.</li> <li>Ensure timely dissemination of all documentation.</li> <li>Participate in planning meetings, capturing key information, decisions made, commitments and status.</li> <li>Collect documentation from response team members and maintain a consistent system for organizing the data.</li> <li>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.</li> <li>Establish duplication services.</li> <li>Post and maintain all Emergency Status Boards and other laminated charts in the Incident Command Post.</li> </ul>	<ul> <li>Determine what technical support is available now and in the future.</li> <li>Work with Logistics to determine the key locations for the required technical support and appropriate time to acquire.</li> <li>Gather data (weather, etc.) and forecast changes considering incident potential and develop new or modified response strategies.</li> <li>As required, obtain plume dispersion modelling.</li> </ul>	<ul> <li>Collect and evaluate information to establish an accurate picture of the situation and creates a detailed summary. Use this information to create maps and projections.</li> <li>Prepare, post, or disseminate resources and situation status information as required, including special requests.</li> <li>Provide photographic services and maps if required.</li> </ul>	<ul> <li>Monitor the statt incident resource to the incident.</li> <li>Oversee the che</li> <li>Maintenance of resources, e.g., personnel, primetc.</li> <li>May assist in princident Action II</li> <li>Maintain and polication of all resources of a line of the incident and polication of all resources are prior to beginning and copies can be for After the incident is an application of a line of the incident is an application of a line of the incident is an application of a line of the incident is an application of a line of the incident is an application of the incident is an application.</li> </ul>
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urces Unit	Demobilization Unit
Unit is responsible for status of all assigned dent.	The <b>Demobilization Unit</b> is responsible for developing the Incident Demobilization Plan.
us and location of all es / personnel responding	Prepare plan for the demobilization of all personnel and equipment upon resolution of the incident.
eck-in of all resources. a master list of all	<ul> <li>Ensure resources in available status are still required. Identify surplus resources and probably release time.</li> </ul>
ary and support resources,	Debrief non-required resources and dismiss resources being demobilized.
eparing the written Plan.	<ul> <li>Coordinate demobilization with agency representatives.</li> </ul>
st the current status and sources.	<ul> <li>Develop incident check-out function for all units.</li> <li>Ensure the demobilization process is organized, safe and cost effective.</li> </ul>
Form Form Form ICS ICS ICS 207 211 214	Form Form ICS ICS 214 221
Impo ny activities, each person in a n ted ICS 201 Incident Briefing an ander. ation of the incident, each perso document all actions, decisions bund in Section 6: Forms. over, each person in a role mus incident activities. All forms referenced can	ortant ole must: nd ICS 207 Incident Organization Chart from the on in a role must: , contacts and requests on an ICS 214 Activity Log. st: <b>be found in Section 6: Forms</b>

Revised October 2018

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

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

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**Revised October 2018** 

		Operat	ions <u>Sectio</u>	n - Public S	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 purposes.	Roadblock personnel are responsible for restricting unauthorized entry into the hazard areas during an incident that could potentially jeopardize public safety.	<b>Rovers</b> 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.	Telephoners are responsible for the notification of impacted residences and businesses to provide public safety instructions.
□       Confirm communication links with the Incident Commander: determine the initial public protection:         □       In conjunction with the Incident Commander: determine the initial public protection measures to be taken.         □       Consider the impact of major highways, navigable water courses, cleared pipeline rights of way & raiways in the heard are and determine the initial public protection measures to be taken.         □       Consider the impact of major highways, navigable water courses, cleared pipeline rights of way & raiways in the heard are and determine the initial public protection measures to be taken.         □       In conjunction with the Incident Commander, Planning Section Chief, and Operations Section Chief, develop and implement an incident Action Plan (RP).         □       Review resident lists, area user lists, reception centres, and telephonen numbers within the ERP.         □       If required, establich a Report must have sufficient personnel to accommodate the following ratios when contacting residents.         □       Dispatch frained personnel with the appropriate hand-heid gas monitors to record concentrations of LEL and HS at the nearest at evel 1 emergency (hand-heid gas monitors in percord) relation (ppb)         □       Minitaria communication with the appropriate hand-heid gas monitors to record concentrations of LEL and HS at the nearest to un-vacuated residences downwind of the indicate site.         □       Dispatch frained personnel with the appropriate hand-heid gas monitors are per billion (ppb)         □       Maintain communication with the appliciable govermment regulator	<ul> <li>Provide air monitoring readings to assist with decision making (evacuation / shelter / ignition).</li> <li>Obtain and check equipment and information (maps, forms, communications, reports, monitors, safety, and breathing equipment).</li> <li>Confirm communication links.</li> <li>Monitor closest downwind public location or residence.</li> <li>Monitor environment for adverse effects.</li> <li>Record all readings on the Air Monitoring Log.</li> <li>Report all readings at established intervals to the Public Safety Group Supervisor.</li> <li>For your own safety, ensure Public Safety Group Supervisor is notified immediately if readings are approaching 10% LEL and / or 10 ppm H<sub>2</sub>S.</li> <li>Prepare Mobile Monitoring Plan.</li> </ul>	<ul> <li>Confirm reception centre is available for use.</li> <li>Establish reception centre. Refer to Section 2: Roles &amp; Responsibilities.</li> <li>Confirm communication links.</li> <li>Receive evacuees and maintain a Reception Centre Registration Log.</li> <li>Arrange for food and accommodations for the evacuees.</li> <li>Provide evacuees with a place to request counselling services, if required.</li> <li>Record and follow up on all evacuees who choose to make their own accommodation arrangements.</li> <li>Arrange for temporary care of livestock (if possible) and the security of evacuated property.</li> <li>Establish and oversee compensation administration activities at the reception centre.</li> <li>Reimburse evacuees for their immediate out-of-pocket expenses and log details on a Resident Compensation Log.</li> <li>Where possible, provide evacuees with information regarding their property, livestock, and the incident.</li> <li>Forward all media and incident inquiries to the Information Officer.</li> <li>Address resident concerns and forward them to the Public Safety Group Supervisor.</li> <li>Address resident concerns and forward them to the Public Safety Group Supervisor.</li> <li>Address resident concerns and forward them to the Public Safety Group Supervisor.</li> <li>Address resident concerns and forward them to the Public Safety Group Supervisor.</li> <li>Address resident concerns and forward them to the Public Safety Group Supervisor.</li> <li>Address resident concerns and forward them to the Public Safety Group Supervisor.</li> </ul>	<ul> <li>In conjunction with the Public Safety Group Supervisor determine the need for and location of roadblocks.</li> <li>Pickup and check roadblock kits.</li> <li>Proceed to roadblock locations.</li> <li>Determine driving directions to assigned roadblock location that does not have you pass through the hazard area.</li> <li>Confirm communication links.</li> <li>Establish roadblocks to secure the EPZ.</li> <li>Follow the scripts and procedures in the ERP. Refer to either Section 2: Roles &amp; Responsibilities or Section 6: Forms.</li> <li>If media personnel show up at your roadblock, forward all requests to your direct supervisor who'll direct them to the Information Officer.</li> <li>Monitor area for H<sub>2</sub>S and / or LEL with personal monitors and document readings on the Air Monitoring Log.</li> <li>Report all H<sub>2</sub>S and / or LEL reading changes / increases to the Public Safety Group Supervisor.</li> <li>For your own safety, ensure the Public Safety Group Supervisor is notified immediately if readings are approaching 10% LEL and / or 10 ppm H<sub>2</sub>S.</li> <li>Record all incoming and outgoing traffic, personnel, and equipment on the Roadblock Log.</li> <li>Forward information given to you by people passing through your location to the Public Safety Group Supervisor.</li> <li>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.</li> <li>Maintain communication with the Public Safety Group Supervisor.</li></ul>	<ul> <li>Confirm resident contact lists are available.</li> <li>Confirm communication links.</li> <li>Know safe routes in and out of the EPZ.</li> <li>Search for residents and transients in the Emergency Response and Planning Zones.</li> <li>Check all buildings including barns, shops, sheds, etc.</li> <li>Assist, as required, with the notification, evacuation or sheltering of persons within the EPZ. Record all contact with residents using the Resident Contact Log.</li> <li>Post Evacuation Notices for residents that are not at their residence.</li> <li>Follow the scripts and procedures in the ERP. Refer to Section 2: Roles &amp; Responsibilities or Section 6: Forms.</li> <li>Monitor area for H<sub>2</sub>S and / or LEL reading changes / increases to the Public Safety Group Supervisor is notified immediately if readings are approaching 10% LEL or 10 ppm H<sub>2</sub>S.</li> <li>Report any suspicious behaviour to the Public Safety Group Supervisor is notified immediately if readings are approaching 10% LEL or 10 ppm H<sub>2</sub>S.</li> <li>Report any suspicious behaviour to the Public Safety Group Supervisor.</li> <li>Maintain communication with the Public Safety Group Supervisor.</li> <li>Maintain communication with the Public Safety Group Supervisor.</li> </ul>	<ul> <li>Confirm resident contact lists are available.</li> <li>Confirm communication links.</li> <li>In conjunction with the Public Safety Group Supervisor, determine who needs to be notified (residents, businesses, area users, etc.).</li> <li>Review with the Public Safety Group Supervisor which telephoner scripts to use: Early Notification / Voluntary Evacuation Message, Shelter-in-Place Phone Message, Shelter-in-Place Phone Message, Contact special needs residents at a Level 1 Emergency and provide them with the option to evacuate.</li> <li>Contact special needs residents at a Level 1 Emergency and provide them with the option to evacuate.</li> <li>Contact the schools / school buses to make arrangements for school age children (if applicable).</li> <li>Advise that buses in the affected area leave immediately and that buses should not enter the area.</li> <li>Request a school administrator for the reception centre to assist in managing the children and releasing them to their guardians.</li> <li>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.</li> </ul>
<ul> <li>Review and confirm evacuation of residents, area industrial users, transients, etc. from the area.</li> <li>Request that a Notice to Airmen (NOTAM) is issued to restrict the airspace above the EPZ.</li> </ul>	Assist with post-incident activities.     All forms referenced can	be found in Section 6: Forms	Roadblock and Rover personnel.		Devised November 2022
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

Escalate, Downgrade or Stand-Down Levels of Emergency: As the emergency is brought under control, the decision to downgrade the level and/or stand down the emergency will be based on air monitoring readings in consultation with the Incident Commander and the applicable government regulator. All affected persons and the media must be kept informed of the status of an emergency. Emergency Follow-up: Once the emergency is over, the area residents, industrial users, involved government agencies, and any individual notified will be informed of the stand-down by the Information Officer or Public Safety Group Supervisor.

# Overview

H2S, SO2, LEL or other toxic substance concentrations will be monitored continuously during the incident response. It is crucial that Air Monitors continuously update the Public Safety Group Supervisor with monitored results. If air monitoring readings show high levels of H2S, SO2, or LEL the Public Safety Group Supervisor may need to initiate evacuation / shelter of additional residences, change the location of the roadblocks, or ignite the release.

### 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.
- Record all readings on the Air Monitoring Log provided.
- Report all readings at established intervals to the Public Safety
- Generation For your own safety, ensure the Public Safety Group readings are approaching the following levels: 10% LEL or 10
- Prepare Mobile Monitoring Plan.
- □ If walking the pipeline right-of-way, walk separately with the wind, staying within visual contact and calling distance. As the lead responder monitors for H<sub>2</sub>S, the backup responder will maintain communication and be prepared to rescue; and

Group Supervisor.

DDM HoS

Supervisor is notified immediately if

A5

ICS 214

SO<sub>2</sub> monitoring equioment will be called out as required.

#### 

Document activities using the ICS 214 Activity Log.

- Assist with post-incident activities.
- □ Monitor H<sub>2</sub>S 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.

**Location of Samples** 

12-05-13-16 W5M

12-05-13-16 W5M

12-05-13-16 W5M

Speed and direction of wind may vary, therefore, be prepared to track gas plume.

H<sub>2</sub>S (ppm)

6

LEL (%)

02 (%)

Record all information:

Time

19:06

19:15

19:25

· Concentrations in ppm or ppb

- Location and time of readings
- · Wind speed and direction

# **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 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.

If the EPZ DOES NOT 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 H<sub>2</sub>S/LEL system must be used while in the critical sour zone. The detection system requirements are as follows:

- · A minimum of four sensors able to detect H<sub>2</sub>S concentrations of 5 ppm or greater
- Audible and visual alarms near the driller's station.

Comments

entering lease access. Contacted

H<sub>2</sub>S reading increased 1 ppm at the

No change in readings. Wind and

temperature is down.

access poin

ntrol room at plant

- · 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 H<sub>2</sub>S detection device is required while drilling in the critical sour zone

Form A5

2.

Air Monitoring Log

# **Choosing a Position**

- 1. 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

2.	Record Information
Re	cord information on the following forms located v

A5 214

AND AND ADDRESS OF ANY ADDRESS OF ADDRESS OF ADDRESS ADDRE	CONTRACTOR STORES	The Association of the Association of the	other the second second		1.111111111111111111
* Estimate meteorological	conditions	where accurate	readings a	re not	available

Air Monitoring Log - Example

Temp (°C)

19

18

17

Other

SO<sub>2</sub> (ppm)

10

12

12

Wind Conditions

Speed (km/hr)

12

11

11

From

NW

NW

NW

# **Regulatory Requirements**

# Production Operations & General Information

#### Sour Gas Release

- measures are not effective.

  - 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 OCCUL
  - · 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 H<sub>2</sub>S.
  - If a sour gas release has been ignited, the licensee should continue to monitor response zones for H<sub>2</sub>S from incomplete combustion, as well as SO<sub>2</sub>.
  - The licensee is expected to provide monitored H<sub>2</sub>S and SO<sub>2</sub> 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**

- request to the public.

# Downgrading Level of Emergency

results.

- · 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
- · 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.

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



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Date:	Responder Name:	
Page of	Responder Position:	

	Comments						
onditions *	Speed (km/hr)						
Wind C	From						
Tomn	(°C)						
	Other						
S	(mdd)						
c	(%)						
ũ	(%)						
U C	(mqq)						
	Location of Samples						
	Time						

# ICS 214 Activity Log

Incident Name:		
Date / Time Initiated:		
Prepared by:	Position / Title	1
Personnel Assigned		
Name	ICS Position	Location
Activity Log		
Time	Actions	

# 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. B2
- 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.
- C2 German 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. ICS 214
- 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,
- Lt 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.

1.

# 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.



Pasidant ID	Name (List all r	names in party)	# of	Number	Arrival	Depart	Destination Phon	# Commente
tesident ID	First	Last	Occupants	Arrived	Time	Time	reached)	Comments
G124-A	John	Doe	2	2	19:06	19:21	555-555-5555	John and his wife arrived safely then left to stay at a friend's house in Red Deer.
H131-B	Jane	Doe	3	3	19:12	19:28	555-555-5555	Jane and her 2 children arrived safely then left to stay with her mother in Bentley.
F122-A	James	Doe	5	3	19:20		555-555-5555	James, his wife and 1 child arrived safely. The other two children are away on a school trip. They will stay at the reception centre for the night.
								Media Statement
							Re He r	efer all media inquiries to the Media Representative in Calgar owever, 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 i becomes available."

Supervis Reception

Reporting and Contacts	
Reception Centre Reps report to the Public Safety Gro Supervisor.	oup
Name:	
Phone Number:	
Reception Centre	
Location:	-
Phone Number:	_
Wind Direction:	_

Revised February 2019

# **B1** Reception Centre Registration Log

Date:			Responde	r Name:	_			
Page	of		Responde	r Position: _				Responders Phone No.:
Resident	Name (list all r	names in party)	#Of	Number	Arrival	Depart	Destination phone #	
id	First	Last	Occupants	arrived	tīme	time	(where they can be reached)	Comments
						-		
						1		
					0.01			
				1				
		1						
1	1				121			

# B2 Resident Compensation Log

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
				IT THE					
		1							
-		-		-	-				
	-			14771		1 1			
				Arresto Arr		i			
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				1000		1-1			
				10000					
				1			-		
-	Total Rep	orted Expenses		1			-		

# ICS 214 Activity Log

Incident Name:					
Date / Time Initiated:					
Prepared by:					
Personnel Assigned					
Name	ICS Pos				
Activity Log					
Time					
-					

# Position / Title: Location sition 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 Comm/Media team.
- □ Knowledge and ability to communicate safest route away from hazard. □ Monitor area for H<sub>2</sub>S and / or LEL with personal monitors and
- document readings on the Air Monitoring Log. A5 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 H<sub>2</sub>S.
- Move location of Roadblock immediately if readings are approaching 10% LEL and / or 10 ppm H<sub>2</sub>S.
- 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 Supervisor.
- A 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 personnel.
- 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 (H<sub>2</sub>S, CO, O<sub>2</sub>, LEL) Portable rotating emergency light **D**SCBA Hand-held stop sign with reflective tape □ Waterproof bag Ontional 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.

1

2.

- 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**

- A 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 left)
- I Confirm that your handheld monitor for H<sub>2</sub>S 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.

-				point. For your ov
<b>3.</b>	<ul> <li>Park vehicle as illustrated, activating four way flashers and roof mounted rotating beacon.</li> <li>Put on reflective vests.</li> <li>Take a reading with your handheld monitor for H<sub>2</sub>S and / or LEL; ensuring your roadblock is not too close to the edge of the EPZ. Record readings on the Air Monitoring Log.</li> <li>Notify the Public Safety Group Supervisor once your roadblock is set up.</li> <li>Continue to monitor and record H<sub>2</sub>S and / or LEL levels at scheduled intervals. Report to the Public Safety Group Supervisor at scheduled intervals.</li> <li>Maintain roadblock until the emergency is over and the "all clear" message is given or</li> </ul>	RDAREA	WARNING MARKERS - these markers will be indicators that there is a readblock abead	Note: • Record driver's name, vehicle is vehicles approaching your road vehicles took when leaving (e.g., experience) when the vehicle took when leaving (e.g., experience) to protect and notify – to protect danger and secondly to protect and server the vehicle to the field is actively responding nature and severity of the information, an Ovintiv repression to the the took as the company's positive to the took as the company's positive took and the emergency situation to the took as the company's positive took and the took as the company's positive took and the emergency situation to the took as the company's positive took and the emergency situation to the took as the company's positive took and the emergency situation to the took as the company's positive to
	Roadblock personnel.	To give motorists time to p	prepare to come to a stop, it is	6. F
Roa Saf	adblock personnel report to the Public ety Group Supervisor.	recommended that the Ro available collapsible reflectin a minimum distance of 200 i	badblock personnel set up all ve triangles 100 metres apart, at metres before the roadblock.	Roadblock Log     Resident Contact Log     Air Monitoring Log     ICS 214 Activity Log
	Name: Phone Number:	granted. The authority for fi through the declaration of	or force an evacuation or restrict ss proper authority has been orced evacuation is gained only a State of Local Emergency by	Dessible Constitution for Describert
Rec	eption Centre	the local authority.		Motorist phase request and drives
	Location:	When establishing a roadblock consider:	Remember to:	<ul> <li>Motorist obeys request and drives</li> <li>Motorist is leaving the EPZ and a</li> <li>Emergency responders (service responders the incident)</li> </ul>
	Phone Number:		Record names	<ul> <li>Motorist disobeys request to leave</li> </ul>
Win	d Direction:	Bends in the road	Group Supervisor	In all cases, notify the Public Safety

# How to Stop Traffic

4

5a.

4. Bring the vehicle to a full stop.

Hold the reflective stop / slow paddle erect and away from your body. Never wave the sign.
 Look directly at the approaching driver.

3. Raise your free arm with the palm of your hand exposed to the driver.

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 *Ovintiv* 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."

> make, colour, etc. and at least the license plate number of all dblock; also make a note of the time and of the direction the , east, south, west, north) on your log sheet.

> position to restrict access to the general public. You are there to the health and safety of the people by notifying them of the the property of the residents who have evacuated the area.

> the restricted area, regardless of your warning about personal to or cell phone to notify the **Public Safety Group Supervisor** ately turned over to the Police.

# **Media Statement**

location, company personnel may give the following statement:

occurred at Ovintiv's (insert facility / site). Our team in ing and we are gathering more information about the e incident. If you would like to leave your contact senetative will provide you with more information as it becomes available."

upervisor if a media representative arrives at your roadblock.

happening at the location to a media person or stranger. This can sition. **DO NOT** give statements, other than the above message, the MEDIA. Refer them to the Information Officer.

Be courteous but firm.

keep politely repeating word for word the statement above.

# **Record Information**

orms located within this section:



#### Personnel:

s away from the EPZ. agrees not to return until further notice. companies, fire, ambulance, etc.) are entering the EPZ to help

e the area and enters the EPZ.

y Group Supervisor and log all information.

**Roadblocks** 

Revised November 2021

# B3 Resident Contact Log

Date:			Responder Name:						
'age	of		Responder Position	r		Respo	Responders Phone No.:		
Time	Resident name	Resident ID	Sheiter / Evacuate	Number of people		Assistance or transportation	Comments		
				Inside	Outside	required?			
			O Shelter O Evacuate			O Yes O No			
		j.	O Shelter O Evacuate		ç[	O Yes O No			
			O Shelter O Evacuate			O Yes O No			
	1		O Shelter O Evacuate	1		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			
	11		O Shelter O Evacuate			O Yes O No			
	1		O Shelter O Evacuate	1		O Yes O No			
			O Shelter O Evacuate			O Yes O No	1		
h. 4			O Shelter O Evacuate	1		O Yes O No			

# B4 Roadblock Log

)ate:		Responde	r Name:				
age	of	Responde	r 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		
			-				
				100	1		

# ICS 214 Activity Log

Date / Time Ir	iitiated:	
Prepared by:		
Personnel As	signed	12.10 State
	Name	ICS Po
		1
-		-
Activity Log		
Time		
-	7	
	1	
-		
_	1	
_		
	-	

osition / Title:	
on	Location
Actions	

#### Overview

Rovers are responsible for patrolling the Emergency Planning Zone to locate and notify residents, businesses, industrial operators, transients (i.e. hunters, trappers, recreational users, non-resident landowners), and the general public. This may be completed via truck, ATV, boat, helicopter, etc. The Public Safety Group Supervisor must be continuously updated by the Rovers so that unsuccessful attempts to evacuate residents,

# **Rover Personnel Roles**

- Confirm resident contact lists are available.
- Confirm communication links.
- C Know safe routes in and out of the EPZ.
- Search for residents and transients in the Emergency Planning and Response Zones.
- Check all buildings including barns, shops, sheds, etc.
- Assist, as required, with the notification, evacuation or sheltering of persons within the Emergency Planning В3 Zone. Record all contact with residents using the Resident Contact Log.
- Post Evacuation Notices for residents that are not at their B5 residence.
- Follow the scripts and procedures in the ERP. Monitor area for H<sub>2</sub>S and / or LEL with personal monitors
- A5 and document readings on the Air Monitoring Log. Report all reading changes / increases to the Public Safety Group Supervisor.
- Generation For your own safety, ensure the Public Safety Group Supervisor is notified immediately if readings are approaching the following levels: 10% LEL and / or 10 ppm H<sub>2</sub>S.
- Report any suspicious behaviour to the Public Safety
- Group Supervisor who will notify the police as required. Document all activities using the ICS 214 Activity Log.
- Form ICS 214 D Maintain communication with the Public Safety Group
- Supervisor.
- Assist with post-incident activities.

# Media Statement

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

"We can confirm an incident occurred at Ovintiv's (insert facility / site). Our team in the field is actively responding and we are gathering more information about the nature and severity of the incident. If you would like to leave your contact information, an Ovintiv represenetative 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

**Evacuation Notice - Example** 

DATE:

TIME:

[Inserf 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 H<sub>2</sub>S and / or LEL monitor to continually test the atmosphere. Report all H<sub>2</sub>S 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.

Protect yourself
Ensure you are equipped with all ne
□ SCBA
Gas monitors
Mobile communications or ot
Forms

3.

□ Vehicle (4x4) with full tank of fuel □ Map

Confirm that your handheld monitor for H<sub>2</sub>S 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.

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, etc.).

□ 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.

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, etc.)

Ask them if they have any questions. 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.

	4.		Rec	ord	i Ini	orr
1	Record information on the Resident Contact	ne followir t Log	ng forms	loca	ted wi	ithin t
	Air Monitoring Lo	g Log	Form ICS 214	Form A5	Form B3	Form B5
	Evacuation Notic	е	-			

# **Before Departure**

ecessary equipment:

ther form of communication

# Notifying Residents / Transients

# **Requested Evacuation Assistance**

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

# nation

this section

# Rovers

Revised November 2021

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Date:			Responder Name:				
Page	of		Responder Position	11		Responders Phone No.:	
Time	Resident name	Resident ID	Shelter / Evacuate	Number of people Inside Outsid	Assistance or transportation erequired?	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		

# ICS 214 Activity Log

Date / Time Initia	ated:	
Prepared by:		
Personnel Assi	igned	
Na	ame	ICS P
		1
Activity Log		
Time		
1		
-		

Jon / III	e:		
ALCONDUCT STOR			
ion		Location	
	-		
	-		_
Actions			
ACIONS			

Overview	Shelter-In-Place Phone Message	Evacuation Phone Message			
In the event of an emergency in which residents and area users need to be	Za.	ZD.			
sheltered and / or evacuated, a team of Telephoners will be established to	Hello, this is of company name!	Hello, this is of (company name)			
Public Safety Group Supervisor must be continuously updated with the	Is this the iname residence at itelephone nimbers?	Is this the Iname! residence at Itelephone humber) ?			
Telephoners progress so that unsuccessful contact attempts and requests fo	[company name] is responding to a (potential) emergency at [location] in your	[company name] is responding to a (potential) emergency at [location] in your area.			
evacuation assistance can be followed up on immediately.	alea.	For your safety, it is extremely important that you and your family leave your residence immediately and travel in a			
Elizabete and Elizabete Elizabete	exists, or you are advised to evacuate.	north / east / south / west direction to our reception centre located at:			
Telephone Personnel Roles	Construction of the second second second				
Confirm recident contact lists are available	To help us understand your inimediate needs, we need to know.	To help us understand your immediate needs, we need to know:			
In conjunction with the Public Safety Group Supervisor, determine	How many people are at your location now?	How many people are at your location now?			
who needs to be notified (residents, businesses, area users, etc.).	now many people are at your location now:				
Review with the Public Safety Group Supervisor the telephoner	Adults	Aduits			
Message, Shelter-in-Place Phone Message, Evacuation Phone	Children	Ghildren			
Message.	. Is there appears in your bousehold that you cannot contact to inform them of the situation and advise them to get in deers	Is there anyone in your household that you cannot contact to inform them of the situation and advise them to evacual			
them with the option to evacuate	- or stay out of the area?	away from the area?			
Contact the other residents and area users in the EPZ and advise them to	Di Yes Di No	I Yes I No			
evacuate or shelter.	IF YES Withorm?	IF YES Whom?			
Contact the schools / school buses to make arrangements for school age children (if applicable)	I protion of the person/si	Location of the person/si			
Advise that buses in the affected area leave immediately and that buses	We will cond company to find them as soon as passible	We will send someone to find them as seen as possible			
should not enter the area.	we will send someone to lind them as soon as possible.	we will serie someone to find them as soon as possible.			
Request a school administrator for the reception centre to assist in	Do you have children in school at this time?	Do you have children in school at this time?			
Document all resident interactions using the Resident Contact Log	DiYes DNo	12 Yes DNo			
and report this information to the Public Safety Group Supervisor. B3	IE VEC Way school?	IF YES What school?			
Immediately advise the Public Safety Group Supervisor about		Children's names			
Document all activities using the ICS 214 Individual Activity Log.	univoren's names	We will contact the school to ensure the safety of your children. Buses will be directed to leave the area			
Assist with post-incident activities.	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 recention centre by their regular	immediately. If school is in session, your children will be redirected to the reception centre by their regul			
	bus driver when the school day is over.	bus driver when the school day is over.			
Shelter-In-Place Instructions B7		Do you require evacuation / transportation assistance?			
	Do you have the "Shelter-in-Place" instructions previously provided to you by(contdany name) ?	17 Voc 17AM			
Immediately gather everyone indoors and stay there. Do not leave even if you see people outside	D'Yés DNo	Dites DIM			
Close and lock all outside doors and windows. Tape gaps around doors and	IF YES Please follow the Shelter-in-Place instructions located inside the resident pamphlet.	IF YES We are sending someone to assist you. Please stay indoors and close all doors and windows until a Ro			
windows. Leave all inside doors open.		of the local police and to evaluate you.			
Turn off appliances or equipment that blows out indoor air or sucks in outside air	IENO Verbally while the receivent through the Shelferin-Blace incriminium up the new page.	IF NO. Provide the resident with:			
Turn down furnace thermostats to the minimum setting and turn off air	I HO PERMITY WAS TO DESCRIPTION OF STREET, IN AND THE REPORT OF THE PERMIT.	17 A list of detos to bring with them to the recention control (medications, cell phone atc.)			
conditioners.		An idea of how long they may be expected to stay at the reception centre			
Extinguish all potential sources of ignition (do not smoke or attempt to start your vabida)	Do you understand what I have told you?	D The option to bring their house pets to the reception centre			
Stay off of the phone so that you can be contacted by emergency	bo you understand what thave told you?				
personnel.		Please contact if you are unable to make it to the reception centre for any reason. Ple			
Stay tuned to local radio and television for possible updates.	Is there an alternate number we can contact you at?	Reep you phone line nee so that we can contact you in necessary.			
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.		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 arrangem			
Who to Contact	If you have any urgent questions, please contact (company name) at (lelephone number)	for your temporary accommodations. Do you understand everything I have told you? Are you leaving immediately?			
	Thank you for your cooperation.	If you have any urgent questions, please contact (company name) at (telephone number) .			
Residents	(Pass on all information regarding this call to the Public Safety Group Supervisor immediately)	Thank you for your cooperation.			
Schools / School Bus Transportation		(Pass on all information regarding this call to the Public Safety Group Supervisor immediately)			
U Businesses					
Recreation Areas	Note: Refer to Shelter-in-Place instructions on page 2 of the Shelter-in-Place Phone Message located in this section.	Record Information			
Urban Centres (contact local authority to coordinate)		3. Record information			
Area Users (other oil and gas operators, rail, logging, etc.)	Telephoner Communication Flow				
Irappers     Guides / Outfitters	Telephoner communication riow	Record information on the following forms located within this section			
Grazing Lease / Allotment Holders		ICS 214 Individual Activity Log			
Priority is given to:		□ Voluntary Evac Message ICS B3 B6 B7 B8			
Those closest to the hazard	Shelter in Plane Provide Public Safety Grou	Shelter-in-Place Message			
Those downwind of the hazard	Message — ->Supervisor with a list of unsucc	Evacuation Message			
Those with sensitivity issues (health issues, require assistance, etc.)	- contacts.				
		Reporting and Contacts			
Tips	Provide Public Safety Grou	Public Safety Group			
D.S.	the Public Safety Group (	Telephoners report to the Public Safety Group Supervisor.			
Lensure you have enough personnel to quickly and efficiently shelter	Supervisor. message evacuation assistance.	Rovers Name			
A general guideline is to have one <b>Telephoner</b> for every seven residences					
that need to be contacted and one Telephoners Leader for every ter	Provide Public Safety Grou	Phone Number:			
Telephoners.	Evecuation contacts, those choosing it	Beception Centre			
given the option to evacuate	Message evacuate, and those requiri	Location:			
given the option to evacuate.					
given the option to evaluate.	evacuation assistance.				
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	evacuation assistance.	Phone Number:			

# **B3 Resident Contact Log**

# ICS 214 Activity Log

Date: Responder Name:			Incident Name:								
Page	of		Responder Positio	n:			Responders Phone No.:	Date / Time Initiated:			
Time	Resident name	Resident 1D	Sheiter / Evacuate	Number Inside	of people Outside	Assistance or transportation required?	Comments	Prepared by:		Position / Title:	
1 - 1			O Shelter O Evacuate			O Yes O No		Personnel Assigned			
			O Shelter O Evacuate			O Yes O No		Name	ICS P	osition	Location
			O Shelter			O Yes					
			O Shelter O Evacuate	1		O Yes					
			O Shelter			O Yes					
170	- 1 B		O Evacuate O Shelter			O Yes					
			O Evacuate O Shelter			O No O Yes					
			O Evacuate			O No		Activity Log			
		-	O Evacuate			O No		Time		Actions	
			O Shelter O Evacuate		1	O Yes O No					
			O Shelter O Evacuate			O Yes O No					
			O Shelter O Evacuate			O Yes O No					
			O Shelter	-		O Yes					
B6 E Pho	arly Notif ne Messa	fication de	/ Volunt	tary	Evac	uation					
Before ca	lling, determine a safe	e evacuation rou	te for the residents	to travel,	away from	the emergency h	azard area, upwind if possible, towards the				
Hello, this	is (vour name)	calling from /cov	mpany name) . Is	this the ()	iame ol ra	ildence i busines:	at (telephone number) ?				
(Comman	( name) is responding	to a (potential) e	emergency at _//oc	ation)	in your a	ea.					
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 inform you and provide you with an early						
To help us	understand and your	immediate need	s we need to know:								
How man	y people are at your	location now?	Adults)		(Children	)					
Do you w	ish to leave your resi	idence at this ti	me?								
IF YES PI	ease travel in a a <u>nor</u>	n / east / solun.	/ west direction to a	our reception	on centre lo	cated at:					
IF NO PI wi	ease standby for furthe th updated information	er contact. Pleas n or when the pro	e do not use your te blem has been elim	elephone fo	or outgoing	calls as this may p	revent us form contacting you				
If you hav	ve urgent questions,	please contact	10	ampany n	ame)	at //telephone /	number! .				
Thank yo	u for your cooperatio	on.									
(Pass on all information regarding this call to the Public Safety Group Supervisor immediately)						nmediately)					



# 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.





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# Step 1 - Objectives Meeting

a Incident Commander conducts the meeting.

- Review the ICS 201 form completed during the Initial Response phase and begin the ICS 209 form by evaluating the current incident status.
- □ Identify issues/problems to resolve using the PPOST methodology.
- Develop SMART (Specific, Measurable, Attainable, Realistic, & Time-Sensitive) objectives to mitigate the identified problems.
- Prioritize the objectives using the ICS 202 form.
- Complete the ICS 202 form and identify initial staffing on the ICS 207 form.
- Utilize IAP Checklist (A4) to complete the IAP.

# Step 2 - Tactics Meeting

- Operations Section Chief conducts the meeting.
- Review the incident status using the ICS 209 form that was completed during the Objectives Meeting.
- Departions Section Chief proposes strategies and tactics.
- Evaluate and assign resources and personnel.
- Ensure that all strategies have associated tactics to ensure responder safety and complete the ICS 215A form.
- Complete the ICS 215 form and update the ICS 207 form started during the Objectives Meeting.

# Step 3 - Planning Meeting

- Planning Section Chief conducts the meeting.
- Review the incident status using the updated ICS 209 form.
- $\hfill\square$  Confirm the strategies and tactics assigned to achieve the defined objectives.
- Ensure that all assigned tactics can be performed safely and follow the defined safety analysis using the ICS 215A form.
- Incident Commander to give tentative approval of proposed plan and review with key response personnel.

# **Prepare for Tactics Meeting**

Develop draft strategies and tactics for each defined objective.

- Outline work assignments and develop an operations organization chart using the ICS 207 form.
- Identify future tactical plans to optimize the Tactics Meeting.
- Begin to prepare a safety analysis once all hazards have been identified using ICS 215A form.

# **Prepare for Planning Meeting**

Review and update the ICS 209 form.

- Confirm availability of resources and locations.
- Prepare all information for review at the Planning Meeting.
- Gather any additional incident documentation (i.e., maps and status boards).

# Incident Action Plan Preparation and Approval

- Produce a coordinated and sustainable Incident Action Plan using the IAP Checklist (A4), ICS forms 202, 207, 209, 215, 215A, and gather any additional incident documentation (i.e., maps and status boards).
- □ Receive final approval from the Incident Commander.
- Define work assignments and break the work into manageable units.
- □ If necessary, other documents may be included such as a Demobilization plan.



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.





X Ovintiv

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# **Objectives Meeting**



Owner: Incident Commander	Date:	Time:						
**Roles belo	w will attend on	v if designated and available	**					
Attendees:	and all all all all all all all all all al	y in accordinated and available						
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:		D Other:						
Summary:								
<ul> <li>Have a completed ICS 202 form</li> <li>Establish objectives and prioritie</li> <li>Begin an ICS 209 Incident Statu</li> <li>Begin identifying all required role</li> <li>Begin addressing the Incident Addressing for the Total</li> </ul>	agreed upon by s for the upcomin s Summary report of the ICS 207 ction Plan Check	all attendees (Command and G g operational period. t. form. ist (A4).	eneral Staff).					
Schedule and prepare for the Ta	actics Meeting.	a IAB Chacklist (A4)						
Agonda Itome:	to ionis, and u	e IAF Checklist (A4)						
Agenda items.	S 201 Incident B	iefing form						
	forence the DDO	T mothodology						
<ul> <li>Establish an incident organizatio mitigate the incident.</li> </ul>	on that is capable	of meeting initial and long-tern	n challenges required to					
Determine the incident response must be SMART (Specific, Meas	objectives and c surable, Attainabl	mplete and ICS 202 Incident C e, Realistic, & Time Sensitive).	Objectives form. They					
Identify initial staffing requirement	nts and begin fillin	g out the ICS 207 Incident Orga	anizational Chart.					
Identify and select incident support	ort facilities.							
Review the incident objectives for on the IAP.	or the next operat	onal period so your manageme	nt team can begin work					
Document the incident status to r	relay to all respor	ding personnel.						
Key Points:								
• Ensure that the meeting is doo	cumented / reco	ded. (Utilize the back side of t	his page.)					
· Define the hours of work and ope	erational period.							
• Utilize Incident Action Plan Chec	cklist (A4).							
· Identify constraints and limitation	ns.							
· Clarify any staff roles and respon	nsibilities.							
· Determine expectations of the te	eam for how all co	mmunications are to be made.						
<ul> <li>Discuss and agree on process is and sensitive information.</li> </ul>	ssues such as res	ource ordering, cost accounting	g, operations security,					
Continue to develop tasks for Co	ommand and Ger	eral Staff.						
· Agree on division of command w	vorkload, such as	press and agency briefings.						



Notes:

# **Tactics Meeting**



		GRAN	DE PRAIRIE EMERGENCY RESPONSE PLAN
Owner: Operations Section Chief	Date:		Time:
**Roles below wi	ill attend only	if design	ated and available**
Attendees:			and the second
Incident Commander:		Planning	Section Chief:
Deputy Incident Commander:		Logistic	s Section Chief:
Operations Section Chief.		- Finance/	Admin. Section Chier:
Figuring Sevoon Giler		Cither	nnoer.
Information Officer.		D Other	
Summary:			
The objectives of this meeting are to:			
Meeting. Have completed ICS 215 and 215. Update the ICS 207 Incident Orga Refer to Incident Action Plan Chec Schedule and prepare for the Plan	A forms agreed unization Chart. cklist (A4) and co	upon by all a Intinue to ad	attendees (Command and General Staff). Id to items accomplished.
Resources: ICS 209, 215, 215	A. and IAP Chec	cklist (A4)	
Agenda Items:		( 1	
Review ICS 209 Incident Status Su	ummary		
Review incident objectives.			
Define tactics to complete objective	es set out during	the Objectiv	ves Meeting.
Provide an operational update and	identify tactics to	deal with in	ncident.
□ Identify roles and responsibilities the	hat have to be pe	rformed to in	mplement tactics.
Build on already established ICS 2 with ICS 215 assignments.	07 Incident Orga	nization Cha	art, check span-of-control, and match up
Complete the Operational Planning W <ul> <li>Identify work assignments</li> <li>Identify resources requirements</li> <li>Identify overhead staffing needs</li> <li>Identify specialized equipment a</li> <li>Specify reporting times and local</li> </ul>	Vorksheet, ICS 21 to achieve each s to support each and supply needs ation for personne	15 (Utilize or work assign work assign for each wo el	ne form for every established objective). nment nment ork assignment
Complete the Incident Action Plan Sa Identify potential hazard types Identify mitigations for associate	ifety Analysis, IC ed hazard types	S 215A.	
□ Identify support facilities and location	ons.		
Key Points:			and the second s
• Ensure that the meeting is docu	mented / record	led. (Utilize	the back side of this page.)
Review planned actions against in	cident objectives	and prioritie	25.
Utilize a map or chart to depict the	operational area	as support f	acilities, and any key information
Discuss any applicable open action	n items.	-, - apport in	
Consider contingencies and secon	ndary options		
- consider contingencies and secon	idaly options.		





Notes:

# **Planning Meeting**



Owner: Planning Section Chief	Date:	GRANDEP	Time:
**Roles below v	will attend o	only if designate	d and available**
Attendees:			
Incident Commander:		Planning Se	ction Chief;
Deputy Incident Commander		Logistics Se	ection Chief.
Departments Section Chief		Safety Offic	min, segnon unier:
Liaison Officer:		D Dther.	507 A.
Information Officer:		Other:	
Summary:			
<ul> <li>Finalize an Incident Action Pla strategies outlined from the prev</li> <li>Schedule and prepare for the Operation</li> </ul>	an with the n ious command perations Briefi	ecessary forms ba I meetings. ng.	sed on the objectives, tactics, and
Resources: IAP Checklist (A	A4) and all as	sociated ICS forms	
Agenda Items:	and the second second	a Unit da la la la la	2 A
Review Incident Action Plan form	ns (ICS 202, 20	07, 209, 215, and 21	5A).
Review Command's incident object	ectives, prioritie	es, decisions, and di	rection.
Provide briefing on current situat	ion, resources	at risk, weather fore	cast, and incident projections.
<ul> <li>Operations Section Chief provide</li> <li>Current operations.</li> <li>An overview on the propo commitment, contingencies, or</li> </ul>	es briefing on: sed plan inclu organization str isure that Com	uding strategy, tack ructure, and needed	tics or work assignments, resource support facilities.
met.	Sure that com	india areodon, pro	shiles, and operational objectives are
Delegate assignments and dead development.	dlines to appro	opriate staff membe	rs to assure timely and effective IAP
Key Points:			
<ul> <li>Ensure that the meeting is door</li> </ul>	cumented / red	corded. (Utilize the	back side of this page.)
<ul> <li>Review IAP Checklist (A4) to en</li> </ul>	sure that all cri	itical materials have	been accounted for in the IAP.
Planning Section Chief brings m	eeting to order	, cover ground rules	, and review agenda.
· Planning Section Chief requests	tacit Comman	d approval of the pla	an as presented.
<ul> <li>Planning Section Chief reviews a objectives.</li> </ul>	and validates r	esponsibility for any	open actions and management
<ul> <li>Planning Section Chief conducts and commitment to the proposed</li> </ul>	round table of d plan.	f Command and Ger	neral Staff to solicit their final input

# **Planning Meeting**



GRANDE PRAIRIE EMERGENCY RESPONSE PLAN

Notes:

# **Operations Briefing**



Owner: Incident Commander	Date:	Time:
**Roles below	will attend only if des	signated and available**
Attendees:		
Incident Commander:	0n-	Site Group Supervisor
Deputy Incident Commander	D Pub	Ilic Safety Group Supervisor
Operations Section Chief:	□ Air1	Monitor Team Lead
Plauning Section Chief:	D Rga	dblock.Team Lead
Liaison Unicer:	L ROV	er ream Leed
Planning Section Chief:	Res	ention Centre Representatives
Logistics Section Chief:	D Oth	er:
Finance/Admin. Section Chief	: Oth	eri
Safety Officer:	D Oth	er.
Staying Area Manager:	D Oth	er:
Summary:		
<ul> <li>Reinforce/relay the safety mess</li> <li>Assign roles &amp; responsibilities a</li> <li>Execute the response.</li> <li>Tentatively schedule next Object next operational period.</li> </ul>	age. Ind tasks for all responders Stives Meeting and identify (	to accomplish. potential problems/issues to address in the
Agondo Itomo:	(A4) and an associated ic	3 101115
Planning Section Chief briefly w	alks through the IAP comp	opents and makes changes as needed
Operations Section Chief condu	icts roll call of the Operatio	n Section Supervisors and provides a briefing
on emergency response	ious foir can of the operatio	in occurring and provides a preming
<ul> <li>Operations Section Chief briefs any of their issues and concerns</li> </ul>	supervisory personnel on s.	their assignments along with clarification on
Safety Officer covers major safe	ety issues.	A second s
Logistics Section Chief covers medical, etc.).	logistical support of operat	ions (communications, supply, transportation,
□ Finance / Admin. Section Chief covers time & cost tracking, procurement, and compensation process.		
General Staff to cover issues ap	oplicable to Operations Sec	tion personnel.
Key Points:	And a supplicit of the second s	
• Ensure that the meeting is do	cumented / recorded. (Uf	tilize the back side of this page.)
<ul> <li>Planning Section Chief opens b and General Staff members.</li> </ul>	riefing, covers ground rules	s, agenda, and conducts roll call of Command
Establish a briefing and message for all responders.		
Review pre-determined public a	nd media statements.	
Planning Section Chief solicits f	inal comments and adjourn	as briefing





Notes:


# **Section 3: Communication and Media**

Guiding Prinicpals and Approach	1
Media Communications	2
Preliminary Media Statement	3





## **COMMUNICATION & MEDIA**

#### **GUIDING PRINCIPLES & APPROACH**

Ovintiv will be responsible, understanding and compassionate to the needs of stakeholders directly impacted by the crisis, but place the following priority on communications that support the safety of:

- o people (i.e. landowners, community residents and staff)
- o the environment
- o property/business

Stakeholders impacted by a crisis should be notified in a timely manner about potential risks so they can make informed decisions about potential personal implications

Communications Response by Severity

Ovintiv's system for assessing incident severity is outlined in the Emergency Preparedness Standard of Ovintiv's environment, health and safety (EH&S) management system, Ethos. This system aligns with the system used by the Alberta Energy Regulator.

The following chart outlines the four severity levels and the suggested corresponding communications response. In the event that reputational impacts/risks warrant an elevated communications response, consider revising and escalating the communications response.

Severity	Communications Response/Strategy
Alert	Communications may heighten media and social media monitoring to include keyword searches relevant to the situation. Key messages and/or standby statements will be reviewed and updated. Communications may not be immediately aware of an Alert-level incident.
Level 1	Communications will heighten media and social media monitoring and be prepared to respond to inquiries from the public, concerned community stakeholders and social and conventional media. Key messages and a holding statement will be developed if required and distributed as necessary.
Level 2	Ovintiv will proactively engage with impacted stakeholders and local and/or regional media if interest or awareness is evident. Any decision to issue a news release or hold a news conference for a Level Two incident will be made in consultation with the senior management team (or under the direction of the appropriate regulator). Mainstream and social media is regularly monitored.
Level 3	Ovintiv will proactively communicate with all stakeholders (both internal and external) and all local, provincial, national or international media as appropriate. Ovintiv may actively distribute information to the media over the wire and may consider holding formal press conferences. Mainstream and social media is constantly monitored (regulatory requirements vary).



## **COMMUNICATION & MEDIA, CONTINUED**

#### MEDIA COMMUNICATIONS

Note: Media updates must be generated and released as significant developments occur. Ovintiv will coordinate media releases whenever possible with the regulator prior to publication to ensure consistency and accuracy of information.

Under most regulatory jurisdictions, the following information must be released to the general public as soon as possible during an incident:

- type and status of incident,
- location and proximity of the incident to people in the vicinity,
- areas impacted by the incident,
- effects the incident may have on people in the vicinity,
- actions the general public should take if they experience adverse effects,
- description of the products involved and their short- and long-term effects,
- public protection measures to follow, evacuation direction, and any other emergency response measures to consider,
- actions being taken to correct the situation and time period anticipated, and
- contacts for additional information.

The effectiveness of Ovintiv's media relations during an emergency depends on the co-operation and mutual support of three components:

- Only the field-based Incident Commander and the Media Spokesperson are authorized to release information to the media;
- The Incident Commander and the Media Spokesperson should confirm facts prior to either spokesperson releasing information; and
- Ovintiv personnel should co-operate with reporters by referring them to the Incident Commander or the Media Spokesperson.



## COMMUNICATION & MEDIA, CONTINUED PRELIMINARY MEDIA STATEMENT

Date:

Time:

We can confirm an incident occurred at Ovintiv's [insert facility/site]. Our team in the field is actively responding and we are gathering more information about the nature and severity of the incident. An Ovintiv spokesperson will provide more information when it is available.

You can contact our media spokesperson at (281) 210-5253.





# Section 4: Emergency Response Procedures

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Deployment, and Skimmers / Temporary Storage / Vacuum Units)	
Post-Incident	1
Call Down Notification	1
Public Care and Assistance	1
Clean-up and Repair	2
Third Party Investigations	2
Review and Debriefing	3
Critical Incident Stress Debriefing (CISD)	3
Post-Incident / Accident Investigation	4
Medical Emergencies	1
First Aid Information	2
Next-of-Kin Notification	5
Medical Evacuation (MEDEVAC) Procedure	7



Responder Safety	GRANDE PRAIRIE EMERGENCY RESPONSE PLAN
Site Safety	
On-Site Work Areas	
Working Alone	
Missing Persons	
Rest Periods	
Fire / Explosion	
Classification of Fires	
Response Actions Based on Type of Fire	
Wildfire Response	
Transportation Incidents	
First On-Scene Transportation (Road, Rail, Marine) Inci	dent Flowchart1
Loss. Theft or Unlawful Interference Reporting Flowcha	rt
Motor Vehicle Accidents	
Emergency Response Assistance Canada (ERAC) Plar	
CANUTEC – Canadian Transport Emergency Centre	
Dangerous Goods References	
TDG Reportable Quantities	
Rail Car Identification Chart	
Road Trailer Identification Chart	9
Table of Markings, Labels and Placards	
TDG 30 Day Follow-up Report Form	13
Weather and Natural Disasters	
Earthquake	
Floods	
Thunderstorm and Lightning Safety	
Tornados	
Winter Storms: Blizzards, Freezing Rain, Heavy Snow,	Blowing Snow7
After a Disaster	
Security Incidents	
Responding to threats	
Bomb threats	
Suspicious packages	5
Trespassing	7
Vandalism	
Terrorism	
Cyber-Attacks	
Animal Encounters	1
First Responders to Animal attacks	1
Bears	1
Cougars	
Large Hooved Animals (Ungulates)	
Rattle Snakes	7
Wolves	
Bees and Wasps	
EpiPens	



## **Public Protection Measures Flowchart**





## **Public Protection Measures**

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

All members of the public within the EPZ will be given the *Shelter-In-Place or Urgent Evacuation* message depending on the best public safety action for the circumstances. Ovintiv's Incident Commander and Public Protection Chief will make this determination.

### **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

If Shelter is implemented, continuous telephone contact with sheltered residents will be maintained until a safe evacuation can be conducted.

Refer to either PAGE 4 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".

#### **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





## **Public Protection Measures, continued**

### **Evacuation continued**

If a level 1 emergency is declared the following evacuation procedures will be implemented

- The Notification and Voluntary Evacuation Message may be delivered to members of the public within the EPZ at a Level 1 Emergency.
- Residents inside the identified EPZ with special needs, (e.g., without telephones, requiring transportation or evacuation assistance, experiencing a language barrier, or requesting early notification, etc.) will be notified by telephoners or rovers and offered voluntary evacuation.
- Operators of private and public facilities such as schools and businesses will be notified.
- Assess area population density inside the EPZ and surrounding area. Begin evacuation preparations and notifications as necessary if a large number of people may be impacted.
- Rovers will locate and advise any transients in the area and request they evacuate.
- For H<sub>2</sub>S or SO<sub>2</sub> emissions, a mobile air quality monitoring unit will respond and be positioned downwind of any gas release to report readings to the Public Protection Chief and/or the Operations Chief.

If for any reason the situation escalates to a Level 2 or 3 Emergency, then the appropriate Level 2 or 3 procedures will be followed.

The decision to proceed with this initial notification and voluntary evacuation will be made by the Incident Commander after careful consideration to ensure area users are not unnecessarily stressed.

The following Schools and Public Library fall within our defined EPZ. In the event a <u>Level 1 Emergency</u> is declared during school/library hours, those public facilities identified inside the EPZ will be contacted and evacuation preparations will be initialized as deemed necessary. Voluntary evacuation will be discussed.

La Glace Elementary School Valhalla Community School Valhalla Community Library

#### **Horse Lake First Nation**

The Horse Lake First Nation is inside the defined EPZ and will be contacted at a Level 1 Emergency to make preliminary plans to coordinate procedures to incorporate their assistance should evacuation be initiated. Ensure that adequate evacuation personnel and transportation are mobilized to handle a potentially large number of residents.

#### Horse Lake Town Site

Horse Lake Town site is inside the defined EPZ. Because it is classified as an Urban Centre the Local Disaster Services will assist with emergency procedures and a 1 ppm (1 hr) H<sub>2</sub>S ignition criteria applies.

#### La Glace

The Hamlet of La Glace is inside the defined EPZ and governed by the County of Grande Prairie. Because it is classified as an Urban Centre the Local Disaster Services will assist with emergency procedures and a 1 ppm (1 hr)  $H_2S$  ignition criteria applies.

#### Wembley

The town of Wembley is inside the defined EPZ. Because they are classified as Urban Centres the Local Disaster Services will assist with emergency procedures and a 1 ppm (1 hr) H<sub>2</sub>S ignition criteria applies.

If evacuation is implemented it will commence, beginning with residents, transients and other area users in locations that are downwind and/or in close proximity to the emergency site, and special needs residents will also receive priority notification if they have not been already evacuated at a Level 1 Emergency.



## **Public Protection Measures, continued**

### **Evacuation, continued**

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

If an emergency requires area isolation and/or evacuation, the Public Protection Chief will contact the principals of area schools and the appropriate area School Bus Coordinators to advise them of roadblock locations and affected students. Telephone numbers are listed in the applicable site sections.

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



## LEVEL 1, 2 or 3 EMERGENCY MESSAGE - STAY IN SHELTER

	15 15	[your name] of _[time, date] wit	Ovintiv calling from the th an important message for _	[facility/office name] at [resident name].
	Please c	ontact me at	[number] when	you receive this message."
Hello, is	this the		residence at	?
		(nan	ne)	(pnone number)
This is Please lis	sten carefully.	(your name)	calling from Ovintiv with an imp	ortant safety message.
We are i	responding to	a serious prob	olem in the area. All efforts a	re being made to solve the problem
For your sheltered	safety it is es indoors.	sential that you	gather everyone in the house, c	lose all windows and doors and remain
How man Is there a	ny people are i anyone outside	n your house rig who you <u>canno</u>	ht now?	No)
How man Is there a <i>If <u>YES</u> that yo</i>	ny people are i anyone outside : Determine ou will send so	n your house rig who you <u>canno</u> the location of a meone to find th	ht now?(Yes / I o <u>t</u> easily contact?(Yes / I nyone outside and assure the re nem as soon as possible.	No) esident
How man Is there a <i>If <u>YES</u> that yo</i> <u>Please:</u>	ny people are i inyone outside : Determine ou will send so	n your house rig who you <u>canno</u> the location of a meone to find th	ht now?(Yes / I of easily contact?(Yes / I nyone outside and assure the re nem as soon as possible.	No) esident
How man Is there a <i>If <u>YES</u> that yo</i> <u>Please:</u>	ny people are in anyone outside : Determine ou will send so Close (and	n your house rig who you <u>canno</u> the location of al meone to find th keep closed) all	ht now? <u>ot</u> easily contact?(Yes / / nyone outside and assure the re- nem as soon as possible. your windows and doors.	No) esident
How man Is there a <i>If <u>YES</u> that yo</i> <u>Please:</u>	in people are in inyone outside : Determine ou will send so Close (and If possible o stove f	n your house rig who you <u>canno</u> the location of a meone to find th keep closed) all shut off any exha ans, bathroom ve	ht now? <u>ot</u> easily contact?(Yes / / nyone outside and assure the re- nem as soon as possible. your windows and doors. aust fans, such as: ents, clothes dryer, air condition	No) esident ner or built-in vacuum systems
How man Is there a <i>If <u>YES</u> that yc</i> <u>Please:</u> •	iny people are in inyone outside <i>Determine</i> ou will send so Close (and If possible o stove f Extinguish	n your house rig who you <u>canno</u> the location of a meone to find th keep closed) all shut off any exha ans, bathroom vo the fire in your fi	ht now? at easily contact?(Yes / I nyone outside and assure the re- nem as soon as possible. your windows and doors. aust fans, such as: ents, clothes dryer, air condition re place.	No) esident ner or built-in vacuum systems
How man Is there a <i>If <u>YES</u> that yo</i> <u>Please:</u> • •	y people are innyone outside Determine ou will send so Close (and If possible o stove t Extinguish Go to the in	n your house rig who you <u>canno</u> the location of a meone to find th keep closed) all shut off any exha ans, bathroom ve the fire in your fin	ht now? <u>ot</u> easily contact?(Yes / / nyone outside and assure the re- erm as soon as possible. your windows and doors. aust fans, such as: ents, clothes dryer, air condition re place. puse away from any windows or	No) esident ner or built-in vacuum systems
How man Is there a <i>If <u>YES</u> that yo</i> <u>Please:</u> • • •	y people are innyone outside Determine ou will send so Close (and If possible stove f Extinguish Go to the in Do not leav	n your house rig who you <u>canno</u> the location of a meone to find th shut off any exha ans, bathroom ve the fire in your fi nterior of your house.	ht now? <u>ot</u> easily contact?(Yes / / nyone outside and assure the re- lem as soon as possible. your windows and doors. aust fans, such as: ents, clothes dryer, air condition re place. buse away from any windows or	No) esident ner or built-in vacuum systems <sup>-</sup> doors.
How man Is there a <i>If <u>YES</u> that yo</i> <u>Please:</u> • • •	ty people are in anyone outside Determine ou will send so Close (and If possible o stove f Extinguish Go to the in Do not leav Avoid using	n your house rig who you <u>canno</u> the location of a meone to find th keep closed) all shut off any exha ans, bathroom ve the fire in your fi nterior of your ho ve your house. g your telephone	ht now? <u>ot</u> easily contact?(Yes / / nyone outside and assure the re- em as soon as possible. your windows and doors. aust fans, such as: ents, clothes dryer, air condition re place. buse away from any windows or so that we can contact you aga	No) esident ner or built-in vacuum systems <sup>r</sup> doors. ain with additional information.
How man Is there a <i>If <u>YES</u> that yo</i> <u>Please:</u> • • • • • • • • • •	ay people are in anyone outside Determine ou will send so Close (and If possible o stove f Extinguish Go to the in Do not leav Avoid using	n your house rig who you <u>canno</u> the location of all meone to find the keep closed) all shut off any exha ans, bathroom ve the fire in your fil nterior of your house. g your telephone se instructions?	ht now? of easily contact?(Yes / / nyone outside and assure the re- lem as soon as possible. your windows and doors. aust fans, such as: ents, clothes dryer, air condition re place. buse away from any windows or so that we can contact you aga (Yes / No)	No) esident ner or built-in vacuum systems r doors. ain with additional information.
How man Is there a If <u>YES</u> that yo <u>Please:</u> • • • • • • • • • • • • • • • • • • •	in people are in anyone outside <i>Determine</i> <i>Determine</i> <i>Close (and</i> If possible <i>stove f</i> Extinguish Go to the in Do not leav Avoid using inderstand the you back with	n your house rig who you <u>canno</u> the location of all meone to find the keep closed) all shut off any exha ans, bathroom ve the fire in your fil neterior of your house. g your telephone se instructions? an update within	ht now?(Yes / / nyone outside and assure the re- nem as soon as possible. your windows and doors. aust fans, such as: ents, clothes dryer, air condition re place. buse away from any windows or so that we can contact you aga (Yes / No) n an hour. In the meantime, if y	No) esident ner or built-in vacuum systems doors. ain with additional information.





## LEVEL 1 EMERGENCY MESSAGE - <u>NOTIFICATION/VOLUNTARY</u> EVACUATION

"This is	[your name] of Ovinti [time, date] with an im	iv calling from the portant message for	[facility/office name] at [resident name].
Please	contact me at	[number] when	you receive this message."
Hello, is this the		residence at	?
	(name)		(phone number)
This is Please listen carefull	(your name) calling y.	from Ovintiv with an importa	nt safety message.
We are currently ex health or safety. Re As a precaution. vou	periencing operational di medial operations are ur and vour family have th	ifficulties in the area. At this nderway. e option of evacuating you	s time, there is no danger to you r residence at this time.
Do you wish to eva	cuate at this time?	_(Yes / No)	
Do you wish to eva <i>IF <u>YES</u>:</i> If you v	cuate at this time? vish to evacuate at this ti	(Yes / No) ime, go to our evacuation F (hall, centr	Reception Centre located at the re, office, hotel).
Do you wish to eva <i>IF <u>YES</u>: If you v</i> An Ov	cuate at this time? vish to evacuate at this ti intiv representative will o	(Yes / No) ime, go to our evacuation F (hall, centr greet you there and addres	Reception Centre located at the e, office, hotel). is your questions.
Do you wish to eva <i>IF <u>YES</u>: If you v</i> An Ov	cuate at this time? vish to evacuate at this ti intiv representative will • How many person	(Yes / No) ime, go to our evacuation F (hall, centr greet you there and addres s are at your residence right	Reception Centre located at the re, office, hotel). rs your questions. ht now?
Do you wish to eva <i>IF <u>YES</u>:</i> If you v An Ov	cuate at this time? vish to evacuate at this ti intiv representative will • How many person • Do you have trans	(Yes / No) ime, go to our evacuation F (hall, centr greet you there and addres s are at your residence rigi portation?(Yes / No	Reception Centre located at the re, office, hotel). is your questions. ht now? )
Do you wish to eva <i>IF <u>YES</u>:</i> If you v An Ov	cuate at this time? vish to evacuate at this ti intiv representative will g • How many person • Do you have trans • Will you require as	(Yes / No) ime, go to our evacuation F (hall, centr greet you there and addres s are at your residence righ portation? (Yes / No ssistance? (Yes / No	Reception Centre located at the e, office, hotel). s your questions. ht now? ) o)
Do you wish to eva <i>IF <u>YES</u>: If you v</i> An Ov <i>If assistan</i> <i>them that</i>	cuate at this time? vish to evacuate at this tivintiv representative will g • How many person • Do you have trans • Will you require as ce is need, advise them to you will send someone to p	(Yes / No) ime, go to our evacuation F (hall, centr greet you there and addres s are at your residence righ portation? (Yes / No ssistance? (Yes / No close their windows and doc pick them up.	Reception Centre located at the re, office, hotel). is your questions. ht now? ) o) ors and remain indoors. Assure
Do you wish to eva <i>IF <u>YES</u>: If you v</i> An Ov <i>If assistan</i> <i>them that</i> <i>Action</i>	<ul> <li>cuate at this time?</li> <li>vish to evacuate at this timinative representative will generate and the second sec</li></ul>	(Yes / No) ime, go to our evacuation F (hall, centr greet you there and addres s are at your residence righ portation? (Yes / No ssistance? (Yes / No close their windows and doc pick them up.	Reception Centre located at the re, office, hotel). is your questions. ht now? ) o) ors and remain indoors. Assure
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## LEVEL 2 or 3 EMERGENCY MESSAGE - URGENT EVACUATION

"This is	[your name] of Ovin [time, date] with an ir	tiv calling from the nportant message for	[facility/office name] at [resident name].
Plea	ase contact me at	[number] when y	you receive this message."
lello, is this the	(name)	residence at	? (phone number)
his is lease listen carefull	( <i>your name</i> ) calling f y.	from Ovintiv with an importa	nt safety message.
Ve are responding to or your safety, yo	o an emergency in the area ou must leave immediately (hall, centri	a. / and go to our evacuation re, office, hotel). An Ovintiv	Reception Centre located at the representative will greet you there
Ve are responding to for your safety, yound address your que s there anyone outsi If <u>YES</u> : Determ that y	o an emergency in the area ou must leave immediately (hall, centri- estions. de who you <u>cannot</u> easily nine the location of anyo you will send someone to	a. y and go to our evacuation re, office, hotel). An Ovintiv contact? (Yes / No) ne outside and assure the find them as soon as pos	Reception Centre located at the representative will greet you there resident sible.
Ve are responding to for your safety, you nd address your que s there anyone outsi If <u>YES</u> : Detern that y that y oo you have your ow If <u>NO</u> : Advis Assi	o an emergency in the area ou must leave immediately (hall, centri- estions. de who you <u>cannot</u> easily mine the location of anyo rou will send someone to Action this immediat on transportation? e them to close their wind ure them that you will ser Action this immedia	a. y and go to our evacuation re, office, hotel). An Ovintiv contact?(Yes / No) me outside and assure the find them as soon as pos- tely by notifying your Super Yes / No) dows and doors and remain to someone to pick them using the someone to pick the someone to pi	Reception Centre located at the representative will greet you there resident sible. ervisor.
Ve are responding to or your safety, you nd address your que there anyone outsi If <u>YES</u> : Detern that y to you have your ow If <u>NO</u> : Advis Assu to you understand the re you leaving imme	o an emergency in the area ou must leave immediately (hall, centri- estions. de who you <u>cannot</u> easily mine the location of anyo rou will send someone to Action this immediat on transportation? e them to close their wind ure them that you will ser Action this immedia hese instructions?(	a. y and go to our evacuation re, office, hotel). An Ovintiv contact?(Yes / No) me outside and assure the find them as soon as pos- tely by notifying your Super Yes / No) dows and doors and remain to someone to pick them used tely. Yes / No)	Reception Centre located at the representative will greet you there resident sible. ervisor.





## Public Protection Measures, continued Establishing and Isolating a Perimeter



#### 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 raidenees

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

#### 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 area 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



6. 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.

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## **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 H<sub>2</sub>S / 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.





**Revised November 2021** 

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Grande Prairie Emergency Response Plan



## **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, H<sub>2</sub>S, SO<sub>2</sub>, 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 H<sub>2</sub>S.
- 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 H<sub>2</sub>S from incomplete combustion, as well as SO<sub>2</sub>.
- 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.							
100.000	Eliminate potential flammable vapour ignition sources.							
Control the source of the spill	Initiate temporary repairs to stop the leak.							
5pm	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	Track oil movement and develop spill trajectories.							
areas	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	Initiate spill response Incident Action Plan.						
response enort	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.						
contain and recover 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.						
and a second second	Conduct appropriate shoreline cleanup efforts.						
Remove oil from	Clean oiled structures.						
impacted areas	Clean oiled equipment.						
	Provide forum to obtain stakeholder input and concerns.						
Keep stakeholders	Provide stakeholders with details of response actions.						
activities	Identify stakeholder concerns and issues and address as practical.						
	Provide regulatory bodies details of response actions.						
Contractor and	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.
- 2. 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 (<u>http://www.wcss.ab.ca</u>)



## 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





Upstream Petroleum Industry – Spill & Release Reporting Requirements

# All Spills must be reported to your Ovintiv EHS Advisor (IMS)

	*** If the released	Minimum Repo product reaches off-site all releases	rtable Quantity must be reported, regardless of a	n minimum quantity					
Any rele	Alberta (s ease that which may cause a	ee Note 1) an adverse effect must be reported.	British Colu All releases must be reported, regardless of "polluting substanc	mbia (see Note 2) a minimum reportable quantity, if the release of a e <sup>*</sup> is causing "pollution".					
Pr	oduct	On-Site	On-Site	Product					
Unrefined pro Condensate), Emu Produc Any/All unre General Oilfield	oducts (Crude Oil, Drilling Mud (all), ulsions, ced Water efined products, Wastes (See Note 6)	2 m <sup>3</sup>	100 L	Unrefined products (Crude Oil, Condensate), Drilling Mud (all), Emulsions, "Waste" Lube Oil, "Waste" Glycols, Diesel Fuel, Gasoline <u>and</u> Other Refined Flammable Liquids <i>(Class 3)</i> Methanol					
Diesel Fuel, Gasoline <u>and</u> Other Refined Flammable Liquids <i>(Class 3)</i> Methanol		200 L	200 L	Produced Water					
Fres	h Water	May be reportable depending on volumes/mechanism of failure (e.g. berm or AWSS breach) impacts (sediment or erosion offsite) and whether the water was tested prior.	Unintentional release of 10 m3 or if there are impacts (sediment or erosion offsite) and whether the water was tested prior.	Fresh Water					
Pipeline Incidents	(leak, break, contact)	Any Licensed Pipeline	Any Permitted Pipeline	Pipeline Incidents (leak, break, contact)					
Natural Gas (Flare	and Vent) -								
Natural Gas	30 e3m3 for any rele intentional venting rel	ease caused by a leak or break. For other fer to Directive 060 section 8. (See Note 5)	10 kg ( if breakage in a pipeline or fitting opera uncontrolled release o	0.012 E <sup>3</sup> M <sup>3</sup> ) ted above 100 psi and results in a sudden & of natural gas. (See Note 7)					
Permit/ Approval Conditions	F	Report as per approval	Report	as per permit					
Solution Gas	Per Table 1 of Dire notifications (AEI	ctive 060. Potential inlet reductions and R and resident) after 4 hours via DDS.							
Temporary and gas Facility flaring	Per Table 2 of Direc resident) after 4 h	tive 060. Notifications required (AER and nours or greater than 30 E <sup>3</sup> M <sup>3</sup> via DDS.	Notify the OGC if non-routine flaring event exceeds 10 e3m3. For resident notification guidelines refer to Section 6 of the Flaring and Venting Reduction Guidelines						
Report to:									
Product Releases and incidents	Alberta Ene Oral report immediate requested. Report any	rgy Regulator 1-800-222-6514 ely to above. A written 7-day report may be pipeline or off-site release to AER and notify landowner.	B.C. Oil & Gas Com Emergency Managemen Oral report immediately to above. Written days or 30 days as required by OGC Section 4.8. Minor incidents must be submission through KERMIT. Form D (P greater emergencies or any	nmission (OGC) via the t BC (EMBC) 1-800-663-3456 report may be required by the OGC within 14 Emergency Response Plan Requirements, e submitted within 24 hours by electronic ost Incident Report) required for all Level 1 or pipeline incident within 60 days					
Releases during transport (Endanger or could endanger public safety)	Releases during tran local Police and Written report withi regulated product rele consignor of the dange of the road vehicle; an that has suffered a ca	sport should be immediately reported to 1-800-272-9600 (AB Transportation) In 30 days to Transport Canada for TDG eases. TDGR also requires reporting to the erous goods; the owner, lessee or charterer ad, for an accidental release from a cylinder atastrophic failure, CANUTEC at 613-996- 6666.	greater emergencies or any pipeline incident within 60 days         Comparison         Emergency Management BC (EMBC) 1-800-663-3456         Written report may be required by the MOE. Written report within 30 days to Trans         Canada for TDG regulated product releases. TDGR also requires reporting to consignor of the dangerous goods; the owner, lessee or charterer of the road version and, for an accidental release from a cylinder that has suffered a failure CANUTI 613-996-6666.						
Federal Regulated Releases	<ul> <li>Report to Environ frequented by fis</li> <li>Canada Energy I as further descrit any uncontrolled through the Onlir crossings also re Reporting Summ</li> <li>Radioactive relea Western Regional</li> </ul>	nment Canada 1-780-499-2432 for any release h. Regulator (CER) regulated pipelines require imm bed in the CER Event Reporting Guidelines. Re release of sour natural gas requires immediate he Event Reporting System (OERS). Unauthoriz equires immediate reporting. For any questions of ary. asses to be immediately reported to any CNSC ( al Office 403-292-5181.	of a deleterious substance directly or indirect mediate reporting of all incidents as defined in leases of LVP in excess of 1.5 m3, sweet nat reporting via the Transportation Safety Boar zed activity such as ground disturbance, cons contact the Ovintiv Regulatory Compliance G Canadian Nuclear Safety Commission) office	tly (including through groundwater) into water the Onshore Production Regulations (OPR) & tural gas or HVP in excess of 30 103 m3 or d (TSB) Hotline at (819) 997-7887 and struction activity or nonauthorized vehicle iroup or for a copy of the CER Event and a full report filed within 21 days. CNSC					
Notes:									
1 In Albe buildin reporte	erta: An unrefined produc ig or secondary containm ed, regardless of minimal	t spill is reportable above the threshold quantity ent) while refined product spills must be into the reportable quantities, if the release has caused by the present.	(2 m3) even if the release does not contact e environment – This is due to applicable act l, is causing or may cause an adverse effect.	the environment (e.g. contained within a /regulation wording. All releases must be An "adverse effect" is defined as impairment					
2 In B.C	.: All releases must be re substance, whether gase	ported, regardless of a minimum reportable qua pous, liquid, or solid that is capable of causing p	antity, if the release of a "polluting substance" follution, if it were to escape to air, or be spille	' is causing "pollution", "Polluting substance" ed or escape onto land or into a water body.					

3	loading, unloading, packing or unpacking dangerous goods in a means of containment for the purposes of, in the course of or following transportation, includes storage in the course of transportation also Including inside buildings and secondary containment. Transportation does not include by pipelines.
4	Waste and TDG classification is variable. Refer to the product's MSDS to determine TDG classification; in particular amines and inhibitors can be a variety of classifications (i.e. corrosive, flammable etc.). Refer to the <i>Ovintiv Shipping Management Chart</i> for waste information. Some products may have to be reported by their secondary TDG classification (e.g. methanol). For Alberta refer also to the Table in Part 8, Section 8 of the TDG Regulations. For BC refer also to the Spill Reporting Regulations. Produced water, lube oil and hydraulic oil are not typically TDG regulated products unless it contains a regulated component(s).
5	Additional AER immediate reporting requirements include: any fire where the loss exceeds 2 m3 of oil or 30 e3m3 of gas or fire caused by a flare stack or any event that causes the activation of a level 1 emergency or higher; also any unexplained loss or theft of oil or condensate exceeding 2 m3, any damage to or uncontrolled flow from a wellhead or any smoke emissions that may result in public concerns; also any gas release exceeding 30 e3m3 per Directive 60 Table 1 and Table 2 or any casing leak or failure; any contact leak or break in a pipeline; any leak in a pipeline during pressure testing. Also notify the AER of gas plant turnaround at least 24 hours in advance. Also note that venting is not considered an acceptable alternative to flaring and gas should be burned if the volumes and flow rates will support stable combustion. Venting should not result in an unacceptable fire or explosion hazard and should not result in off-lease odors (consult EHS staff to discuss whether odors require notification). Also note that all flared and vented volumes should be measured or estimated and reported to the AER via ACTS/Production Accounting if the volumes are greater than 0.1 e3m3
6	AER definition of an oilfield waste is "An unwanted substance (by the generator) or mixture of substances that results from the construction, operation or reclamation of a well site, oil and gas battery, gas plant, compressor station, crude oil terminal, pipeline, gas gathering system, heavy oil site, oil sands site or related facility.
7	Report to the OGC any damage or malfunction likely to cause spillage that could be a risk to the public safety or the environment including all pipeline incidents. Well control incidents should be reported to EMBC and the OGC directly at 1-250-794-5200. Spills and incidents that do not reach an emergency level 1, 2 or 3 (minor incident score 2 or less) also require reporting on the On-line Minor Incident Reporting system within 24 hours (Form A). Any level 1, 2 or 3 emergency incidents (including any pipeline related incidents) must be reported immediately to EMBC AND A Form D completed within 60 days.

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hydrocarbons, drilling fluids, invert mud etc. which contain toxic substances must be reported at 5 L

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Version 2.1, March 31, 2020 This chart is an unofficial consolidation of specific provincial and federal spill reporting regulations. While every attempt has been made to ensure the accuracy and reliability of the contents of this chart, Wotherspoon Environmental Inc. disclaims any liability and responsibility for its accuracy, loss or damage howsoever occasioned resulting from the use of any of the information in this chart or for the violation of any regulation with which the information may conflict. This chart identifies initial notification requirements; it does not necessarily identify all specific requirements for follow-up written reports or the need and required content of Emergency Response Plans. In all cases, consultation should be made with the product MSDS, the applicable regulation (and/ or license, approval or permit) and government department for specific details on all aspects of emergency response and release notification. Product examples are provided to assist with interpr and must not be relied on to be complete and correct for all releases. tion



# **Spill Priorities:**

- Establish site control
- □ Determine and control source of spill
- □ Contain the spill and prevent it from spreading
- □ Contact your supervisor
- **Contact Environmental advisor** 
  - $_{\odot}\,$  Report to Regulator if required and coordinate cleanup
  - $\circ\,$  Coordinate Waste handling, transportation and disposal
  - o Record and compile information/reporting regarding the spill
- Clean up spill
- **Enter into IMS**

		-	-		-	-		60	minu	te ga:	s rele	ased	(m3)	-	-		-	-	-	-
	100	100	147	188	225	260	382	509	636	763	889	1016	1143	1270	1397	1523	1650	1777	1904	203
	75	75	110	140	169	195	286	381	475	571	666	760	856	951	1045	1140	1235	1330	1425	152
1/4 inch	50	50	73	94	112	130	191	254	317	380	443	507	570	633	696	760	823	886	949	101
% open	25	25	37	47	56	65	96	127	159	191	222	254	286	317	349	381	412	444	476	508
	10	10	15	19	22	26	38	51	64	76	89	102	114	127	140	152	165	178	190	203
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Version 2.1, March 31, 2020

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## **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.

	Ground	
	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 lope is present. It is likely to collect in depressions and watercourses.
Identify resources at risk:	<ul> <li>Examples of resources needing protection include:</li> <li>Non-vegetated: mud/silt; sand; pebble/boulders.</li> <li>Vegetated: grassland; forest; wetland.</li> </ul>	Examples of resources needing protection include: • Drainage systems • Watercourses • Utilities
Response Considerations:	<ul> <li>Penetration of soil below the uppermost layer must be minimized.</li> <li>Prevent oil from entering areas with ground water.</li> <li>Drains and inlets should be blocked.</li> </ul>	<ul> <li>Oil should be contained as soon as possible.</li> <li>Any flowing oil should be intercepted quickly to prevent further contamination of the surface.</li> <li>Drains and inlets should be blocked.</li> </ul>

#### Permeable Ground

#### Impermeable Ground





# **Containment and Recovery, continued**

	Water	
	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:	<ul> <li>Prevent oil from spreading beyond the water body and contaminating further surfaces.</li> <li>Consider impact of oil moving into vegetated areas such, as reed beds. This will act to trap oil making it more difficult to recover.</li> </ul>	<ul> <li>Oil should be contained as soon as possible and collected.</li> <li>Intercept oil flowing downstream to prevent further contamination, while protecting resources at risk.</li> </ul>

Static 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.



## **Containment and Recovery, continued**

Surface Type	Capacity (Itrs/m <sup>3</sup> )
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.




# **Containment and Recovery, continued**

#### 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.





# Containment and Recovery, continued

#### **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.





# 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.





# 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.	<ul> <li>Shovels</li> <li>Buckets</li> <li>Sorbents</li> <li>(10-20) labourers</li> </ul>	<ul> <li>Can be used on all habitat types</li> <li>Light to moderate oiling conditions for stranded oil or heavy oils that have formed semi-solid to solid masses</li> <li>In areas where roosting or birthing animals cannot or should not be disturbed.</li> </ul>	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.	<ul> <li>Motor grader,</li> <li>Backhoe</li> <li>Dump truck</li> <li>Elevating scrapers</li> <li>(2-4) labourers</li> <li>Equipment operators</li> </ul>	<ul> <li>On land, wherever surface sediments are accessible to heavy equipment</li> <li>Large amounts of oiled materials.</li> </ul>	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.	<ul> <li>Hand tools</li> <li>Sorbents</li> <li>(2-10) labourers</li> </ul>	<ul> <li>Can be used on all habitat types</li> <li>Free-floating oil close to shore or stranded on shore, secondary treatment method after gross oil removal</li> <li>Sensitive areas where access is restricted.</li> </ul>	<ul> <li>Sediment disturbance and erosion potential</li> <li>Trampling of vegetation and organisms</li> <li>Foot traffic can work oil deeper into soft sediments.</li> </ul>
Vacuum / Pumps / Skimmers	Pumps, vacuum trucks, skimmers are used to remove oil accumulations from land or relatively thick floating layers from the water.	<ul> <li>(1-2) - 50 to 100 bbl vacuum trucks w/ hoses</li> <li>(1-2) nozzle screens or skimmer heads</li> <li>(2-6) labourers</li> <li>truck operators</li> </ul>	<ul> <li>Can be used on all habitat types</li> <li>Stranded oil on the substrate</li> <li>Shoreline access points.</li> </ul>	<ul> <li>Typically, does not remove all oil</li> <li>Can remove some surface organisms, sediments, and vegetation.</li> </ul>
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.	<ul> <li>vater at used to sa to to for pumping systems</li> <li>(1) - 100 ft perforated header hose per system</li> <li>(1) - 100 ft perforated header hose per system</li> <li>(1-2) - 200 ft containment booms per system</li> <li>(1) oil recovery device per system</li> <li>(6-8) labourers per system</li> </ul>		<ul> <li>Can impact clean down gradient areas</li> <li>Can displace some surface organisms if present</li> <li>Sediments transported into water can affect water quality.</li> </ul>



# Containment and Recovery, continued

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.	<ul> <li>(1-5) - 189 to 380 lpm / 689 kpa pumping systems with manifold</li> <li>(1-4) - 30 m hoses and nozzles per system</li> <li>(1-2) - 60 m containment booms per system</li> <li>(1) oil recovery device per system</li> <li>(8-10) labourers per system</li> </ul>	<ul> <li>Substrates, riprap, and solid man-made structures</li> <li>Oil stranded onshore</li> <li>Floating oil in shallow areas.</li> </ul>	<ul> <li>Can impact clean down gradient areas</li> <li>Will displace many surface organisms if present</li> <li>Sediments transported into water can affect water quality</li> <li>Hot water can be lethal to many organisms</li> <li>Can increase oil penetration depth.</li> </ul>
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.	<ul> <li>(1-5) - 1,200 to 4,000 psi units with hose and spray wand</li> <li>(1-2) - 30 m containment booms per unit</li> <li>(1) oil recovery device per unit</li> <li>(2-4) labourers per unit</li> </ul>	<ul> <li>Bedrock, man-made structures, and gravel substrates</li> <li>When low-pressure flushing is not effective</li> <li>Directed water jet can remove oil from hard-to- reach sites.</li> </ul>	<ul> <li>Will remove most organisms if present</li> <li>Can damage surface being cleaned</li> <li>Can affect clean down gradient or nearby areas.</li> </ul>
Sediment Tilling	Mechanical equipment or hand tools are used to till lightly to moderately oiled surface sediments to maximize natural degradation processes.	<ul> <li>(1) tractor fitted with tines, dicer, ripper blades, etc., or</li> <li>(1-4) rototillers</li> <li>hand tools</li> <li>(2-10) labourers</li> </ul>	<ul> <li>Any sedimentary substrate that can support heavy equipment</li> <li>Sand and gravel beaches with subsurface oil</li> <li>Where sediment is stained or lightly oiled</li> <li>Were oil is stranded above normal high waterline.</li> </ul>	<ul> <li>Significant amounts of oil can remain on the shoreline for extended periods of time</li> <li>Disturbs surface sediments and organisms.</li> </ul>
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.	<ul> <li>(1) set of fire control equipment</li> <li>(2-4) fans</li> <li>(1) supply of combustion promoter</li> <li>(2-4) labourers</li> </ul>	<ul> <li>On most habitats except dry muddy substrates where heat may impact the biological productivity of the habitat</li> <li>Where heavily oiled items are difficult or impossible to move</li> <li>Many potential applications on ice.</li> </ul>	<ul> <li>Heat may impact local near-surface organisms</li> <li>Substantial smoke may be generated</li> <li>Heat may impact adjacent vegetation.</li> </ul>
Natural Recovery	No action is taken, and oil is allowed to degrade naturally	None required	<ul> <li>All habitat types</li> <li>When natural removal rates are fast</li> <li>Oiling is light</li> <li>Access is severely restricted or dangerous to cleanup crews</li> <li>When cleanup actions will do more harm than natural removal</li> </ul>	<ul> <li>Oil may persist for significant periods of time</li> <li>Remobilized oil or sheens may impact other areas</li> <li>Higher probability of impacting wildlife.</li> </ul>

# SORBENTS

H2Safety

# Objectives

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

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.

# Safety

- Identify hazards and complete a site safety plan.
- Onsider toxic and flammable vapours.
- Adjacent infrastructure such as powerlines, pipelines, and underground services.
- Waders, safety harness, line and PFD 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.
- Onsider air quality issues and proximity of stakeholders.



# Equipment / Resources

Sorbents

bags Gloves

Waste disposal

# Personnel

- Supervisor / lead
  - Site safety
  - Labourers

# Procedure

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





#### SORBENT PADS



#### SORBENT BOOMS

# **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

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.

H2Safety

# Objectives

- O 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.
- O Diversion of surface flows from impacted area.

# Safety

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

# **Environmental Consideration**

0

- 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.
- Insure 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
- I Plastic sheeting
- Sorbents
- Vacuum truck / portable vacuum unit

# Personnel

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

# Procedure

- 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.











SURFACE FLOW DIVERSION

# TRENCHES AND BELL HOLES

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.
- O To stop spilled product where a significant containment capacity is required on a slope.



# Safety

- Identify hazards and complete a site safety plan.
- O Consider toxic and flammable vapours.
- Adjacent infrastructure such as powerlines, pipelines, and underground services.
- O 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.
- Outilize low lying areas to minimize depth of excavations.
- Keep trench depth at a minimum to prevent further sub-surface or groundwater impacts.

HoSafety

- 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
- Ocontainment booms
- Sorbents
- Hand lines



# Personnel

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

# Procedure

- 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.
- O Consider 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



# Procedure

- 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

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.

H2Safety

# Objectives

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



Safety

- Identify hazards and complete a site safety plan. 0
- 0 Consider toxic and flammable vapours.
- 0 Adjacent infrastructure such as powerlines, pipelines, and underground services.
  - Establish communications in remote areas.



- 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

- 0 Track hoe
- 0 Sorbents
- Shovels 0
- Earthen materials or sandbags 0
- 0 Vacuum truck / portable vacuum unit
- 0 Skimmer
- Temporary storage 0
- Plywood, stakes, nails 0

# Personnel

- Track hoe operator 0
- Vacuum operator 0
- Supervisor / lead 0
- Site safety
- 0 Labourers

0

- Using earthen materials or sandbags, completely block the culvert or,
- 0 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. 0
- 0 Utilize vacuum unit or skimmer to recover pooled fluids and dispose at appropriate location.
- 0 Utilize containment boom to protect banks from oil impacts.



# Procedure



# BOOM DEPLOYMENT

H2Safety

# 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.



6 - 24	8 - 32
3:1	4:1
1,500	5,000
60° 45°	30
	6-24 3:1 1,500 50° 45° 5 kph 2.0 k

0.9 mph 1.0 mph 1.2 mph

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.

# Shore Seal Boom

- Provides an effective barrier to control the spread of 0 oil in the critical region where water meets the shoreline.
- 0 A floating barrier with integral water bags that provide an effective seal when grounded.
- 0 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.
- 0 Shore seal boom can adjust to fluctuating water levels.







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 <mark>d</mark> egrees
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:

- O The slower the current and deeper the water, the more effective the containment and recovery operations will be.
- O Chose a location where the current is directed towards the recovery area.
- O Consider access and staging when selecting a recovery location.
- On larger watercourses chose a location that is on the side as the spill.
- O Boom should be a straight as possible to defect oil to recovery areas.
- Ø Boom angle is critical for ongoing maintenance of containment and recovery operations.
- 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.
  - 0 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.
  - Boom 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.



PORTABLE VACUUM UNIT

# Temporary Storage

- Recovered oil can be critical to the success of a spill response. Temporary storage tanks are usually fabric, for storage and portability.
- Observe the server of the s
- 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:
  - Ensuring all equipment and locations are free of any pockets of fire, smoke and / or toxic gases.
  - Ensuring all equipment and debris are removed from offices and / or public areas.
  - Cordoning off the incident area to isolate any remaining hazards.
  - 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.
- 2. Coordinate the deactivation of all emergency response operations, personnel, equipment and incident areas.
- 3. 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.
- 6. 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.

Within 30 days of the end of an incident, a Licensee must file with the Provincial Agency, National Energy Board (NEB), and / or the Transportation Safety Board (TSB), an Operator Incident Summary Report structured as outlined by the Provincial / Federal Agency. After reviewing the Operator Incident Summary Report, the Provincial and / or Federal agency may require that the licensee attend a meeting to further discuss the incident.

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



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



## **Medical Emergencies, continued**

#### 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.



## **Medical Emergencies, continued**

#### 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.



## **Medical Emergencies, continued**

#### **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



# **Medical Emergencies, continued**

#### **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.



#### **Medical Emergencies, continued**

#### 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**



Section 4: Emergency Response Procedures

**GRANDE PRAIRIE EMERGENCY RESPONSE PLAN** 

#### A: Considerations for Air MEDEVAC

Patient requires critical care life support during transport that is not available

B 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.

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

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

Mechanism of injury (and time of injury if known)

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.

Vhen is MEDEVAC transport scheduled to arrive?:

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

f transport doesn't arrive, or if no updates are heard, what time will we contact

#### **Emergency MEDEVAC Phone Numbers**

#### PROVINCIAL AIR AMBULANCE:

British Columbia Saskatchewan

800-661-3822 911 800-689-6559 888-782-8247

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

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GRANDE PRAIRIE EMERGENCY RESPONSE PLAN



## **Responder Safety**

#### Site Safety

Response personnel must stay out of the hazard area until the hazards are identified and assessed. All responders must evaluate potential site hazards including ignition sources or vapours gathering in low-lying areas such as ditches, trenches, and forested areas. The nature of a hazard will influence the responses. Therefore, the following characteristics about the hazard **must** be considered:

- The quantity and type of product involved.
- The potential for the situation to escalate.
- The location of the incident, the time of day and the weather conditions.
- Actual and perceived danger to responders, the public and the environment.
- The number of responders and their training.
- The availability of response equipment.
- The availability of external support, e.g. ambulances, police, fire fighters and mutual aid.

Responders **must** approach an incident site that may have gases or explosive vapours from an upwind or crosswind direction. They should inspect the site from a distance (using binoculars if possible) if hazards have not been assessed. When on-site, responders must take the following precautions:

- Identify safe escape routes away from hazardous areas.
- Continue to assess the related hazards, e.g. toxic vapours, fire or explosion hazards.
- Protect themselves and others (responders and public) before initiating control and containment operations.
- Do not allow anyone, including first responders such as police, fire fighters or ambulance attendants to enter the hazard area unless they are properly trained and equipped with personal protective equipment.
- Avoid extinguishing an ignited hydrocarbon release if the supply cannot be stopped.
- Only attempt fire control on small fires. Extensive fires or uncontrolled facility fires must be dealt with by external firefighting professionals. Responders must not attempt to battle a fire without adequate firefighting equipment, training, and backup personnel.
- Advise fire authorities when a company facility is threatened by an external fire. They should also be made aware of dangerous products or flammable hazards at the facility, such as pressurized NGL vessels, chemical and fuel storage.

Consider an outside expert when necessary. Well control, for example, is a specialty requiring specific experience, equipment, and procedures.



# **Responder Safety, continued**

#### **On-Site Work Areas**

The On-Site Group Supervisor may choose to separate the site into three distinct areas to clearly identify the high-risk areas and to reduce the hazards to the on-site responders. The three areas could be defined as the safe area, the hazardous area, and the decontamination area.

#### Hazardous Area (Hot Zone)

Extreme caution and planning must be undertaken when entering the hazardous area. Access to and from the hazardous area will be controlled. Only personnel with appropriate personal protective equipment, training and an understanding of the specific response and control procedures will be allowed into the hazardous area. An example is confined space entry and rescue. Prior to entry into the hazardous area, all personnel should fully understand the goals, the method of on-site responder communication and the rescue plan.

The following guidelines help the On-Site Group Supervisor to determine the hazardous area. An area is considered hazardous if any of the following conditions exist:

- Combustible gas reading of 10% LEL or greater
- H<sub>2</sub>S gas reading of 15 ppm or greater for 15 minutes
- SO<sub>2</sub> readings of 5 ppm or greater for 15 minutes
- Oxygen content of less than 19.5% or greater than 22%
- Presence of organic and inorganic vapours / gases and liquids (consult Safety Data Sheets (SDS) for toxicity data)
- An area the On-Site Group Supervisor deems to be hazardous, such as the area surrounding a fire or spill

The On-Site Group Supervisor will consider the following on-site conditions when determining the size of the hazardous area:

- The location of access routes, power lines, pipelines, fire, and explosion hazards
- Areas where vapours are likely to accumulate such a downwind areas, low areas, confined spaces
- Site stability, e.g. steep slopes, overhanging banks, unstable soil, thin ice
- Weather conditions
- The toxicity and evacuation data for the product involved (Refer to SDS)

#### **Decontamination Area (Warm Zone)**

Personnel responding to hazardous substance emergencies may become contaminated in several ways:

- Contacting vapours, gases, mists, or particulate in the air.
- Being splashed by materials while sampling or opening a container.
- Walking through puddles of liquids or on contaminated soil.
- Using contaminated instruments or equipment.



# **Responder Safety, continued**

Decontamination is the complete or partial removal or neutralization of the harmful contamination chemicals. Some equipment will not withstand a proper decontamination process and therefore must be destroyed. Site safety personnel will recommend to the On-Site Group Supervisor whether clothing, instruments and equipment should be decontaminated or destroyed.

The decontamination area is usually set up in response to a hazardous material spill and when decontamination of personnel and equipment is required. The decontamination area buffers the designated hazardous and safe areas. Decontamination areas should be set up in areas that are not affected by the onsite hazard. Any contaminated personnel and equipment leaving the hazardous area must be decontaminated in the decontamination area before continuing to the safe area.

Equipment, solutions, and procedures required for decontamination depend on the type and degree of contamination. All hazardous waste must be disposed of according to applicable waste management regulations.

#### Safe Area (Cold Zone)

The safe area is an area verified by the On-Site Group Supervisor to be safe. The On-site Command Post (OSCP) is located in the safe area. The safe area must be continually monitored and evaluated to confirm its safety. If there is any concern about the area's safety, the On-site Command Post will relocate to an area proven to be safe.





# Responder Safety, continued

#### Working Alone

A Working Alone Procedure and a working alone hazard assessment are legislated responsibilities of every employer. One working alone hazard assessment may fit multiple work sites providing the working conditions are the same. These assessments must be available for the workers to review. All working alone hazards shall be mitigated to a reasonable and practical level of risk. Every worker who works alone must have a designated "Working Alone Contact". Activities, dates, and times of contact shall be documented and filed. The "Working Alone Contact" may be a co-worker, a 24/7 facility control room, a third-party emergency answering service, or automated working alone tracking system.

#### Application

Each operating area will develop a Site-Specific Procedure (SSP) for Working Alone; the SSP will be documented, approved by management, and signed by every company employee or contract employee working in that operating area. Service suppliers will be expected to provide their own "Working Alone Programs" but due to communication limitations or emergency response capabilities they may need to utilize the company Working Alone Program, this temporary change of "Working Alone Contact" should be documented on the safe work permit.

#### **Potential Hazards**

- Loss of communication needed for requesting assistance;
- Delays in reporting times;
- Injury requiring assistance; and
- Transportation problems.

#### **Equipment and Training Requirements**

- The Working Alone Procedure and Response Plan for the overdue worker are to be a specific agenda item for safety meetings to ensure a suitable level of acceptance and involvement from all personnel is achieved, and
- Supervisors and members of the management shall discuss the plan with workers that participate in field activities, to ensure a high level of awareness and preparedness is maintained at all times.

#### Low Risk Working Alone Procedure

(Sweet Gas Operations, daylight hours, normal weather conditions)

- The employee should notify their "Working Alone Contact" of check-in times and locations of work;
- If multiple travel routes are an option, then the route selected will also be noted
- If an employee's arrival at a check-in location is delayed by more than one (1) hour, the employee should notify their "Working Alone Contact" of the new estimated time of arrival.


# **Responder Safety, continued**

### **High Risk Working Alone Procedure**

(Sour Gas Operations, Call-outs, Adverse Weather Conditions)

- The employee should notify their "Working Alone Contact" prior to departure, and advise them contact of the estimated time of arrival at location;
- The employee should notify their "Working Alone Contact" of arrival at location;
- The employee should assess the problem or job scope, notify their contact, discuss the nature of the problem or job, work procedure to be used, and any additional required safeguards, and provide an estimation of how long they will be at the location;
- The employee should notify their "Working Alone Contact" when they are finished and ready to leave the location and estimated time of arrival at next check point, base or home; and
- The employee should notify their "Working Alone Contact" of arrival at next checkpoint, base or home.
- If the employee is delayed or expects to be delayed arriving at their next check-in point by more than one (1) hour, the employee should notify their "Working Alone Contact" of amended estimated time of arrival.
- During adverse weather conditions the employee should notify their "Working Alone Contact" of the exact route to be followed; shorter check-in time intervals are recommended.

Note: Every worker has both the right and responsibility to refuse unsafe work.

### **Overdue Worker Response Plan**

- The Overdue Worker Response Plan shall be initiated when a worker is one (1) hour overdue, (shorter grace periods may be instituted during bad weather or at high risk worksites), and
- After the one (1) hour grace period has expired, the worker's "Working Alone Contact" shall:
  - Attempt to contact the overdue worker by cell phone or radio; immediately notify the worker's supervisor of the circumstances;
- The supervisor will discuss options with the "Working Alone Contact" and together they will agree on an action plan; and
- The action plan may include any or all of the following:
  - Continue attempts to contact the overdue worker by cell phone or radio;
  - The "Working Alone Contact" or other designated individual will drive the route taken by the overdue worker in an attempt to contact the worker. Specific PPE safety equipment may be required for rescue activities by those involved with the Overdue Worker Response Plan;
  - The "Working Alone Contact" or the supervisor may request search assistance from industry workers in the area who have been identified in the contact list;
  - The "Working Alone Contact" or supervisor will call local hospital(s) to establish whether an injured person has been admitted; and
  - The "Working Alone Contact" or supervisor may notify the local police or RCMP of circumstances with a request for assistance.



# **Responder Safety, continued**

### **Missing Persons**

In the event that an employee should go missing:

- Confirm that the person has failed to check in at the predetermined time.
- Contact the person's supervisor (or next in line for reporting) and provide details, e.g. where the person was working, length of time overdue, and if the person is alone.
- If it is deemed appropriate to initiate a search, inform a supervisor (or next in line for reporting) of any plans before any employees head out to search.
- Employees should never endanger themselves during a rescue.
- Searchers should always use the buddy system and work in teams. Each team must be fully equipped, names logged, and their designated search area recorded on a map before heading out. Searchers should carry maps and compass, GPS (Global Positioning System) unit, survival kit, first aid kit, communication equipment, extra batteries, and appropriate provisions.
- Search first where the missing person will most likely be found, e.g. where the person's truck is parked.
- If the missing person is not found within a specified time (e.g. two hours), notify the appropriate Search and Rescue (SAR) authority and/or local police.
- When formal SAR groups are engaged, it is imperative that only one person coordinates all operations.
- Notify ALL authorities when the missing person is found so all search participants are informed and can cease their efforts.
- Complete and submit the required accident/incident investigation form.

Source: PDAC Field Safety Pocket Guide

### **Rest Periods**

Response members may experience a wide array of stresses which may include the death or serious injury of a co-worker, witnessing distressing sights, time pressures, responsibility overload, physical demands, mental demands, emotional demands, limited resources and high expectations from others, hazardous environments or extreme weather conditions.

In high-stress assignments, responders should be routinely rotated. Where manpower is limited, responders should alternate from high-stress positions to lower-stress positions.

Fifteen-to-thirty-minute rest periods should be scheduled every two hours during an emergency situation for all responders; and if possible, provided with:

- Shelter from weather, dry clothes, and a place to sit or lie down away from the scene.
- Warm food, high protein snacks and juices.
- An opportunity to share their feelings with co-workers.



# Fire / Explosion





# Fire / Explosion, continued

An explosion is a mechanical or chemical reaction that suddenly releases a large amount of energy, resulting in a shock or pressure wave that causes damage, high temperature and usually a release of gases. Explosions can be loosely categorized according to reaction time. High explosives react quickly within a millionth of a second, while low explosives react more slowly. Important general guidelines must be followed for all fires or explosions to ensure the safety of the public, employees and environment. When encountering different types of fire, the appropriate firefighting services should always be contacted. This is especially important for fuelrelated, structure-related or forest-related fires to decrease the risk of major damage. For oil-related fires, industrial fire-fighters are the best equipped to reduce further danger in the area.

If a fire or explosion occurs, the following actions shall be taken:

### **Control / Containment:**

- If possible;
  - o Isolate the source and take reasonable action to extinguish or contain the fire.
  - Shut down all known fuel sources.
  - Shut off high voltage power supplies to equipment in fire-affected area.
  - o Shut off fuel to heaters near to, or downwind of fire.
  - Dissipate static electrical charges on bodies of all personnel in area. Grounding may be accomplished by holding onto a metal structure for ten seconds with bare hands.
- Call out to industrial firefighting services.
- Notify the Incident Commander.
- Isolate hazard area or equipment as required.

### **External Notifications:**

• Follow notification procedures for fires outlined in the Government Notification Matrix in Section 5: External Agencies.



# Fire / Explosion, continued

# **Classification of Fires**

Most fires that occur will fall into one or more of the following categories:

Class / Symbol	Material	Extinguishing Agent
	Ordinary combustible materials, such as wood, paper, cloth, trash, and plastics.	Cooling, blanketing or wetting extinguishing agent is needed. Water and foam extinguishers work on this class of fire.
в	Flammable liquids such as gasoline, thinners, oil-based paints and greases; Also includes flammable gases such as propane and butane.	Extinguishers for this type of fire include carbon dioxide, dry chemical and halogenated or clean agent types.
	Energized electrical equipment, such as motors transformers and appliances.	The most common type of extinguisher for this class is a carbon dioxide extinguisher. A dry chemical or clean agent extinguisher can also be used.
	Combustible metals such as magnesium, sodium, potassium, titanium and aluminum.	Special dry powder extinguishing agents are required for this class of fire, and must be tailored to the specific hazardous metal.
ĸ	Cooking oils and greases such as animal fats and vegetable fats.	A wet chemical fire extinguisher agent is used for this class of fire.

Source: www,femalifesafety,org



# Fire / Explosion, continued

# **Response Actions Based on Type of Fire**

### **Process Fire**

### **Definition:**

Process fires include those within or adjacent to: fractionation skids, compressors, exchangers, vessels (also see BLEVE / LPG), piping, tanks/bullets (also see BLEVE / LPG).

### Hazards:

Process fires can be a particular hazard where flammable materials are present.

### **Response Actions:**

Deny or restrict access to the area, shut down and depressurize any related or additional process equipment, if safe to do so. Do not attempt to extinguish a process fire if you are not properly trained.

## **Sulphur Fire**

### **Definition:**

Sulphur dust suspended in air ignites easily, and can cause an explosion in confined areas.

### Hazards:

Toxic gases will form upon combustion. Bulk/solid forms burn only at a moderate rate, whereas dust burns with explosive violence. Burning sulphur decomposes into toxic sulphur oxide gases such as sulphur dioxide (SO<sub>2</sub>) and hydrogen sulphide ( $H_2S$ ) which is toxic if inhaled.

### **Response Actions:**

The following precautions should be taken when dealing with sulphur fires:

- Prevent human contact or inhalation. Fire may produce irritating and/or toxic gases.
- Wear full faced, self-contained breathing apparatus and full protective clothing.
- Use a water fog, NOT water, to extinguish fire.
- Cool fire, surrounding area, and containers, tanks, and trucks to below 154°C in order to diminish the fire.
- Evacuate the area, except for essential personnel.
- Isolate the area with a 1600m radius.

Trained personnel, local fire departments or contract fire services should only attempt to control a sulphur fire. To ensure public protection, evacuate 1600 meters in all directions and ensure air monitoring is set up downwind of fire and the smoke plume. Continually assess evacuation zone based on air quality readings.



# Fire / Explosion, continued

# **Electrical System Fire**

### Definition:

Electrical fires are fires involving potentially energized electrical equipment. This sort of fire may be caused by, for example, short-circuiting machinery or overloaded electrical cables.

### Hazard:

Electrical fires can quickly get out of control and can cause serious damage and threaten lives.

### **Response Actions:**

Electrical fire may be fought in the same way as an ordinary combustible fire, but water, foam, and other conductive agents are not to be used. While the fire is, or could possibly be electrically energized, it can be fought with any extinguishing agent rated for electrical fire. Carbon dioxide CO<sub>2</sub>, FM-200 and dry chemical powder extinguishers such as PKP and even baking soda are especially suited to extinguishing this sort of fire. Once electricity is shut off to the equipment involved, it will generally become an ordinary combustible fire. Water conducts electricity; throwing water on an electrical fire can cause the fire to get larger.

### **Grass Fire**

### Definition:

A grass fire is a fire that burns large amounts of grass. They mainly occur in grasslands and or Great Plains.

### Hazards:

Grassfires spread rapidly, travelling at speeds of up to 25 km/hr, and can quickly threaten lives and properties.

#### **Response Actions:**

Threatening grass fires have a potential to involve the licensee's and other area operators' facilities, pipelines and well sites, therefore guidelines to minimize damage to any property need to be followed. To protect the licensee's and other area user property, it is important to follow these guidelines:

- Notify other area operators of the emergency.
- Isolate and shut in all affected facilities if safe to do so.
- For small grass fires extinguish using a shovel or ABC type fire extinguisher. If it enters coulees, along rivers, or into large areas of trees or forests, contact the local fire department and local forestry office for assistance.
- For larger grass fires do not attempt to extinguish, but contact local fire department and local forestry office.



# Fire / Explosion, continued

# Natural Gas Liquid Fire

### Definition:

Liquid natural gas is very flammable after vaporization to a gaseous phase.

### Hazard:

If liquid natural gas is spilled, it vaporizes. The natural gas vapours are initially heavier than air and they form a cloud close to the ground, which is pushed downwind and eventually dissipates. If a viable ignition source is present where a vapour cloud exists at a 5%–15% concentration in air, the vapour cloud can ignite and burn. A vapour cloud, formed by an LNG spill, could drift downwind into populated areas. An LNG fire gives off a tremendous amount of heat. Water will react violently with the LNG and may cause the fire to flare up and intensify.

### **Response Actions:**

A solid stream of water should never be used to extinguish this type because it can cause the fuel to scatter, spreading the flames. The most effective way to extinguish a liquid or gas fueled fire is by inhibiting the chemical chain reaction of the fire, which is done by dry chemical and Halon extinguishing agents, although smothering with  $CO_2$  or, for liquids, foam is also effective.

## BLEVE

### Definition:

BLEVE is an acronym for Boiling Liquid Expanding Vapour Explosion. It is the term for an uncontrolled fire and explosion of vapour as it escapes from a ruptured vessel of pressurized / liquefied gas. Such explosions can be extremely hazardous.

#### Hazards:

The hazards associated with a BLEVE include the initial impact of the blast, the fireball and radiation from the explosion and projectiles (pieces of the tank and nearby equipment) that are rocketed from the explosion.

#### **Response Actions:**

- Contact Emergency Response Assistance Canada (ERAC) for assistance with emptying any damaged tanks.
  - Under the plan, response is provided for the following chemicals: LPG UN 1075, Propane UN 1978, Butane UN 1011, Propylene UN 1077, Butylene UN 1012, Isobutane UN 1969, Isobutylene UN 1055, Butadiene-1,3 UN 1010
- If safe to do so, attempt to extinguish any fires before they come in contact with any storage bullets.
- Call 911 to obtain assistance with fire suppression. Ensure all responders are made aware of the hazards.
- Flowing water can be used to cool the tanks in order to prevent or delay a BLEVE; however, this requires a significant amount of water and should not be attempted unless an unlimited water supply can be located and the tank can be approached safely.
- Evacuate all personnel and isolate the area to a 1600m radius.
- Evaluate the tank from a safe distance away. Choose an upwind position to the side of the tank if possible.
- Leave the area immediately if you hear a rising sound from venting safety devices or see discoloration of the tank.



Core Emergency Response Plan

# Fire / Explosion, continued

### **BLEVE Considerations Based on Tank Capacity**

									BLEVE										
Сар	acity	Diam	eter	Len	gth	Propa	ne Mass	Minimum time to failure for severe torch	Approximate time to empty for engulfing fire	Firel Rad	oall ius	Emerg Respo Dista	ency onse nce	Minin Evacu Dista	num ation nce	Prefe Evacu Dista	rred ation nce	Cooling Flow	Water Rate
Litres	Gallons	Metres	Feet	Metres	Feet	kg	lbs	Minutes	Minutes	Metres	Feet	Metres	Feet	Metres	Feet	Metres	Feet	Litres/min	Gal/min
100	38.6	0.3	1	1.5	4.9	40	88	4	8	10	33	90	295	154	505	307	1007	94.6	25
400	154.4	0.61	2	1.5	4.9	160	353	4	12	16	53	90	295	244	801	488	1601	189.3	50
2000	772	0.96	3.2	3	9.8	800	1764	5	18	28	92	111	364	417	1368	834	2736	424	112
4000	1544	1	3.3	4.9	16.1	1600	3527	5	20	35	115	140	459	525	1722	1050	3445	598	158
8000	3088	1.25	4.1	6.5	21.3	3200	7055	6	22	44	144	176	577	661	2169	1323	4341	848	224
22000	8492	2.1	6.9	6.7	22	8800	19400	7	28	62	203	247	810	926	3038	1852	6076	1404	371
42000	16212	2.1	6.9	11.8	38.7	16800	37037	7	32	77	253	306	1004	1149	3770	2200	7218	1938	512
82000	31652	2.75	9	13.7	45	32800	72310	8	40	96	315	383	1257	1435	4708	2200	7218	2710	716
140000	54040	3.3	10.8	17.2	56.4	56000	123457	9	45	114	374	457	1499	1715	5627	2200	7218	3539	935



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# FIRE / EXPLOSION, continued FOREST FIRE / WILDFIRE

### **Definition:**

A forest fire is an uncontrolled fire in a wooded area. A forest fire is a natural disaster consisting of a fire which destroys a forested area, and can be a great danger to people who live in forests as well as wildlife. Forest fires are generally started by lightning, but also by human negligence or arson, and can burn thousands of square kilometres.

#### Hazards:

Forest fires can quickly get out of control and can cause serious damage in agricultural and forested lands.

#### **Response Actions:**

- Notify other area operators of the emergency.
- Isolate and shut in all affected facilities if safe to do so.
- For small fires extinguish using a shovel or ABC type fire extinguisher. If it enters coulees, along rivers, or into large areas of trees or forests, contact the local fire department and local forestry office for assistance.
- For larger fires do not attempt to extinguish the fire. To report a forest fire/wildfire, call:

British Columbia	1-800-663-5555 (Prov-wide)
British Columbia	or
	*5555 (from cell, Prov-wide)
Alberta	310-FIRE (3473) (Prov-wide)
Saskatchewan	1-800-667-9660 (Prov-wide)
Manitoba	1-800-782-0076 (Prov-wide)
Northwest Territories	1-877-NWT-FIRE (698-3473) (Prov-wide)
Ontario	Local Fire Department or 911
Quebec	1-800-463-FEUX (3389) (Prov-wide)



# FIRE / EXPLOSION, continued FOREST FIRE / WILDFIRE, continued

### Fire Season Procedure

- Determine a single point of contact to manage wildfire response for either a specific area or discipline (e.g. drilling specific to the Duvernay or drilling as a whole).
- Identify number of staff working in each area
- Ensure all staff have access to transportation if evacuation is required
- Identify the lowest number of staff required to continue operations
- Determine who is considered non-essential staff.
- What is the timeframe to shut in operations?
  - Drilling \_\_\_\_\_
  - Completions \_\_\_\_\_\_
  - Production Operations \_\_\_\_\_
  - o Construction
- Is there anything that can be done during wildfire season to reduce shut-in timeframe
  - Wireline Plugs?
- Visual Air Quality Assessment conducted regularly
  - To estimate particulate matter concentrations that are potentially harmful using a visibility assessment use the following procedure:
  - 1) Face away from the sun.
  - 2) Look for landmarks at known distances.
  - 3) Determine the visibility range the limit of which is the point where eben highcontrast objects, like a mountain or a dark building, totally disappear.
  - 4) Estimate visibility in kilometres.
  - 5) Use the table below to identify the suggested health message and apropriate action, based on the air-quality category.

Table 1: Estimating air quality using visibility Adapated from Wildfire Smoke: a guide for public health officials:

Visibility in km	Air Quality Category	Equiv. approx. PM2.5-3 hour average in µg/m <sup>3*</sup>
15 km and up	Good	0-40
5-14 km	Moderate/Unhealthy for Sensitive Groups	41-175
2.5-4 km	Unheallthy	176-300
1.5-2 km	Very Unhealthy	301-500
Less than 1 km	Hazardous	Over 500

\*The concentration of an air pollutant (ie. Particulates less than 2.5 microns in diameter – PM2.5) us given in micrograms (one-millionth of a gram) per cubic meter air or  $\mu g/m^3$ .

The visibility index may be unreliable at times when specific landmarks at known distances are unavailable or when visibility is poor eg., at dawn or dusk and at night. The above index also only applies to the particulate matter (PM) levels in dry air conditions. The method of estimation is not accurate during high humidity conditions.



# FIRE / EXPLOSION, continued FOREST FIRE / WILDFIRE, continued

- Active monitoring of wildfire begins when a fire within 50km to operational activity occurs
  - GIS will produce a web map updated daily with our operations and wildfire locations during wildfire season (Mar 1st- Nov 30th)
    - It would be advantageous to plot more transient activities on this map as well (e.g. Drilling/Completions activity)
  - Emergency Response Coordinator and operational points of contact will regularly monitor this map. Once the 50km threshold is reached the coordinator will contact the operational point of contact.
  - If the fire is deemed a threat to operations an area specific map will be produced with markers identifying distance to fire as well as a map of all heavy equipment and water sources wildfire responders could utilize.
- Once a fire is deemed a threat a determination as to what kind of evacuation will take place is required
  - Tactical evacuation: May occur when the emergency wildfire situation has escalated with little notice where authorities recommend an immediate evacuation due to an emerging wildfire threat.
  - Strategic evacuation: May occur when a wildfire threat in not imminent however is likely to impact the operation. Projected time of impact of a probable threat will be provided by provincial or municipal authorities. This may also occur when smoke from wildfire is affecting air quality of the operation where a full or limited evacuation is recommended.
- The identification of evacuation routes within the area must be made at this time as it will be a factor in determining evacuation type and evacuation trigger points.
- Evacuation trigger points must be identified.
  - trigger points help decide when to change or modify operations. A trigger point is defined as a point of reference from which predetermined actions take place. It is important to consider factors specific to the operational environment when developing trigger points for wildfire response planning. These may include time to evacuate, distance of the operation from the fire or smoke, or physical features such as a river or road.

Wildfire evacuations could involve a few different scenarios and it is important to understand how your trigger points will relate to various threats. External resources and expertise can be utilized where internal expertise is limited. Operational personnel should be involved in developing these triggers, and emergency response plans and associated trigger points should be communicated to workers.

• If it is determined that a strategic evacuation is preferred evacuation timeframes must be determined. A generally used fire speed rate is between 8-10 km/hr. This is only an estimate though and cannot take into account extreme weather conditions like drought or high winds.



# FIRE / EXPLOSION, continued FOREST FIRE / WILDFIRE, continued

- Evacuation trigger point determination needs to be made for non-essential staff
  - When wildfire reaches a distance of \_\_\_\_\_\_ evacuate all nonessential Production Operations/Camp Staff.
  - When wildfire reaches a distance of \_\_\_\_\_ evacuate all nonessential Drilling Staff.
  - When wildfire reaches a distance of \_\_\_\_\_\_ evacuate all nonessential Completions Staff.
  - When wildfire reaches a distance of \_\_\_\_\_\_ evacuate all nonessential Construction Staff.
- Evacuation trigger point determination needs to be made for all essential staff
  - When wildfire reaches a distance of \_\_\_\_\_ initiate shutdown procedures evacuate all remaining Production Operations/Camp Staff.
  - When wildfire reaches a distance of \_\_\_\_\_ initiate shutdown procedures evacuate all remaining Drilling Staff.
  - When wildfire reaches a distance of \_\_\_\_\_ initiate shutdown procedures evacuate all remaining Completions Staff.
  - When wildfire reaches a distance of \_\_\_\_\_\_ initiate shutdown procedures evacuate all remaining Construction Staff.



# **Transportation Incidents**

### First On-Scene Transportation (Road, Rail, Marine) Incident Flowchart





# **Transportation Incidents, continued**

### Loss, Theft or Unlawful Interference Reporting Flowchart

Loss or Theft Report Protocol





# **Transportation Incidents, continued**

### Motor Vehicle Accidents

The first person on scene will follow the First Person On-Scene Transportation Incident Flowchart, then:

- Record and report the following:
  - o Driver's name, address and phone number.
  - Driver's license number.
  - o Vehicle license plate number, make, model, year and colour.
  - Name of injured and nature of injury.
  - Witnesses' name, address and phone numbers.
  - Time and location of accident.
  - o Actions taken.
  - o Weather conditions.
  - o Individuals and organizations notified.
- Make a statement to the RCMP / police.
- Chronologically document all actions, decisions, contacts and requests on an ICS 214 Activity Log (see Section 6: Forms).

The Incident Commander will be engaged through the initial notification and is responsible to:

- Ensure required communication occurs with internal and external personnel.
- Ensure no unauthorized personnel enter the emergency area.
- Ensure evidence is secured for investigation.
- Conduct an initial debriefing to all emergency personnel and delegate areas of responsibility.
- Chronologically document all actions, decisions, contacts and requests on an ICS 214 Activity Log (refer to Section 6: Forms).

In case of a hazardous material spill:

- Ensure your own personal safety.
- Refer to Section 4: Spill Response.

In case of a vehicle fire:

- Ensure your own personal safety.
- Call for assistance.
- Use an ABC fire extinguisher for cab, electrical, cargo space or trunk and engine fires.

Note: RCMP/Police must be notified when an injury or fatality has occurred and / or vehicle damages exceed \$1000.00.



# **Transportation Incidents, continued**

Refer to the Transport Canada - 2016 Emergency Response Guidebook for further details regarding the Initial Phase of a Dangerous Goods / Hazardous Materials Transportation Incident.

# **Emergency Response Assistance Canada (ERAC) Plan**

Internal notification is required in the event of a LPG incident. The extent of the notification depends on the severity of the incident. If the Emergency Response Assistance Canada (ERAC) Plan has been implemented, the incident is considered serious. Examples of serious incidents include: fire, spill, rupture, collision involving tanker car, tanker car overturning, etc.

Notification of an LPG incident outside of a plant site will most likely come from Emergency Response Assistance Canada (ERAC) in Calgary, Alberta.

If the call is NOT from ERAC, contact ERAC immediately and confirm the plan has been initiated.

If you receive the initial call, contact the ERAC:

• Refer to Section 5: External Agencies or Area Specific Information for contact information

Refer to the First On-Scene Incident Flowchart on the previous page for information on when to contact.

## **CANUTEC – Canadian Transport Emergency Centre**

CANUTEC is operated by Transport Canada to assist emergency response personnel in handling dangerous goods emergencies involving all modes of transportation.

In an emergency, CANUTEC may be called collect at:

• Refer to Section 5: External Agencies or Area Specific Information for contact information

CANUTEC **MUST** be notified in the case of the following:

- Lost, stolen or misplaced infectious substances.
- An incident involving infectious substances.
- An accidental release from a cylinder that has suffered a catastrophic failure.
- An incident where the shipping documents display CANUTEC's telephone number as the emergency number.
- A dangerous goods incident in which a railway vehicle, a ship, an aircraft, an aerodrome or an air cargo facility is involved.



# Transportation Incidents, continued

### Dangerous Goods References

### **Agency Contacts**

Although technical information and emergency response assistance can be obtained from CANUTEC, there are federal and provincial regulations requiring the reporting of dangerous goods incidents to certain authorities.

• Refer to Section 5: External Agencies or Area Specific Information for contact information

Note: The nearest police department must be notified in the case of lost, stolen or misplaced explosives, radioactive materials or infectious substances.

The appropriate federal agencies must be notified if affected:

• Refer to Section 5: External Agencies or Area Specific Information for contact information

### **TDG Reportable Quantities**

Refer to Petroleum Release Reporting Requirements chart in Section 4: Spill Response.



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# Transportation Incidents, continued

### **Rail Car Identification Chart**





# **Transportation Incidents, continued**

### **Rail Car Identification Chart, continued**



**CAUTION:** Emergency response personnel must be aware that rail tank cars vary widely in construction, fittings and purpose. Tank cars could transport products that may be solids, liquids or gases. The products may be under pressure. It is essential that products be identified by consulting shipping documents or train consist or contacting dispatch centres before emergency response is initiated.

The information stencilled on the sides or ends of tank cars, as illustrated above, may be used to identify the product utilizing:

- a. the commodity name shown; or
- b. the other information shown, especially reporting marks and car number which when supplied to a dispatch centre, will facilitate the identification of the product.

# The recommended guides should be considered as last resort if the material cannot be identified by any other means.

Source: 2016 Emergency Response Guidebook



# **Transportation Incidents, continued**

## **Road Trailer Identification Chart**

**WARNING:** Road trailers may be jacketed, the cross-section may look different than shown and external ring stiffeners would be invisible.

**NOTE:** An emergency shut-off valve is commonly found at the fornt of the tank, near the driver door.





# **Transportation Incidents, continued**

# **Road Trailer Identification Chart, continued**



**CAUTION:** This chart depicts only the most general shapes of road trailers. Emergency response personnel must be aware that there are many variations of road trailers, not illustrated above, that are used for shipping chemical products. The suggested guides are for the most hazardous products that may be transported in these trailer types.

The recommended guides should be considered as last resort if the material cannot be identified by any other means.

Source: 2016 Emergency Response Guidebook



# **Transportation Incidents, continued**

# Table of markings, labels and placards





# **Transportation Incidents, continued**

Table of Markings, Labels and Placards, continued





### TRANSPORTATION OF DANGEROUS GOODS **30-DAY FOLLOW-UP REPORT**

PART I: REPORTING TIMELI	NE						
1. Please provide applicable da	ates and check one box			FOR INTERNAL USE ONLY			
Date of initial report to CANU	TEC (yyyy-mm-dd):		S -	Road, Rail or Marine Reports			
30-Day Follow-up Report sub	omission date (yyyy-mm-dd):			() Release			
○ 30-Day Follow-up Rer	oort		;	Anticipated Release			
Undate or amendmen	t to 30-Day Follow-up Report			Air Report			
Date original 30 Da	v Follow up Doport submittee	d (saaa mm dd):	O Dangerous Goods Accident or Inc				
		d (yyyy-min-dd).					
2 Information of the porson co	mploting this roport						
		A On another					
First Name	I ast Name	an Operator					
r il se ritarito	Lust Humo		Thus				
Telephone (999-999-9999)	Company Name		-				
	company name						
Address			City	Province/Territory			
			1				
Country	untry Postal Code (797 979) Email						
3. Information on the Consigno	r, Consignee and Carrier/Airo	craft Operator					
Consignor		2000 C 100 C					
First Name	Last Name		Title				
Telephone (999-999-9999)	Company Name		1				
Address			City	Province/Territory			
			1000				
Country	Postal Code (Z9Z 9Z9)	Email					
Consignee		1					
First Name	Last Name		Title				
Telephone (999-999-9999)	Company Name						
\ddress			City	Province/Territory			
Country	Postal Code (Z9Z 9Z9)	Email		4			
Carrier/Aircraft Operator		T.					
First Name	Last Name		Title				
Telephone (999-999-9999)	Company Name						
Address	4		City	Province/Territory			
Country	Postal Code (Z9Z 9Z9)	Email					
16-0086E (1611-03)	DI-	and cond const-	tod form to des sed ou				
Page 1 of 5	Ple A copy of the	ase send comple a 30-Day Follow-i	up Report must be ret	ained for 2 years			

PART III: INCIDENT INFORMATION								
4. Please indicate the date and time of	the incident							
Date (yyyy-mm-dd)			Time (24-hour system)					
5. Geographic location of the incident								
Address								
City	Province/Territory	Postal Cod	e (Z9Z 9Z9)	GPS Position				
If the incident occured by rail, please in	dicate the milepost and subd	ivision	If the incident	happened on First Nations Territory, please indicate the Territory				
			name					
				e				
Origin of consignment			Destination of	r consignment				
Same address as consignor	Same address as consi	gnee	Same add	dress as consignor O Same address as consignee				
Other (please provide address):			Other (plea	ease provide address):				
6. Geographic Area (Check only one bo	ox)							
O <b>Urban</b> Mixed use – residential, commercial	I O Suburban Primary residential	⊖ Rur Sma	<b>al</b> all towns, village	es, agricultural lands O Wilderness/Remote				
7. Mode of Transport (Check all applica	ble boxes)							
Road	Rail		Air	Marine				
8. If MARINE was checked on question	7, please indicate the position	on of the ves	sel and the nex	t location at which the vessel will be at anchor or alongside a				
fixed facility			N					
Position			Next location					
9. Phase of Transport (Check only one	box)							
C In-Transit Consignment moving between origin and destination			Consignment	nent is being packed or loaded into a means of transport at origin				
Unloading				ry Storage				
Consignment is being unpacked or unloaded from a     means of transport at destination				nent is in short term storage pending transportation				
0. Type of Incident (Check all applicable boxes)								
Collision/Sideswipe			Derailmer	nt				
Moving vehicles striking an object, a	animal, or another vehicle		Railcar lea	aving the rail tracks				
Ran off road Vehicle enters a soft shoulder, ditch	n or similar area		Overturn Vehicle tur	rning on its side or upside down				
Loadshift Shifting of the consignment within a	vehicle		Dropped Means of o	containment falling unexpectedly				
Struck				losso sposify).				
Means of containment being struck 11 Type of Release (Check all applicate)	by another object			незе specify)				
	· · ·····,							
Quick, immediate discharge, emissi	on or escape		Slow, spor	radic or continuous discharge, emission or escape				
Explosion Violent sudden release of energy fro shock wave that may result in fragm	om means of containment pro nent projection and/or fire bal	oducing a	Fire Burning su and smoke	ubstances combined with oxygen to typically produce flame, heat e				
BLEVE Boiling Liquid Expanding Vapour Ex	plosion		Vapour <ul> <li>Dispersion in air of particles of a substance that is liquid or solid in its normal state</li> </ul>					
Controlled release of gas into the er	nvironment		Anticipated Release Distressed means of containment that is not leaking, venting or otherwise releasing its contents					

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12. Information	tion on the Dangero	us Goods									
UN Number	Shippin Name	g ;	Primary Class	Subsidia Class(e	ary Packing Group or Category	Total Quar Before the Anticipate	ntity in MOC Release or ed Release	Units (kg, L, etc.)	Estimated Quantity Released (if applicable)	Units (kg, L, etc.)	
13. Means of	of Containment										
Please prov	vide a description of	the means of	containmen	t involved	in the incident by	/ completing	the appropria	ate forms from	Annex E of the Guide (1	P15294)	
PART IV: C	ONSEQUENCES										
14. Conseq	uences of the incide	ent (Check all	applicable b	oxes)							
NOTE: Refe	er to the Guide for m	nore informati	on on how to	o complete	e this section						
Human	Property	/ (e.g. produc	t loss, facility	/, equipme	ent) 🗌 Er	vironmental	(e.g. contam	ination of wate	erway, ground, air)		
15. Evacuat	tion of people and b	uildings/Shelt	er in place	_	_						
Was there a	an Evacuation as a r	result of the in	ncident?	) Yes	O No						
Was there S	Shelter in place as a	result of the	incident? (	) Yes	() No						
ii <b>res</b> , piea			o Docidono		Dublic Duil	dingo					
Evacuatio Buildings	on of People and Shelter in Place	of People and Includes houses helter in Place buildings used as (e.g. Retiremen			Includes libraries churches, gov buildings,	ernment etc.	<b>۷</b> Includ fa	<b>/orkplace</b> es warehouse acility, etc.	, Includes parks, parking lo	Public (Outside) Areas Includes parks, playgrounds, parking lots, etc.	
Estimated n	umber of <b>people</b>										
Estimated n	number of <b>people</b> n <b>place</b>										
Estimated n buildings e	umber of wacuated										
Size of Eva	cuation area (square	e meters)	Du	ration of E	Evacuation (hours	3)		Ouration of She	elter in place (hours)		
16. Injuries	and/or deaths										
Were there	any injuries and/or o	deaths?	) Yes (pleas	se complet	te the following ta	able) (	) No				
Minor Injur	ies 🛛 Yes	🔵 No									
Number of	injured requiring i	mmediate fir	st aid treatr	ment at th	ne scene						
Attributed to	Dangerous Goods		Att	ributed to	incident			Total			
Moderate I	njuries Ves	◯ No	I								
Number of	injured requiring i	mmediate en	nergency tr	eatment i	n hospital and r	elease short	ly after				
Attributed to	Dangerous Goods		Att	ributed to	incident			Total			
Major Injur	ies 🔿 Yes	◯ No	I								
Number of Attributed to	injured requiring i Dangerous Goods	mmediate tre	eatment with	h overnig ributed to	ht hospitalizatio incident	'n		Total			
Deaths	) Yes	◯ No									
Number of Attributed to	deaths Dangerous Goods	Ŭ	Att	ributed to	incident			Total			

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17. Please indicate an estimate of costs in Canadian dollars associated with the incident, as applicable							
NOTE: Refer to the Guide for	more information on h	low to fill this section					
Material loss of Da dangerous goods the	mage incurred by e carrier	Property damage	Emergency response cost	Clean-up cost	Total cost		
18. Infrastructure closure and	I duration (please use a	additional sheets for	multiple closures)	I			
Was there an infrastructure c	losure as a result of the	e incident?	Yes 🔿 No				
If <b>Yes</b> , please complete the fo	ollowing table	0	<u> </u>				
		Туре			Duration of the closure (in hours)		
Aerodrome – Area of land, water or other supporting surface used either in whole or in part for arrival and departure,     movement or servicing of aircraft includes any building, installations and equipment situated thereon or in connection     therewith							
Air cargo facility – Facili	ity used to receive or tr	ansfer cargo carried	or to be carried by an aircraft	:			
Facility – Permanent or temporary building or a portion of a building or equipment used in loading or unloading of     dangerous goods							
Railway – Tracks used by trains							
Waterway – Navigable body of water through which a ship or boat can move							
Roadway – The strip of land over which motor vehicles circulate, such as dirt road, numbered provincial highway or multiple lane freeway							
Runway – the strip of gro	<b>Runway</b> – the strip of ground on a landing field that aircraft use for landing or takeoff						
19. Geographic location of closure							
Address							
City	City Province/Territory Postal Code (Z9Z 9Z9) GPS Position						
If the incident occured by rail,	, please indicate the mi	lepost and subdivision	on Name of facility, roa	id, railway or waterv	vay		
20. ERAP Requirements				$\bigcirc$ $\vee$	$\sim$ H		
Was an ERAP required under	r Part 7 of the <b>Transpo</b> Slowing table	ortation of Dangero	us Goods Regulations?	U Yes (	) NO		
FRAP Reference Number		FRAP	Holder				
Address							
City	Province/T	erritory	phone of ERAP Holder (999-999-9999)				
Email							
Level of Response (check all	that apply)						
No response First	t responders on scene	Phone call to	ERAP holder	oyee from ERAP ho	Ider Team from ERAP holder		
Other:							



#### PART V: INCIDENT DESCRIPTION

21. Please describe:

- The sequence of events that led to the incident
- The means of containment damage or failure, including the size/location of holes, cracks, etc.
- The actions taken at the time it was discovered
- · What was done to mitigate the effects of the release
- Contributing factors (e.g. human error, mechanical, equipment, packaging, infrastructure, external, weather, etc.)
- The physical environment (e.g. residential, commercial, industrial, etc.)
- The road's appearance (e.g. flat, straight, inclined, curved, intersection, etc.)
- Timeline of event (e.g. how long it lasted, time of release or discovery, time of first responder arrival, etc.)
- · Communications with first responders and with your organization

Photographs and diagrams should be submitted, as required, for clarification. Estimate the duration of the release, if possible. Please use additional sheets if necessary.

**NOTE:** Refer to the Guide for more information on how to complete this section

#### PART VI: INCIDENT DESCRIPTION - AIR ONLY

22. Please describe:

· Any serious jeopardy to persons on any aircraft or aircraft itself

· Any damages to property or environment

• The route by which the dangerous goods were to be or have been transported, including the name of any aerodromes along the route

Aircraft Operator
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Air Cargo Facility

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# Weather and Natural Disasters



<sup>1</sup> The primary concern is for human life. If time allows and it is safe to do so, secure the area (tie down / secure objects that could be moved and cause additional damage).



# Weather and Natural Disasters, continued

Severe storms can occur in Canada year-round. In the months between May and September, hot and humid weather combined with a cold front could be a sign that a severe storm is brewing. A severe storm can create lightning, hail, severe rain fall (flooding), high winds and tornados. In the months between October and April, severe storms could include blizzards, freezing rain, heavy and blowing snow.

The weather office will issue through the use of radio and television repeated weather watches and warnings. The only exception to these warnings is earthquakes, since they occur by surprise and cannot be predicted.

### Listen for the Warnings

Environment & Climate Change Canada (ECCC) monitors the weather 24-hours a day, seven days a week. If a severe storm is on the horizon, the weather service issues watches, advisories and warnings for that specific storm through national, regional and local radio and television stations, and through ECCC weather radio.

### Weather Watch

This means conditions are favourable for a severe storm, even though nothing has developed yet. It does not mean that the storm will occur. A Weather Watch is usually issued early in the day; keep monitoring weather conditions and listen for updated statements.

### Weather Warning

This means severe weather is happening or hazardous weather is highly probable. If the warning is for your area, take precautions immediately and listen to your radio for constant updates.

### Earthquake

### **General Information**

An earthquake (also known as a quake, tremor, or tremblor) is caused by a sudden slip on a fault, which in turn, releases energy in waves that travel through rock to cause the shaking that we feel during an earthquake.

An earthquake cannot be prevented or predicted, but it can be mitigated. The effects of earthquakes include, but are not limited to, shaking and ground rupture. Most common effects or impacts of an earthquake are shaking and ground rupture. Depending on the magnitude of an earthquake, these may cause damage to buildings, pipelines and other rigid structures.

### **During an Earthquake**

Be aware that some earthquakes are actually foreshocks and a larger earthquake might occur. Minimize movement to a few steps to a nearby safe place and stay indoors until the shaking has stopped and exiting is safe.



# Weather and Natural Disasters, continued

### If indoors

- DROP to the ground; take COVER by getting under a sturdy table or other piece of furniture; and HOLD ON until the shaking stops. If there isn't a table or desk near you, cover your face and head with your arms and crouch in an inside corner of the building.
- Stay away from glass, windows, outside doors and walls, and anything that could fall, such as lighting fixtures or furniture.
- Use a doorway for shelter only if it is in close proximity to you and if you know it is a strongly supported, load bearing doorway.
- Stay inside until shaking stops and it is safe to go outside. Research has shown that most injuries occur when people inside buildings attempt to move to a different location inside the building or try to leave.
- Be aware that the electricity may go out or the sprinkler systems or fire alarms may turn on.
- DO NOT use the elevators.

### If outdoors

- Stay outdoors and move away from buildings, streetlights, and utility wires.
- Once in the open, stay there until the shaking stops. The greatest danger exists directly outside buildings, at exits, and alongside exterior walls. Ground movement during an earthquake is seldom the direct cause of death or injury. Most earthquake-related casualties result from collapsing walls, flying glass, and falling objects.

#### If in a moving vehicle

- Stop as quickly as safety permits and stay in the vehicle. Avoid stopping near or under buildings, trees, overpasses, and utility wires.
- Proceed cautiously once the earthquake has stopped. Avoid roads, bridges, or ramps that might have been damaged by the earthquake.

### If trapped under debris

- Do not light a match.
- Do not move about or kick up dust. Cover your mouth with a handkerchief or clothing.
- Tap on a pipe or wall so rescuers can locate you. Use a whistle if one is available. Shout only as a last resort. Shouting can cause you to inhale dangerous amounts of dust.



# Weather and Natural Disasters, continued FLOODS

The potential for overland flooding can create a high level of risk for facility damage and environmental impact at petroleum facilities. While there is little that can be done to prevent flooding, actions can be taken to minimize the impact.

It is important to consider that your facility may play a vital role in fuel supply during an emergency situation. It is therefore important that you and the government authority having jurisdiction during a flood emergency have regular and clear communication with regards to facility closure.

### To shut down a facility which may be flooded:

- 1. Take a product inventory reading of all underground and aboveground tanks, including water level readings.
- 2. Seal fill pipe caps to prevent water from entering underground tanks. Close all valves to above ground tanks. DO NOT PLUG OR SEAL TANK VENT LINES.
- 3. Underground tanks should be kept as full of product as possible. Above ground tanks should be filled to a level at least 25% above the estimated/predicted floodwater elevation.
- 4. Ensure that above ground tanks which could float away are secured or tethered in a manner that would prevent floating from the property.
- 5. Seal all drains in tank lots.
- 6. Oil/water separators and product sumps should be skimmed of product using sorbent pads or vacuum trucks as appropriate. Spent sorbent pads should be drummed and every effort must be made to remove any waste from the expected flood zone. If time does not allow for removal the drums must be secured to prevent them from floating away. Close the oil/water separator drain valve.
- 7. Drums and lubricant cubes should be tied down or otherwise secured to prevent floating.
- 8. Propane facilities contact your propane supplier for appropriate flood emergency procedures.
- 9. Secure used oil collection cabinets. Every effort must be made to remove all waste oil from the expected flood zone. If waste oil from the cabinet drains to a waste oil underground tank, ensure the connection is tight.
- 10. Secure containers of chemicals, cleaning agents, pesticides, etc. Every effort must be made to remove these products from the expected flood zone. If they cannot be moved to a safe location, store these containers at high elevations in a manner that prevents them from floating off the property or leaking into floodwaters.
- 11. If the facility is to be closed/evacuated, shut down electrical power to the site at the main breaker. Contact the power service utility company to determine if the power service to the facility is going to be cut-off.
- 12. Shut down other utilities to the site including natural gas and potable water. If water is obtained from a water well, secure the well using a well seal.
- 13. Shut down all appliances, including hot water tanks, furnaces, etc.
- 14. Lock all doors and gates to the facility.
- 15. Post a sign in a prominent location identifying the names and telephone numbers where key company personnel can be contacted during the emergency.


# Weather and Natural Disasters, continued

### To start-up a facility which has been flooded:

- 1. Re-activate utilities to the site (natural gas, water, electricity) and appliances using qualified utility service personnel, where required.
- 2. Take product inventory readings and water dips of all tanks to determine if product has leaked out from the tanks or water has entered the tanks.
- 3. Take appropriate measures to test product quality.
- 4. Propane facilities contact your propane supplier for recommissioning your propane facilities.
- 5. Pump out water from sumps and containment pans using a qualified petroleum contractor.
- 6. Follow all re-entry procedures and requirements for health and safety as provided by your local government authority (disinfection, potable water testing, etc.).

Government agencies monitor weather patterns, precipitation and provincial water levels and flows. They provide a comprehensive series of public advisories about potential flooding. These include river stage-up advisories, ice-jam warnings, high stream flow advisories, flood watches and flood warnings; for more information visit the following websites:

Alberta	Alberta Environment					
	http://environment.alberta.ca/forecasting/advisories/					

### What to do during a flood

- Gather essential items together in a high place.
- Collect things needed for evacuation.
- Stack sandbags, if possible, to form a barrier to hold back or redirect moving water from critical areas.
- Turn off gas, electricity and water supply if it is safe to do so.
- Avoid electricity sources.
- Avoid walking or driving through flood water.



# Weather and Natural Disasters, continued

# Thunderstorm and Lightning Safety

A lightning bolt carries up to 100 million volts of electricity. When someone is struck by lightning, an electrical shock occurs that can cause burns and even stop the person's breathing. Although thunder and lightning can occur occasionally during a snowstorm, April to October are the prime thunderstorm months in Canada. Thunderstorms occur most often in late afternoon or evening, and around sunrise.

Knowing how lightning behaves can help you plan for an approaching storm. It tends to strike higher ground and prominent objects, especially materials that are good conductors of electricity, such as metal. Thunder can be a good indicator of lightning - loud crackling means its close, whereas rumbling means the storm is further away.

Because light travels faster than sound, you will see lightning before you hear the thunder. Each second between the flash and the thunderclap represents about 300 metres. If you can hear thunder, you are within striking distance. Immediately go inside, there is NO safe place to be outside in a thunderstorm.

Protection from lightning begins before the storm. Paying attention to weather conditions and forecasts allows time to plan for threatening weather and to react appropriately.

### What to do during a thunderstorm

The safest place to be during a thunderstorm is in a building that is fully enclosed with a roof, walls and floor with electrical wiring, plumbing, telephone line, or antennas to ground the lightning should the building be hit directly. Unsafe shelters are buildings or structures without electricity or plumbing to ground the lightning, as they do not provide any lightning protection. Shelters that are unsafe include covered picnic shelters, carports, tents, baseball dugouts as well as other small non-metal buildings (sheds and greenhouses).

Even when inside the building, there are safety precautions to take:

- Keep as many walls as possible between you and the outside. Stay away from doors, windows, and fireplaces.
- Stay away from anything that will conduct electricity such as radiators, stoves, sinks and metal pipes.
- Use battery operated appliances only. Avoid handling electrical appliances and regular telephones (cordless phones and cell phones do not increase the risk of a lightning strike).

The next best place for shelter is an enclosed metal car, truck or van but NOT a tractor, golf cart, topless or soft-top vehicle. Make sure the vehicle is not parked near trees or other tall objects that could fall over during a storm. When inside a vehicle during a lightning storm, roll up the windows and sit with your hands in your lap and wait out the storm. Don't touch any part of the metal frame or any wired device in the vehicle (including the steering wheel or plugged-in cell phone). A direct strike to your car will flow through the frame of the vehicle and usually jump over or through the tires to reach ground.

### What to do if you cannot find shelter

There is no safe place to be outdoors during a thunderstorm. However, to reduce the risk of being struck by lightning when outside, stay away from things that are tall (trees, flagpoles or posts), water, and other objects that conduct electricity (tractors, metal fences, lawn mowers, golf clubs). Do not become a target by being the highest object on the landscape. If you are with a group of people in the open, spread out several metres apart from one another.

If you get caught in a level field far from shelter, crouch down on the balls of your feet immediately, with feet together, place your arms around your knees and bend forward. Be the smallest target possible, and at the same time, minimize your contact with the ground. Don't lie flat.



# Weather and Natural Disasters, continued

If someone has been hit by lightning

Lightning victims are safe to touch. Bystanders shouldn't hesitate to save a life by calling for help. If breathing has stopped, administer mouth-to-mouth resuscitation. If the victim is not breathing or they do not have a pulse, a trained rescuer should administer cardiopulmonary resuscitation (CPR).

# Tornados

A tornado is nature's most violent form of storm activity. It can produce upwardly spiraling winds of 120 to 450 km/h, producing devastating damage along a path of 50 to 300 metres in width. The forward motion of the tornado funnel may be quite erratic as it zigzags along a southwest to north-easterly direction (usually) at a forward speed of 50 to 70 km/h.

Hot, humid weather combined with a cold front could be a sign that a tornado is brewing, and a funnel cloud hanging from a dark cloud may be visible before the tornado actually occurs (a funnel cloud is not a tornado until it touches the ground). The sound has been described as a tremendous roar which sounds like an express train or jet aircraft (only louder). Clouds may be green or yellow tinged. There is usually a noticeable lowering of a portion of the cloud that contains a large, swirling, turbulent mass from which the funnel will hang (funnel cloud).

### Protecting yourself during a tornado

- Have a radio on to listen for warning information or advice.
- Determine an appropriate shelter (select a shelter area that would offer protection, such as underneath a stairway and is secured to the main floor). The shelter must be easily accessible and able to offer protection from flying glass, debris and furniture. (Decide on shelter options in advance, for your place of employment.) If forced to take shelter away from the plant avoid large halls or any large building with large span roofs. Seek out an inner hallway, washroom, closet, etc.
- Stay away from windows.
- Avoid travelling any great distance so that you will not be caught out in the open.
- If the storm warning is issued for your immediate area, go to your designated shelter.
- If caught outdoors and you cannot reach shelter, lie flat in a ditch, excavation or culvert. If possible, lay flat, holding the base of a small tree, bush or shrubbery to avoid being lifted or blown away.
- If caught while driving, drive away from the funnel at a right angle or to its direction of travel (if possible). If you cannot escape the path of the funnel, get out of your vehicle immediately and seek shelter in a ditch or ravine, keeping its slope between you and the funnel.
- If caught away from the plant, seek shelter in a sturdy building. Go to an interior hallway or washroom on the lower floor, and stay away from windows.

# Winter Storms: Blizzards, Freezing Rain, Heavy Snow, Blowing Snow

### **General Information**

Blizzards come in on a wave of cold arctic air, bringing snow, bitter cold, high winds, and poor visibility in blowing snow. These conditions must last for a minimum of six hours to be designated a blizzard and they may last for several days. Poor visibility, low temperatures and high winds constitute a significant hazard.



# Weather and Natural Disasters, continued

Freezing rain occurs when the air in an upper-air layer has an above-freezing temperature, while the temperature at the surface is below freezing. The snow that falls melts in the warmer layer; as a result, it is rain—not snow— that lands on the surface. But since the temperature is below 0°C, raindrops freeze on contact and turn into a smooth layer of ice. More slippery than snow, freezing rain is tough and clings to everything it touches. A bit of freezing rain is dangerous; a great deal of it can be catastrophic.

### Things to do during a severe winter storm or if a storm is forecast

- Stay calm and leave your radio on to stay informed of the situation and hear updated forecasts.
- Stay indoors. If you must go out, dress for the weather.
- Secure everything that might be blown around or torn loose indoors and outdoors (flying objects can injure people and damage property).

Winter Weather Warnings	Issued				
Blizzard Warning	When winds of 40 km/hr or greater are expected to cause widespread reductions in visibility to 400 metres or less, due to blowing snow, or blowing snow in combination with falling snow, for at least 4 hours.				
Freezing Rain Warning	When freezing rain is expected to pose a hazard to transportation or property; or when freezing rain is expected for at least 2 hours.				
Snowfall Warning	When 10 cm or more of snow is expected to fall within 12 hours.				
Wind Warning	70 km/h or more sustained wind; and/or Gusts to 90 km/h or more.				
	Issued to warn of conditions that will cause frostbite to exposed skin. Criteria vary across the country, ranging from wind chill values of -55 in some Arctic regions to -30 in South-western Ontario. A national wind chill program is in development.				
Wind Chill Warning	For wind chill values:				
	-27 to -44risk of frostbite and risk of hypothermia increases with time spent outdoors				
-27 to -44risk of frostbite and risk of h spent outdoors -45 or lowerexposed flesh may freeze in risk of hypothermia	-45 or lowerexposed flesh may freeze in minutes and there is a serious risk of hypothermia				
	When severe and potentially dangerous winter weather conditions are expected, including:				
Winter Storm Warning	A major snowfall (25 cm or more within a 24 hour period); and				
	A significant snowfall (snowfall warning criteria amounts) combined with other cold weather precipitation types such as: freezing rain, strong winds, blowing snow and/or extreme wind chill.				

• If you are outdoors when a storm hits, take shelter immediately.

Source: Environment & Climate Change Canada (ECCC), Public Alert Criteria http://www.ec.gc.ca/meteo-weather/default.asp?lang=En&n=D9553AB5-1



# Weather and Natural Disasters, continued

# After a Disaster

These are general guidelines to look for after an occurrence:

- Assess site and declare an emergency as required.
- Activate ERP as required.
- Account for all on-site and field personnel.
- Listen to a battery-operated radio or television for the latest emergency information.
- Give first aid to the injured and call for medical assistance if required. Do not move seriously injured persons unless they are in immediate danger of further injury. Use intrinsically safe flashlights to survey for damage and look for victims. Do not use candles or matches (explosion hazards may exist).
- Use the telephone for emergency calls only.
- Check for spilled medicines, bleaches, gasoline or other flammable liquids.
- Open cabinets cautiously. Beware of objects that can fall off shelves.
- Report fires to the fire department. Be alert to prevent fires, as broken water mains may cause a reduction in water pressure. Lightning and downed power lines can cause fires. Know how to fight small fires.
- Inspect utilities.
  - Look for electrical system damage. If you see sparks or broken or frayed wires, or if you smell hot insulation, turn off the electricity at the main fuse box or circuit breaker. Do not go near loose or dangling power lines. If you have to step in water to get to the fuse box or circuit breaker, call an electrician first for advice.
  - Check for sewage and water lines damage. If you suspect sewage lines are damaged, avoid using the toilets and call a plumber. If water pipes are damaged, contact the water company and avoid using water from the tap. You can obtain safe water by melting ice cubes.
  - Check for leaking pipes. If you smell sour gas:
    - Immediately evacuate the area and don appropriate personal protective equipment.
    - Close gas valves and isolate the area.
    - Turn off the main power switch (only if you are NOT wet or standing in water).
    - Shut down required plant and well sites and notify appropriate government authorities.
    - Check buildings prior to entering as there may be structural damage; proceed cautiously.
- In the case of a flood, proper cleanup is essential. Discard all materials that cannot or should not be saved. Wash and rinse all surfaces, then disinfect them. Remove any water as soon as possible and clean out mud and other debris. Water supplies may be contaminated; use caution with drinking water.
- In the case of an earthquake, expect aftershocks. These are usually less violent than the main quake but can be strong enough to do additional damage to weakened structures and can occur in the first hours, days, weeks, or even months after the quake.

Note: The emotional impacts of disasters on those affected can be distressing and lasting, even if it doesn't involve physical harm. Help by maintaining a positive attitude and a sense of calmness. Your local health authority can assist in coping with trauma resulting from a disaster.



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# **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 Incident Commander.



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:

- 1. 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:
  - What type of bomb is being used?
  - Did you place the bomb?
  - Who is the target?
  - o Where has the bomb been placed?
  - What time is the bomb set to explode?
  - Why was the bomb placed?
  - What type of container is the bomb placed in?
  - What does it look like?
  - What is the bomber's name?
  - 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:
  - o Age and gender
  - Emotional state (angry, agitated, calm, etc.)
  - 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	Explo Mass equiva	(TNT alent) <sup>1</sup>	Build Evacu Dista	ling ation nce²	Out Evac Dist	tdoor uation ance <sup>3</sup>
	Pipe Bomb	5 lbs	2.3 kg	70 ft	21 m	850 ft	259 m
nt)	Suicide Belt	10 lbs	4.5 kg	90 ft	27 m	1,080 ft	330 m
ivale	Suicide Vest	20 lbs	9 kg	110 ft	34 m	1,360 ft	415 m
r Equ	Briefcase/Suitcase Bomb	50 lbs	23 kg	150 ft	46 m	1,850 ft	564 m
TNT)	Compact Sedan	500 lbs	227 kg	320 ft	98 m	1,500 ft	457 m
sives	Sedan	1,000 lbs	454 kg	400 ft	122 m	1,750 ft	534 m
cplos	Passenger/Cargo Van	4,000 lbs	1 814 kg	640 ft	195 m	2,750 ft	838 m
igh Ev	Small Moving Van/ Delivery Truck	10,000 lbs	4 536 kg	860 ft	263 m	3,750 ft	1 143 m
H	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 <u>contact@cyber.gc.ca</u> or by phone at 1-833-292-3788.



# **Animal Encounters**

# First Responders to Animal Attacks

In the event of witnessing or identifying a scene as an attack, it is important to avoid harm to yourself. If equipped with deterrents, an attempt to scare away any remaining animals on scene is optional. In most cases any animals who have recently engaged in an attack are unpredictable therefore it is advised to keep clear and wait until the scene is clear. Steps to be considered:

- Assess the immediate area for personal safety and determine the type of incident
- If cause of injury is unknown, use your gas monitor to ensure there aren't any air-borne hazards.
- Ensure all animals have vacated the scene.
- If not, use any available noise deterrents (Honk Horn, Rev Engine, yell etc.)
- If possible call or radio for assistance and emergency services.
- Calling an applicable wildlife agency is an effective alternative; however, if confronted with a fastpaced scenario such as this, the RCMP will be able to direct your call appropriately.
- Once the area is safe, assess the individuals' injuries and administer any necessary first aid. If the victim is conscious, always ask for his/her consent before doing so.
- Stay with the victim until help arrives:
  - As shock to the victim may be a factor after an attack, using a calm voice and catering to the individuals' requests as best possible is beneficial. For example; covering the victim with a blanket, providing drinking water for the victim, ensuring the victim that help is on the way, etc.
  - Minimize the victim's movements until emergency services have arrived as the extent of harm to the individual is unknown until assessed by a licensed health care representative.
- It is important to document the time and actions taken if a scenario like this presents itself as it will aid you and your company in showing what actions have been taken and how the situation has been responded to.
- Notify your supervisor of the incident.
- You or your supervisor must contact the applicable wildlife regulatory agency to report the incident.



# Animal Encounters, continued

# Bears

There are no hard and fast rules about what to do when you confront a bear. Bears react to humans in different ways in different situations. A bear's reaction depends on the following: sex, age, health; the season; whether the bear is hungry; whether bear cubs are present or whether there is an escape route available to the bear. Never harass or chase a bear!

There are three possible scenarios that are most likely to occur:

- 1. A wandering bear. While it is unlikely that a bear will wander into an area and near workers, we must be prepared to deal with this situation. Any bear seen on the job site will cause an immediate notification of the Incident Commander. In addition, all workers within 500 metres of the animal are to seek immediate shelter within a vehicle or building. The Incident Commander shall assess the situation, observe the bear for its intent, and determine a proper course of action to be taken. At no time will the bear be approached by any workers for any reason other than at the direction of the Incident Commander.
- 2. A located occupied den. A den occupied by a bear will cause an immediate cessation of work and removal of personnel within 500 metres of the den and notification of the Incident Commander. At the discretion of the Incident Commander, the appropriate Environment Fish and Wildlife agency may be notified to determine the best course of action to be taken.
- 3. **Denning bear disturbed**. The company understands that disturbing a hibernating bear is unsuitable for both the bear and for the workers. Upon discovery or disturbance of a hibernating bear all workers will immediately retreat from the area to a distance of not less than 500 metres and into immediate shelter within a vehicle or building. This situation will cause an immediate notification of the Incident Commander.

### On the Trail

Bear encounters on the trail can be dangerous, especially if the bear is surprised or if it is a female with cubs. The bear may consider you a threat and either run away or attempt to remove you as a threat. If you encounter a bear on a trail:

- Stop! Try to stay calm and quiet. Do not make any sudden moves or loud noises. Avoid direct eye contact with the bear; however, never take your eyes off the bear.
- Size up the situation. Is it a black bear or a grizzly? Are there cubs present and where are they in relation to you and the bear? Did you disturb the bear during feeding? Where is the rest of your party? (Always stay together as a group; a bear is less likely to attack a group of people than an individual).
- Do not run from the bear. You cannot out run it! Black bears can reach speeds of 55km/hr.
- Talk quietly and slowly back up leaving the way you came; give the bear enough time and room to leave on its own. Invading the bears space will invoke its "fight or flight" response. Grizzly bears are most likely to fight while Black bears are most likely to choose flight. Avoid any rapid movements and move up wind so the bear can catch your scent and determine you are not a threat.
- If the bear keeps coming at you, climb the tree as high as you can. Remember, some grizzlies and all black bears can climb trees; but if you climb a tree the bear may feel less threatened.



# Animal Encounters, continued

### In Case of Attack (general)

Try to defend yourself on a steep slope or grade; in doing so, you can ensure that any bear will at least have a difficult time standing erect, thereby reducing his full weight force. Bears are also front-heavy, creating an offset in balance when downing slopes or grades.

- Do not run from the bear. You cannot out run it. A bear will often make a "bluff" charge, in which it turns away at the last moment. Running away from such a charge will trigger a more aggressive attack.
- If the bear continues the attack, spray bear ("pepper") aerosol in the animal's eyes. This may cause the bear to stop the attack, and give you an opportunity to escape.

Note: Bear spray must be kept on your person within easy reach or it will not be of use. Bear spray is not a repellent, but a weapon that is only effective in the animal's eyes and nose. It will not repel bears from a sprayed area. In fact, there is evidence to suggest that bears are attracted to objects covered with pepper spray. Read the instructions, understand how to use the spray, and test it to be sure of its range and accuracy.

- If no escape is possible and the bear has knocked you to the ground—roll yourself into a "cannonball" position and play dead. Cover your neck and head with your hands and arms. Stay in this tucked position until the bear leaves.
- If a black bear is attacking you, or you are attacked at night by either species, consider it a predatory attack and fight back with everything you have.

#### **Defensive Attack**

- Bears will engage in a defensive attack when feeling threatened or cornered. This type of attack occurs when a bear is protecting her young, or the carcass of its latest kill. The bear will show signs of stress, like huffing, pawing the ground, exposing its teeth, body swaying and pinning its ears back. The bear in this type of attack will often make "bluff" charge, in which it will turn away at the last moment or veer off its path.
- In this type of attack, play dead to show the bear you are not a threat.
  - If wearing a pack, leave it on for protection
  - o Lie face down on the ground, legs splayed (spread) so the bear cannot easily turn you over
  - If rolled over, quickly turn back onto stomach
  - Clasp hands around the back of your neck
  - Do not shout or act aggressive
  - Remain quiet and still
  - Be prepared to wait until the bear realizes you are not a threat.
- If the bear continues to attack, fight for your life, aiming your assault at the bears head, nose and eyes.

#### **Predatory attack**

- Bears will show no signs of stress during this type of attack. The bear will stalk you and swiftly attack without a warning or "bluff" charge.
- In this type of attack, act aggressive to show the bear you will not be easy prey
  - o Do not be submissive
  - Face the bear, never taking your eyes off of it



# Animal Encounters, continued

- Don't attempt to run away
- Scan for any near-by cover and possible weapons (stick and stones)
- Prepare your deterrent
- Make yourself as large as possible
- o Raise your arms and stomp your feet
- Use rapid arm and leg movement
- Shout loudly
- o Remove your pack
- DO NOT PLAY DEAD
- If the bear continues to attack, fight for your life, aiming your assault at the bears head, nose and eyes.

### In Camp

Bears entering a camp may be coming to feed on human food and garbage, based on their past experiences in camps. Such bears are especially dangerous because they have become human habituated and no longer fear people. It is important if a bear wanders into your campsite to provide it with a negative stimulus to prevent it from returning and becoming human habituated (screaming, noise deterrents etc.). If your campsite is clean, with all attractants properly stored, a bear may lose interest and move on. If a bear comes into your camp, refer to the points in ON THE TRAIL. If your vehicle is nearby, get in it as soon as possible.

# Cougars

Conflict between cougars and humans is extremely rare. Although a cougar attack is highly unlikely, it always pays to be prepared. Information and awareness are your best defenses.

- Cougars are most active at dusk and dawn. However, they will roam and hunt at any time of the day or night and in all seasons.
- During late spring and summer, one to two-year old cougars become independent of their mothers. While attempting to find a home range, these young cougars may roam widely in search of unoccupied territory. This is when cougars are most likely to conflict with humans.
- Cougars have four toes with three distinct lobes present at the base of the pad. Claws are retractable, so they usually do not leave imprints.
- Generally, cougars are solitary. If tracks show two or more cougars traveling together, it probably indicates a female with cubs.
- Cougars seem to be attracted to children, possibly because their high-pitched voices, small size, and erratic movements make it difficult for cougars to identify them as human and not as prey.

### **Cougar Safety**

- Avoidance is the best line of defense.
- Keep a radio playing.
- Do not attract or feed wildlife, especially deer or raccoons. These are natural prey and may attract cougars.
- Roaming pets are easy prey.



# Animal Encounters, continued

- Bring pets in at night. If they must be left out, confine them in a kennel with a secure top.
- Do not feed pets outside. This not only attracts young cougars but also many small animals, such as mice and raccoons, that cougars prey upon.
- Place domestic livestock in an enclosed shed or barn at night.
- Hike in groups of two or more. Make enough noise to prevent surprising a cougar.
- Carry a sturdy walking stick to be used as a weapon.
- Watch for cougar tracks and signs. Cougars cover unconsumed portions of their kills with soil and leaf litter. Avoid these food caches.
- Cougar cubs are usually well hidden. However, if you do stumble upon cougar cubs, do not approach or attempt to pick them up. Leave the area immediately, as a female will defend her young.

### If You Meet a Cougar

- All cougar encounters should be considered predatory. Act big and confident. Make direct eye contact, be loud and attempt to intimidate.
- Never approach a cougar. Although cougars will normally avoid a confrontation, all cougars are unpredictable. Cougars feeding on a kill may be dangerous.
- Always give a cougar an avenue of escape.
- Stay calm. Talk to the cougar in a confident voice.
- Pick all children up off the ground immediately. Children frighten easily and their rapid movements may provoke an attack.
- Do not run. Try to back away from the cougar slowly. Sudden movement or flight may trigger an instinctive attack.
- Do not turn your back on the cougar. Face the cougar and remain upright.
- Do all you can to make yourself seem larger and as intimidating as possible. Don't crouch down or try to hide. Pickup sticks or branches and wave them about.
- Any cougar seen on the job-site will cause an immediate notification of the Incident Commander. In
  addition, all workers within 500 metres of the animal are to seek immediate shelter within a vehicle or
  building. The Incident Commander shall assess the situation, observe the cougar for its intent, and
  determine a proper course of action to be taken. At no time will the cougar be approached by any
  workers for any reason other than at the direction of the Incident Commander.

### If a Cougar Behaves Aggressively

- Arm yourself with a large stick, throw rocks, and speak loudly and firmly. Convince the cougar that you are a threat, not prey.
- If a cougar attacks, fight back! Many people have survived cougar attacks by fighting back with anything, including rocks, sticks, bare fists, and fishing poles.

Cougars are a vital part of our diverse wildlife. Seeing a cougar should be an exciting and rewarding experience, with both you and the cougar coming away unharmed. At the discretion of the On-Site Group Supervisor, the appropriate Environment Fish and Wildlife agency may be notified to determine the best course of action to be taken.



# Animal Encounters, continued

# Large Hooved Animals (Ungulates)

This family is comprised of several hooved omnivores common to Canadian lands. Unknown to most, ungulates cause more yearly fatalities then all predatory species combined. However, this is mainly due to vehicular accidents as opposed to acts of aggression. This class refers to:

- Bison
- Moose
- Mule and White-tailed deer
- Elk
- Caribou

### Ungulate Safety

- Generally speaking they prefer not being near people.
- The best line of defense is avoidance.
- Although physical size and appearance varies significantly, temperaments have been noted to be fairly similar between most species of ungulate.
- Mating season for most ungulates is during the fall months with the young being born in the spring; at both of these periods females and particularly males will become more aggressive and territorial.
- Like all wildlife, keeping a safe distance and never feeding the animals is advised.

### If You Meet an Ungulate

The following 7 steps are suggested if experiencing a close encounter:

- 1. Avoid making similar noises, such as coughing, groaning, grunts, etc.
- 2. Do not approach the animal.
- 3. Stay calm and increase the distance between you and the animal while looking for an escape.
- 4. Run to safety once close enough.
- 5. Use noise deterrent if available.
- 6. Climb a tree if possible.
- 7. Report the incident to a work authority.

### If It Behaves Aggressively

If confronted by an ungulate that feels threatened by you, consider it to be a dangerous situation.

• Look for an avenue of escape.

If knocked down:

- Curl up in a ball, protect head and neck with arms, and remain as still as possible. This is known as the "cannonball" position.
- Do not try to escape until the animal has moved a safe distance away.



# Animal Encounters, continued

# **Rattle Snakes**

Most North American snakes aren't poisonous. Exceptions in Canada include the rattlesnake and very rarely the copperhead snake. Their bites can be life-threatening. Both have slit-like eyes and are known as pit vipers. Their heads are triangular, with a depression (pit) midway between the eye and nostril on either side of the head. Rattlesnakes can be easily identified by the "rattle" noise created from the last segment of their tale when shaken.

### **Rattlesnake Safety**

- Wear over-the-ankle or calf high boots.
- Do not put your hands where you cannot see.
- Use a tool when turning over rocks or boards.
- Always step on rocks and logs, never walk over them.
- Avoid walking through dense brush. If you must use a long stick or branch to beat the brush.
- Be careful when stepping over doorsteps. Snakes like to crawl along the edge of buildings.

### If You Meet a Rattlesnake

- Remain calm. Do not panic.
- Stay at least five feet from the snake. Give the rattlesnake respect and space. Give the snake plenty of room.
- Avoid touching any snake. Back away slowly. Most snakes avoid people if possible and bite only when threatened or surprised.
- Do not try to kill the snake. Doing so is illegal and greatly increases the chance the snake will bite you.
- Alert your supervisor and others in the area of its location and update any hazard maps. Advise them to use caution and to respect the snake. Keep children and pets away.

### In the event of a snake bite

- Remain calm, and inactive. By becoming agitated, your heart beats faster and you increase the flow of blood to the affected area and increase the amount of toxin able to find its way into your tissues.
- Immobilize the bitten arm or leg, and stay as quiet as possible to keep the poison from spreading through your body.
- Remove jewellery before you start to swell.
- Position yourself, if possible, so that the bite is at or below the level of your heart.
- Cleanse the wound, but don't flush it with water, and cover it with a clean, dry dressing.
- Do not put ice or cold substances on the bite.
- Apply a splint to reduce movement of the affected area, but keep it loose enough so as not to restrict blood flow.
- Mark the size of the affected area with a pen to track its progression.
- Drink plenty of fluids to maintain blood volume and prevent shock
- Don't try to capture the snake, but try to remember its colour and shape so you can describe it, which may help identify the snake for treatment, or try to get a picture of it from a safe distance.



# Animal Encounters, continued

- Drive to a hospital or doctor's office ASAP, or have someone else drive. In the event you are several hours away from the nearest hospital, stay standing, stay hydrated, stay calm, and use a cell phone to call emergency responders.
- Do not make "X" incisions over the fang injuries or suck out the toxin. You will most likely cause excessive bleeding and/or additional necrosis (tissue death) and/or further infection from the germs in your mouth or surrounding environment.
- For shallow bite wounds, let it bleed out naturally. More blood will come out at first as generally there are anticoagulants in the venom. If a bite is deep enough to cause spurting blood (i.e. the strike hit a major artery and you're losing blood fast), immediately apply pressure to the wound and call emergency medical personnel.
- Do not use a tourniquet. While certain medical conditions still are helped with proper application of a tourniquet, these are few in number. In most cases, application of a tourniquet will cause necrosis and possibly elevate the need for amputation of the affected area distal to the heart. (a tourniquet is a tight encircling band applied around an arm or leg in an emergency to stop severe bleeding, e.g. tying a piece of cloth around your arm really tight) However, if treatment is more than 60 minutes away, using a constrictive band is advisable to prevent spread of the toxin. The band should be placed 5-10 cm above the bite and you should be able to place 2 fingers under the band.
- Snakes typically do not exhaust their venom after the initial bite, so be sure to remove yourself from the area as quick as possible. Furthermore, snakes have been known to have a bite reflex last up to 60 minutes after death.
- Watch the victim for signs of shock. This is treated by lying flat with feet elevated. Cover with warm clothes or blankets.

# Wolves

Wolves generally avoid human interactions, unless they have become human habituated through repeated exposure to humans without any negative stimulus. It is not normal for wolves to attack or pursue humans. Please do your part to keep wolves where they belong, in the wild. As human population continues to grow, wolves are now considered an endangered species in Canada. In an attempt to keep wolves non-habituated, if seen, ensure all garbage has been properly disposed of and use noise to deter/scare the animal(s) away.

### Wolf safety

- Wolves are notoriously intelligent animals; generally hunting in groups or packs surrounding their prey.
- Wolves have ranges of up to 400km.
- Wolves may breed anytime throughout the year. However, pups are mainly born between April-June at which time the entire pack will aggressively defend their young.
- Wolves are considered timid towards humans. Attacks are more likely if a wolf feels threatened, is sick, or assess their prey maybe injured and therefore more susceptible to attack.
- Secure all food items and never feed any other wildlife. Deer and small mammals can attract larger predators such as wolves.
- Howling is a form of communication for wolves. If heard within a close proximity, it is advised to find shelter in a vehicle or building.



# Animal Encounters, continued

### If you meet a wolf

In the unlikely event of a wolf or wolves threatening humans, here is what to do.

- Stay calm
- Never make sudden movement; back away slowly, never turning your back on the wolf.
- Leave the wolf an avenue of escape.
- Raise your voice and speak firmly.
- If the wolf continues to approach, wave your arms in an attempt to make yourself look bigger.
- Make use of any rocks, sticks, camping gear, fists, or feet to fend off an attack, Try to protect your neck and head from attacks.

### Finding a wolf carcass

Wolves are an endangered species; in the event of finding a wolf carcass, take these following steps:

- Do not disturb or move any evidence.
- If possible, cover the carcass with a secured tarp or blanket in an attempt to preserve it.
- Once reported to your supervisor, call the appropriate provincial wildlife agency as they will determine the best course of action to be taken.

# **Bees and Wasps**

The presence of native wild bees, and many species of wasps and hornets will be noted by all personnel working on the project.

Head-nets will be required PPE for all personnel when working in areas where large concentrations of bees, wasps, or hornets have been identified.

All personnel will inform the Incident Commander of any known allergy to, or past reaction to bee, wasp, or hornet stings.

### If a "nest" is detected:

- All personnel will leave the area immediately.
- Call in the location of the "nest" to the Incident Commander.
- The area will be flagged as a hazard and its location written down for marking on the hazard map.

### If a sting or attack occurs the following procedure will be followed:

- Remove the stinger within 30 seconds if possible.
- Do not squeeze the wound as this will release more venom.
- Wash the wound with soap and water.
- Apply cold pack.
- Watch for any of these signs and symptoms of allergic reaction and notify Incident Commander immediately if detected: rash, tightness of the chest and throat, swelling of the face, neck, and tongue, excessive sweating, dizziness, and / or difficulty breathing.



# Animal Encounters, continued

# **EpiPens**

Adrenaline (epinephrine) is a natural hormone released in response to stress. It is a natural "antidote" to the chemicals released during severe allergic reactions triggered by drug allergy, food allergy or insect allergy. It is destroyed by enzymes in the stomach, and so needs to be injected. When injected, it rapidly reverses the effects of a severe allergic reaction by reducing throat swelling, opening the airways, and maintaining blood pressure.

Use of adrenaline for treating anaphylaxis is First Aid.

IMPORTANT: The information provided is of a general nature and should not be used as a substitute for professional advice. If you think you may suffer from an allergic or other disease that requires attention, you should discuss it with your Incident Commander.

### Warning / direction for EpiPen use:

- Never put thumb, fingers, or hand over the orange tip. (Tip colours vary by brand. Other colours are generally black and green.)
- Do not remove grey safety release until ready to use.
- Do not use if solution is discoloured or red flag appears in clear window as it may be expired.
- Do not place any other foreign objects in carrier with auto-injector, as this may prevent you from removing the auto-injector for use.

### Steps for EpiPen use:

- 1. Unscrew the yellow or green cap off of the EpiPen carrying case and remove the EpiPen auto-injector from its storage tube.
- 2. Grasp unit with the black tip pointing downward.
- 3. Form fist around the unit (black tip down).
- 4. With your other hand, pull off the gray safety release.
- 5. Hold black tip near outer thigh.
- 6. Swing and jab firmly into outer thigh until it clicks so that unit is perpendicular (at a 90° angle) to the thigh. (Auto-injector is designed to work through clothing.)
- 7. Hold firmly against thigh for approximately 10 seconds. (The injection is now complete. Window on auto-injector will show red.)
- 8. Remove unit from thigh and massage injection area for 10 seconds.
- 9. Call for Help and seek immediate medical attention.
- 10. Carefully place the used auto-injector (without bending the needle), needle-end first, into the storage tube of the carrying case that provides built-in needle protection after use. Then screw the cap of the storage tube back on completely, and take it with you to the hospital emergency room.

Most of the liquid (about 90%) stays in the auto-injector and cannot be reused. However, you will have received the correct dose of the medication if the red flag appears in window.

#### Immediately after EpiPen use:

- Go immediately to the nearest hospital emergency room or call 911. You may need further medical attention. Take your used auto-injector with you.
- Tell the doctor that you have received an injection of epinephrine in your thigh.
- Give your used EpiPen to the doctor for inspection and proper disposal.



# **Section 5: External Agencies**

Provincial Notification Matrix Provincial Lead Agency Roles Government Consultation Summary Specific Government Agency Roles Health Services Local Authority Provincial Supporting Agency Roles Federal Agency Roles



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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 or that has the potential to cause 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 EDGE (Environmental and Dangerous Goods Emergencies) is the first call for all transportation related spills/incidents. If spill is contained on-site, Alberta EDGE will contact the AER. If the spill moves off-site or into a waterbody, Alberta EDGE will contact Alberta Environment and Protected Areas (EPA) and/or Environment & Climate Change Canada (ECCC). Contact Alberta EDGE 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 EDGE 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 1m<sup>3</sup> 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

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GRANDE PRAIRIE EMERGENCY RESPONSE PLAN

	Before the Incident	During the Incident	After the Incident	
Common Tasks	<ul> <li>All departments/agencies should participate in training and exercises for this plan and the Energy Resources Industry Emergency Support Plan (ERIESP).</li> <li>This plan will be reviewed as required.</li> <li>A join multi-department/agency exercise will be held as required.</li> </ul>	<ul> <li>The AER may activate the ERIESP based on the following criteria:         <ul> <li>Level 2 or 3 emergencies (as defined by the AER)</li> <li>Any level of emergency:                  <ul></ul></li></ul></li></ul>	<ul> <li>Complete a Post Incident Assessment (PIA) based on the scope of their involvement and the outcome.</li> <li>Integrate PIA into internal response processes.</li> <li>All departments/agencies will participate in a joint PIA to be coordinated by AER. Participation from each department/agency will be determined by the response to the emergency.</li> <li>Reports required by other regulatory authorities must be completed and delivered to the appropriate regulatory body within the time lines they prescribe.</li> </ul>	
*Alberta Energy Regulator (AER)	<ul> <li>Confirm and act as lead Government of Alberta (GoA) organization in energy resources industry emergency preparedness and response.</li> <li>Set requirements for planning for, and responding to energy resources industry emergencies.</li> <li>Participate in exercises of this plan.</li> <li>Review and recommend changes to this plan.</li> <li>Maintain 24/7 telephone contact where energy resources industry emergencies can be reported.</li> <li>Maintain 24/7 emergency contact numbers where resources can be accessed to carry out a response to this plan.</li> <li>Make this plan available to stakeholders.</li> <li>Communicate changes to the plan with stakeholders</li> <li>Maintain emergency response resources.</li> <li>Act as Subject Matter Expert (SME).</li> </ul>	<ul> <li>Receive notification of energy resources industry emergencies.</li> <li>Determine the emergency level of an emergency through consultation with the duty holder.</li> <li>Dispatch AER representative to the site of the emergency, as required.</li> <li>Confirm that local resources have been notified as appropriate.</li> <li>Monitoring discharges and ensuring appropriate mitigation and response actions are taken to reduce the impact of liquid releases for land based spills and to ensure watercourses are protected.</li> <li>Confirm, plan and/or implement public safety actions taken to ensure the safety of the public and the environment, including issuing Fire Hazard Orders or requesting NOTAMs.</li> <li>As lead agency, provide coordination for departments/agencies and duty holder on site.</li> <li>Request a local authority liaison officer to be present at the REOC, if necessary.</li> <li>Activate the Energy Resources Industry Emergency Support Plan.</li> <li>Advise AEMA to escalate POC activation (if required).</li> <li>Identify and request initial provincial resources to support the emergency response, to be coordinated at the regional level if necessary through a local or regional EOC.</li> <li>Initiate consolidated Situation Reports through AEMA.</li> <li>Provide Situation Reports to AEMA if requested.</li> <li>Send an AER representative to the emergency location and/or the incident command post.</li> <li>Establish an EOC at the local AER Field Centre until the duty holder or local authority establishes a REOC. AER ECC will be expanded if a REOC is not established.</li> <li>Dispatch an AER representative to the REOC when it opens.</li> <li>Request the deployment of other provincial GoA department/agency representative to be present at the REOC, or the local AER Field Centre Unit the duty holder or local authority establishes a REOC. AER ECC will be expanded if a REOC is not established.</li> <li>Dispatch an AER representative to the</li></ul>	<ul> <li>Conduct the PIA related to the response, as described by the ERIESP.</li> <li>As part of the PIA, recommend any mitigation actions that may improve the coordination of the GoA response, as described by the ERIESP.</li> <li>Establish processes to receive and address community concerns.</li> <li>Review and update the ERIESP, in consultation with AEMA.</li> <li>Communicate any changes to the ERIESP to applicable stakeholders.</li> </ul>	oles
*AEMA	<ul> <li>Act as the provincial coordinating agency in energy resources industry emergency responses as per the <i>Emergency Management Act</i>.</li> <li>Maintain list of 24 hour emergency contact numbers.</li> <li>Maintain 24 hour duty manager system.</li> </ul>	<ul> <li>Confirm AER has been notified.</li> <li>Conduct the notification in accordance with Section 5.3.</li> <li>Obtain a situation report from the AER, AEP, local authority, etc.</li> <li>Confirm the level of emergency.</li> <li>Elevate the POC as required.</li> <li>Notify the appropriate provincial officials as per standard operating procedures.</li> <li>Release consolidated Situation Reports in accordance with section 3.4.4.</li> <li>Coordinate the Government of Alberta response including requests for provincial/federal resources.</li> <li>Provide ongoing situation reports or briefing notes to appropriate provincial officials in accordance with the AEP or as requested.</li> <li>Notify partners and stakeholders when the event is over.</li> </ul>	<ul> <li>Participate in all PIAs related the ERIESP.</li> <li>Complete documentation or reporting in relation to the activation of the ERIESP and the emergency for all GoA-wide PIAs.</li> </ul>	cy Ro
Local Authority	<ul> <li>Work with the operator to effectively prepare for a 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.</li> <li>Participate in industrial operators' preparatory training and exercises where possible.</li> <li>Train personnel to carry out functions as assigned by MEP or procedures.</li> <li>Maintain 24 hour emergency contact numbers.</li> <li>Meaningful planning (including confirmation and coordination of roles and responsibilities) between the local authority and the licensee/operator has taken place.</li> <li>Details on municipal emergency response capacity and planning are found in the applicable municipal emergency plan.</li> </ul>	Receive notification and work with the licensee/operator.     In a petroleum industry incident, determine if the incident can be managed and the level of support that would be needed if required from AER and AEMA. If the local authority, licensees or operators are unable to manage the response, the AER with assistance from AER with manage the response.     Send a local authority liaison officer to be present at the AER regional EOC if necessary.     If AEMA is providing support provide regular situation reports.     Respond to and assess the emergency incident.     Establish contact with the industrial operator in order to:     Obtain additional hazard information.     Determine the direction of approach to the incident.     Determine the direction of approach to the incident.     Determine if there are any injuries.     If AEME is provident 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 Provincial Operations Centre (POC), when it is established, to coordinate the response, if required establishent and maintenance with the industrial operator.     When possible, work with all other responders to establish a single Regional EOC (REOC).     Stablish a public information service, including the use of the news media to inform and instruct the public of the emergency Planning Zone (EPZ), the county will coordinate evacuation of the emergency and of any protection the emergency planning zone (EPZ), the county will coordinate evacuation of the emergency and of any protective actions to be taken.     If necessary, declare a local State of Emergency.     If necessary declare a local State of Emergency Planning Zone (EPZ), the county will coordinate evacuation of the public as well as reception cent	Complete a "lessons learned" process based on the scope of involvement and provide any feedback to the industrial operator. Participate in multi-agency debriefings.	Lead Agen
Alberta Health Services (AHS)	<ul> <li>Alberta Health Services (AHS) - Environmental Public Health (EPH) roles and responsibilities in public health emergency preparedness and response to 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.</li> <li>Environmental Public Health will endeavor to:</li> <li>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.</li> <li>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.</li> <li>Participate with stakeholders in preparedness training and exercises associated with a Licensee's simulated activation of an Emergency Response Plan in which Environmental Public information sessions during the Licensee's Emergency Response Plan development process when appropriate and as resources allow.</li> </ul>	<ul> <li>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.</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>Establish EPH emergency management operations, when appropriate, to support regional efforts and liaise with the Government Emergency Operations Centre, Municipal Emergency Operations Centre, if needed.</li> <li>Assist the Zone Medical Officer on 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.</li> <li>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.</li> <li>Record and respond to health complaints or concerns from the public during and following and incident.</li> </ul>	<ul> <li>Record and respond to health complaints or concerns from the public during and following and incident.</li> <li>Participate in stakeholder debriefings as necessary.</li> </ul>	berta

Note: The roles for the local authority(s) and regional health authority(s) are not outlined in the Energy Resources Industry Emergency Support Plan (ERIESP) Plan and will be coordinated during the public consultation program. \*AER - Alberta Energy Regulator \*AEMA - Alberta Emergency Management Agency \*AHS - Alberta Health Services



#### 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.

es

G 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

- Servi When a local authority EOC is activated, police and fire first responder agencies 3 provide situational awareness to the local authority and submit requests for support to the local authority EOC en
- First response services provided by a fire department are determined by the local Emerg 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 8 airplane or helicopter. 4
  - 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
  - Derticipate in industrial operators' exercises where possible
  - □ Maintain 24 hour emergency contact numbers

### **During the Incident**

- CMP 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.
- Alintain 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.
- Amintain 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.

#### EMS

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.

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### 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.

Revised June 2018



### **Governement Consultation Summary - 2023**

GRANDE PRAIRIE EMERGENCY RESPONSE PLAN

Type of Agency	Agency Name	Provided Specific Roles	Unable to Contact	Willing to consider a single REOC	Evacuation outside of the EPZ	Location of EOC	Suggested Reception Centres	Notes
Health Authority	AHS – Z5 North	x		Yes, where possible	N/A	Virtual	N/A	
Health Authority	First Nations Inuit Health	x	1	Yes, where possible	N/A	N/A	N/A	
Local Authority	County of Grande Prairie No.1	x		Yes, where possible	Require assistance from licensee with coordinating evacuation outside of EPZ.	10808-100 Ave Clairmont, AB	N/A	
Local Authority	Horse Lake First Nation	x		Yes, where possible	N/A.	Horse Lake Band Office	N/A	
Local Authority	M.D. of Greenview	x		Yes, where possible	Require assistance from licensee with coordinating evacuation outside of EPZ.	4806-36 Ave Valleyview, AB	N/A	
Local Authority	Saddle Hills County	x		Yes, where possible	Require assistance from licensee with coordinating evacuation outside of EPZ.	Saddle Hills County Office	N/A	
Local Authority	Town of Wembley	x		Yes, where possible	N/A.	10808-100 Ave Clairmont, AB GPREP	N/A	



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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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Gouvernement du Canada

#### DEPARTMENT OF INDIGENOUS SERVICES CANADA:

First Nations and Inuit Health Branch - Alberta Region / Environmental Public Health Services (EPHS)

Mandate of EPHS:

Government

of Canada

- Environmental Public Health Services (EPHS) in First Nations communities works to identify and
  prevent environmental public health risks that could adversely impact the health of community
  residents, and recommends corrective action that may be taken by community leaders and
  residents to reduce these risks.
  - Programming includes public health inspections, monitoring environmental conditions such as drinking water quality, delivering training and raising awareness about potential environmental public health risks and the steps people can take to protect themselves and their families.
- The EPHS program provides services to most First Nations located within the Province of Alberta (excluded are First Nations Bands that make up the community of Maskwacis, AB), based on discretionary government policy considerations, without any legal obligation and at the request and/or with the agreement of First Nations Authorities.

EPHS staff work with stakeholders in an advisory role at the community, regional and national levels to coordinate efforts and assure public health risks posed by emergencies in First Nations communities are eliminated or mitigated.

During a petroleum industry incident, our agency would likely provide or perform the following:

#### Before the Incident:

- Provide and maintain a 24/7 Single-Point-Of-Contact (SPOC) emergency contact number to enable the Licensee to notify and alert FNIHB-AB EPHS of an emergency or incident. From the initial notification or alert, EPHS will ensure that the information is received by the FNIHB-AB Director of Health Promotion and Protection and the Director of the Office of the Senior Medical Officer of Health, who will help to ensure coordination of all FNIHB-AB response activities.
- Review the Licensee developed Emergency Response Plans as they relate to EPHS program's role and responsibility.
- Upon request, participate in preparedness training and exercises associated with a Licensee's simulated activation of an Emergency Response Plan in which EPHS program has a role and responsibility.
- Provide guidance to stakeholders and local First Nation authorities in identifying sites suitable for establishing and operating of an evacuation centre and/or reception centre.

#### During the Incident:

Provide environmental public health advice to First Nation community leadership and to on
reserve health care facilities, related to known adverse environmental conditions resulting from
a petroleum incident.



- Upon request from the First Nation community, provide the interpretation of air quality data provided to our department.
- Investigate and provide guidance on environmental public health related complaints received from Alberta First Nation communities.
- Provide guidance on environmental public health advisories, concerning on reserve population to First Nation leadership and other stakeholders.
- Provide representation at off-site EOCs or ECCs (established by local, provincial, or federal government stakeholders) when requested and upon EPHS staff availability.
- Work with partners to determine the health risks and to assist with public messaging to help provide accurate information concerning environmental health impacts related to an incident.
- Provide environmental public health services at on reserve evacuation centre(s) to help ensure that public health standards are being met.
- Provide input to First Nation leadership to help with their decision making relating to evacuations, re-entry and re-occupancy of evacuated areas and dwellings.
- Provide advice to EOC/ECC on existing or potential health risks and health effects associated with the incident based on available information.

#### After the Incident:

- Compile and maintain environmental public health related documents on inspected facilities.
- Participate in PIAs (Post Incident Assessments)
- Provide guidance on assessing and mitigating public health risks following an upstream petroleum incident.

The following contact information should be used for all notification and alerting purposes by Licensees and can be included in industry ERPs, where appropriate:

#### 24/7 EPHS Single-Point-Of-Contact: (780) 719-8782

Environmental Public Health Services, First Nations and Inuit Health Alberta Department of Indigenous Services Canada, Government of Canada Suite 730, 9700 Jasper Avenue Edmonton, AB T5J 4C3 Phone: (780) 495-4409, Fax: (780) 495-6380

This document has been compiled to inform all stakeholders of EPHS program's roles and responsibilities and for purposes related to ERCB's /AER's Directive 071 (ERCB 2009), Section 4.1. The above information is valid as of February 1st, 2018 and will be reviewed and updated as needed every two years following its release.

### County of Grande Prairie No. 1

### Revised October 3, 2022

#### **Contact information:**

Name	Title	Office #	Cell #	E-mail
Trevor Grant	Fire Chief (Primary)	780-532-9727	780-882-2975	tgrant@countygp.ab.ca
Bart Johnson	Deputy Fire Chief	780-532-9727	587-297-0246	bjohnson@countygp.ab.ca
Jason Nesbitt	Deputy Fire Chief	780-532-9727	780-882-1540	jnesbitt@countygp.ab.ca
Joulia Whittleton	Director Emergency Management	780-532-9722	780-933-8712	jwhittleton@countygp.ab.ca
Darryl Martin	Deputy Director Emergency Mgmt.	780-532-9727	780-882-5048	dmartin@countygp.ab.ca

Initial contact person for ERP's for the County of Grande Prairie No. 1 is Trevor Grant Fire Chief.

#### Responsibilities

The *Emergency Services Act* requires the local authority of each municipality to be responsible for Emergency Response Planning and for the direction and control of their emergency response in their respective jurisdiction (*Local Authority*).

#### The Local Authority:

- Review the Site specific Emergency Response Plan
- Initiates and manages the local municipal disaster services response
- Dispatches representative(s) to the Emergency Operations Centre, when established and as required
- If required, activates their municipal emergency operations centre and coordinates municipal activities at this centre
- Upon request, may assist with setting up and administration of the Reception Centre.
- Assists with the arrangements of temporary accommodations for residents who have been evacuated
- Assist with the establishing, set up and maintenance of roadblocks as resources and staff training permit
- Ensures that if available, local emergency services and resources are available to the level that they are trained
- Assists with off-site fire protection
- Activates the Emergency Public Warning System (EPWS) to alert public to life threatening hazards as required according to criteria set out by AEMA
- Supports operator in dealing with the emergency situation
- Initiate public protection methods as required
- If necessary, declares a local state of emergency to provide local authorities with special powers (mandatory evacuation, use of or entry into private property, conscription, demolition of private property structures for safety reasons, etc), and
- Establish a public information service, including use of the news media to inform and instruct the public of the emergency as required
- Assist as required with post incident damage assessment

#### Resources

## County of Grande Prairie No. 1

## Revised October 3, 2022

- The County has and may provide equipment and manpower in an <u>offsite support</u> role for fire protection and emergency mitigation. No County Fire personnel will work outside of their scope of practice. All County personnel will remain under immediate control and direction of a County Fire Officer or designate. The County Fire Service is manned 24 hours a day from the Clairmont and Dunes Fire Halls. All other stations in the County service area are Paid Response or Volunteer and will be dispatched through 911.
- The County has uniformed Level 1 Peace Officers. The RCMP performs all other policing, evacuation and notification duties. The Peace Officers would be mobilized at the request of the RCMP.
- The County has a large Public Works Department (divided into 3 zones), affiliated equipment and vehicles, and a staff that ranges from 140 in the winter to 240 in the summer. Manpower and equipment may be available to assist with roadblocks and county road closures depending on training and availability.

#### County of Grande Prairie Notification 24 hr. Phone Number 1-780-814-0280

#### For all Emergencies Dial 911





#### LOCAL AUTHORITY – HORSE LAKE FIRST NATION

- Ramona Horseman, Chief 780-831-0823
- Dale Horseman Jr. Fire Chief, DEM 780-518-6653
- Bertus Horseman, Public Works Director 780-832-1768

It was confirmed that the Horse Lake First Nations do have their own emergency response plan and are able to coordinate their own evacuation. They have 4 large school buses and each bus can transport 60 people. If there was an emergency on the reserve the Band would likely evacuate to the Hythe Legion Hall. Unless affected by an on-reserve emergency, the EOC would be at the Band Office.

In the event of an emergency, Horse Lake First Nation would contact Alberta Environment (Chase Belhomme) and they would dispatch a mobile unit to help with all aspects of emergency management. Typical response time is 5-6 hours.

The following is a brief summary of the roles and responsibilities of the First Nation in an emergency.

First Nations are responsible for developing and implementing emergency plans for their communities. When an emergency occurs or may be imminent within a First Nation, it is the responsibility of the Chief of the First Nation to make a declaration of Emergency. When a First Nation declares a State of Emergency, it may not necessitate an evacuation from the community. However if evacuation is necessary the First Nation is able to coordinate it. If the Chief is unable to be contacted with regards to evacuation the following can be contacted:

• Dale Horseman Jr. - Fire Chief – 780-518-6653 (cell)



#### LOCAL AUTHORITY - M.D. OF GREENVIEW

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.
- **D** 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.
- □ Establish contact with the industrial operator in order to (the following roles/responsibilities are entirely contingent upon the communication of accurate and timely information from the industrial operator to the MD of Greenview):
  - □ 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 emergency public warning system to alert people to life threatening hazards, as required.
- Activate the Municipal EOC (MEOC), as required.
- □ Initiate public protection measures, as necessary.
- □ May dispatch a representative to the Government EOC (GEOC), when it is established, to coordinate the response, if requested.
- □ If necessary, declare a State of Local Emergency.
- □ When possible work with all other responders to establish a single Regional EOC (REOC).



#### Upon the Notification of and during an Event, continued

- □ Establish a public information service *on behalf of the MD of Greenview*, including the use of the news media to inform and instruct the public of the emergency and of any protective actions to be taken.
- Provide timely news releases on behalf of the MD of Greenview, if required.
- □ If a State of Local Emergency has been declared, inform AEMA and the public when the emergency is over.

#### 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.

#### 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).
- As available technology allows, communicate to MEOC and provide site reps as required.
- Assist with fire protection where trained personnel are available.
- Provide emergency medical assistance, as required, understanding that Alberta Health Services is primarily responsible for ground ambulances in the Peace Country Health region.
- Provide timely news releases with respect to the MD of Greenview, 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.



#### MUTUAL AID UNDERSTANDING

**Emergency Notification of Saddle Hills County:** 

Saddle Hill County must be contacted at a Level 1 Emergency if any members of the public are notified or road blocks are established on any County road(s) or numbered provincial highways.

Saddle Hill County must be contacted automatically at a Level 2 or 3 Emergency.

**Please note:** Saddle Hills County will dispatch a representative to liaison with the Incident Commander or Operations Chief at the Company Regional Emergency Operations Centre (REOC), Incident Command Post or On Site Command Post as appropriate depending on the location.

#### **Emergency Contacts**

1. Brice Daly – Manager of Protective Services - Cell (780) 876-2930 (24 hr.) - Duty Officer Cell (780) 864-0439 (24 hr.) bdaly@saddlehills.ab.ca

2. Cary Merritt – Chief Administrative Officer - Cell (780) 864-5587 (24 hr.) cao@saddlehills.ab.ca

3. Ron Pelensky - Cell (780) 500-7017 rpelensky@saddlehills.ab.ca

County Office (780) 864-3760 (weekdays only)

#### **Public Information Officer**

Monica Randell - Cell (780) 864-7841 - Office (780) 864-3760 mrandell@saddlehills.ab.ca

Please Note: The office number is weekdays only.

All Emergency Services Police, Fire, Ambulance Dial 9-1-1

Grande Prairie (9-1-1) Dispatch Centre Direct line (780) 538-0390 (answered as 9-1-1 call)

Alberta Agriculture & Forestry – Grande Prairie Wildfire Management Area Duty Officer - (780) 538-8093 (Fire Centre – GP) (780) 518-6696 (cell) **310-Fire** (Fire Centre – Edmonton) Saddle Hills County is a member of: Central Peace - Regional Emergency Management Agency along

with Birch Hills County, MD of Spirit River, Town of Spirit River and Village of Rycroft. This partnership enables a seamless response a throughout the Central Peace Region.

#### Responsibilities

- Initiates and manages the local Emergency Management response in accordance with County Policy.

- May dispatch representative(s) to the Company's Incident command Pos t(ICP) or Regional Emergency Operations Centre

- Ensures all local emergency and public information services are available in accordance with County Policy. (Public Information Releases will be coordinated with the Companies Public Information Officer to ensure consistency of key messages)

- If required, activates Central Peace - Regional Emergency Operations Centre and coordinate activities at this centre. The Central Peace - Regional EOC, located the Saddle Hills County office at NW9 – 79 – 8 – W6 is available to the Company for use as a REOC subject to limitations as may be imposed by Saddle Hills County due to operational requirements at the time of an incident.

- Upon request, may assist with set-up and administration of a Reception Centre.

- May assist with arrangement of temporary accommodations for residents who have been evacuated in accordance with County Policy.

- May assist with set up and maintenance of road blocks and detours in accordance with County Policy.

- May assist with Fire Protection in accordance with County Policy in areas where accessible.
- If necessary, may declare a "State of Local Emergency" to provide local authorities with special powers.
- Supports the Company in dealing with the emergency in accordance with County Policy.

#### Resources

**Fire Departments** - There are 5 County Fire Departments, located at **Bonanza, Blueberry, Happy Valley, Savanna & Woking** and 1 Fire Department on contract from **Tomslake, BC for the Gundy area**, each with approximately 15 - 25 volunteer fire fighters.

#### Please note:

The Fire Departments are not equipped for Industrial Fire Protection and would only be responsible for anything off-site or outside the EPZ. Some Fire Department resources may be useful for on-site actions such as Water Tanker Trucks, Portable Tanks, etc and may be made available if requested.

Certain areas of Saddle Hills County have limited access or are extremely remote from any Fire Station, **Alberta Agriculture & Forestry** – GP Wildfire Management Area is responsible for Wildland fire protection in these areas

Police - The County currently has 1 Community Peace Officer. Most policing duties are covered by the Spirit River RCMP.

**Public Works** – The County Public Works Department employs about 20 personnel, which expands to 30 employees during the summer.

Emergency Medical Services are provided by Alberta Health Services - EMS, however, Saddle Hills County does have

**Medical First Responders (trained and equipped to an FMR level)** in areas of the County that are remote from the Ambulance Station in Spirit River. They are automatically dispatched to all ambulance calls in their area.

**Emergency Social Services** – The Central Peace – Emergency Social Services Group can provide assistance with registration and inquiry services as well as arranging for sheltering and other requirements as may be needed by evacuees.

**Regional Emergency Operations Centre** – 16 work stations (2 people each) with phone; data; & wifi capability.

(Whenever possible please send ERPs in electronic format/ USB or E-mail only)

2022/08/18



#### LOCAL AUTHORITY - TOWN OF WEMBLEY

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

#### **Before the Event**

- 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 the Notification of and during an Event

- **Q** 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. Location will be determined based on location of incident.
- □ 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 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 the licensee; evacuation of the public.
- □ Coordinate with the licensee establishment and maintenance of reception centre(s).
- Only has limited access to transportation for evacuees.
- 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.
- □ 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.

P 403.212.2332 | F 403.313.9180 | E <u>info@h2safety.ca</u> 210, 7260 12 St. SE | Calgary, AB, T2H 2S5



#### operated by the Local Authority)

#### Emergency Services (as managed /

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.

#### **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.

All departments/agencies should participate in training and exercises for	During the Incident	After the Incident	<b></b>
this plan and the Energy Resources Industry Emergency Support Plan (ERIESP). This plan will be reviewed as required. A join multi-department/agency exercise will be held as required.	<ul> <li>Levef 2 or 3 emergencies (as defined by the AER)</li> <li>Any level of emergency:         <ul> <li>Grequires coordination of multi-agency response;</li> <li>requires coordination of information and communication between departments/agencies and/or has significant provincial/national media interest.</li> </ul> </li> <li>Elevations of the POC will be escalated by AEMA. Once the elevations level of the POC has been escalated, provincial-level emergency control will be coordinated by AEMA under the leadership of the lead agency.</li> <li>The AER will develop emergency objectives to guide the GoA response and support to duty holders and local authorities. AER will assist the AER by providing leadership and strategic policy direction for the GoA as per the Government Emergency Management Regulation (AR 248/2007).</li> <li>GoA emergency management assistance will be provided to the local authority as requested and as long as is required by the local authority.</li> </ul>	<ul> <li>involvement and the outcome.</li> <li>Integrate PIA into internal response processes.</li> <li>All departments/agencies will participate in a joint PIA to be coordinated by AER. Participation from each department/agency will be determined by the response to the emergency.</li> <li>Reports required by other regulatory authorities must be completed and delivered to the appropriate regulatory body within the time lines they prescribe.</li> </ul>	
Maintain and provide resources to support 24\7 employer reporting of incidents to OHS. Maintain capacity for OHS attendance to a work site when warranted. Maintain a formal Incident Management Program is in place to ensure compliance to OHS requirement to reporting, investigation, risk management, and monitoring.	<ul> <li>Ensure appropriate response and management of the scene is conducted:         <ul> <li>Ensure appropriate medical response is initiated and emergency response is contacted.</li> <li>Ensure safety of those on-site.</li> <li>Ensure security and integrity of the incident site is maintained.</li> <li>Inspect the work activities and processes to ensure legislative standards are being met by all work site parties. (Attendance to be determined by Occupational Health and Safety management.)</li> <li>Ensure the appropriate provincial/territorial agencies are notified, where required.</li> </ul> </li> </ul>	<ul> <li>Ensure work site parties have implemented appropriate controls prior to reentry by workers.</li> <li>Investigate the incident if the incident is a reportable incident in line with current Alberta OHS Legislation.</li> <li>Ensure internal investigation has been conducted and that identified corrective actions have been minimized to reduce recurrence of similar incidents.</li> <li>Ensure outcomes and corrective actions are communicated to workers.</li> <li>Ensure health and safety committee or health and safety representative as defined by OHS legislation has been involved in internal investigations.</li> </ul>	5
Act as subject matter expert (SME) relating to agriculture and livestock impacts. Act as the liaison between farming/ranching community and the Government of Alberta (GoA). Maintain emergency response resources.	<ul> <li>Act as SME relating to agriculture and livestock impacts.</li> <li>Act as the liaison between farming/ranching community and GoA during energy resources industry emergencies.</li> <li>Provide information relating to agricultural and livestock impacts to the GoA during energy resources industry emergencies.</li> </ul>	<ul> <li>Conduct agriculture and livestock impact assessments.</li> <li>Implement response activities as required.</li> </ul>	
Maintain 24/7 contact numbers and duty officer where resources can be accessed for emergency response. Maintain emergency response resources. Act as subject matter expert (SME).	<ul> <li>Notify forestry staff in the area of the emergency.</li> <li>Forest Areas Wildfire Coordination Centres will notify duty holder if energy resources industry infrastructure is threatened by wildfire, where practical and in order of priority. Priority contact will be through the contact information indicated in the company's Industrial Wildfire Control Plan for the identified locations. Can fight wildfires started as the result of the energy resources industry product release.</li> <li>Alberta Wildfire is responsible for managing all wildfires within the Forest Protection Area. Will suppress wildfires caused from industry operations when industry has appropriately shut-in the operation and notified Alberta wildfire to ensure the safety of first responders.</li> </ul>	Conduct forest impact assessment. (if applicable)	V
Maintain a 24/7 call centre (EDGE - Environmental and Dangerous Goods Emergencies) to receive emergency calls related to the transportation and handling of dangerous goods as well as environmental spills/releases/ incidents, and AER emergency notifications. Act as SME for dangerous goods incidents.	<ul> <li>Handle inter-departmental communication as needed during energy resources industry emergencies.</li> <li>Maintain ability to process calls for new emergencies.</li> <li>Provide information on the impacts to transportation routes.</li> <li>Provide response support if dangerous goods are released.</li> </ul>	Provide a summary of transportation impacts during the PIA process. (if applicable)	
Maintain a team of trained Communications and Public Engagement personnel. Activate crisis communications plan and crisis communications response.	Confirm distribution of AER messaging. Provide support as required.	<ul> <li>Participate in all PIAs related to the ERIESP.</li> <li>Coordinate key messaging with the AER.</li> </ul>	
Maintain the list of Critical Infrastructure and key assets in the Province of Alberta. Maintain and regularly test the Emergency Notification System. Maintain awareness of threats, vulnerabilities, and risks related to human induced intentional hazards.	<ul> <li>Provide intelligence and threat risk assessments when appropriate and when requested, in relation to critical infrastructure and key assets.</li> <li>Communicate with owners and operators of critical infrastructure and key assets, through normal communication channels, or if necessary through the Emergency Notification System maintained by ASSIST.</li> </ul>	<ul> <li>Participate in all PIAs related to the ERIESP.</li> <li>Communicate with owners and operators of critical infrastructure and key assets, through normal communication channels, or if necessary through the Emergency Notification System maintained by ASSIST.</li> </ul>	C

Before the Incident	During the Incident
<ul> <li>Maintain 24 hour emergency contact numbers and duty officer where resources can be accessed for a response related to this plan.</li> <li>Maintain emergency response resources.</li> <li>Maintain a specialty air monitoring team and equipment used to oversee and verify air monitoring during incident response.</li> <li>Act as SME.</li> <li>Prepare to act as lead agency when appropriate.</li> </ul>	<ul> <li>Ensure that non-energy industry resources environmental impacts are mitigated.</li> <li>Provide expertise to mitigate the impacts of non-energy resources industry liquid releases on land and into watercourses.</li> <li>Provide technical assistance related to emergency drinking water supply engineering.</li> <li>Notify Fish and Wildlife staff in the area of the emergency.</li> </ul>
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. UCB 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 system. Strive to balance the interests of workers and employers. Delivery of workers' compensation services to the workers and employers of Alberta. Make decisions based on evidence, law and policy and fair, impartial and transparent processes. Encourage safer workplaces and promote disability management.	<ul> <li>Employer must report to WCB within 72 hours of being notified of an injury/illness that results in or will likely result in:</li> <li>Lost time or the need to temporarily or permanently modify work beyond the date of accident</li> <li>Death or permanent disability (amputation, hearing loss, etc.)</li> <li>A disabling or potentially disabling condition caused by occupational exposure or activity (poisoning, infection, respiratory disease, dermattis, etc.)</li> <li>The need for medical treatment beyond first aid (assessment by a physician or chiropractor, physiotherapy, etc.)</li> <li>Medical aid expenses (dental treatment, eyeglass repair/replacement, prescription medications, etc.)</li> </ul> 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.
<ul> <li>Review, accept and register pressure equipment designs and construction procedures that relate to pressure equipment.</li> <li>Issue certificate of inspection permits for pressure equipment before the equipment is placed into service.</li> <li>Ensure that regular inspections of in-service pressure equipment are conducted.</li> <li>Keep records for pressure equipment that has been registered for use, or manufactured, in Alberta.</li> <li>Examine, certify and register Pressure Welders and Welding Examiners, Power Engineers, and Pressure Equipment Inspectors.</li> <li>Authorize and monitor, through quality management systems, organizations that have been permitted to conduct some of the activities subject to the regulations.</li> <li>Conduct safety education and training.</li> </ul>	<ul> <li>Receive notification of an incident.</li> <li>As required under the <i>Pressure Equipment Safety Regulation</i> Section 35, the accident scene must not be disturbed (except when it is absolutely necessary to prevent death or injury, or to prevent further property damage) unless approval to do so has been given by an ABSA Safety Codes Officer.</li> </ul>

5



	Before the Incident	During the Incident	
	Environment & Climate Change Canada's Environmental Emergencies Program (EEP) protects Canadians and their environment from the effects of environmental emergencies through provision of <u>science-based expert advice</u> and <u>regulations</u> .	During an environmental emergency, <i>The National Environmental Emergencies Centre (NEEC)</i> is the focal point for ECCC. ECCC's services during an environmental emergency:	<ul> <li>ECCC can co</li> <li>Provide speci</li> <li>Provide Advis</li> </ul>
*ECCC	<pre>Ine key Acts and Regulations that govern ECCC's role in environmental emergencies that allow it to deliver its mandate are:</pre>	<ul> <li>Contable and rederal, provincial, territorial and international environmental protection agencies to enable rapid sharing of information.</li> <li>Convene and chair a Science Table of experts and stakeholders to develop consensus based advice to the Lead Agency.</li> <li>Identify environmentally sensitive areas and priorities (sensitivity and resource at risk mapping).</li> <li>Advise on mitigation and cleanup measures.</li> <li>Provide support and guidance in the assessment of oiled shorelines to prioritize their protection and cleanup (Shoreline Cleanup Assessment Technique (SCAT)).</li> <li>Advice on the fate and behavior of the spilled product.</li> <li>Advice on sampling and laboratory analysis.</li> <li>Provide weather forecasting and spill dispersion modelling to identify where these substances are likely to move in the environment.</li> <li>Provide expertise on the migratory bird resources and species at risk, including on-site assessment and determination of wildlife impact.</li> </ul>	
*DFO	<ul> <li>The Canadian Coast Guard is the lead federal agency for ensuring appropriate response to all ship-source and unknown mystery spills in Canadian waters and waters under international agreements.</li> <li>Establishes appropriate and nationally consistent level of preparedness and response services in Canadian waters.</li> <li>Design and develop related regulations, policies, strategies and tools.</li> <li>Review, assess and monitor activities associated with fish habitat to ensure their compliance with the Fisheries Act and Species at Risk Act.</li> <li>Conduct environmental assessments under the Canadian Environmental Assessment Act.</li> <li>Design, develop and implement communication and education strategies.</li> </ul>	<ul> <li>Any amount of hydrocarbons entering a waterway frequented by fish or occupied by waterfowl is deemed to be in contravention of the Federal Fisheries Act and must be reported to the Department of Fisheries and Oceans.</li> <li>Work together with provincial environment protection agencies and may be initially notified by ECCC.</li> <li>May send personnel to the site if there has been or could potentially be an impact to fish or fish habitat.</li> <li>Monitors and investigates all reports of marine pollution in Canada in conjunction with other federal departments.</li> <li>Maintains communications with the program's partners, including Transport Canada and ECCC, to ensure a consistent coordinated approach to marine pollution incident response.</li> <li>Aids in search and rescue operations.</li> </ul>	U Work closely environmenta
NAV Canada	NAV Canada is a private company who coordinates the safe and efficient movement of aircraft in Canadian domestic airspace and international airspace 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:	As requested by the oil and gas company, the Flight Information Centre will issue a NOTAM (Notice to Airmen). To close air space beyond an airport (e.g. above a sour gas release), Refer to Transport Canada on back side of this page.	□ Rescind the N
Health Canada	<ul> <li>Sets national standards to keep the environment healthy, keep water and air pollution low and Canadians safe.</li> <li>Maintains a nationwide network of radiation monitoring stations and can act if levels spike.</li> <li>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</li> <li>Sets strict rules on how chemicals are used in order to limit human exposure.</li> <li>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.</li> </ul>	During a health emergency or disaster, Health Canada and the Public Health Agency of Canada are responsible for supporting emergency health and social services in the provinces and territories.	Work collabo Canadian hea future.
Public Health Agency of Canada	The Centre for Emergency Preparedness and Response (CEPR) is responsible for.         Developing and maintaining national emergency response plans for the Public Health Agency of Canada and Health Canada.         Assessing public health risks during emergencies.         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.         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.	<ul> <li>In an emergency situation, the Office of Emergency Response Services (OERS) is responsible for supporting emergency health and social services in the provinces, territories or abroad. It manages the National Emergency Stockpile System (NESS), which includes medical, pharmaceutical and related emergency supplies. The Office is responsible for the federal response to emergencies that have health repercussions; this includes the deployment of health emergency response teams (HERT).</li> <li>If a public health emergency grows beyond one province and/or territory, the Public Health Agency of Canada usually gets involved.</li> </ul>	U Work with He can be improv



Agency Roles Federal Canadä

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Before the Incident	During the Incident	
<ul> <li>Maintain a 24 hour emergency telephone service.</li> <li>*CANUTEC</li> <li>Regulate the handling, offering for transport and the transport of dangerous goods by all modes in order to ensure public safety.</li> <li>Federal regulations require that CANUTEC be contacted in the event of an incident or accident involving dangerous goods and infections substances.</li> <li>Maintains records of over 3 million Safety Data Sheets (SDS).</li> <li>Aviation Operations Centre (AVOPS)</li> <li>Federal regulations require that AVOPS be contacted if there is imminent and immediate threat to aviation and public safety.</li> <li>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.</li> <li>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).</li> </ul>	*CANUTEC 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 assis 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 a company. Public Safety Canada houses the Government Operations Centre at the hub of the national emergency management system. advanced centre for monitoring and coordinating the federal response to an emergency.	and gas
*Canada Energy The CER's top priority in any emergency is to make sure that people are safe and sec attend the site to oversee a company's immediate response. The CER will require that	y Regulator Roles & Responsibilities	anadian
the regulated company conducts adequate and appropriate clean-up and remediation of As lead regulatory agency, the CER: Monitors, observes and assesses the overall effectiveness of the company's emerge Emergency Management Safety Safety	any environmental effects caused by the incident.	modes conducti ranspor dentifyii making reporting
<ul> <li>Security</li> <li>Environment</li> <li>Integrity of operations and facilities; and</li> <li>Energy Supply.</li> <li>Investigates the event, either in cooperation with the Transportation Safety Board of</li> </ul>	As pair identifie reduce To insti Canada, under the Canada Labour Code, or as per the Canada Energy Regulator Act or Canada Oil & Gas Operations that an	t of its es safe injury ill confi n invest
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	accider indeper Parliarr to be fu safety	nts, ide ndent nent thr ully obje recomn
<ul> <li>Coordinate stakeholder and Aboriginal community feedback regarding environmenta</li> <li>Confirms that a company is following its Emergency Procedures Manual (s), commit</li> <li>Initiates enforcement actions as required</li> <li>Approves the restart of the pipeline.</li> </ul>	al clean-up and remediation Iments, plans, procedures, and CER regulations and identifies non-compliances reportin Board's	tifying to to assig ng on th s findin
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.	dings. <u>sb-bst.g</u>
*Indigenous Services Canada, Regio	onal Operations and First Nations and Inuit Health Branch	
Since the Government of Canada's renewed commitment to a stronger relationship with Indigenous peoples. This included the creation of two new departments, which was and Canada (CIRNAC) and Indigenous Services Canada (ISC), are intended to improve	Indigenous peoples in Canada, measures were initiated to effect a shift in the way the Government delivers services to nounced on December 4, 2017. The two newly created departments, Crown-Indigenous Relations and Northern Affairs the delivery of services while accelerating movement towards self-government and self-determination of Indigenous	is an c e lands
peoples. 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 parallel	es exis

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.

to First Nations communities in Canada.

anada

Gas Canada.

#### After the Incident

#### CANUTEC

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

viation 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.

#### \*Transportation Safety Board Mandate

ortation Accident Investigation and Safety Board Act provides the legal framework vities. Our mandate is to advance transportation safety in the marine, pipeline, rail sportation by:

pendent investigations, including public inquiries when necessary, into selected ccurrences in order to make findings as to their causes and contributing factors; deficiencies, as evidenced by transportation occurrences;

endations designed to eliminate or reduce any such safety deficiencies; and y on our investigations and on the findings in relation thereto.

investigations, the TSB also reviews developments in transportation safety, and that they believe the government and the transportation industry should address to

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

ses and contributing factors of a transportation incident, it is not the function of the or determine civil or criminal liability. However, the Board does not refrain from fully s and contributing factors merely because fault or liability might be inferred from the inding of the Board should be construed as assigning fault or determining civil or ngs of the Board are not binding on the parties to any legal, disciplinary, or other

qui-about/index.html

#### \*Indian Oil & Gas Canada

ion committed to managing and regulating oil and gas resources on First Nation pecial operating agency within Indigenous Services Canada.

or oil and gas on First Nation reserve lands across Canada, but only a handful of of the 60th parallel. Therefore, practically all of IOGCs work is south of the 60th hat in the Western Canada Sedimentary Basin.

IOGC's general responsibilities are to:

identify and evaluate oil and gas resource potential on Indian reserve lands;

encourage 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

Additional information is available at: <u>http://www.pgic-iogc.gc.ca/eng/1100110010458/1100110010464</u> Acts and Regulations: <u>https://www.pgic-iogc.gc.ca/eng/1100110010437/1100110010438</u>

Revised June 2022





# **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 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



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## **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 after- action 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.		



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incluent Name.					
Date/Time Initiated:					
Prepared By:		ICS Posit	tion:		
Level of Emergency	Alert / Minor	Level 1	Level 2	Level 3	
Map Sketch:					
Note: Maps can be dra	awn or attached here.				
					<u> </u>



	Autoph and	GRANDE PRAIRIE EMERGENCY RESPONSE PLAT				
Current and Planned Ob	jectives:					
Priorities: (1) Life Safety	(2) Incident Stabilization (3) E	nvironment & Property				
1. Ensure Safety of Citizens	and Response Personnel:	4. Minimize Economic Impacts:				
□ 1a. Identify hazard(s) of rele	eased product.	□ 4a. Consider tourism and local economic impacts.				
1b. Establish site control (he security).	ot zone, warm zone, cold zone, &	4b. Protect public and private assets, as resources permi				
1c. Establish an Emergency Safety Actions.	y Response Zone and Initiate Public	4c. Establish damage claims process.				
□ 1d. Consider evacuations if	needed.	5. Keep Stakeholders and Public Informed of Respons Activities:				
□ 1e. Establish aircraft restric	tions.	5a. Provide forum to obtain stakeholder input and concerns.				
□ 1f. Monitor air in impacted a	areas	□ 5b. Provide stakeholders with details of response actions.				
1g. Develop site safety plan briefings are conducted.	n for personnel and ensure safety	5c. Identify stakeholder concerns and issues, and address as practical.				
2. Control the Source of the	Release:	5d. Provide timely safety announcements.				
2a. Complete emergency sl	hutdown.	5e. Conduct regular news briefings.				
2b. Conduct firefighting.		□ 5f. Conduct public meetings, as appropriate.				
2c. Initiate temporary repair	rs.					
3. Manage a Coordinated Re	esponse Effort:					
□ 3a. Complete or confirm no	tifications.					
3b. Establish a unified com (command post, etc.).	mand organization and facilities					
3c. Ensure mobilization and personnel and equipment.	tracking of resources and account for					
□ 3d. Complete documentation	on.					
Current and Planned Ac	tions, Strategies and Tactics:					
Time:	Actions:					
FIEIMIM						
HHMM						
HHMM						
HHMM						
HHMM						
HHMM						
HHMM						
нным						
HEMM						





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



sources Summ	ary:			
Resource(s)	Time Called	ETA	On-Site	Notes (Location/Assignment/Status)
			•	
	1	L	٥	
		1		
	1			
ternal Notificati	ions: (Governmen	it)	A A	
Agency	Time Called			Notes
		F		
	1			
		1		
	-			



#### GRANDE PRAIRIE EMERGENCY RESPONSE PLAN

Si	te Safety and Hazard Control Analysis	
Si	te Control	
1.	Is Site Control set-up?  ☐ Yes  ☐ No	2. Is there an On-Scene Command Post? □ Yes □ No If so, where?
3.	Have all personnel been accounted for?	Injuries: Fatalities: Unaccounted: Trapped:
4.	Are observers involved or rescue attempts planned? Observers:  Yes No Rescuers: Yes No	5. Are Decon areas setup? □ Yes □ No If so, where?
Ha	zard Identification, immediate signs of: (if yes	, explain in remarks)
1.	Electrical line(s) down or overhead?  Yes No	2. Unidentified liquid or solid products visible?
3.	Wind direction across incident:          Towards your position          Wind Speed:           Away from your position	n 4. Is a safe approach possible? □ Yes □ No
5.	Odours or smells?	6. Vapours visible?
7.	Holes, ditches, fast water, cliffs, etc. nearby?	8. Fire, sparks, sources of ignition nearby?
9.	Is local traffic a potential problem?  ☐ Yes  ☐ No	10. Product placards, colour codes visible?  Ves  No
11	Other Hazards?   Yes  No	<ol> <li>As you approach the scene from the upwind side, do you note a change in the status of any of the above? □ Yes □ No</li> </ol>
1.	Entry Objectives:	
2.	Warning sign(s), barriers, colour codes in place?	ves □No
3.	<ul> <li>Hazardous material being monitored?</li> <li>Yes IN</li> <li>Sampling equipment:</li> <li>Sampling location(s):</li> <li>Sampling frequency:</li> <li>Peak reading:</li> <li>Personal exposure monitoring:</li> </ul>	10
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:	
6.	Emergency escape route established?	lo
7.	Field responders briefed on hazards?	lo
8.	Remarks:	







ncident Name.						
Date / Time Initiated:						
Prepared by:	ICS Position:	ICS Position:				
General Control Objectives	or the Incident:					
Ť						
2						
3						
4						
F						
3						
Veather Forecast:						
Second Orfets Manager						
seneral Salety Message:						
lote: Create and prioritize SM	אר ו (Specific, Measureable, Attainable, Realistic, & T	ime-Sensitive)				



# ICS 203 Organization Assignment List



Incident Name			Operational Period (Date/Time)			
				From:	To:	
Incident	Commander(s)		1	Operations Section		
Ą	gency	IC	Deputy		Chief	
			-	a company of a second self-	Deputy	
-				Staging Area I	Manager	
-				On-Site Group	-	
				Su	pervisor	
S	Safety Officer		-		Lead	ĥc.
	Assistant				Lead	
Inform	nation Officer				Lead	
-	Assistant			1	Lead	
Li	aison Officer			·	Lead	
· · · · · ·	Assistant					
				Public Safety Gro	up	
				Su	pervisor	P
Agency F	Representatives	2	2	(i =)	Lead	
Agency	Name			2	Lead	1
					Lead	
				(	Lead	
(mar)	1				Lead	
· · · · · · · · · · · · · · · · · · ·	(*			(		
_				Branch - Division	Group	
				Branch	Director	
					Deputy	
Planning	Section			Division/Group	Lead	14
-	Chief			Division/Group	Leed	4
	Deputy			Division/Group	Lead	
Re	sources Unit			Division/Group	Lned	
5	Situation Unit			DiVision/Group	Lend	
Enviro	nmental Unit			·	1	
Docum	entation Unit			Branch - Division / Group		
Demot	bilization Unit			Branch Director		
Technica	al Specialists				Deputy	
				Division/Group	Lead	
-			-	Division/Group	Lead	
Logistics	Section			Division/Group	Lead	
-	Chier			Division(Group	Lead	
	Deputy			Divisionstonb	Lead	
	Supply Unit			Planner I & Josley Deather	_	
Ground	Support Unit			Finance / Admin Section	Chief	
Commun	Support Unit				Doruth	
				ime Linit		
_	Eood Unit			Time Unit		
_	FUUL UTIL			Componention / Ola	ime Unit	
				Compensation / Cla	Cost Unit	
-				(	JUSEUNIE	
	D (D	1				D-4- (Time
Prepared	By: (Resources L	Jnit)				Date/Time

## ICS 204 Assignment List



Branch: Incident Name: Division / Group / Staging Operations Chief Branch Director					GRANDE PRAIRIE EMERGENCY RESPONSE PLAN Division / Group / Staging:				
					Operational Period: From: Date		T	Time	
					Division/Group Supervisor				
Resources	Assigned to	o This Period	-						
Resour Identif	ier	Leader	No. of Persons	Ce	Contact II #, radio fre	eq. Etc.	Reporting Equipment an	Location, Sp d Supplies, F	ecial Remarks
Special Instr	ructions:								
Division / G	roup Comn	nunications Summ	nary						
Funct	tion	Frequencies	System	Chan.	Func	tion	Frequencies	System	Chan.
Command	Local Repeat				Logistics	Local Repeat			
Div. / Group	Tactical			2	Ground to	Air			
Prepared By (Resource L	r: Init Leader)							Date:	Time:
Signature:									





# **ICS 207 Incident**

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GRANDE PRAIRIE EMERGENCY RESPONSE PLAN
## ICS 208 Safety Message / Plan



	GRANDE PRAIRIE EMERGENCY RESPONSE PLA							
ncident Name:	Operati	onal Period:						
	From:	Date	Time					
	То:	Date	Time					
Safety Message/Expanded Safety Mess	sage, Safety Plan, Site	e Safety Plan:						
Site Safety Plan Required? 🗆 Yes 🗅 N	0							
Approved Site Safety Plan(s) Located At:								
Prepared By:		Date Prepared:						
Name and Position)		Date Frepared.						
Signature:		Time Prepared:						





Incident Name:	Location of Incident:						
Date / Time Initiated: (LSD / NTS)							
Prepared by:	ICS Position						
Incident Details:							
Gas readings: H <sub>2</sub> S	SO <sub>2</sub>	LEI					
Level of Emergency:	002						
Incident Severity:	ert / Minor DLevel 1 D	Level 2 🗆 Level 3					
Affect Medium: (Check all that app	ly)						
Air 🗆 Water 🗆	Soil D Other – Specify:						
Site Type: (Select only 1)							
□ Well (Active)	Well (Abandoned/Suspended)	□ Remote Sump					
Well (Drilling & Completions): Rig	Name:						
□ Battery/Plant/Facility	□ Tank Farm/Storage	Pipeline					
□ Riser (Pipeline)							
Road or Road Structure	Name:	Location on Road:					
Other – Specify:							
Incident Type: (Check all that apply	y)						
Sour Gas Release		Liquid Spills					
Worker Injury/Fatality	Security (theft, threat, terrorism)						
		Vehicle/Transportation					
Equipment/Structural Damage							
Other – Specify:     Activity: (Check all that apply)							
Construction (Road Lease Pine)		Waste Management					
	Well Fracturing						
	Flaring (Emergency)	Well Testing					
Pressure Testing							
	Compare and a second set						



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:		1. 1								
Material Information:										
Is spill off lease?	Is spill off lease?  Ves - Estimated spill quantity: No									
Liquid Hydrogen (Cr	ude, Oil, Diesel, Fuel)	□ Toxic Gas Liquid (>	1% Different Toxins)							
□ Acid	Emulsion (Oil, Gas, Water)	Sweet Natural Gas	□ Salt Water							
Methanol	lethanol Don-Toxic Liquids Dresh Water									
□ Sour Natural Gas □ Sour Liquids (<1% H <sub>2</sub> S) □ Other – Specify:										
□ Non-Toxic Gases (N	itrogen, Carbon Dioxide, Inert	Gases)								
Area Information:										
Land Type: D Priva	ate Land 🛛 🗆 Crown Lar	nd Field Name:								
Area Type: D Fore	est 🗆 Muskeg 🗖 Fa	armland	□ Other							
Access: 🛛 Helio	copter □ ATV □ 4V	VD 🗆 2WD	Unknown							
Name of road the asset	t is located on:									
KM where the incident	occurred:		- 2							
Distance to nearest res	idence/public facility:									
Nearest City/Town/Ope	en Camp:									
Weather Conditions:		CARD C								
Weather Conditions	Clear  Cloudy	□ Other:								
Wind Direction	N NE NW E	SE S SW	W							
Wind Strength	Calm Moderate	□ Strong □ Gust	у							
Temperature	°C									
Public / Worker Injurie	es / Medical Emergencies:	مستند والقرو فتستوجك								
□ First Aid □ Hosp	italization	□ Other – Specify:								
Notification: (Notify a	ll agencies as required)									
□ 911 (Police/RCMP, Fire, EMS)	BCER, AER*, etc.)	□ Local Authority (MD, County, Town, City)	Health Authority							
Canada Energy	□ Occupational Health		Ministry of							
Regulator (CER)	& Safety (OH&S)	Management Agency	Transportation							
Compensation Board (WCB)	Assistance Canada (ERAC)	□ Western Canadian Spill Services (WCSS)								
□ Transportation Dangerous Goods (TDG)	Other	□ Other	□ Other							
□ Other	□ Other	□ Other	D Other							
*Request that the AER notif	y Alberta Environment & Parks (Fore	stry/Fish/Wildlife/Lands), Environ	ment & Climate Change Canada							
Refer to the Govern	ment Notification Matrix and	External Agencies Conta	ct List or Area Specific							
	nformation for complete list (	of agencies requiring con	tact.							



H2Safety



Air Monitor	100 million (1997)		
Number	Name		Location/LSD
10.			
-			
Collect all comple	eted Ab Air Monitorin	ig Logs from responders	for full documentation.
eption Centres			
eption Centres Name		Location	Phone Number
eption Centres Name		Location	Phone Number
eption Centres Name		Location	Phone Number
eption Centres Name		Location	Phone Number
eption Centres Name		Location	Phone Number
eption Centres Name Collect all completed B	31 Reception Centre Re	Location	Phone Number
eption Centres Name Collect all completed P	31 Reception Centre Re	Location egistration Logs from respon	Phone Number
eption Centres Name Collect all completed B	31 Reception Centre Re	Location egistration Logs from respon	Phone Number
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eption Centres Name Collect all completed P	31 Reception Centre Re	Location	Phone Number
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eption Centres Name Collect all completed P	31 Reception Centre Re	Location	Phone Number
eption Centres Name Collect all completed F	31 Reception Centre Re	Location	Phone Number
eption Centres Name	31 Reception Centre Re	Location egistration Logs from respon	Phone Number
eption Centres Name	31 Reception Centre Re	Location	Phone Number

#### ICS 211 Check-In / Out List



Date / Time Initiated:         ICS Position:         Check-in Location       IS Seging 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         Name of Company       Date of Check-in       Supervisor Name       Total # of Personnel       Incident Assignment       Assigned       Available       Date of Check-out         Image: Colspan="4">Incident Assignment       Assigned       Available       Date of Check-out         Image: Colspan="4">Image: Colspan="4">Image: Colspan="4">Other:         Image: Colspan="4">Image: Colspan="4">Image: Colspan="4">Check-out         Image: Colspan="4">Image: Colspan="4">Image: Colspan="4">Other:         Image: Colspan="4">Image: Colspan="4">Image: Colspan="4">Image: Colspan="4">Check-out         Image: Colspan="4">Image: Colspan="4">Image: Colspan="4">Image: Colspan="4">Image: Colspan="4">Image: Colspan="4">Check-out         Image: Colspan="4">Image: Colspan="4">Colspan="4">Image: Colspan="4">Image: Colspan="4" <th>Incident Name:</th> <th></th> <th></th> <th></th> <th></th> <th>1.</th> <th></th> <th></th>	Incident Name:					1.						
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         Name of Company       Date of Check-in       Supervisor Name       Total # of Personnel       Incident Assignment       Assigned       Available       Date of Check-out         Name of Company       Date of Check-in       Supervisor Name       Total # of Personnel       Incident Assignment       Assigned       Available       Date of Check-out         Incident Assignment       Assigned       Available       Incident Assignment       Assigned       Available       Date of Check-out         Incident Assignment       Incident Assignment       Assigned       Available       Incident Check-out         Incident Assignment       Incident Assignment       Incident Assignment       Incident Assignment       Incident Assignment       Incident Assignment         Incident Assignment       Incident Assignment       Incident Assignment       Incident Assignment       Incident Assignment       Incident Assignment         Incident Assignment       Incident Assignment       Incident Assignment       Incident Assignment       Incidet Assignment </th <th>Date / Time Initiated:</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	Date / Time Initiated:											
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         Image: Company       Date of Check-in       Image: Company       Available       Date of Check-out       Date of Check-out         Image: Company       Date of Check-in       Image: Company       Available       Date of Check-out         Image: Company       Image: Company       Image: Company       Available       Date of Check-out         Image: Company       Image: Company       Image: Company       Image: Company       Available       Date of Check-out         Image: Company       Image: Compan	Prepared by:				ICS Position:							
Name of CompanyDate of Check-inSupervisor NameTotal # of PersonnelIncident AssignmentAssignedAvailableDate of Check-outImage: Check-inImage: Check-in	Check-in Location		Staging Area		ICS Res. Unit Other:							
Image: Section of the section of th	Name of Company	Date of Check-in Supervisor Name		Total # of Personnel	Incident Assignment	Assigned	Available	Date of Check-out				
Notes:       Image: Sector secto												
Image: Section of the section of th							I					
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Image: Sector of the sector												
Image: Second												
Image: Constraint of the second sec												
Notes:												
Notes:			2									
Notes:												
	Notes:											



## ICS 214 Activity Log



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



### **ICS 215 Operational Planning Worksheet**



Incid	lont Nor	mo:				orational	Doriod		GIVA				LOPUNO	
meio				Т	perational p: Date_	renou.	 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											
			Need	 				 						
			Req.											
			Have											
			Need											
			Req.											
			Have											
			Need											
			Req.											
			Have											
			Need											
			Req.											
			Have											
			Need											
			Req.											
			Have											
			Need											
			Req.											
			Have								-			
			Need											
		Total Resources Requir	ed:									Prepared b	y:	
		Total Resources - Have Hand:	on									Position/Tit	le:	
		Total Resources Need t Order:	0									Signature:		



# ICS 215a Incident Action Plan Safety Analysis



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



#### **ICS 221 Demobilization Checkout**



					GRANDE	PRAIRIE EMERGEN	CY RESPONSE PLA
Incident Name / Number:	<u>C</u>			Date / Time:		Demob. Number:	
Unit/Personnel Released:							
Transportation Type / Number:							
Actual Release Date / Time:	1					Manifest Completed?	□Yes □No
Destination:	Notify:	□ HQ	□ Agency	Region	C Area		Dispatch
	Name:						
	Date:						
Unit Leader responsible for collecting performance rating		-					
			Unit / F	Personnel			
You and your resources have been Demobilization Unit Leader - Chec	released subject to S k the appropriate box	ign-Off from the	following:				
Logistics Section							
Supply Unit							
Communications Unit	-						
G Facilities Unit							
Ground Support Unit Leader	<b>.</b> .						
Planning Section	1						
Demobilization Unit							
Finance/Admin Section							
🗆 Time Unit	1						
Other							
	8						
0	2						
Remarks:							
Page of	Prepared By: (Name and Position	)			Signature:		



## ICS 230 Meeting Schedule



Incident Name			Operational Period:						
			Erom: Date		Time				
Meeting Scher	ule (Commonly-beld	meetings are in	sluded)						
Date / Time	Meeting Name	Purp	ose	Attendees	Location				
		7 m							
repared by: (S	Situation Unit Leader)			Date / Time:					





	GRANDE PRAIRIE EMERGENCY RESPONSE PLAN
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 233 Incident Open Action Tracker**



Incident Name:						_	
No.	Item	For	Status	Start Date	Briefed	Target Date	Actual Date
1							
2							
3							
4							
5							
6						1	
7							
8							
9							
10							
11							
12							
13				0.000			
14							
15							
16							
17		A					
18				1			
19							
20				L			

## ICS 233 Incident Open Action Tracker



	EMERGENCY R	SPONSE PLAN					
No.	Item	For	Status	Start Date	Briefed	Target Date	Actual Date
21							
22							
23				1			
24				12			
25							
26							
27							
28							
29						·	· · · · ·
30							
31							
32						1	
33							
34							
35							
36						-	
37							
38							
39							
40							



#### First On-Scene Actions

Evacuate	<ul> <li>Get to a safe area immediately.</li> <li>Move upwind if release is downwind of you.</li> <li>Move crosswind if a release is upwind from you.</li> <li>Move to higher ground if possible.</li> </ul>
Alarm	<ul> <li>Call for help ("Man Down").</li> <li>Sound bell, horn or whistle, or call by radio.</li> <li>For medical emergencies, call 911.</li> </ul>
Assess	<ul> <li>Take head count, locate any casualties. Consider all of the hazards.</li> <li>Fill out information below to complete assessment.</li> </ul>
Protect	Put on breathing apparatus before attempting rescue.
Rescue	Remove any casualties to a safe area.
First Aid	□ Follow the standard first aid protocols at worksite. (CPR, etc.)
Medical Aid	<ul> <li>Arrange transport of casualties to medical aid.</li> <li>Provide information to Emergency Medical Services (EMS).</li> </ul>

Report take		person involved of notified				
ATTACH STREET	n by		Date / Time			
Name of per	rson calling		Caller Telephone			
Incident Loc	cation					
		(LSD / NTS	5)			
Event Summ	nary					
Agencies	□ Yes Who?					
Agencies Notified	□ Yes Who? □ No					
Agencies Notified Event	Yes Who? No Incident contained or c	controlled	Intermittent control pos	ssible		
Agencies Notified Event Status	Yes Who? No Incident contained or c Imminent control possi	ontrolled ble	Intermittent control pos Incident is uncontrolled	ssible		
Agencies Notified Event Status Site Type	Yes Who? No Incident contained or c Imminent control possi Well Pipeline	ontrolled ble □ Tank Farm/Storage	□ Intermittent control pos □ Incident is uncontrolled □ Battery/Plant/Facility	ssible		
Agencies Notified Event Status Site Type	<ul> <li>☐ Yes Who?</li> <li>☐ No</li> <li>☐ Incident contained or c</li> <li>☐ Imminent control possi</li> <li>☐ Well □ Pipeline</li> <li>☐ Sour Gas Release</li> </ul>	ontrolled ble □ Tank Farm/Storage □ Sweet Gas Release	□ Intermittent control pos □ Incident is uncontrolled □ Battery/Plant/Facility □ Pipeline Break	ssible d □ Other □ Security (theft, threat, terrorism)		
Agencies Notified Event Status Site Type Incident Type	Yes Who? No Incident contained or co Imminent control possi Well Pipeline Sour Gas Release Loss of Containment	controlled ble □ Tank Farm/Storage □ Sweet Gas Release □ Fire/Explosion	□ Intermittent control pos □ Incident is uncontrolled □ Battery/Plant/Facility □ Pipeline Break □ Worker Injury/Fatality	Ssible d ☐ Other ☐ Security (theft, threat, terrorism) ☐ Vehicle/Transportation		

#### A1 Initial Emergency Report Form



impacts								
Public Health and Sa	fety	Could be jeopardized			□ Is jeopardized			
Public Protection Me	asures Taken	□ Notification □		acuation	Shelter-in	-place	Roadbl	ocks
Worker Injuries		First Aid		ospitalized	□ Fatality		ther	
Distance to nearest su	rface development		km	Distance to	nearest urban	H.	-	km
Details								
Release Impact	On-Lease O	Off-Lease Pro	oduct			Amou	nt	
Gas Readings	H <sub>2</sub> S SO;	LE	<u> </u>	Other				
Distance to nearest wa	atercourse		km	Weather Co	nditions		360*	
Media Involvement?	es □No Regu Invo	ulator □ vement? □	Yes	⊒ No Aff Re	blic airs/Commu lations Issue	s?	WSW SSW SS	SE SE ISS
Notes / Instructions	s 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.



Date:		Prepared by:
Time:	🗌 a.m. 🗌 p.m.	Duration of call:

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

Name:			
Contact number: _			
Description of the c	oncern:		
How many people are you v	with right now?		
Adults	Children		
Can you provide the location	on of the incident?		
Location of the inci	dent (address, legal, la	ndmark, etc.): _	
Where are you right now?			
Home / Work	In a Vehicle	Outside	Other
If the resident is at	home / work / outside (	tell them:	
The company will send some go inside and stay inside. Clo (i.e. clothes dryer) or suck in any vehicles until you are tolo	one to investigate. To b se all doors and windov outside air (i.e. heating / t it is safe to do so.	be safe, you and a ws and turn off any air conditioning).	nyone that you may be with need to y appliances that blow out indoor air Do not go outside or attempt to start
If the resident is in a	a vehicle and cannot s	helter-in-place te	ll them:
The company will send some get inside the vehicle and sta heat. If you see or hear any direction of the hazard; other the hazard area.	one to investigate. To b y inside. Keep all doors thing that might indicate wise, continue travelling	be safe, you and a and windows clos where the incider on your current co	nyone that may be with you need to ed and shut off the air conditioning / nt is occurring, travel in the opposite burse which will likely take you out of
Someone will call you back contact you. If you have an	<pre>&lt; with further instructi y urgent questions ple</pre>	on so please sta ase call the com	y off of the phone so that we can pany at



#### **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.

AFR contact		Field centre:	
icensee:	Caller		Phone <sup>.</sup>
E-mail address for release	report		
Licence #	Pipeline line #		Approval #
Incident location: /	/ / W M		
Emergency level:			
Serious event?  Yes	_ No		
If ves. what kind of serious	event?  Blowout  Explosic	on 🗌 Fire 🔲 Other control lo	oss 🔲 Fracking 🔲 Casing failure
Land type (iurisdiction):	Freehold First Nations	☐ Métis ☐ CFB ☐ Crow	/n – Disposition #:
Agencies notified:			Date:
FIRST duty office (DO) co	ntacted: Ves No If ves	date & time DO was contacted.	
DO contact name			
Bo contact name.			
Release Details			
Volumes			
Substance*	Released (m <sup>3</sup> /10 <sup>3</sup> m <sup>3</sup> )	Recovered (m <sup>3</sup> /10 <sup>3</sup> m <sup>3</sup>	b) Disposal/storage location
		1.1	
* For emulsion, break down oil	& water if possible.	Zala da a da a ti	
Description of now the rele	ase volume was determined and ve	mileo (including calculations; e.g.	., spili lengtn × wiatn × deptn):
Area affected (length × wic	tth): m²		
How was the area affected	I determined? (Aerial survey, perime	eter walk, range finder, samples t	aken,etc.):
Who delineated the arill	no (onvironmontal technologist	states, atc.) and what processors	c usad2

	R immediately if release volumes or area changes from what was originally reported.
Asked for the immediate submission o to be submitted with the release report	f photos of the entire spill site to the AER and communicated that photos of the cleanup will nee t.
Cause of release (suspected or actual):	
Impact	
Release off lease? 🗌 Yes 🛛 No (pipelir	ne right-of-way is off lease)
if yes, was the landowner notified?	es 🗌 No Name of landowner/agency:
Release within disposition boundary?	Yes 🗌 No
Outside disposition – was leaseholder notif	ied? Yes No Name of leaseholder.
If outside disposition, reminded license	ee that they will need a TFA.
Actual incident H <sub>2</sub> S concentration (if application ap	able): % / ppm / mol/kmol
Nearest town:	Distance and direction to town:
Environment affected:	Land Uter
Distance of release to the nearest water bo	ody, watercourse, or waterway:
Wildlife/waterfowl/livestock affected:	one Habitat affected Animals injured/killed
Confirm how the release has been or will h	e contained:
Somethin now the release has been of Will D	
Confirm how the release has been or will be	e cleaned up:
Evacuees (#):	People injured (#): Fatalities (#):

Media interest?  None Local Re	egional 🗌 National			
Damage to public property?	mage 🗌 Substantia	I (home covered in oil)	] Extensive (home de	stroyed)
Pipeline Specific				
Hit? 🗋 Yes 📄 No	Line #:		Test failure? 🗌 Yes	□ No
Normal operating pressure: kPa		Maximum operating pre	essure: kPa	
Is the pipeline shut in, depressured, and isolat	ted? 🗌 Yes 🗌 No			
If yes, date & time:				
What is the total volume of liquid in the pipelin	e?			
Are there isolation valves?  Yes  No.	o If yes, have they be	en activated? 🗌 Yes	🗆 No	
Are there any other pipelines that tie into the fa	ailed line? 🗌 Yes 🗌 N	lo If yes, have they be	en shut in/isolated?	Yes No
Reminded the company to contact the Al	ER before excavating the	pipeline.		
Reminded, advised, or directed the comp	pany that the pipeline is r	not to be returned to servi	ce without the AER's	permission.
Right-of-way (ROW)				
Licensee has confirmed when the pipeline	ROW and well were las	t checked. Date:		
How was the ROW surveillance conducted (free	om the air, by quad, on f	oot, 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 (co repair, site access, EM survey, etc.)?	ontainment, sampling, line	e locating, retaining contr	actors/consultants, pip	eline excavation,

#### **A4 Incident Action Plan Checklist**



GRANDE PRAIRIE EMERGENCY RESPONSE PLAN
Comments:





Date:		Responder Name:	
Page	of	Responder Position:	
1.1.20.12			

and the second second	The second second second second	це	1 EL	•	80	a Destroy	Tomp	Wind Conditions *		and the second s
Time	Location of Samples	(ppm)	(%)	(%)	(ppm)	Other	(°C)	From	Speed (km/hr)	Comments
		12.2			-					
									1	
$\rightarrow$	1									
			-		-					
							()			
							0		2	

\*Estimate meteorological conditions where accurate readings are not available.



Time	Location of Samples	H.S (ppm)	LEL (%)	0. (%)	SO (ppm)	Other	Temp (°C)	Wind Conditions *		and the second sec
								From	Speed (km/hr)	Comments
							11.000			
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1.00					4-4		1			
				1						
	1	P						· · · · · · · · · · · · · · · · · · ·		
		<u></u>	_			<		$\langle \rangle$		
		1 0								
								1		
-			_	_						
							110.000			
1				1						

\*Estimate meteorological conditions where accurate readings are not available.

## A6 Threatening Call / Bomb Threat



					GRANDE PRAIRIE EMERGENCY RESPONSE PLA						
Date.   Time Call Rece					Ved: Time Call Reported:						
Perso	on Receiving Call:				What/Whom C	all Dir	ected To:				
Calle	r's Sex: 🔲 Male		Female	Unknown	Approximate A	ge:					
Acce	nt: 🗌 Yes 🔲	No T	уре:	Familiar voice:	Yes No	b Wł	no:				
Threa	at (Exact Wording)										
lips:	Listen carefull Do not interru Attempt to kee Attempt to ask Obtain as muc Signal some Do not hang For telephone	y and ot calle p calle c quest ch info one to up or tracin	remain ca er. er talking. tions belo rmation as call your disconne g, call the	w. s you can while o s upervisor; giv ct your phone, local telephone	call is in progress /e him / her this even after the ca company and loc	inforr ller ha al poli	nation. ngs up. ce.				
fbor	nb threat, ask th	e follo	wing que	estions:							
When	will the bomb go	off?									
Whor	e is it located?										
Albert											
/vny	did you place it?										
What	kind of bomb is it	?									
What	does it look like?	-									
What	is your name?										
When	e are you calling f	rom?									
Nas	the caller familiar	with co	ompany fa	cilities or emplo	vees? (e.a. nicki	names	familiarity with	staff etc			
		inter oc	inpuny io		Joob. (o.g.: mon	lamou	, remaining many				
Jid c	aller appear famili	ar with	building	facility by the d	escription of the b	omb I	ocation?	Yes			
dent	ifying Characteri	stics	of Caller								
	Voice		Speec	h	Language		Manner		Background		
	Loud		Fast		Excellent		Calm		Office Machine		
	Soft		Slow		Good		Angry		Machines		
	High Pitched		Distinct		Fair		Rational		Street Traffic		
	Deep		Distorte	d 🛛	Poor		Irrational		Airplanes		
	Raspy		Stutter		Foul Language		Coherent		Trains		
	Pleasant	u.	Nasal	L .	Accent	-	Inconerent Doliborato /	L L	Animals		
	Intoxicated		Slurred		<u></u>		Serious	-	Atmosphere		
							Emotional		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.						








### **B1** Reception Centre Registration Log



Due to to cover pa evacues	te 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 ver 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 vacuees until a company representative arrives.									
Evacue	e registration guidelines									
(insect of	Compared Name requires your assistance with receiving	g evacuees at the followi	ng Reception Centre:	14						
Your co	ompany contact is:									
Name:	Position:		Contact Number:		Fax Number:					
1) 2) 3) 4) 5)	Record all evacuees as they arrive on the forms provi Provide all evacuees with the statement below and ar Provide the evacuees with food and lodging as requir Record if any evacuees choose to leave the Receptio Continually update the company of any residences ar	ided. ny other status updates a red. on Centre (name, contact rriving at or leaving the R	s provided by your con number, where are th eception Centre so tha	mpany contact. ey going, etc.). at they can follow up o	on any residents that are	unaccounted for.				
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Date:			Responde	Responder Name:						
Page	of		Responde	r Position: _				_ Responders Phone No.:		
Resident	Name (list all names in party)		# Of	Number	Arrival	Depart	Destination phone #	Comments		
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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
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	Total Rep	orted Expenses							

Date:



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
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	Total Repo	orted Expenses							

Date:



Date:			Responder Name:					
Page	of		Responder Position	າ:			_ Responders Phone No.:	
Time	Resident name	Resident ID	Shelter / Evacuate	Number of people Inside Outside		Assistance or 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		
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			O Shelter O Evacuate			O Yes O No		
	· · · · · · · ·		O Shelter O Evacuate			O Yes O No		
			O Shelter O Evacuate			O Yes O No		

# **B3 Resident Contact Log**



					GRAND	GRANDE PRAIRIE EMERGENCY RESPONSE PLAN	
Time	Resident name	Resident ID	Shelter / Evacuate	Number Inside	of people Outside	Assistance or transportation required?	Comments
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate			O Yes O No	
			O Shelter O Evacuate		1	O Yes O No	
			O Shelter O Evacuate		1	O Yes O No	
			O Shelter O Evacuate			O Yes O No	
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			O Shelter O Evacuate			O Yes O No	

### **B4 Roadblock Log**

GRANDE PRAIRIE EMERGENCY RESPONSE PLAN

**Ovintiv** 

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)
				-		
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				_		

# **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)
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DATE: \_\_\_\_\_

TIME: \_\_\_\_\_

# EVACUATION NOTICE

Ovintiv has an emergency at its nearby location.

[Insert Location Name]

As a safety precaution, please leave the area in a

(north / east / south / west) direction and proceed to the

**Reception Centre located at** 

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

For assistance, call [Insert Company Contact Name] at

Thank you for your cooperation.



#### B6 Early Notification / Voluntary Evacuation Phone Message



#### GRANDE PRAIRIE EMERGENCY RESPONSE PLAN

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, thi	s is <u>(your name)</u> callin	g from	Ovintiv						
Is this the	(name of residence / business)	at	(telephone numbe	e <u>r)</u> ?					
(con	npany name) is responding to a (potentia	I) emergency at	(location)	in your area.					
You are only to in	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.								
Το help ι	To help us understand and your immediate needs we need to know:								
How many people are at your location now?									
	Adults								
	Children								
Do you	vish to leave your residence at this time?								
lf Yes	Please travel in a north / east / south / wes	t direction to our	reception centre loca	ited at:					
lf No	Please standby for further contact. Please c may prevent us from contacting you with upo eliminated.	lo not use your to dated informatior	elephone for outgoing n or when the problem	calls as this has been					
lf you ha	If you have urgent questions, please contact <u>(company contact name)</u> at <u>(telephone number)</u> .								
Thank y	ou for your cooperation.								

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



# **B7 Shelter-In-Place Phone Message**



	GRANDE PRAIRIE EMERGENCY RESPONSE PLAN					
Hello, thi	s is <u>(your name)</u> of <u>Ovintiv</u> .					
Is this th	e <u>(name)</u> residence at <u>(telephone number)</u> ?					
(con	npany name) is responding to a ( <i>potential</i> ) emergency at( <i>location)</i> in your area.					
For your hazard n	safety, it is extremely important that you, and those with you, stay indoors until the potential o longer exists, or you are advised to evacuate.					
To help (	us understand your immediate needs, we need to know:					
How ma	ny people are at your location now?					
	Adults					
	Children					
Is there a to get in	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 <u>(company name)</u> ?					
	Yes   No					
If Yes	Please follow the Shelter-in-Place instructions located inside the resident pamphlet.					
lf No	Verbally walk the resident through the Shelter-in-Place instructions on the next page.					
Do you	Do you understand what I have told you?					
Is there	an alternate number we can contact you at?					
lf you ha Thank y	ave any urgent questions, please contact <u>(company contact name)</u> at <u>(telephone number).</u> ou for your cooperation.					

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



#### 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.



Date:(YY/MM/DD)	Responder Name:				
Responder Position:	Responder Phone No.:				
We can confirm an incident has occurred at Ovintiv's (insert facility / site). Our team in the field is actively responding and we are gathering more information about the nature and severity of the incident. An Ovintiv spokesperson will provide more information when it is available.					
You can contact out media spokesperson at (281) 210-52	253.				
Contact:					
Offic	ce:				
Fa	ax:				
Note: Only the <b>Media Spokesperson</b> designated by the Incident Commander is to provide any specific information to the public or the media. Refer to page 1 of Section 3: Communications & Media for the generic media statement to be used by all other response personnel.					



# C2 Media Contact Log



Date:			Respon	Responder Name:				
Page If you feel y	of ou are not the a	appropriate pers	Respon on to be answeri	der Position: ng the media agencies questio	Responders Phone No.: ions, use the following series of statements.			
	"Thanl	"May I reque k you. Ovintiv a	"Ovintiv has a st the following appreciates you	n Information Officer to answ information to expedite you r cooperation and I will pass	ver all media q r request?" (co on this inform	uestions." omplete the fo nation to the a	orm below). ppropriate person."	
Time	Call To	Call From	Media Outlet	Reporter / Contact Name	Telephone Work	Numbers Fax	Remarks / Information Required	
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Document all key events, conversations, and meetings on this form. Where lengthy notes are necessary, use additional copies or the back of the page.

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Time	Call To	Call From	media Outlet	Reporter / Contact Name	Work	Fax	Remarks / Information Required
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Date:	Responder Name:						
Page	of	and in	Responde	er Position:		Responde	ers Phone No.:
lf you feel y	f you feel you are not the appropriate person to be answering the media agencies questions, use the following series of statements. "Ovintiv has a Government Liaison to answer all media questions." "May I request the following information to expedite your request?" (complete the form below). "Thank you. Ovintiv appreciates your cooperation and I will pass on this information to the appropriate person."						
Time	Call To	Call From	Agency	Contact Name	Telephone	Numbers	Remarks / Comments
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Document all key events, conversations, and meetings on this form. Where lengthy notes are necessary, use additional copies or the back of the page.

# C3 Government Agency Contact Log



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Time	Call To	Call From	Agency	Contact Name	Work	Fay	Remarks / Comments
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	GRANDE PRAIRIE EMERGENCY RESPONSE PLAN
Location	
Address:	
City / Town:	
Phone #:	
Contact Name:	
Office #:	
Home #:	
Map or Directions to Site	





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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**





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# Health & Safety Policy

Ovintiv<sup>™</sup> Inc. recognizes that a robust health and safety culture contributes to growing shareholder value and that strong safety performance is both a foundational value and a common goal of Ovintiv's leadership and workforce. We believe occupational injuries and illnesses are preventable, and we strive for a workplace free of recognized hazards. This Health & Safety Policy articulates our commitment to a safe and healthy workplace where our workforce is empowered and expected to comply with the provisions of this policy.

Ovintiv will:

- comply with health and safety laws and regulations, requirements and industry standards applicable to our activities
- ensure all personnel working on an Ovintiv location have the authority, responsibility and support to stop work when an unsafe situation is recognized or suspected
- identify and assess health and safety hazards arising from our activities and adopt technically sound and economically practicable measures to eliminate or mitigate the potentially negative health and safety impacts associated with such activities
- ensure that our workforce understands that working safely is a condition of employment and that all workers are responsible for their own health and safety as well as the health and safety of those around them
- expect our workforce to comply with our established health and safety practices and provide the tools and training for them to do so
- communicate to our workforce our expectations regarding health and safety performance and the necessity for adherence to these expectations
- ensure the competency of our workforce is verified and maintained in support of Ovintiv's health and safety programs, initiatives, performance and culture
- commit to the continual improvement of our safety programs by setting health and safety objectives and targets, and measure and monitor our performance through regular inspections, audits and investigation of incidents. Use these results to develop, communicate and implement appropriate corrective actions geared toward lasting improvement
- commit to safe and courteous driving by complying with the Driving Safety Program
- integrate health and safety stewardship into our business planning and decision-making processes
- commit to protect the health and safety of our workforce and the public
- commit to always doing what is right when it comes to the health and safety of our workforce and the



public; if it cannot be done safely it should not be done at all.

Ovintiv is committed to implementing this Health & Safety Policy through the active participation of our leadership and workforce, and through the integration of Ethos, our Operations Management System, into our day-to-day operations and decision-making processes.

Updated September 15, 2021





# Appendix A: ERP Scope, Training and Plan Maintenance, continued

#### **Training Requirements**

Frequency / Action	As Required	Annually*	Every Three (3) Years**	Every Five (5) Years***
	Trainin	Ig		
Employee Orientation New / Transfer	1			
On-the-job Training	1			
Response Discussion During Pre-Job Meetings	1			
Drills	1			
Tabletop Exercise		✓ one of these		
Communication / Partial Mobilization Exercises		exercises		
Major (Full Scale) Exercise	✓ Start-up of facility or transmission line (BCER)		1	1
Post Incident (Actual) Review	1			
ERP Review / Self Audit		*		

\* Must be held annually.

\*\* CSA Z246.2-18, CER, BCER & 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 an 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 of the following events will trigger an ERP update:
  - Changes to emergency information (e.g., contact phone numbers).
  - New mapping information.
  - New resident information.
  - o Changes to response staff information or response capabilities.
  - Facility additions such as well or pipeline tie-ins that do not require submission of a supplement. Before starting operations, the duty holder is expected to update its approved ERPs with information about on- and off-site emergency response team personnel.
- 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 H<sub>2</sub>Safety 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 H<sub>2</sub>Safety 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:
<ul> <li>Company information</li> <li>Mapping information</li> <li>Resident contact information</li> <li>Response staff information or capacity changes</li> <li>Facility additions, such as well or pipeline tie-ins</li> <li>Other</li> </ul>
Description of the change: Please attach additional pages and/or support documentation as required.
Please return the completed checklist to: Ovintiv
Attn: Tanner Strangway 500 Centre Street S.E. (Box 2850) Calgary, AB T2G 1A6 Email: tanner strangway@ovintiv.com
Fax: 403-290-8323



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#### Appendix B: Incident Command Post (ICP) Communication Methods Between Command Posts - Alberta



Appendices



# 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	<ul> <li>Establish briefings with the Field Response Team (FRT).</li> <li>Ensure staffing is adequate for the task(s).</li> <li>Consider the time difference, if applicable, and determine how time will be communicated throughout the incident.</li> </ul>
Safety Officer	<ul> <li>Ensure the room / floor / building is secure.</li> <li>Ensure a safe work area, i.e. remove clutter or cords causing slips, trips, falls, etc.</li> </ul>
Information Officer	<ul> <li>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.</li> <li>Ensure inbound and outbound calls received or made are centrally logged.</li> <li>Ensure responders have their office phones forwarded to their cell phones.</li> </ul>
Logistics / IT Support	<ul> <li>Turn on all computers; ensure the relevant systems are operational and that they all have internet/email access.</li> <li>Bring up any ERP related electronic tools (ie; H<sub>2</sub>CommandCentre) and ensure they are working and that they can all be displayed on various projectors / screens as required.</li> <li>Check that printers are connected to the computers and working. Print a test page to confirm.</li> <li>Check that the fax machine is setup and working.</li> <li>Check that any phone conferencing systems are set up and working.</li> <li>Ensure that telephone lines are available and active.</li> <li>Ensure TVs are working properly and set up to local news or CNN.</li> <li>Obtain any additional equipment as required.</li> </ul>
Logistics / Security	<ul> <li>Ensure the room/floor/building is secure. Arrange for additional security if required.</li> <li>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.</li> <li>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.</li> <li>Arrange for refreshments (coffee, food, water, etc.) for those working there, as well as sleeping space if required.</li> <li>Ensure there are sufficient tables and chairs for the team.</li> </ul>


# Appendix B: Incident Command Post (ICP), continued

### ICP Activation and Setup, continued

Position	Task
	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.
Planning /	□ As team members arrive, write their name in the appropriate position on the Field
Documentation	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 <sub>2</sub> 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 found in Section 6: Forms are designed to aid in this process.



# Appendix C: Toxic Gases Hydrogen Sulphide (H<sub>2</sub>S)

### Background

Hydrogen sulphide ( $H_2S$ ) 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.  $H_2S$  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.

 $H_2S$  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  $H_2S$  gas is ignited, it will change into sulphur dioxide (SO<sub>2</sub>), 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  $H_2S$  concentration of exposure. The health effects of acute exposure to  $H_2S$  are shown in the following table. Acute exposure reflects a range from a few seconds up to several weeks.



### 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.



### 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-ofhydrogen-sulphide-and-sulphur-dioxide.pdf



### Chronic Exposure Effects of Hydrogen Sulphide

Chronic effects from  $H_2S$  exposure is a developing area of research. Chronic exposure may inflame and irritate the upper respiratory tract.

#### Medical treatment for hydrogen sulphide exposure

(Please note: This information was provided by a medical source other than the Provincial Regional Health Authorities. See Hydrogen Sulphide ( $H_2S$ ) Guidelines - Revised November 2000)

#### Guidelines for in Hospital Assessment/Treatment of Possible Hydrogen Sulphide Exposure

This is provided to assist medical staff in assessing a worker who has a possible or actual H<sub>2</sub>S exposure.

Section I provides information on H<sub>2</sub>S

Section II summarizes possible health effects, which should be evaluated at the time of presentation

Section III depicts a summary of possible clinical management

Section IV provides a guideline regarding return to work (RTW) considerations

#### I. Hydrogen sulphide

H<sub>2</sub>S is a colourless gas. It is heavier than air and tends to flow in ditches, trenches and low-lying areas.

H<sub>2</sub>S is clearly recognizable in small concentrations at around one part per million (ppm) by its characteristic rotten egg smell.

At concentrations of about 150 ppm in the air, or after prolonged exposure to lower concentrations, the olfactory sense is paralyzed and the presence of H<sub>2</sub>S can no longer be detected by odour.

#### II. Health effects of hydrogen sulphide

H<sub>2</sub>S can be rapidly fatal. It acts by paralyzing the respiratory control centre in the brain and by inhibiting cellular respiration.

Hydrogen sulphide is a mucous-membrane and respiratory-tract irritant. Pulmonary edema, which may be immediate or delayed, can occur after exposure to high concentrations.

#### Acute exposure may include the following symptoms and signs:

#### **Central Nervous System**

CNS injury is immediate and significant after exposure to hydrogen sulphide. At high concentrations, only a few breaths can lead to loss of consciousness, coma, respiratory paralysis, seizures, and death. CNS stimulation may precede CNS depression. Stimulation manifests as excitation, rapid breathing, and headache; depression manifests as impaired gait, dizziness, and coma, possibly progressing to respiratory paralysis and death. In addition, decreased ability to smell occurs at 100 to 150 ppm.

#### Respiratory

Inhaled Hydrogen sulphide initially affects the nose and throat. Low concentrations (50 ppm) can rapidly produce irritation of the nose, throat, and lower respiratory tract. Pulmonary manifestations include cough, shortness of breath, and bronchial or lung hemorrhage. Higher concentrations can provoke bronchitis and cause accumulation of fluid in the lungs, which may be immediate or delayed for 24 hours or more. Lack of oxygen may result in cyanosis.



#### Medical Treatment for Hydrogen Sulphide Exposure, continued

#### Cardiovascular

High dose exposure may cause insufficient cardiac output, irregular heartbeat and conduction abnormalities.

#### Renal

Although very unlikely, transit renal effect may include blood, casts, and protein in the urine. Renal failure as a direct result of hydrogen sulphide toxicity has not been described, although it may occur secondary to cardiovascular compromise.

#### Gastrointestinal

Symptoms may include nausea and vomiting.

#### Dermal

Prolonged or massive exposure may cause burning, itching, redness and painful inflammation of the skin.

#### Ocular

Eye irritation may result in inflammation (i.e. kerato-conjunctivitis) and clouding of the eye surface. Symptoms include blurred vision, sensitivity to light, and spasmodic blinking or involuntary closing of the eyelid.

#### Potential Sequelae

Inflammation of the bronchi can be a late development. Survivors of severe exposure may suffer psychic disturbances and permanent damage to the brain and heart.

#### III. Approach to the worker with suspected hydrogen sulphide exposure

Although this document refers only to  $H_2S$ , it is important for the clinician to keep in mind the possibility of coexposure to numerous other agents. Sulphur dioxide may have been present if there has been combustion of hydrogen sulphide. Sulphur dioxide does not cause loss of consciousness but is a respiratory tract irritant. Therefore, the management of sulphur dioxide intoxication is similar to that for hydrogen sulphide. Other agents capable of causing asphyxia include carbon monoxide (toxic asphyxia) as well as a wide array of gases that act as simple asphyxiants (carbon dioxide, methane, nitrogen, etc.) by displacing oxygen. Finally, other conditions (MI, syncope, seizure, etc.) that may cause sudden collapse must be investigated and managed as appropriate.

#### History

The history is the key to the diagnosis of hydrogen sulphide (or other industrial) intoxication. There are two facets to the history in such cases:

Exposure history: This attempts to define, in qualitative terms, the likelihood of, and amount of exposure to hydrogen sulphide. This should include questions about work processes, the presence of a rotten egg odour and inquiring as to effects in co-workers. If possible, this should be supplemented by Industrial Hygiene information, which might include the triggering of alarms for hydrogen sulphide and historical data on air measurements. For suspected exposures, the workplace can often provide useful estimates regarding the level of exposure, although such data may require several days to reconstruct.

Clinical history: The physician should attempt to establish the presence of as many of the symptoms as possible associated with H<sub>2</sub>S exposure. Determining the presence of respiratory tract irritation (conjunctivitis, rhinitis, tracheitis) is of particular importance since this symptom distinguishes hydrogen sulphide from several other asphyxiants and serious toxicity is unlikely in the absence of this symptom at presentation.

#### Investigations

There are no specific tests in routine clinical use to establish hydrogen sulphide intoxication. Rather, testing is aimed at characterizing the sequels of intoxication, as well as to rule out other causes for the presentation.



#### Medical Treatment for Hydrogen Sulphide Exposure, continued

#### Treatment

Treatment is entirely supportive in nature and includes supplemental oxygen, managing eye and skin exposure as a chemical bum and maintenance of circulatory status. Although nitrite therapy has been advocated as an antidote, there is little evidence to support its use and as it is potentially dangerous it is not recommended.

On arrival - check blood gases and assess for lactic acidosis. Take chest film and repeat as necessary keeping in mind the delayed possibility of pulmonary edema. ECG may assist as arrhythmias and bradycardia are not uncommon. Temporary T wave depression may occur and ECG may mimic infarction.

For the unconscious patient, give oxygen using mechanical ventilation with positive end expiratory pressure.

Assess for associated musculo-skeletal and internal traumatic injury.

Maintain circulating fluid volume, but be alert for delayed onset of pulmonary edema.

At times, strong physical restraint may be required. Keep the patient as inactive as possible.

A pulmonary function test should be done near time of discharge and, if abnormal should be repeated at appropriate intervals thereafter.

# If symptoms and/or exposure history are strongly clinically suggestive, because of the possibility of delayed pulmonary edema, adequate monitoring and follow-up for at least 24 hours is essential.

#### IV. Guidelines for Return to Work (RTW)

Three possible scenarios may be considered by the attending medical personnel:

Possible exposure, without symptoms

Possible exposure, with symptoms (that are compatible with H<sub>2</sub>S)

Known exposure including "knockdown", with symptoms that require medical treatment and/or hospitalization.

In each scenario, a clinical decision about appropriate medical investigations, treatment, follow-up evaluation, and timing of return-to-work (RTW) will have to be made. It is emphasized that with scenarios (1) and (2), it may be preferable to either monitor the employee in the hospital or as an outpatient (with follow-up examination) for 24-48 hours prior to RTW.



# Appendix C: Toxic Gases, continued Sulphur Dioxide (SO<sub>2</sub>)

### Background

Sulphur Dioxide (SO<sub>2</sub>) belongs to the family of sulphur oxide gases (SO<sub>2</sub>). 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, SO<sub>2</sub> 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 SO<sub>2</sub> (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, SO<sub>2</sub> emissions cause aesthetic damage and accelerate the decay of building materials and paints.

General guidelines dictate evacuation where  $SO_2$  concentrations reach 5 ppm averaged over a 15 minute period. However, as a precaution, evacuation will be established under the criteria when the  $SO_2$  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.

Concentration (ppm)	Acute Health Effects
0.1	Transient bronchoconstriction <sup>1</sup> in sensitive exercising asthmatic individuals that ceases when exposure ceases. <sup>2</sup>
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).

### Acute Health Effects of Sulphur Dioxide (AB Regulations)

<sup>1</sup> At low levels, bronchoconstriction was generally observed as changes in airway conductance detectable by spirometry rather than as clinical symptoms.

<sup>2</sup> 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.

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-ofhydrogen-sulphide-and-sulphur-dioxide.pdf



#### Medical treatment for sulphur dioxide exposure

(Please note: This information was provided by a medical source other than the Provincial Regional Health Authorities. See Sulphur Dioxide (SO<sub>2</sub>) Guidelines - Revised July 2001)

#### Guidelines for in Hospital Assessment/Treatment of Possible Sulphur Dioxide Exposure

This is provided to assist medical staff in assessing a worker who has a possible or actual SO<sub>2</sub> exposure.

Section I provides information on SO2

Section II summarizes possible health effects which should be evaluated at the time of presentation

Section III depicts a summary of possible clinical management

Section IV provides a guideline regarding return to work (RTW) considerations.

#### I. Sulphur Dioxide

 $SO_2$  is a colourless gas with a pungent odour detectable by the human nose at concentrations of about 0.5 to 0.8 ppm.

SO<sub>2</sub> is highly soluble in water resulting in the formation of sulphurous acid.

Approximately 90% of inhaled SO<sub>2</sub> is absorbed in the upper respiratory tract.

Asthmatics and individuals with underlying bronchial hyperactivity may be more susceptible to low level exposure to SO<sub>2</sub>.

#### II. Health Effects of Sulphur Dioxide

SO<sub>2</sub> causes almost immediate coughing with significant exposure.

SO<sub>2</sub> causes irritation of the conjunctive and nasal mucosa at levels between 5 and 10 ppm.

Exposures of  $SO_2$  as low as 8 ppm has been associated with symptoms of cough, phlegm, wheezing and exertional dyspnea.

Acute high-dose exposures leading to severe injury are unusual, parenchyma lung damage occurs above 50 ppm.



#### Medical treatment for sulphur dioxide exposure, continued

#### Acute exposure may include the following symptoms and signs:

#### Respiratory

Inhaled  $SO_2$  is a moderate to strong respiratory irritant. Reddening of the throat and nose may occur. Repeated exposure to 10 ppm has caused nosebleeds. Sensitivity varies among people, short exposure to low concentrations may produce a reversible decrease in lung function, and symptoms may include chest tightness.

Exposure to high concentrations of SO<sub>2</sub> has caused severe airways obstruction, hypoxia and pulmonary edema. The effects of pulmonary edema include coughing and shortness of breath which can be delayed until hours or days after the exposure; these symptoms are aggravated by physical exertion. Survivors of high concentration exposures may suffer chemical bronchopneumonia and bronchiolitis obliterans, which can be fatal after a few days. Delayed chemical pneumonitis and bronchial asthma can also result.

#### Dermal

The gas will react with moisture on the skin and cause irritation (redness, itching).

#### Ocular

Eye irritation may result in smarting of the eyes and tearing. In severe cases (high concentrations in a confined area), SO<sub>2</sub> has caused temporary corneal burns.

#### Potential Sequelae

Survivors of high concentration exposures may suffer chemical bronchopneumonia and bronchiolitis obliterans, which can be fatal after a few days. Delayed chemical pneumonitis and bronchial asthma can also result.

#### III. Approach to the worker with suspected Sulphur Dioxide Exposure

Although this document refers only to SO<sub>2</sub>, it is important for the clinician to keep in mind the possibility of coexposure to numerous other agents.

#### History

The history is the key to the diagnosis of  $SO_2$  (or other industrial) intoxication. There are two facets to the history in such cases:

Exposure history: This attempts to define, in qualitative terms, the likelihood of, and amount of exposure to sulphur dioxide. This should include questions about work processes, the presence of an odour and inquiring as to the effects in co-workers. If possible, this should be supplemented by industrial hygiene information which might include the triggering of alarms for sulphur dioxide and historical data on air measurements. For suspected exposures, the workplace can often provide useful estimates regarding the level of exposure, although such data may require several days to reconstruct.

Clinical history: The physician should attempt to establish the presence of as many of the symptoms as possible associated with  $SO_2$  exposure.

#### Investigations

There are no specific tests in routine clinical use to establish sulphur dioxide intoxication. Rather, testing is aimed at characterizing the sequels of intoxication as well as to rule out other causes for the presentation.



#### Medical treatment for sulphur dioxide exposure, continued

#### Treatment

Treatment is entirely supportive in nature and includes supplemental oxygen, managing eye and skin exposure as a chemical burn and maintenance of respiratory status.

On arrival - check blood gases. Take chest film and repeat as necessary keeping in mind the delayed possibility of pulmonary edema.

Oxygen should be delivered by nasal cannula or mask, or if pulmonary injury leads to severe hypoxia by mechanical ventilation.

If bronchospasm occurs, bronchodilators may be of value.

A pulmonary function test should be done near time of discharge and, if abnormal, should be repeated at appropriate intervals thereafter.

Conjunctival irritation should be treated with copious irrigation with saline and the eyes examined with fluorescein for corneal defects.

Assess for associated musculo-skeletal and internal traumatic injury.

Prophylactic antibiotics should be avoided.

If symptoms and/or exposure history are strongly clinically suggestive, because of the possibility of delayed pulmonary edema, adequate monitoring and follow-up for at least 24 hours is essential.

#### IV. Guidelines for Return to Work (RTW)

Three possible scenarios may be considered by the attending medical personnel:

Possible exposure, without symptoms;

Possible exposure, with symptoms (that are compatible with SO<sub>2</sub>) or

Known exposure, including "knockdown", with symptoms that require medical treatment and/or hospitalization.

In each scenario, a clinical decision about appropriate medical investigations, treatment, follow-up evaluation and timing of return-to-work (RTW) will have to be made. It is emphasized that with scenarios (2) and (3), it may be preferable to either monitor the employee in the hospital or as an outpatient (with follow-up examination) for 24 - 48 hours prior to RTW.



# Appendix D: Key Elements of the Incident Command System (ICS)

**Management by Objectives** – Objectives are ranked by priority, should be as specific as possible, must be attainable and if possible given a working time-frame. Objectives are accomplished by first outlining strategies (general plans of action), then determining appropriate tactics (how the strategy will be executed) for the chosen strategy

**Unity and Chain of Command** – Each individual takes direction from and reports to only one designated supervisor; this is called Unity of Command. Higher level personnel have authority over lower level personnel; the lower level personnel are subordinate to and take direction from higher level personnel. Orders and instructions travel down the chain of command from one supervisor to each subordinate. This is called Chain of Command.





# Appendix D: Key Elements of the Incident Command System (ICS), continued

**Organizational Flexibility** – Only positions that are required at the time should be assigned. In most cases, very few positions will need to be assigned.



**Span of Control** – ICS requires that any single person's span of control (number of people reporting to them) should be between three and seven, with five being ideal.

**Common Terminology** – When different organizations are required to work together, the use of common terminology is essential.

**Incident Action Plan (IAP)** – Every incident must have a written or oral Incident Action Plan. The following information is part of an Incident Action Plan and must be communicated to the rest of the organization:

- Objectives, strategies and tactics outlined by the Incident Commander.
- Resources assignments what resources do we have and what are they doing? What resources are
  on order and what are they going to do?
- A description of the ICS organizational structure what positions will be filled?
- Supporting materials incident map, communications plan, evacuation plan, stick diagrams, etc.

**Integrated Communications** – The use of a common communications plan is essential for ensuring effective communication during an incident.



# Appendix D: Key Elements of the Incident Command System (ICS), continued

**Establishment and Transfer of Command** – The highest ranking authority arriving onscene at an incident will assume the role of the Incident Commander. That person will continue to be the Incident Commander until there is a formal transfer of command. A transfer of command briefing usually consists of:

- Reviewing a description of the incident.
- Reviewing the actions taken thus far to contain and control the incident.
- Reviewing the current ICS organizational structure.
- A summary of the resources available and ordered.

**Resources Management** – A resource must either be in assigned, available, or out-of-service status.

- Assigned a resource in assigned status is currently doing whatever tasks have been assigned to it.
- Available a resource in available status is ready to be deployed at a moments notice. Resources in available status often wait for assignments at an incident Staging Area.
- Out-of-Service a resources in out-of-service status might be sleeping, receiving medical aid, getting repairs, etc. and is not ready for assignment.

### Summary of Responsibilities

These management functions are handled by the General Staff once they have been delegated by the Incident Commander.

**Command** Ensures safety. Assumes overall responsibility for the incident.

The Incident Commander is responsible for the Command of the incident as well as the following management functions until they are assigned to other response personnel:

- **Operations** Implements the Incident Action Plan (IAP) focusing on control, containment, and site safety.
- **Public Safety** Implements the Incident Action Plan (IAP) focusing on notification and evacuation of the public.
- **Planning** Help create and track (document) the success of the Incident Action Plan (IAP).
- **Logistics** Secure the resources and put them in place to allow Operations to implement the Incident Action Plan.
- **Finance/Admin** Ensures procedures are in place to allow logistics to secure the resources (spending) and track and control the expenditures.
- **Communications** Disseminates information and liaises with external agencies.

Communications is handled by the Information Officer once one has been appointed by the Incident Commander. The Information Officer is part of the Command Staff.

# Appendix E: Land Descriptions

### Dominion Land Survey (DLS) System

- Each township (6 mile x 6 mile) is divided into 36 sections (1 mile x 1 mile)
- Each section is divided into 16 legal sub-divisions (L.S.D.)
- Each section is divided into four quarters (N.W., N.E., S.W., and S.E.)

The numbering of sections and L.S.D.s is shown below:

		- Rang	e —			Secti	on			
31	32	33	34	35	36		13 N	14 w	15	16 F
30	29	28	27	26	25		12	11	10	9
19	20	21	22	23	24		5	6	7	8 F
18	17	16	15	14	13		4	3	2	1
7	8	9	10	11	12		/			
6	5	4	3	2	1	/				

- Townships increase in number from South to North starting at the Canada USA border
- Ranges increase in number from East to West within a Meridian. A Range is one (1) Township wide (6 miles).
- Meridians run from the North Pole to the South Pole and are spaced every four degrees. The principal Meridian in Canada originates in Central Manitoba and increases West or East from there.
- Legal land description is listed in the following order:

	L.S.D		Section		Township		Range	Meridian
Example	02	-	01	-	38	-	09	West of the 4th



# Appendix E: Land Descriptions, continued

### National Topographic System (NTS)

Based on the National Topographic System (NTS), the map labelling terms are as follows:

1) Series	A rectangular area that has a width of 8 degrees of longitude and 4 degrees of latitude. There are 9 Series in British Columbia (82, 83, 92, 93, 94, 102, 103, 104, and 114).
2) Area	1/16 of a map Series that has a width of 2 degrees of longitude by 1 degree of latitude (labelled from A to P).
3) Sheet	1/16 of map Area that has a width of 30' in longitude and 15' of latitude (labelled from 1 to 16).
4) Block	1/12 of a map Sheet with a width of 7'30" in longitude and 5' in latitude (labelled from A to L).
5) Unit	1/100 of a map Block, and has a latitudinal extent of 30" and longitudinal extent of 45" (labelled from 1 to 100).
6) Quarter Unit	1/4 of a map Unit (labelled from a to d).

Note: 1 degree is equivalent to approximately 111 km in British Columbia. Degrees vary in size around the planet. They become smaller the closer they get to the poles (north or south) and very large as they reach the equator.

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# Appendix F: ERP Reference Material

### Acronyms

Acronym	Meaning	Acronym	Meaning
ABSA	Alberta Boilers Safety Association	IIZ	Initial Isolation Zone
AEMA	Alberta Emergency Management Agency	IAP	Incident Action Plan
AER	Alberta Energy Regulator	INAC	Indigenous and Northern Affairs Canada
AH	Alberta Health	LA	Local Authority
AHS	Alberta Health Services	LBV	Line Block Valve
AT	Alberta Transportation	LEL	Lower Explosive Limit
BCER	BC Energy Regulator	LPG	Liquefied Petroleum Gas
BLEVE	Boiling Liquid Expanding Vapour Explosion	MD	Municipal District
CANUTEC	Canadian Transport Emergency Centre	MEP	Municipal Emergency Plan
CAPP	Canadian Association of Petroleum Producers	MOP	Maximum Operating Pressure
CEPA	Canadian Environmental Protection Act	NGL	Natural Gas Liquids
CER	Canada Energy Regulator	NOTAM	Notice to Airmen
CEOC	Corporate Emergency Operations Centre	OHS	Occupational Health and Safety
CISD	Critical Incident Stress Debriefing	OSCAR	Oil Spill Containment and Recovery
CPE	Communications and Public Engagement	OSCP	On-Site Command Post
CSA	Canadian Standards Association	PAD	Protective Action Distance
DFO	Department of Fisheries and Oceans	PAZ	Protective Action Zone
ECCC	Environment & Climate Change Canada	POC	Provincial Operations Centre
EMO	Emergency Management Organization	PPB	Parts Per Billion
EOC	Emergency Operations Centre	PPE	Personal Protective Equipment
EPZ	Emergency Planning Zone	PPM	Parts Per Million
EMO	Emergency Management Organization	RCMP	Royal Canadian Mounted Police
ERAC	Emergency Response Assistance Canada	RD	Rural District
ERP	Emergency Response Plan	REOC	Regional Emergency Operations Centre
ESD	Emergency Shut Down	RHA	Regional Health Authority
ESDV	Emergency Shut-Down Valve	RM	Rural or Regional Municipality
ETA	Estimated Time of Arrival	SABA	Supplied Air Breathing Apparatus
FH Order	Fire Hazard Order	SCBA	Self-Contained Breathing Apparatus
FNIHB	First Nations and Inuit Health Branch – Health Canada	SDS	Safety Data Sheet
GEOC	Government Emergency Operations Centre	SO <sub>2</sub>	Sulphur Dioxide
HPZ	Hazard Planning Zone	STARS	Shock Trauma Air Rescue Society
HVAC	Heating Ventilation Air Conditioning	TDG	Transportation of Dangerous Goods
HVP	High Vapour Pressure	WCSS	Western Canadian Spill Service
HVPL	High Vapour Pressure Liquid	WHMIS	Workplace Hazardous Materials Information System
H <sub>2</sub> S	Hydrogen Sulphide		
ICS	Incident Command System	1	



### Glossary of Terms

#### Adjacent to

Within 25 m.

#### Air Quality Monitoring

Measurement of atmospheric concentrations of a hazardous substance, such as H<sub>2</sub>S or SO<sub>2</sub>.

#### 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 duty holder through normal operating procedures and is deemed to be a very low risk to 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.

#### 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

#### Corporate Emergency Response Plan

Plans prepared by the duty holder under provincial regulations, statues, or conditions imposed by the regulator. A corporate ERP contains planned procedures which allows for effective incident response.

#### 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 H<sub>2</sub>S release rate greater than 2.0 m3/s or wells with lower H<sub>2</sub>S release rates in near an urban centre as defined in Directive 056: Energy Development Applications and Schedules.

#### 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 Planning Zone (EPZ)**

An EPZ is a geographic area around wells, pipelines, or facilities where the presence of hazardous substances requires specific emergency preparedness by the duty holder.

#### 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).

#### 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.



### Glossary of Terms, continued

#### ERCBH2S (Alberta specific)

A software program that calculate site-specific EPZs using thermodynamics, fluid dynamics, atmospheric dispersion modelling and toxicology.

#### Evacuation

An organized, phased, and supervised withdrawal of persons 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**

#### 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 (H<sub>2</sub>S)

A naturally occurring gas found in a variety of geological formations and also formed by the natural decomposition of organic matter in the absence of oxygen.  $H_2S$  is colourless, has a molecular weight that is heavier than air, and is extremely toxic. In small concentrations, it has a rotten egg smell and causes eye and throat 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 (H<sub>2</sub>S) 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 H<sub>2</sub>S release rate.



### **Glossary of Terms, continued**

#### Hydrogen sulphide (H<sub>2</sub>S) 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  $H_2S$  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)

The area in close proximity to a continuous hazardous release where indoor sheltering may provide temporary protection due to the proximity of the 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)

The incident presents no danger outside the duty holder's property or threat to the public and has a minimal environmental impact. Duty holder personnel can manage the incident themselves with immediate control of the hazard. There is little or no media interest.

#### Level 2 Emergency (Alberta specific)

The incident presents no immediate danger outside the duty holder's property but could potentially extend beyond the duty holder's property. Outside agencies must be notified. Imminent control of the hazard is probable, but there is a moderate threat to the public or the environment or both. There may be local and regional media interest in the event.

#### 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 multiagency municipal and provincial government involvement is required.

#### 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

M.D.

Municipal District

#### Major (full-scale) 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 (ER)

ER 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<sub>2</sub>S or SO<sub>2</sub> 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 irreversible health effects on people.

#### 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

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 (H<sub>2</sub>S).

#### Sour gas release

An uncontrolled release of natural gas containing hydrogen sulphide (H<sub>2</sub>S).

#### **Sour multiphase product** (British Columbia specific)

Any liquid that contains H<sub>2</sub>S in the gas phase.

#### Sour multiphase pipeline (British Columbia specific)

A pipeline that transmits a multiphase product that contains more than 10 moles of H<sub>2</sub>S 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.



### 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.

#### 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 (SO<sub>2</sub>)

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 H<sub>2</sub>S and SO<sub>2</sub>, 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).



### 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 EMERGENCY RESPONSE PLAN



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# H<sub>2</sub>Safety










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