South Peace

Regional Emergency Response Plan

24 Hour Emergency Number 1-844-667-8477

24 Hour BC OGC Incident Reporting 1-800-663-3456

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An H2Safety Product

ERP Core Development Date: March 31, 2020
Copy Number: 43093

Revision History

This Emergency Response Plan is effective April 1, 2020. The company's Emergency Response Program Coordinator is responsible for updating this plan annually or as required. Any errors or omissions in the plan should be brought to their attention.

Date of Update Inserted Into ERP: ______________________________

Signature: ______________________________

ERP Revision Due Date: April 1, 2020

Date of Revision	Date of Issue	Reason for Revision	Section	Affected Pages
2020 Emergency Response Plan Annual Update				
March 31, 2020	April 1, 2020	Revised form on back of Step 2 - Internal Notification	Section 1: Initial Response	Step 2 – Internal Notification
		Changed all references of National Energy Board (NEB) to Canada Energy Regulator (CER) in ERP	Section 1: Initial Response	Step 3 – External Notification
			Section 4: Emergency Response Procedures	Post Incident pg 4
				Spill Chart
			Section 5: External Agencies	Gov't Notification Matrix
				Federal Roles Chart
			Section 6: Forms	ICS 209 pg 2
				A3 pg 1
			Section 7: Appendices	Appendix A, pg 2
				Appendix F, pg 21
March 31, 2020	April 1, 2020	Revised ignition criteria on Public Protection Measures flowchart to match CSA Standards.	Section 1: Initial Response	Step 5 – Public Safety
			Section 4: Emergency Response Procedures	Public Protection Measures Flowchart
March 31, 2020	April 1, 2020	Removed Class 9.1-9.3 from Spill Chart as they are no longer applicable. TDG has 1 class 9 category and BC reg's state to utilize federal TDG guidelines. Revised CEPA substances link.	Section 4: Emergency Response Procedures	Spill Chart
March 31, 2020	April 1, 2020	Yearly revisions to entirety of the Area Specific Information	Area Specific Information	All

Date of Revision	Date of Issue	Reason for Revision	Section	Affected Pages
2019 Emergency Response Plan Regular Update				
July 10, 2019	July 10, 2019	New mailing address for Calgary head office	Foreword	Cover Page
July 10, 2019	July 10, 2019	Added form to back of Step 2 - Internal Notification	Section 1: Initial Response	Step 2 – Internal Notification
July 10, 2019	July 10, 2019	Added more Mobile Air Monitoring services		Step 3 – External Notification
July 10, 2019	July 10, 2019	Added Drinking Water Contingency Plan	Foreword	Table of Contents Page 8
			Section 4: Emergency Response Procedures	New tab added w/ 4 pages
July 10, 2019	July 10, 2019	Removed reference to the Media Representative being in Calgary.	Section 2: Roles & Responsibilities	Reception Centre Rep
July 10, 2019	July 10, 2019	Revised Response Team Structure – Changed from 3 to 2 tier flow		Response Team Structure
July 10, 2019	July 10, 2019	Revised telephone list and added TELUS Conferencing information on back of page		Response Teams Phone List
July 10, 2019	July 10, 2019	Added Government Consultation Summary and Roles	Section 5: External Agencies	All
July 10, 2019	July 10, 2019	Changed email address of program contact	Appendix A: Plan Maintenance – ERP Revision Request Form	Page 4
July 10, 2019	July 10, 2019	Revised 1-Pager with added support services, schools/school bus and non-resident landowner information Added confidential resident information Revised maps with all surface development information Revised company naming convention on pipeline tables	Area Specific Information	All
2019 Emergency Response Plan Annual Update				
April 30, 2019	May 1, 2019	Permit holder name change, new ERP format, new ERP Core to meet BCOGC regulations.	All	All

Distribution List

Manual #	Type	Res Info	Branch	Title / Agency	Name
Corporate					
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4 Electronic Manuals

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2 Hard Field Manuals

21 Electronic Field Manuals

External					
Federal Agencies					
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British Columbia Agencies					
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Alberta Agencies					
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4 Hard External Manuals

17 Digital External Manuals

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Foreword

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  Command Staff Roles Chart
Field Response Team – General Staff
  Operations Section Roles Chart
  Planning Section Roles Chart
  Logistics Section Roles Chart
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  Air Monitors Module
  Reception Centre Rep Module
  Roadblocks Module
  Rovers Module
  Telephoners Module
Ongoing Response
  Planning “P”
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Section 4: Emergency Response Procedures, continued

Section 4: Emergency Response Procedures, continued

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  ICS 215 Operational Planning Worksheet
  ICS 215A IAP Safety Analysis
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Section 6: Forms, continued

Emergency Forms

Resident Forms

Media Forms

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Appendices, continued

Section 1: Initial Response

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A1 Initial Emergency Report Form

First On-Scene Actions

Evacuate	☐ Get to a safe area immediately. ☐ Move upwind if release is downwind of you. ☐ Move crosswind if a release is upwind from you. ☐ Move to higher ground if possible.
Alarm	☐ Call for help (“Man Down”). ☐ Sound bell, horn or whistle, or call by radio. ☐ For medical emergencies, call 911.
Assess	☐ Take head count, locate any casualties. Consider all of the hazards. ☐ Fill out information below to complete assessment.
Protect	☐ Put on 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	☐ Arrange transport of casualties to medical aid. ☐ Provide information to Emergency Medical Services (EMS).

Incident Details *To be completed by the person involved or notified*

Report taken by	Date / Time
Name of person calling	Caller Telephone
Incident Location (LSD / NTS)	
Event Summary	

Agencies Notified	☐ Yes Who? ☐ No				
Event Status	☐ Incident contained or controlled ☐ Imminent control possible		☐ Intermittent control possible ☐ Incident is uncontrolled		
Site Type	☐ Well	☐ Pipeline	☐ Tank Farm/Storage	☐ Battery/Plant/Facility	☐ Other______________
Incident Type	☐ Sour Gas Release	☐ Sweet Gas Release	☐ Pipeline Break	☐ Security (theft, threat, terrorism)	
	☐ Loss of Containment	☐ Fire/Explosion	☐ Worker Injury/Fatality	☐ Vehicle/Transportation	
	☐ Liquid Spill	☐ Other______________________________			

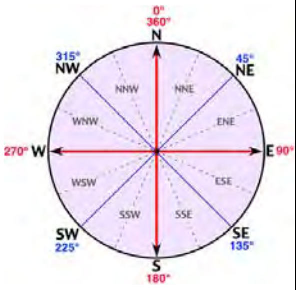
A1 Initial Emergency Report Form

Impacts

Public Health and Safety	☐ Could be jeopardized ☐ Is jeopardized		
Public Protection Measures Taken	☐ Notification ☐ Evacuation ☐ Shelter-in-place ☐ Roadblocks		
Worker Injuries	☐ First Aid ☐ Hospitalized ☐ Fatality ☐ Other____________		
Distance to nearest surface development	____________km	Distance to nearest urban centre	___________km
Details			

Release Impact	☐ On-Lease ☐ Off-Lease Product_____________________	Amount_______________
Gas Readings	H2S______ SO2_______ LEL________ Other________________________________	

Distance to nearest watercourse	__________________km	Weather Conditions
Details		



Media Involvement?	☐ Yes	☐ No	**Regulator Involvement?**	☐ Yes	☐ No	**Public Affairs/Community Relations Issues?**	☐ Yes	☐ No
Details								

Notes / Instructions Provided:

Distribute this completed report to all Key Response Personnel

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

First On-Scene Actions

Evacuate
Alarm
Assess
Protect
Rescue
First Aid
Medical Aid

Refer to A1 Initial Emergency Report Form

Step 1 - Level of Emergency

Determine Level of Emergency:
- ☐ **Alert / Minor**
- ☐ **Level 1 Emergency**
- ☐ **Level 2 Emergency**
- ☐ **Level 3 Emergency**

Use the following resources:
- **Section 1: Initial Response (Level of Emergency)**
- The Emergency Assessment SmartPhone App. (Search H_2Safety or Emergency Assessment in the App Store).

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

Step 2 - Internal Notification

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

Use the following resources:
- **Section 1: Initial Response (Internal Emergency Notification Flowchart)**
- **Section 2: Roles & Responsibilities (Response Team Phone List)**
- **Section 6: Forms (A1)**

Step 3 - External Notification

- ☐ Follow the External Emergency Notification Flowchart to determine which external agencies need to be notified.
  - ☐ 911 (police, fire, ambulance)
  - ☐ Regulatory agency to confirm the Level of Emergency
  - ☐ Local Authority (Cities, Towns, Villages, Counties, M.D.s, R.D.s, R.M.s, Special Areas, Reserves, etc.)
  - ☐ Health Authority / Health Services
  - ☐ Air Monitoring (at all levels of emergency)
- ☐ Use the following resources:
  - **Section 1: Initial Response (External Emergency Notification Flowchart)**
  - **Section 5: External Agencies (Provincial Notification Matrix)**
  - **Area Specific Information (White tabs)**

Step 4 - Incident Briefing

Complete an **ICS 201** Incident Briefing Form:
- ☐ Define incident details and an operational period (page 1).
  - Establish the On-Site Command Post (OSCP) and ICP.
- ☐ Document current incident objectives, strategies and tactics (page 2).
- ☐ Prioritize objectives (page 2).
- ☐ Define initial Incident Command Structure (page 3).
- ☐ Identify required resources and when they'll be available (page 4).

Use the following resources:
- **Section 1: Initial Response (ICS 201)**
- **Section 6: Forms (ICS 201)**

Step 5 - Initiate Public Safety

Public Protection Measures

- ☐ Determine the hazard area; start with Emergency Planning Zone (EPZ) as 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 Measures)**
- **Area Specific Information (Map / EPZ calculation tables)**

Rovers

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

Use the following resources:
- **Section 2: Roles & Responsibilities (Rovers)**
- **Section 6: Forms**
- **Area Specific Information (Map)**

Telephoners

- ☐ Establish a Telephoner Team to notify residents to evacuate or shelter-in-place 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.**
- ☐ Regularly provide status updates to the Public Safety Group Supervisor.

Use the following resources:
- **Section 2: Roles & Responsibilities (Telephoners)**
- **Section 6: Forms**

Roadblocks

- ☐ Follow safety procedures to safely establish roadblocks wherever a road intersects with the EPZ and advise vehicles to reroute.
- ☐ Record all vehicle encounters and air monitoring readings. Complete the following forms: **ICS 214, A5, B3 & B4.**
- ☐ Gain permission from the Public Safety Group Supervisor for response vehicles to enter the hazard area.
- ☐ Provide status updates to the Public Safety Group Supervisor at established intervals.

Use the following resources:
- **Section 2: Roles & Responsibilities (Roadblocks)**
- **Section 6: Forms**
- **Area Specific Information (Map)**

Air Monitors

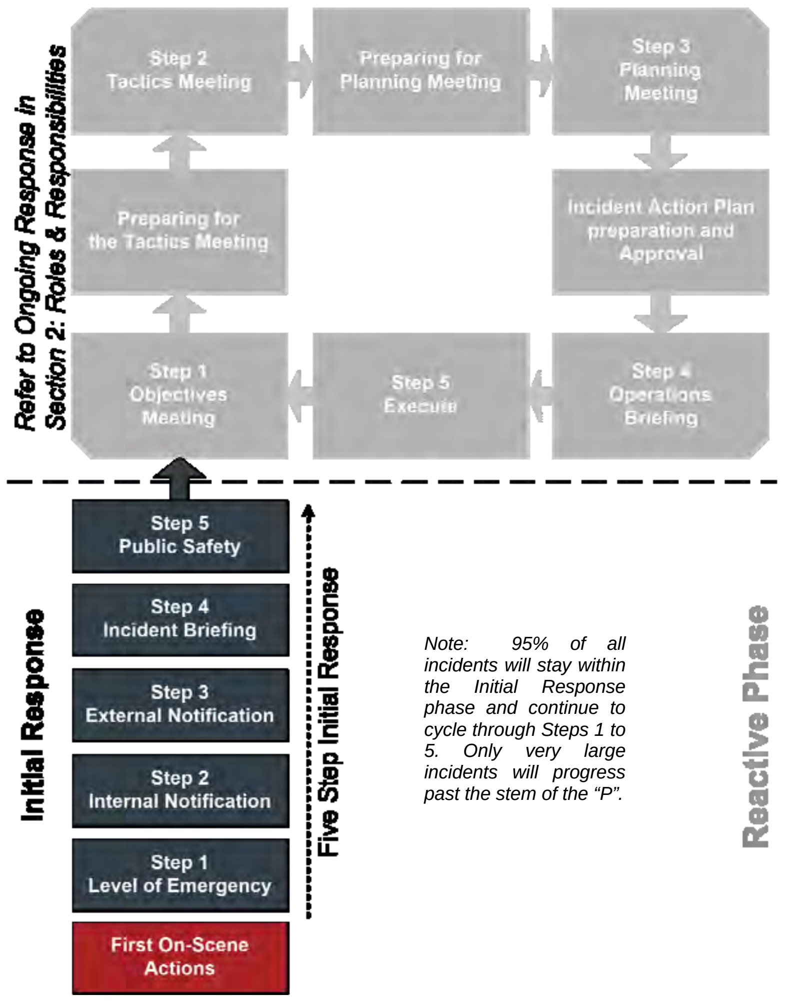
- ☐ Dispatch Air Monitoring personnel to the nearest residence / public facility downwind of the incident.
- ☐ Follow safety procedures and have appropriate PPE.
- ☐ Monitor and record air quality readings using the following forms: **ICS 214 & A5.** (Smoke, plumes, wind, etc.)
- ☐ Provide status updates to the Public Safety Group Supervisor at established intervals.

Use the following resources:
- **Section 2: Roles & Responsibilities (Air Monitors)**
- **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 and those who have not yet arrived).

Use the following resources:
- **Section 2: Roles & Responsibilities (Reception Centre Rep)**
- **Section 6: Forms**


Refer to Ongoing Response in Section 2: Roles & Responsibilities
Step 2 Tactics Meeting
Preparing for Planning Meeting
Step 3 Planning Meeting
Preparing for the Tactics Meeting
Incident Action Plan preparation and Approval
Step 1 Objectives Meeting
Step 5 Execute
Step 4 Operations Briefing
Initial Response
Step 5 Public Safety
Step 4 Incident Briefing
Step 3 External Notification
Step 2 Internal Notification
Step 1 Level of Emergency
First On-Scene Actions
Five Step Initial Response
Reactive Phase

Note: 95% of all incidents will stay within the Initial Response phase and continue to cycle through Steps 1 to 5. Only very large incidents will progress past the stem of the "P".

Five Step Initial Response Guide

H2Safety

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.

Revised January 2019

Incident Classification Matrix

Instructions: Start at the top and continue down until you check off any one box in both consequence and probability to determine the incident classification. *This matrix is required as an attachment upon submission of an incident through the* *Online Minor Incident Reporting System*.

Table 1. Consequence Ranking

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

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

Table 2. Probability Ranking

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

Table 3. Incident Risk Score and Classification

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

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

Step 1 – Level of Emergency

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

Minor Incidents

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

Level 1, 2, or 3 Emergency

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

Escalating, Downgrading or Standing-Down of Emergency

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

Permit Holders Post-Incident Report

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

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

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

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

Spill Reporting Criteria

Where the permit holder holds or maintains rights, the permit holder must report to the BC Oil and Gas Commission, all spills of materials as identified below:

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

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

Other Reportable Incidents

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

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

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

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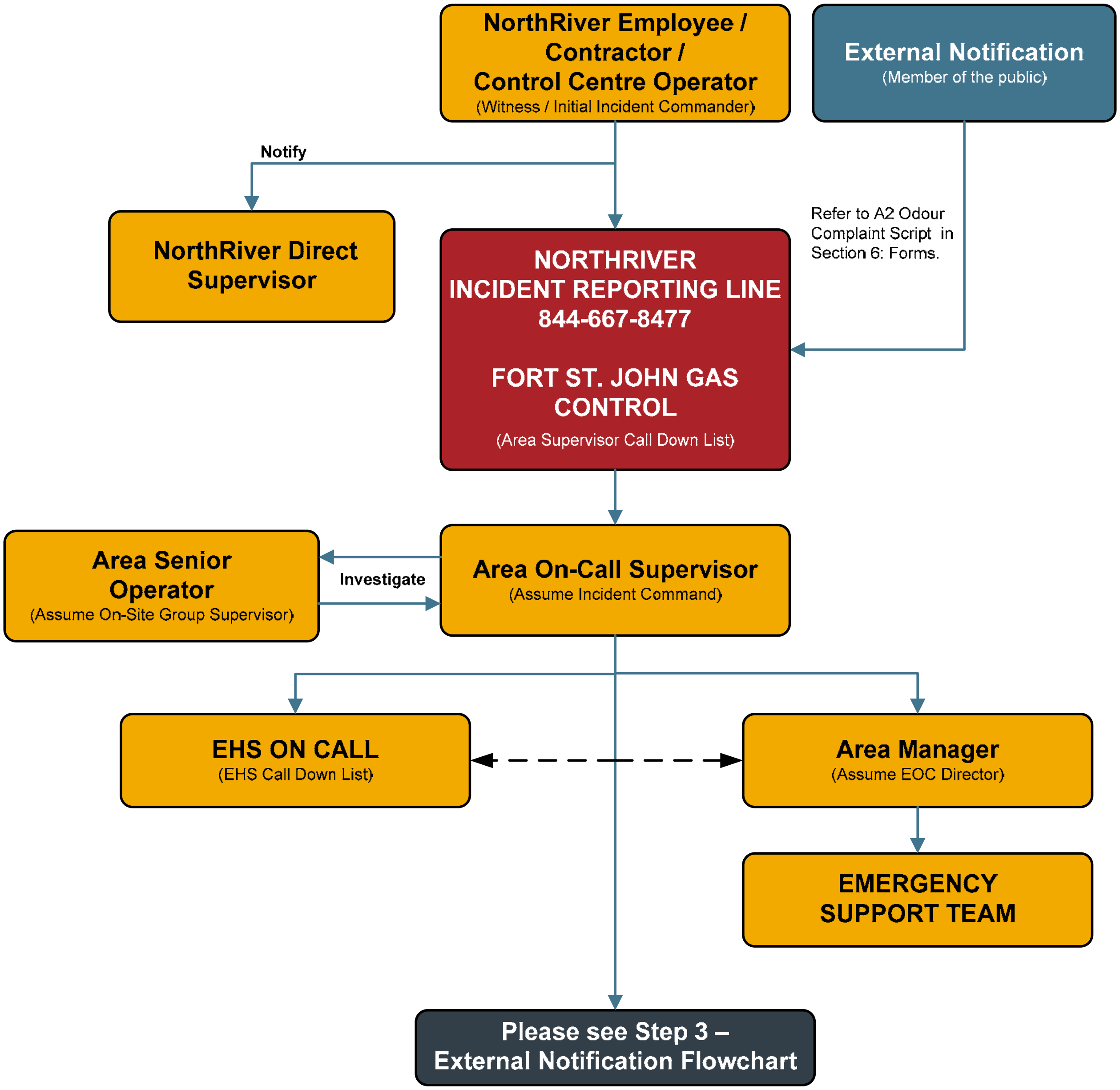
Internal Emergency Notification Flowchart


NorthRiver Employee / Contractor / Control Centre Operator
(Witness / Initial Incident Commander)
External Notification
(Member of the public)
Notify
NorthRiver Direct Supervisor
Refer to A2 Odour Complaint Script in Section 6: Forms.
NORTHRIVER INCIDENT REPORTING LINE
844-667-8477
FORT ST. JOHN GAS CONTROL
(Area Supervisor Call Down List)
Area Senior Operator
(Assume On-Site Group Supervisor)
Investigate
Area On-Call Supervisor
(Assume Incident Command)
EHS ON CALL
(EHS Call Down List)
Area Manager
(Assume EOC Director)
EMERGENCY SUPPORT TEAM
Please see Step 3 – External Notification Flowchart

Phone List

Refer to Refer to the "Response Teams Phone List" yellow tab, behind the Section 2.0: Roles and Responsibilities blue tab for contact information.

Investigation of Complaints

Company representatives will be dispatched to investigate complaints received by outside sources (member of the public, 3rd party company etc.). If H_2S is suspected, personnel should be dispatched in teams of two. Any company representative who is to investigate a complaint must be trained and prepared to assume the role of Incident Commander if any of the emergency conditions are met.

Once a complaint has been investigated, the company must report the results of the investigation to the outside source who alerted the company about the situation.

- 🟠 **NorthRiver**
- 🔵 **External Notification**
- ⚫ **External Agencies**

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.

Procedure:

WITNESS:

The witness shall, upon becoming aware of an incident:

- Control or contain the incident;
- **Freeze the scene and preserve the evidence**, if required by the regulations;
- If it is an emergency, activate the Emergency Response Plan;
- Report the incident to Gas Control and their People Leader;
- Provide to Gas Control, the following information:
    - Name and phone number of witnesses and persons responsible for incident;
    - Location, time, and description of incident;
    - Actions taken to control and contain the incident;
- Enter the incident into the Incident Database.

GAS CONTROL:

Gas Control shall document the incident, and contact the Area On-Call Supervisor.

AREA ON-CALL SUPERVISOR:

The Area On-Call Supervisor shall:

- Determine if it is an emergency and take command as per the Emergency Response Plan;
- Determine if regulatory reporting is required (A Subject Matter Expert may be consulted in instances where the On-Call Supervisor is unsure of the reporting requirements); contact the appropriate EHS on call using the EHS Call-Down list;
- Ensure that any required regulatory notification is complete;
- This may be delegated to the appropriate Subject Matter Expert;
- Complete and distribute the Email Summary Template as per the distribution list;
- Verbally notify the Area Leader, Area Director, or Project Lead and Chief Operations Officer (see below).

SUBJECT MATTER EXPERTS (SME):

- Provide advice and expertise on Regulatory Reporting Requirements;
- Provide Regulatory Notification, if requested (EHS Call-Down List).

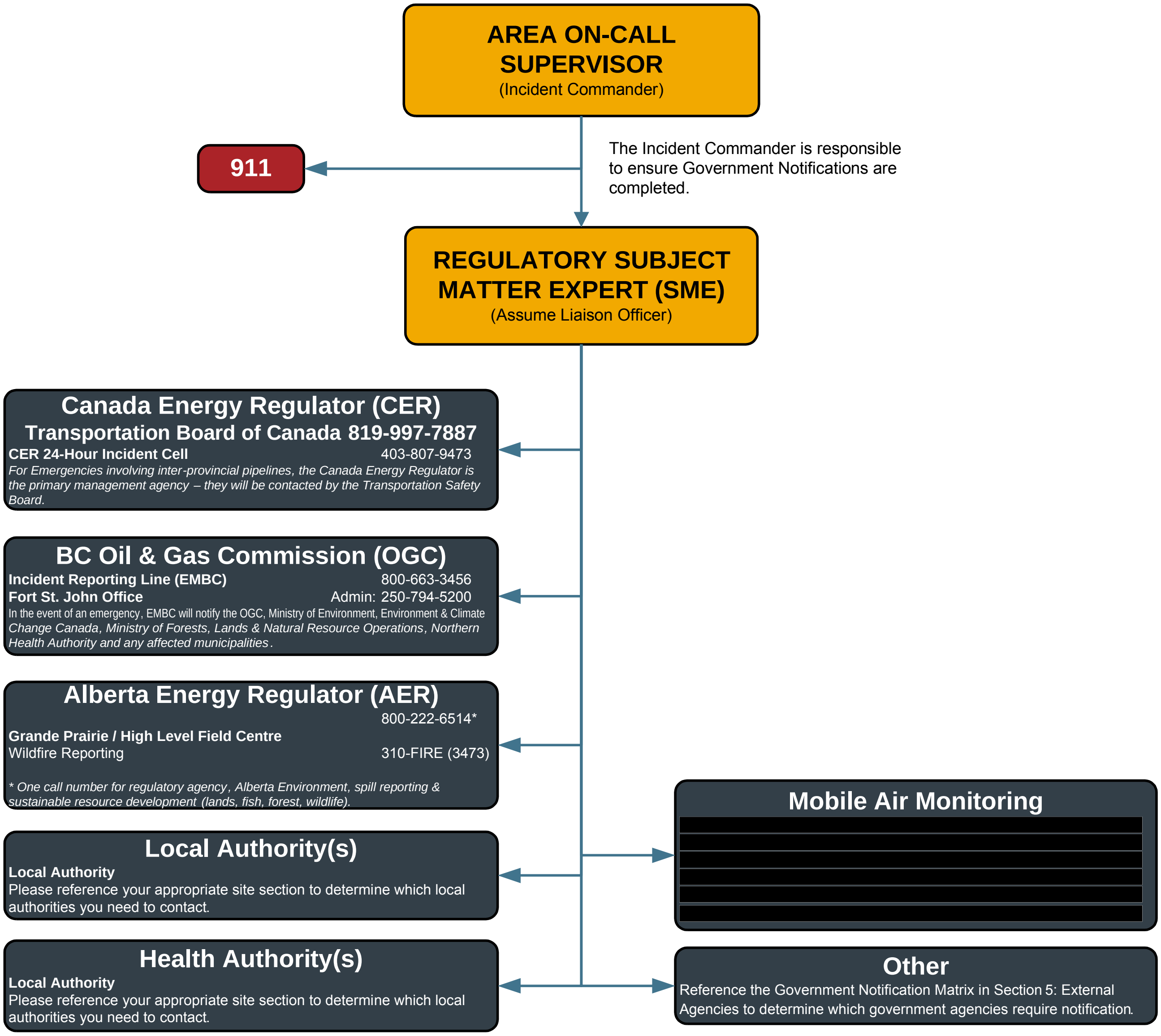
CHIEF OPERATIONS OFFICER:

Below are events where the Chief Operations Officer is expected to be informed immediately. **His cell phone number is** [redacted]

- Operational issues where we have an unplanned plant shut down and we have negatively impacted flows as a result;
- Safety incidents that involve medical aid treatment and above – Operations and Projects – Core employees and Contractors;
- Vehicle incidents where we have damaged a vehicle, equipment, and/or injury;
- Pipeline ruptures, through body leaks;
- Major landowner or community complaints;
- Unplanned events that require regulatory notification.

External Emergency Notification Flowchart

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



AREA ON-CALL SUPERVISOR
(Incident Commander)

911

The Incident Commander is responsible to ensure Government Notifications are completed.

REGULATORY SUBJECT MATTER EXPERT (SME)
(Assume Liaison Officer)

Canada Energy Regulator (CER)
Transportation Board of Canada 819-997-7887
CER 24-Hour Incident Cell 403-807-9473
For Emergencies involving inter-provincial pipelines, the Canada Energy Regulator is the primary management agency – they will be contacted by the Transportation Safety Board.

BC Oil & Gas Commission (OGC)
Incident Reporting Line (EMBC) 800-663-3456
Fort St. John Office Admin: 250-794-5200
In the event of an emergency, EMBC will notify the OGC, Ministry of Environment, Environment & Climate *Change Canada, Ministry of Forests, Lands & Natural Resource Operations, Northern Health Authority and any affected municipalities.*

Alberta Energy Regulator (AER)
800-222-6514*
Grande Prairie / High Level Field Centre
Wildfire Reporting 310-FIRE (3473)

** One call number for regulatory agency, Alberta Environment, spill reporting & sustainable resource development (lands, fish, forest, wildlife).*

Local Authority(s)
Local Authority
Please reference your appropriate site section to determine which local authorities you need to contact.

Health Authority(s)
Local Authority
Please reference your appropriate site section to determine which local authorities you need to contact.

Mobile Air Monitoring
[redacted]

Other
Reference the Government Notification Matrix in Section 5: External Agencies to determine which government agencies require notification.

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

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

- ● **NorthRiver**
- ● **External Notification**
- ● **External Agencies**

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.

Procedure:

Immediately (as soon as possible) notify **WorksafeBC** of the occurrence of any incident that:

- Resulted in serious injury to or the death of a worker;
- Involved in a major structural failure or collapse of a building, bridge, tower, crane, hoist, temporary construction support system or excavation;
- Involved in the release of a hazardous substance;
- Involved a fire or explosion that had the potential for causing serious injury to a worker, or was an incident required by the regulation to be reported.

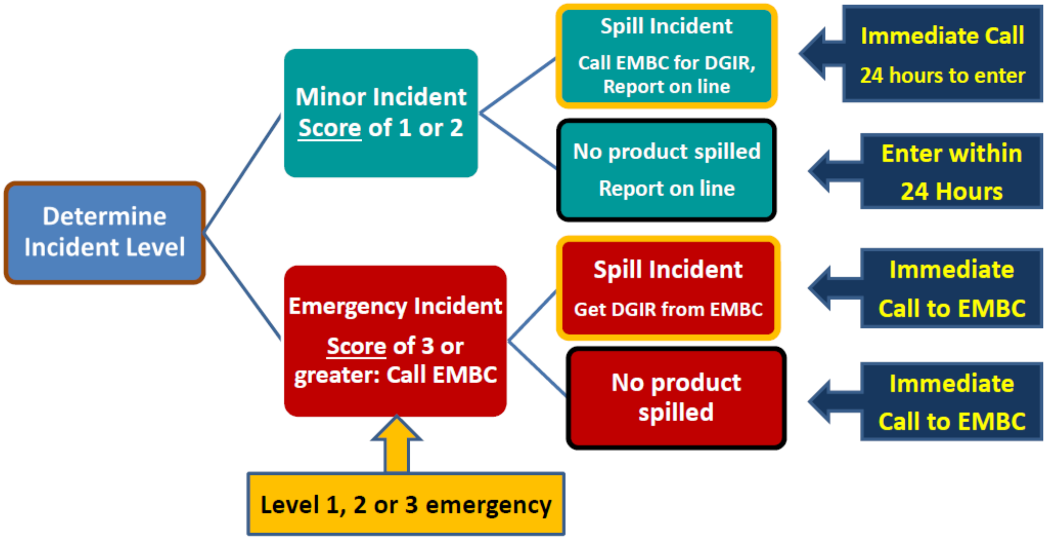
Within 24 hours notify **BC Ministry of Environment (MOE)**:

- Spills, leaks, unplanned or uncontrolled emissions, or emergency flaring from processing plants;
- Events impacting wildlife;
- Environmental Permit or license deviations;
- All spills at or exceeding the thresholds noted in the Spill Reporting Regulation must have a Dangerous Goods Incident Report created. **Emergency Management BC** manages this process;
- For spills, a DGIR must be attached to the on-line report;
- Failure to report a spill or other incident is a serious offence.

Within 24 hours notify the **BC Oil and Gas Commission (OGC)**:

- Any release of a substance in amounts exceeding the thresholds defined in the Spill Reporting Regulation;
- Any release of a substance into a lake, stream, river or ocean in any volume;
- Any release of sour product where measurement of 10 ppm or greater is found, 1 meter or more from the source;
- Any failure of an emergency or safety related system;
- Damage to equipment, with or without release;
- Vandalism or security incident causing damage or interfering with a process control;
- Well incidents including seismic, loss of circulation, pit gains;
- All major incidents (Emergencies) are reported to **Emergency Management BC**;
- The Commission’s duty emergency officer will follow up with the permit holder to obtain more information;
- Minor incidents are reported by the permit holder directly into the KERMIT system;
- All incidents must have a UTM location.

Incident Reporting: Systems and Processes


Determine Incident Level
Minor Incident Score of 1 or 2
Emergency Incident Score of 3 or greater: Call EMBC
Level 1, 2 or 3 emergency
Spill Incident Call EMBC for DGIR, Report on line
No product spilled Report on line
Spill Incident Get DGIR from EMBC
No product spilled
Immediate Call 24 hours to enter
Enter within 24 Hours
Immediate Call to EMBC
Immediate Call to EMBC

Step 4 – Incident Briefing

Incident Name:

Date/Time Initiated:

Prepared By: ICS Position:

Level of Emergency Alert / Minor Level 1 Level 2 Level 3

Map Sketch:

Note: Maps can be drawn or attached here.

Situation Summary: (Write description or attach A1)

Safety Briefing:

Step 4 – Incident Briefing

Current and Planned Objectives:

Priorities: (1) Life Safety (2) Incident Stabilization (3) Environment & Property

1. Ensure Safety of Citizens and Response Personnel:

- ☐ 1a. Identify hazard(s) of released product.
- ☐ 1b. Establish site control (hot zone, warm zone, cold zone, & security).
- ☐ 1c. Establish an Emergency Response Zone and Initiate Public Safety Actions.
- ☐ 1d. Consider evacuations if needed.
- ☐ 1e. Establish aircraft restrictions.
- ☐ 1f. Monitor air in impacted areas
- ☐ 1g. Develop site safety plan for personnel and ensure safety briefings are conducted.

2. Control the Source of the Release:

- ☐ 2a. Complete emergency shutdown.
- ☐ 2b. Conduct firefighting.
- ☐ 2c. Initiate temporary repairs.

3. Manage a Coordinated Response Effort:

- ☐ 3a. Complete or confirm notifications.
- ☐ 3b. Establish a unified command organization and facilities (command post, etc.).
- ☐ 3c. Ensure mobilization and tracking of resources and account for personnel and equipment.
- ☐ 3d. Complete documentation.

4. Minimize Economic Impacts:

- ☐ 4a. Consider tourism and local economic impacts.
- ☐ 4b. Protect public and private assets, as resources permit.
- ☐ 4c. Establish damage claims process.

5. Keep Stakeholders and Public Informed of Response Activities:

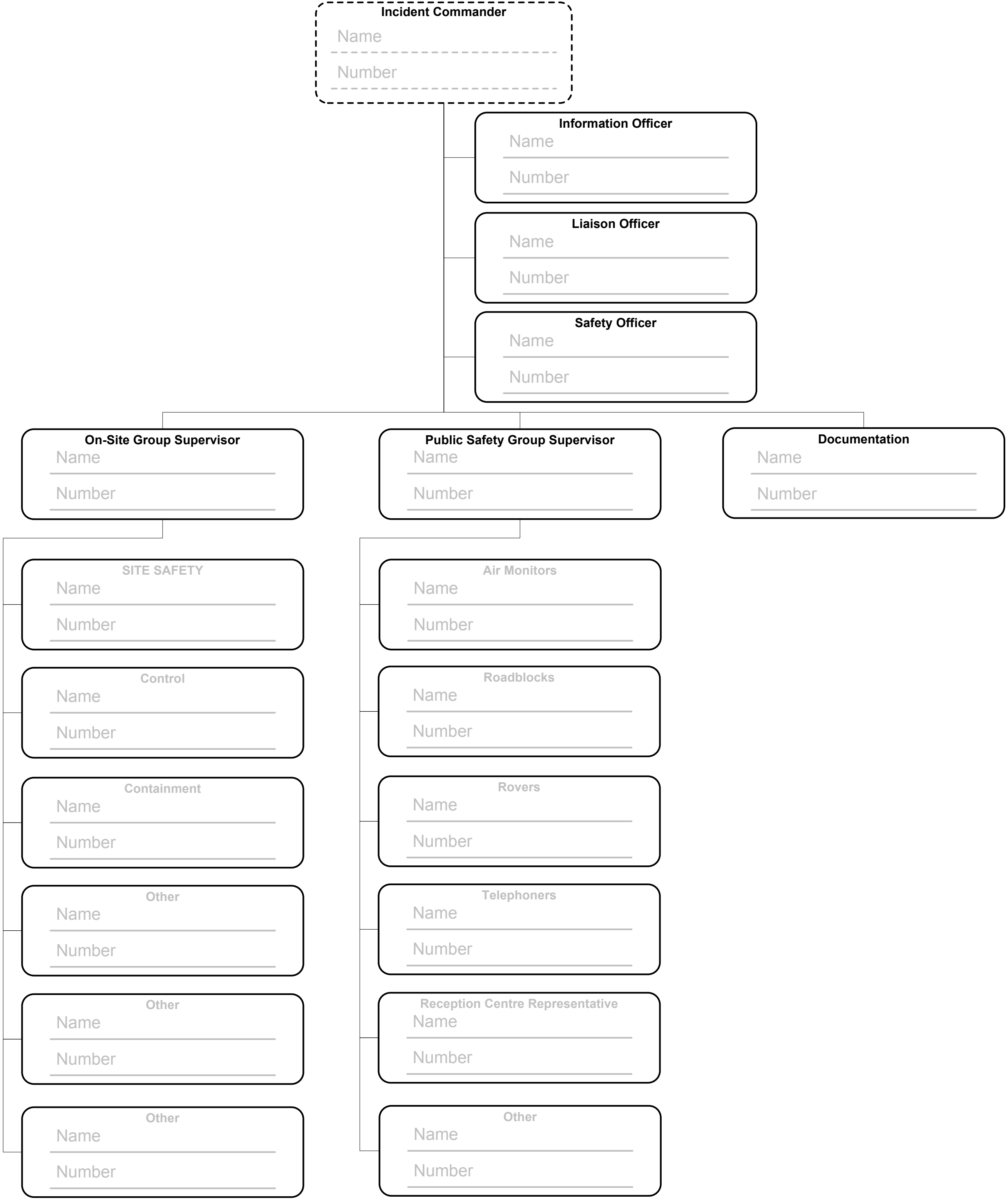
- ☐ 5a. Provide forum to obtain stakeholder input and concerns.
- ☐ 5b. Provide stakeholders with details of response actions.
- ☐ 5c. Identify stakeholder concerns and issues, and address as practical.
- ☐ 5d. Provide timely safety announcements.
- ☐ 5e. Conduct regular news briefings.
- ☐ 5f. Conduct public meetings, as appropriate.

Current and Planned Actions, Strategies and Tactics:

Time:	Actions:
HHMM	
HHMM	
HHMM	
HHMM	
HHMM	
HHMM	
HHMM	
HHMM	
HHMM	

Current Organizational Structure: (draw in current response structure)*

**** This is a condensed Organizational Chart to account for all currently responding personnel during the Initial Response.***



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

Step 4 – Incident Briefing

Resources Summary:

Resource(s)	Time Called	ETA	On-Site	Notes (Location/Assignment/Status)
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	

External Notifications: (Government)

Agency	Time Called	Notes

Step 4 – Incident Briefing

Site Safety and Hazard Control Analysis

Site 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? ☐ Yes ☐ No ☐ Don't Know	Injuries: Fatalities: Unaccounted: Trapped:
4. Are observers involved or rescue attempts planned? Observers: ☐ Yes ☐ No Rescuers: ☐ Yes ☐ No	5. Are Decon areas setup? ☐ Yes ☐ No If so, where?

Hazard 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? ☐ Yes ☐ No
3. Wind direction across incident: ☐ Towards your position Wind Speed: ☐ Away from your position	4. Is a safe approach possible? ☐ Yes ☐ No
5. Odours or smells? ☐ Yes ☐ No	6. Vapours visible? ☐ Yes ☐ No
7. Holes, ditches, fast water, cliffs, etc. nearby? ☐ Yes ☐ No	8. Fire, sparks, sources of ignition nearby? ☐ Yes ☐ No
9. Is local traffic a potential problem? ☐ Yes ☐ No	10. Product placards, colour codes visible? ☐ Yes ☐ No
11. Other Hazards? ☐ Yes ☐ No	12. As you approach the scene from the upwind side, do you note a change in the status of any of the above? ☐ Yes ☐ No

13. Remarks:

Hazard Mitigation: have you determined the necessity for any of the following?

1. Entry Objectives:

2. Warning sign(s), barriers, colour codes in place? ☐ Yes ☐ No

3. Hazardous material being monitored? ☐ Yes ☐ No
   3a. Sampling equipment:
   3b. Sampling location(s):
   3c. Sampling frequency:
   3d. Peak reading:
   3e. Personal exposure monitoring:

4. Protective gear / level:	4a. Gloves:
4b. Respirators	4c. Clothing:
4d. Boots:	4e. Chemical cartridge change frequency:

5. Decon
   5a. Instructions:
   5b. Decon equipment and materials:

6. Emergency escape route established? ☐ Yes ☐ No
   Route?

7. Field responders briefed on hazards? ☐ Yes ☐ No

8. Remarks:

Protective Zones: record initial control perimeters (see Figure 1)

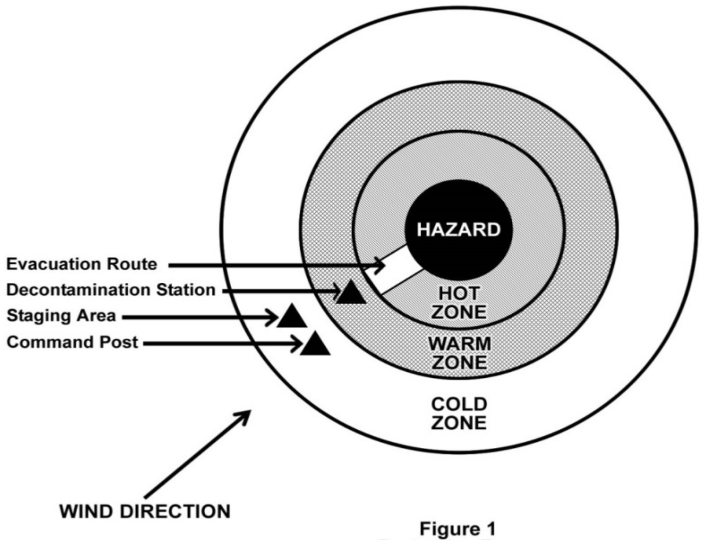


Figure 1
Protective Zones

1. Is there a Hot Zone established?
   ☐ Yes
   ☐ No
   If so, Where?

2. Is there a Warm Zone established?
   ☐ Yes
   ☐ No
   If so, Where?

3. Is there a Cold Zone established?
   ☐ Yes
   ☐ No
   If so, Where?

4. Remarks: (Include any information on evacuation route, etc.)

5. Include any site sketches or photos of the protective zones (if available):

Public Protection Measures Flowchart

Is there potential for the release to impact beyond the lease, facility or pipeline right of way?

No

Continue with control / containment measures

Yes

Do any of the following apply:

- ☐ The release is expected to pass over quickly
- ☐ The public would be at a higher risk if evacuated
- ☐ There is not enough time or warning to safely evacuate the public
- ☐ The source and nature of the release has not been identified
- ☐ The source and nature of the release has not been identified

No

Evacuation

- ☐ Begin evacuating the public

Refer to Evacuation Phone Message in either Section 2: Roles and Responsibilities or Section 6: Forms

Yes

Shelter

- ☐ Begin sheltering the public

Refer to Shelter-in-Place Phone Message in either Section 2: Roles and Responsibilities or Section 6: Forms

Ignition must take place when one of the following conditions have been met:

- ☐ Although required, evacuation of the response zones has not taken place.
- ☐ H_2S concentrations in excess of 10 ppm over a 3-minute average in unevacuated parts of the EPZ.
- ☐ H_2S concentrations exceed 1 ppm per one hour average in urban density developments.
- ☐ Monitoring is not taking place due to weather or other unforeseen circumstances.
- ☐ The release cannot be brought under control in the short term (ignition decision will be made by Incident Commander. Notify Regulatory Agency intention to ignite.

AND

- ☐ Personnel working at the site can be cleared to a safe distance.

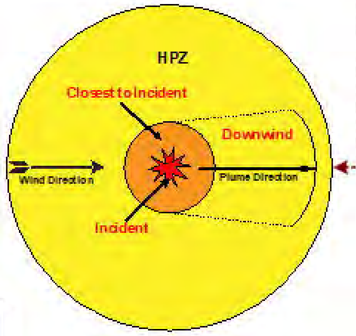
Evacuation begins closest to incident and expands outward downwind of the release so that members of the public are not exposed to the hazard.

Closest to Incident
If safe to do so, the licensee must evacuate public closest to the incident.

Downwind
Evacuation / Shelter-In-Place all public downwind of the incident

HPZ
Hazard Planning Zone
Giving priority to those who have special needs and / or have requested early notification

Modified HPZ
Hazard Planning Zone
Any public that are outside the calculated HPZ that may be effected.



Is there an urban centre within the HPZ?

Yes

Notify the Director of Emergency Management and the Health Authority.

Revised July 2018

Note: Evacuation outside the HPZ is based on air monitoring readings and not the level of emergency.

Has ignition criteria been met?

No

- ☐ Continue air monitoring for H_2S
- ☐ Continue evacuation / shelter procedures

Yes

Refer to the H_2S / HVP Ignition Procedure behind the Public Protection Measures tab in Section 4: Emergency Response Procedures

- ☐ Continue air monitoring for SO_2
- ☐ Continue evacuation / shelter procedures

Is there potential for the release to impact the public outside of the HPZ?

No

- ☐ Continue air monitoring for H_2S or SO_2
- ☐ Continue evacuation / shelter procedures in the HPZ

Yes

- ☐ Work with local authority to determine the need for evacuation / shelter outside of the HPZ
- ☐ Continue air monitoring for H_2S or SO_2

Notification and Evacuation Requirements Outside of the HPZ

For a sour gas release, the licensee must continuously assess and act on the need to expand the evacuation area based on the monitored levels of H_2S and SO_2. In the absence of monitored readings, responders should advise the residents to Shelter-in-Place.

H_2S Requirements

1-10 ppm	Individuals who requested notification so that they can voluntarily evacuate before any exposure to H_2S or SO_2 must be notified.
10 ppm and above (1-hour average)	Local conditions must be assessed and all persons must be advised to evacuate and/or shelter.

Note: H_2S Evacuation Level – when downwind monitoring at the nearest unevacuated residence, outside the Hazard Planning Zone, indicates a level of 10 ppm, evacuation procedures will be Initiated if safe to do so.

SO_2 Requirements

1-5 ppm	Individuals who requested notification so that they can voluntarily evacuate before any exposure to H_2S or SO_2 must be notified.
5 ppm and above	Local conditions must be assessed and all persons must be advised to evacuate and/or shelter.

Section 2: Roles and Responsibilities

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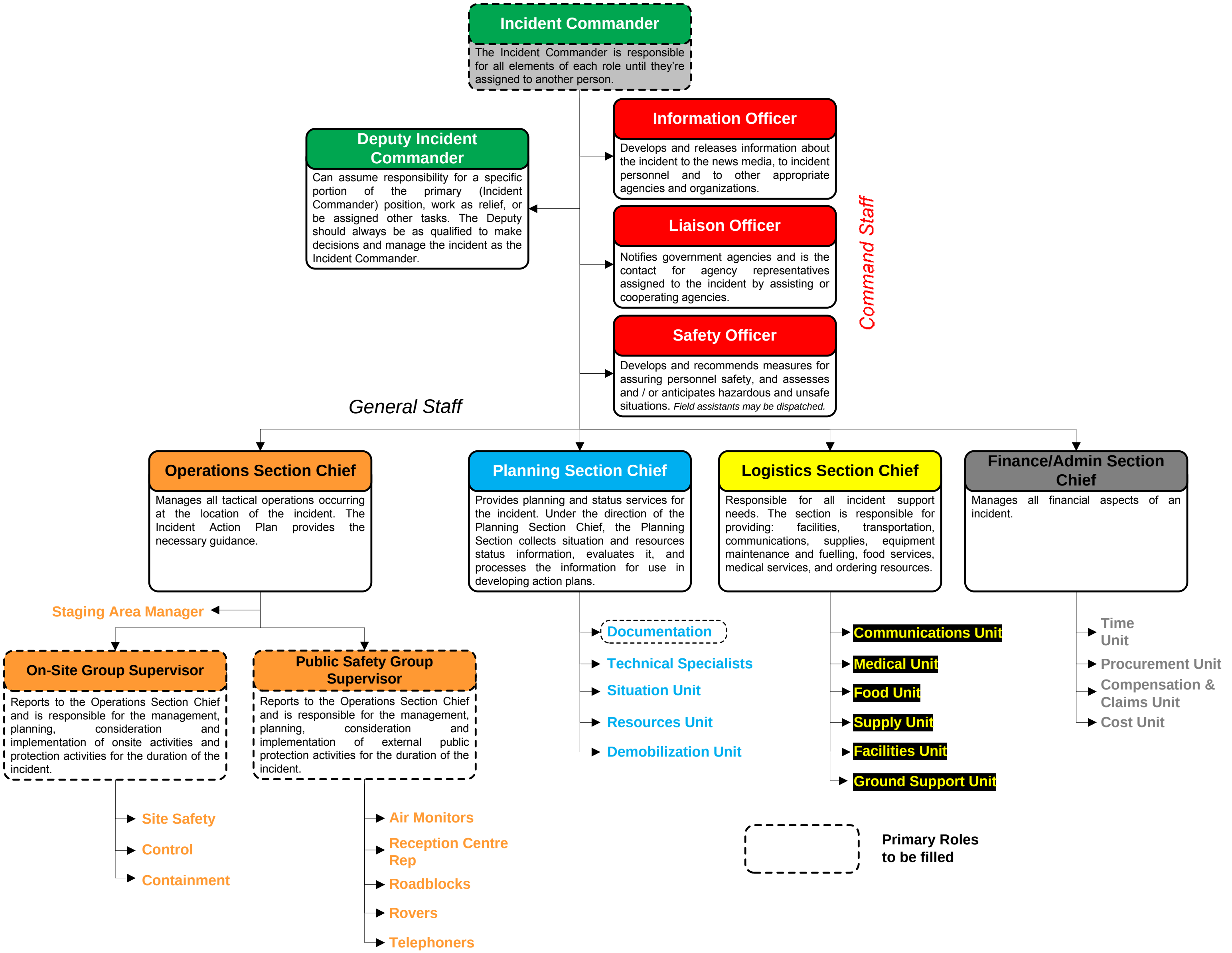
Field Response Team



Incident Commander

The Incident Commander is responsible for all elements of each role until they're assigned to another person.

Deputy Incident Commander

Can assume responsibility for a specific portion of the primary (Incident Commander) position, work as relief, or be assigned other tasks. The Deputy should always be as qualified to make decisions and manage the incident as the Incident Commander.

Information Officer

Develops and releases information about the incident to the news media, to incident personnel and to other appropriate agencies and organizations.

Liaison Officer

Notifies government agencies and is the contact for agency representatives assigned to the incident by assisting or cooperating agencies.

Safety Officer

Develops and recommends measures for assuring personnel safety, and assesses and / or anticipates hazardous and unsafe situations. *Field assistants may be dispatched.*

Command Staff

General Staff

Operations Section Chief

Manages all tactical operations occurring at the location of the incident. The Incident Action Plan provides the necessary guidance.

Staging Area Manager

On-Site Group Supervisor

Reports to the Operations Section Chief and is responsible for the management, planning, consideration and implementation of onsite activities and protection activities for the duration of the incident.

- Site Safety
- Control
- Containment

Public Safety Group Supervisor

Reports to the Operations Section Chief and is responsible for the management, planning, consideration and implementation of external public protection activities for the duration of the incident.

- Air Monitors
- Reception Centre Rep
- Roadblocks
- Rovers
- Telephoners

Planning Section Chief

Provides planning and status services for the incident. Under the direction of the Planning Section Chief, the Planning Section collects situation and resources status information, evaluates it, and processes the information for use in developing action plans.

- Documentation
- Technical Specialists
- Situation Unit
- Resources Unit
- Demobilization Unit

Logistics Section Chief

Responsible for all incident support needs. The section is responsible for providing: facilities, transportation, communications, supplies, equipment maintenance and fuelling, food services, medical services, and ordering resources.

- Communications Unit
- Medical Unit
- Food Unit
- Supply Unit
- Facilities Unit
- Ground Support Unit

Finance/Admin Section Chief

Manages all financial aspects of an incident.

- Time Unit
- Procurement Unit
- Compensation & Claims Unit
- Cost Unit

Primary Roles to be filled

Key Response Personnel

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

Command Staff	**Incident Commander**	Operations Supervisor or Coordinator
On-Site	**On-Site Group Supervisor**	Senior or Lead Operators
Public Safety	**Public Safety Group Supervisor**	Operations Supervisor or Coordinator or other Senior Operations personnel
	Air Monitors / Roadblock / Rovers	Operations personnel (operators, safety, planners, maintenance, electric, etc.)
	Telephoners	Land personnel
	Reception Centre Representative	Senior company representative that works in the area
Emergency Support Team (EST)	**EOC Director**	Area Manager
	Communications / Media	CEO

Please refer to the **Response Teams Phone List (Yellow tab)** for a list of senior personnel and their contact information.

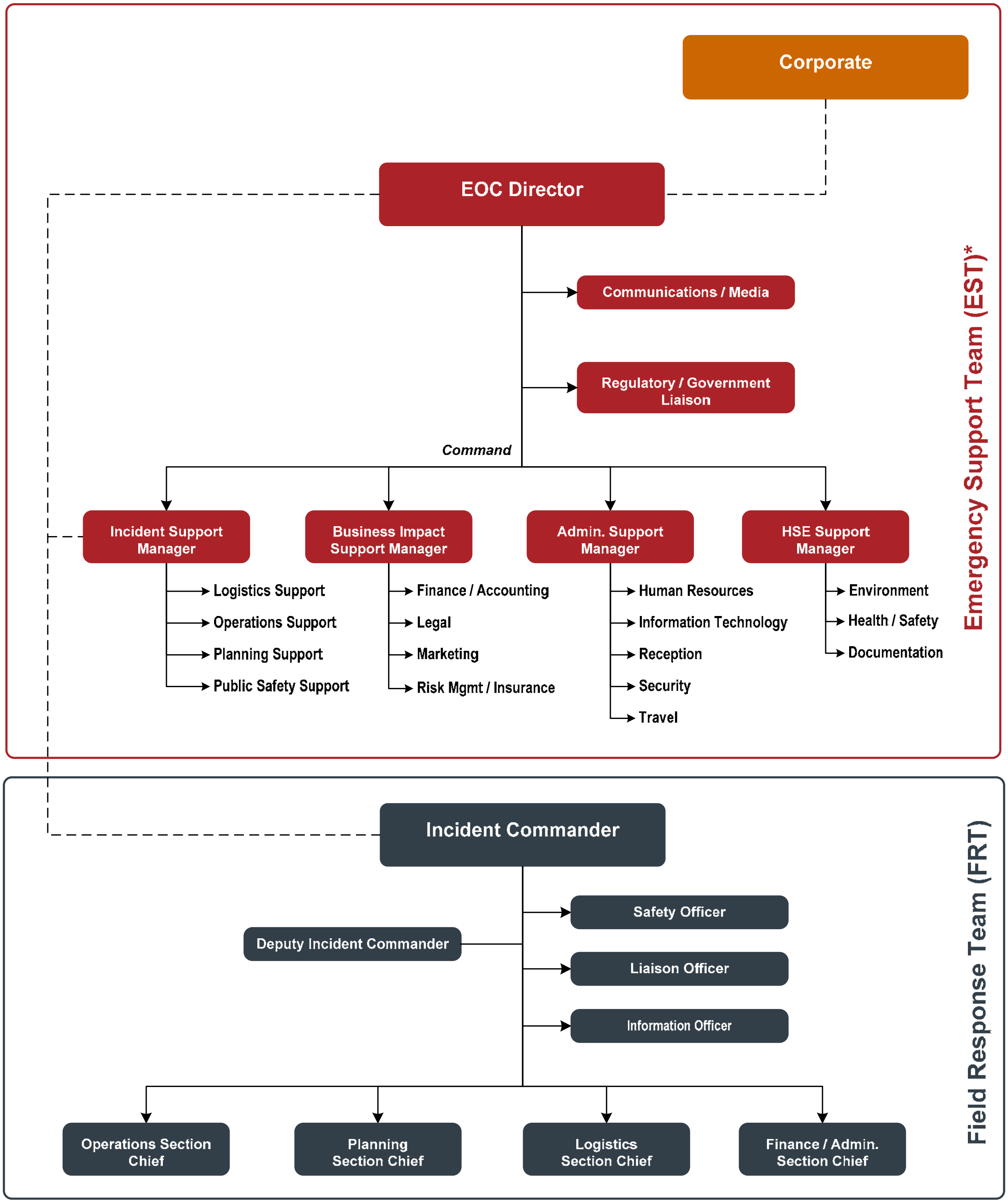
General Safety Equipment and Resource Lists

Operator, Truck & Other Safety Equipment

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

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

Response Team Structure



Legend

- - - - - - - Communication

———— Command

* Detailed role descriptions for the EST can be found in the Emergency Support Team Plan located at the Charlie Lake Office EOC.

Quick Reference Guide – Emergency Support Team (EST)

(Located at the Emergency Operations Centre)

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

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

Command Staff Roles

Incident Commander

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 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

- ☐ If necessary, investigate and confirm the emergency. If the incident involves a release of sour product, the investigation should be conducted in teams of two. Take appropriate safety precautions (PPE, SCBA, etc.). Ensure personal safety at all times.
- ☐ Determine the Level of Emergency using the OGC Incident Classification Matrix for BC or AER's Assessment Matrix for Classifying Incidents for all other provinces (e.g. Alert/Minor, Level 1, 2, 3) found in **Section 1: Initial Response** or using the Emergency Assessment SmartPhone App. (Search H_2Safety or Emergency Assessment in the App Store).

Emergency
Alert
Level 1
Level 2
Level 3

Step 2: Internal Notification

- ☐ Follow the Internal Emergency Notification Flowchart outlined in Section 1: Initial Response to contact required field resources. Refer to the **Section 2: Roles and Responsibilities / Response Team Phone List**. Relay the information from the A1 Initial Notification Form. Mobilize internal resources to the site, to the Incident Command Post (ICP) or place them on standby as required.
- ☐ Contact required company resources and communicate the level of emergency. Refer to **Section 2: Roles and Responsibilities / Response Team Phone List.**

Step 3: External Notification

- ☐ Follow the External Emergency Notification Flowchart in **Section 1: Initial Response** for communication structure and the Provincial Notification Matrix in **Section 5: External Agencies** to determine which external agencies need to be notified. Reference **Section 5: External Agencies** and the **Area Specific Information** for the location of the incident.

Step 4: Incident Briefing

- ☐ The following positions are always filled regardless of the size of the incident: **Incident Commander**, **On-Site Group Supervisor** and **Documentation**.
- ☐ Assess the situation, identify the incident source, and consider how to stop the source. Carry out a site assessment that includes the following: identify hazardous materials, evaluate risk to workers and the public, determine the potential for the incident to escalate, identify safety concerns, determine which other company's facilities are involved.
- ☐ Detail and prioritize the objectives for the next operational period taking into consideration the **priorities of (1) Life Safety, (2) Incident Stabilization, (3) Property & Environment** using the ICS 201 Incident Briefing Form**.** Form ICS 201
- ☐ Assign other positions as required to meet the identified objectives. Review and complete the ICS 207 Incident Organization Chart in **Section 6: Forms**. Depending on the scale of emergency, all positions may not be assigned. The **Incident Commander** assumes responsibility for all unassigned roles until personnel have been assigned to them. Form ICS 207
- ☐ Conduct a role review with each of the positions above to ensure they clearly understand their roles and responsibilities.
- ☐ Develop detailed plans of action (strategies) to achieve the objectives and determine what tactics and resources are required to implement the strategies (oil spill services, safety services, etc.).
- ☐ Activate the Incident Command Post (ICP). Refer to the **Appendices** for Incident Command Post activation guidelines.
- ☐ Ensure the **Planning Section** posts and updates the status board with incident details.

Step 5: Public Safety

- ☐ Determine the size of the Emergency Planning and Response Zones around the incident. Refer to the EPZ calculation tables and map in **Area Specific Information**.
- ☐ Use the Public Protection Measures Flowchart located in **Section 1: Initial Response** to assist with determining if evacuation / shelter / ignition are required.
- ☐ Ensure the affected public are contacted and advised to shelter or evacuate as required.
- ☐ Establish **Air Monitoring, Reception Centre Representatives, Roadblocks**, **Rovers**, and **Telephoners** as required.

Ongoing Response - **Refer to the Five Step Ongoing Response Guide in Section 2: Ongoing Response**

- ☐ Establish a method to track responders and resources to ensure they are accounted for at all times.
- ☐ Monitor implementation of IAP and revise as the situation dictates. Prepare for next operational period.
- ☐ Support the **Operations Section Chief** in the preparation of an incident control and containment action plan.
- ☐ Ensure each section chief has adequate staff, is not violating span of control and clearly understands the roles and responsibilities.
- ☐ Conduct frequent Command Staff and General Staff meetings and regularly update the Emergency Support Team.
- ☐ If transfer of command occurs, an incident status briefing must take place. Provide all documentation and review situation status, objectives and priorities, current organization and resources, facilities, communications plan, concerns and introductions to staff.
- ☐ 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.
- ☐ The **Demobilization Unit** will develop and implement objectives/strategies for demobilization.

Deputy Incident Commander

The **Deputy Incident Commander** may assume responsibility for a specific portion of the primary position, work as relief, or be assigned other tasks. The **Deputy** should always be as qualified to make decisions and manage the incident as the **Incident Commander**.

- ☐ If no scribe has been assigned to the **Incident Commander**, support the **Incident Commander** by documenting details of the emergency, focusing on 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**.

Important

Prior to beginning any activities, each person in a role must:

- ☐ Obtain a completed ICS 201 Incident Briefing and ICS 207 Incident Organization Chart from the **Incident Commander**.

Throughout the duration of the incident, each person in a role must:

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

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

- ☐ Assist with post-incident activities.

All forms referenced can be found in Section 6: Forms

Information Officer

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 organizations.

- ☐ Receive incident briefing from the **Incident Commander** before contacting external agencies.
- ☐ Prepare regular status updates that will be provided to internal company personnel to keep them apprised of the situation.
- ☐ Identify and document any media involvement that has already taken place
- ☐ 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.
- ☐ Assist head office with the preparation of a preliminary media statement if required using the Preliminary Media Statement form. Form C1
- ☐ Document all communications with the media using the Media Contact Log. Form C2
- ☐ Develop a detailed media strategy for the incident.
- ☐ Designate and prepare media briefing rooms away from the Incident Command Post.
- ☐ Organize tours and photo opportunities if required.
- ☐ Maintain communication with the **Incident Commander**.
- ☐ Media releases must be coordinated with applicable regulatory agency.
- ☐ If necessary, coordinate with and use broadcast media to notify residents in the hazard area.
- ☐ 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 cell phone usage for photography, social media, speaking to the media, etc.).

Liaison Officer

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.

- ☐ Complete Regulatory First Call Communication Form. Form A3
- ☐ 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:
  - ☐ Government regulator
  - ☐ Local authorities (counties, cities, towns, MDs, RDs, First Nations Reserves, etc.)
  - ☐ Health authority
  - ☐ Environment
  - ☐ Provincial emergency management organization
  - ☐ Other agencies
- ☐ Keep track of all government correspondence using the Government Agency Contact Log. Form C3
- ☐ 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.
- ☐ Conduct appropriate periodic briefings to keep agencies informed of planning actions.
- ☐ Coordinate with any government agency representatives attending the ICP or REOC.
- ☐ Coordinate with mutual aid groups.

Safety Officer

The **Safety Officer** develops and recommends measures for assuring personnel safety, and assesses and / or anticipates hazardous and unsafe situations.

- ☐ Ensure the site is evacuated if unsafe.
- ☐ Initiate rescue plans if safe to do so.
- ☐ Review the Incident Action Plan to identify and correct any potential occupational and health hazards.
- ☐ Ensure work / rest guidelines are followed.
- ☐ Continuously monitor workers for exposure to ensure they are wearing the required PPE.
- ☐ Take appropriate action to mitigate or eliminate unsafe conditions, operations, or hazards.
- ☐ Immediately stop any unsafe practices.
- ☐ 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.
- ☐ Document both safe and unsafe acts, corrective actions taken on the scene, accidents or injuries, and ways to improve safety on future incidents.
- ☐ Investigate accidents that have occurred within the incident area.
- ☐ Identify "Hot Zone" and declare when responders may enter it.
- ☐ Ensure that responders inside the "Hot Zone" are accounted for and initiate search if required.
- ☐ Prepare a site-specific health and safety plan.

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Revised October 2018

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General Staff Roles – Operations Section

Operations Section Chief	On-Site Group Supervisor	Staging Area Manager	Site safety	Control	Containment
The **Operations Section Chief** is responsible for managing all tactical operations occurring at the location of the incident. The Incident Action Plan provides the necessary guidance. The need to expand the **Operations Section** is generally dictated by the number of tactical resources involved and is influenced by span of control considerations.	**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.	**Control** is responsible for implementing measures designed to bring the incident under control or stop the incident.	**Containment** is responsible for implementing measures designed to reduce the impact of the incident on and prevent the spread of the incident to the surrounding areas.
☐ Identify and confirm communication links. ☐ Ensure the On-Site Command Post (OSCP) is established. ☐ Manage the following positions, as required: **On-Site Group Supervisor**, **Public Safety Group Supervisor.** ☐ In conjunction with the **Incident Commander**, the **Planning Section Chief**, and the **Public Safety Group Supervisor**, develop and implement an Incident Action Plan (IAP) ☐ Ensure responder safety at all times. ☐ Oversee control / containment procedures; ensure the hazard is isolated. ☐ Determine the current and potential environmental impact of product released, response activities, or waste disposal. ☐ Ensure that all environmental laws and regulations are complied with during emergency response operations. ☐ Provide technical advice to **Incident Commander** to determine public protection measures. ☐ Assess the requirements for on-site safety supervision, personnel, equipment, and other contract services. Coordinate with **Logistics** to obtain equipment and resources. ☐ Assist the **On-Site Group Supervisor** in determining whether ignition is appropriate. If at all possible, input is to be obtained from the **Incident Commander**, the **EOC Director** and the applicable government regulator. ☐ Maintain continuous communications with the **Incident Commander**.	☐ Ensure all personnel are accounted for. Release nonessential personnel from the site ☐ Oversee and maintain control of all on-site personnel. ☐ Establish On-Site Command Post (OSCP). ☐ Obtain incident briefing and environmental impact information. ☐ Coordinate activities of **Staging Area Manager, Site Safety, Control** and **Containment.** ☐ Report air monitoring to **Incident Commander** (third party and regulatory). ☐ Call police, fire and ambulance as needed. ☐ Coordinate with ambulance / fire / RCMP / regulatory agencies / spill co-ops. ☐ Conduct meetings with on-site personnel to review action plans, communication and safety. ☐ Request additional resources needed to implement on-site response actions. ☐ Supervise the execution of the on-site response actions. ☐ The **On-Site Group Supervisor** has the authority to ignite the release if ignition criteria are met. If at all possible, the **On-Site Group Supervisor** must consult with higher authority individuals within the company (ideally the **Operations Section Chief, Incident Commander, EOC Director**, etc.) and the applicable government regulator before making the decision to ignite a release. Refer to **Section 4: Emergency Response Procedures**.	☐ 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: ☐ Adequate sized site that is stable and level with suitable access roads ☐ No entry problems such as narrow approach ways, gates, power lines, buried pipelines, etc. ☐ Approval has been received from landowner ☐ Reception of communication equipment is adequate ☐ Erect staging area information and directional signs to the staging area, if required. ☐ Flag the perimeter of the staging area. ☐ Obtain an office trailer and emergency lighting, if required. ☐ 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**. ☐ Respond to **Operations Section Chief** or **Incident Commander** requests for resources. ☐ Confirm all workers have required training before they are dispatched to the incident. ☐ Maintain and provide status to the **Planning Section** of all resources in Staging Area. ☐ Demobilize or move Staging Area as required.	☐ Assess hazards & potential risks e.g. fire/explosion, toxicity, oxygen deficiency, ignition sources, access/egress. ☐ Ensure responder safety at all times. ☐ Ensure that on-site personnel are taking appropriate safety actions: PPE, SCBA / SABA, Safe Work Procedures, proper grounding / bonding procedures, work in teams, etc. ☐ Ensure workers that show signs of stress, fatigue, and other symptoms are demobilized and sent for treatment if necessary. ☐ Maintain records of all injuries and on-site medical treatments. ☐ Conduct responder safety orientations. ☐ Monitor activities and conduct a head count on a regular basis. ☐ Continually evaluate risks and stop unsafe activities immediately. ☐ Recommend alternatives for activities that are considered to be unsafe.	☐ Assist with the development of control procedures. ☐ Identify immediate response tactics (i.e. offensive / defensive response tactics). Only when safety is assured, take immediate operational actions to bring the incident under control (i.e. shut down, isolate, de-pressure, etc.). ☐ Provide or seek technical / engineering advice around all control-related issues. ☐ Inform **Operations Section Chief** of any interactions with regulatory agencies or environmental personnel.	☐ Assist with the development of containment procedures. ☐ Identify immediate response tactics (i.e. offensive / defensive response tactics). Only when safety is assured, take actions to contain the incident so as to prevent the incident from spreading offsite and to reduce the impact on the public, sensitive terrain, watercourses, etc. ☐ Provide or seek technical / engineering advice around all containment-related issues. ☐ Secure the scene and restrict access to essential and authorized personnel only. ☐ Inform **Operations Section Chief** of any interactions with regulatory agencies or environmental personnel. ☐ Coordinate oil spill cooperative activities (booms, dams, etc.).
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)**

Important

Prior to beginning any activities, each person in a role must:

☐ Obtain a completed ICS 201 Incident Briefing and ICS 207 Incident Organization Chart from the **Incident Commander**.

Throughout the duration of the incident, each person in a role must:

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

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

☐ Assist with post-incident activities.

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General Staff Roles – Planning Section

Planning Section Chief

The **Planning Section Chief** is responsible for providing planning and status services for the incident. Under the direction of the **Planning Section Chief**, the Planning Section collects situation and resources status information, evaluates it, and processes the information for use in developing action plans. Dissemination of information can be in the form of the Incident Action Plan, formal briefings, or through map and status board displays.

- ☐ Identify and confirm communication links.
- ☐ Assign personnel to assume the following positions, as required: **Documentation**, **Technical**, **Situation**, **Resources**, and **Demobilization**.
- ☐ Assist with setup of the Incident Command Post.
- ☐ Review the details of the incident and support the **Incident Commander** with the development of a preliminary response strategy.
- ☐ Identify the need for technical specialists.
- ☐ Collect and analyze information on the current situation, prepare situation displays and situation summaries, and develop maps and projections.
- ☐ Establish special information collection activities as necessary, e.g., weather, environmental, toxics, etc.
- ☐ Provide technical support to the **Incident Commander** and work with **Incident Commander** to develop the Incident Action Plan (IAP).
- ☐ Review any changes to the Incident Action Plan (IAP) to ensure consistency.
- ☐ Assemble information on alternative strategies.
- ☐ Coordinate with **Logistics** to determine current available resources and resource availability for future plans of action.
- ☐ Establish reporting schedules.
- ☐ Conduct long-range and / or contingency planning.
- ☐ Develop plans for demobilization.
- ☐ Maintain continuous communications with the **Incident Commander.**

Form ICS 202 | Form ICS 214 | Form ICS 215 | Form ICS 215a | Form ICS 230

Documentation Unit

The **Documentation Unit** is responsible for the maintenance of accurate, up-to-date incident files. Duplication services will also be provided by the **Documentation Unit**.

- ☐ 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. FORM ICS 201
  - ☐ Be prepared to document the **Incident Commander's** status update meetings using whiteboards, PC or Action Logs. FORM ICS 214
- ☐ Ensure consistent documentation.
- ☐ Ensure timely dissemination of all documentation.
- ☐ Participate in planning meetings, capturing key information, decisions made, commitments and status.
- ☐ Collect documentation from response team members and maintain a consistent system for organizing the data.
  - ☐ 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.
- ☐ Establish duplication services.
- ☐ Incident files will be stored for legal, analytical, and historical purposes.
- ☐ Post and maintain all Emergency Status Boards and other laminated charts in the Incident Command Post.

Form ICS 201 | Form ICS 214 | Form ICS 231 | Form ICS 233

Technical Specialists Unit

Certain incidents or events may require the use of **Technical Specialists** who have specialized knowledge and expertise. **Technical Specialists** may function within the Planning Section, or be assigned wherever their services are required.

- ☐ Determine what technical support is available now and in the future.
- ☐ Work with **Logistics** to determine the key locations for the required technical support and appropriate time to acquire.
- ☐ Gather data (weather, etc.) and forecast changes considering incident potential and develop new or modified response strategies.
- ☐ As required, obtain plume dispersion modelling.

Situation Unit

The collection, processing, and organization of all incident information. The **Situation Unit** may prepare future projections of incident growth, maps, and intelligence information.

- ☐ 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.
- ☐ Prepare, post, or disseminate resources and situation status information as required, including special requests.
- ☐ Provide photographic services and maps if required.

Form ICS 201 | Form ICS 209 | Form ICS 214

Resources Unit

The **Resources Unit** is responsible for maintaining the status of all assigned resources at an incident.

- ☐ Monitor the status and location of all incident resources / personnel responding to the incident.
- ☐ Oversee the check-in of all resources.
- ☐ Maintenance of a master list of all resources, e.g., key supervisory personnel, primary and support resources, etc.
- ☐ May assist in preparing the written Incident Action Plan.
- ☐ Maintain and post the current status and location of all resources.

Form ICS 203 | Form ICS 204 | Form ICS 207 | Form ICS 211 | Form ICS 214

Demobilization Unit

The **Demobilization Unit** is responsible for developing the Incident Demobilization Plan.

- ☐ Prepare plan for the demobilization of all personnel and equipment upon resolution of the incident.
- ☐ Ensure resources in available status are still required. Identify surplus resources and probably release time.
- ☐ Debrief non-required resources and dismiss resources being demobilized.
- ☐ Coordinate demobilization with agency representatives.
- ☐ Develop incident check-out function for all units.
- ☐ Ensure the demobilization process is organized, safe and cos effective.

Form ICS 214 | Form ICS 221

Important

Prior to beginning any activities, each person in a role must:

- ☐ Obtain a completed ICS 201 Incident Briefing and ICS 207 Incident Organization Chart from the **Incident Commander**.

Throughout the duration of the incident, each person in a role must:

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

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

- ☐ Assist with post-incident activities.

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Revised October 2018

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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 **Communications Unit** 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 **Supply Unit** 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.
☐ Identify and confirm communication links. ☐ Assign personnel as required. ☐ List and obtain all immediate resources requested by the **Incident Commander** or **Operations Section Chief**. ☐ Identify anticipated and known incident service and support requirements. ☐ Maintain continuous communications with the **Incident Commander.** ☐ Develop plans to move required resources to site. ☐ Confirm spending authorities with the Finance / Admin Section. ☐ Mobilize resources. ☐ Move required resources to site. ☐ Coordinate spending with the **Finance / Admin Section Chief.**	☐ Establish the communications plan for the use of incident communications equipment and facilities. ☐ Install, test, distribute, and maintain all communications equipment. ☐ Advise on communications capabilities and limitations. ☐ Establish telephone, communication links, and public address systems. ☐ Establish clear and widespread communication throughout the incident.	☐ Arrange and provide response personnel with first aid and minor medical services. ☐ Develop Incident Medical Plan. ☐ Develop procedures for handling serious injuries of responder personnel. ☐ Provide medical aid to personnel. ☐ Assist the Finance / Administration Section with processing injury-related claims. *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.*	☐ 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. ☐ 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. ☐ 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. ☐ Obtain necessary equipment and supplies and establish cooking facilities. ☐ Order sufficient food and potable water from the **Supply Unit**. ☐ Maintain inventory of food and water. ☐ Maintain food services areas, ensuring that all appropriate health and safety measures and being followed. ☐ Supervise caterers, cooks, and other **Food Unit** personnel as appropriate.	☐ Order, receive, distribute and track all incident equipment and supplies. ☐ Ordered all off-incident resources including: tactical and support resources (including personnel), all expendable and non-expendable support supplies. ☐ Management of tool operations, including the storage, disbursement, and service of all tools and portable non-expendable equipment.	☐ Set-up, maintain, and demobilize incident support facilities with the exception of staging areas. ☐ 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. ☐ Prepare layout of facilities; inform appropriate unit leaders. ☐ Will provide security services to the incident as needed. ☐ Contact local law enforcement agencies as required. ☐ Investigate and document all complaints and suspicious occurrences. ☐ Ensure strict compliance with applicable safety regulations. ☐ Provide facility maintenance services, e.g., sanitation, lighting, etc. ☐ Demobilize base and camp facilities.	☐ Responsible for the maintenance, service and fuelling of all mobile equipment and vehicles, with the exception of aviation resources. ☐ Coordinates the transportation of all personnel, supplies, and equipment. ☐ Update the **Resources Unit** with the status (location and capability) of transportation vehicles. ☐ Develop the Incident Traffic Plan as required.

Important

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

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

☐ Assist with post-incident activities.

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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 **Time Unit** 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 **Procurement Unit**. The unit is also responsible for maintaining equipment time records. The **Procurement Unit** 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 **Cost Unit** 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.
☐ Identify and confirm communication links. ☐ Assign personnel to assume the following positions, as required: **Time Unit, Procurement Unit, Compensation & Claims Unit,** and **Cost Unit.** ☐ Review legal issues with the **Incident Commander** and **EOC Director**. ☐ Maintain continuous communications with the **Incident Commander**. ☐ Brief agency administrative personnel on all incident-related financial issues needing attention or follow-up. ☐ Manage all financial aspects of an incident.	☐ Record daily personnel time, ensure compliance with specific agency time recording policies, and manage commissary operations if established at the incident. ☐ Submit cost estimate data forms to **Cost Unit** as required. ☐ Ensure that all records are current and complete prior to demobilization.	☐ Manage finances relating to vendor contracts, leases and fiscal agreements. ☐ Maintain equipment time records. ☐ Establish local sources for equipment and supplies. Coordinate with local jurisdiction on plans and supply sources. ☐ Manage all equipment rental agreements. Establish contracts and agreement with supply vendors. ☐ Processes all rental and supply fiscal document billing invoices. ☐ Prepare and authorize contracts and land use agreements, as needed.	☐ Handle all matters relating to compensation for injury or property damage due to the incident. ☐ Oversees the completion of all forms required by workers' compensation and local agencies. ☐ Maintain a file with all the injuries and illnesses associated with the incident. ☐ Obtain witness statements in writing. ☐ Investigate all claims involving property associated with or involved in the incident. ☐ Ensure the completion of a Resident Compensation Log for any out-of-pocket expenses incurred by evacuees. Form B2 ☐ All claims must be submitted to the Finance and Legal departments for processing and disbursement of funds. ☐ If applicable, Finance and Legal will deal with insurers as well as any other extraneous circumstances (affected parties want more, etc.).	☐ 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.

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

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

- ☐ Assist with post-incident activities.

All forms referenced can be found in Section 6: Forms

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

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, transients, 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**.

Operations Section - Public Safety Roles

Public Safety Group Supervisor

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.

- ☐ Confirm communication links with the **Incident Commander** and **Operations Section Chief**.
- ☐ In conjunction with the **Incident Commander**: determine the size of the EPZ; identify the residents, businesses, industrial operators, and / or transients in the area; and determine the initial public protection measures to be taken. Refer to **Section 4: Emergency Response Procedures** for guidelines on evacuation / shelter, ignition, roadblocks, rovers, public concerns, etc. Additional information for **Air Monitors, Reception Centre Representative, Roadblocks, Rovers,** and **Telephoners** can be found in **Section 2: Roles & Responsibilities**.
- ☐ In conjunction with the **Incident Commander**, **Planning Section Chief**, and **Operations Section Chief**, develop and implement an Incident Action Plan (IAP).
- ☐ Review resident lists, area user lists, reception centres, and telephone numbers within the ERP.
- ☐ If required, establish a Regional Emergency Operations Centre (REOC).
- ☐ Assign personnel to assume the following positions as required: **Air Monitors, Reception Centre Representative, Roadblocks, Rovers,** and **Telephoners.**
  - ☐ The **Telephoners** must have sufficient personnel to accommodate the following ratios when contacting residents: 1 Telephoner to every 7 residences; and 1 Supervisor for every 10 Telephoners.
- ☐ Dispatch **Air Monitors** at a Level 1 emergency (hand-held and mobile).
  - ☐ Dispatch trained personnel with the appropriate hand-held gas monitors to record concentrations at the nearest unevacuated residences downwind of the incident site.
  - ☐ Mobilize third party mobile air monitoring units.
  - ☐ Maintain communication with the applicable government regulator and environment agency regarding air monitoring needs and activities.
  - ☐ Consult with the **Operations Section Chief** to determine the need for evacuation / sheltering. This is based on air monitoring readings at the nearest downwind residence.
- ☐ Prioritize residents and area users in the EPZ to establish the order of evacuation. Coordinate evacuation or shelter of residents, area users, and transients (via **Telephoners** and **Rovers**).
  - ☐ Determine who needs to be notified and what script will be used: Early Notification / Voluntary Evacuation Message, Shelter-in-Place Phone Message, Evacuation Phone Message. Form B6 Form B7 Form B8
  - ☐ At a Level 1 Emergency it is required to notify any special needs residents and give them the option to evacuate.
  - ☐ If residences are evacuated, a reception centre must be established.
  - ☐ Determine and notify landowner / occupant(s) as soon as possible.
  - ☐ Ensure the schools / school buses are contacted to make arrangements for school age children (if applicable).
  - ☐ If a large number of people need to be evacuated (large industrial operations and/or public facilities) refer to the **Area Specific Information** section (white tabs) for contacts to obtain charter buses or changes to the normal notification procedures.
  - ☐ Send **Rovers** (if required) to identify human activity in the area which is not already identified within the ERP (drilling, pipeline construction, logging, hunting, farming, camping, fishing, etc.).
  - ☐ Prepare Evacuation Notices and provide copies to **Rovers**. Form B5
  - ☐ **Rovers** can be used to assist with notifications, assist with evacuating special needs residents, assist with air monitoring, etc.
- ☐ Determine the need for helicopters to identify human activity in the area.
- ☐ Determine the need for and location of **Roadblocks** to isolate and secure the area.
  - ☐ Ensure all **Roadblock** personnel are properly trained and have appropriate roadblock kits.
  - ☐ Ensure all **Roadblock** personnel have the legal authority to restrict access to the area.
- ☐ Assess public impact outside of EPZ. See **Section 5: External Agencies** to determine what assistance local authorities can provide for public protection outside the EPZ.
- ☐ Regularly update the **Incident Commander**.
- ☐ Confirm communication links with: **Air Monitors, Reception Centre, Roadblocks, Rovers,** and **Telephoners.** Personnel should check in at scheduled intervals.
- ☐ Review and confirm evacuation of residents, area industrial users, transients, etc. from the area.
- ☐ Request that a Notice to Airmen (NOTAM) is issued to restrict the airspace above the EPZ.

Located at the Incident Command Post (ICP) or the Regional Emergency Operations Centre (REOC).

Air Monitors

Air Monitoring personnel are responsible for acquiring and providing air quality readings to the **Public Safety Group Supervisor.**

- ☐ Provide air monitoring readings to assist with decision making (evacuation / shelter / ignition).
- ☐ Obtain and check equipment and information (maps, forms, communications, reports, monitors, safety, and breathing equipment).
- ☐ Confirm communication links.
- ☐ Monitor closest downwind public location or residence.
- ☐ Monitor environment for adverse effects.
  - ☐ Record all readings on the Air Monitoring Log. Form A5
- ☐ Report all readings at established intervals to the **Public Safety Group Supervisor**.
- ☐ For your own safety, ensure **Public Safety Group Supervisor** is notified immediately if readings are approaching 10% LEL and / or 10 ppm H_2S.
  - ☐ Prepare Mobile Monitoring Plan.

Location will be assigned.

Reception Centre Rep

Reception Centre Reps are responsible for establishing reception centres, managing evacuee accommodation, communication and documentation for compensation purposes.

- ☐ Confirm reception centre is available for use.
- ☐ Establish reception centre. Refer to **Section 2: Roles & Responsibilities**.
- ☐ Confirm communication links.
- ☐ Receive evacuees and maintain a Reception Centre Registration Log. Form B1
- ☐ Arrange for food and accommodations for the evacuees.
  - ☐ Provide evacuees with a place to request counselling services, if required.
- ☐ Record and follow up on all evacuees who choose to make their own accommodation arrangements.
- ☐ Arrange for temporary care of livestock (if possible) and the security of evacuated property.
- ☐ Establish and oversee compensation administration activities at the reception centre.
  - ☐ Reimburse evacuees for their immediate out-of-pocket expenses and log details on a Resident Compensation Log. Form B2
- ☐ Where possible, provide evacuees with information regarding their property, livestock, and the incident.
- ☐ Forward all media and incident inquiries to the **Information Officer**.
- ☐ Report all names of evacuees who have registered at the reception centre to the **Public Safety Group Supervisor**.
- ☐ Address resident concerns and forward them to the **Public Safety Group Supervisor.**

Location will be the reception centre.

Important

Prior to beginning any activities, each person in a role must:

- ☐ Obtain a completed ICS 201 Incident Briefing and ICS 207 Incident Organization Chart from the **Incident Commander**.

Throughout the duration of the incident, each person in a role must:

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

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

- ☐ Assist with post-incident activities.

All forms referenced can be found in Section 6: Forms

Roadblocks

Roadblock personnel are responsible for maintaining assigned roadblock positions, air monitor readings and communication with transients.

- ☐ 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.
- ☐ Confirm communication links.
- ☐ Establish roadblocks to secure the EPZ.
- ☐ Follow the scripts and procedures in the ERP. Refer to either **Section 2: Roles & Responsibilities** or **Section 6: Forms**.
- ☐ Monitor area for H_2S and / or LEL with personal monitors and document readings on the Air Monitoring Log. Form A5
- ☐ Report all H_2S and / or LEL reading changes / increases to the **Public Safety Group Supervisor**.
- ☐ For your own safety, ensure the **Public Safety Group Supervisor** is notified immediately if readings are approaching 10% LEL and / or 10 ppm H_2S.
  - ☐ Record all incoming and outgoing traffic, personnel, and equipment on the Roadblock Log. Form B4
- ☐ Forward information given to you by people passing through your location to the **Public Safety Group Supervisor**.
- ☐ 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.

*Note: See **Section 2: Roles & Responsibilities** for a media script for **Roadblock** and **Rover** personnel.*

Location will be assigned.

Rovers

Rovers travel to assigned locations to locate the public and personally provide public safety instructions and assistance as required.

- ☐ Confirm resident contact lists are available.
- ☐ Confirm communication links.
- ☐ Know safe routes in and out of the EPZ.
- ☐ Search for residents and transients in the Emergency Response and Planning Zones.
- ☐ Check all buildings including barns, shops, sheds, etc.
- ☐ Assist, as required, with the notification, evacuation or sheltering of persons within the EPZ. Record all contact with residents using the Resident Contact Log. Form B3
- ☐ Post Evacuation Notices for residents that are not at their residence. Form B5
- ☐ Follow the scripts and procedures in the ERP. Refer to **Section 2: Roles & Responsibilities** or **Section 6: Forms**. Form A5
- ☐ Monitor area for H_2S and / or LEL with personal monitors and document readings on the Air Monitoring Log.
- ☐ Report all H_2S and / or LEL reading changes / increases to the **Public Safety Group Supervisor**.
- ☐ For your own safety, ensure the **Public Safety Group Supervisor** is notified immediately if readings are approaching 10% LEL or 10 ppm H_2S.
- ☐ Report any suspicious behaviour to the **Public Safety Group Supervisor** who will notify the police as required.
- ☐ Maintain communication with the **Public Safety Group Supervisor**.

*Note: See **Section 2: Roles & Responsibilities** for a media script for **Roadblock** and **Rover** personnel.*

Location will be assigned.

Telephoners

Telephoners are responsible for the notification of impacted residences and businesses to provide public safety instructions.

- ☐ Confirm resident contact lists are available.
- ☐ Confirm communication links.
- ☐ In conjunction with the **Public Safety Group Supervisor**, determine who needs to be notified (residents, businesses, area users, etc.).
- ☐ Review with the **Public Safety Group Supervisor** which telephoner scripts to use: Early Notification / Voluntary Evacuation Message, Shelter-in-Place Phone Message, Evacuation Phone Message. Form B6 Form B7 Form B8
- ☐ Contact special needs residents at a Level 1 Emergency and provide them with the option to evacuate.
- ☐ Contact the other residents and area users in the EPZ and advise them to evacuate or shelter.
- ☐ Contact the schools / school buses to make arrangements for school age children (if applicable).
  - ☐ Advise that buses in the affected area leave immediately and that buses should not enter the area.
  - ☐ Request a school administrator for the reception centre to assist in managing the children and releasing them to their guardians.
- ☐ Document all resident interactions using the Resident Contact Log and report this information to the **Public Safety Group Supervisor**. Immediately advise the **Public Safety Group Supervisor** about unsuccessful contacts and any residents requiring assistance. Form B3

Revised January 2019

Location will be Incident Command Post (ICP) or Regional Emergency Operations Centre (REOC).

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, transients, 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

H_2S, SO_2, 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 H_2S, SO_2, 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. Form A5
- ☐ Report all readings at established intervals to the **Public Safety Group Supervisor**.
- ☐ For your own safety, ensure the **Public Safety Group Supervisor** is notified immediately if readings are approaching the following levels: 10% LEL or 10 ppm H_2S.
- ☐ Prepare Mobile Monitoring Plan.
- ☐ Document activities using the ICS 214 Activity Log. Form ICS 214
- ☐ Assist with post-incident activities.
- ☐ Monitor H_2S 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.
- Assist in determining when the emergency can be downgraded.
- Determine roadblock locations.
- Determine concentrations in areas being evacuated to ensure that evacuation is safe.

Tips

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

Regulatory Requirements

Sour Gas Release – Manned Operations

- **Critical / Special Sour Wells & EPZ includes** a portion of urban density development or urban centre:
  - 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.

The licensee must also:

- Ensure that one unit is in the area during drilling and / or completion, testing, and workover operations in potentially critical sour zones.
- Ensure that the other unit is dispatched if 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.

- **Critical / Special Sour Wells whose EPZ does not include** a portion of an urban density development or urban centre and for **all noncritical sour wells**:

The licensee must:

- 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.

Sour Gas Release – Unmanned Operations

- If notified of a release by an alarm or by a reported odour, the licensee must investigate the source of the release and send out **Air Monitors** upon confirmation of the release location.

Air quality monitoring occurs downwind, with priority being directed to the nearest unevacuated residence or area where people may be present.

The licensee is expected to provide monitored H_2S and SO_2 information on a regular basis throughout a sour gas emergency to the relevant government regulator, environmental agency, health authority, local authorities, and on request to the public.

HVP Product Release

- Monitoring may occur downwind or upwind depending on how the plume is tracking, with priority being directed to the nearest unevacuated residence or areas where people may be present.

- The licensee is expected to provide monitored HVP product LEL information on a regular basis throughout the emergency to the relevant government regulator, environmental agency, health authority, local authorities, and on request to the public.

Downgrading Level of Emergency

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

Air Monitoring Log - Example

Form A5

Time	Location of Samples	H_2S (ppm)	LEL (%)	O_2 (%)	SO_2 (ppm)	Other	Temp (°C)	Wind Conditions *		Comments
								From	Speed (km/hr)	
19:06	*12-05-13-16 W5M*	*5*	*4*		*10*		*19*	*NW*	*12*	*Picked up 5 ppm reading upon entering lease access. Contacted control room at plant.*
19:15	*12-05-13-16 W5M*	*6*	*7*		*12*		*18*	*NW*	*11*	*H_2S reading increased 1 ppm at the access point.*
19:25	*12-05-13-16 W5M*	*6*	*7*		*12*		*17*	*NW*	*11*	*No change in readings. Wind and temperature is down.*

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

1. Choosing a Position

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

2. Record Information

Record information on the following forms located within this Section:

- ☐ Air Monitoring Log Form A5
- ☐ ICS 214 Activity Log Form ICS 214

Reporting and Contacts

Air Monitors report to the **Public Safety Group Supervisor**.

Name: ______________________________

Phone Number: ________________________

Reception Centre

Location: ____________________________

Phone Number: ________________________

Wind Direction: _________________________________

A5 Air Monitoring Log

Date:

Responder Name:

Page of

Responder Position:

Time	Location of Samples	H_2S (ppm)	LEL (%)	O_2 (%)	SO_2 (ppm)	Other	Temp (°C)	Wind Conditions * From	Wind Conditions * Speed (km/hr)	Comments

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ICS 214 Activity Log

Incident Name:

Date / Time Initiated:

Prepared by:

Position / Title:

Personnel Assigned

Name	ICS Position	Location

Activity Log

Time	Actions

Reception Centre Rep

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 Registration Log. Form B1
- ☐ 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. Form 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.
- ☐ Forward all media and incident inquiries to the **Information Officer**. Form C2
- ☐ 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. Form 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**.

1. Choosing a Reception Centre

- ☐ Reception Centres are usually located in schools, hotels / motels, or community halls.
- ☐ It may be useful to coordinate the location of the Reception Centre with the local authority (city, town, county, M.D., etc.).
- ☐ See Area Specific Information (white tabs) for pre-identified Reception Centres in your area.

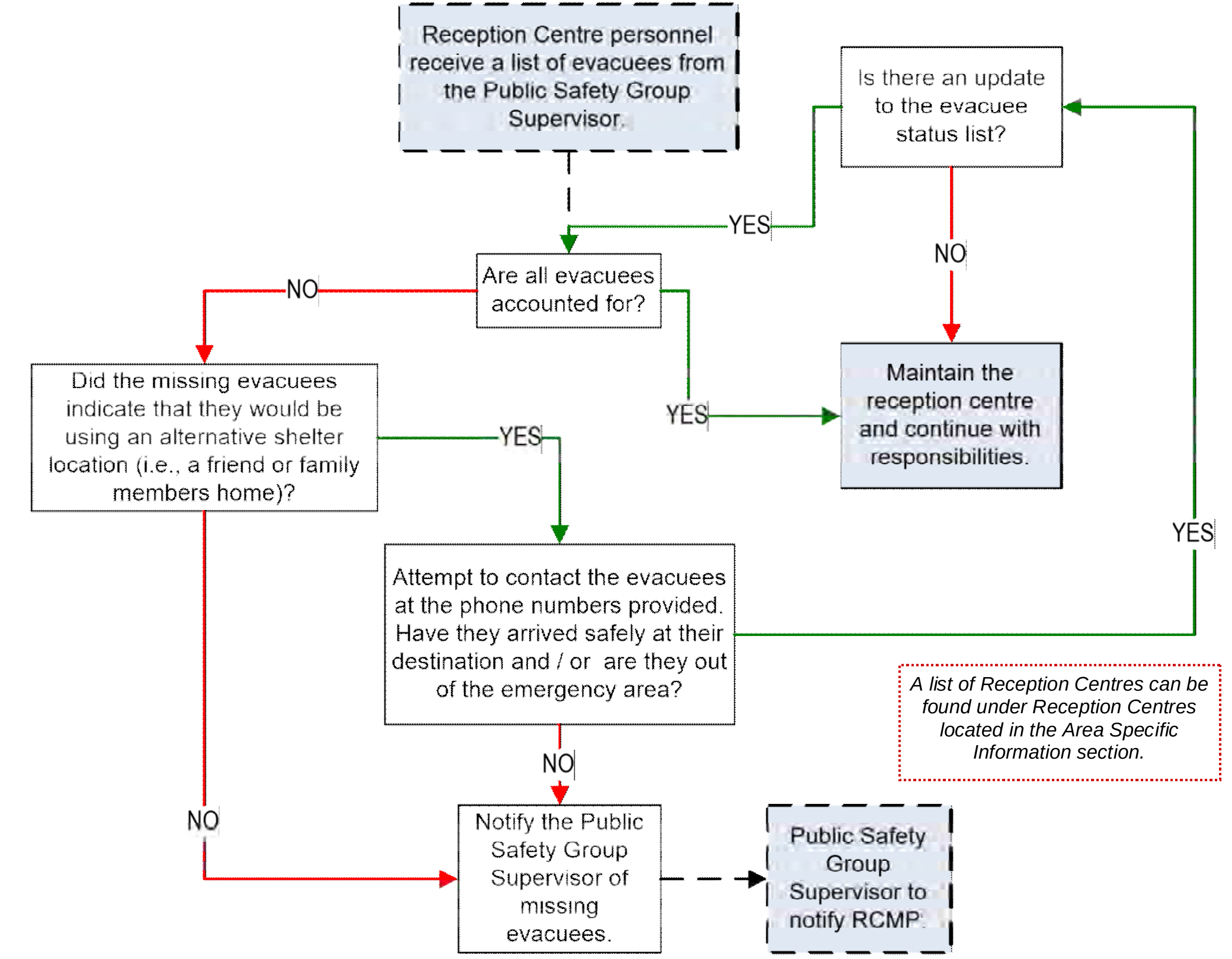
A Reception Centre should:

- ☐ Have a conference room of some type where a large number of people can gather.
- ☐ Have conferencing services including fax machine, internet access, and phone access.
- ☐ Be large enough to house all of the evacuees.
- ☐ Be outside of the hazard area.
- ☐ Allow residents to evacuate to the Reception Centre without travelling through the hazard area.
- ☐ Allow pets.

Tips

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

2. Reception Centre Feedback Loop



Reception Centre personnel receive a list of evacuees from the Public Safety Group Supervisor.

Are all evacuees accounted for?

NO

YES

Did the missing evacuees indicate that they would be using an alternative shelter location (i.e., a friend or family members home)?

YES

NO

Attempt to contact the evacuees at the phone numbers provided. Have they arrived safely at their destination and / or are they out of the emergency area?

YES

NO

Is there an update to the evacuee status list?

YES

NO

Maintain the reception centre and continue with responsibilities.

Notify the Public Safety Group Supervisor of missing evacuees.

Public Safety Group Supervisor to notify RCMP.

A list of Reception Centres can be found under Reception Centres located in the Area Specific Information section.

Reception Centre Registration Log - Example

Form B1

Resident ID	Name (List all names in party)		# of Occupants	Number Arrived	Arrival Time	Depart Time	Destination Phon # (Where they can be reached)	Comments
	First	Last						
G124-A	*John*	*Doe*	*2*	*2*	*19:06*	*19:21*	*555-555-5555*	*John and his wife arrived safetly 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 ar away on a school trip. They will stay at the reception centre for the night.*

Media Statement

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

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

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

3. Record Information

Record information on the following forms located within this Section:

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

Form ICS 214 Form B1 Form B2 Form C2

Reporting and Contacts

Air Monitors report to the **Public Safety Group Supervisor**.

Name:______________________________

Phone Number: __________________________

Reception Centre

Location:______________________________

Phone Number: __________________________

Wind Direction: __________________________

Revised
February
2019

B1 Reception Centre Registration Log

Date: ______________ Responder Name: ______________

Page of Responder Position: ______________ Responders Phone No.: ______________

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

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
		Total Reported Expenses							

Approved By: ______________ Date: ______________

ICS 214 Activity Log

Incident Name:	
Date / Time Initiated:	
Prepared by:	Position / Title:

Personnel Assigned

Name	ICS Position	Location

Activity Log

Time	Actions

Roadblocks

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.
- ☐ Confirm communication links and establish communication interval times.
- ☐ Establish roadblocks to secure the EPZ.
- ☐ Follow the scripts and procedures in the ERP.
- ☐ Knowledge and ability to communicate safest route away from hazard.
- ☐ Monitor area for H_2S and / or LEL with personal monitors and document readings on the Air Monitoring Log. Form A5
- ☐ Report all reading changes / increases to the **Public Safety Group Supervisor.**
- ☐ For your own safety, ensure the **Public Safety Group Supervisor** is notified immediately if readings are approaching 10% LEL and / or 10 ppm H_2S.
- ☐ Move location of Roadblock immediately if readings are approaching 10% LEL and / or 10 ppm H_2S.
- ☐ Record all incoming and outgoing traffic, personnel, and equipment on the Roadblock Log. Form B4
- ☐ 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. Form ICS 214
- ☐ 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_2S, CO, O_2, LEL)
- ☐ Portable rotating emergency light
- ☐ SCBA
- ☐ Hand-held stop sign with reflective tape
- ☐ Waterproof bag

Optional

- ☐ Caution tape
- ☐ Rain suit
- ☐ Road barrier

Tips

- ☐ When talking to motorists at the roadblock, ONLY provide them with the information as directed by the **Public Safety Group Supervisor**.
- ☐ Ask for identification prior to granting access.
- ☐ You do not have the legal authority to restrict access to the area without an order from the relevant authority. Report any person who chooses to proceed, without permission, through the roadblock.
- ☐ Check with the motorists and ensure all members of their residence are accounted for and documented on the Resident Contact Log. Report any resident that is left behind in the EPZ. Form B3
- ☐ 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.

1. Choosing a Roadblock

Roadblocks should be established:

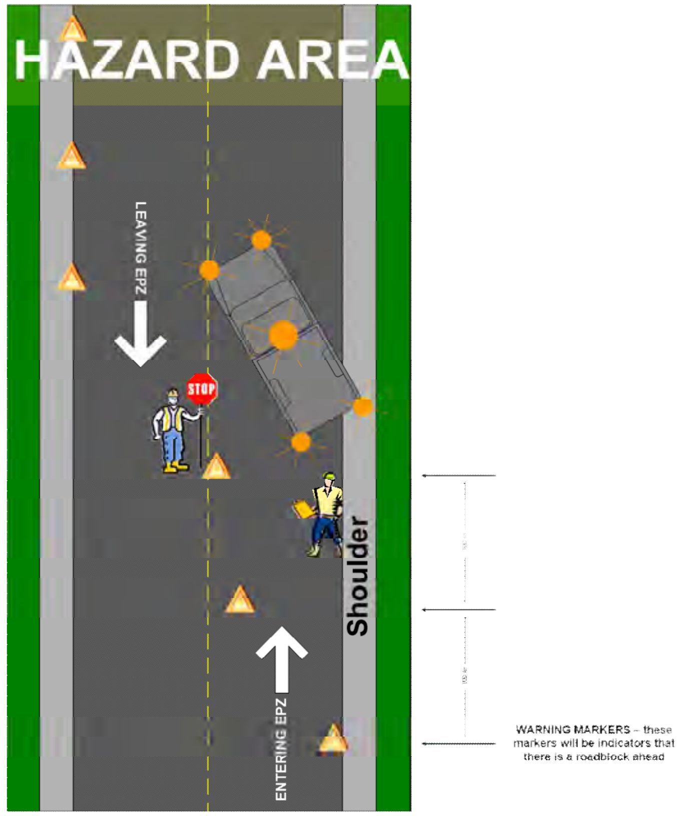
- ☐ Approximately where the EPZ intersects any highways / roads.
- ☐ Outside of the hazard area.
- ☐ At a conspicuous location where the **Roadblock** personnel will be visible to approaching traffic, providing them with enough time to safely stop.
- ☐ At a location where traffic can easily turn around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

2. Before Departure

- ☐ Make sure your vehicle is equipped and suitable for the travel conditions.
- ☐ Check roadblock kit to confirm all items are present (see sample of roadblock kit contents to left).
- ☐ Confirm that your handheld monitor for H_2S 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.

3. Setting up a Roadblock

- ☐ Park vehicle as illustrated, activating four way flashers and roof mounted rotating beacon.
- ☐ Put on reflective vests.
- ☐ Take a reading with your handheld monitor for H_2S and / or LEL; ensuring your roadblock is not too close to the edge of the EPZ. Record readings on the Air Monitoring Log. Form A5
- ☐ Notify the **Public Safety Group Supervisor** once your roadblock is set up.
- ☐ Continue to monitor and record H_2S and / or LEL levels at scheduled intervals. Report to the **Public Safety Group Supervisor** at scheduled intervals.
- ☐ Maintain roadblock until the emergency is over and the "all clear" message is given or until relieved by other **Roadblock** personnel.


HAZARD AREA
LEAVING EPZ
STOP
Shoulder
ENTERING EPZ
WARNING MARKERS – these markers will be indicators that there is a roadblock ahead

Reporting and Contacts

Roadblock personnel report to the **Public Safety Group Supervisor**.

Name:________________________

Phone Number:____________________

Reception Centre

Location:_______________________

Phone Number:____________________

Wind Direction:_____________________

To give motorists time to prepare to come to a stop, it is recommended that the **Roadblock** personnel set up all available collapsible reflective triangles 100 metres apart, at a minimum distance of 200 metres before the roadblock.

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

When establishing a roadblock consider:

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

Remember to:

- ☐ Remain calm
- ☐ Be courteous
- ☐ Record names
- ☐ Notify the **Public Safety Group Supervisor**

4. How to Stop Traffic

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

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

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

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

5a. Roadblock Script

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

Note:

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

5b. Media Statement

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

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

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

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

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

6. Record Information

Record information on the following forms located within this section:

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

Form ICS 214 Form A5 Form B3 Form B4

Possible Scenarios for Roadblock Personnel:

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

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

Revised
June 2018

B3 Resident Contact Log

Date: ______________________ Responder Name: ____

Page ______ of ______ Responder Position: ____________________ Responders Phone No.: ____________

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

B4 Roadblock Log

Date: ______________________ Responder Name: ____

Page ______ of ______ Responder Position: ____________________ Responders Phone No.: ____________

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

ICS 214 Activity Log

Incident Name:

Date / Time Initiated:

Prepared by: Position / Title:

Personnel Assigned

Name	ICS Position	Location

Activity Log

Time	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. The **Public Safety Group Supervisor** must be continuously updated by the **Rovers** so that unsuccessful attempts to evacuate residents, transients, etc. can be followed up on immediately.

Rover Personnel Roles

- ☐ Confirm resident contact lists are available.
- ☐ Confirm communication links.
- ☐ Know safe routes in and out of the EPZ.
- ☐ Search for residents and transients in the Emergency 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 Zone. Record all contact with residents using the Resident Contact Log. Form B3
- ☐ Post Evacuation Notices for residents that are not at their residence. Form B5
- ☐ Follow the scripts and procedures in the ERP.
- ☐ Monitor area for H_2S and / or LEL with personal monitors and document readings on the Air Monitoring Log. Form A5
- ☐ Report all reading changes / increases to the **Public Safety Group Supervisor.**
- ☐ For your own safety, ensure the **Public Safety Group Supervisor** is notified immediately if readings are approaching the following levels: 10% LEL and / or 10 ppm H_2S.
- ☐ 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
- ☐ 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 are currently dealing with the situation at hand to ensure the safety of the public, our personnel, and the environment. A statement will be released by the company once the facts have been determined. If you would like to leave your business card or phone number, a company representative will provide you with more information as it becomes available."

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

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

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

Reporting and Contacts

Rovers report to the **Public Safety Group Supervisor**.

Name: ______________________

Phone Number: ______________________

Reception Centre:

Location: ______________________

Phone Number: ______________________

Wind Direction: ______________________

Evacuation Notice - Example

Form B5

DATE: ______________
TIME: ______________

EVACUATION NOTICE

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

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

____.

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

For assistance, call *[Insert Company Name]* at

______________________.

Thank you

Tips

Remember to:
- ☐ Remain calm
- ☐ Be courteous
- ☐ Document all actions and comments
- ☐ Notify the **Public Safety Group Supervisor**

Remember to use a handheld H_2S and / or LEL monitor to continually test the atmosphere.
Report all H_2S 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.

1. Before Departure

- ☐ Protect yourself
- ☐ Ensure you are equipped with all necessary equipment:
  - ☐ SCBA
  - ☐ Gas monitors
  - ☐ Mobile communications or other form of communication
  - ☐ Forms
  - ☐ Vehicle (4x4) with full tank of fuel
  - ☐ Map
- ☐ Confirm that your handheld monitor for H_2S 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.

2. Notifying Residents / Transients

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

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

- ☐ Ask if they will require evacuation assistance and arrange additional transportation assistance if necessary.
- ☐ Make sure they are all accounted for.
- ☐ Ensure they gather any supplies they will need for the next 24 hours (medicines, baby food, diapers, 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**.

3. Requested Evacuation Assistance

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

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

- ☐ Try not to scare them. They are aware you might be coming but don't know what to expect.
- ☐ Make sure they are all accounted for.
- ☐ Ensure they gather any supplies they will need for the next 24 hours (medicines, baby food, diapers, etc.)
- ☐ Ask them if they have any questions.
- ☐ Once you are satisfied that all personnel from the residence are accounted for, deliver them to the Reception Centre.
- ☐ On the way to the Reception Centre, notify the **Public Safety Group Supervisor** of your progress and estimated time of arrival at the Reception Centre.
- ☐ Ensure that the residents check in at the Reception Centre with the **Reception Centre Representative** before you leave for your next assignment.

4. Record Information

Record information on the following forms located within this section:
- ☐ Resident Contact Log
- ☐ Air Monitoring Log
- ☐ ICS 214 Activity Log
- ☐ Evacuation Notice

Form ICS 214 · Form A5 · Form B3 · Form B5

Rovers

Revised
June 2018

B3 Resident Contact Log

Date: ______________ Responder Name: ______________

Page ____ of ____ Responder Position: ______________ Responders Phone No.: ______________

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

ICS 214 Activity Log

Incident Name:	
Date / Time Initiated:	
Prepared by:	**Position / Title:**

Personnel Assigned

Name	ICS Position	Location

Activity Log

Time	Actions

Telephoners

Overview

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

Telephone Personnel Roles

- ☐ Confirm resident contact lists are available.
- ☐ Confirm communication links.
- ☐ In conjunction with the **Public Safety Group Supervisor**, determine who needs to be notified (residents, businesses, area users, etc.). Form B6
- ☐ Review with the **Public Safety Group Supervisor** the telephoner scripts to be used: Early Notification / Voluntary Evacuation Message, Shelter-in-Place Phone Message, Evacuation Phone Message. Form B7 Form B8
- ☐ Contact special needs residents at a Level 1 Emergency and provide them with the option to evacuate.
- ☐ Contact the other residents and area users in the EPZ and advise them to evacuate or shelter.
- ☐ Contact the schools / school buses to make arrangements for school age children (if applicable).
  - ☐ Advise that buses in the affected area leave immediately and that buses should not enter the area.
  - ☐ Request a school administrator for the reception centre to assist in managing the children and releasing them to their guardians.
- ☐ Document all resident interactions using the Resident Contact Log and report this information to the **Public Safety Group Supervisor**. Immediately advise the **Public Safety Group Supervisor** about unsuccessful contacts and any residents requiring assistance. Form B3
- ☐ Document all activities using the ICS 214 Individual Activity Log. Form ICS 214
- ☐ Assist with post-incident activities.

Shelter-In-Place Instructions

FORM B7

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

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

1. Who to Contact

- ☐ Residents
- ☐ Schools / School Bus Transportation
- ☐ Businesses
- ☐ Public Facilities
- ☐ Recreation Areas
- ☐ Urban Centres (contact local authority to coordinate)
- ☐ Area Users (other oil and gas operators, rail, logging, etc.)
- ☐ Trappers
- ☐ Guides / Outfitters
- ☐ Grazing Lease / Allotment Holders

Priority is given to:

- ☐ Those closest to the hazard
- ☐ Those downwind of the hazard
- ☐ Those with sensitivity issues (health issues, require assistance, etc.)

Tips

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

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

2a. Shelter-In-Place Phone Message

Hello, this is ________ *(your name)* ________ of ________ *(company name)* ________.

Is this the ________ *(name)* ________ residence at ________ *(telephone number)* ________?

________ *(company name)* ________ is responding to a (*potential*) emergency at ________ *(location)* ________ in your area.

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

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

How many people are at your location now?

Adults ________

Children ________

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

☐ *Yes* ☐ *No*

IF YES *Whom?* ________

Location of the person(s) ________

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

Do you have children in school at this time?

☐ *Yes* ☐ *No*

IF YES *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 ________ *(company name)* ________**?**

☐ *Yes* ☐ *No*

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

IF NO *Verbally walk the resident through the Shelter-in-Place instructions on the next page.*

Do you understand what I have told you?

Is there an alternate number we can contact you at? ________

If you have any urgent questions, please contact ________ *(company name)* ________ **at** ________ *(telephone number)* ________.

Thank you for your cooperation.

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

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

2b. Evacuation Phone Message

Hello, this is ________ *(your name)* ________ of ________ *(company name)* ________.

Is this the ________ *(name)* ________ residence at ________ *(telephone number)* ________?

________ *(company name)* ________ is responding to a (*potential*) emergency at ________ *(location)* ________ in your area.

For your safety, it is extremely important that you and your family leave your residence immediately and travel in a *north / east / south / west* direction to our reception centre located at:

____

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

How many people are at your location now?

Adults ________

Children ________

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

☐ *Yes* ☐ *No*

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 require evacuation / transportation assistance?

☐ *Yes* ☐ *No*

IF YES We are sending someone to assist you. Please stay indoors and close all doors and windows until a Rover or the local police arrive to evacuate you.

IF NO *Provide the resident with:*

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

Please contact ________ *(company name)* ________ if you are unable to make it to the reception centre for any reason. Please keep your phone line free so that we can contact you if necessary.

Is there an alternate number we can contact you at? ________

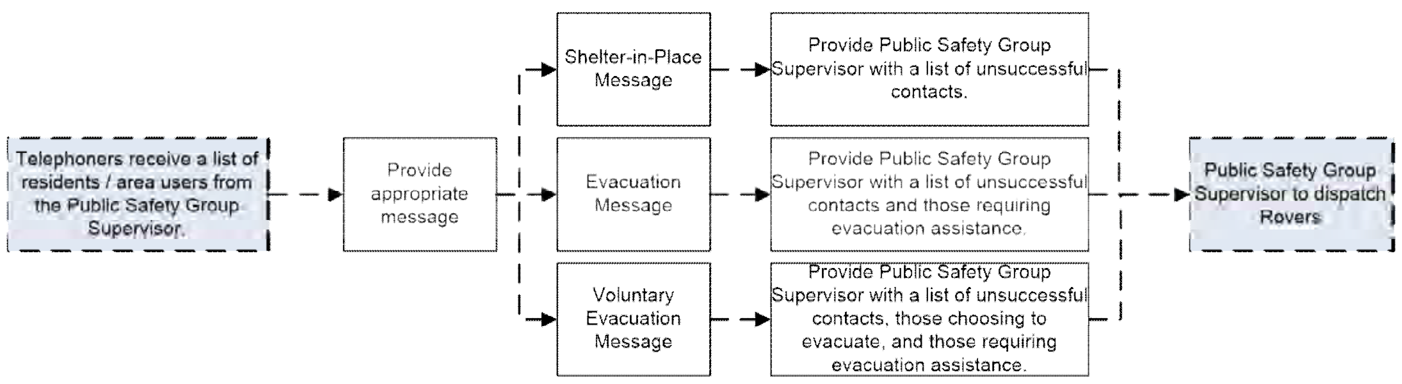
A company representative at the reception centre will address any questions you may have and will make arrangements for your temporary accommodations. Do you understand everything I have told you? Are you leaving immediately?

If you have any urgent questions, please contact ________ *(company name)* ________ **at** ________ *(telephone number)* ________.

Thank you for your cooperation.

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

Telephoner Communication Flow



Telephoners receive a list of residents / area users from the Public Safety Group Supervisor.

Provide appropriate message

Shelter-in-Place Message

Evacuation Message

Voluntary Evacuation Message

Provide Public Safety Group Supervisor with a list of unsuccessful contacts.

Provide Public Safety Group Supervisor with a list of unsuccessful contacts and those requiring evacuation assistance.

Provide Public Safety Group Supervisor with a list of unsuccessful contacts, those choosing to evacuate, and those requiring evacuation assistance.

Public Safety Group Supervisor to dispatch Rovers

3. Record Information

Record information on the following forms located within this section:

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

Form ICS 214 Form B3 Form B6 Form B7 Form B8

Reporting and Contacts

Telephoners report to the **Public Safety Group Supervisor**.

Name: ________

Phone Number: ________

Reception Centre Location: ________

Phone Number: ________

Wind Direction: ________

Revised
February
2019

B3 Resident Contact Log

Date: ______________________________ Responder Name: ______________________________

Page ______ of ______ Responder Position: ______________________ Responders Phone No.: ______________

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

B6 Early Notification / Voluntary Evacuation Phone Message

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

Hello, this is *(your name)* calling from *(company name)*. Is this the *(name of residence / business)* at *(telephone number)* ?

(Company name) is responding to a *(potential)* emergency at *(location)* in your area.

You are in no danger at this time. All efforts are being made to resolve the problem and this phone call is only to inform you and provide you with an early notification.

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

How many people are at your location now? *(Adults)* ______________ *(Children)* ______________

Do you wish to leave your residence at this time?

IF YES Please travel in a a *north / east / south / west* direction to our reception centre located at:

____

IF NO Please standby for further contact. Please do not use your telephone for outgoing calls as this may prevent us form contacting you with updated information or when the problem has been eliminated.

If you have urgent questions, please contact *(company name)* **at** *(telephone number)* **.**

Thank you for your cooperation.

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

ICS 214 Activity Log

Incident Name:

Date / Time Initiated:

Prepared by: Position / Title:

Personnel Assigned

Name	ICS Position	Location

Activity Log

Time	Actions

Initial Response:

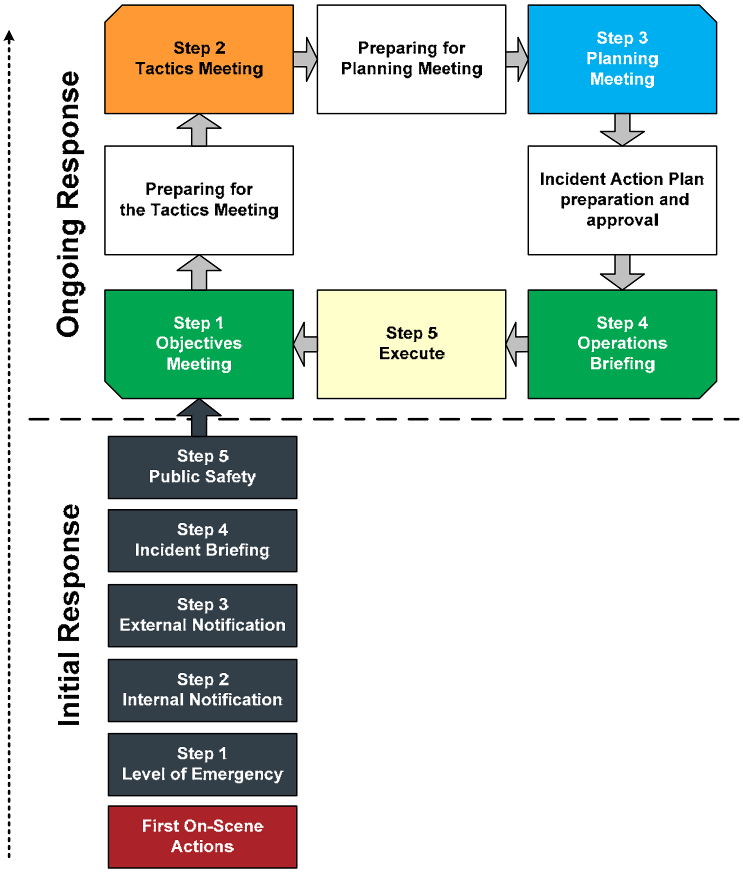
All incidents begin with the initial response (reactive phase) during the first operational period. At the onset of an emergency response an Initial Emergency Report (A1) Form is completed to determine the severity of the emergency and extent of the response.

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 re-addressed 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.


Ongoing Response
Step 2 Tactics Meeting
Preparing for Planning Meeting
Step 3 Planning Meeting
Preparing for the Tactics Meeting
Incident Action Plan preparation and approval
Step 1 Objectives Meeting
Step 5 Execute
Step 4 Operations Briefing
Initial Response
Step 5 Public Safety
Step 4 Incident Briefing
Step 3 External Notification
Step 2 Internal Notification
Step 1 Level of Emergency
First On-Scene Actions

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Step 1 - Objectives Meeting

- ❑ 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.

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.

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.
- ❑ Operations 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.

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).

Step 3 - Planning Meeting

- ❑ Planning Section Chief conducts the meeting.
- ❑ Review the incident status using the updated **ICS 209** form.
- ❑ 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.

Incident Action Plan Preparation and Approval

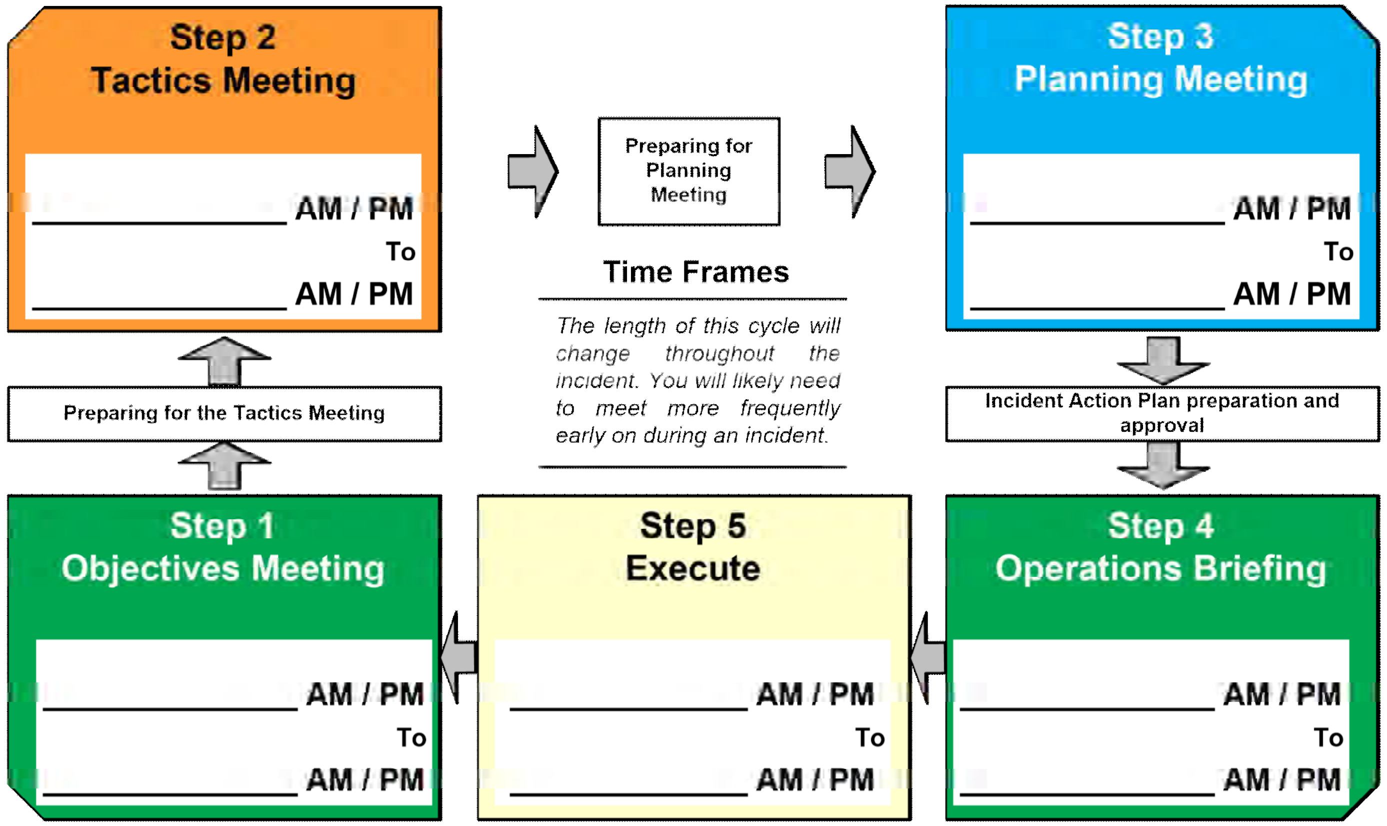
- ❑ Produce a coordinated and sustainable Incident Action Plan using the IAP Checklist (**A4**), ICS forms **202**, **207**, **209**, **215**, **215A**, and gather any additional incident documentation (i.e., maps and status boards).
- ❑ Receive final approval from the Incident Commander.
- ❑ Define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

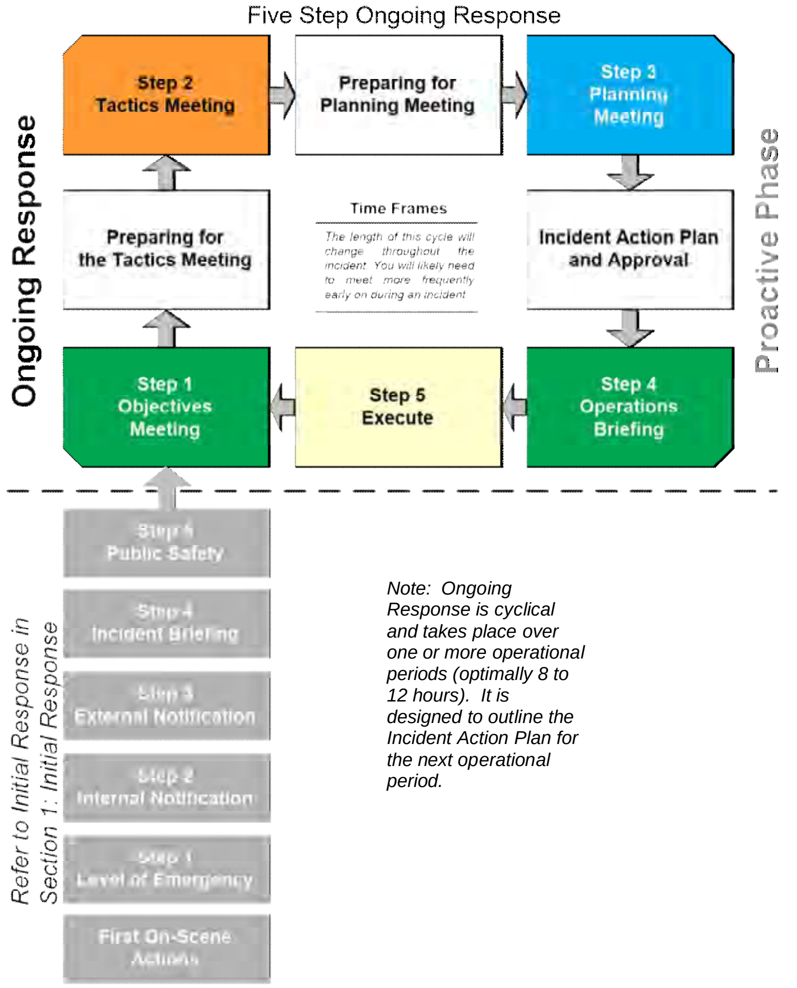
Step 4 - Operations Briefing

- ❑ Incident Commander conducts the meeting.
- ❑ Provide personnel with work assignments from the IAP.
- ❑ Operations Section Chief to brief the organization and provide clarification on all tactical assignments.
- ❑ Ensure that all responders know and understand the safety analysis, hazards, and controls.

Step 5 - Execute

- ❑ Perform work assignments according to assigned roles.
- ❑ Document all actions, decisions, and conversations.
- ❑ Constantly evaluate how well the plan is designed and being conducted.
- ❑ Adjust the plan and associated actions accordingly.
- ❑ Identify additional objectives for the upcoming operational period.
- ❑ Schedule next Objectives Meeting if applicable.




Five Step Ongoing Response
Ongoing Response
Proactive Phase
Step 2
Tactics Meeting
Preparing for Planning Meeting
Step 3
Planning Meeting
Preparing for the Tactics Meeting
Time Frames
The length of this cycle will change throughout the incident. You will likely need to meet more frequently early on during an incident
Incident Action Plan and Approval
Step 1
Objectives Meeting
Step 5
Execute
Step 4
Operations Briefing
Refer to Initial Response in Section 1: Initial Response
Step 5
Public Safety
Step 4
Incident Briefing
Step 3
External Notification
Step 2
Internal Notification
Step 1
Level of Emergency
First On-Scene Actions

Note: Ongoing Response is cyclical and takes place over one or more operational periods (optimally 8 to 12 hours). It is designed to outline the Incident Action Plan for the next operational period.

Five Step Ongoing Response Guide

H2Safety

Revised June 2018

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.

Objectives Meeting

Owner: Incident Commander	**Date:**	**Time:**

*****Roles below will attend only if designated and available*****

Attendees:

☐ *Incident Commander:*	☐ *Planning Section Chief:*
☐ *Deputy Incident Commander:*	☐ *Logistics Section Chief:*
☐ *Operations Section Chief:*	☐ *Finance/Admin. Section Chief:*
☐ *Planning Section Chief:*	☐ *Safety Officer:*
☐ *Liaison Officer:*	☐ *Other:*
☐ *Information Officer:*	☐ *Other:*

Summary:

The objectives of this meeting are to:

- Have a completed **ICS 202** form agreed upon by all attendees (Command and General Staff).
- Establish objectives and priorities for the upcoming operational period.
- Begin an **ICS 209** Incident Status Summary report.
- Begin identifying all required roles on the **ICS 207** form.
- Begin addressing the Incident Action Plan Checklist (**A4**).
- Schedule and prepare for the Tactics Meeting.

Resources:	**ICS 202, 207, 209 forms, and the IAP Checklist (A4)**

Agenda Items:

☐ Status Update and review the **ICS 201** Incident Briefing form.

☐ Determine incident priorities. Reference the PPOST methodology.

☐ Establish an incident organization that is capable of meeting initial and long-term challenges required to mitigate the incident.

☐ Determine the incident response objectives and complete and **ICS 202** Incident Objectives form. They must be **SMART** (Specific, Measurable, Attainable, Realistic, & Time Sensitive).

☐ Identify initial staffing requirements and begin filling out the **ICS 207** Incident Organizational Chart.

☐ Identify and select incident support facilities.

☐ Review the incident objectives for the next operational period so your management team can begin work on the IAP.

☐ Document the incident status to relay to all responding personnel.

Key Points:

- **Ensure that the meeting is documented / recorded.** (Utilize the back side of this page.)
- Define the hours of work and operational period.
- Utilize Incident Action Plan Checklist (**A4**).
- Identify constraints and limitations.
- Clarify any staff roles and responsibilities.
- Determine expectations of the team for how all communications are to be made.
- Discuss and agree on process issues such as resource ordering, cost accounting, operations security, and sensitive information.
- Continue to develop tasks for Command and General Staff.
- Agree on division of command workload, such as press and agency briefings.

Notes:

Tactics Meeting

Owner: Operations Section Chief	**Date:**	**Time:**

*****Roles below will attend only if designated and available*****

Attendees:

☐ *Incident Commander:*
☐ *Deputy Incident Commander:*
☐ *Operations Section Chief:*
☐ *Planning Section Chief:*
☐ *Liaison Officer:*
☐ *Information Officer:*
☐ *Planning Section Chief:*
☐ *Logistics Section Chief:*
☐ *Finance/Admin. Section Chief:*
☐ *Safety Officer:*
☐ *Other:*
☐ *Other:*

Summary:

The objectives of this meeting are to:

- Define tactics, work assignments, and resources to meet actions identified during the Objectives Meeting.
- Have completed **ICS 215** and **215A** forms agreed upon by all attendees (Command and General Staff).
- Update the **ICS 207** Incident Organization Chart.
- Refer to Incident Action Plan Checklist (**A4**) and continue to add to items accomplished.
- Schedule and prepare for the Planning Meeting.

Resources:	**ICS 209, 215, 215A, and IAP Checklist (A4)**

Agenda Items:

☐ Review **ICS 209** Incident Status Summary.
☐ Review incident objectives.
☐ Define tactics to complete objectives set out during the Objectives Meeting.
☐ Provide an operational update and identify tactics to deal with incident.
☐ Identify roles and responsibilities that have to be performed to implement tactics.
☐ Build on already established **ICS 207** Incident Organization Chart, check span-of-control, and match up with **ICS 215** assignments.

Complete the Operational Planning Worksheet, **ICS 215** (Utilize one form for every established objective).
  ☐ Identify work assignments
  ☐ Identify resources requirements to achieve each work assignment
  ☐ Identify overhead staffing needs to support each work assignment
  ☐ Identify specialized equipment and supply needs for each work assignment
  ☐ Specify reporting times and location for personnel

Complete the Incident Action Plan Safety Analysis, **ICS 215A**.
  ☐ Identify potential hazard types
  ☐ Identify mitigations for associated hazard types

☐ Identify support facilities and locations.

Key Points:

- **Ensure that the meeting is documented / recorded.** (Utilize the back side of this page.)
- Review planned actions against incident objectives and priorities.
- Utilize a map or chart to depict the operational areas, support facilities, and any key information.
- Discuss any applicable open action items.
- Consider contingencies and secondary options.

Notes:

Planning Meeting

Owner: Planning Section Chief	**Date:**	**Time:**

Roles below will attend only if designated and available

Attendees:

☐ *Incident Commander:*	☐ *Planning Section Chief:*
☐ *Deputy Incident Commander:*	☐ *Logistics Section Chief:*
☐ *Operations Section Chief:*	☐ *Finance/Admin. Section Chief:*
☐ *Planning Section Chief:*	☐ *Safety Officer:*
☐ *Liaison Officer:*	☐ *Other:*
☐ *Information Officer:*	☐ *Other:*

Summary:

The objectives of this meeting are to:

- Finalize an Incident Action Plan with the necessary forms based on the objectives, tactics, and strategies outlined from the previous command meetings.
- Schedule and prepare for the Operations Briefing.

Resources:	**IAP Checklist (A4) and all associated ICS forms**

Agenda Items:

☐ Review Incident Action Plan forms (**ICS 202, 207, 209, 215**, and **215A**).

☐ Review Command's incident objectives, priorities, decisions, and direction.

☐ Provide briefing on current situation, resources at risk, weather forecast, and incident projections.

☐ Operations Section Chief provides briefing on:
  ☐ Current operations.
  ☐ An overview on the proposed plan including strategy, tactics or work assignments, resource commitment, contingencies, organization structure, and needed support facilities.

☐ Review the proposed plan to ensure that Command direction, priorities, and operational objectives are met.

☐ Delegate assignments and deadlines to appropriate staff members to assure timely and effective IAP development.

Key Points:

- **Ensure that the meeting is documented / recorded.** (Utilize the back side of this page.)
- Review IAP Checklist (**A4**) to ensure that all critical materials have been accounted for in the IAP.
- Planning Section Chief brings meeting to order, cover ground rules, and review agenda.
- Planning Section Chief requests tacit Command approval of the plan as presented.
- Planning Section Chief reviews and validates responsibility for any open actions and management objectives.
- Planning Section Chief conducts round table of Command and General Staff to solicit their final input and commitment to the proposed plan.

Notes:

Operations Briefing

Owner: Incident Commander	**Date:**	**Time:**

*****Roles below will attend only if designated and available*****

Attendees:

- ☐ *Incident Commander:*
- ☐ *Deputy Incident Commander:*
- ☐ *Operations Section Chief:*
- ☐ *Planning Section Chief:*
- ☐ *Liaison Officer:*
- ☐ *Information Officer:*
- ☐ *Planning Section Chief:*
- ☐ *Logistics Section Chief:*
- ☐ *Finance/Admin. Section Chief:*
- ☐ *Safety Officer:*
- ☐ *Staging Area Manager:*
- ☐ *On-Site Group Supervisor*
- ☐ *Public Safety Group Supervisor*
- ☐ *Air Monitor Team Lead*
- ☐ *Roadblock Team Lead*
- ☐ *Rover Team Lead*
- ☐ *Telephoner Team Lead*
- ☐ *Reception Centre Representatives*
- ☐ *Other:*
- ☐ *Other:*
- ☐ *Other:*
- ☐ *Other:*

Summary:

The objectives of this meeting are to:

- Review a summary of the incident status with all responders.
- Relay objectives, tactics, and strategies.
- Reinforce/relay the safety message.
- Assign roles & responsibilities and tasks for all responders to accomplish.
- Execute the response.
- Tentatively schedule next Objectives Meeting and identify potential problems/issues to address in the next operational period.

Resources:	**IAP Checklist (A4) and all associated ICS forms**

Agenda Items:

- ☐ Planning Section Chief briefly walks through the IAP components and makes changes as needed.
- ☐ Operations Section Chief conducts roll call of the Operation Section Supervisors and provides a briefing on emergency response.
- ☐ Operations Section Chief briefs supervisory personnel on their assignments along with clarification on any of their issues and concerns.
- ☐ Safety Officer covers major safety issues.
- ☐ Logistics Section Chief covers logistical support of operations (communications, supply, transportation, medical, etc).
- ☐ Finance / Admin. Section Chief covers time & cost tracking, procurement, and compensation process.
- ☐ General Staff to cover issues applicable to Operations Section personnel.

Key Points:

- **Ensure that the meeting is documented / recorded.** (Utilize the back side of this page.)
- Planning Section Chief opens briefing, covers ground rules, agenda, and conducts roll call of Command and General Staff members.
- Establish a briefing and message for all responders.
- Review pre-determined public and media statements.
- Planning Section Chief solicits final comments and adjourns briefing.

Notes:

NorthRiver AB North & South Peace Phone List

Name	Title	Cell #	Office #	Ext.
[redacted]	[redacted]	[redacted]	[redacted]	
[redacted]	[redacted]	[redacted]	[redacted]	
[redacted]	[redacted]	[redacted]	[redacted]	
[redacted]	[redacted]	[redacted]	[redacted]	
[redacted]	[redacted]	[redacted]	[redacted]	
[redacted]	[redacted]	[redacted]		
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
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TELUS Conferencing Solutions

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Section 3: Communications & Media

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Media Relations and Generic Media Statement

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

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

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

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

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

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

Generic Media Statement

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

Media Management

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

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

On-Site Media Spokesperson

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

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

Managing the Media On-Site

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

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

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

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

Internal Communication

Internal communication plans for company personnel must include:

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

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

Communicating with the Public

A communication plan for contacting affected parties must be in place at the beginning and conclusion of pipeline maintenance, blowdowns and planned prolonged flaring activities.

Information Disseminated to the Public

Communication plans for contacting affected parties must be in place at the beginning and conclusion of any flaring operations.

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

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

Information Disseminated to the Public, continued

  - Description of the products involved.
  - Contacts for additional information.
  - Actions being taken to respond to the situation, including anticipated time period.
- **To the evacuated or sheltered public post-incident:**
  - Status of recovery.
  - Financial reimbursement information.
  - Contacts for additional information.

Preparing a Preliminary Media Statement

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

The preliminary statement shall contain:

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

Preparing a Preliminary Media Statement, continued

What not to do:

- Downplay the seriousness of the event or speculate on volumes, damage or timelines.
- Point fingers; liability will be determined later by appropriate authorities.
- Allow the focus to stray away from the company’s commitment to addressing the response and recovery effort.
- Answer additional questions. The designated media personnel should handle all media questions.
- Say no comment. It sounds like you’re hiding something. If necessary, explain why it is not appropriate or possible for you to answer the questions.

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Section 4: Emergency Response Procedures

Note: For more in-depth information on regulatory reporting requirements refer to NorthRiver’s internal Regulatory Reporting Requirements document and process.

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.

Shelter-In-Place

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

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

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

Refer to either **Section 2: Roles and Responsibilities** or **Section 6: Forms** for Form B7 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

The licensee is expected to monitor the air quality along the edge of the EPZ to determine if sheltering or evacuation criteria have been met outside the EPZ.

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

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

Special procedures may be required for evacuating large industrial operations and/or public facilities. If large numbers of people are involved, the 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.

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.

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

- the increased risk(s) of delayed ignition,
- whether the perimeter of the hazard area has been established,
- whether the public has been evacuated from the area,
- whether ignition will worsen the situation by endangering the public or the environment or damaging the equipment used to control the product,
- whether wind direction has been established and is it being continually monitored, and
- whether the possibility of an explosion has been assessed (i.e. obstructions or regions of congestion within the perimeter of the dispersing vapour cloud).

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.

Road and Airspace Closures

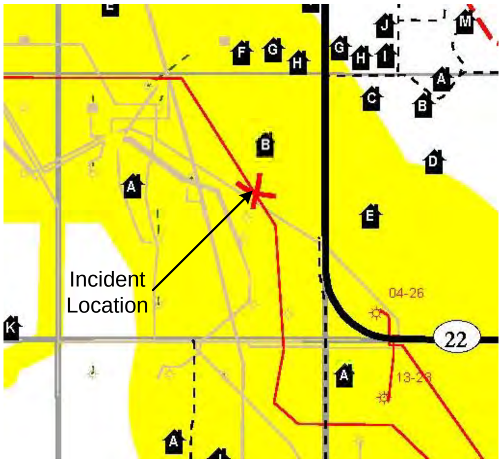
The company should receive authorization from local authorities or the RCMP before establishing roadblocks on public roads. The company must contact the RCMP and the transportation authority to have one-, two– or three-digit highways closed. However, if the safety of the public is in jeopardy, the company 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 for NAV CANADA to issue a Notice to Airmen (NOTAM) to advise the 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 or closure of airspace may be requested by the regulatory agency at a level 2 or level 3 emergency.

Public Protection Measures, continued

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



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

EPZ - Emergency Planning Zone
IIZ - Initial Isolation Zone
PAZ - Protective Action Zone

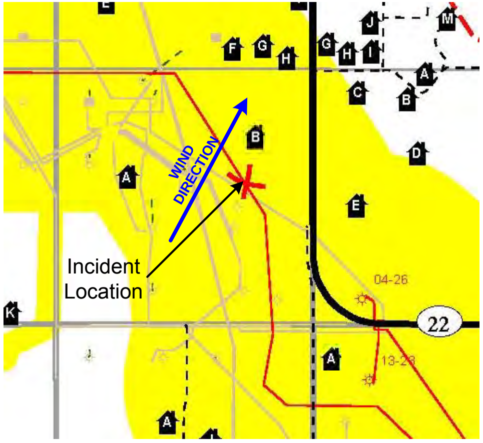
You can find this information:
a) Labeled on the map
b) In the site specific tables
c) As the yellow area on the map

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.

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.

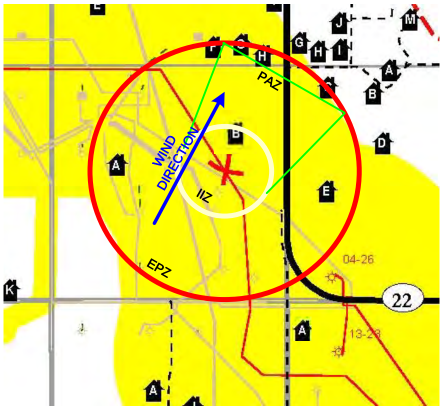


4. Draw the zones on map:

a) EPZ - The entire hazard area

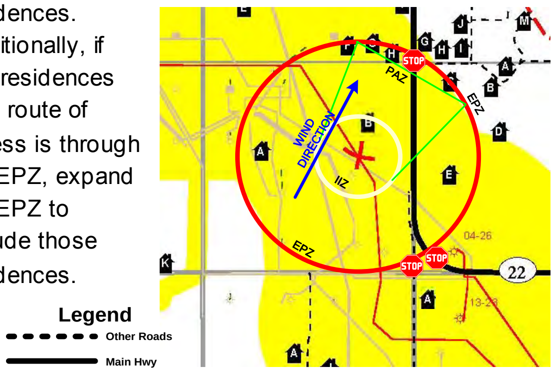
b) IIZ - Those closest to the hazard

c) PAZ - Those downwind of the hazard



5. Isolate the hazard area with roadblocks

If any residences exist between the optimal roadblock location and the EPZ, expand the EPZ to include those residences. Additionally, if any residences only route of egress is through the EPZ, expand the EPZ to include those residences.



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

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

Residents in the PAZ 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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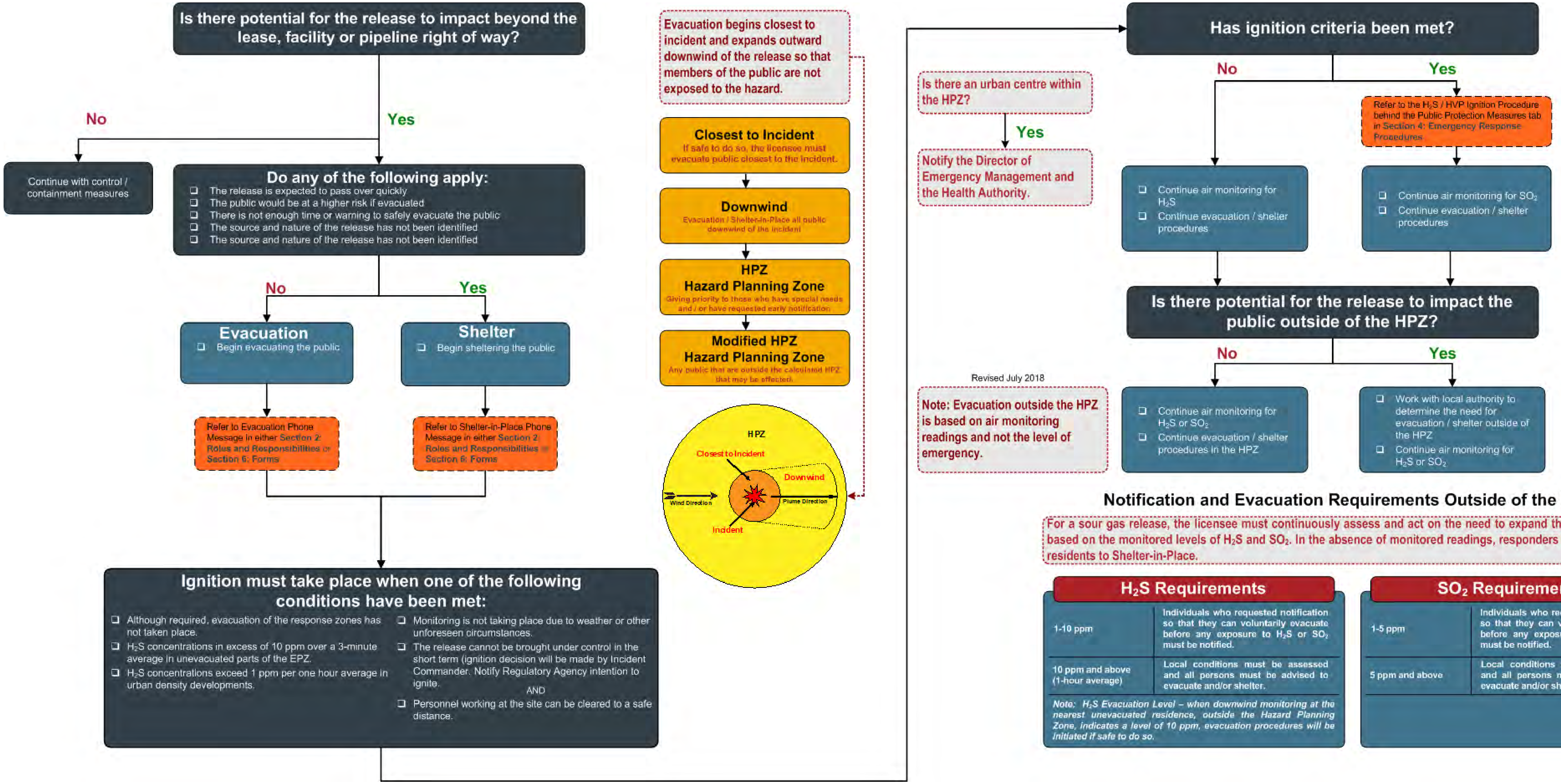
Public Protection Measures Flowchart



Is there potential for the release to impact beyond the lease, facility or pipeline right of way?

No

Continue with control / containment measures

Yes

Do any of the following apply:

- ☐ The release is expected to pass over quickly
- ☐ The public would be at a higher risk if evacuated
- ☐ There is not enough time or warning to safely evacuate the public
- ☐ The source and nature of the release has not been identified
- ☐ The source and nature of the release has not been identified

No

Evacuation

- ☐ Begin evacuating the public

Refer to Evacuation Phone Message in either Section 2: Roles and Responsibilities or Section 6: Forms

Yes

Shelter

- ☐ Begin sheltering the public

Refer to Shelter-in-Place Phone Message in either Section 2: Roles and Responsibilities or Section 6: Forms

Ignition must take place when one of the following conditions have been met:

- ☐ Although required, evacuation of the response zones has not taken place.
- ☐ H_2S concentrations in excess of 10 ppm over a 3-minute average in unevacuated parts of the EPZ.
- ☐ H_2S concentrations exceed 1 ppm per one hour average in urban density developments.
- ☐ Monitoring is not taking place due to weather or other unforeseen circumstances.
- ☐ The release cannot be brought under control in the short term (ignition decision will be made by Incident Commander. Notify Regulatory Agency intention to ignite.

AND

- ☐ Personnel working at the site can be cleared to a safe distance.

Evacuation begins closest to incident and expands outward downwind of the release so that members of the public are not exposed to the hazard.

Closest to Incident
If safe to do so, the licensee must evacuate public closest to the incident.

Downwind
Evacuation / Shelter-in-Place all public downwind of the incident

HPZ
Hazard Planning Zone
Giving priority to those who have special needs and / or have requested early notification

Modified HPZ
Hazard Planning Zone
Any public that are outside the calculated HPZ that may be affected.

Is there an urban centre within the HPZ?

Yes

Notify the Director of Emergency Management and the Health Authority.

Revised July 2018

Note: Evacuation outside the HPZ is based on air monitoring readings and not the level of emergency.

Has ignition criteria been met?

No

- ☐ Continue air monitoring for H_2S
- ☐ Continue evacuation / shelter procedures

Yes

Refer to the H_2S / HVP Ignition Procedure behind the Public Protection Measures tab in Section 4: Emergency Response Procedures

- ☐ Continue air monitoring for SO_2
- ☐ Continue evacuation / shelter procedures

Is there potential for the release to impact the public outside of the HPZ?

No

- ☐ Continue air monitoring for H_2S or SO_2
- ☐ Continue evacuation / shelter procedures in the HPZ

Yes

- ☐ Work with local authority to determine the need for evacuation / shelter outside of the HPZ
- ☐ Continue air monitoring for H_2S or SO_2

Notification and Evacuation Requirements Outside of the HPZ

For a sour gas release, the licensee must continuously assess and act on the need to expand the evacuation area based on the monitored levels of H_2S and SO_2. In the absence of monitored readings, responders should advise the residents to Shelter-in-Place.

H_2S Requirements

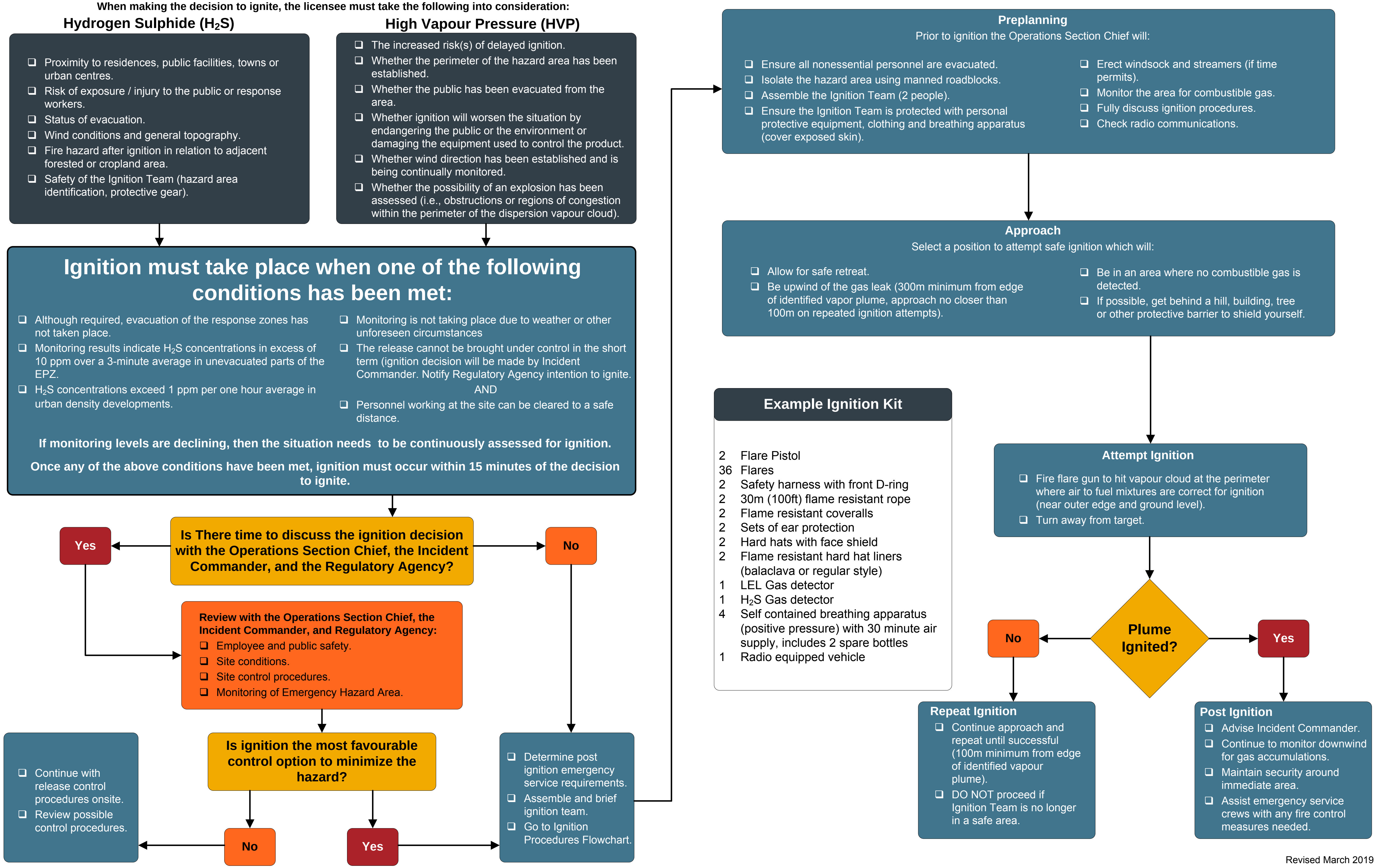
1-10 ppm	Individuals who requested notification so that they can voluntarily evacuate before any exposure to H_2S or SO_2 must be notified.
10 ppm and above (1-hour average)	Local conditions must be assessed and all persons must be advised to evacuate and/or shelter.

Note: H_2S Evacuation Level – when downwind monitoring at the nearest unevacuated residence, outside the Hazard Planning Zone, indicates a level of 10 ppm, evacuation procedures will be initiated if safe to do so.

SO_2 Requirements

1-5 ppm	Individuals who requested notification so that they can voluntarily evacuate before any exposure to H_2S or SO_2 must be notified.
5 ppm and above	Local conditions must be assessed and all persons must be advised to evacuate and/or shelter.

H_2S / HVP Ignition Procedure



Pre-Ignition Considerations – On-Site Group Supervisor

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

Hydrogen Sulphide (H_2S)

- ❑ Proximity to residences, public facilities, towns or urban centres.
- ❑ Risk of exposure / injury to the public or response workers.
- ❑ Status of evacuation.
- ❑ Wind conditions and general topography.
- ❑ Fire hazard after ignition in relation to adjacent forested or cropland area.
- ❑ Safety of the Ignition Team (hazard area identification, protective gear).

High Vapour Pressure (HVP)

- ❑ The increased risk(s) of delayed ignition.
- ❑ Whether the perimeter of the hazard area has been established.
- ❑ Whether the public has been evacuated from the area.
- ❑ Whether ignition will worsen the situation by endangering the public or the environment or damaging the equipment used to control the product.
- ❑ Whether wind direction has been established and is being continually monitored.
- ❑ Whether the possibility of an explosion has been assessed (i.e., obstructions or regions of congestion within the perimeter of the dispersion vapour cloud).

Ignition must take place when one of the following conditions has been met:

- ❑ Although required, evacuation of the response zones has not taken place.
- ❑ Monitoring results indicate H_2S concentrations in excess of 10 ppm over a 3-minute average in unevacuated parts of the EPZ.
- ❑ H_2S concentrations exceed 1 ppm per one hour average in urban density developments.
- ❑ Monitoring is not taking place due to weather or other unforeseen circumstances
- ❑ The release cannot be brought under control in the short term (ignition decision will be made by Incident Commander. Notify Regulatory Agency intention to ignite.

AND

- ❑ Personnel working at the site can be cleared to a safe distance.

If monitoring levels are declining, then the situation needs to be continuously assessed for ignition.

Once any of the above conditions have been met, ignition must occur within 15 minutes of the decision to ignite.

Is There time to discuss the ignition decision with the Operations Section Chief, the Incident Commander, and the Regulatory Agency?

Yes

Review with the Operations Section Chief, the Incident Commander, and Regulatory Agency:

- ❑ Employee and public safety.
- ❑ Site conditions.
- ❑ Site control procedures.
- ❑ Monitoring of Emergency Hazard Area.

Is ignition the most favourable control option to minimize the hazard?

No

- ❑ Continue with release control procedures onsite.
- ❑ Review possible control procedures.

Yes

No

- ❑ Determine post ignition emergency service requirements.
- ❑ Assemble and brief ignition team.
- ❑ Go to Ignition Procedures Flowchart.

Ignition Procedure – On-Site Group Supervisor

Preplanning

Prior to ignition the Operations Section Chief will:

- ❑ Ensure all nonessential personnel are evacuated.
- ❑ Isolate the hazard area using manned roadblocks.
- ❑ Assemble the Ignition Team (2 people).
- ❑ Ensure the Ignition Team is protected with personal protective equipment, clothing and breathing apparatus (cover exposed skin).
- ❑ Erect windsock and streamers (if time permits).
- ❑ Monitor the area for combustible gas.
- ❑ Fully discuss ignition procedures.
- ❑ Check radio communications.

Approach

Select a position to attempt safe ignition which will:

- ❑ Allow for safe retreat.
- ❑ Be upwind of the gas leak (300m minimum from edge of identified vapor plume, approach no closer than 100m on repeated ignition attempts).
- ❑ Be in an area where no combustible gas is detected.
- ❑ If possible, get behind a hill, building, tree or other protective barrier to shield yourself.

Attempt Ignition

- ❑ Fire flare gun to hit vapour cloud at the perimeter where air to fuel mixtures are correct for ignition (near outer edge and ground level).
- ❑ Turn away from target.

Plume Ignited?

No

Repeat Ignition

- ❑ Continue approach and repeat until successful (100m minimum from edge of identified vapour plume).
- ❑ DO NOT proceed if Ignition Team is no longer in a safe area.

Yes

Post Ignition

- ❑ Advise Incident Commander.
- ❑ Continue to monitor downwind for gas accumulations.
- ❑ Maintain security around immediate area.
- ❑ Assist emergency service crews with any fire control measures needed.

Example Ignition Kit

2	Flare Pistol
36	Flares
2	Safety harness with front D-ring
2	30m (100ft) flame resistant rope
2	Flame resistant coveralls
2	Sets of ear protection
2	Hard hats with face shield
2	Flame resistant hard hat liners (balaclava or regular style)
1	LEL Gas detector
1	H_2S Gas detector
4	Self contained breathing apparatus (positive pressure) with 30 minute air supply, includes 2 spare bottles
1	Radio equipped vehicle

Revised March 2019

British Columbia Petroleum Industry Release Reporting Requirements

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

Agency	Reportable Spills	Report Type	Report to
Emergency Management BC (EMBC) **BC Oil & Gas Commission (OGC)**	Report when: 1) If a spill/release occurs or is at imminent risk of occurring. 2) All oil and produced water spills related to the Oil & Gas Industry. 3) All "Minor" incidents involving a leak or spill of any substance. *<u>**See Note</u>*** 4) All spills or releases of any amount of material which impacts or may impact a body of water. 5) All spills or releases of hazardous substances; which are not provincially regulated (such as radioactive substances). 6) All pipeline incidents, such as spills during construction phase or failure (without release) of any pressure control or ESD device. 7) All Substances spilled/released, or likely to be spilled/released when quantities are equal to or exceed the quantities listed in the Environment Reporting Requirements column in the **Release Reporting Thresholds** table on the following page. Response to land based spills: 1) During the day must be initiated within 6 hours from time of discovery. 2) During the weekend or night must be initiated within 12 hours from time of discovery.	Verbal	OGC / EMBC 24 Hour Number 800-663-3456 (Within 1 hour of a level 1, 2 or 3 emergency)
		Written / Verbal	OGC / EMBC 24 Hour Number 800-663-3456 and by electronic submission through the Online Minor Incident Reporting System, operated through KERMIT (Within 24 hours of a Minor incident)
		Written	**Minister of Environment** **Initial Report** - as soon as possible on request of the minister **Follow-up Report** - at least once every 30 days after the spill began (if continuing) and any time the previously reported information has become inaccurate or incomplete **End of Spill Report** - 30 days after emergency response completion date for that spill
Canadian Environmental Protection Agency (CEPA)	Environmental emergencies if: 1) The emergency involves any of the substances identified in Environment & Climate Change Canada's E2 List of regulated substances. See the website link at the bottom of the following page for more information. Note: CEPA has not identified specific reporting thresholds; however, CEPA has suggested that existing provincial reporting thresholds or TDG reporting thresholds are acceptable for use.	Verbal	OGC / EMBC 24 Hour Number 800-663-3456
		Written	Within 30 days
Transportation of Dangerous Goods (TDG)	Substances regulated by Transportation of Dangerous Goods if: 1) A release is anticipated, or the release meets or exceeds the reporting threshold in the TDG Reporting Requirements column in the **Release Reporting Thresholds** table on the following page.	Verbal	911 Local Authority Dangerous Goods OGC / EMBC 800-663-3456
		Written	Within 30 days
Canadian Transport Emergency Centre (CANUTEC)	Loss and theft reporting: 1) CANUTEC - all loss or theft of dangerous goods materials 2) Natural Resources Canada Inspector - Class 1 explosive materials only 3) Canadian Nuclear Safety Commission - Class 7 radioactive materials only	Verbal	1) 888-226-8832 or 613-996-6666 2) 613-995-5555 3) 613-995-0479
		Written	Within 30 days
Department of Fisheries and Oceans (DFO)	1) A release of any substance deleterious to fish into a fish bearing water body.	Verbal	OGC / EMBC 24 Hour Number 800-663-3456
Canada Energy Regulator (CER)	Immediately reportable events as defined in the NEB Event Reporting Guidelines December 2017: 1) An incident that harms people or the environment, 2) A rupture, or 3) A toxic plume Note: Immediately reportable incidents must be reported within 3 hours to both the TSB Reporting Hotline and CER's OERS. If applicable, refer to the Federal Roles & Responsibilities chart in SECTION 5: EXTERNAL AGENCIES and the CER site section behind the AREA SPECIFIC INFORMATION tab for further regulations, definitions and reporting guidelines.	Verbal	Via Transportation Safety Board (TSB) Reporting Hotline 819-997-7887
		Written	CER Online Event Reporting System (OERS) https://apps.cer-rec.gc.ca/ers/home/index
Canadian Nuclear Safety Commission (CNSC)	All radioactive releases must be reported immediately.	Verbal	613-995-0479
		Written	Within 21 days
Indian Oil & Gas (IOGC)	Immediately reportable events on First Nation reserve lands only: 1) Any health or environment-threatening emergency or off-lease spills. 2) On-lease spills greater than 1m^3.	Verbal	IOGC Tsuu T'ina Office 403-292-5625

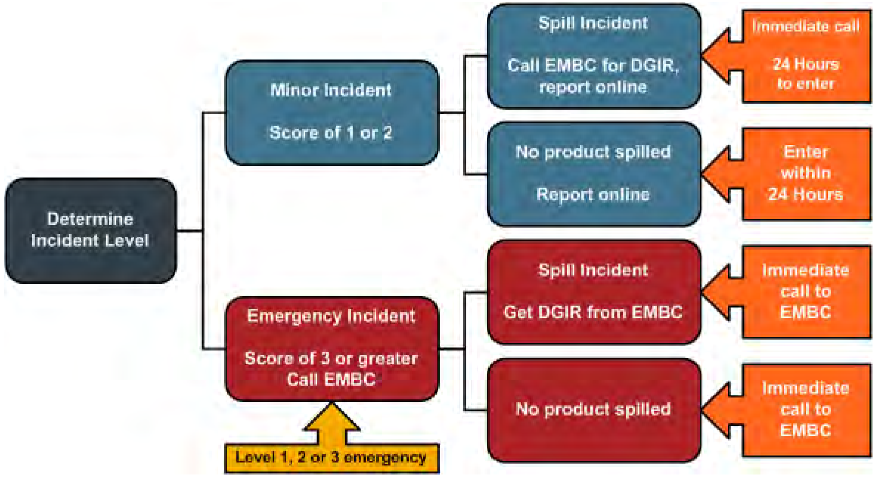
<u>Note:</u> The permit holder must report any minor incident (both spill and non-spill related) to the OGC within 24 hours by electronic submission through the Online Minor Incident Reporting System, opened through KERMIT (Form A). In addition to Form A, minor spills and leaks must also be reported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

Lead Agency Contact Numbers

British Columbia	
Emergency Management BC (EMBC)	800-663-3456
BC Oil & Gas Commission (OGC)	
Canada	
Western Canadian Spill Services (WCSS)	
Western Canada	866-541-8888
CANUTEC	
All Provinces	888-CAN-UTEC (888-226-8832) 613-996-6666
Canada Energy Regulator / Transportation Safety Board of Canada	
Incident Reporting Line	819-997-7887

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

Incident Reporting Process



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

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

See following page for spill/release quotas.

British Columbia spill reporting
document updated February 2020

British Columbia Petroleum Industry
Release Reporting Requirements

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

Chemical Class	Substance / Example	T.D.G. Reporting Requirements		B.C. (OGC / EMBC) Reporting Requirements
		Road, Rail or Marine	Loss or Theft	
Spilled Liquid Substances	Hydraulic Oil	No TDG Reporting Requirements		100 L on-site Any release off-site
	Methanol	See Class 3 & 6.1		
	Natural Gas	See Class 2.1		10 kg or $15m^3$ if there is a break in a pipeline or fitting operated above 100 psi that result in an uncontrollable release of natural gas
	Crude Oil / Emulsion	See Class 3		100 L on-site / Any release off-site
	Produced / Salt Water	No TDG Reporting Requirements		200 L / Any release off-site
	Drilling or Invert Mud	No TDG Reporting Requirements		100 L on-site / Any release off-site
	Condensate	See Class 3		
	Glycol	No TDG Reporting Requirements		200 kg or 200 L
	Fresh Water	No TDG Reporting Requirements		10,000 L
	Any fluid with toxic substances	No TDG Reporting Requirements		25 L
Class 1 Explosives	Ammunition Nitro-glycerine	Any quantity of Packing Group II	Any quantity in Class 1.1, 1.2, and 1,3 Total quantity of 450 kg or more in Class 1.4 (except 1.4S), 1.5, or 1.6	All releases which could pose a danger, or 50 kg
Class 2.1 Flammable Gases	H_2S	Any quantity	Total quantity of 450 kg or more	10 kg or 100 L where the hydrocarbon contains no toxic materials and does not impact water ways
	Methane Propane Butane Natural Gas			
Class 2.2 Non-Flammable Gases	Compressed Air O_2 N_2 CO_2		No TDG Reporting Requirements	10 kg
Class 2.3 Toxic Gases (poisonous or corrosive)	H_2S SO_2 Hydrogen Cyanide Nitric Acid Anhydrous Ammonia		Any quantity	5 kg
Class 3 Flammable Liquids	Gasoline Diesel Methanol Demulsifiers Scale Inhibitors	Any quantity of Packing Group I or II More than 30 L or 30 kg of Packing Group III	Total quantity of 450 kg or more of desensitized explosives Any quantity of UN1261, Nitromethane	100 L
	Lube Oil			100 L
Class 4.1 Flammable Solids	Calcium Resinate Naphthalene Crude		Total quantity of 450 kg or more of desensitized explosives Any quantity of UN1357, Urea Nitrate, with not less than 20% water, by mass; UN3370, Urea Nitrate, Wetted, with not less than 10% water by mass	25 kg
Class 4.2 Spontaneously Combustible	Activated Carbon Potassium Sulphide Phosphorus		Total quantity of 450 kg or more in Packing Groups I or II	
Class 4.3 Dangerous when Wet	Molten Sulphur Calcium Carbide Sodium Activated Carbon		Total quantity of 450 kg or more in Packing Groups I or II	
Class 5.1 Oxidizing Substances	Calcium Nitrate Ammonium Nitrate Bleaches		Total quantity of 450 kg or more in Packing Groups I or II Any quantity of UN1485, Potassium Chlorate; UN1486, Potassium Nitrate; UN 1487, Potassium Nitrate and Sodium Nitrate Mixture; UN1489, Potassium Perchlorate; UN1495, Sodium Chlorate; UN1498, Sodium Nitrate; UN1499 Sodium Nitrate and Potassium Nitrate Mixture; UN1511, Urea Hydrogen Peroxide; UN1942 Ammonia Nitrate, with not more than 0.2% combustible substances, including any organic substance calculated as carbon, to the exclusion of any other added substances; UN2014 Hydrogen Peroxide, Aqueous Solution with not less than 20% but not less than 60% hydrogen peroxide (stabilized as necessary); UN2015, Hydrogen Peroxide, Stabilized; UN2031, Nitric Acid, other than red fuming; UN3149, Hydrogen Peroxide and Peroxyacetic Acid Mixture with acid(s), water and not more than 5% peroxyacetic acid, stabilized	50 kg or 50 L
Class 5.2 Organic Peroxides	Methyl Ethyl Ketone Peroxide Succinic Acid Peroxide		Any quantity in Class 5.2, Type B, liquid or solid, temperature controlled	1 kg or 1 L
Class 6.1 Poisonous Toxic Substances	Arsenic Lead Acetate Mercuric Oxide Methanol Toxic Pesticides		Any quantity of Packing Group I	5 kg or 5 L
Class 6.2 Infectious Substances	Infectious Substances affecting Humans / Animals	Any quantity of Category A or B	Any quantity	1 kg or 1 L, or less if the waste poses a danger to public safety or the environment
Class 7 Radioactive Substances	Uranium Plutonium Naturally Occurring Radioactive Materials (N.O.R.M.)	For packages being transported under exclusive use: (i) 10 mSv/h on the external surface (ii) 2 mSv/h on the surface of the conveyance, and (iii) 0.1 mSv/h at a distance of 2 m from the surface For packages not being transported under exclusive use: (i) 2 mSv/h on the external surface (ii) 0.1 mSv/h at a distance of 1m from the package, (iii) 2 mSv/h on the surface of the conveyance, and (iv) 0.1 mSv/h at a distance of 2m from the surface of the conveyance.	Any quantity	Any quantity that could pose a danger to public safety and an emission level greater than the emission level established in section 20 of the "Packaging and Transport of Nuclear Substance Regulations"
Class 8 Corrosives	Acids Bases Batteries Caustic Amine	Any quantity of Packing Group I or II 30 L or 30 kg of Packing Group III	Total quantity of 450 kg or more in Packing Group I or II Any quantity of UN1796, Nitrating Acid Mixture with more than 50% nitric acid; UN1826, Nitrating Acid Mixture, Spent, with more than 50% nitric acid; UN2032, Nitric Acid, Red Fuming	5 kg or 5 L
Class 9 Miscellaneous Products, Substances & Organisms, Environmentally Hazardous Substances	P.C.B. Asbestos Substances not regulated by the *Transportation of Dangerous Goods Act*	30 L or 30 kg of Packing Group II or III, or without Packing Group	No TDG Reporting Requirements	30 L or 30 kg of Packing Group II or III, or without Packing Group

Other items in the BC Spill Reporting Regulation that are applicable to the petroleum industry but do not fit in the above table format.

Item	Substance Spilled	Specified Amount
14	Waste containing dioxin as defined in Section 1 of the Hazardous Waste Regulation	1 k or 1 L, or less if the waste poses a danger to public safety or the environment
15	Leachable toxic waste as defined in Section 1 of the Hazardous Waste Regulation	25 kg or 25 L
16	Waste containing polycyclic aromatic hydrocarbons as defined in Section 1 of the Hazardous Waste Regulation	5 kg or 5 L
17	Waste asbestos as defined in Section 1 of the Hazardous Waste Regulation	50 kg
18	Waste oil as defined in Section 1 of the Hazardous Waste Regulation	100 L
20	PCB wastes as defined in Section 1 of the Hazardous Waste Regulation	25 kg or 25 L
23	A hazardous waste as defined in Section 1 of the Hazardous Waste Regulation and not covered under items 1 to 22 (built into above table)	25 kg or 25 L
24	A substance, not covered by items 1 to 23 (built into above table) that can cause pollution	200 kg or 200 L

For all other reportable substances/quantities, please refer to company SDS sheets for more information.

List of Environment & Climate Change Canada's E2 Regulated Substances: http://gazette.gc.ca/rp-pr/p2/2019/2019-03-06/html/sor-dors51-eng.html

Spill Response, continued

Spill Response Guidelines

This section provides basic hydrocarbon spill response guidelines. For greater detail, refer to the Western Canada Spill Services (WCSS) manuals, applicable Safety Data Sheets (SDS) and the Emergency Response Assistance Plan (ERAP). Refer to the Petroleum Industry Release Reporting Requirements chart at the beginning of this section to determine the TDG and Provincial Reporting Requirements for each class of chemicals (as classified by the TDG Hazard Classification System).

Initial Response Actions:

- Determine the Level of Emergency using the Assessment Matrix in **Section 1: Initial Response**.
- Determine spilled substance. If it can be classified as an LPG release, isolate the area to a minimum distance of 1600 meters (1 mile) and refer to the BLEVE portion of the fire / explosion section.
- Assess spill hazards and risks. Determine what PPE will be required.

Considerations:

- Are there any nearby public (workers, traffic, residents) that would need to be evacuated or diverted from the spill area?
- Is there a fire or explosion hazard? What is the ignition source?
- Is there H_2S or other toxins present? Are concentrations safe or is additional PPE needed?
- Are there any areas deemed hazardous? (Mark with flags)
- What are the ground and weather conditions? (Snow, gravel, sand etc.)
- Where is the location of the leak, the type of release and the volume released? Is it reportable? Has it been reported to the regulator?
- How long has the spill been taking place?
- Are air monitoring trailers required?
- Is the spill into a watercourse, watershed or a water body?
- Is the spill contained or migrating? Which direction? How far can it go?
- If the spill is not contained, determine and prioritize the containment points and methods to be used.
- What lands or water bodies may be affected? (Farm, livestock, brush, drinking water, etc.)
- How is it going to be contained and cleaned up?
- How to access the spill site, the source of the spill and recovery points?
- What equipment is required? Is oil spill equipment (oil spill co-op) required?
- Where can spill responders park so as not to interfere with spill equipment? (Minimize vehicular traffic as much as possible at the spill site.)
- Are there any residences in the area? Do they have water wells that could be affected?
- Should the spill site be cordoned off to prevent wildlife / livestock from entering?
- Will a media response be required?

Spill Response, continued

Control/Containment

- Remove all sources of ignition.
- Stop the spill if safely possible (e.g. shut off pump, replace cap, tip drum upward, patch leaking hole). Use the contents of the nearest spill kit to aid in stopping the spill if it is safe to do so.
- Assess speed and direction of spill and cause of movement (water, wind and slope).
- Use contents of spill kits to place sorbent materials on the spill, or use shovel to dig to contain spill. Methods may vary depending on the nature of the spill.
- Prioritize and set up containment points.
- Where possible, prevent a spill from entering a watercourse.
- Have a contingency plan ready in case spill worsens beyond control or if the weather or topography impedes containment.
- Avoid excessive walking or driving on the spill area.
- Consider ground disturbance guidelines.
- Surface run off may have to be diverted from the spill site if wet conditions are present.
- Mitigate or eliminate any danger to life, health, the environment or property arising from the spill.
- Ensure the health and safety of the persons responding to the spill.
- Once containment has been achieved, recovery and clean-up operations begin immediately.
- Recover as much product and saturated debris as possible.
- Keep environmental disturbance to a minimum.
- Take steps to rehabilitate any land affected by the spill.
- Take steps to prevent the occurrence of a similar spill.

External Notifications

- Follow notification procedures outlined at the beginning of this section as per the applicable provincial Petroleum Industry Release Reporting Requirements chart.
- Contact the applicable spill service (as outlined in the table below) to determine the closest available spill equipment and towing requirements. See contact information below:

British Columbia	Western Canadian Spill Services (WCSS)	866-541-8888
Alberta	Western Canadian Spill Services (WCSS)	866-541-8888

Spill Response, continued

Spill Control Points

Control points are pre-identified locations on watercourses that allow for the staging and deployment of oil spill containment and recovery equipment in response to oil spills that have occurred upstream of the control point. Control point selection is critical to an effective oil spill response and part of your risk assessment and development of site-specific emergency response plan information. For a detailed list of control points utilize the WCSS website (http://www.wcss.ab.ca).

An ideal control point should have:

- Quick access to the watercourse in all seasons, using clear ground, a road or a trail
- Adequate work space to conduct operations and to store required equipment with minimal need for clearing of brush and vegetation
- Sufficient space to deploy containment and recovery equipment quickly with minimal effort or obstructions (i.e. trees, rocks, steep banks, etc.) and minimal environmental impact
- Boat launch location(s) for boats assisting in containment and recovery operations.

Selection of control points with public access is preferred.

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

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

Action

Where a spill occurs, the person who had possession immediately before the spill shall take all reasonable and practical action. They should have due regard for the safety of the public, themselves, to stop and contain and minimize the effects of the spill.

Provincial oil and gas regulations require operators to take immediate steps to contain and clean up spilled upstream petroleum product. Upstream petroleum product refers to crude oil, salt water, emulsions, condensates, sour gas natural gas liquids and / or any combination of the materials listed that are generated during exploration and production activities.

Spill Response, continued

Recovery Techniques

There are two basic means of stopping the flow of petroleum products floating on a stream or river: a boom or a dam. If the stream or river if relatively large, booms are used. A dam may be constructed across the channel of a small stream with a low flow.

If a stream or river is to be boomed, the appropriate equipment should be obtained from the Local Spill Response Cooperative or mutual aid partners. Decisions must incorporate the following considerations:

- Width of stream or river to be boomed (where possible, the entire river width should be boomed)
- Allowable boom angle based on stream or river current and length of boom required
- Anchoring methods for the booms
- Methods to lay out and deploy a boom

If a dam is to be constructed across the stream, some allowance must be made for the flow of water past the dam. The Western Canadian Spill Services plan provides detailed information about oil spill containment and recovery.

Containment and Storage of Product

When commercial barriers are not suitable or available, particularly in remote areas, barriers must be improvised. Improvising depends on the materials at hand and the situation in which the spill occurred. In each case, the experience and innovative ability of the personnel at the spill site is needed for the successful containment of the oil spill.

Tank trucks, storage tanks or an earthen pit may be used to store recovered petroleum products. Access must be close enough to the recovery site so that hoses from the pumps can reach a tank truck. Storage tanks must be located on level, stable ground with access available for tank truck use. An earthen pit should only be constructed when tank trucks or storage tanks cannot be used. Earth-moving equipment and appropriate ground disturbance procedures will be required to construct a pit. A plastic lining should be used.

Disposal and Remedial Operations

Disposal of the product and site restoration actions will be determined for each site by consultation among operations personnel, the provincial environmental protection agency or other environmental regulators and any external contracted professional environmental consultants.

It is the company's responsibility when reporting a release to the regulatory agency or the Ministry of Environment (as appropriate) to inform any private individuals whose lands may be affected by the release. The company must notify the landowner of any release that occurs off a lease site, migrates off a lease site or occurs on an easement or right-of-way. The company is reminded that landowner cooperation is essential in being able to quickly respond to a release that is not on the normal working area of a lease site.

Western Canadian Spill Services (WCSS)

WCSS maintains spill contingency plans and provides spill response equipment to all member companies.

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

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

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

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.

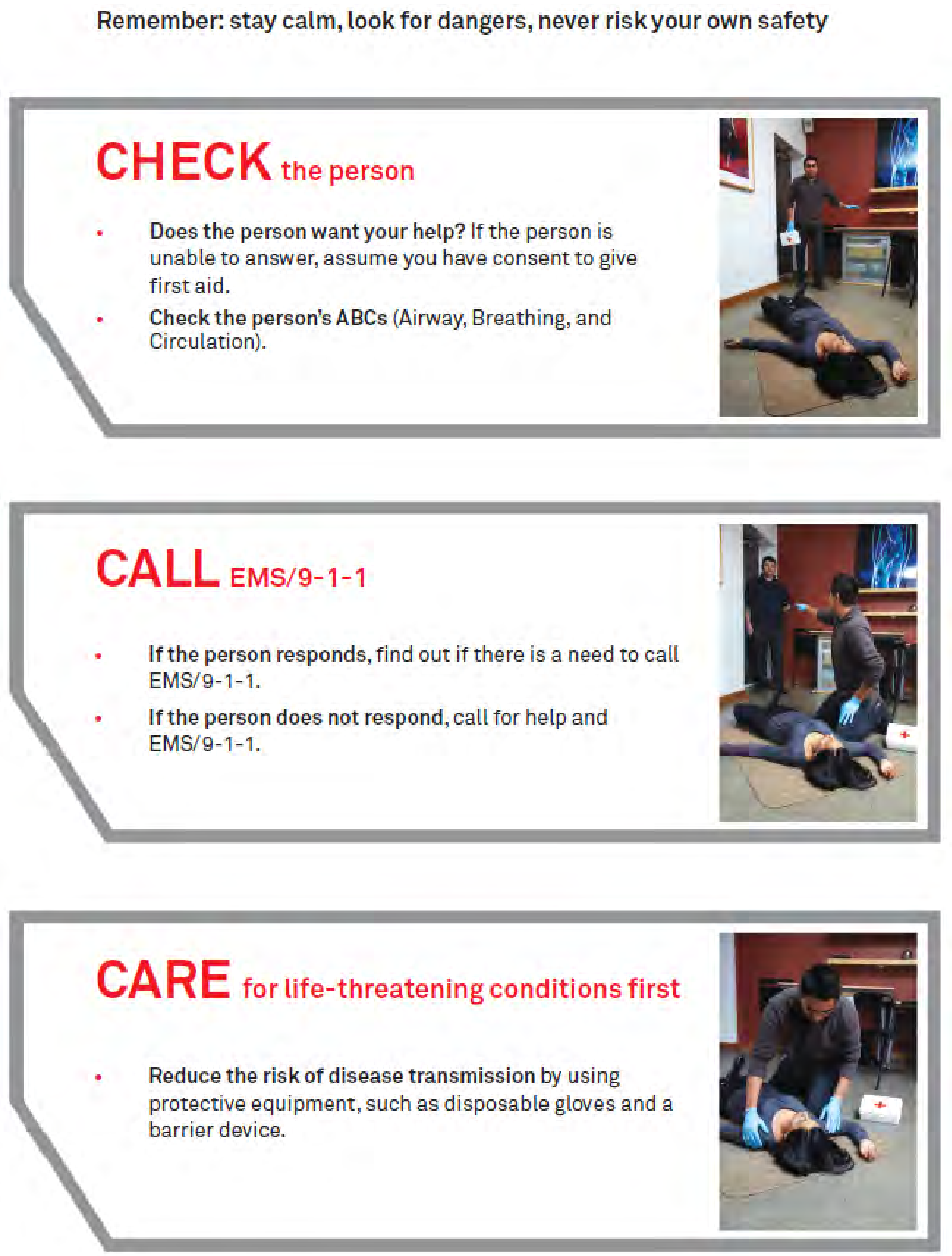
Within 30 days of the end of an incident, a Licensee must file with the Provincial Agency, Canada Energy Regulator (CER), and / or the Transportation Safety Board (TSB), an Operator Incident Summary Report structured as outlined by the Provincial / Federal Agency. After reviewing the Operator Incident 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

CHECK the person

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

CALL EMS/9-1-1

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

CARE for life-threatening conditions first

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

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

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

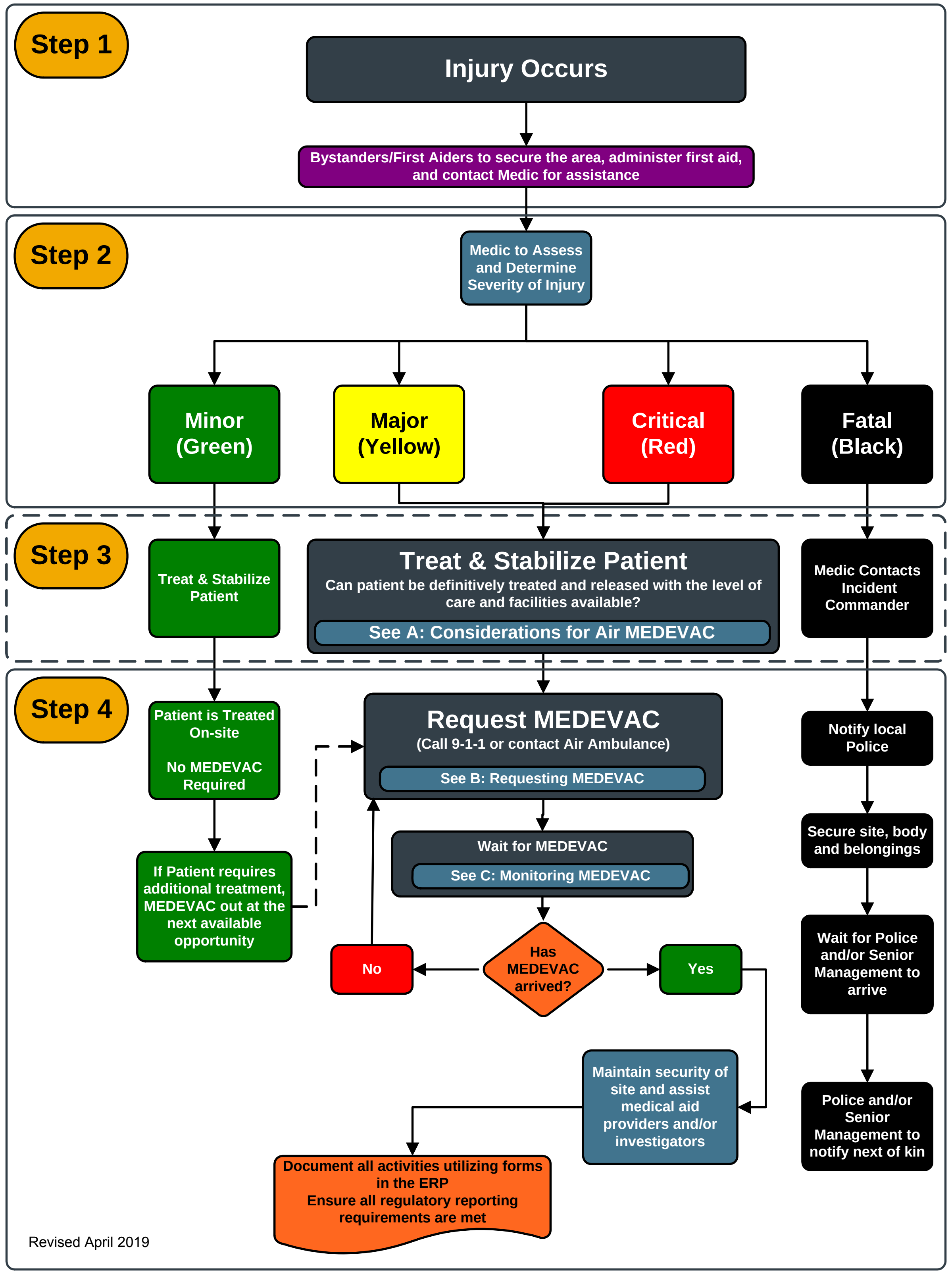
During the Notification of the Next-of-Kin, continued

- 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



Step 1

Injury Occurs

Bystanders/First Aiders to secure the area, administer first aid, and contact Medic for assistance

Step 2

Medic to Assess and Determine Severity of Injury

Minor (Green)

Major (Yellow)

Critical (Red)

Fatal (Black)

Step 3

Treat & Stabilize Patient

Treat & Stabilize Patient

Can patient be definitively treated and released with the level of care and facilities available?

See A: Considerations for Air MEDEVAC

Medic Contacts Incident Commander

Step 4

Patient is Treated On-site

No MEDEVAC Required

If Patient requires additional treatment, MEDEVAC out at the next available opportunity

Request MEDEVAC

(Call 9-1-1 or contact Air Ambulance)

See B: Requesting MEDEVAC

Wait for MEDEVAC

See C: Monitoring MEDEVAC

Has MEDEVAC arrived?

No

Yes

Maintain security of site and assist medical aid providers and/or investigators

Document all activities utilizing forms in the ERP
Ensure all regulatory reporting requirements are met

Notify local Police

Secure site, body and belongings

Wait for Police and/or Senior Management to arrive

Police and/or Senior Management to notify next of kin

Revised April 2019

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

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

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

2) Call for help:

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

Patient Priority Colour Code

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

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

For example:

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

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

For example:

- Open fractures
- Large lacerations

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

For example:

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

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

A: Considerations for Air MEDEVAC

Consider air transport when:

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

B: Requesting MEDEVAC

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

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

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

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

C: Monitoring MEDEVAC

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

When is MEDEVAC transport scheduled to arrive?: ________________

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

____

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

____

Emergency MEDEVAC Phone Numbers

PROVINCIAL AIR AMBULANCE:

Alberta	800-661-3822
British Columbia	911

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

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

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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 speciality 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 20% LEL or greater
- H_2S gas reading of 10 ppm or greater for 15 minutes
- SO_2 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

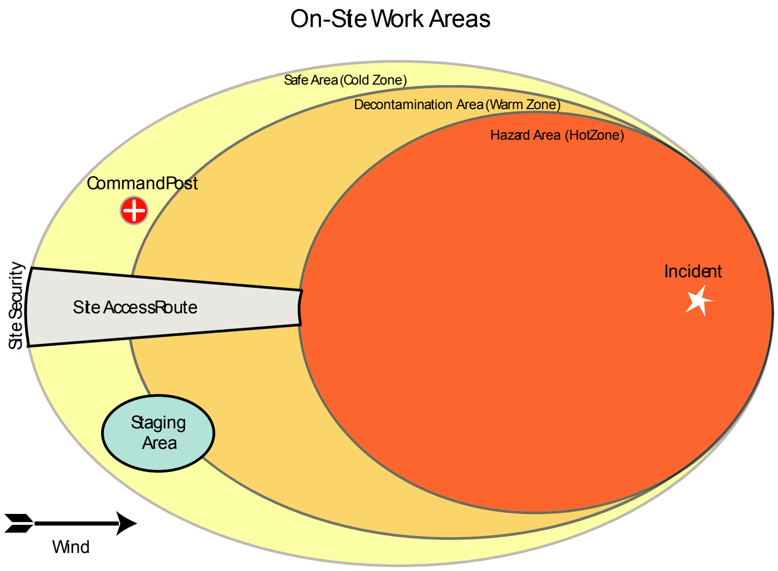
Decontamination is the complete or partial removal or neutralization of the harmful contamination chemicals. Some equipment will not withstand a proper decontamination process and therefore must be destroyed. Site safety personnel will recommend to the On-Site Group Supervisor whether clothing, instruments 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 on-site 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 24 hour security contractor, 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 the 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 Search Procedure

A worker would be considered missing if they fail to respond at the designated contact time and continuing attempts to contact them over the next fifteen (15) minutes have been unsuccessful.

If such a situation arises, the contact person shall:

1. Check in with the area district office to determine if the worker has checked in, or if anyone knows the whereabouts of the overdue worker;
2. Call the Fort St John Gas Control as appropriate to see if they have spoken with the overdue worker recently and if they know of their whereabouts;
3. If 1) and 2) are unsuccessful, report the situation to that worker's Supervisor, who in turn will initiate the Emergency Response Plan (ERP).
4. Continue to attempt to contact the worker by radio, phone and/or pager; and
5. Advise the Supervisor or their designate if you are successful in locating the overdue worker.

The Supervisor or their designate shall:

1. Report the situation to their respective Manager if after 5 minutes attempts to contact the overdue worker have been unsuccessful.
2. Attempt to contact other parties or persons (customers, contractors, suppliers, nearby facilities) to determine if they have any information of the overdue workers whereabouts;
3. Contact the local police detachment and inform them of the missing worker.
4. If the overdue worker’s whereabouts is unknown, determine the missing worker’s likely location(s) and the likely route(s) to and from that location, and only if weather permits dispatch worker(s) to those likely areas. Ensure that these persons are equipped with radios and/or cell phones so that they can communicate their status to other members of the search party; and
5. Advise management and the local police when the overdue worker has been successfully located.

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.

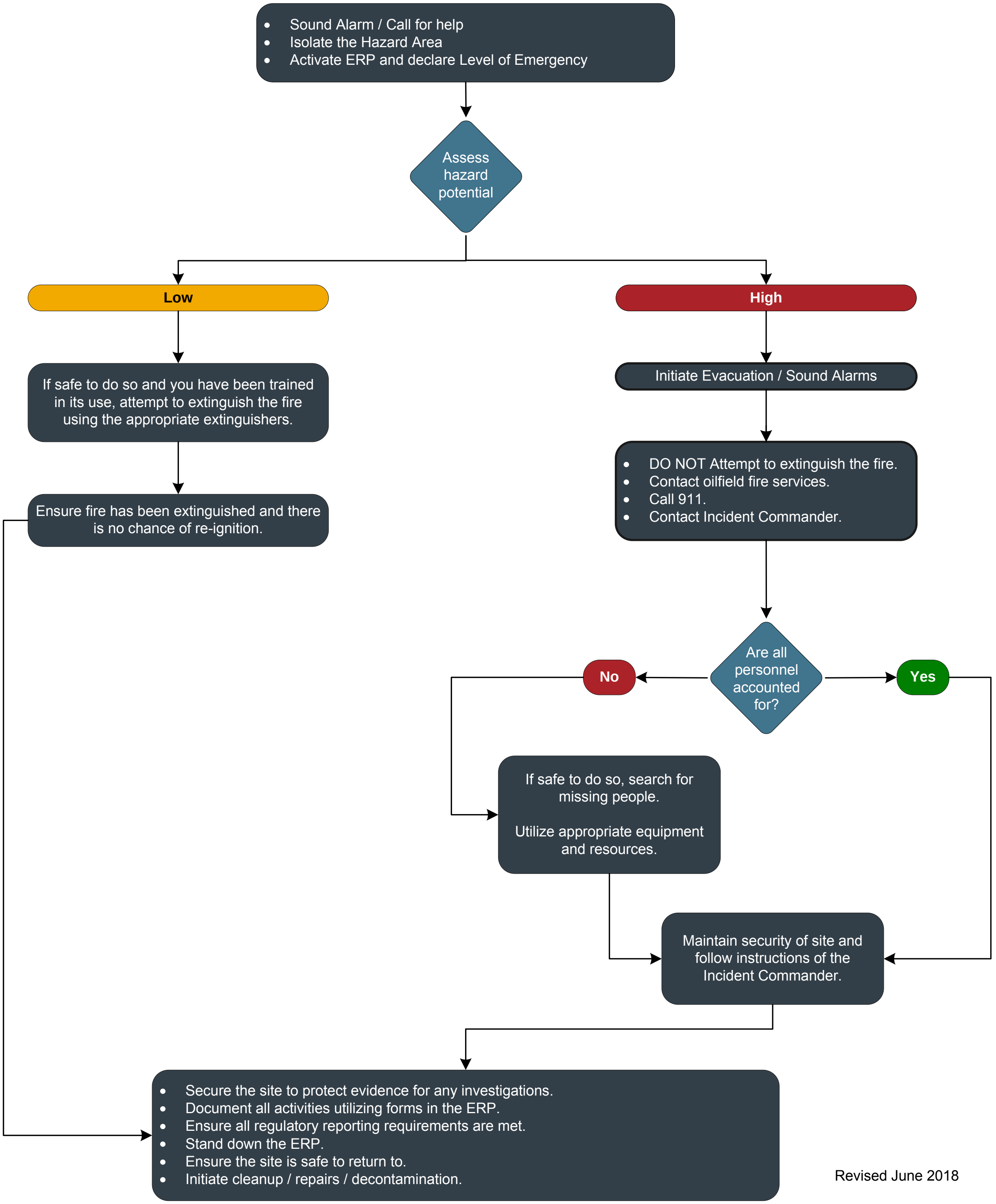
In high-stress assignments, responders should be routinely rotated. Where manpower is limited, responders should alternate from high-stress positions to lower-stress positions.

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 Consideration



- Sound Alarm / Call for help
- Isolate the Hazard Area
- Activate ERP and declare Level of Emergency

If safe to do so and you have been trained in its use, attempt to extinguish the fire using the appropriate extinguishers.

Ensure fire has been extinguished and there is no chance of re-ignition.

Initiate Evacuation / Sound Alarms

- DO NOT Attempt to extinguish the fire.
- Contact oilfield fire services.
- Call 911.
- Contact Incident Commander.

If safe to do so, search for missing people.

Utilize appropriate equipment and resources.

Maintain security of site and follow instructions of the Incident Commander.

- Secure the site to protect evidence for any investigations.
- Document all activities utilizing forms in the ERP.
- Ensure all regulatory reporting requirements are met.
- Stand down the ERP.
- Ensure the site is safe to return to.
- Initiate cleanup / repairs / decontamination.

Revised June 2018

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 fuel-related, 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;
  - 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.
  - 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.

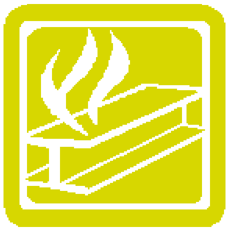
External Notifications:

- 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
A	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.
B	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.
C	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.
D 	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.
K	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_2) 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_2, 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

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) or *5555 (from cell, Prov-wide)
Alberta	310-FIRE (3473) (Prov-wide)

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:

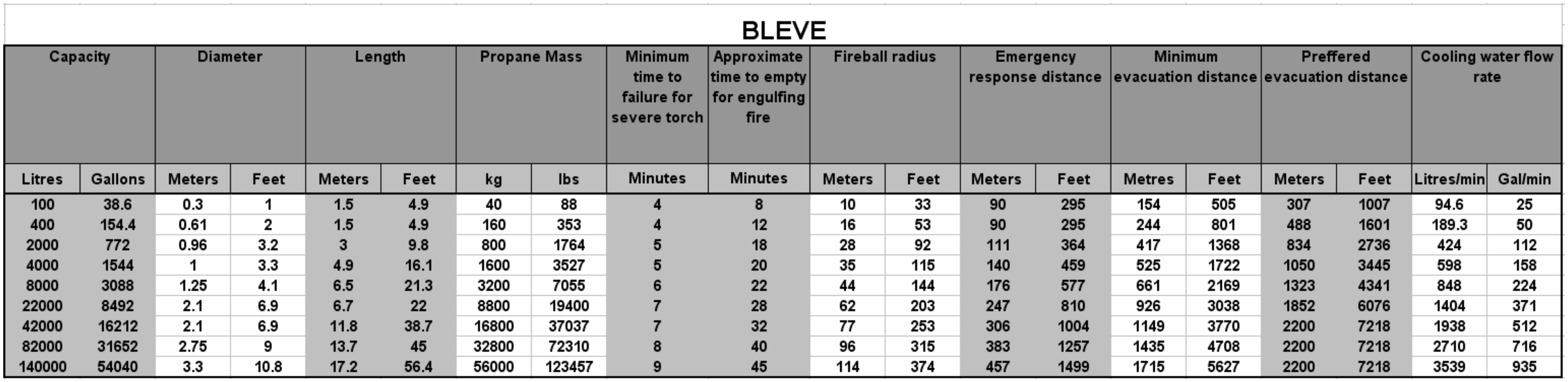
The hazards associated with a BLEVE include the initial impact of the blast, the fireball and radiation from the explosion and projectiles (pieces of the tank and nearby equipment) that are rocketed from the explosion.

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.

Fire / Explosion, continued

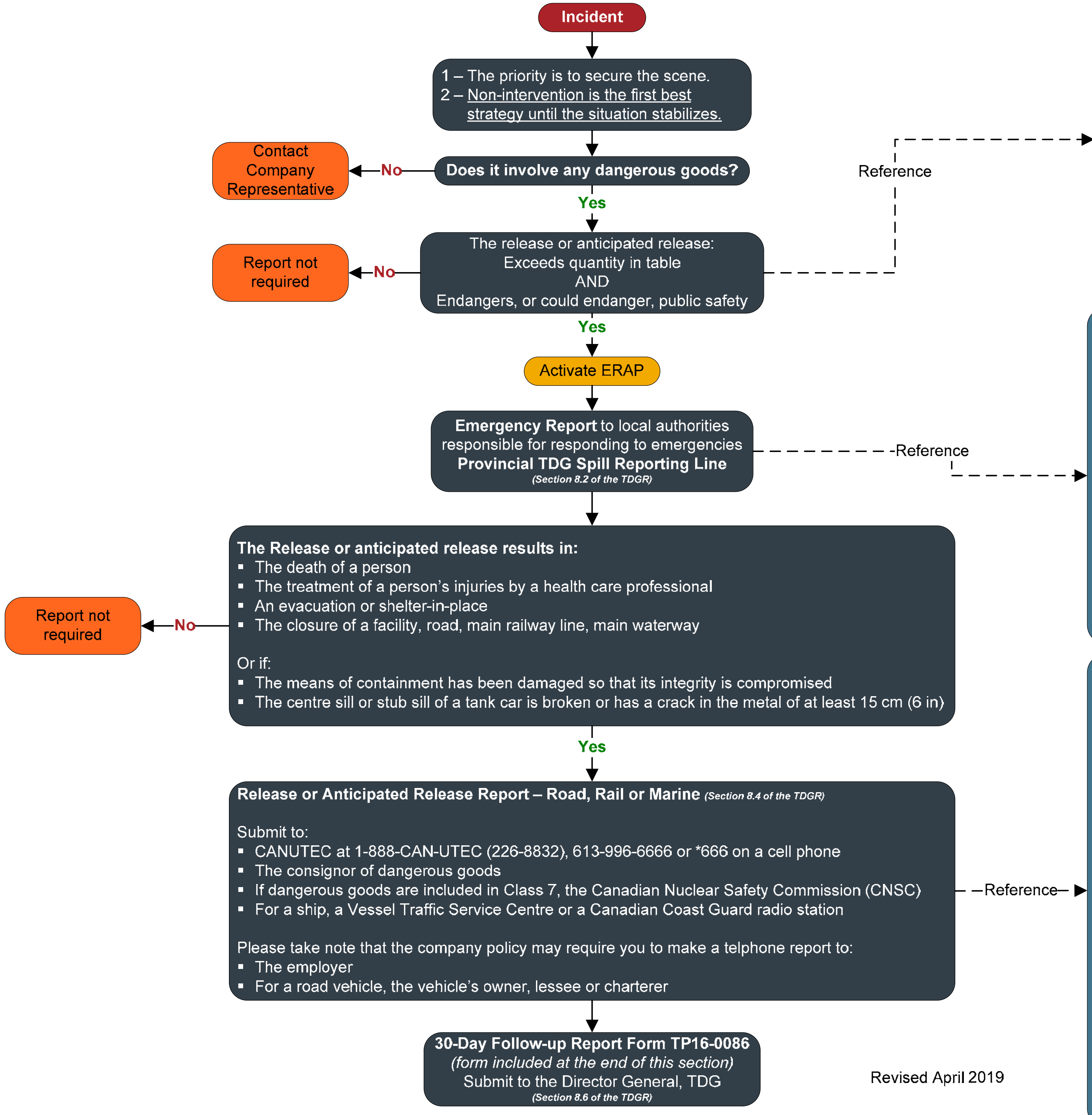
BLEVE Considerations Based on Tank Capacity



BLEVE

Capacity		Diameter		Length		Propane Mass		Minimum time to failure for severe torch	Approximate time to empty for engulfing fire	Fireball radius		Emergency response distance		Minimum evacuation distance		Preffered evacuation distance		Cooling water flow rate	
Litres	Gallons	Meters	Feet	Meters	Feet	kg	lbs	Minutes	Minutes	Meters	Feet	Meters	Feet	Metres	Feet	Meters	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

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



Incident

1 – The priority is to secure the scene.
2 – Non-intervention is the first best strategy until the situation stabilizes.

Does it involve any dangerous goods?

No → Contact Company Representative

Yes

The release or anticipated release:
Exceeds quantity in table
AND
Endangers, or could endanger, public safety

No → Report not required

Reference

Yes

Activate ERAP

Emergency Report to local authorities responsible for responding to emergencies
Provincial TDG Spill Reporting Line
(Section 8.2 of the TDGR)

Reference

The Release or anticipated release results in:

- The death of a person
- The treatment of a person’s injuries by a health care professional
- An evacuation or shelter-in-place
- The closure of a facility, road, main railway line, main waterway

Or if:

- The means of containment has been damaged so that its integrity is compromised
- The centre sill or stub sill of a tank car is broken or has a crack in the metal of at least 15 cm (6 in)

No → Report not required

Yes

Release or Anticipated Release Report – Road, Rail or Marine *(Section 8.4 of the TDGR)*

Submit to:

- CANUTEC at 1-888-CAN-UTEC (226-8832), 613-996-6666 or *666 on a cell phone
- The consignor of dangerous goods
- If dangerous goods are included in Class 7, the Canadian Nuclear Safety Commission (CNSC)
- For a ship, a Vessel Traffic Service Centre or a Canadian Coast Guard radio station

Please take note that the company policy may require you to make a telphone report to:

- The employer
- For a road vehicle, the vehicle’s owner, lessee or charterer

Reference

30-Day Follow-up Report Form TP16-0086
(form included at the end of this section)
Submit to the Director General, TDG
(Section 8.6 of the TDGR)

Class	Packing Group or Category	Quantity
1	II	Any Quantity
2	N/A	Any Quantity
3, 4, 5, 6.1 or 8	I or II	Any Quantity
3, 4, 5, 6.1 or 8	III	30 L or 30 kg
6.2	A or B	Any Quantity
7	N/A	A level of ionizing radiation greater than the level established in section 39 of the "Packaging and Transport of Nuclear Substances Regulations, 2015"
9	II or III, or without packing group	30 L or 30 kg

8.3 Information to be included in an Emergency Report – Road, Rail or Marine SOR/2016-95

An emergency report referred to in section 8.2 must include the following information:

(a) the name and contact information of the person making the report;
(b) in the case of a release of dangerous goods, the date, time and geographic location of the release;
(c) in the case of anticipated release of dangerous goods, the date, time and geographic location fo the incident that led to the anticipated release;
(d) the mode of transportation used;
(e) the shipping name or UN number of the dangerous goods;
(f) the quantity of dangerous goods that was the means of containment before the release or anticipated release;
(g) in the case of a release of dangerous goods, the quantity of dangerous goods estimated to have been released; and
(h) if applicable, the type of incident leading to the release or anticipated release, including a collision, roll-over, derailment overfill, fire, explosion or load-shift.

8.5 Information to be included in a Release or Anticipated Release Report – Road, Rail or Marine SOR/2016-95

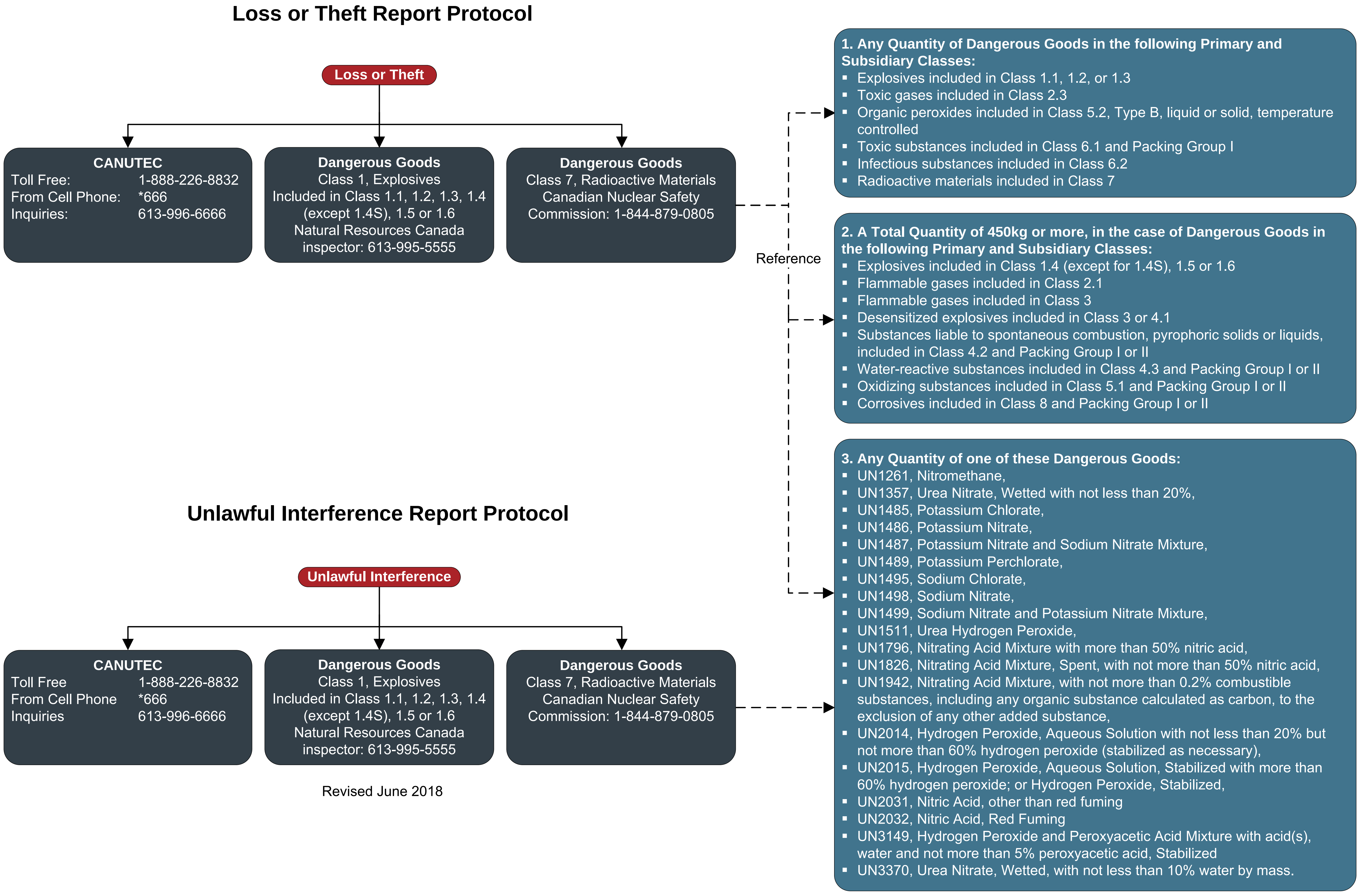
A release or anticipated release report referred to in section 8.4 must include the following information:

(a) the name and contact information of the person making the report;
(b) in the case of a release of dangerous goods, the date, time and geographic location of the release;
(c) in the case of anticipated release of dangerous goods, the date, time and geographic location of the incident that led to the anticipated release;
(d) the mode of transportation used;
(e) the shipping name or UN number of the dangerous goods;
(f) the quantity of dangerous goods that was the means of containment before the release or anticipated release;
(g) in the case of a release of dangerous goods, the quantity of dangerous goods estimated to have been released;
(h) if applicable, the type of incident leading to the release or anticipated release, including a collision, roll-over, derailment overfill, fire, explosion or load-shift.
(i) if applicable, the name and geographic location of any road, main railway line or main waterway that was closed;
(j) a description of the means of containment containing the dangerous good;
(k) if applicable, an estimate of the number of people evacuated or sheltered-in-place; and
(l) if applicable, the number of deaths and the number of persons who sustained injuries that required immediate medical treatment by a health care provider.

Revised April 2019

Source: https://www.tc.gc.ca/eng/canutec/emergencies-reporting-411.htm

Loss, Theft or Unlawful Interference Reporting Flowchart



Loss or Theft Report Protocol

Loss or Theft

CANUTEC
Toll Free: 1-888-226-8832
From Cell Phone: *666
Inquiries: 613-996-6666

Dangerous Goods
Class 1, Explosives
Included in Class 1.1, 1.2, 1.3, 1.4 (except 1.4S), 1.5 or 1.6
Natural Resources Canada inspector: 613-995-5555

Dangerous Goods
Class 7, Radioactive Materials
Canadian Nuclear Safety Commission: 1-844-879-0805

Reference

1. Any Quantity of Dangerous Goods in the following Primary and Subsidiary Classes:

- Explosives included in Class 1.1, 1.2, or 1.3
- Toxic gases included in Class 2.3
- Organic peroxides included in Class 5.2, Type B, liquid or solid, temperature controlled
- Toxic substances included in Class 6.1 and Packing Group I
- Infectious substances included in Class 6.2
- Radioactive materials included in Class 7

2. A Total Quantity of 450kg or more, in the case of Dangerous Goods in the following Primary and Subsidiary Classes:

- Explosives included in Class 1.4 (except for 1.4S), 1.5 or 1.6
- Flammable gases included in Class 2.1
- Flammable gases included in Class 3
- Desensitized explosives included in Class 3 or 4.1
- Substances liable to spontaneous combustion, pyrophoric solids or liquids, included in Class 4.2 and Packing Group I or II
- Water-reactive substances included in Class 4.3 and Packing Group I or II
- Oxidizing substances included in Class 5.1 and Packing Group I or II
- Corrosives included in Class 8 and Packing Group I or II

3. Any Quantity of one of these Dangerous Goods:

- UN1261, Nitromethane,
- UN1357, Urea Nitrate, Wetted with not less than 20%,
- UN1485, Potassium Chlorate,
- UN1486, Potassium Nitrate,
- UN1487, Potassium Nitrate and Sodium Nitrate Mixture,
- UN1489, Potassium Perchlorate,
- UN1495, Sodium Chlorate,
- UN1498, Sodium Nitrate,
- UN1499, Sodium Nitrate and Potassium Nitrate Mixture,
- UN1511, Urea Hydrogen Peroxide,
- UN1796, Nitrating Acid Mixture with more than 50% nitric acid,
- UN1826, Nitrating Acid Mixture, Spent, with not more than 50% nitric acid,
- UN1942, Nitrating Acid Mixture, with not more than 0.2% combustible substances, including any organic substance calculated as carbon, to the exclusion of any other added substance,
- UN2014, Hydrogen Peroxide, Aqueous Solution with not less than 20% but not more than 60% hydrogen peroxide (stabilized as necessary),
- UN2015, Hydrogen Peroxide, Aqueous Solution, Stabilized with more than 60% hydrogen peroxide; or Hydrogen Peroxide, Stabilized,
- UN2031, Nitric Acid, other than red fuming
- UN2032, Nitric Acid, Red Fuming
- UN3149, Hydrogen Peroxide and Peroxyacetic Acid Mixture with acid(s), water and not more than 5% peroxyacetic acid, Stabilized
- UN3370, Urea Nitrate, Wetted, with not less than 10% water by mass.

Unlawful Interference Report Protocol

Unlawful Interference

CANUTEC
Toll Free 1-888-226-8832
From Cell Phone *666
Inquiries 613-996-6666

Dangerous Goods
Class 1, Explosives
Included in Class 1.1, 1.2, 1.3, 1.4 (except 1.4S), 1.5 or 1.6
Natural Resources Canada inspector: 613-995-5555

Dangerous Goods
Class 7, Radioactive Materials
Canadian Nuclear Safety Commission: 1-844-879-0805

Revised June 2018

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:
    - Driver's name, address and phone number.
    - Driver's license number.
    - 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.
    - Actions taken.
    - Weather conditions.
    - 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 Plan (ERAP)

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 Plan (ERAP) 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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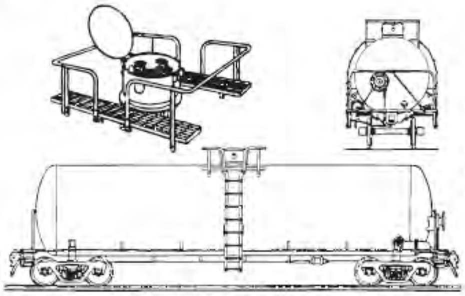
Transportation Incidents, continued

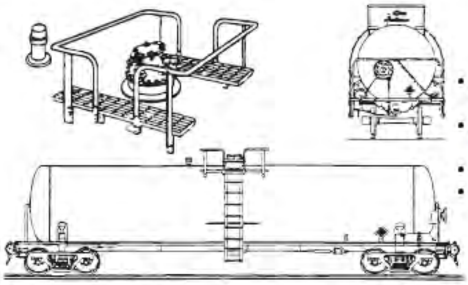
Rail Car Identification Chart

117 Pressure tank car



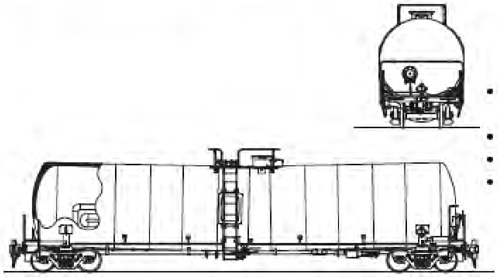
- For flammable, non-flammable, toxic and/or liquefied compressed gases
- Protective housing
- No bottom fittings
- Pressures usually above 40 psi

131 General service tank car (low pressure)



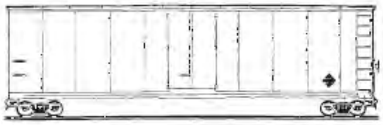
- For variety of hazardous and non-hazardous materials
- Fittings and valves normally visible at the top of the tank
- Some may have bottom outlet valve
- Pressures usually below 25 psi

128 Low pressure tank car (TC117, DOT117)



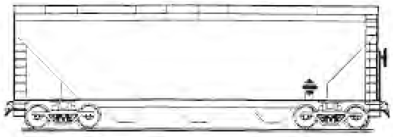
- For flammable liquids (e.g., Petroleum crude oil, ethanol)
- Protective housing separate from manway
- Bottom outlet valve
- Pressures usually below 25 psi

111 Box car



- For general freight that carry bulk or non-bulk packages
- May transport hazardous materials in small packages or "tote bins"
- Single or double sliding door

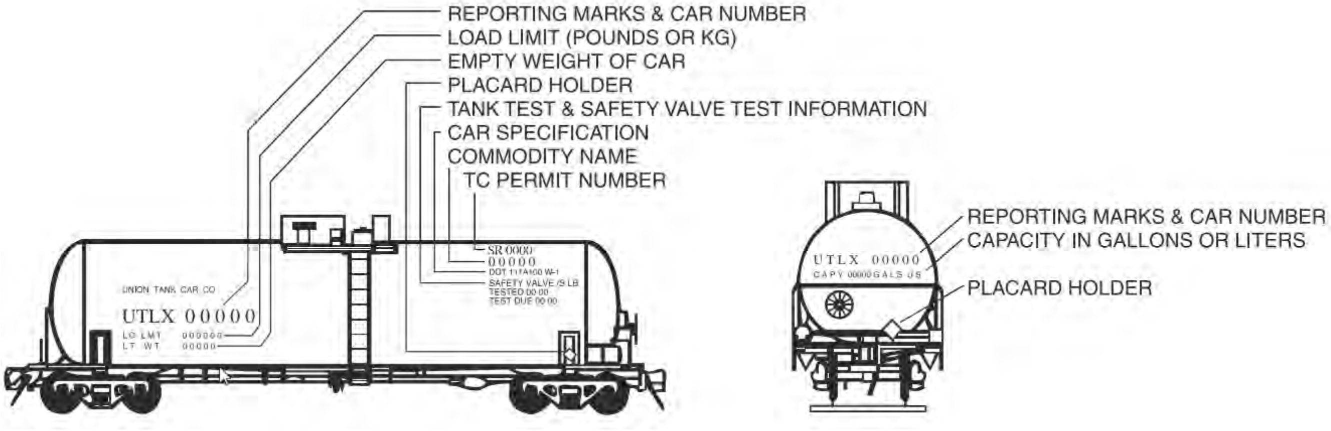
140 Hopper car



- For bulk commodities and bulk cargo (e.g., coal, ore, cement and solid granular materials)
- Bulk lading discharged by gravity through the hopper bottom doors when doors opened

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

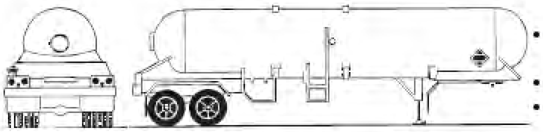
Transportation Incidents, continued

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.

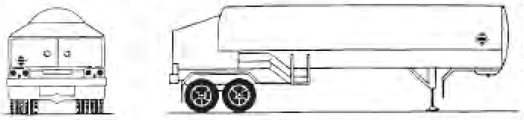
NOTE: An emergency shut-off valve is commonly found at the fornt of the tank, near the driver door.

117 MC331, TC331, SCT331



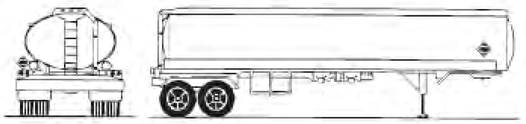
- For liquefied compressed gases (e.g., LPG, ammonia)
- Rounded heads
- Design pressure between 100-500 psi

117 MC338, TC338, SCT338, TC341, CGA341



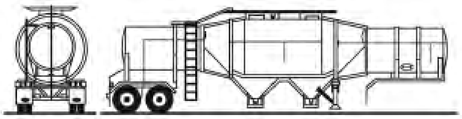
- For refrigerated liquefied gases (cryogenic liquids)
- Similar to a "giant thermo-bottle"
- Fitting compartments located in a cabinet at the rear of the tank
- MAWP between 25-500 psi**

131 DOT406, TC406, SCT306, MC306, TC306



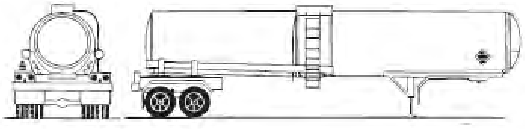
- For flammable liquids (e.g., gasoline, diesel)
- Elliptical cross-section
- Rollover protection at the top
- Bottom outlet valves
- MAWP between 3-15 psi**

112 TC423



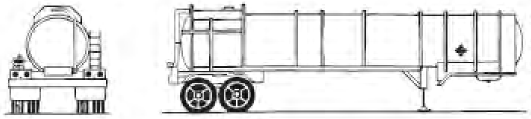
- For emulsions and water-gel explosives
- Hopper-style configuration
- MAWP between 5-15 psi**

137 DOT407, TC407, SCT307, MC307, TC307



- For toxic, corrosive, and flammable liquids
- Circular cross-section
- May have external ring stiffeners
- MAWP of at least 25 psi**

137 DOT412, TC412, SCT312, MC312, TC312

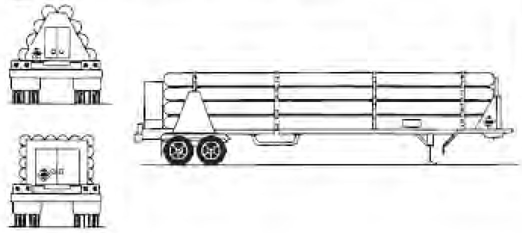


- Usually for corrosive liquids
- Circular cross-section
- External ring stiffeners
- Tank diameter is relatively small
- MAWP of at least 15 psi**

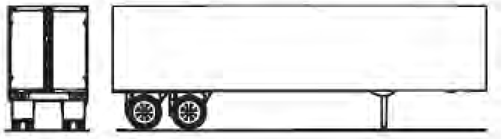
Transportation Incidents, continued

Road Trailer Identification Chart, continued

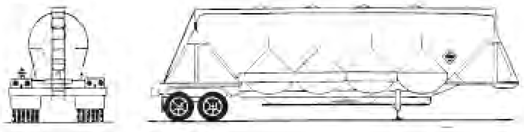
117 Compressed Gas/Tube Trailer



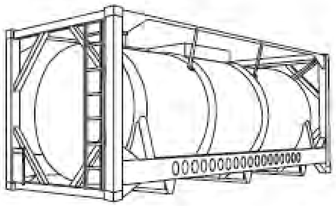
111 Mixed Cargo



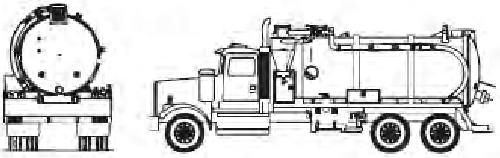
134 Dry Bulk Cargo Trailer



117 Intermodal Tank



137 Vacuum Tanker



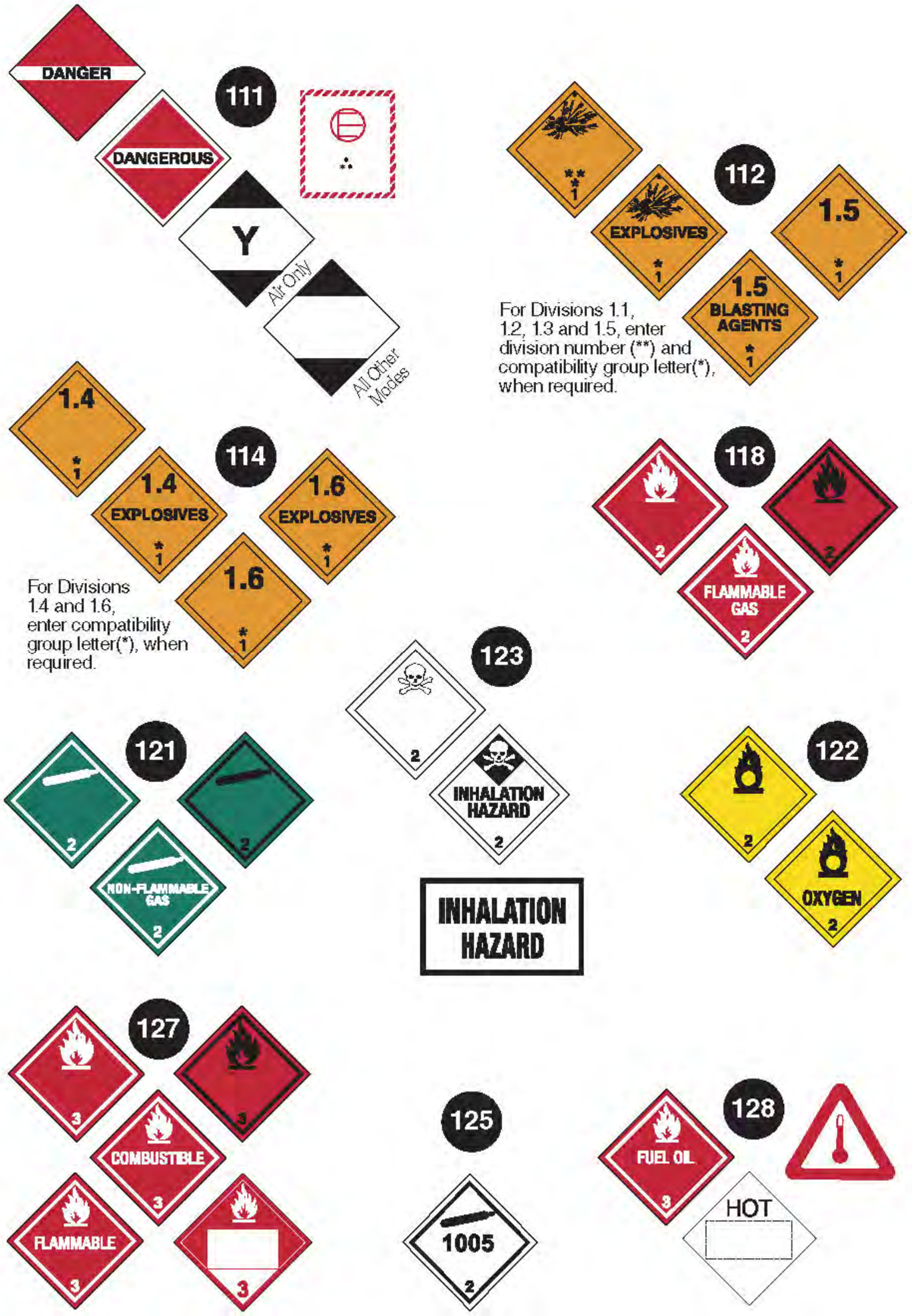
CAUTION: This chart depicts only the most general shapes of road trailers. Emergency response personnel must be aware that there are many variations of road trailers, not illustrated above, that are used for shipping chemical products. The suggested guides are for the most hazardous products that may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

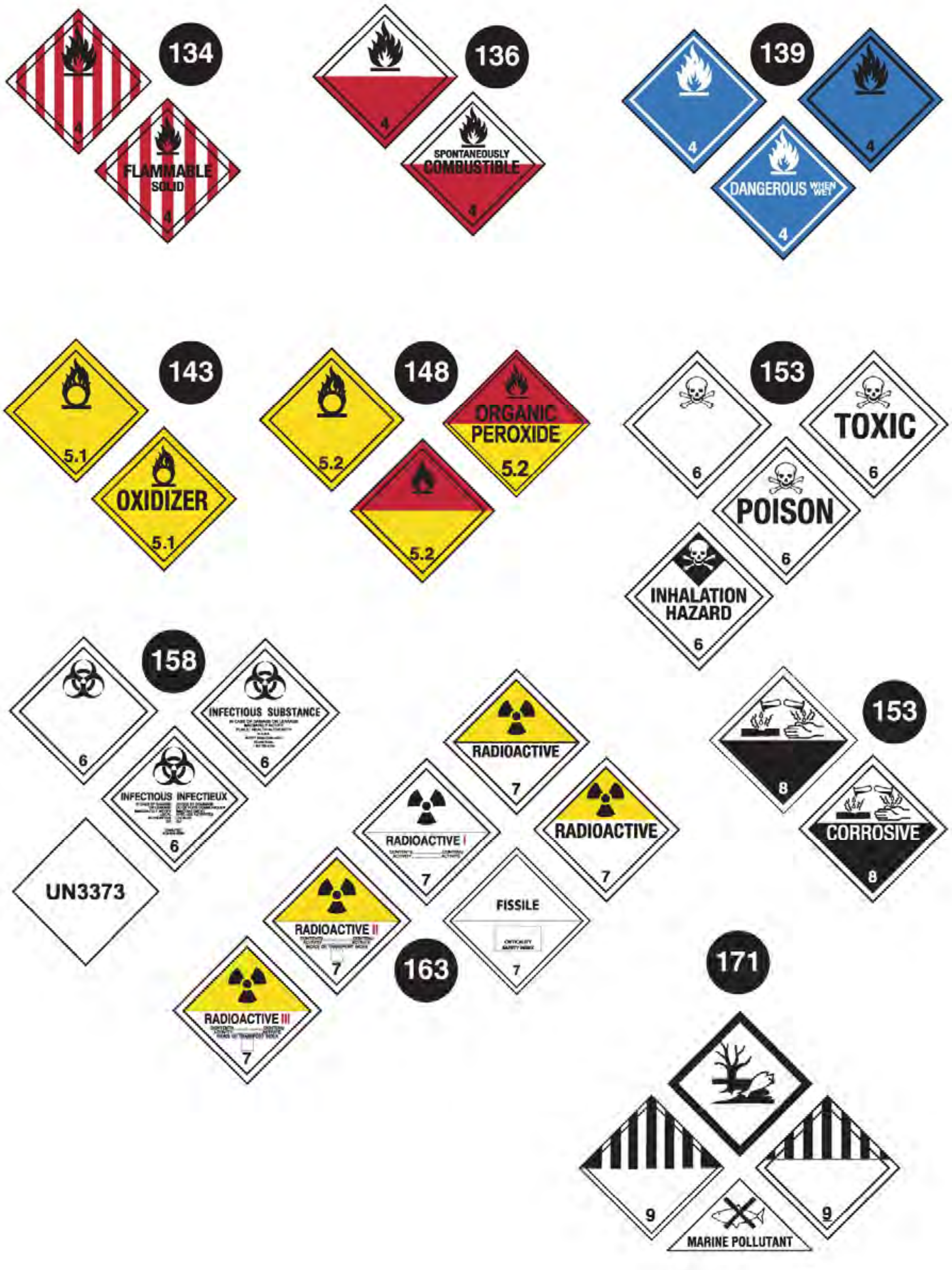


For Divisions 1.1, 1.2, 1.3 and 1.5, enter division number (**) and compatibility group letter(*), when required.

For Divisions 1.4 and 1.6, enter compatibility group letter(*), when required.

Transportation Incidents, continued

Table of Markings, Labels and Placards, continued



Transport Canada   Transports Canada

TRANSPORTATION OF DANGEROUS GOODS
30-DAY FOLLOW-UP REPORT

PART I: REPORTING TIMELINE

1. Please provide applicable dates and check one box

Date of initial report to CANUTEC (yyyy-mm-dd): ____________________

30-Day Follow-up Report submission date (yyyy-mm-dd): ____________________

○ 30-Day Follow-up Report

○ Update or amendment to 30-Day Follow-up Report

- Date original 30-Day Follow-up Report submitted (yyyy-mm-dd): ____________________

FOR INTERNAL USE ONLY

Road, Rail or Marine Reports

○ Release

○ Anticipated Release

Air Report

○ Dangerous Goods Accident or Incident

PART II: CONTACT INFORMATION

2. Information of the person completing this report

☐ Consignor ☐ Consignee ☐ Carrier/Aircraft Operator ☐ Other

First Name	Last Name	Title
Telephone (999-999-9999)	Company Name	
Address	City	Province/Territory
Country	Postal Code (Z9Z 9Z9)	Email

3. Information on the Consignor, Consignee and Carrier/Aircraft Operator

Consignor

First Name	Last Name	Title
Telephone (999-999-9999)	Company Name	
Address	City	Province/Territory
Country	Postal Code (Z9Z 9Z9)	Email

Consignee

First Name	Last Name	Title
Telephone (999-999-9999)	Company Name	
Address	City	Province/Territory
Country	Postal Code (Z9Z 9Z9)	Email

Carrier/Aircraft Operator

First Name	Last Name	Title
Telephone (999-999-9999)	Company Name	
Address	City	Province/Territory
Country	Postal Code (Z9Z 9Z9)	Email

Please send completed form to dor-rcd@tc.gc.ca
A copy of the 30-Day Follow-up Report must be retained 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 Code (Z9Z 9Z9)	GPS Position

If the incident occured by rail, please indicate the milepost and subdivision	If the incident happened on First Nations Territory, please indicate the Territory name

Origin of consignment ○ Same address as consignor ○ Same address as consignee ○ Other (please provide address):	Destination of consignment ○ Same address as consignor ○ Same address as consignee ○ Other (please provide address):

6. Geographic Area (Check only one box)

○ **Urban** Mixed use – residential, commercial
○ **Suburban** Primary residential
○ **Rural** Small towns, villages, agricultural lands
○ **Wilderness/Remote** Little or no population

7. Mode of Transport (Check all applicable boxes)

☐ Road ☐ Rail ☐ Air ☐ Marine

8. If MARINE was checked on question 7, please indicate the position of the vessel and the next location at which the vessel will be at anchor or alongside a fixed facility

Position	Next location

9. Phase of Transport (Check only one box)

○ **In-Transit** Consignment moving between origin and destination
○ **Loading** Consignment is being packed or loaded into a means of transport at origin
○ **Unloading** Consignment is being unpacked or unloaded from a means of transport at destination
○ **Temporary Storage** Consignment is in short term storage pending transportation

10. Type of Incident (Check all applicable boxes)

☐ **Collision/Sideswipe** Moving vehicles striking an object, animal, or another vehicle
☐ **Derailment** Railcar leaving the rail tracks
☐ **Ran off road** Vehicle enters a soft shoulder, ditch or similar area
☐ **Overturn** Vehicle turning on its side or upside down
☐ **Loadshift** Shifting of the consignment within a vehicle
☐ **Dropped** Means of containment falling unexpectedly
☐ **Struck** Means of containment being struck by another object
☐ **Other (Please specify):** ____________________

11. Type of Release (Check all applicable boxes)

☐ **Spill** Quick, immediate discharge, emission or escape
☐ **Leak** Slow, sporadic or continuous discharge, emission or escape
☐ **Explosion** Violent sudden release of energy from means of containment producing a shock wave that may result in fragment projection and/or fire ball
☐ **Fire** Burning substances combined with oxygen to typically produce flame, heat and smoke
☐ **BLEVE** Boiling Liquid Expanding Vapour Explosion
☐ **Vapour** Dispersion in air of particles of a substance that is liquid or solid in its normal state
☐ **Venting** Controlled release of gas into the environment
☐ **Anticipated Release** Distressed means of containment that is not leaking, venting or otherwise releasing its contents

Please send completed form to dor-rcd@tc.gc.ca
A copy of the 30-Day Follow-up Report must be retained for 2 years

12. Information on the Dangerous Goods

UN Number	Shipping Name	Primary Class	Subsidiary Class(es)	Packing Group or Category	Total Quantity in MOC Before the Release or Anticipated Release	Units *(kg, L, etc.)*	Estimated Quantity Released (if applicable)	Units *(kg, L, etc.)*

13. Means of Containment

Please provide a description of the means of containment involved in the incident by completing the appropriate forms from Annex E of the Guide (TP15294)

PART IV: CONSEQUENCES

14. Consequences of the incident (Check all applicable boxes)

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

☐ Human ☐ Property (e.g. product loss, facility, equipment) ☐ Environmental (e.g. contamination of waterway, ground, air)

15. Evacuation of people and buildings/Shelter in place

Was there an Evacuation as a result of the incident? ○ Yes ○ No

Was there Shelter in place as a result of the incident? ○ Yes ○ No

If **Yes**, please complete the following table

Evacuation of People and Buildings/Shelter in Place	**Private Residence** Includes houses and other buildings used as dwellings (e.g. Retirement homes)	**Public Buildings** Includes libraries, hospitals, churches, government buildings, etc.	**Workplace** Includes warehouse, facility, etc.	**Public (Outside) Areas** Includes parks, playgrounds, parking lots, etc.
Estimated number of **people evacuated**				
Estimated number of **people sheltered in place**				
Estimated number of **buildings evacuated**				▨

Size of Evacuation area (square meters)	Duration of Evacuation (hours)	Duration of Shelter in place (hours)

16. Injuries and/or deaths

Were there any injuries and/or deaths? ○ Yes (please complete the following table) ○ No

Minor Injuries ○ Yes ○ No

Number of injured requiring immediate first aid treatment at the scene

Attributed to Dangerous Goods	Attributed to incident	**Total**

Moderate Injuries ○ Yes ○ No

Number of injured requiring immediate emergency treatment in hospital and release shortly after

Attributed to Dangerous Goods	Attributed to incident	**Total**

Major Injuries ○ Yes ○ No

Number of injured requiring immediate treatment with overnight hospitalization

Attributed to Dangerous Goods	Attributed to incident	**Total**

Deaths ○ Yes ○ No

Number of deaths

Attributed to Dangerous Goods	Attributed to incident	**Total**

Please send completed form to dor-rcd@tc.gc.ca
A copy of the 30-Day Follow-up Report must be retained for 2 years

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 how to fill this section

Material loss of dangerous goods	Damage incurred by the carrier	Property damage	Emergency response cost	Clean-up cost	**Total cost**

18. Infrastructure closure and duration (please use additional sheets for multiple closures)

Was there an infrastructure closure as a result of the incident? ○ Yes ○ No

If **Yes**, please complete the following table

Type	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** – Facility used to receive or transfer 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 ground on a landing field that aircraft use for landing or takeoff	

19. Geographic location of closure

Address

City	Province/Territory	Postal Code (Z9Z 9Z9)	GPS Position

If the incident occured by rail, please indicate the milepost and subdivision	Name of facility, road, railway or waterway

20. ERAP Requirements

Was an ERAP required under Part 7 of the ***Transportation of Dangerous Goods Regulations***? ○ Yes ○ No

If **Yes**, please complete the following table

ERAP Reference Number	ERAP Holder

Address

City	Province/Territory	Postal Code (Z9Z 9Z9)	Telephone of ERAP Holder (999-999-9999)

Email

Level of Response (check all that apply)

☐ No response ☐ First responders on scene ☐ Phone call to ERAP holder ☐ Employee from ERAP holder ☐ 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:

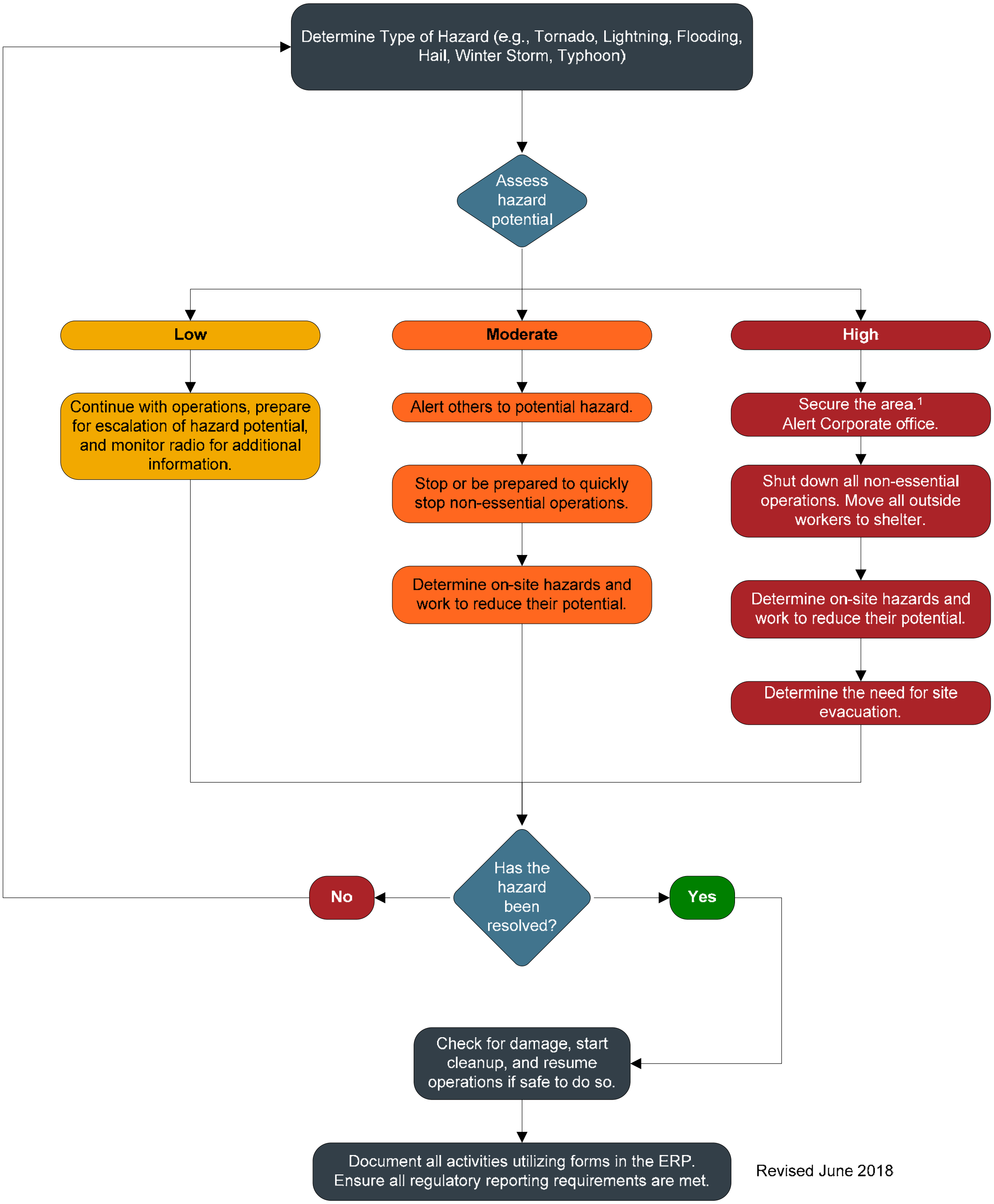
- Any serious jeopardy to persons on any aircraft or aircraft itself
- Any damages to property or environment
- The route by which the dangerous goods were to be or have been transported, including the name of any aerodromes along the route

Aircraft Operator	Air Cargo Facility

Please send completed form to dor-rcd@tc.gc.ca
A copy of the 30-Day Follow-up Report must be retained for 2 years

Weather and Natural Disasters

Natural Disaster


Determine Type of Hazard (e.g., Tornado, Lightning, Flooding, Hail, Winter Storm, Typhoon)
Assess hazard potential
Low
Moderate
High
Continue with operations, prepare for escalation of hazard potential, and monitor radio for additional information.
Alert others to potential hazard.
Stop or be prepared to quickly stop non-essential operations.
Determine on-site hazards and work to reduce their potential.
Secure the area.¹ Alert Corporate office.
Shut down all non-essential operations. Move all outside workers to shelter.
Determine on-site hazards and work to reduce their potential.
Determine the need for site evacuation.
Has the hazard been resolved?
No
Yes
Check for damage, start cleanup, and resume operations if safe to do so.
Document all activities utilizing forms in the ERP. Ensure all regulatory reporting requirements are met.

Revised June 2018

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[1] 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 Weatheradio.

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.

Considerations in the event of a flood:

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

Considerations for starting up a facility after a flood:

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/
British Columbia	Ministry of Forests, Lands and Natural Resource Operations – River Forecast Centre http://bcrfc.env.gov.bc.ca/warnings/index.htm

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

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.
Wind Chill Warning	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. For wind chill values: -27 to -44 ...risk of frostbite and risk of hypothermia increases with time spent outdoors -45 or lower ...exposed flesh may freeze in minutes and there is a serious risk of hypothermia
Winter Storm Warning	When severe and potentially dangerous winter weather conditions are expected, including: 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.

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 (Z246.1-17), a Security Management Program should be implemented to ensure security incidents and threats are identified and managed with appropriate safeguards and response procedures in place.

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

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

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

Types of Security Threats

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

Responding to Threats

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

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

Security Incidents, continued

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

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Security Incidents, continued

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Suspicious Packages

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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.

Security Incidents, continued

Vandalism

Vandalism is the wilful 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** – wilful 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.

Security Incidents, continued

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.

Security Incidents, continued

- 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 cyber-incident@ps-sp.gc.ca or by phone at 1-800-O-CANADA (622-6232).

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 fast paced 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.

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.

Animal Encounters, continued

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 no less than 500 metres and into immediate shelter within a vehicle or building. This situation will cause an immediate notification of the Incident Commander.

How to Tell the Difference

Black bears usually have a black coat with a brownish muzzle, a nose that arches downward and slightly pointed ears. Often they will have a white patch below the throat or on their chest. Black bears aren't always black; they can be other colours such as brown, dark brown, cinnamon, and blonde.

Grizzly bears have a large head, small eyes and a nose that turns slightly upward. Their ears are smaller and rounded, and they have a prominent hump over their shoulders. They generally have light coloured fur on their heads and a dark body.

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. Black bears are more likely to run away or climb a tree, whereas grizzly bears are more likely to stand their ground. If you encounter a bear on a trail:

- If the bear does not see you, discreetly leave the way you came while keeping your eyes on the bear. If you must pass the bear, give it and the surrounding area a wide berth while also keeping a lookout for other bears. Once you have passed the bear and are roughly 300m away, make a loud noise such as clapping, shouting or using an air horn; keep moving and watch that the bear is not following you.
- If you come across a bear that is aware of your presence, stop, stay calm and assess the situation. Try to determine your distance from the bear and do not turn around or run as it could provoke a chase. Raise your arms to appear larger. Avoid direct eye contact but never take your eyes off the bear. Use a soft low voice and avoid sudden movements. Try to move upwind, if possible, so the bear can catch your scent.
- If you are certain it is a black bear and it has an escape route, shout, clap, or throw rocks to scare it away. Black bears are more likely to run away or climb a tree, even if its cubs are near. If it is a Grizzly bear, or you are unsure what kind of bear it is do not try to move the bear. Be sure to have your bear spray ready in case the bear approaches.
- Size up the situation. Is the bear near a food source? Are there possibly cubs nearby? Try to determine an escape route for both yourself as well as the bear. Ensure the bear does not feel trapped or cornered. Stay calm. A panicked response may cause a bluff charge which could turn into a defensive attack.
- If the bear does not run away, have your deterrent ready. A bear that seems scared or threatened is usually protecting something such as cubs, food, or themselves.
- You can tell the bear is stressed by a change in body posture, movements, or vocalization. It may swat at the ground, put its ears back, sway its head, or bluff charge. It may vocalize by blowing, huffing and teeth/jaw popping (clicking its molars together).
- Do not run from the bear if it charges. Stand your ground and use your deterrent. You cannot out run it! Bears can reach speeds of 55 km/hr or more.

Animal Encounters, continued

In Case of Attack (general)

Determine if the attack is defensive or predatory. Look for signs of stress such as vocalization, body posture and body movements which can indicate a defensive attack. A bear approaching you without appearing fearful or stressed is not behaving in a defensive manner.

- 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.
- If you are with others, group together.

  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 has an effective range of about 3 meters and will not repel bears from a sprayed area. Read the instructions, understand how to use the spray, and test it to be sure of its range and accuracy.

- If 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, popping (clicking) its teeth, body swaying and pinning its ears back. The bear in this type of attack will often make a “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.
- Lie face down on the ground, legs slightly 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 and has left the area.
- Be patient, you may need to wait up to an hour or two to ensure the bear is no longer nearby.

If the bear continues to attack or bites you, fight for your life and aim 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. Any bear that is aware of your presence and approaches showing no signs of stress or fear, is not behaving in a defensive manner.

- Predatory attacks are extremely rare but are more common with black bears.

Animal Encounters, continued

- In this type of attack:
    - Act aggressive to show the bear you will not be easy prey.
    - Do not be submissive.
    - Face the bear and never take your eyes off of it.
    - Do not attempt to run away. Scan the area for cover such as a tree or large rock and move their quickly, as well as for possible weapons.
    - Prepare your deterrent.
    - Make yourself as large as possible.
    - Raise your arms and stomp your feet.
    - Use rapid arm and leg movement.
    - Shout loudly.
    - Remove your pack to use as a distraction.
    - DO NOT PLAY DEAD.
- If the bear continues to attack, fight for your life and aim your assault at the bears head, nose and eyes. You will be knocked to the ground, remain on your back and continue to use your bear spray or whatever is at hand (belt knife, rock, your bear spray can) as a weapon. Kick and punch the bear.

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 (ie. 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 ON THE TRAIL section for guidelines for encountering a bear. 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.

Animal Encounters, continued

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.
- 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.

Animal Encounters, continued

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.

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 jewelry 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.
- Animal Encounters, continued
- 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 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.

Coyotes

Coyotes are nocturnal animals and are unlikely to be seen in areas with large populations. They are usually spotted when they are in search of prey or if they have become habituated to people. Even if a coyote has been habituated to humans, it is possible to use hazing deterrents to effectively change their behavior.

Coyotes have a narrow snout, small nose pad, and tall pointed ears. They are generally 1.5 ft tall and weigh around 20 to 50 pounds.

Coyote Safety

- Coyotes are extremely curious and intelligent animals. They are usually solitary animals but are known to form packs while hunting larger prey.
- Coyotes are omnivores; however, the majority of their diet is mammalian. They will eat anything from rodents, fish, rabbits and frogs, as well as larger animals such as deer.
- Breeding season is in February and March. Females can give girth to litters of 3 to 7 pups and will stay with them in their den until their eyes open. The males will bring food and help protect them from predators.
- Males will travel up to 160 km to find food.
- Coyotes are nocturnal and usually sleep during the day; however, they are known to adapt their routines if they learn to find a reliable food source at a particular time.
- Secure all food items and never feed any other wildlife. Deer and small mammals can attract larger predators such as wolves.

Animal Encounters, continued

If you meet a coyote

Coyotes are usually timid towards humans and rarely attack unless provoked. In the unlikely event of a coyote or coyotes threatening humans, here is what to do if it is not during breeding and pupping season (which is between the months of February and July):

- Respond aggressively and wave your arms above your head.
- Throw rocks, sticks or other objects at the coyote.
- Shout in a deep voice and maintain eye contact.
- Do not turn away or run as this will encourage it to chase you.

If it is breeding and pupping season you may be near a den and considered a threat. Do not haze coyotes as normal, because coyotes will defend their den site and you'll only be escalating a situation, causing undue stress on the coyote and potentially forcing a coyote to act out defensively.

- Slowly and calmly walk away without ever turning your back on the coyote.
- Stay tall and assertive as you leave the area, even if it means walking backwards. Coyotes will sometimes follow you for a distance to escort you out of their territory and turning your back may invite them to come in closer to hurry you on your way.
- Maintaining eye contact and an assertive posture keeps things balanced by letting the coyote know they do not have the upper hand while still respecting the coyotes defense of their den site.

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

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. 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.

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Drinking Water Contingency Plan

Drinking Water Emergencies may include:

1. Drinking water advisories
2. Contamination of source
3. Loss of source
4. Flood conditions
5. System failures

Actions

- Shut down pumps and close valve to users
- Notify all users
- Contact Drinking Water Program Coordinator
- Contact government agencies, if required
- Arrange alternate source of water for plant and personnel. (i.e. bottled water, bulk hauler)
- Order sample kits for post treatment and/or cleaning retesting

Cleaning and disinfecting your drinking water storage tank

1. Confirm materials used for storage tanks are intended for use in potable water. If non-potable materials are used, harmful chemicals such as heavy metals and hydrocarbons could leach into the drinking water. Storage tanks should be sealed and fly tight to prevent onsite contamination.
2. Delivered water should be potable (safe for human consumption) and obtained from an approved source. Surface water is continually susceptible to contamination from wildlife, aquatic life, domesticated animals and humans. Surface water used for domestic use needs be treated to ensure a safe supply. The water hauler is required to disinfect this water for your safety.
3. Storage tanks should be cleaned and disinfected at least twice a year (spring and fall). This is to remove algae (plant growth which produces bad tastes and odours), silt, and bacteria which may be harmful. See the following procedure:

Procedure:

a. Drain water from tank.

b. Scrub or pressure-wash the interior walls to remove sediment and grime.

c. Rinse the inside surfaces of tank with clean potable water and drain wash water.

d. Fill tank with clean potable water.

e. Add the required amount of unscented household bleach (Sodium hypochlorite) to the water in the storage tank (see table below). Mix well.

f. To disinfect the plumbing lines and fixtures, open all taps in the distribution system until a chlorine smell is apparent at each outlet. Close taps.

g. Let chlorine solution sit in the water system for at least 12 hours. Do not consume this highly concentrated solution.

h. Drain the water tank (not into a septic system).

i. Refill with fresh potable water.

j. Open valve to distribution lines. Run water from the taps until there is no smell of chlorine.

Drinking Water Contingency Plan, continued

Dosage of Household Bleach (~ 5% chlorine) required for the Cleaning and Disinfecting of Water Holding Tanks				
Tank Size		**Amount of Household Bleach to obtain 50 ppm Chlorine**		
Litres	**Imp. Gallons**	**mL**	**Imp. Ounces**	**Cups**
227	50	227	8	1
455	100	511	18	2
909	200	909	32	4
1137	250	1136 (1.2 L)	40	5
2273	500	2273 (2.3 L)	80	10
4546	1000	4546 (4.5 L)	160	20
6819	1500	6818 (6.8 L)	240	30
9092	2000	9091 (9.1 L)	320	40
11365	2500	11340 (11.5 L)	400	50

Disinfecting the well

1. It will be necessary to disinfect the well if bacteria tests show that it has become contaminated. Even if you prevent further contamination of your well, the bacteria that have already gotten into it can cause ongoing water quality problems. Bacterial contamination of a well may include an increased risk of illness and the production of unpleasant tastes or odours. The method outlined below describes the procedure to disinfect a well. If you have any questions about this procedure contact a Health Officer for direction.

2. Pour unscented household bleach (5 per cent chlorine) directly into the well. Make sure that the chlorine gets all the way to the bottom of the well. (Please note: this instruction applies to all types of wells, be they drilled, driven or dug. In every case, pour the chlorine solution right down into the well, either through the drill pipe, or well head, or simply by adding the bleach to the water in an open or dug well, preferably through a hose inserted to the bottom of the well.) Check the amount of chlorine to add in the chart that follows:

   a. Start the pump and open all taps.

   b. Close the taps and stop the pump when you begin to smell chlorine at the taps.

   c. Open the valve or plug at the top of the pressure tank just before stopping the pump to allow the solution to contact the entire inside surface of the tank. Then close the valve or plug.

   d. Leave the chlorinated water in the system for 24 hours. This is a very strong chlorine solution (about what you should use for cleaning floors) – DO NOT DRINK THE WATER

   e. Pump out the water until the chlorine odour disappears. *Do not drain this water into a stream, ditch, or storm drain which connects with any fish bearing streams.

   f. Monitor frequently and treat again as necessary.

   g. Control the factors that limit the effect of chlorine, e.g., cloudiness, and high levels of iron, manganese and hydrogen sulphide.

Drinking Water Contingency Plan, continued

Amount of Bleach Solution Required to Disinfect Water Systems Diameter of Well, or Pipe Bleach (5% Chlorine) Per Depth of Water in Well or Pipe

Inches Centimeters per 10 Feet* Per 3 Meters

1 cup = 16 Tbl (tablespoons) = 48 tsp (teaspoons)

Inches *	Centimetres *	Bleach
2	5	1 tsp, 5 ml
4	10	4 tsp, 20 ml
6	15	10 tsp, 50 ml
8	20	7 Tbl, 100 ml
10	25	½ cup + 2 Tbl, 150 ml
12	30	¾ cup + 1 Tbl, 200 ml
24	60	3.5 cups, 800 ml
36	90	2 quarts, 2.3 L
48	120	3 quarts, 3.4 L
60	150	5 quarts, 5.7 L
72	180	7 quarts, 8.0 L
96	240	3 gal, 13.6 L

Boil water advisory resampling

Two consecutive satisfactory water samples shall be taken at least 24 hours apart and all stages of the investigation, repair and remediation have been completed to the satisfaction of the Health officer.

A Health Officer may direct an alternate time span between samples based upon the bacteria detected.

The Health Officer shall provide written notice when the boil water notice may be lifted.

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Section 5: External Agencies

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British Columbia

Notification Requirements for Key Government Agencies

Agency or Resource	Initial Responders			Lead Agencies					Supporting Agencies & Other Government Contacts									
Incident Type	Ambulance Services	Local Fire Department	RCMP - Royal Canadian Mounted Police[1]	EMBC - Emergency Management BC[2]	OGC - BC Oil and Gas Commission[3]	Local Authorities[4]	Northern Health Authority	CER - Canada Energy Regulator[5]	WorkSafe BC[6]	MOE - Ministry of Environment[7]	Technical Safety BC[8]	ECCC - Environment & Climate Change Canada	MOTI - Ministry of Transportation & Infrastructure	PSPC - Public Services and Procurement Canada	CANUTEC	ERAC - Emergency Response Assistance Canada	DFO - Department of Fisheries and Oceans	IOGC - Indian Oil & Gas Canada
Sour Gas / HVP Release (Uncontrolled)		a	✓	✓	✓	✓	✓	✓*	✓	✓		✓	c	d				g
Chlorine Gas Release		a	✓	✓		✓	b		✓	✓		✓	c	d	e			g
Sweet Combustible Gas Release		a	✓	✓	✓	✓	✓	✓*	✓	✓		✓	c	d				g
Spills / Transportation Incidents (Unrefined Products)**		a	✓	✓	✓	✓	✓	✓*	✓	✓	✓̲	✓	c	d	e		✓	g
Spills / Rail or Trucking Incidents (Refined Products)**		a	✓	✓	✓	✓	b	✓*	✓	✓	✓̲	✓	c	d	e	f	✓	g
Serious Injury or Death as a Result of Oil & Gas Activity	✓		✓	✓	✓			✓*	✓									
Missing Person			✓					✓*										
Fire / Explosion / B.L.E.V.E.	✓	✓	✓	✓	✓	✓	✓	✓*	✓	✓		✓	c	d				g
Pressure Vessel or Piping Incident			✓		✓			✓*	✓		✓	✓						
Electrical Incident			✓		✓				✓		✓							
Motor Vehicle Accident (Serious Injury or Death)	✓		✓						✓					d				
Motor Vehicle Accident (No injuries)			✓															
Security Incidents			✓		✓			✓*	✓									
On - Site Incident Involving E2 Regulated Substance		a	✓		✓		b	✓*	✓	✓		✓					✓	g

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

18-Oct-19

✓ Compulsory contact

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

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

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

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

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

EMBC to notify Environment & Climate Change Canada (ECCC) of all oil and gas incidents in time, but immediately as required for incidents involving regulated substances at E2 registered facilities, incidents involving PCBs or any spills on First Nations lands, in National Parks, into river or lake systems containing fish, or onto railway right-of-way.

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

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

b) Contact the Northern Health Authority if the incident affects public health, e.g., contaminated drinking water.

c) Contact the Ministry of Transportation and Infrastructure (MOTI) and the RCMP if the emergency intersects with a 1, 2 or 3 digit Provincial or Secondary highway (e.g., Hwy 2, Hwy 47, Hwy 837). MOTI and RCMP have the authority to shut down highways.

d) Contact Public Services and Procurement Canada (PSPC) and the RCMP if the emergency intersects with the Alaska Highway (97) north of mile 83.5 all the way to the Yukon border. PSPC and RCMP have the authority to shut down this portion of the Alaska highway.

e) Contact the Canadian Transport Emergency Centre (CANUTEC) when a highway is shut down, there is an injury or fatality, there is lost, stolen or unlawfully interfered with dangerous goods (except Class 9), the incident involves infectious substances, there is an accidental release from a cylinder that has suffered a catastrophic failure, where the shipping documents display CANUTEC's telephone number, where a railway vehicle, ship, aircraft aerodrome or an air cargo facility is involved, when a facility is closed, evacuation/shelter-in-place procedures take place as a result of the transportation of dangerous goods, containment has been damaged and integrity compromised, or the centre/stub sill of a tank car is broken or there is a crack in the metal ≥ 15cm(6"). CANUTEC can also provide guidance on handling procedures for toxic material releases.

f) Emergency Response Assistance Canada will only respond to transportation incidents and only incidents that involve the following UN numbers: 1075 (Propane, Butane, etc.) and 1010 (Butadiene); and those products have tank storage capacity of 450 litres or greater.

g) Indian Oil & Gas (IOGC), the First Nation and the provincial authority must be notified immediately in the event of any health or environment-threatening emergency or off-lease spills on First Nation reserve lands. On-lease spills greater than 1m3 must be reported to IOGC immediately.

1 In the event of a fatality, request that the RCMP contact the Medical Examiner. The RCMP must be notified in the case of lost, stolen or misplaced explosives, radioactive materials or infections substances.

2 Notify Emergency Management BC (EMBC) for all spill and non-spill incidents to receive a Dangerous Goods Incident Report (DGIR) number. EMBC will notify the OGC and Ministry of Environment, and will provide a representative to coordinate the provincial response.

3 Contact the OGC for any spills or release of hazardous substances that are not provincially regulated (such as radioactive materials), pipeline incidents such as spills during construction phase, exposed pipe caused by flooding, pipeline over pressure, failure (without release) of any pressure control or ESD device during operations, drilling kicks when any of the following occur: pit gain of 3m^3 or greater, casing pressure 85% of MA, 50% out of hole when kicked, well taking fluid (LC), associated spill or general situation deterioration such as leaks, equipment failure or unable to circulate etc., major damage to oil and gas roads or road structures and security related issues which are relatively minor; such information may be required for tracking and monitoring purposes only. The OGC must also be notified of needed emergency oil and gas road closures. The OGC may request a NOTAM order from NAV Canada upon request from operator.

4 Local authorities include regional district disaster services, national park authorities and the local police.

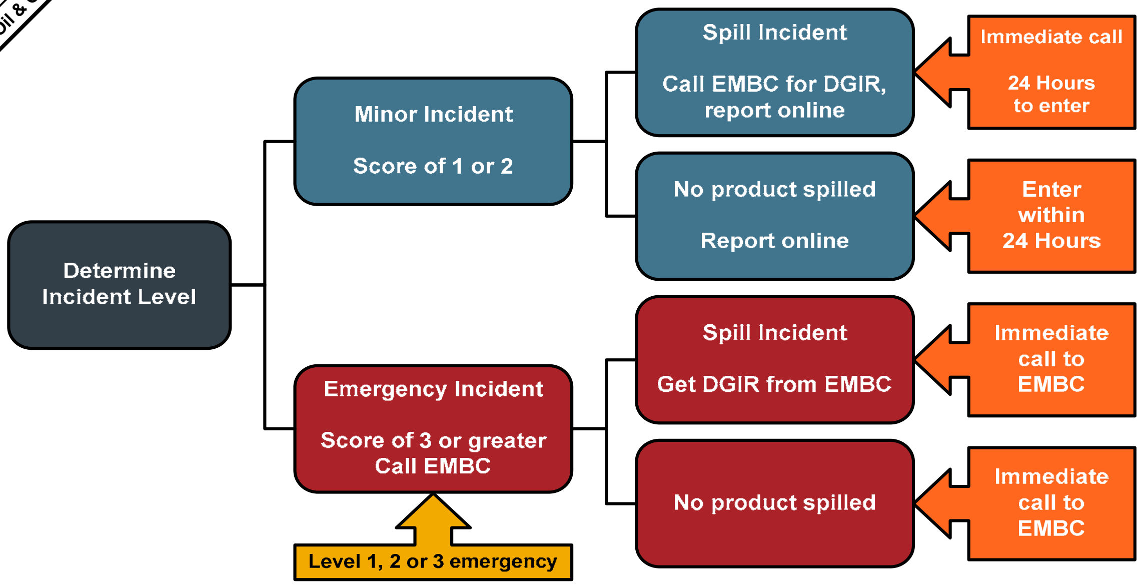
5 Contact the Canada Energy Regulator (via the Transportation Safety Board of Canada) for all emergencies involving CER regulated sites and inter-provincial pipelines. The CER regulates all inter-provincial pipelines and other facilities and sites located in Frontier lands (Northern Canada).

6 Ensure any workplace conditions that present an immediate hazard to other workers are addressed, ensure first aid and medical treatment for the worker, and then notify WorkSafeBC of the incident. The requirement to immediately report a serious injury or fatality is separate from the requirement to report injuries for claims purposes. Failure to immediately notify WorkSafeBC will be considered a breach of section 172 of the Workers Compensation Act. The employer must immediately report the following incidents, injury or not: Any incident that kills, causes risk of death, or seriously diving incident or decompression sickness, a major leak or release of a dangerous substance, a major structural failure or collapse of a structure, equipment, construction support system or excavation, or any serious mishap. Must also report incidents that requires the employee to seek medical attention or cause time-loss from work.

7 Ministry of Environment was formerly known as Ministry of Water, Land and Air Protection.

8 Technical Safety BC is to be notified immediately in cases of Boilers, Pressure Vessels, Piping and Fittings, Electrical & Gas incidents resulting in a moderate, major and fatal injury or moderate, major or severe property damage. All other incidents must be reported within 24 hours (or as soon as practical). Rail accidents where a person sustains a serious injury or is killed as a result of being on board or getting on or off the rolling stock, or coming into contact with any part of the rolling stock or its contents, or the rolling stock is involved in a grade crossing collision or a derailment, sustains damage that affects its safe operations, or causes or sustains a fire or explosion, or causes damage to the railway, that poses a threat to the safety of any person, property or the environment, or any dangerous good is released.

OGC Incident Reporting Process



Determine Incident Level

Minor Incident

Score of 1 or 2

Spill Incident

Call EMBC for DGIR, report online

Immediate call

24 Hours to enter

No product spilled

Report online

Enter within 24 Hours

Emergency Incident

Score of 3 or greater Call EMBC

Level 1, 2 or 3 emergency

Spill Incident

Get DGIR from EMBC

Immediate call to EMBC

No product spilled

Immediate call to EMBC

British Columbia Notification Matrix

Lead Agency Roles

	Before the Incident	During the Incident	After the Incident
*OGC	The Emergency Response and Safety Department is the lead department responsible for emergency management within the Commission. The Department oversees the administration of the EMR. This includes: ❒ Reviewing industry emergency management programs and plans ❒ Participating in permit holder emergency response exercises ❒ Providing 24 hour Emergency Officer services ❒ Leading emergency and incident follow-up and investigation ❒ Administering incident and complaint response services ❒ The Commission uses a combination of reviews, assessments, and field inspections. ❒ To ensure permit holders maintain compliance with the requirements detailed in the Emergency Management Regulation and the Oil and Gas Activities Act. The audit and inspection program objectives are to ensure permit holders have adequate processes and procedures in place. ❒ Participate in selected licensee ERP exercises. ❒ Maintain a 24 hour telephone contact where petroleum industry incidents can be reported.	During emergencies the Oil and Gas Commission (OGC) acts as a liaison between industry operators and the provincial emergency management structure to provide situation updates related to threatened oil and gas assets. ❒ Oversee operator's response to an incident. ❒ Notified by EMBC of incidents within OGC's jurisdiction (on lease). ❒ Establish communication with operator. ❒ Confirm incident level with operator. ❒ Confirm downgrade of incident level. ❒ Issue road closure order upon request from operator. ❒ Request NOTAM order from NAV Canada upon request from operator. ❒ May send an OGC representative to operator's On-Site Command Post and / or Evacuation Centre. ❒ May establish a government EOC at the OGC office. ❒ Confirm ignition decision with operator if time permits. ❒ Confirm media releases to be sent out by operator.	❒ Close EOC if established. ❒ Participate in event debriefings. ❒ Receive and review Post-Incident reports. ❒ May audit licensee records.
*EMBC	❒ Assist the OGC with planning initiatives regarding petroleum industry emergency response as requested by the OGC. ❒ EMBC Northeast Region receives Industry Facility Emergency Response Plans. ❒ Participate in selected licensee ERP exercises when requested as time permits. ❒ Maintain a 24 "800" telephone contact where petroleum industry spill incidents can be reported. ❒ Maintain 24 hour emergency contact numbers for local governments and provincial emergency responders.	❒ ECC Victoria will notify the OGC on call Emergency Response Officer and initiate British Columbia's notification of government agencies including MOF, MOE, MOT, Health Unit, WorkSafe BC, affected municipalities and all other level of government and industry, depending on the level of "coding" (notification code 1,2,3 is determined by the Lead Agency MOE or OGC), depending on the code level Standard Operating Procedures (SOPs) in ECC will determine who is notified. ❒ Provide representatives to help coordinate provincial response as required.	❒ As requested by OGC
Local Authority / Regional Districts	❒ Set up and maintain an emergency management organization which can include an executive committee, emergency program management committee, emergency program coordinator or emergency social services director. ❒ Develop and maintain a Hazard, Risk and Vulnerability Analysis (HRVA) to identify potential emergencies and disasters in its jurisdictional area. ❒ Educate community residents and business owners about the need for personal emergency preparedness. ❒ Prepare for emergencies and disasters through mitigation, preparedness, response and recovery planning. ❒ Conduct training and exercises for all emergency response staff. ❒ Establish procedures for implementing, reviewing and revising response and recovery plans. ❒ Complete periodic reviews and updating of the local emergency plan. ❒ Respond to emergencies when required. ❒ Establish procedures for notifying persons threatened by emergencies or impending disasters. ❒ Identify procedures for obtaining emergency resources. ❒ Establish priorities for restoring essential services. ❒ Work with volunteer groups to plan for the provision of food, clothing and shelter to victims. ❒ Participate in industrial operators' preparatory training and exercises where possible. ❒ Maintain 24 hour emergency contact numbers.	❒ Provides the local government response for rural and crown areas. ❒ Assesses the situation. ❒ Provides support to the first responders, including resources. ❒ Provides public information, including media briefings. ❒ Coordinates the provision of food, clothing, shelter and transportation. ❒ Liaises with volunteer groups. ❒ Provides situation reports to the PREOC. ❒ Tracks finances. ❒ Coordinates recovery of essential services. ❒ Coordinates community recovery efforts. ❒ During emergencies and disasters the local authority's primary link to the provincial emergency management structure is the PREOC. ❒ When a local authority EOC is activated, police and fire first responder agencies provide situational awareness to the local authority and submit requests for support to the local authority EOC. ❒ Establish contact with the industrial operator in order to: ❒ Obtain additional hazard information. ❒ Determine where roadblocks should be or are established. ❒ Determine the direction of approach to the incident. ❒ Determine if there are any injuries. ❒ Find out what response and public protection actions have been taken. ❒ Identify the location of the On-site Command Post (OSCP) and any Emergency Operations Centres (EOCs). ❒ Activate the MEP, when required. ❒ Manage the Local Authority's emergency response. ❒ Activate the emergency public warning system to alert people to life threatening hazards, as required. ❒ Activate the Municipal EOC (MEOC), as required. ❒ May dispatch a representative to the Government EOC (GEOC), when it is established, to coordinate the response, if requested. ❒ If necessary, declare a local State of Emergency. ❒ When possible, work with all other responders to establish a single Regional EOC (REOC). ❑ Inform EMBC and the public when the emergency is over.	❒ Complete a "lessons learned" process based on the scope of involvement and provide any feedback to the industrial operator. ❒ Participate in multi-agency debriefings.
*BC Emergency Services	The first level of emergency response is provided by fire and/or police services and may involve the activation of the Emergency Operations Centre (EOC). Other first responders, such as the RCMP and British Columbia Ambulance Service, have a provincial mandate but with a local presence through detachments or stations. These agencies are usually accessed through 9˜ 1˜1 and have internal dispatch arrangements. ❒ First responders work at the site level of an event and include police, fire and ambulance. Activities of first responders include medical response, firefighting and managing crowds or evacuation zones. ❒ When a local authority EOC is activated, police and fire first responder agencies provide situational awareness to the local authority and submit requests for support to the local authority EOC. ❒ First response services provided by a fire department are determined by the local authority responsible, and may include hazardous material incident response, road rescue, and medical rescue. ❒ The BC Ambulance Service (BCAS) operates under the authority of the Emergency and Health Services Commission (EHSC) and is tasked with the provision of pre-hospital emergency care and transport of patients across the province. ❒ BCAS staff actively participates in emergency planning, mock emergency exercises and other joint training initiatives to ensure emergency preparedness and response resources are identified and deployed quickly and effectively when they are needed most. ❒ Participate in industrial operators' exercises where possible. ❒ Maintain 24 hour emergency contact numbers.	**RCMP** ❒ Maintain law and order and assist the operator with security. ❒ Assist with mobilization of additional resources as directed by EMBC. ❒ Assist with traffic control, evacuation, and residence security. ❒ Assist with setting up and maintaining roadblocks or closures of 1, 2 and 3 digit Provincial or Secondary highways. ❒ Establish and maintain communications with industrial operator. ❒ Dispatch a representative to the off-site Regional Emergency Operations Centre, when established, to coordinate the response. ❒ Coordinate with the industrial operator both the establishment and the administration of reception centres for evacuees. ❒ Maintain a 24 hour emergency contact number where resources can be accessed for a response related to Emergency Response Plans. **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 BC Ambulance Service provides and coordinates ambulance service s within British Columbia, including triage, treatment, transportation and care of casualties. ❒ The BC Ambulance Service provides situational awareness and coordinates resources through the PREOCs and PECC. ❒ Provide medical aid and transportation of ill or injured workers to a medical facility during high risk operations as required under the *WCB Act* and WSBC Regulations. ❒ Provide emergency medical assistance, as required.	❒ Complete a "lessons learned" process based on the scope of involvement and provide any feedback to the industrial operator. ❒ Participate in multi-agency debriefings.

*OGC - Oil & Gas Commission

*EMBC - Emergency Management BC - Provincial Emergency Program

* Emergency Services - as managed / operated by the Local Authority

Revised July 2018

Lead Agency Roles

	Before the Incident	During the Incident	After the Incident
Northern Health Authority	Northern Health is the regional health authority responsible for providing health services to 300,000 people over an area of 600,000 square kilometers in the province of British Columbia. Services include: ☐ Acute (hospital) Care ☐ Public Health (Protection, Preventive and Population Health services ☐ Mental Health and Addictions ☐ Home and Community Care ☐ In the event of a major emergency/disaster, Northern Health will provide health care services within its capacity, and will activate its emergency response management plan(s). ☐ Participate with industry, local authority and other partners in the development of their Emergency Response Plans as it relates to health authority roles and responsibilities. ☐ Participate in stakeholder training and exercises associated with activation of an Emergency Response Plan, in which Northern Health or HEMBC have a role and responsibility.	☐ Activate internal emergency response management plans related to ongoing provision of its services ☐ Provide acute care and emergency services at existing Northern Health hospitals/health centres. ☐ Work with BC Emergency Health Services (Ambulance) and the BC Patient Transfer Network to transport patients to the appropriate levels of care. ☐ Apply and enforce the Public Health Act, and associated regulations. ☐ Provide advice/information to the stakeholders on the existing or potential public health effects of an incident (including drinking water safety, air quality, environmental contaminants, communicable disease prevention, re-occupancy of evacuated areas, etc.). ☐ Provide advice/information on the best methods for monitoring health effects from an incident. ☐ Assist in development of (joint) messaging for public information on emergency incidents. ☐ Provide guidance to stakeholders and local authorities on public health considerations in operating reception and evacuation centres, and group lodging facilities.	
Ministry of Justice	The Police and Community Safety Branch of the Ministry of Justice will work with EMBC to: ☐ Prepare, promulgate and implement orders relating to law enforcement and internal security. ☐ Provide through the jurisdictional police force: ☐ Advice to local authorities respecting the maintenance of law and order ☐ Reinforcement of local police services ☐ Security control of emergency areas; and ☐ Traffic and crowd control ☐ The Ministry of Justice provides legal services to the government. Policy direction and legislative changes are made in consultation with the Ministry of Justice. During emergencies or disasters the Ministry of Justice may be called on to assist with risk management and provide expertise. This could include providing advice to provincial ministries and government corporations on legal matters relating to the preparation and promulgation of emergency orders, regulations, declarations and contractual arrangements.	☐ Jurisdictional police forces to task search and rescue services for missing persons on land and in inland waters. ☐ Before, during and after an emergency the Ministry of Justice could be called upon to provide expertise, technical advice and/or policy direction regarding police and correctional services. ☐ The Minister of Justice has overall responsibility for emergency management in the province. In the event of a disaster, the Minister may: ☐ Declare a provincial state of emergency ☐ Make a formal written request for federal assistance or aid from the Government of Canada ☐ Direct the establishment of M-DEC ☐ Inform his/her colleagues of the situation, and ☐ Be available for media interviews	

BRITISH COLUMBIA
The Best Place on Earth

Source of information: "The All-Hazard Plan" Emergency Management British Columbia 2012, Northern Health Emergency Response Roles and Responsibilities 2015, Emergency Management BC Emergency Response Roles & Responsibilities 2015, OGC Roles & Responsibilities OGC Website 2012

Revised July 2018

Peace River Regional District

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

Local Authority (Regional District)

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

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

Revised October 27, 2010

Contact information:

Name	Title	Office #	Cell #	E-mail
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted] [redacted]	[redacted]	[redacted]	[redacted]

Initial contact person for ERP's for the County of Grande Prairie No. 1 is [redacted]

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

- The County has and may provide equipment and manpower in an offsite support 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

Saddle Hills
COUNTY

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

[redacted]

[redacted]

Public Information Officer

[redacted]

[redacted]

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
[redacted]

Alberta Agriculture & Forestry – Grande Prairie Wildfire Management Area
[redacted]

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 CD Rom or similar electronic format) *2019/06/24*

Emergency Response
Roles & Responsibilities

Health Emergency Management BC, North (HEMBC)

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

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

Northern Health Authority (NH)

Northern Health is the regional health authority responsible for providing health services to 300,000 people over an area of 600,000 square kilometers in the province of British Columbia. Services include:
- Acute (hospital) Care
- Public Health (Protection, Preventive and Population Health services)
- Mental Health and Addictions
- Home and Community Care

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

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

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

NH Roles & responsibilities - RESPONSE:

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

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

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

Appendix I

Contact information:

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

- **For non-urgent requests or emergency exercise planning/information,** contact [redacted]

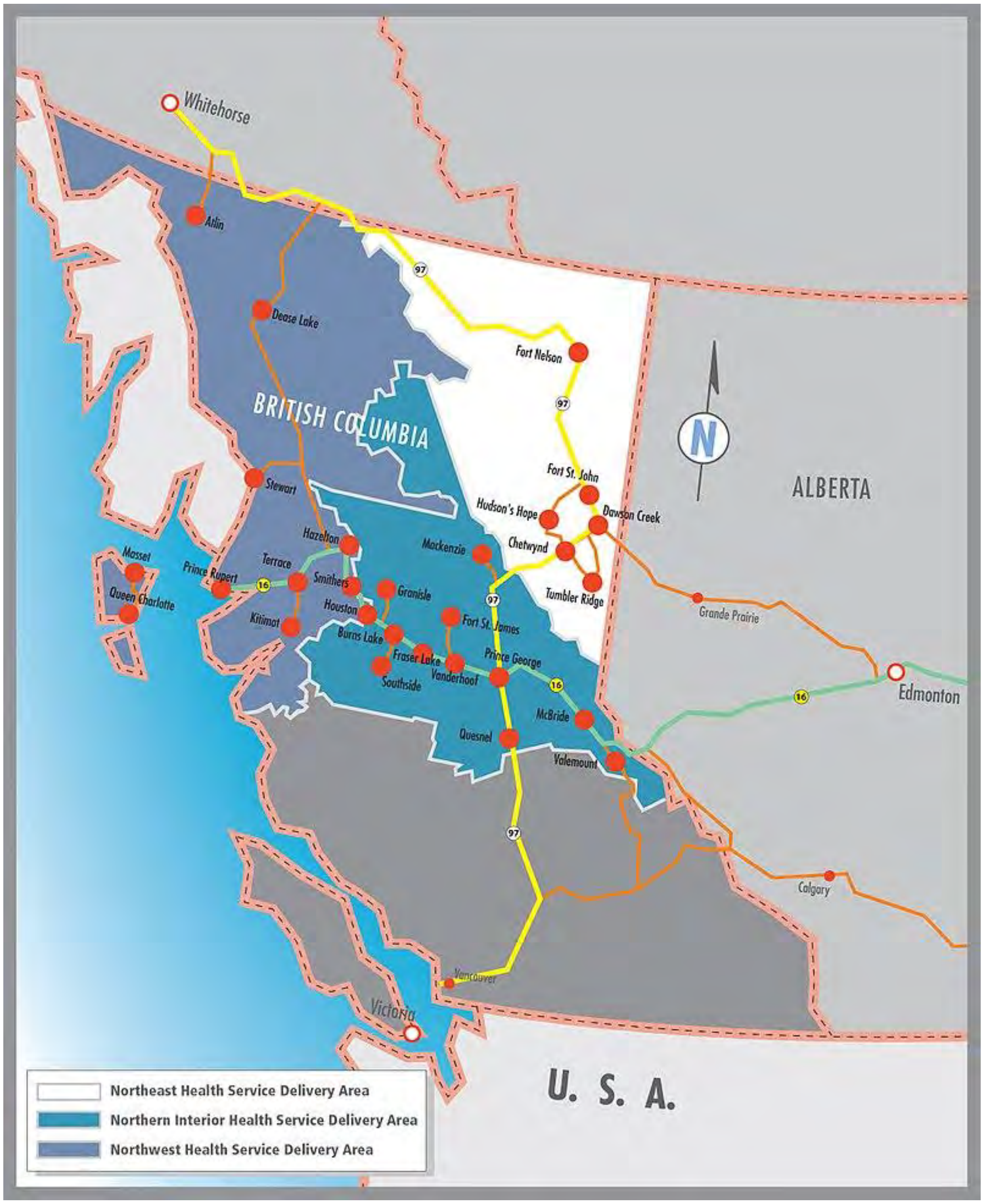
- **Please note that Northern Health does not review or approve emergency response plans** (ERPs) unless there is a request made from the regulators or governing agencies (e.g. Oil and Gas Commission, National Energy Board, Ministry of Environment, Environmental Assessment Office, etc.). Northern Health also does **not require that general stakeholder consultation/notification packages** be sent to Northern Health.

- **Please make your site and project ERPs available to Northern Health in the event of an emergency to:** [redacted]

- For Environmental assessment inquires and general government consultation questions pertaining to health please email the NH Office of Health and Resource Development at: [redacted]

Appendix II

Northern Health Geography



Oil and Gas Industry Emergency Preparedness and Response

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

EPH will endeavor to:

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

[redacted]

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

For more information, please contact your nearest Environmental Public Health office.

[redacted]

www.ahs.ca/eph

PUB-55-201711

BRITISH COLUMBIA

EMERGENCY MANAGEMENT BC

EMERGENCY RESPONSE ROLES & RESPONSIBILITIES

Before An Emergency

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

During an Emergency

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

After an Emergency

- As requested by OGC.

Ministry of Transportation – Roles & Responsibilities

Before the Incident

- Maintain a 24 hour emergency contact number where resources can be accessed for a response related to Emergency Response Plans.
- In the event of an emergency, the Highway Department's Operations, Maintenance and Reconstruction team plays an important role to ensure the public is safe and transportation routes are available for accessing emergency services.
- Ministry of Transportation and Infrastructure oversees provincial highways identified as emergency response routes - a network of pre-identified routes that can best move emergency services and supplies to where they are needed in response to a major disaster.
- Disaster Response Routes (DRRs) are a critical part of the overall emergency transportation system.
- Responsible for the construction, maintenance and operation of public roads.

During the Incident

Before, during and after an emergency the Ministry of Transportation and Infrastructure (MoTI) could be called upon to provide expertise, technical advice and/or policy direction regarding:

  - Highway construction and maintenance
  - Safety and protection of provincial road and bridge infrastructure
  - Transportation planning and policy

MoTI can:

  - Authorize the closure of provincial transportation routes, including highways and inland ferries, where the safety of the public is at risk.
  - Assist in public notification through the DriveBC website, as well as posting advisories on overhead message boards along designated routes.
  - Coordinate and arrange for transportation, engineering and construction resources.
  - Rebuild and restore provincial highways that are impacted by an emergency.

Major agencies, boards and commissions within MoTI that have identified responsibilities within the Emergency Program Management Regulation are BC Rail, BC Transit and BC Ferries.

- During an emergency, BC Rail will:
  - Provide priority movement of emergency personnel, equipment and supplies.
  - In cooperation with Transport Canada, assist in railway crashes and derailments in the conduct of rescue operations, removal of debris and the cleanup of hazardous material.
  - Provide railcars for emergency facilities.
  - Provide specialized equipment.
- During an emergency, BC Transit will coordinate requirements for public transportation, including school and privately owned buses.
- During an emergency, BC Ferries is required to provide priority loading for emergency personnel, equipment and supplies and ensure ferries are available to serve as reception centres, hospitals, response centres or other emergency facilities.

After the Incident

- Work with appropriate local and federal entities to facilitate the restoration of roadways and utilities.

Supporting Agency Roles

	Before the Incident	During the Incident	After the Incident
Ministry of Environment	☐ Provide regulatory oversight and monitor the situation to ensure that the Responsible Party (RP) is taking appropriate actions. **Can liase with FLNRO to provide:** ☐ Species and ecosystem protection policy. ☐ Water protection and sustainability policy ☐ Conservation and resource management enforcement	Before, during and after an emergency the Ministry of Environment could be called upon to provide expertise, technical advice and/or policy direction regarding: ☐ Environmental emergency response (including hazardous materials) ☐ Air, land and water quality standards ☐ Pollution prevention and waste management ☐ Water and air monitoring and reporting ☐ Environmental assessment ☐ Environmental monitoring ☐ Parks, wilderness and protected areas. ☐ Provide regulatory oversight and monitor the situation to ensure that the Responsible Party (RP) is taking appropriate actions. ☐ May provide a representative to the Incident Command Centre, the Off-Site Command EOC and the OGC Emergency Operations Centre (EOC) and / or the Provincial Emergency Operations Centre (PREOC) on a 24-hour basis. ☐ In a larger scale incident, based on risk, additional ministry resources such as IMTs (Incident Management Teams) may be deployed to establish unified command and monitor, augment, or take over the response if the RP fails to take appropriate action as deemed necessary by the EERO or Provincial Incident Commander. ☐ May assist the RP to ensure that other required agencies and affected stakeholders are contacted. ☐ May provide assistance with hazardous waste management. ☐ May conduct sampling for monitoring and enforcement purposes.	
*MFLNRO	☐ Five key agencies are housed within the Ministry of Forests, Lands and Natural Resource Operations: Wildfire Management Branch, Dam Safety, Flood Safety, GeoBC and the River Forecast Centre. ☐ Develop, deliver and promote innovative and effective wildfire management practices to clients. ☐ Maintain a 24 hour emergency contact number where resources can be accessed for a response related to Emergency Response Plans. ☐ The Ministry of Forests, Lands and Natural Resource Operations is identified to provide personnel, equipment, supplies, telecommunications equipment, aviation support and weather information to assist in emergency response operations. ☐ The Ministry of Forests and Range is the designated key agency for wildfires.	Before, during and after an emergency the Ministry of Forests, Lands and Natural Resource Operations could be called upon to provide expertise, technical advice and/or policy direction regarding: ☐ Forest stewardship policy ☐ Land use planning ☐ Water use planning and authorizations ☐ Drought management ☐ Dam and dike safety and regulation ☐ Flood plain management ☐ GeoBC and information management ☐ Pests, disease, invasive plants and species ☐ Wildfire management	☐ Participate in event debriefings. ☐ Complete a "lessons-learned" process based on the scope of their involvement and the outcome.
Ministry of Transportation and Infrastructure	☐ Maintain a 24 hour emergency contact number where resources can be accessed for a response related to Emergency Response Plans. ☐ In the event of an emergency, the Highway Department's Operations, Maintenance and Re- construction team plays an important role to ensure the public is safe and transportation routes are available for accessing emergency services. ☐ Ministry of Transportation and Infrastructure oversees provincial highways identified as emergency response routes - a network of pre-identified routes that can best move emergency services and supplies to where they are needed in response to a major disaster. ☐ Disaster Response Routes (DRRs) are a critical part of the overall emergency transportation system. ☐ Responsible for the construction, maintenance and operation of public roads.	Before, during and after an emergency the Ministry of Transportation and Infrastructure (MoTI) could be called upon to provide expertise, technical advice and/or policy direction regarding: ☐ Highway construction and maintenance ☐ Safety and protection of provincial road and bridge infrastructure ☐ Transportation planning and policy ☐ MoTI can: ☐ Authorize the closure of provincial transportation routes, including highways and inland ferries, where the safety of the public is at risk. ☐ Assist in public notification through the DriveBC website, as well as posting advisories on overhead message boards along designated routes. ☐ Coordinate and arrange for transportation, engineering and construction resources. ☐ Rebuild and restore provincial highways that are impacted by an emergency. ☐ Major agencies, boards and commissions within MoTI that have identified responsibilities within the Emergency Program Management Regulation are BC Rail, BC Transit and BC Ferries. ☐ During an emergency, BC Rail will: ☐ Provide priority movement of emergency personnel, equipment and supplies. ☐ In cooperation with Transport Canada, assist in railway crashes and derailments in the conduct of rescue operations, removal of debris and the cleanup of hazardous material. ☐ Provide railcars for emergency facilities. ☐ Provide specialized equipment. ☐ During an emergency, BC Transit will coordinate requirements for public transportation, including school and privately owned buses. ☐ During an emergency, BC Ferries is required to provide priority loading for emergency personnel, equipment and supplies and ensure ferries are available to serve as reception centres, hospitals, response centres or other emergency facilities.	☐ Work with appropriate local and federal entities to facilitate the restoration of roadways and utilities.
*PSPC	The Roles & Responsibilities listed below for Public Services and Procurement Canada (PSPC) are only in relation to the Alaska Highway (97) in British Columbia, north of mile 83.5 (km 133) to the border of British Columbia and Yukon Territories at km 968. In conjunction with the BC Ministry of Transportation & Infrastructure (MOTI) and the provincial maintenance contractor, PSPC may: ☐ Maintain a 24 hour emergency contact number where resources can be accessed for a response related to Emergency Response Plans. ☐ Hold responsibility for the acquisition of contracts for the maintenance and operation of the Alaska Highway. ☐ Oversee Alaska Highway response routes - a network of pre-identified routes that can best move emergency services and supplies to where they are needed in response to a major disaster.	In conjunction with the BC Ministry of Transportation & Infrastructure (MOTI), PSPC, and the provincial maintenance contractor may be called upon to: ☐ Provide expertise, technical advice and/or policy direction regarding: ☐ Highway construction and maintenance ☐ Safety and protection of provincial road and bridge infrastructure ☐ Transportation planning and policy ☐ Play an important role to ensure the public is safe and transportation routes are available for accessing emergency services. ☐ Assist in the coordination of roadblock locations along the highway. ☐ Authorize closure of the Alaska Highway where the safety of the public is at risk. ☐ Assist in public notification of an emergency through the MOTIs DriveBC website, as well as posting advisories on overhead message boards along designated routes. ☐ Coordinate and arrange for transportation, engineering and construction resources. ☐ Handle inter-departmental communication as needed during energy resources industry emergencies. ☐ Maintain ability to process calls for new emergencies. ☐ Provide information on the impacts to transportation routes. ☐ Provide response support if dangerous goods are released.	☐ Work with appropriate local and federal entities to facilitate the restoration and re-opening of the Alaska Highway. ☐ Complete a "lessons learned" process based on the scope of involvement and provide any feedback to the industrial operator. ☐ Provide a summary of transportation impacts during the post incident review process. ☐ Participate in multi-agency debriefings.

*MFLNRO - Ministry of Forests, Lands and Natural Resource Operations

*PSPC - Public Services and Procurement Canada

Revised October 2019

Supporting Agency Roles

	Before the Incident	During the Incident	After the Incident
Ministry of Health	☐ Provide public health measures, including epidemic control and immunization programs. ☐ Provide and coordinate ambulance services and triage, treatment, transportation and care of casualties. ☐ Provide the continuity of care for patients evacuated from hospitals or other health institutions and for medically dependant patients from other care facilities. ☐ Provide standard medical units consisting of emergency hospitals, advanced treatment centres, casualty collection units and blood donor packs. ☐ Monitor potable water supplies. ☐ Inspect and regulate food quality with the assistance of the Minister of Agriculture. ☐ Provide critical incident stress debriefing and counselling services. ☐ Provide support services for physically challenged or medically disabled people affected by an emergency. ☐ Maintain a 24 hour emergency contact number where resources can be accessed for a response related to Emergency Response Plans. ☐ Provide input on public health issues related to a petroleum incident.	Before, during and after an emergency the Ministry of Health could be called upon to provide expertise, technical advice and/or policy direction regarding: ☐ Health service delivery ☐ Public health planning and response ☐ Community and home support services ☐ Mental health ☐ Communicable disease prevention ☐ During an emergency the Ministry of Health will provide the continuity of care both for patients evacuated from hospitals or other health institutions and for medically dependent patients from other care facilities; The Ministry will also provide emergency psychosocial services. ☐ Ensure appropriate Health entities have been notified of the incident. ☐ Ensure appropriate Executive and Public Health personnel have been notified of the incident. ☐ Carry out evacuation of medically dependent and vulnerable populations, as needed. ☐ Transport incident casualties as required. ☐ Triage and provide medical care to incident casualties as required. ☐ Decontaminate incident casualties that present to health care facilities, as needed. ☐ Relay health hazard information to the public. ☐ Monitor water and air quality, as it relates to public health. ☐ Coordinate the public health response to the incident. ☐ Address the psychosocial aspects of the aftermath of an event. ☐ Arrange with Health Canada and the Public Health Agency of Canada for federal support, if needed.	☐ Participate in event debriefings. ☐ Complete a “lessons-learned” process based on the scope of their involvement and the outcome. ☐ Continue with public health and environmental health monitoring as required. ☐ Continue to address the psychosocial aspects of recovery.
WorksafeBC	WorkSafeBC is a provincial body set up to maintain a safe, healthful working environment at job sites throughout the province. In addition to providing employers and workers with guidance and assistance when they are setting up health and safety programs, WorkSafeBC, has specific workplace responsibilities. Under the Workers Compensation Act, WorkSafeBC is responsible for: ☐ Inspecting places of employment. ☐ Investigating accidents and the causes of industrial diseases. ☐ Issuing orders and directions specifying means of preventing injuries and industrial disease. ☐ Assisting and advising employers and workers in developing health and safety programs. ☐ Educating workers about health and safety. ☐ Providing living allowances, rehabilitation, and retraining for workers injured on the job. ☐ Collecting contributions to an accident fund from employers and distributing money from the fund to injured workers. ☐ Maintain a 24 hour emergency contact number where petroleum industry incidents can be reported. ☐ Receive Emergency Response Plans. ☐ Attend critical sour well meetings.	**Employer must immediately report the following types of incidents** to WorkSafeBC's emergency and accident reporting phone line whether there is an injury or not: ☐ Any incident that kills, causes risk of death, or seriously injures a worker ☐ Any blasting accident that results in injury, or unusual event involving explosives ☐ A diving incident that causes death, injury, or decompression sickness requiring treatment ☐ A major leak or release of a dangerous substance ☐ A major structural failure or collapse of a structure, equipment, construction support system, or excavation ☐ Any serious mishap ☐ Employer must also report incidents that require the employee to seek medical attention or cause time-loss from work.	☐ Prompt investigation of incidents should be conducted so that other employees will not get injured in the same way. Everyone in the business has a role to play, and you must report accidents and incidents to your supervisor. ☐ According to the Regulation, an employer must immediately undertake an investigation into the cause of any accident or other incident that: ☐ Is required to be reported under the Act? ☐ Results in injury to a worker requiring medical treatment? ☐ Does not involve injury to a worker, or involves only minor injury not requiring medical treatment, but has a potential for causing serious injury to a worker? ☐ Is an incident required by regulation to be investigated? ☐ Submit an employer’s incident investigation report to WorkSafe BC.
Ministry of Agriculture	Examples of emergency management activities carried out by the Ministry of Agriculture are: ☐ Providing advice to farmers, aqua-culturalists and fishers on the protection of crops, livestock and provincially managed fish and marine plant stocks. ☐ Through EMBC, provide support to impacted agricultural industries and coordinate support and/or managing agricultural animal relocation. ☐ Assisting the Ministry of Health with inspection and monitoring of food safety and quality. ☐ Coordinate with Canadian Food Inspection Agency the response to animal disease and plant health. ☐ Administering provision of crop insurance to cover damage from disasters or emergencies.	Before, during and after an emergency the Ministry of Agriculture may be called upon to provide expertise, technical advice and/ or policy direction regarding: ☐ Agriculture ☐ Aquaculture and food industry development ☐ Animal health ☐ Crop/plant protection ☐ Food safety and quality ☐ Crop insurance	
Technical Safety BC	☐ Technical Safety BC (formerly BC Safety Authority) is an independent, self-funded organization mandated to oversee the safe installation and operation of technical systems and equipment across the province. ☐ In addition to issuing permits, licenses and certificates, we work with industry to reduce safety risks through assessment, education and outreach, enforcement, and research.	☐ Technical Safety BC implements a business continuity plan in the event of a natural disaster. This plan ensures that Technical Safety BC resumes safety services as soon as possible. ☐ Though Technical Safety BC is not a first responder, they will provide technical support including inspection services to the recovery team relating to the technical equipment and systems covered by the Safety Standards Act (e.g., gas, electrical, elevating devices, boiler and pressure vessel technologies) after first ensuring the safety of its employees. ☐ Starting in the planning phase and through collaboration with other agencies, Technical Safety BC can provide most value to the public and best support the other agencies.	☐ Technical Safety BC tracks and investigates incidents and hazards that are reported to inform awareness and prevention initiatives ☐ Technical Safety BC does not investigate all reported incidents and may not follow-up with a notification unless there is an intention to investigate. ☐ Technical Safety BC will contact duty holders within 24 hours of the next regular business day following the report of an incident if more information is required or an investigation is planned to occur.
HEMBC North	Health Emergency Management BC (HEMBC) is a program under the Provincial Health Services Authority (PHSA). HEMBC provides the expertise, education, tools, and support specifically for the BC Health Sector to effectively mitigate, prepare for, respond to, and recover from the impacts of emergency events; ensuring the continuity of health services. There is a HEMBC team in each BC health authority. HEMBC-North deals specifically with Northern Health. ☐ Maintain a 24-hour emergency/on call contact number for notification and activation of the health system in Northern BC.	☐ For emergency events that require immediate connection with Northern Health, please call HEMBC on call (24/7) - **855-554-3622.** HEMBC will notify / activate the appropriate Northern Health programs (ie. Public Health, Acute Care etc.) based on the nature of the event / emergency. Please include this number in industry ERPs for the use of permit holders in contacting Northern Health on an emergency basis. ☐ Notify/activate the appropriate Northern Health programs (i.e. Public Health, Acute Care, etc.) based on the nature of the incident/emergency event.	

Source of information: “The All-Hazard Plan” Emergency Management British Columbia 2012, Northern Health Emergency Response Roles and Responsibilities 2016, Emergency Management BC Emergency Response Roles & Responsibilities 2016, OGC Roles & Responsibilities OGC website 2012, WorkSafeBC Roles and Responsibilities 2017 Revised October 2019
*HEMBC - Health Emergency Management BC North

Federal Agency Roles

	Before the Incident	During the Incident	After the Incident
***ECCC**	Environment & Climate Change Canada's Environmental Emergencies Program (EEP) protects Canadians and their environment from the effects of environmental emergencies through provision of science-based expert advice and regulations. The key Acts and Regulations that govern ECCC's role in environmental emergencies that allow it to deliver its mandate are: ☐ *Canadian Environmental Protection Act, 1999* ☐ *Fisheries Act—Pollution Prevention Provisions;* ☐ *Migratory Birds Convention Act, 1994;* ☐ *Statutory Notification Requirements—EC's Environmental Notification System.* ☐ *Environmental Emergencies Regulations.*	During an environmental emergency, *The National Environmental Emergencies Centre (NEEC)* is the focal point for ECCC. **ECCC's services during an environmental emergency:** ☐ Collaborate with federal, provincial, territorial and international environmental protectin agencies to enable rapid sharing of information. ☐ Convene and chair a Science Table of experts and stakeholders to develop consensus based advice to the Lead Agency. ☐ Identify environmentally sensitive areas and priorities (sensitivity and resource at risk mapping). ☐ Advise on mitigation and cleanup measures. ☐ Provide support and guidance in the assessment of oiled shorelines to prioritize their protection and cleanup (Shoreline Cleanup Assessment Technique (SCAT)). ☐ Advice on the fate and behavior of the spilled product. ☐ Advice on sampling and laboratory analysis. ☐ Provide weather forecasting and spill dispersion modelling to identify where these substances are likely to move in the environment. ☐ Provided expertise on the migratory bird resources and species at risk, including on-site assessment and determination of wildlife impact. ☐ Can conduct post-emergency assessments.	☐ ECCC can conduct post-emergency assessments. ☐ Provide specialized advice in shoreline clean-up assessment techniques (SCAT). ☐ Provide Advise on mitigation and cleanup measures..
***DFO**	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. ☐ Establishes appropriate and nationally consistent level of preparedness and response services in Canadian waters. ☐ Design and develop related regulations, policies, strategies and tools. ☐ Review, assess and monitor activities associated with fish habitat to ensure their compliance with the Fisheries Act and Species at Risk Act. ☐ Conduct environmental assessments under the Canadian Environmental Assessment Act. ☐ Design, develop and implement communication and education strategies.	☐ 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. ☐ Work together with provincial environment protection agencies and may be initially notified by ECCC. ☐ May send personnel to the site if there has been or could potentially be an impact to fish or fish habitat. ☐ Monitors and investigates all reports of marine pollution in Canada in conjunction with other federal departments. ☐ Maintains communications with the program's partners, including Transport Canada and ECCC, to ensure a consistent coordinated approach to marine pollution incident response. ☐ Aids in search and rescue operations.	☐ Work closely with ECCC, The Canadian Coast Guard and other provincial environmental agencies.
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: ☐ Emergency ☐ Aviation Weather Briefing ☐ Flight Planning ☐ En-route Flight Information Services ☐ Remote Aerodrome Advisory Services (RAAS)	☐ As requested by the provincial oil and gas regulator, 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), the Flight Information Centre can be contacted by the provincial oil and gas regulator. Depending on the situation, the Flight Information Centre may issue a NOTAM to close the air space in a defined area.	☐ Rescind the NOTAM and re-open air space that was closed due to emergency.
Health Canada	☐ Sets national standards to keep the environment healthy, keep water and air pollution low and Canadians safe. ☐ Maintains a nationwide network of radiation monitoring stations and can act if levels spike. ☐ Under Chemicals Management Plan, assess health risks from chemicals used in manufacturing and agriculture and require users to prove they actually need the chemicals to make their products ☐ Sets strict rules on how chemicals are used in order to limit human exposure. ☐ Preparedness exercises are designed to test how well the plans and procedures work during simulated emergency situations. Such exercises help the government identify strengths as well as any problems or inadequacies in preparedness plans and procedures so that these can be addressed before, not after, an actual emergency.	☐ 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 collaboratively with the provinces and territories to test ways in which the Canadian health care system can be improved and ensure its sustainability for the 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.	☐ 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). ☐ If a public health emergency grows beyond one province and/or territory, the Public Health Agency of Canada usually gets involved.	☐ Work with Health Canada to test ways in which the Canadian health care system can be improved and ensure its sustainability for the future.

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

Since the Government of Canada's renewed commitment to a stronger relationship with Indigenous peoples in Canada, measures were initiated to effect a shift in the way the Government delivers services to Indigenous peoples. This included the creation of two new departments, which was announced on December 4, 2017. The two newly created departments, Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) and Indigenous Services Canada (ISC), are intended to improve the delivery of services while accelerating movement towards self-government and self-determination of Indigenous 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 Canada have been absorbed into the newly created Indigenous Services Canada (ISC). RO and FNIHB work closely and collaborate towards the provision of emergency preparedness and response activities to First Nations communities in Canada.

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

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

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

*Indian Oil & Gas Canada

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

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

IOGC's general responsibilities are to:
☐ identify and evaluate oil and gas resource potential on Indian reserve lands;
☐ 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* and *Indian Oil and Gas Regulations, 1995*, as well as other relevant legislation and guidelines (see Acts and Regulations). Oil and gas activity on First Nation reserve lands depends on agreements involving First Nation band councils, oil and gas companies, and Indian Oil and Gas Canada.

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

*ECCC - Environment & Climate Change Canada *DFO – Canadian Department of Fisheries & Oceans *ISC – Indigenous Services Canada *FNIHB - First Nation & Inuit Health Branch *RO - Regional Operations *IOGC - Indian Oil & Gas Canada

Federal Agency Roles

	Before the Incident	During the Incident	After the Incident
Transport Canada *CANUTEC	☐ Regulate the handling, offering for transport and the transport of dangerous goods by all modes in order to ensure public safety. ☐ Maintain a 24 hour emergency telephone service. ☐ Federal regulations require that CANUTEC be contacted in the event of an incident or accident involving dangerous goods and infections substances. ☐ Maintains records of over 3 million Safety Data Sheets (SDS).	☐ Assist emergency response personnel in handling dangerous good emergencies including advice on ☐ Chemical, physical and toxicological properties and incompatibilities of the dangerous goods ☐ Health hazards and first aid ☐ Fire, explosion, spill or leak hazards ☐ Remedial actions for the protection of life, property and the environment ☐ Evacuation distances ☐ Personal protective clothing and decontamination ☐ CANUTEC staff does not go to the site of an incident, however, should on-site assistance be required, CANUTEC can assist in the activation or industry emergency response plans. ☐ Provide communication links with the appropriate industry, government or medical specialists.	☐ Maintain voice communication and written information records for two years for the protection of all parties.
*Emergency Response Assistance Canada	Emergency Response Assistance Canada (ERAC) is a not for profit cooperative organization built by industry for industry providing safe, timely effective, sustainable, cost effective flammable liquids and gases emergency preparedness and response assistance to all Plan Participants and Stakeholders of ERAC. ☐ ERAC will act on behalf of the Plan Participant to develop, submit, update, and respond to the requirements of the Plan Participant ERAP submitted to and approved by Transport Canada. ☐ ERAC provides a network of experienced, trained Technical Advisors (TAs), Remedial Measures Advisors (RMAs) and Response Teams who respond to rail, road and stationary tank incidents involving flammable gases, Class 2.1 Liquefied Petroleum Gas (LPG) emergencies and Flammable Liquids Class 3 rail transport and road cargo tank transport emergencies. The emergency responders are constantly available through a 24 hour activation telephone number. ☐ Once a year, there is Regional Training that is held in each region for the Remedial Measures Advisors, Technical Advisors, Response Team Leaders, Alternate Team Leaders as well as all Response Team Members to test their skills and update them on any new developments. Also, once every two years, National Training Session is held for all the Remedial Measures Advisors, Technical Advisors, Response Team Leaders and Alternate Team leaders across Canada.	Provides emergency response to plan participants who transport the following products by road or rail, or those who store these products in tanks with capacities of 450 litres or greater. These products are gases at standard temperatures and pressure, and include: Propane (UN1978), Butane (UN1011), Propylene (UN1077), Butylene (UN1012), Isobutene (UN1969), Isobutylene (UN1055), and NGL (UN1075). It is recognized that these products may contain a concentration of condensate and/or quantities of other elements including hydrogen sulphide. ☐ Response is also provided to emergencies involving Butadiene – 1,3 (stabilized) (UN1010). In addition we respond to the following Flammable Liquids transported by rail only: UN1170 Ethanol UN1987 Alcohols, N.O.S. UN1202 Diesel Fuel UN1993 Flammable Liquid, N.O.S. UN1203 Gasoline UN3295 Hydrocarbons, Liquid, N.O.S. UN1267 Petroleum Crude Oil UN3475 Ethanol and Gasoline Mixture UN1268 Petroleum Distillates N.O.S. UN3494 Petroleum Sour Crude Oil, Flammable, Toxic UN1863 Fuel Aviation, Turbine Engine ☐ If LPG/Flammable Liquid Incident, Emergency Call Centre Operator receives an activation (notification) phone call. ☐ Emergency Call Centre Operator sends group email to Home Based Coordinator. ☐ Home Based Coordinator / Technical Advisor conferenced into call to assist with information gathering. ☐ Caller requires technical advice. ☐ Home Based Coordinator / Technical Advisor provides technical advice. ☐ Caller requests response team. ☐ Confirm plan participant involvement. ☐ Plan participant notified of activation. ☐ Home Based Coordinator / Technical Advisor activate plan. ☐ Mobilization phase ERAC-002. ☐ Initial incident size-up. ☐ Damage and spill assessment. ☐ Develop Incident Action Plan. ☐ Execute IAP & initiate planning for next operational period. ☐ Update Emergency Call Centre Operator and Home Based Coordinator.	☐ Terminate and de-mobilize. ☐ Post-incident assessment and communication program.
*PSC	☐ Public Safety Canada works with provincial and territorial officials to ensure first responders and emergency management personnel are well-prepared through education, support and exercises. ☐ Responsible for promoting and coordinating the preparation of departmental emergency management plans as well as coordinating the government's response to an emergency through the Government Operations Centre (GOC).	☐ Public Safety Canada houses the Government Operations Centre at the hub of the national emergency management system. It's an advanced centre for monitoring and coordinating the federal response to an emergency.	☐ In the event of a large-scale natural disaster where response and recovery costs exceed what individual provinces and territories could reasonably be expected to bear on their own, PS provides financial assistance to the provincial and territorial governments through the Disaster Financial Assistance Arrangements (DFAA). Assistance is paid to the province or territory – not directly to individuals or communities. The provincial or territorial governments design, develop and deliver disaster financial assistance, determining the amounts and types of assistance that will be provided to those who have experienced losses.

*Canada Energy Regulator Roles & Responsibilities

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

As lead regulatory agency, the CER:

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

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

*Transportation Safety Board Mandate

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

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

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

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

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

http://www.bst-tsb.gc.ca/eng/qui-about/mission-mandate.asp

*ERAC - Emergency Response Assistance Canada *CANUTEC - Canadian Transport Emergency Centre *CER - Canada Energy Regulator *TSB - Transportation Safety Board *PSC - Public Safety Canada

Revised September 2019

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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ICS 201 Incident Briefing Form

Incident Name:

Date/Time Initiated:

Prepared By: ICS Position:

Level of Emergency Alert / Minor Level 1 Level 2 Level 3

Map Sketch:

Note: Maps can be drawn or attached here.

Situation Summary: (Write description or attach A1)

Safety Briefing:

Current and Planned Objectives:

Priorities: (1) Life Safety (2) Incident Stabilization (3) Environment & Property

1. Ensure Safety of Citizens and Response Personnel:

- ☐ 1a. Identify hazard(s) of released product.
- ☐ 1b. Establish site control (hot zone, warm zone, cold zone, & security).
- ☐ 1c. Establish an Emergency Response Zone and Initiate Public Safety Actions.
- ☐ 1d. Consider evacuations if needed.
- ☐ 1e. Establish aircraft restrictions.
- ☐ 1f. Monitor air in impacted areas
- ☐ 1g. Develop site safety plan for personnel and ensure safety briefings are conducted.

2. Control the Source of the Release:

- ☐ 2a. Complete emergency shutdown.
- ☐ 2b. Conduct firefighting.
- ☐ 2c. Initiate temporary repairs.

3. Manage a Coordinated Response Effort:

- ☐ 3a. Complete or confirm notifications.
- ☐ 3b. Establish a unified command organization and facilities (command post, etc.).
- ☐ 3c. Ensure mobilization and tracking of resources and account for personnel and equipment.
- ☐ 3d. Complete documentation.

4. Minimize Economic Impacts:

- ☐ 4a. Consider tourism and local economic impacts.
- ☐ 4b. Protect public and private assets, as resources permit.
- ☐ 4c. Establish damage claims process.

5. Keep Stakeholders and Public Informed of Response Activities:

- ☐ 5a. Provide forum to obtain stakeholder input and concerns.
- ☐ 5b. Provide stakeholders with details of response actions.
- ☐ 5c. Identify stakeholder concerns and issues, and address as practical.
- ☐ 5d. Provide timely safety announcements.
- ☐ 5e. Conduct regular news briefings.
- ☐ 5f. Conduct public meetings, as appropriate.

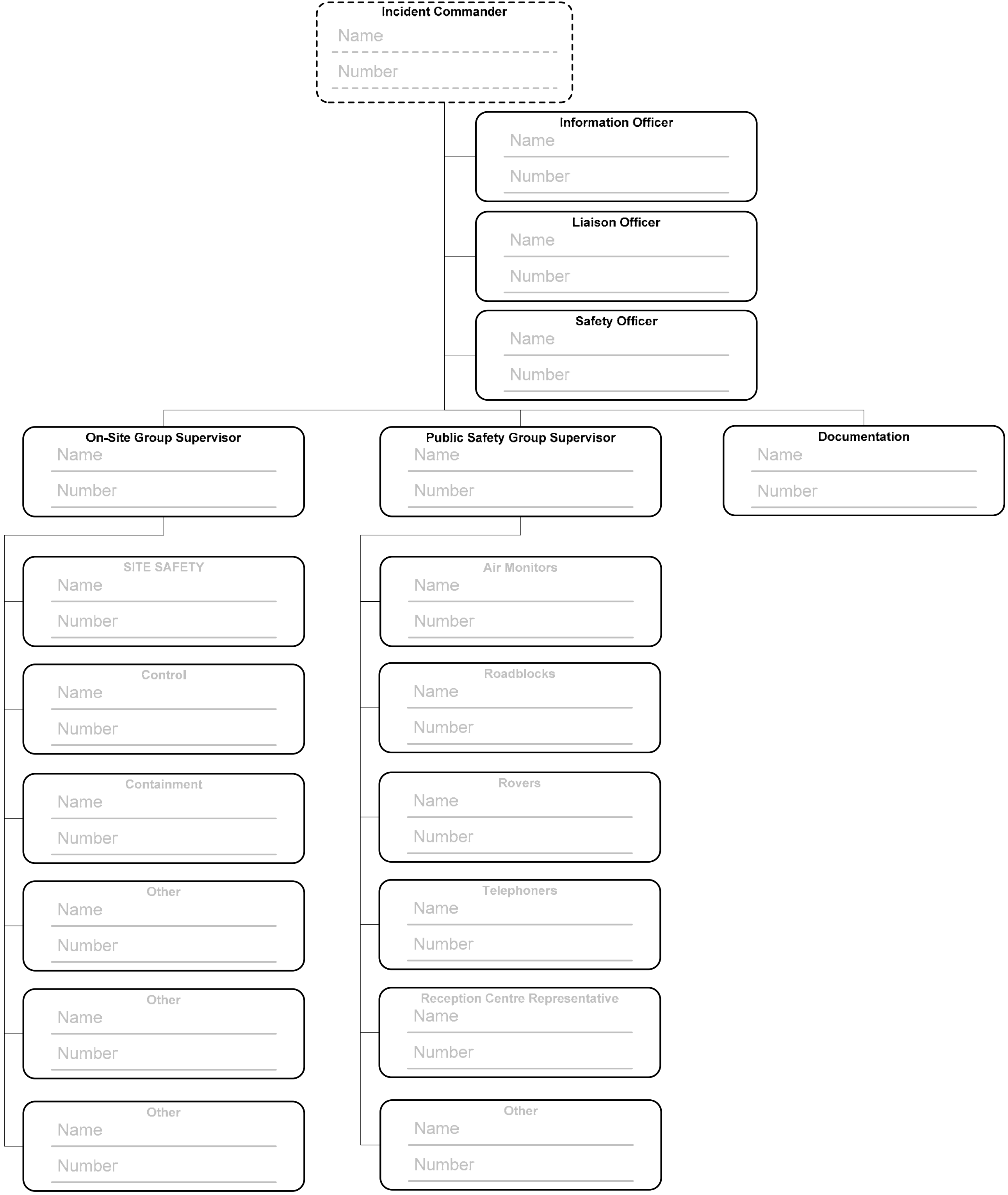
Current and Planned Actions, Strategies and Tactics:

Time:	Actions:
HHMM	
HHMM	
HHMM	
HHMM	
HHMM	
HHMM	
HHMM	
HHMM	
HHMM	

ICS 201 Incident Briefing Form

Current Organizational Structure: (draw in current response structure)*

***** This is a condensed Organizational Chart to account for all currently responding personnel during the Initial Response.***



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

Resources Summary:

Resource(s)	Time Called	ETA	On-Site	Notes (Location/Assignment/Status)
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	

External Notifications: (Government)

Agency	Time Called	Notes

Site Safety and Hazard Control Analysis

Site 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? ☐ Yes ☐ No ☐ Don't Know	Injuries: Fatalities: Unaccounted: Trapped:
4. Are observers involved or rescue attempts planned? Observers: ☐ Yes ☐ No Rescuers: ☐ Yes ☐ No	5. Are Decon areas setup? ☐ Yes ☐ No If so, where?

Hazard 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? ☐ Yes ☐ No
3. Wind direction across incident: ☐ Towards your position Wind Speed: ☐ Away from your position	4. Is a safe approach possible? ☐ Yes ☐ No
5. Odours or smells? ☐ Yes ☐ No	6. Vapours visible? ☐ Yes ☐ No
7. Holes, ditches, fast water, cliffs, etc. nearby? ☐ Yes ☐ No	8. Fire, sparks, sources of ignition nearby? ☐ Yes ☐ No
9. Is local traffic a potential problem? ☐ Yes ☐ No	10. Product placards, colour codes visible? ☐ Yes ☐ No
11. Other Hazards? ☐ Yes ☐ No	12. As you approach the scene from the upwind side, do you note a change in the status of any of the above? ☐ Yes ☐ No

13. Remarks:

Hazard Mitigation: have you determined the necessity for any of the following?

1. Entry Objectives:

2. Warning sign(s), barriers, colour codes in place? ☐ Yes ☐ No

3. Hazardous material being monitored? ☐ Yes ☐ No
   3a. Sampling equipment:
   3b. Sampling location(s):
   3c. Sampling frequency:
   3d. Peak reading:
   3e. Personal exposure monitoring:

4. Protective gear / level:	4a. Gloves:
4b. Respirators	4c. Clothing:
4d. Boots:	4e. Chemical cartridge change frequency:

5. Decon
   5a. Instructions:
   5b. Decon equipment and materials:

6. Emergency escape route established? ☐ Yes ☐ No
   Route?

7. Field responders briefed on hazards? ☐ Yes ☐ No

8. Remarks:

Protective Zones: record initial control perimeters (see Figure 1)

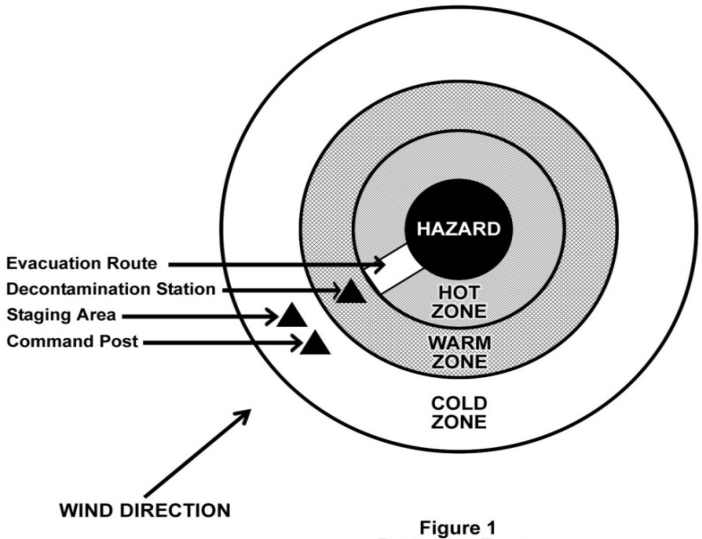


Figure 1
Protective Zones

1. Is there a Hot Zone established?
   - ☐ Yes
   - ☐ No

   If so, Where?

2. Is there a Warm Zone established?
   - ☐ Yes
   - ☐ No

   If so, Where?

3. Is there a Cold Zone established?
   - ☐ Yes
   - ☐ No

   If so, Where?

4. Remarks: (Include any information on evacuation route, etc.)

5. Include any site sketches or photos of the protective zones (if available):

ICS 202 Incident Objectives

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

ICS 203 Organization Assignment List

Incident Name	**Operational Period (Date/Time)** From: To:

Incident Commander(s)		
Agency	IC	Deputy
Safety Officer		
Assistant		
Information Officer		
Assistant		
Liaison Officer		
Assistant		

Agency Representatives	
Agency	Name

Planning Section	
Chief	
Deputy	
Resources Unit	
Situation Unit	
Environmental Unit	
Documentation Unit	
Demobilization Unit	
Technical Specialists	

Logistics Section	
Chief	
Deputy	
Supply Unit	
Facilities Unit	
Ground Support Unit	
Communications Unit	
Medical Unit	
Food Unit	

Operations Section		
	Chief	
	Deputy	
	Staging Area Manager	
On-Site Group		
	Supervisor	
	Lead	
	Lead	
	Lead	
	Lead	
	Lead	
Public Safety Group		
	Supervisor	
	Lead	
	Lead	
	Lead	
	Lead	
	Lead	
Branch – Division / Group		
	Branch Director	
	Deputy	
Division/Group	Lead	
Division/Group	Lead	
Division/Group	Lead	
Division/Group	Lead	
Division/Group	Lead	
Branch – Division / Group		
	Branch Director	
	Deputy	
Division/Group	Lead	
Division/Group	Lead	
Division/Group	Lead	
Division/Group	Lead	
Division/Group	Lead	

Finance / Admin Section	
Chief	
Deputy	
Time Unit	
Procurement Unit	
Compensation / Claims Unit	
Cost Unit	

Prepared By: (Resources Unit)	**Date/Time**

ICS 204 Assignment List

Branch:	Division / Group / Staging:
Incident Name:	Operational Period: From: Date________________ Time_______________ To: Date________________ Time_______________
Division / Group / Staging Operations Chief_____________________________________ Branch Director_______________________________________	Division/Group Supervisor______________________________ Staging Area Manager__________________________________

Resources Assigned to This Period

Resource Identifier	Leader	No. of Persons	Contact Cell #, radio freq. Etc.	Reporting Location, Special Equipment and Supplies, Remarks

Work Assignments:

Special Instructions:

Division / Group Communications Summary

Function		Frequencies	System	Chan.	Function		Frequencies	System	Chan.
Command	Local				Logistics	Local			
	Repeat					Repeat			
Div. / Group Tactical					Ground to Air				

Prepared By: (Resource Unit Leader)		Date:	Time:
Signature:			

ICS 207 Incident Organization Chart

Incident Name:

Date: Time:

Operational Period:

KEY INFORMATION:

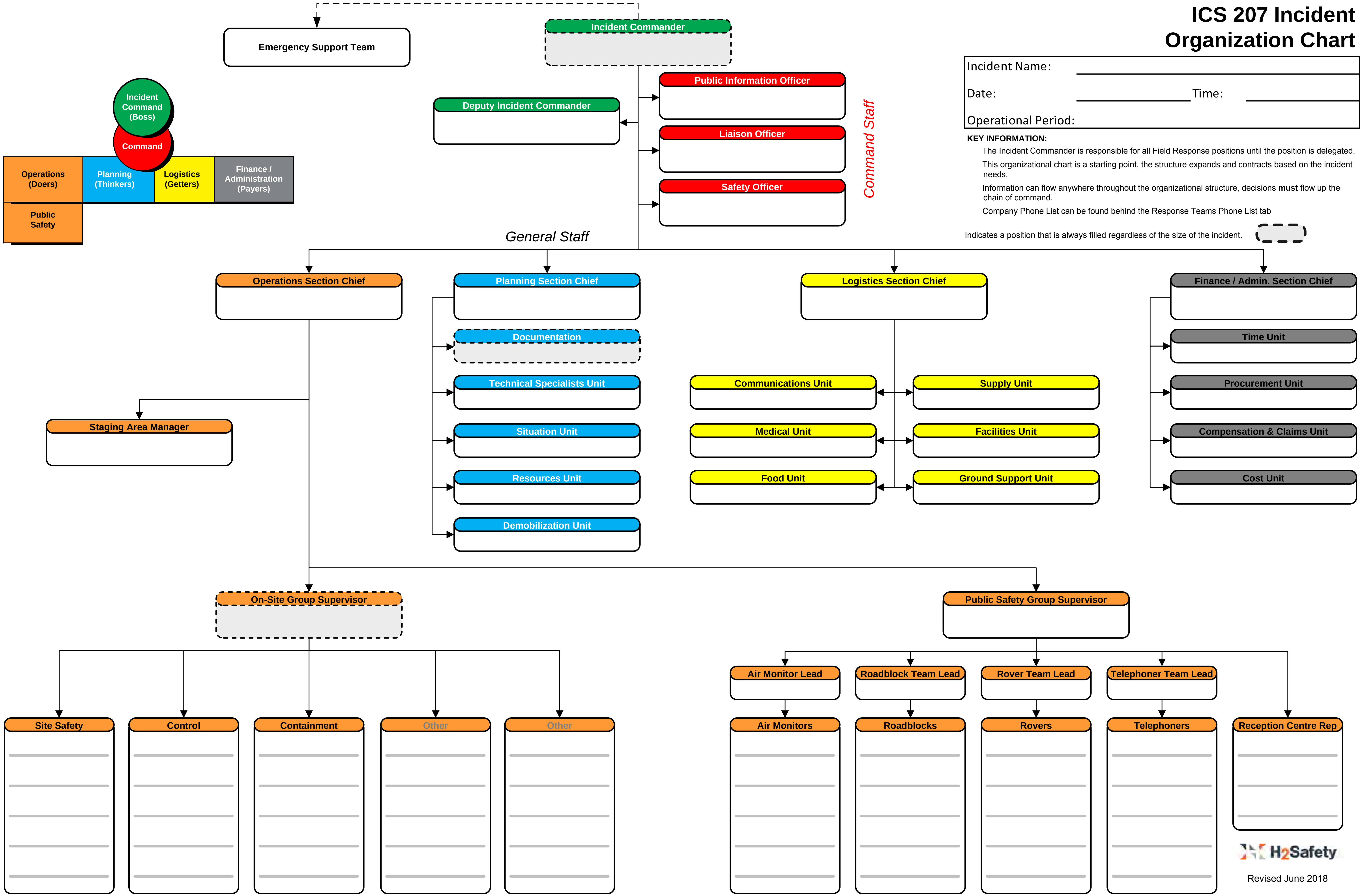
The Incident Commander is responsible for all Field Response positions until the position is delegated.

This organizational chart is a starting point, the structure expands and contracts based on the incident needs.

Information can flow anywhere throughout the organizational structure, decisions **must** flow up the chain of command.

Company Phone List can be found behind the Response Teams Phone List tab

Indicates a position that is always filled regardless of the size of the incident.



Incident Command (Boss)
Command
Operations (Doers)
Planning (Thinkers)
Logistics (Getters)
Finance / Administration (Payers)
Public Safety

- Emergency Support Team
- Incident Commander
  - Deputy Incident Commander
  - *Command Staff*
    - Public Information Officer
    - Liaison Officer
    - Safety Officer
  - *General Staff*
    - Operations Section Chief
      - Staging Area Manager
      - On-Site Group Supervisor
        - Site Safety
        - Control
        - Containment
        - Other
        - Other
      - Public Safety Group Supervisor
        - Air Monitor Lead
          - Air Monitors
        - Roadblock Team Lead
          - Roadblocks
        - Rover Team Lead
          - Rovers
        - Telephoner Team Lead
          - Telephoners
        - Reception Centre Rep
    - Planning Section Chief
      - Documentation
      - Technical Specialists Unit
      - Situation Unit
      - Resources Unit
      - Demobilization Unit
    - Logistics Section Chief
      - Communications Unit
      - Medical Unit
      - Food Unit
      - Supply Unit
      - Facilities Unit
      - Ground Support Unit
    - Finance / Admin. Section Chief
      - Time Unit
      - Procurement Unit
      - Compensation & Claims Unit
      - Cost Unit

H2Safety

Revised June 2018

ICS 208 Safety Message / Plan

Incident Name:	Operational Period: From: Date________________ Time_______________ To: Date________________ Time_______________

Safety Message/Expanded Safety Message, Safety Plan, Site Safety Plan:

Site Safety Plan Required? ☐ Yes ☐ No

Approved Site Safety Plan(s) Located At:

Prepared By: (Name and Position)	Date Prepared:
Signature:	Time Prepared:

ICS 209 Incident Status Summary

Incident Name:	Location of Incident:
Date / Time Initiated:	(LSD / NTS)
Prepared by:	ICS Position

Incident Details:

Gas readings:	H_2S	SO_2	LEL

Level of Emergency:

Incident Severity:	☐ Alert / Minor	☐ Level 1	☐ Level 2	☐ Level 3

Affect Medium: (Check all that apply)

☐ Air	☐ Water	☐ Soil	☐ 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)

☐ Sour Gas Release	☐ Sweet Gas Release	☐ Liquid Spills
☐ Natural Disaster/Weather	☐ Fire/Explosion	☐ Drilling Kick
☐ Worker Injury/Fatality	☐ Security (theft, threat, terrorism)	☐ Induced Seismicity
☐ Well Bore Communication	☐ Pipeline Boring	☐ Vehicle/Transportation
☐ Equipment/Structural Damage	☐ Pipeline Break	☐ Well Control
☐ Other – Specify:		

Activity: (Check all that apply)

☐ Construction (Road, Lease, Pipe)	☐ Drilling/Exploration	☐ Waste Management
☐ Processing	☐ Well Fracturing	☐ Servicing
☐ Repair	☐ Flaring (Emergency)	☐ Well Testing
☐ Pressure Testing	☐ Transportation	
☐ Other – Specify:		

Consequence or Impacts: (Check all that apply, if none, leave blank)	
☐ Worker Safety (Injuries, Fatalities)	☐ Property
☐ Economic (Loss of and/or damage to equipment or infrastructure, loss of production, work stoppage)	
☐ Other – Specify:	

Material Information:			
Is spill off lease?	☐ Yes - Estimated spill quantity:		☐ No
☐ Liquid Hydrogen (Crude, Oil, Diesel, Fuel)		☐ Toxic Gas Liquid (>1% Different Toxins)	
☐ Acid	☐ Emulsion (Oil, Gas, Water)	☐ Sweet Natural Gas	☐ Salt Water
☐ Methanol	☐ Non-Toxic Liquids	☐ Fresh Water	
☐ Sour Natural Gas	☐ Sour Liquids (<1% H_2S)	☐ Other – Specify:	
☐ Non-Toxic Gases (Nitrogen, Carbon Dioxide, Inert Gases)			

Area Information:					
Land Type:	☐ Private Land	☐ Crown Land	Field Name:		
Area Type:	☐ Forest	☐ Muskeg	☐ Farmland	☐ Residential	☐ Other
Access:	☐ Helicopter	☐ ATV	☐ 4WD	☐ 2WD	☐ Unknown
Name of road the asset is located on:					
KM where the incident occurred:					
Distance to nearest residence/public facility:					
Nearest City/Town/Open Camp:					

Weather Conditions:								
Weather Conditions	☐ Clear		☐ Cloudy		☐ Other:			
Wind Direction	N	NE	NW	E	SE	S	SW	W
Wind Strength	☐ Calm		☐ Moderate		☐ Strong		☐ Gusty	
Temperature	°C							

Public / Worker Injuries / Medical Emergencies:			
☐ First Aid	☐ Hospitalization	☐ Fatality	☐ Other – Specify:

Notification: (Notify all agencies as required)			
☐ 911 (Police/RCMP, Fire, EMS)	☐ Energy Regulator (OGC, AER*, etc.)	☐ Local Authority (MD, County, Town, City)	☐ Health Authority
☐ Canada Energy Regulator (CER)	☐ Occupational Health & Safety (OH&S)	☐ Emergency Management Agency	☐ Ministry of Transportation
☐ Workers' Compensation Board (WCB)	☐ Emergency Response Assistance Canada (ERAC)	☐ Western Canadian Spill Services (WCSS)	☐ CANUTEC
☐ Transportation Dangerous Goods (TDG)	☐ *Other*	☐ *Other*	☐ *Other*
☐ *Other*	☐ *Other*	☐ *Other*	☐ *Other*

**Request that the regulator notify Ministry of Environment, Environment & Climate Change Canada (ECCC) and the Department of Fisheries and Oceans as required.*

Refer to the Government Notification Matrix and External Agencies Contact List or Area Specific Information for complete list of agencies requiring contact.

Agency Notification

Agency Name	Contact Name	Contact Number	Notified (Y/N)

Collect all completed C3 Government Agency Contact Logs from responders for full documentation.

Notes:

Roadblock Locations:

Roadblock Number	Name	Location/LSD

Collect all completed B4 Roadblock Logs from responders for full documentation.

Notes:

Air Monitor Locations:

Air Monitor Number	Name	Location/LSD

Collect all completed A5 Air Monitoring Logs from responders for full documentation.

Notes:

Reception Centres

Name	Location	Phone Number

Collect all completed B1 Reception Centre Registration Logs from responders for full documentation.

Notes:

ICS 211 Check-In / Out List

Incident Name:

Date / Time Initiated:

Prepared by:

ICS Position:

Check-in Location ☐ Staging Area ☐ ICS Res. Unit ☐ Other:

Name of Company	Date of Check-in	Supervisor Name	Total # of Personnel	Incident Assignment	Assigned	Available	Date of Check-out

Notes:

ICS 211 Check-In / Out List

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

Incident Name:

Operational Period:
To: Date________________ Time______________ 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 Required:															Prepared by: Name: Position/Title: Date/Time: Signature:		
		Total Resources - Have on Hand:																	
		Total Resources Need to Order:																	

ICS 215 Operational Planning Worksheet

ICS 215a Incident Action Plan Safety Analysis

Incident Name:	Date / Time Initiated:
Prepared by:	ICS Position:

Division or Group	Potential Hazards									Controls (e.g., PPE, buddy system, escape routes)
	Type of Hazard	Type of Hazard	Type of Hazard	Type of Hazard	Type of Hazard	Type of Hazard	Type of Hazard	Type of Hazard	Type of Hazard	

ICS 221 Demobilization Checkout

Incident Name / Number:		Date / Time:		Demob. Number:	
Unit/Personnel Released:					
Transportation Type / Number:					
Actual Release Date / Time:				Manifest Completed? ☐ Yes ☐ No	

Destination:	Notify:	☐ HQ	☐ Agency	☐ Region	☐ Area	☐ Dispatch
	Name:					
	Date:					

Unit Leader responsible for collecting performance rating	

Unit / Personnel	
You and your resources have been released subject to Sign-Off from the following: Demobilization Unit Leader – Check the appropriate box	
Logistics Section	
☐ Supply Unit	
☐ Communications Unit	
☐ Facilities Unit	
☐ Ground Support Unit Leader	
Planning Section	
☐ Demobilization Unit	
Finance/Admin Section	
☐ Time Unit	
Other	
☐	
☐	
Remarks:	

Page		of		Prepared By: (Name and Position)	Signature:

ICS 221 Demobilization Checkout

ICS 230 Meeting Schedule

Incident Name:	Operational Period: From: Date________________ Time_______________

Meeting Schedule (Commonly-held meetings are included)

Date / Time	Meeting Name	Purpose	Attendees	Location

Prepared by: (Situation Unit Leader)	Date / Time:

ICS 231 Meeting Summary

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

ICS 233 Incident Open Action Tracker

Incident Name:

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

ICS 233 Incident Open Action Tracker

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

A1 Initial Emergency Report Form

First On-Scene Actions

Evacuate	☐ Get to a safe area immediately. ☐ Move upwind if release is downwind of you. ☐ Move crosswind if a release is upwind from you. ☐ Move to higher ground if possible.
Alarm	☐ Call for help ("Man Down"). ☐ Sound bell, horn or whistle, or call by radio. ☐ For medical emergencies, call 911.
Assess	☐ Take head count, locate any casualties. Consider all of the hazards. ☐ Fill out information below to complete assessment.
Protect	☐ Put on 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	☐ Arrange transport of casualties to medical aid. ☐ Provide information to Emergency Medical Services (EMS).

Incident Details *To be completed by the person involved or notified*

Report taken by	Date / Time
Name of person calling	Caller Telephone
Incident Location (LSD / NTS)	
Event Summary	

Agencies Notified	☐ Yes Who? ☐ No			
Event Status	☐ Incident contained or controlled ☐ Imminent control possible		☐ Intermittent control possible ☐ Incident is uncontrolled	
Site Type	☐ Well ☐ Pipeline	☐ Tank Farm/Storage	☐ Battery/Plant/Facility	☐ Other______________
Incident Type	☐ Sour Gas Release	☐ Sweet Gas Release	☐ Pipeline Break	☐ Security (theft, threat, terrorism)
	☐ Loss of Containment	☐ Fire/Explosion	☐ Worker Injury/Fatality	☐ Vehicle/Transportation
	☐ Liquid Spill	☐ Other____		

A1 Initial Emergency Report Form

Impacts

Public Health and Safety	☐ Could be jeopardized		☐ Is jeopardized	
Public Protection Measures Taken	☐ Notification	☐ Evacuation	☐ Shelter-in-place	☐ Roadblocks
Worker Injuries	☐ First Aid	☐ Hospitalized	☐ Fatality	☐ Other____________
Distance to nearest surface development	____________km	Distance to nearest urban centre		____________km

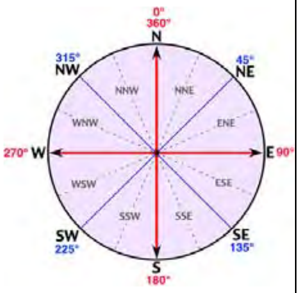
Details

Release Impact	☐ On-Lease	☐ Off-Lease	Product______________________	Amount________________
Gas Readings	H_2S______	SO_2_______	LEL________	Other________________________________

Distance to nearest watercourse	__________________km

Details

Weather Conditions



Media Involvement?	☐ Yes	☐ No	**Regulator Involvement?**	☐ Yes	☐ No	**Public Affairs/Community Relations Issues?**	☐ Yes	☐ No

Details

Notes / Instructions Provided:

Distribute this completed report to all Key Response Personnel

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

A2 Odour Complaint Script

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

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

Name: ____________________

Contact number: ____________________

Description of the concern: ____________________

____

____

How many people are you with right now?

*Adults*____________________*Children* ____________________

Can you provide the location of the incident?

Location of the incident (address, legal, landmark, 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 someone to investigate. To be safe, you and anyone that you may be with need to go inside and stay inside. Close all doors and windows and turn off any appliances that blow out indoor air (i.e. clothes dryer) or suck in outside air (i.e. heating / air conditioning). Do not go outside or attempt to start any vehicles until you are told it is safe to do so.

If the resident is in a vehicle and cannot shelter-in-place tell them:

The company will send someone to investigate. To be safe, you and anyone that may be with you need to get inside the vehicle and stay inside. Keep all doors and windows closed and shut off the air conditioning / heat. If you see or hear anything that might indicate where the incident is occurring, travel in the opposite direction of the hazard; otherwise, continue travelling on your current course which will likely take you out of the hazard area.

Someone will call you back with further instruction so please stay off of the phone so that we can contact you. If you have any urgent questions please call the company at__________________.

A3 First Call Communication

Contact Details	Regulatory Contact			Field Centre			
	Caller					Phone	
	Notification	**Date**	**Time**	**Release**	**Start Time**	**End Time**	☐ **Ongoing**
	Licensee					Phone	
	Location			**Nearest Town**			
	Nearest Resident	Distance/Direction				Phone	
	Media Involvement?	☐ **Local** ☐ **Regional**	☐ **National** ☐ **International**	Media Contact			
	Operator					Phone	

Public Impact	**Public Health and Safety**	☐ **Could be jeopardized** ☐ **Is jeopardized**		**Worker Injuries**	☐ **First Aid** ☐ **Hospitalization**	☐ **Fatality**
	Emergency Assessment Matrix completed with licensee	☐ **Minor** ☐ **One**	☐ **Two** ☐ **Three**	ERP Activated?	☐ Site Specific ☐ Field/Area	☐ Corporate
	EPZ Size (2 km if unknown)	Numbers and Types of Public in EPZ			EOC/ICP Location	
	Public Protection Measures Implemented	☐ Notification ☐ Shelter	☐ Roadblocks ☐ Evacuation		Number Evacuated	

Release Type	**Release Impact**	☐ On lease	☐ Off lease	H_2S Concentration		
	☐ Sensitive Environment	Environment Affected		☐ Air ☐ Land	☐ Standing Water ☐ Flowing Water	Water Body Name
	Area Affected (m^3)	☐ Property Damage	☐ Equipment Loss	☐ Wildlife / Livestock Affected		
	Gas Release	☐ Sweet	☐ Sour		Volume/Rate	
	Liquid Release	☐ Oil	☐ Water	☐ Effluent	Volume/Rate	
	☐ Release Point Determined					

Containment	**Third Party / Outside Assistance Required**	☐ **Incident contained or controlled** ☐ **Intermittent control possible**	☐ **Imminent control probable** ☐ **Incident is uncontrolled**
	Company	WCSS Co-op	

Operations Type	Well Licence No.		Type of Incident	☐ Kick	☐ Blowout	☐ Loss of Circulation
	Well Status	☐ Drilling ☐ Standing	☐ Servicing ☐ Sweet	☐ Producing ☐ Sour	☐ Injection ☐ Critical	☐ Suspended
	Pipeline License No.		Line No.	☐ Hit	☐ Leak	☐ Rupture
	Production Facility License No.		☐ Gas ☐ Oil	☐ Gas Plant ☐ Battery	☐ Compressor ☐ Other	Approval No.

A3 First Call Communication

Air Monitoring

☐ License Air Monitoring Occurring		☐ Mobile	☐ Handheld	Estimated Time of Arrival	
Initial Readings / Location		☐ PPB ☐ PPM	☐ On Site ☐ Off Site	Distance	
Contractor Name		Phone		AMU Phone	
Wind	Direction	Speed	Meteorological Conditions		AMU ETA

Communications

Communications completed by Licensee and /or Regulatory Agency

☐ RCMP/Police	☐ Energy Regulator	☐ Emergency Management Agency	☐ TDG	☐ OH&S	☐ WCB
☐ Ambulance	☐ Local Authority	☐ Ministry of Transportation	☐ CANUTEC	☐ DFO	☐ WCSS
☐ Fire	☐ Health Authority	☐ Environment & Climate Change Canada (ECCC)	☐ ERAC	☐ Other	☐ Other
☐ CER	☐ First Nations	☐ Indian Oil & Gas	☐ Other	☐ Other	☐ Other

Contact Names & Phone Numbers

Incident Cause	☐ Natural	☐ Human-Induced unintentional	☐ Human-Induced Intentional

Other Information

☐ First Nations Band ☐ Metis Settlement	Band / Settlement Name / Contact	Phone
Complaints	☐ Local ☐ Large area	
Private Land Title holder		Phone

Additional Information

A4 Incident Action Plan Checklist

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

Notes:

A5 Air Monitoring Log

Date: ______________________ Responder Name: ______________________

Page ________ of ______________ Responder Position: ______________________

Time	Location of Samples	H_2S (ppm)	LEL (%)	O_2 (%)	SO_2 (ppm)	Other	Temp (°C)	Wind Conditions *		Comments
								From	Speed (km/hr)	

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

A5 Air Monitoring Log

Time	Location of Samples	H_2S (ppm)	LEL (%)	O_2 (%)	SO_2 (ppm)	Other	Temp (°C)	Wind Conditions *		Comments
								From	Speed (km/hr)	

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

A6 Threatening Call / Bomb Threat

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Tips:

[redacted]

If bomb threat, ask the following questions:

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

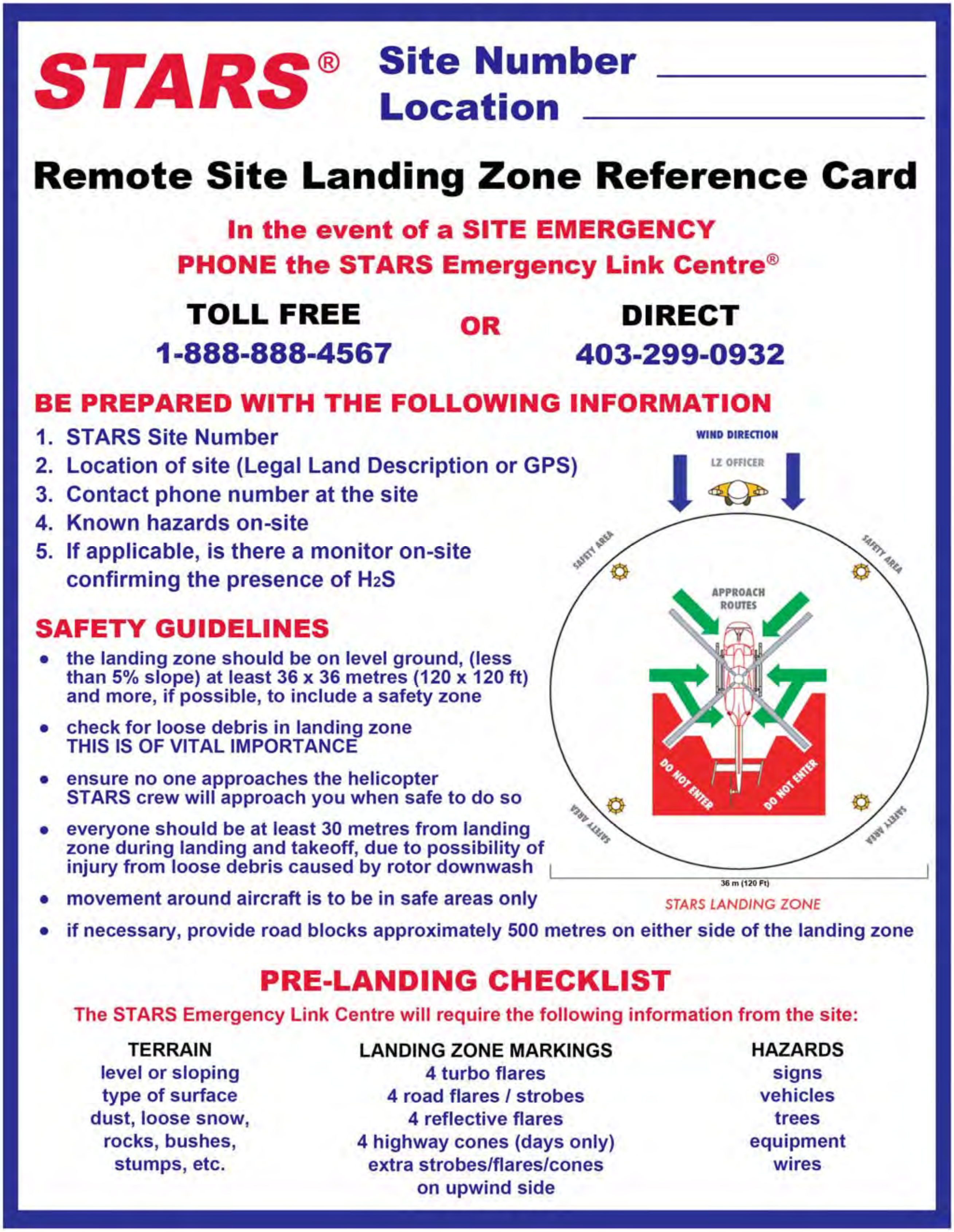
[redacted]

[redacted]

[redacted]

[redacted]

A7 STARS Landing Zone Card



STARS® **Site Number** ____________

Location ____________

Remote Site Landing Zone Reference Card

In the event of a SITE EMERGENCY
PHONE the STARS Emergency Link Centre®

TOLL FREE		DIRECT
1-888-888-4567	OR	403-299-0932

BE PREPARED WITH THE FOLLOWING INFORMATION

1. STARS Site Number
2. Location of site (Legal Land Description or GPS)
3. Contact phone number at the site
4. Known hazards on-site
5. If applicable, is there a monitor on-site confirming the presence of H_2S

SAFETY GUIDELINES

- the landing zone should be on level ground, (less than 5% slope) at least 36 x 36 metres (120 x 120 ft) and more, if possible, to include a safety zone
- check for loose debris in landing zone
  THIS IS OF VITAL IMPORTANCE
- ensure no one approaches the helicopter
  STARS crew will approach you when safe to do so
- everyone should be at least 30 metres from landing zone during landing and takeoff, due to possibility of injury from loose debris caused by rotor downwash
- movement around aircraft is to be in safe areas only
- if necessary, provide road blocks approximately 500 metres on either side of the landing zone

STARS LANDING ZONE

PRE-LANDING CHECKLIST

The STARS Emergency Link Centre will require the following information from the site:

TERRAIN	LANDING ZONE MARKINGS	HAZARDS
level or sloping	4 turbo flares	signs
type of surface	4 road flares / strobes	vehicles
dust, loose snow, rocks, bushes, stumps, etc.	4 reflective flares	trees
	4 highway cones (days only)	equipment
	extra strobes/flares/cones on upwind side	wires

B1 Reception Centre Registration Log

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

Evacuee registration guidelines

NorthRiver Midstream requires your assistance with receiving evacuees at the following Reception Centre: ______________________

Your company contact is:

Name: ______________________ Position: ______________________ Contact Number: ______________________ Fax Number: ______________________

1) Record all evacuees as they arrive on the forms provided.
2) Provide all evacuees with the statement below and any other status updates as provided by your company contact.
3) Provide the evacuees with food and lodging as required.
4) Record if any evacuees choose to leave the Reception Centre (name, contact number, where are they going, etc.).
5) Continually update the company of any residences arriving at or leaving the Reception Centre so that they can follow up on any residents that are unaccounted for.

Statement to provide to residents as they arrive:

B1 Reception Centre Registration Log

Date: ______________________________ Responder Name:____

Page of Responder Position: ______________________________ Responders Phone No.: ______________

<table>
<tr><th rowspan="2">Resident id</th><th colspan="2">Name (list all names in party)</th><th rowspan="2"># Of Occupants</th><th rowspan="2">Number arrived</th><th rowspan="2">Arrival time</th><th rowspan="2">Depart time</th><th rowspan="2">Destination phone # (where they can be reached)</th><th rowspan="2">Comments</th></tr>
<tr><th>First</th><th>Last</th></tr>
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</table>

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
Total Reported Expenses									

Approved By: ______________________________ Date: ____________________

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
Total Reported Expenses									

Approved By: ____ Date: __________________________

B3 Resident Contact Log

Date: ______________________________

Responder Name: ______________________________

Page ______ of ______

Responder Position: ______________________________

Responders Phone No.: ______________________________

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

B3 Resident Contact Log

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

B4 Roadblock Log

Date: ______________________ Responder Name: ______________________

Page   of   Responder Position: ______________________ Responders Phone No.: ______________

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

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

B4 Roadblock Log

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

DATE: _______________

TIME: _______________

EVACUATION NOTICE

NorthRiver Midstream 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

____.

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

For assistance, call NorthRiver Midstream at

_________________________.

Thank you for your cooperation.

B6 Early Notification / Voluntary Evacuation Phone Message

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

Hello, this is ___*(your name)*___ calling from NorthRiver Midstream.

Is this the ___*(name of residence / business)*___ at ___*(telephone number)*___ **?**

NorthRiver is responding to a *(potential)* emergency at ___*(location)*___ in your area.

You are in no danger at this time. All efforts are being made to resolve the problem and this phone call is only to inform you and provide you with an early notification.

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

How many people are at your location now?

*Adults*_______________________________

*Children*_____________________________

Do you wish to leave your residence at this time?

If Yes Please travel in a *north / east / south / west* direction to our reception centre located at:

____

If No Please standby for further contact. Please do not use your telephone for outgoing calls as this may prevent us from contacting you with updated information or when the problem has been eliminated.

If you have urgent questions, please contact NorthRiver at ___*(telephone number)*___**.**

Thank you for your cooperation.

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

B6 Early Notification / Voluntary Evacuation Phone Message

B7 Shelter-In-Place Phone Message

Hello, this is ______*(your name)*______ of NorthRiver Midstream.

Is this the ______*(name)*______residence at ______*(telephone number)*______?

NorthRiver is responding to a (*potential*) emergency at ______*(location)*___in your area.

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

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

How many people are at your location now?

*Adults*______________________________

*Children*____________________________

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

☐ *Yes* ☐ *No*

If Yes *Whom?* ______________________________

Location of the person(s) ______________________________

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

Do you have children in school at this time?

☐ *Yes* ☐ *No*

If Yes *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 NorthRiver?

☐ *Yes* ☐ *No*

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

If No *Verbally walk the resident through the Shelter-in-Place instructions on the next page.*

Do you understand what I have told you?

Is there an alternate number we can contact you at? ______________________________

If you have any urgent questions, please contact NorthRiver at ______*(telephone number)*______.

Thank you for your cooperation.

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

B7 Shelter-In-Place Phone Message

Shelter-In-Place Instructions

For your safety:

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

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

B8 Evacuation Phone Message

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

Hello, this is ____________*(your name)*____________ of NorthRiver Midstream.
Is this the____________*(name)*____________ residence at ____________*(telephone number)*__________?
NorthRiver is responding to a *(potential)* emergency at ____________*(location)*_______in your area.
For your safety, it is extremely important that you and your family leave your residence immediately and travel in a *north / east / south / west* direction to our reception centre located at:

____

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

How many people are at your location now?

*Adults*________________________________
*Children*______________________________

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

☐ *Yes* ☐ *No*

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 require evacuation / transportation assistance?

☐ *Yes* ☐ *No*

If Yes We are sending someone to assist you. Please stay indoors and close all doors and windows until a Rover or the local police arrive to evacuate you.

If No *Provide the resident with:*

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

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

Is there an alternate number we can contact you at? ________________________________

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

If you have any urgent questions, please contact NorthRiver at ____________*(telephone number)*_____.
Thank you for your cooperation.

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

B8 Evacuation Phone Message

C1 Preliminary Media Statement

Date:(YY/MM/DD)	Responder Name:
Responder Position:	Responder Phone No.:

This is the information I can give you so far:

At *(time – 24hr local clock)* on (date), *a(n) (fire, explosion, gas release, spill)* occurred at the Company's *(location name)* site, located *(distance)* kilometres *(east / west / north / south)* of *(nearest town or city)* .

Presently, *(number of personnel)* workers are being treated for injuries. The names and condition of the injured cannot be released until their families have been contacted.

The *(well site, plant, pipeline, office, drilling location)* has been *(shut down, isolated, or is still flowing)* .

Company staff have been activated and are directing emergency response procedures to protect the public, our workers and the environment.

The cause of the *(fire, explosion, gas release, spill)* is not yet known and no estimate of damage is available. As information becomes available, news releases will be issued from the Information Office.

Any further inquiries should be directed to the Emergency Support Team, who will issue a press release at a later time.

Contact:

______________________________ Office: ______________________________

______________________________ Fax: ______________________________

*Note: Only the **Media Spokesperson** designated by the Emergency Support Team is to provide any specific information to the public or the media. Refer to page 3 of Section 3: Communications & Media for the generic media statement to be used by all other response personnel.*

C1 Preliminary Media Statement

C2 Media Contact Log

Date: ______________________________ Responder Name:____

Page of Responder Position: ___________________________ Responders Phone No.: _________________

If you feel you are not the appropriate person to be answering the media agencies questions, use the following series of statements.

"NorthRiver Midstream has an Information Officer to answer all media questions."

"May I request the following information to expedite your request?" (complete the form below).

"Thank you. NorthRiver appreciates your cooperation and I will pass on this information to the appropriate person."

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

C2 Media Contact Log

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

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

C3 Government Agency Contact Log

Date: ______________________________ Responder Name:______________________________

Page of Responder Position: ______________________________ Responders Phone No.: ____________________

If you feel you are not the appropriate person to be answering the media agencies questions, use the following series of statements.

NorthRiver Midstream 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. NorthRiver 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
					Work	Fax	

C3 Government Agency Contact Log

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

Time	Call To	Call From	Agency	Contact Name	Telephone Numbers		Remarks / Comments
					Work	Fax	

C4 Media Centre Site

Location

Address: ____________________

City / Town: ____________________

Phone #: ____________________

Contact Name: ____________________

Office #: ____________________

Home #: ____________________

Map or Directions to Site

Appendices

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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, the environment, and assets during an incident. This plan clarifies the following:

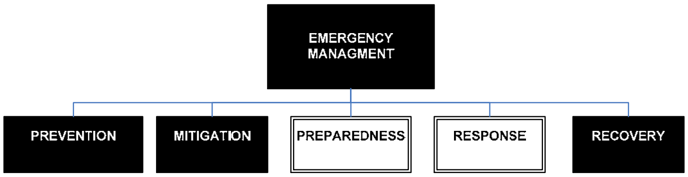
- Overall Incident Command System (ICS) response organization.
- Incident Command System (ICS) Roles and responsibilities.
- Guidance to determine the Alert or Emergency Level.
- Mechanisms to activate the ERP.
- Notification /communication requirements to stakeholders (public /government /responders).
- Documentation tools for accurate records management of events and decisions during an event.
- Guidance for post-emergency actions.

The intent of this Emergency Response Plan (ERP) is to define effective measures in place to:

- Notify and protect the workers and the public.
- Minimize environmental impact.
- Minimize asset and property loss.
- Regain steady state of operations.
- Minimize emergency response time.
- Maximize response effectiveness.
- Coordinate with government agencies and stakeholders.
- Minimize business and reputational impact.

This manual outlines the framework, tools and reference materials to facilitate a prompt, safe, efficient and properly managed response to all incidents regardless of size or complexity. Therefore this plan provides employees and contractors with practical tools that will guide them through the Preparedness and Response principles of Emergency Management.

Emergency Management Process Flow



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

Training Requirements

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

*** Must be held annually.**

**** CSA Z246.2-18, CER, OGC & AER requires Major Exercises be held every three (3) years.**

***** Environment & Climate Change Canada (ECCC) requires Major Exercises be held every five (5) years for facilities with E2 required substances.**

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

Plan Maintenance

Responsibility

The licensee is responsible to ensure that an ERP is created for all provincial and federally regulated oil and gas activities (i.e. sour operations, HVP pipelines, cavern storage facilities, etc.), they are maintained regularly, and any updates are disseminated to the regulatory agency and other plan holders as required. In order for this to occur the following responsibilities are designated:

- Each individual plan holder is responsible for ensuring their assigned manuals are current, all updates are applied / downloaded / inserted, and any errors or omissions are reported to a supervisor.
- Each Area Supervisor / Coordinator is responsible for ensuring that a semi-annual review of their ERP is conducted. The ERP Revision Request Form is located in this section and can be used to track this information and provide documentation in the case of an ERP assessment.
- Any requests for revisions to this plan should be forwarded to the applicable Area Supervisor / Coordinator for review. These revisions will be discussed with the company's Emergency Response Program Coordinator and H_2Safety 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_2Safety Services Inc. or destroyed. If a plan holder no longer requires their manual (job changes, position changes, etc.), it must be returned to the company's Emergency Response Program Coordinator to be tracked, reassigned, or destroyed.

The licensee must distribute changes in information that are instrumental to implementing the ERP to all required plan holders.

Errors identified in the ERP by the regulatory agency, licensee, and other party must be corrected immediately upon identification.

Modifications to New or Existing Operations

The licensee must submit a supplement for review and approval to the regulatory agency for all newly added wells, pipelines, well / pipeline tie-ins, facilities and operating areas prior to commencement of operations if there are new surface developments within the Emergency Planning Zone. For example, the EPZ for a new pipeline tie-in does not fall entirely within the existing Emergency Planning Zone and impacts a new residence / public facility / trapper cabin / etc. that was not previously included in the Emergency Response Plan. The licensee must conduct a public involvement program for all new members of the public. Before any new or major modifications to an existing facility / pipeline are brought on-stream, any additions or changes will be added to the Emergency Response Plan. If required, a site specific Emergency Response Plan will be developed. Meetings to review response plan requirements must be held before major facility modifications are commissioned.

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

ERP Revision Request Form

Plan Holder Name / Title / Company: ____________________

ERP Name: ____________________

Manual Number: ____________________

If any of the following items have changed, please check the box beside it and provide a description of the change in the space provided:

- ☐ Company information
- ☐ Mapping information
- ☐ Resident contact information
- ☐ Response staff information or capacity changes
- ☐ Facility additions, such as well or pipeline tie-ins
- ☐ Other

Description of the change:

Please attach additional pages and/or support documentation as required.

____

____

____

____

____

____

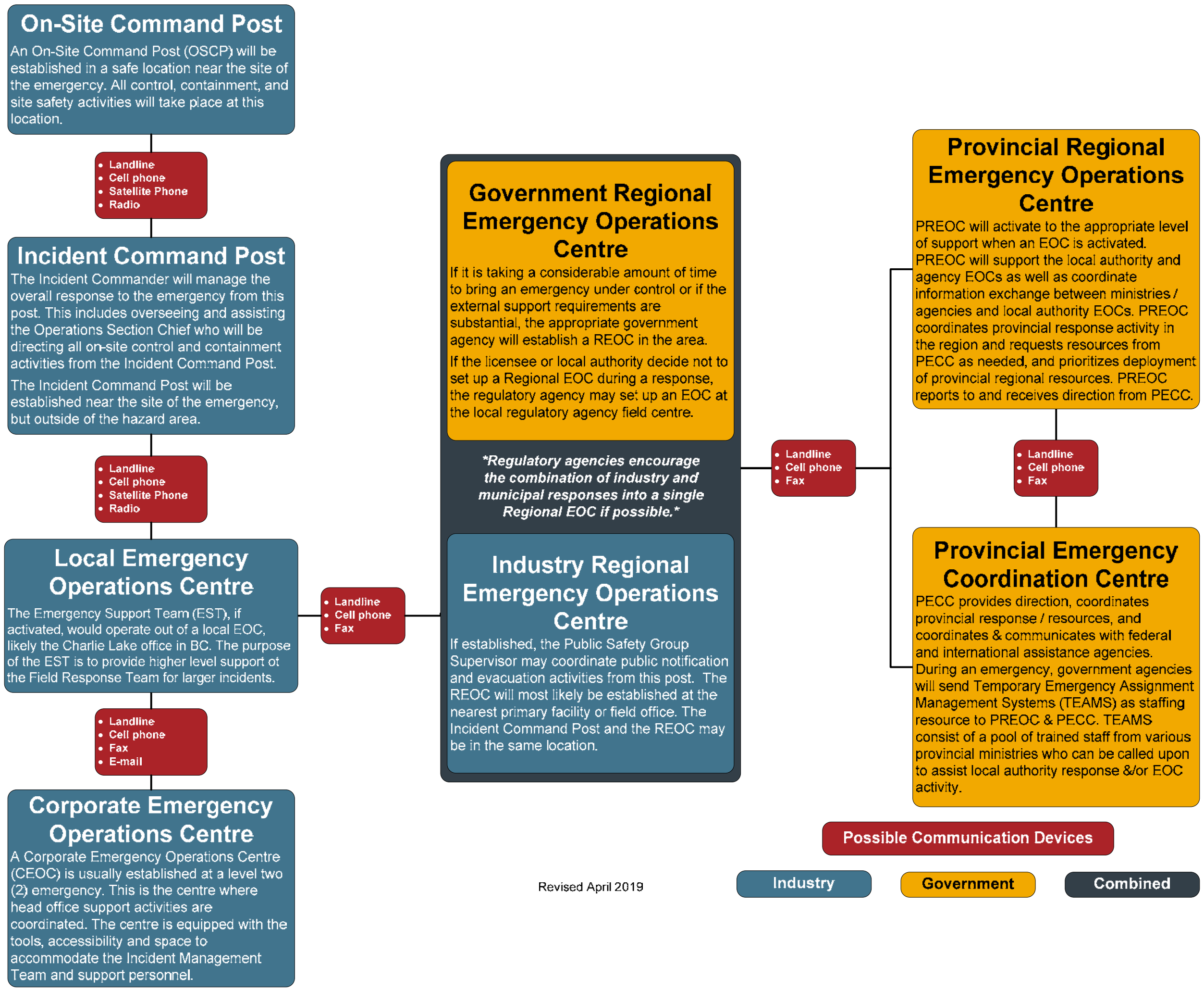
____

Please return the completed checklist to:

[redacted]

Appendix B: Incident Command Post (ICP)

Communication Methods Between Command Posts – British Columbia



On-Site Command Post

An On-Site Command Post (OSCP) will be established in a safe location near the site of the emergency. All control, containment, and site safety activities will take place at this location.

- Landline
- Cell phone
- Satellite Phone
- Radio

Incident Command Post

The Incident Commander will manage the overall response to the emergency from this post. This includes overseeing and assisting the Operations Section Chief who will be directing all on-site control and containment activities from the Incident Command Post.

The Incident Command Post will be established near the site of the emergency, but outside of the hazard area.

- Landline
- Cell phone
- Satellite Phone
- Radio

Local Emergency Operations Centre

The Emergency Support Team (EST), if activated, would operate out of a local EOC, likely the Charlie Lake office in BC. The purpose of the EST is to provide higher level support ot the Field Response Team for larger incidents.

- Landline
- Cell phone
- Fax
- E-mail

Corporate Emergency Operations Centre

A Corporate Emergency Operations Centre (CEOC) is usually established at a level two (2) emergency. This is the centre where head office support activities are coordinated. The centre is equipped with the tools, accessibility and space to accommodate the Incident Management Team and support personnel.

- Landline
- Cell phone
- Fax

Government Regional Emergency Operations Centre

If it is taking a considerable amount of time to bring an emergency under control or if the external support requirements are substantial, the appropriate government agency will establish a REOC in the area.

If the licensee or local authority decide not to set up a Regional EOC during a response, the regulatory agency may set up an EOC at the local regulatory agency field centre.

Regulatory agencies encourage the combination of industry and municipal responses into a single Regional EOC if possible.

Industry Regional Emergency Operations Centre

If established, the Public Safety Group Supervisor may coordinate public notification and evacuation activities from this post. The REOC will most likely be established at the nearest primary facility or field office. The Incident Command Post and the REOC may be in the same location.

- Landline
- Cell phone
- Fax

Provincial Regional Emergency Operations Centre

PREOC will activate to the appropriate level of support when an EOC is activated. PREOC will support the local authority and agency EOCs as well as coordinate information exchange between ministries / agencies and local authority EOCs. PREOC coordinates provincial response activity in the region and requests resources from PECC as needed, and prioritizes deployment of provincial regional resources. PREOC reports to and receives direction from PECC.

- Landline
- Cell phone
- Fax

Provincial Emergency Coordination Centre

PECC provides direction, coordinates provincial response / resources, and coordinates & communicates with federal and international assistance agencies. During an emergency, government agencies will send Temporary Emergency Assignment Management Systems (TEAMS) as staffing resource to PREOC & PECC. TEAMS consist of a pool of trained staff from various provincial ministries who can be called upon to assist local authority response &/or EOC activity.

Possible Communication Devices

Industry

Government

Combined

Revised April 2019

Appendix B: Incident Command Post (ICP), continued

ICP Activation and Setup

The Incident Command Post is activated by the Incident Commander.

The following tasks must be addressed once the ICP has been activated:

Position	Task
Incident Commander	☐ Establish briefings with the Field Response Team (FRT). ☐ Ensure staffing is adequate for the task(s). ☐ Consider the time difference, if applicable, and determine how time will be communicated throughout the incident.
Safety Officer	☐ Ensure the room / floor / building is secure. ☐ Ensure a safe work area, i.e. remove clutter or cords causing slips, trips, falls, etc.
Information Officer	☐ Notify the receptionist that there is an incident. Provide details of what message should be given out to the public and media, as well as where to direct incoming calls. ☐ Ensure inbound and outbound calls received or made are centrally logged. ☐ Ensure responders have their office phones forwarded to their cell phones.
Logistics / IT Support	☐ Turn on all computers; ensure the relevant systems are operational and that they all have internet/email access. ☐ Bring up any ERP related electronic tools (ie; **H$_2$CommandCentre**) and ensure they are working and that they can all be displayed on various projectors / screens as required. ☐ Check that printers are connected to the computers and working. Print a test page to confirm. ☐ Check that the fax machine is setup and working. ☐ Check that any phone conferencing systems are set up and working. ☐ Ensure that telephone lines are available and active. ☐ Ensure TVs are working properly and set up to local news or CNN. ☐ Obtain any additional equipment as required.
Logistics / Security	☐ Ensure the room/floor/building is secure. Arrange for additional security if required. ☐ If the location of the Incident Command Post is closed to general staff, provide a list of staff needing access clearance to the meeting area. ☐ The following supplies should be available: notepaper, pens, printer cartridges and paper, documentation forms, dry erase markers, staplers and staples, spare power bars and extension cords, etc. ☐ Arrange for refreshments (coffee, food, water, etc.) for those working there, as well as sleeping space if required. ☐ Ensure there are sufficient tables and chairs for the team.

Appendix B: Incident Command Post (ICP), continued

ICP Activation and Setup, continued

Position	Task
Planning / Documentation	☐ Determine which emergency response plans and other ERP tools are needed and pull them out to be readily accessible. ☐ Determine what laminated maps and charts are going to be utilized and put them up on the wall with dry erase markers. Set up the white boards and roles chart. ☐ Ensure clocks are displaying the correct time, including any clocks with a different time zone. ☐ As each person arrives: provide them with a vest, provide them with a print out of the Initial Emergency Report Form, ensure they synchronize their watches and ensure they check in with their assigned supervisor. ☐ As team members arrive, write their name in the appropriate position on the Field Response Team Assignment Chart. ☐ Pass out documentation forms and provide an overview of the documentation process. ☐ Ensure the latest contact list for Field Response Team members are available. ☐ Begin documenting all actions, decisions and major events. Start-up **H$_2$CommandCentre** if available. ☐ Continually update the laminated maps and charts as information becomes available (Field Response Team Assignment Chart, Emergency Status Board, etc.). ☐ Post a schedule of events, including shift changes and status updates.

Incident Command Post Briefings

Once the ICP has been activated and team members arrive, the Incident Commander or Deputy needs to conduct an initial briefing to provide the team with the status of the situation, establish operational periods for the ICP, establish a meeting schedule for both a planning meeting and periodic briefings and outline broad goals to guide the ICP throughout the emergency.

In additional to periodic briefings for status updates, the Incident Commander also has to conduct a meeting once the approved Incident Action Plan is in place. This meeting will outline the planned objectives and tasks and will ensure that resources required for implementation of the action plan are in available or en route.

At the end of each operational period, all departing members of the Field Response Team will be debriefed and must brief their replacements.

Documentation

It is critical to ensure that all ICP documentation is compiled, properly stored and readily available after the event. Proper documentation will aid in investigations, inquiries, debriefs and support for financial claims and budgets. Everything that happens during the Response/Recovery Operations should be recorded at the ICP. The forms at the back of this manual are designed to aid in this process

Appendix C: Toxic Gases

Hydrogen Sulphide (H_2S)

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_2), 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.

Hydrogen Sulphide Toxicity Table (BC Regulations)

Concentration (ppm)	Effects
Less than 1	Most people smell “rotten eggs”.
3 – 5	Odour is strong.
20 – 150	Nose and throat feel dry and irritated. Eyes sting, itch or water and “gas eye” symptoms may occur. Prolonged exposure may cause coughing, hoarseness, shortness of breath and runny nose.
150 – 200	Sense of smell is blocked (olfactory fatigue).
200 – 250	Major irritation of the nose, throat and lungs, along with headache, nausea, vomiting and dizziness. Prolonged exposure can cause fluid buildup in the lungs (pulmonary edema), which can be fatal.
300 – 500	Symptoms are the same as above, but more severe. Death can occur within 1-4 hours of exposure.
Above 500	Immediate loss of consciousness. Death is rapid, sometimes immediate.

Adapted from Hydrogen Sulfide in Industry, WorkSafe BC February 2010

Appendix C: Toxic Gases, continued

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_2S exposure.

Section I provides information on H_2S

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_2S is a colourless gas. It is heavier than air and tends to flow in ditches, trenches and low-lying areas.

H_2S 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_2S can no longer be detected by odour.

II. Health effects of hydrogen sulphide

H_2S 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.

Appendix C: Toxic Gases, continued

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 co-exposure 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_2S 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.

Appendix C: Toxic Gases, continued

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_2S)

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_2)

Background

Sulphur Dioxide (SO_2) belongs to the family of sulphur oxide gases (SO_2). 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_2 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_2 (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_2 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.

Sulphur Dioxide Toxicity Table (BC Regulations)

Concentration (ppm)	Effects
0.13	24 hour level (MWLAP Level B Criteria).
0.34	One hour average evacuation level (MWLAP Level B criteria).
2	Eight hour occupational Exposure Limit (BC WCB)
3 – 5	Odour threshold.
5	15 minute Occupational Exposure Limit (BC WCB)
8 – 12	Throat irritation, coughing, constriction in chest, tearing and smarting of the eyes.
10 – 50	5 – 15 minutes exposure produces increased irritation of eyes, nose, and throat, choking, coughing, and in some cases wheezing due to narrowing of the airways (which increases the resistance of the air flow).
150	Short-term endurance lost due to the severe eye irritation and because of the effects on the membranes of the nose, throat, and lungs.
500	Highly dangerous after exposure of 30 – 60 minutes.

Adapted from the Canada Safety Council Data Sheet “Sulphur Dioxide” No. B-4 Oil and Gas Commission November 2003.

Appendix C: Toxic Gases, continued

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_2) 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_2 exposure.

Section I provides information on SO_2

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_2 is highly soluble in water resulting in the formation of sulphurous acid.

Approximately 90% of inhaled SO_2 is absorbed in the upper respiratory tract.

Asthmatics and individuals with underlying bronchial hyperactivity may be more susceptible to low level exposure to SO_2.

II. Health Effects of Sulphur Dioxide

SO_2 causes almost immediate coughing with significant exposure.

SO_2 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.

Appendix C: Toxic Gases, continued

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_2 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_2 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_2, it is important for the clinician to keep in mind the possibility of co-exposure 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.

Appendix C: Toxic Gases, continued

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_2) or

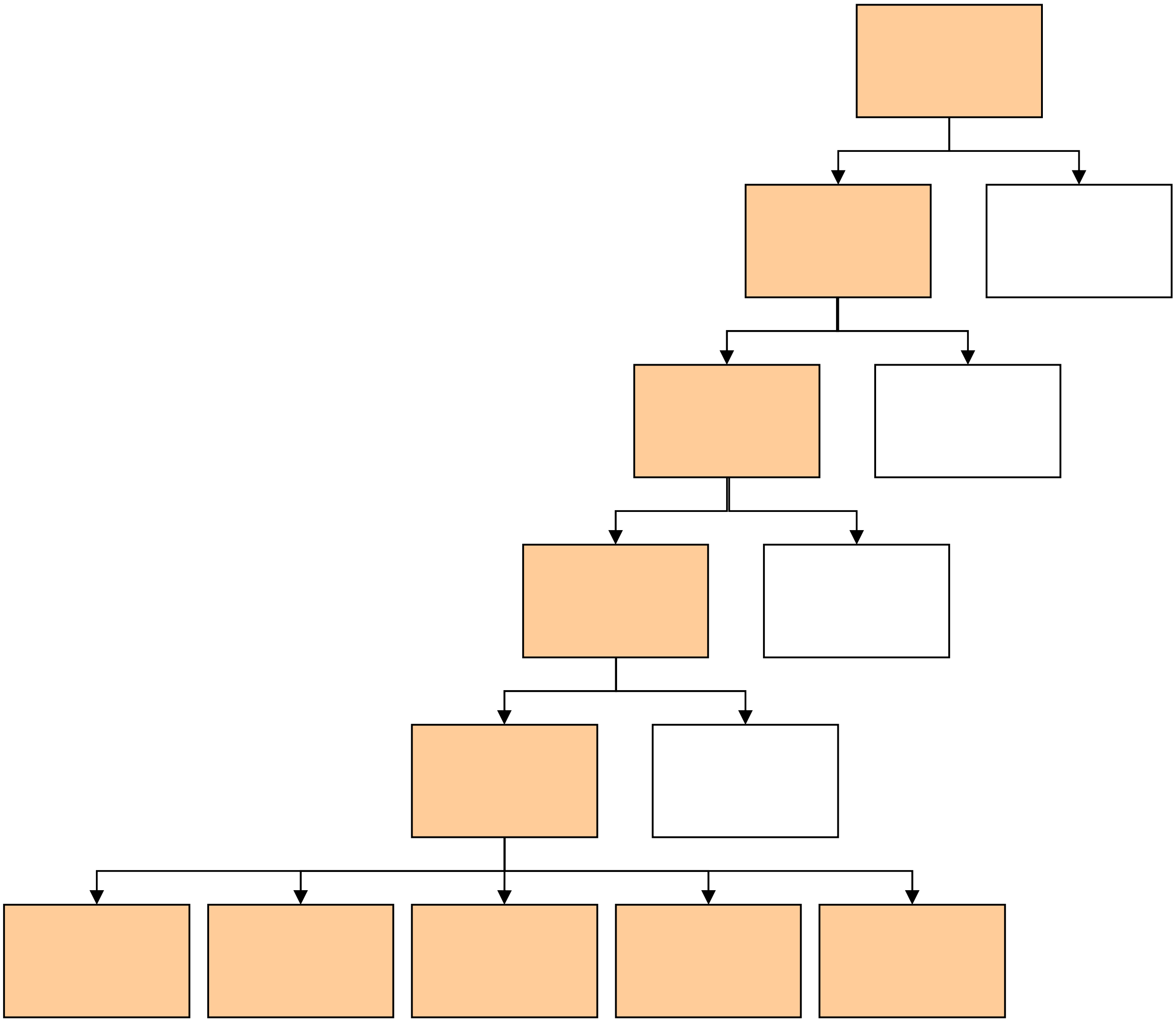
Known exposure, including "knockdown", with symptoms that require medical treatment and/or hospitalization.

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)

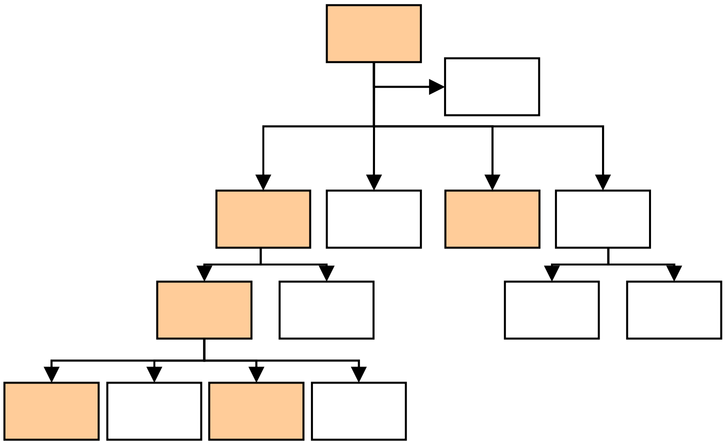
Management by Objectives – Objectives are ranked by priority, should be as specific as possible, must be attainable and if possible given a working time-frame. Objectives are accomplished by first outlining strategies (general plans of action), then determining appropriate tactics (how the strategy will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

Establishment and Transfer of Command – The highest-ranking authority arriving on-scene 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.

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

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.

Unified Command - When a federal or state/provincial agency arrives on-scene to participate in managing a response action, the agencies will utilize a unified command structure to jointly manage the incident.

- In the unified command, decisions with regard to the response will be made by consensus and documented through a single Incident Action Plan (IAP) for each operational period.
- The Unified Command is responsible for the overall management of the incident. The Unified Command directs incident activities including the development and implementation of strategic decisions, approval of the Incident Action Plan (IAP), and approves the ordering and releasing of resources.
- It is expected that each Unified Command member will have the authority to make decisions and commit resources on behalf of their organization.
- The unified command may incorporate additional tribal/first nations or local government on-scene coordinators into the command structure as appropriate.

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.

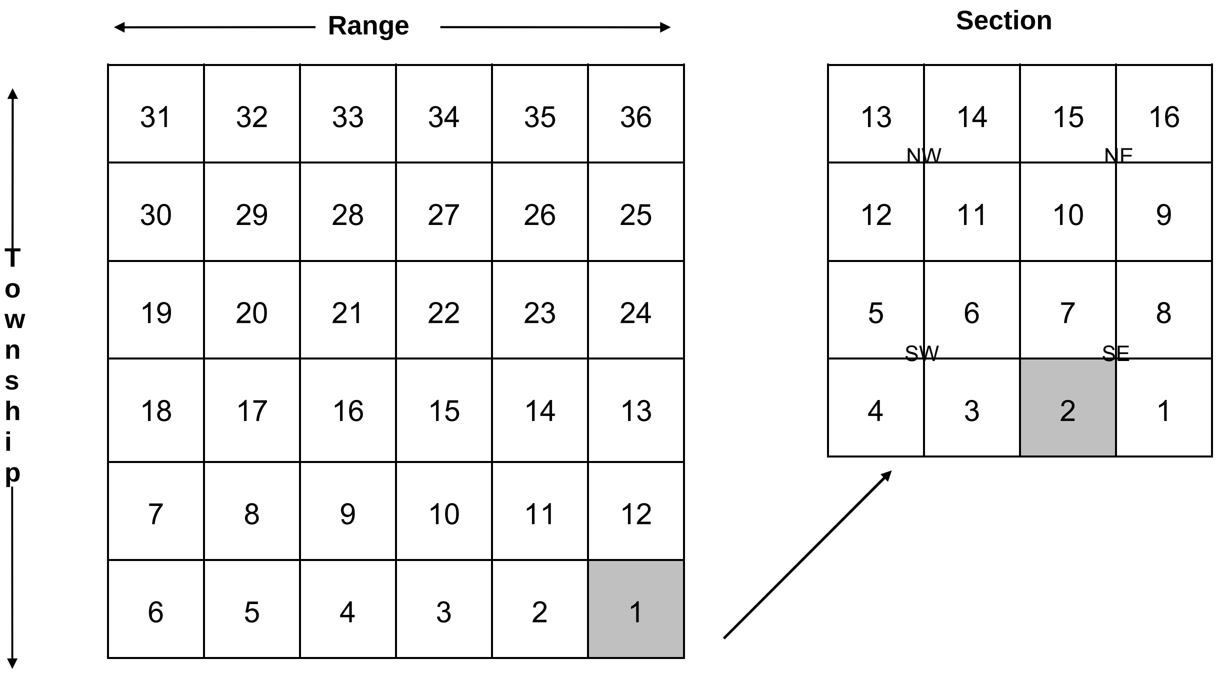
Communications is handled by the Information Officer once one has been appointed by the Incident Commander. The Information Officer is part of the Command Staff.

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:



31	32	33	34	35	36
30	29	28	27	26	25
19	20	21	22	23	24
18	17	16	15	14	13
7	8	9	10	11	12
6	5	4	3	2	1

13	14	15	16
12	11	10	9
5	6	7	8
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

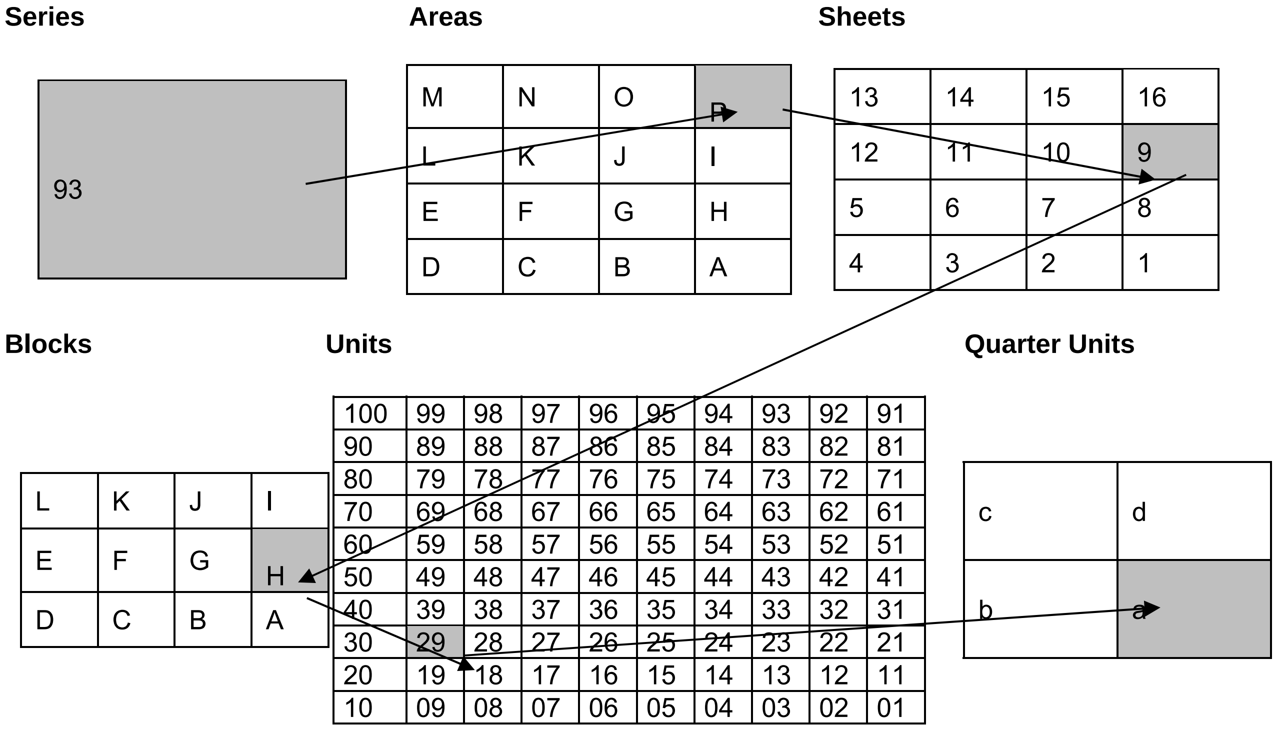
National Topographic System (NTS)

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.

Example a-29-H / 93-P-9



a	-	29	-	H	/	93	-	P	-	9
Quarter Unit		Unit		Block		Series		Area		Sheet

Appendix F: ERP Reference Material

Acronyms

Acronym	Meaning	Acronym	Meaning
ABSA	Alberta Boilers Safety Association	IIZ	Initial Isolation Zone
AEMA	Alberta Emergency Management Agency	ISC	Indigenous Services Canada
AER	Alberta Energy Regulator	LA	Local Authority
AHS	Alberta Health Services	LBV	Line Block Valve
AT	Alberta Transportation	LEL	Lower Explosive Limit
BLEVE	Boiling Liquid Expanding Vapour Explosion	LPG	Liquefied Petroleum Gas
CANUTEC	Canadian Transport Emergency Centre	MARS	Mapping and Response System
CAPP	Canadian Association of Petroleum Producers	MD	Municipal District
CEPA	Canadian Environmental Protection Act	MEP	Municipal Emergency Plan
CER	Canada Energy Regulator	MOP	Maximum Operating Pressure
CERC	Corporate Emergency Response Centre	NGL	Natural Gas Liquids
CISD	Critical Incident Stress Debriefing	NOTAM	Notice to Airmen
CPE	Communications and Public Engagement	OGC	Oil & Gas Commission
CSA	Canadian Standards Association	OHS	Occupational Health and Safety
DFO	Department of Fisheries and Oceans	OSCAR	Oil Spill Containment and Recovery
EAZ	Emergency Awareness Zone	OSCP	On-Site Command Post
ECCC	Environment & Climate Change Canada	PAD	Protective Action Distance
EMBC	Emergency Management BC	PAZ	Protective Action Zone
EMO	Emergency Measures Organization	POC	Provincial Operations Centre
EOC	Emergency Operations Centre	PPB	Parts Per Billion
EPZ	Emergency Planning Zone	PPE	Personal Protective Equipment
ERAC	Emergency Response Assistance Canada	PPM	Parts Per Million
ERP	Emergency Response Plan	RCMP	Royal Canadian Mounted Police
ESD	Emergency Shut Down	RD	Rural District
ESDV	Emergency Shut-Down Valve	REOC	Regional Emergency Operations Centre
ETA	Estimated Time of Arrival	RHA	Regional Health Authority
FH Order	Fire Hazard Order	RM	Rural Municipality
FNIHB	First Nations and Inuit Health Branch – Health Canada	SABA	Supplied Air Breathing Apparatus
GEOC	Government Emergency Operations Centre	SCBA	Self-Contained Breathing Apparatus
HPZ	Hazard Planning Zone	SDS	Safety Data Sheet
HVAC	Heating Ventilation Air Conditioning	SO_2	Sulphur Dioxide
HVP	High Vapour Pressure	STARS	Shock Trauma Air Rescue Society
HVPL	High Vapour Pressure Liquid	TDG	Transportation of Dangerous Goods
H_2S	Hydrogen Sulphide	WCSS	Western Canadian Spill Service
IAP	Incident Action Plan	WHMIS	Workplace Hazardous Materials Information System
ICS	Incident Command System		

Appendix F: ERP Reference Material, continued

Glossary of Terms

Adjacent to
Within 25 m.

Air Quality Monitoring
Measurement of atmospheric concentrations of a hazardous substance, such as H_2S or SO_2.

Alberta Energy Regulator (AER)
The AER ensures the safe, efficient, orderly, and environmentally responsible development of hydrocarbon resources over their entire life cycle. This includes allocating and conserving water resources, managing public lands, and protecting the environment while providing economic benefits for Albertans.

Alert (Alberta specific)
An incident that can be handled on-site by the licensee through normal operating procedures and is deemed to be a very low risk to members of the public.

Auto-ignition temperature
All NGL products are flammable and will flash at extremely low temperatures. An open flame or spark is not necessary to cause ignition. Any hot surface which exceeds the auto-ignition temperature of a product can cause a fire if the vapours reaching the hot surface are within their flammable range.

Best practices
A technique or methodology that, through experience and research, has proven to reliably lead to a desired result. A commitment to using the best practices in any field is a commitment to using all the knowledge and technology at one's disposal to ensure success.

Body of water
Streams, lakes, and rivers.

Boiling Liquid Expanding Vapour Explosion (BLEVE)
Boiling Liquid Expanding Vapour Explosion, which is associated with natural gas liquids and high vapour pressure liquids.

Boiling point
This is the temperature that a liquid changes to a gas. NGL products change to a gas at extremely low temperatures and will absorb heat from the surrounding environment during the phase change. Therefore, caution must be used when working with NGLs because contact with flesh can reduce the temperature of the flesh to the NGL boiling point and cause severe frostbite.

British Columbia Oil and Gas Commission (OGC)
The OGC is the lead agency for all regulated oil and gas related activities within British Columbia.

British Columbia Emergency Management (EMBC) *(British Columbia specific)*
Aids local governments in analyzing hazards and risks, develop and test emergency plans, train and organize emergency staff and volunteers. EMBC also manages all agencies in the event of an emergency or disaster, which cannot be handled locally.

Businesses
Industrial operators, retail outlet operators, suppliers, residents, outfitters, foresters and other entities that normally operate within the Emergency Planning Zone, but do not necessarily reside in the Emergency Planning Zone.

Appendix F: ERP Reference Material, continued

Glossary of Terms, continued

Closure order *(British Columbia specific)*
When the OGC believes that, because of hazardous conditions in a field or at a well, it is necessary or expedient to close an area and to shut out all persons except those specifically authorized, the commission may make an order in writing setting out and delimiting the closed area. For Alberta see Fire Hazard (FH) Order.

Corporate Emergency Response Plan
This Emergency Response Plan is to facilitate a co-ordinated response by company executive and management personnel to an emergency situation, which may affect the company or its affiliated companies. The Corporate Emergency Response Plan is an integral part of all site-specific company Emergency Response Plans and procedures.

Critical Incident Stress Debriefing (CISD)
Critical Incident Stress Debriefing is a specially structured counselling process between the debriefers and those who are directly involved and/or impacted by an incident.

Critical sour well *(Alberta specific)*
A well with an H_2S release rate greater than 2.0 m3/s or wells with lower H_2S release rates in close proximity to an urban centre as defined in ID 97-6: Sour Well Licensing and Drilling Requirements.

Emergency
A present or imminent event outside the scope of normal operations that requires prompt coordination of resources to protect the health, safety, and welfare of people and to limit damage to property and the environment.

Emergency Operations Centre (EOC)
An Emergency Operations Centre is a designated facility in a suitable location (i.e. head office, regional office, etc.) established by the permit holder to support Incident Command and to manage the larger aspects of an emergency. In a high-impact emergency, there may be a number of EOCs established to support the response. They may include the Incident Command Post, regional and corporate EOCs, a municipal EOC (MEOC), and the provincial government EOC (POC).

Emergency Awareness Zone (EAZ) (British Columbia specific)
A distance outside of the EPZ where public protection measures may be required due to poor dispersion of the hazard. This area is twice the radius of the Emergency Planning Zone (EPZ).

Emergency Planning Zone (EPZ)
The geographical area that surrounds a well, pipeline or facility containing hazardous product that requires specific emergency response planning by the licensee.

Emergency Response Plan (ERP)
A comprehensive plan to protect the public that includes criteria for assessing an emergency situation and procedures for mobilizing response personnel and agencies and establishing communication and coordination among the parties.

Emergency Support Team (EST)
Provides advice and logistical support to the Field Response Team and Incident Commander in particular. The team is comprised of head office personnel and any contract emergency experts.

Appendix F: ERP Reference Material, continued

Glossary of Terms, continued

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.

ERCBH2S *(Alberta specific)*
A software program that calculate site-specific EPZs using thermodynamics, fluid dynamics, atmospheric dispersion modelling and toxicology.

Evacuation
Organized, phased, and supervised withdrawal of members of the public from dangerous or potentially dangerous areas to safe areas.

> **Tactical Evacuation** – A measure to immediately move people to a safe area as part of emergency response and operations. Does not require approval from local authority but the local authority may enact an evacuation order, if required, and local authority must be advised if a tactical evacuation has occurred.
>
> **Planned Evacuation** – An evacuation coordinated by local government authority that can authorize evacuation alerts and orders.

Explosive Limits (Lower and Upper)
Each gaseous hydrocarbon substance has a minimum (Lower Explosive Limit or LEL) and a maximum (Upper Explosive Limit or UEL) percentage in air below or above which combustion will not take place. Explosive limit and flammability limit are used interchangeable. The terms "Too Lean" and "Too Rich" are used for levels outside of the explosive range.

Facility
Any building, structure, installation, equipment, or appurtenance that is connected to or associated with the recovery, development, production, handling, processing, treatment, or disposal of hydrocarbon-based resources or any associated substance or wastes. This does not include wells or pipelines.

Field Response Team (FRT)
Company and contractor personnel directly involved in controlling the incident at the emergency site and from the EOC.

Fire Hazard (FH) Order *(Alberta specific)*
An order issued by the AER during an emergency to restrict public access to a specified area.

Functional Exercise
As described in CAN/CSA Z246.2-18, an activity designed to evaluate capabilities and multiple functions using simulated response. A functional exercise will simulate the deployment of resources and rapid problem solving. Participants will evaluate management of the command and coordination centres and assess the adequacy of emergency response plans and resources.

Gathering system
The network of pipelines, pumps, tanks, and other equipment that carries oil and gas to a processing plant or to other separation equipment.

Appendix F: ERP Reference Material, continued

Glossary of Terms, continued

Hazard
A situation with potential to harm persons, property, or the environment.

Hazard Planning Zone (HPZ) (British Columbia specific)
A geographical area (a) determined by using the hazard planning distance as a radius, and (b) within which persons, property or the environment may be affected by an emergency. Defined in Emergency Management Regulation.

Hazardous product
A substance released in quantities that may harm persons, property, or the environment.

High Vapour Pressure Liquids (HVPLs)
HVPLs have a vapour pressure greater than 240 kPa at 38°C (34.8 PSIG @ 100°F) and include ethane, propane, butane, and pentanes plus, either as a mixture or as a single component.
Note: Comparisons

Gasoline -	Vapour pressure between 55 and 100 kPa at 38°C (8 - 14.5 PSIG @ 100°F).
Condensate -	Often a component of a propane/butane mixture, has a vapour pressure of 59 to 72 kPa at 38°C (8.6 - 10.4 PSIG @ 100°F).

High Vapour Pressure (HVP) plume dispersion geometry
An uncontrolled release of NGL product on flat terrain will form a vapour plume as it disperses. If the vapour plume formed at the leak site has not been ignited, it will most likely reach its maximum size within the first half hour of the leak occurrence. Two unique features of an NGL plume are:
The downwind edge of the plume tends to spread out significantly forming a broad frontal edge.
Under certain conditions, the plume will travel upwind for a short distance.

High Vapour Pressure (HVP) pipeline
A pipeline system conveying hydrocarbons or hydrocarbon mixtures in the liquid or quasi-liquid state with a vapour pressure greater than 110 kilopascals absolute at 38°C. Some examples are liquid ethane, ethylene, propane, butanes, and pentanes plus.

High Vapour Pressure (HVP) products
HVP products have a vapour pressure greater than 240 kPa at 38°C (34.8 PSIG at 100°F) and include ethane, propane, butane and pentanes plus, either as a mixture or as a single component. A leak from a vessel or pipe containing HVP products can result in a BLEVE.

Hydrogen sulphide (H_2S)
A naturally occurring gas found in a variety of geological formations and also formed by the natural decomposition of organic matter in the absence of oxygen. H_2S is colourless, has a molecular weight that is heavier than air, and is extremely toxic. In small concentrations, it has a rotten egg smell and causes eye and throat 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_2S) 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_2S release rate.

Appendix F: ERP Reference Material, continued

Glossary of Terms, continued

Hydrogen sulphide (H_2S) 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)
An area in close proximity to a continuous hazardous release where indoor sheltering may provide limited protection due to proximity of release.

Incident Management System
A system used to coordinate preparedness and incident management.

Isolating the release
Ensuring access to the hazard area is controlled.

Appendix F: ERP Reference Material, continued

Glossary of Terms, continued

Level 1 Emergency *(Alberta specific)*
There is no danger outside the licensee's property, there is no threat to the public, and there is minimal environmental impact. The situation can be handled entirely by licensee personnel. There will be immediate control of the hazard. There is little or no media interest.

Level 1 Emergency *(British Columbia specific)*
There is no immediate danger to the public or environment as no H_2S has been released; the emergency is confined to the lease or company property.

Level 2 Emergency *(Alberta specific)*
There is no immediate danger outside the licensee's property or the right-of-way, but there is the potential for the emergency to extend beyond the licensee's property. Outside agencies must be notified. Imminent control of the hazard is probable but there is a moderate threat to the public and/or the environment. There may be local and regional media interest in the event.

Level 2 Emergency *(British Columbia specific)*
There is potential risk to the public or environment, as the emergency could extend beyond company property. However, control is still possible.

Level 3 Emergency *(Alberta specific)*
The safety of the public is in jeopardy from a major uncontrolled hazard. There are likely significant and ongoing environmental impacts. Immediate multi agency municipal and provincial government involvement is required.

Level 3 Emergency *(British Columbia specific)*
An immediate danger to the public or environment exists; control of the situation has been lost.

Licensee
The responsible duty holder as specified in legislation.

Liquid to gas expansion
NGL products will expand greatly when released to the atmosphere. For example, propane expands 272 times its liquid volume. Other products expand at different rates, but all have a high gas to liquid ratio.

Liquefied Petroleum Gas (LPG)
Mixture of heavier, gaseous hydrocarbons (butane and propane), liquefied as a portable source of energy.

Local Authority
A local authority is considered to be:

1) The council of a city, town, village or municipal district;
2) in the case of an improvement district or special area, the Minister of Municipal Affairs;
3) for a national park, the park superintendent or the par superintendent's delegate;
4) the settlement council of a Métis settlement; or
5) the band council of a First Nations Reserve.

Local State of Emergency
See State of local emergency.

Lower Explosive Limit (LEL)
The lowest concentration of gas or vapour (per cent by volume in air) that explodes if an ignition source is present at ambient temperatures.

Appendix F: ERP Reference Material, continued

Glossary of Terms, continued

M.D.
Municipal District

Major (full-blown) exercise
As described in CAN/CSA Z246.2-18, a multi-agency, multi-jurisdictional activity involving actual deployment of resources in a coordinated response, as if a real emergency had occurred. The full-scale exercise includes the mobilization of units, personnel, and equipment. Participants will assess plans and procedures and evaluate coordinated responses under crisis conditions.

Maximum Operating Pressure (MOP)
The maximum licensed operating pressure for a vessel or pipeline or a section of it.

Mobile air quality monitoring
Use of sophisticated portable equipment to track substances such as H_2S or SO_2 at very low parts per billion atmospheric concentrations.

Municipality
See local authority.

Municipal Emergency Operations Centre (MEOC)
The centre from which responsible municipal officials manage and support emergency operations within their jurisdiction, as well as formulate protective actions and provide public information. The centre has adequate workspace, maps, status boards, and communications capability.

Municipal Emergency Plan (MEP)
The emergency plan of the local authority.

Natural Gas Liquids (NGL)
These are hydrocarbons liquefied under pressure in field facilities or in gas processing plants. Natural gas liquids include ethane, propane, butane and pentanes plus and normally occur as a mixture of these compounds.
Physical Properties of NGL Products:

> **Colour -** NGL products are colourless except when they include a condensate component, which gives them a light-yellow appearance. Releases during winter conditions can discolour snow. NGL products may appear as a white cloud when released to the atmosphere. This white cloud is formed by the condensing of moisture in the air.
>
> **Odour -** Most NGL products have a mild petroleum odour. During pipeline transport NGL products are almost odourless.
>
> **Vapour Density -** A measure of the mass per unit volume of the vapour (i.e. kg/m3). All NGL products transported by the company have a vapour density greater than air or a relative vapour density greater than 1.0.

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.

Appendix F: ERP Reference Material, continued

Glossary of Terms, continued

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 on-site.

Personal consultation
Consultation through face-to-face visits or telephone conversations with all requisite individuals.

Petroleum industry
Refers to all petroleum industry operations.

Plume (gas plume)
An elongated mobile column of gas or smoke.

Protective Action Zone (PAZ)
An area downwind of a hazardous release where outdoor pollutant concentrations may result in life threatening or serious and possibly irreversible health effects on the public.

Protective Action Distance (PAD)
The distance from the incident to the EPZ outer boundary.

Provincial Operations Centre (POC)
An operations centre with the capacity to accommodate representatives from each government department.

Public
The group of people who may be or are impacted by an emergency (e.g., employees, contractors, neighbours, emergency response organizations, regulatory agencies, the media, appointed or elected officials, visitors, customers, etc., as appropriate).

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.

Appendix F: ERP Reference Material, continued

Glossary of Terms, continued

Public protection measures
The use of sheltering, evacuation, ignition, and isolation procedures to mitigate the impact of a hazardous release on members of the public.

Public Safety Group Supervisor
Member of the field response team. Individual charged with the responsibility of co-ordinating the evacuation or shelter of people in the emergency hazard Area. The Public Safety Group Supervisor reports to and may be located in the same location as the Incident Commander.

Publicly used development *(Alberta specific)*
Places where the presence of 50 individuals or less can be anticipated (e.g., places of business, cottages, campgrounds, churches, and other locations created for use by the non-resident public).

Publicly used facility (British Columbia specific)
Places where the presence of people can be anticipated. Examples include places of business, cottages, campgrounds, churches, and other locations created for use by the public. Includes any similar development the OGC may designate as a public facility.

Publicly used facility
Places where the presence of people can be anticipated. Examples include places of business, cottages, campground, churches, and other locations created for use by the public.

Reception centre
A centre established to register evacuees for emergency shelter, to assess their needs, and, if temporary shelter is not required because evacuees will stay elsewhere, to ascertain where they can be contacted.

Regional Emergency Operations Centre (REOC)
An operations centre established in a suitable location to manage the larger aspects of the emergency that is manned jointly by government and industry staff.

Residence
A dwelling that is occupied full time or part time.

Resident
Individual living in the area at a fixed location.

Resident data record
Form used to track the contact made with residents, businesses and transients.

Response zones (Alberta specific)
The Initial Isolation Zone (IIZ), Protective Action Zone (PAZ) and Emergency Planning Zone (EPZ).

Roadblock Crew
Personnel responsible for controlling access to the Emergency Hazard Area, reporting to the Public Safety Group Supervisor.

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.

Appendix F: ERP Reference Material, continued

Glossary of Terms, continued

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_2S).

Sour gas release
An uncontrolled release of natural gas containing hydrogen sulphide (H_2S).

Sour multiphase product *(British Columbia specific)*
Any liquid that contains H_2S 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_2S per kilomole of natural gas in the gas phase.

Sour pipeline
Pipeline that conveys gas and/or liquid that contains sour gas.

Sour production facility
Facility that processes gas and/or liquid that contains sour gas

Sour well
An oil or gas well expected to encounter during drilling formations bearing sour gas or any oil or gas well capable of producing sour gas.

Appendix F: ERP Reference Material, continued

Glossary of Terms, continued

Special needs
Those persons for whom early response actions must be taken because they require evacuation assistance, requested early notification, do not have telephones, require transportation assistance, have a language or comprehension barrier, or have specific medical needs. Special needs also include those who decline to give information during the public consultation process and any residences or businesses where contact cannot be made.

Special sour well *(British Columbia specific)*
A designation that reflects the proposed well's proximity to populated centers and its maximum potential H_2S release rate during the drilling state. The casing or open-hole flow configuration is used in arriving at this designation.

Standing well
A well that has been drilled and cased but not perforated. A company is generally allowed to leave the well as standing for up to one year.

State of local emergency
A declaration by a local authority providing the necessary authority, resources, and procedures at the municipal level to allow an emergency to be resolved effectively and efficiently.

Sulphur dioxide (SO_2)
A colourless, water-soluble, suffocating gas formed by burning sulphur in air; also used in the manufacture of sulphuric acid. SO_2 has a pungent smell similar to a burning match. SO_2 is extremely toxic at higher concentrations. The molecular weight of SO_2 is heavier than air; however, typical releases are related to combustion, 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_2S and SO_2, 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.

Transient
An individual that is temporarily in the area (e.g. camper, cross-country skier).

Appendix F: ERP Reference Material, continued

Glossary of Terms, continued

Trapper
The holder of a provincial licensed and registered trapline for the purpose of hunting and trapping fur bearing animals.

Uncontrolled flow
A release of product that cannot be shut off at the licensee’s discretion.

Urban centre
A city, town, village, summer village, or hamlet with no fewer than 50 separate buildings, each of which must be an occupied dwelling, or any similar development.

Unrestricted country development
Any collection of permanent dwellings situated outside of an urban centre and having more than eight permanent dwellings per quarter section.

Urban density development
Any incorporated urban centre, unincorporated rural subdivision, or group of subdivisions with no fewer than 50 separate buildings, each of which must be an occupied dwelling.

Vapour pressure
The pressure exerted by the vapour when the rate of evaporation is equal to the rate of condensation of the vapour. All NGL products have vapour pressure greater than atmospheric pressure air and therefore have to be kept under pressure or else they will vaporize.

Vapour-air plume / vapour cloud
When released to atmosphere, products form a vapour-air plume that is colourless, heavier than air and has a faint gasoline odour. Depending on the product released and the atmospheric conditions, water vapour may condense to form a cloud.

Water body
Natural or manmade; contains or conveys water continuously, intermittently, or seasonally. A natural water body is any location where water flows or is present, whether the flow or the presence of water is continuous, seasonal, intermittent, or occurs only during a flood. This includes, but is not limited to, the bed and shore of a river, stream, lake, creek, lagoon, swamp, marsh, slough, muskeg, or other natural drainage, such as ephemeral draws, wetlands, riparian areas, floodplains, fens, bogs, coulees, and rills. Examples of a manmade water body include, but are not limited to, a canal, drainage ditch, reservoir, dugout or other manmade surface feature.

Well servicing
The maintenance procedures performed on a producing or injecting well after the well has been completed and operations have commenced. Well servicing activities are generally conducted to maintain or enhance well productivity or injectivity.

Workover
The process of re-entering an existing well to perform remedial action that will restore or improve the productivity or injectivity of the target formation.

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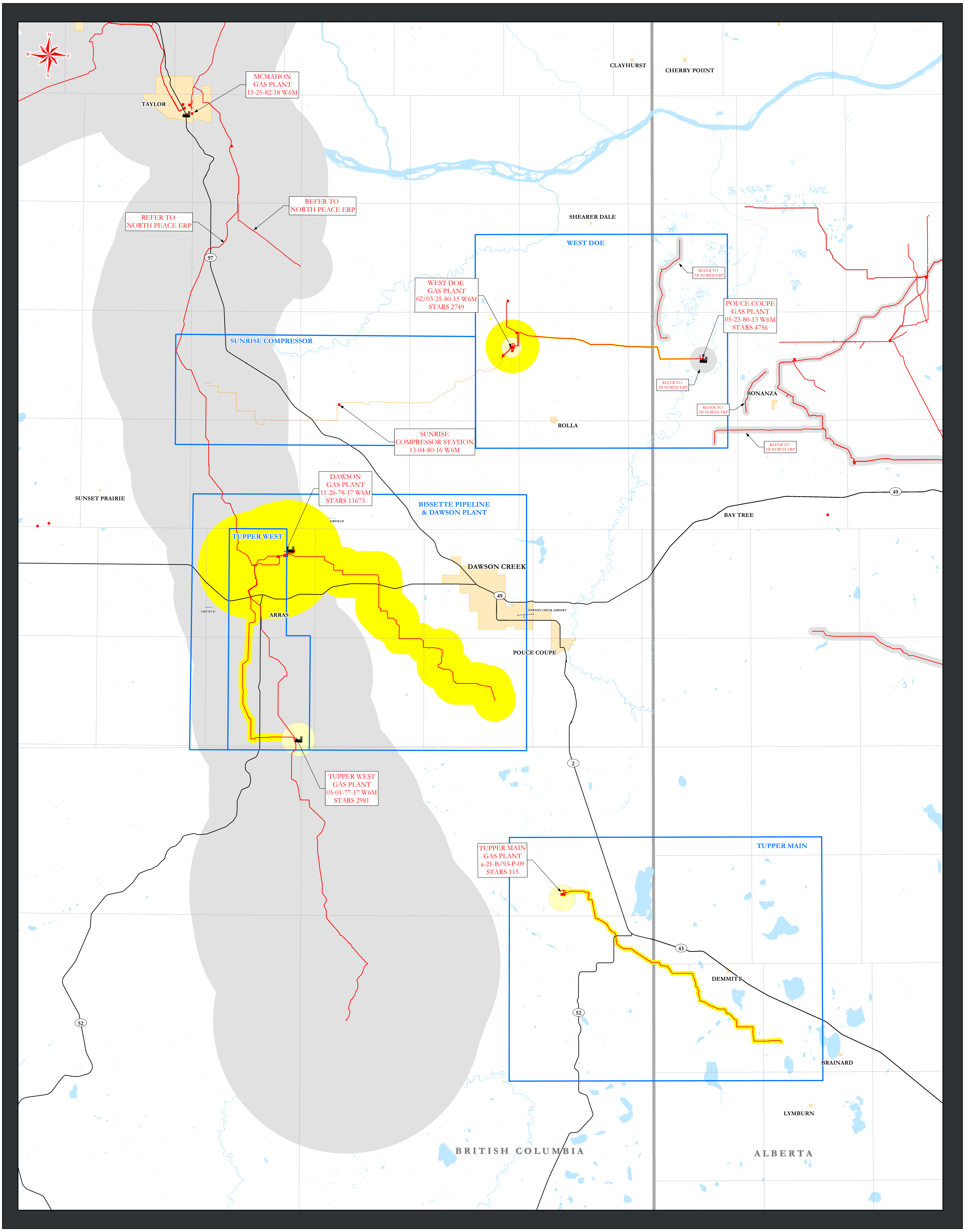


SOUTH PEACE AREA

NORTHRIVER
MIDSTREAM

Draft Date: March 19, 2019 SP	Scale: 1:150,000	Map: 8237
Revision Date: March 27, 2020 GLG	UTM ZONE 10 NAD83	

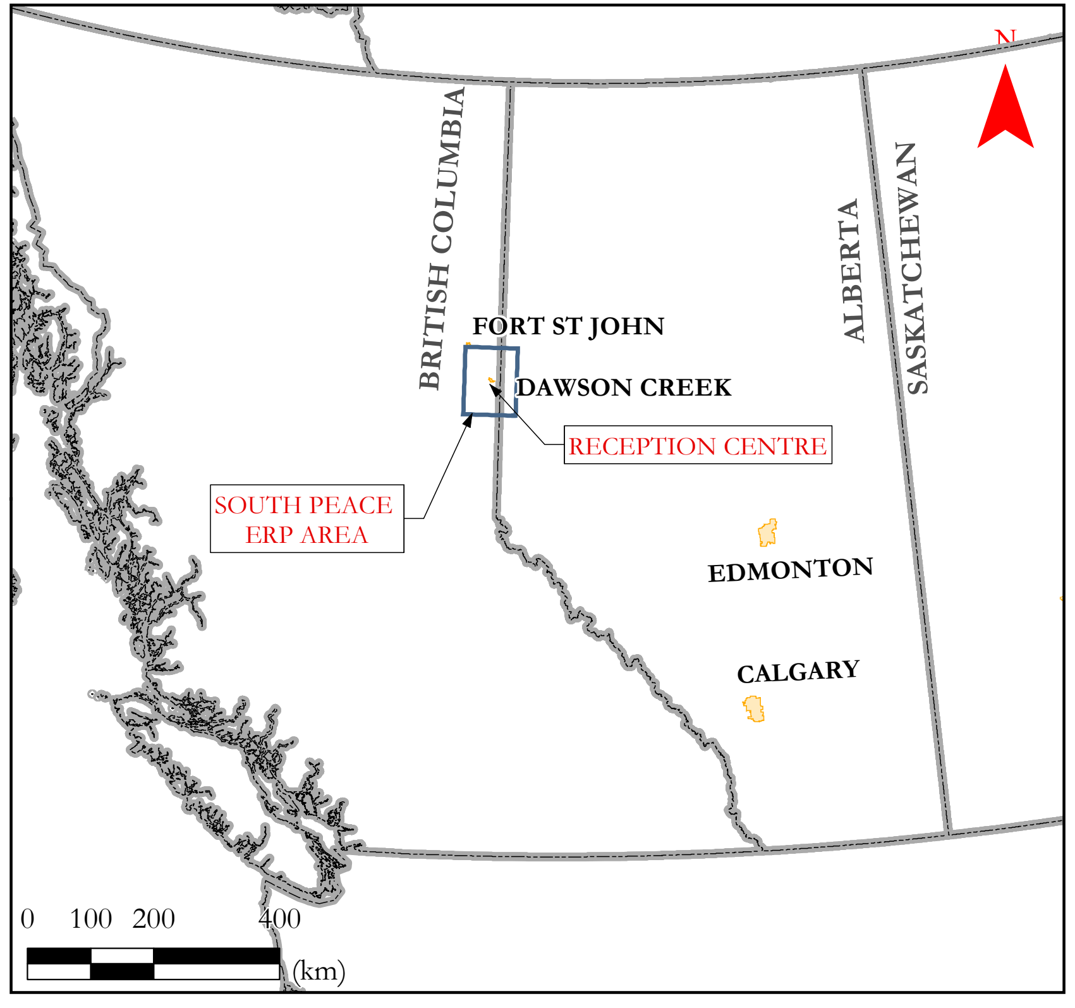
0 5 10 15 (km)

MAP PRODUCED BY

H2Safety
h2safety.ca

AREA OVERVIEW MAP

1:12,000,000



- ■ Facility
- ■ Gas Plant
- ■ NorthRiver E2 Facilities
- — Gas Pipeline
- ---- Discontinued Gas Pipeline
- — Highway
- ▬ Airfield
- ▨ Urban Area
- ▨ Waterbody
- ☐ Provincial Boundary
- ☐ South Peace ERP Boundaries
- ● EPZ
- ● Other EPZ

NORTHRIVER 24-HOUR EMERGENCY

INCIDENT REPORTING LINE: **844-667-8477**

GENERAL INQUIRIES:

[redacted]

Primary Incident Command Post:

[redacted]

Alternate Incident Command Post:

Dawson Creek Airport Office*

**Phone numbers to be determined when Command Post is activated.*

Or other nearby location

Local Emergency Operations Centre

[redacted]

Refer to the "Response Teams Phone List" yellow tab, behind the Section 2.0: Roles and Responsibilities blue tab for additional contact information.

OPERATION SUMMARY

The NorthRiver Tupper Main Gas Plant is the gathering point for sour production from the Tupper Main field and is located in the Peace River Regional District. The Tupper Main Gas Plant processes the sour gas to remove H_2S, hydrocarbon liquids and water. The facility has the option to run a Sulferox unit to convert acid gas to Sulphur cake. Sweet gas production is then pipelined through an interprovincial sales gas pipeline to a TCP Meter Station at 09-07-74 -12 W6M. This pipeline crosses the Alberta / British Columbia provincial border and is regulated by the CER. The Tupper Main Gas Plant is regulated by the OGC.

HVP / EPZ Information

The licensed H_2S concentration for the CER Pipeline is 0% H_2S and the pipeline has a maximum calculated thermal radiation EPZ of 206m. The NorthRiver Tupper Main Gas Plant has a calculated EPZ of 1.2km.

On-Site Storage

Refer to the "Tupper Main Gas Plant" tab for on-site storage information.

Closest Urban Centre

The hamlet of Toms Lake has a population of 25 and is located 6km northeast of Tupper Main. The City of Dawson Creek is located 28km northwest of the Tupper Main Gas Plant and has a population of +/- 12,978.

Hydrology

There are numerous waterbodies flowing through the Tupper CER Pipeline EPZ, including Little Tupper Creek ,Tupper Creek and a few unnamed rivers and creeks.

Highways

Highway 52 (Heritage Highway) runs north / south through the Tupper Main EPZ.

Site Access

Refer to the following pages for access maps and directions. Where industrial roads exist, the pipelines can be accessed by road vehicle and off-road vehicles. Otherwise, helicopter access must be employed.

SAFETY EQUIPMENT

Operator / Truck Safety Equipment

Each company truck contains a 30lb fire extinguisher, first aid kit, a radio and seasonal fire fighting equipment.

Tupper Main Gas Plant a-21-E/93-P-03 Safety Equipment

Item	Quantity
Fire Extinguishers & First Aid Kits / Equipment	Strategically located throughout
First Aid Kit (Level 3)	1
Automatic External Defibrillator	1 - in plant first aid room
Air Evacuation Kit	1
SCBA	8
SABA	2
Gas Detectors (Multi-head)	2
Radios Fixed (Control Room)	3
Radios Fixed (Plant Vehicle)	2
Radios Fixed (Portable)	2
Radios Handheld	18
Pickup Trucks (Plant)	2
Emergency Transport Vehicle	1
Spill Equipment:	3

Notification

The Tupper Main Gas Plant is manned 24 hours a day, 7 days a week. It is equipped with numerous monitoring and detection systems, including SCADA, to alert NorthRiver personnel of any conditions outside of normal operating range. The SCADA system monitors H_2S, LEL and fire alarms inside the plant, as well as H_2S monitoring along the facility fence line. All buildings located within the plant boundary that have rotary equipment are fitted with fire detection and vibration sensors. The gas plant is also equipped with visual alarms (beacons) located in all buildings located within the plant boundary and on the roof of the control room. The blue beacon identifies and H_2S alarm, the amber / orange identifies a general or process control alarm and the red identifies a fire or LEL alarm. Arrival time for company personnel responding to a call-out is 60 minutes.

Communications

Cell phones and plant telephones are the primary methods of communication. All company trucks have radio equipment in that are programmed with NorthRiver's VHF frequencies as well as the applicable Resource Road or Loading Channels for any radio controlled roads in their area. Refer to the NorthRiver Radio Communications Information page at the beginning of the Area Specific Information section for more information. A plant UHF radio system is available at the Tupper Main & Tupper West Gas Plants using the following frequencies:

Channel	Tx MHZ	Rx MHZ
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]

SAFETY EQUIPMENT, cont.

Ignition

Refer to "Ignition Services" under "Support Services" for a complete list of companies with ignition services.

Roadblock Kits

There are 5 roadblock kits located at Tupper Main Gas Plant, 5 at the Tupper West Gas Plant and 2 at the Dawson Gas Plant (security trailer). Appropriate roadblock locations will be determined at the time of the incident. Roadblock kits contain: rotary beacon, Stop/Slow paddle, flashlight w/ batteries, traffic triangles, reflective vests, note pad, roadblock checkpoint binder w/ forms, note paper & pens. Appropriate roadblock locations will be determined at the time of the incident.

Muster Location

All personnel will muster in front of the shop. Staging area will be determined based on severity and location of incident.

AREA USERS & TIE-INS

Note: All numbers, unless otherwise indicated, are 24 hours.

Oil and Gas

Canadian Natural Resources Ltd.	888-878-3700
Murphy Oil Company Ltd.	888-999-0423
Ovintiv Canada	403-645-3333
Pembina Pipelines	800-360-4706
TC Energy Ltd.*	888-382-7222
Tidewater Midstream & Infra.	866-544-9875
Veresen Midstream General Partner Inc.	855-577-4555

** There are tie-ins between NorthRiver and the noted companies. The NorthRiver ERP does not cover emergencies for other operations. NorthRiver will strive to provide support to any other industrial operator in the area on a best effort basis.*

Guides & Outfitters (BC)

ID	Name	Phone
701271	[redacted]	
701271		

Guides & Outfitters (WMU 357)

ID	Name	Phone
[redacted]		

Trappers (AB)

Trapper ID	Name	Phone
1744	[redacted]	
2397		
2559		

Trappers (BC)

Trapper ID	Name	Phone
720T012	[redacted]	

Grazing Leases

Grazing ID	Name	Phone
RAN074305	[redacted]	
GRL040041		
GRL36652		
GRL910027		
GRL950033		

Rights Holders

Crown/Forest Tenure File Number	Name	Phone
[redacted]		

Railway

Canadian National Railway Company (CN)	800-465-9239

Non-Resident Landowners

Refer to the Tupper Main Non-Resident Landowner Information sheet.

LEAD AGENCIES & PRIORITY CONTACTS

Note: All numbers, unless otherwise indicated, are 24 hours.

FEDERAL AGENCIES

Note: If the incident involves pipelines that cross the Alberta and British Columbia border, notify the Canada Energy Board (CER) / Transportation Safety Board (TSB).

Canada Energy Board	
TSB Incident Line (Pipeline emergencies)	819-997-7887
CER Incident Line (All other emergencies)	403-807-9473
TSB Fax	819-997-2239
Email	pipelinenotifications@tsb.gc.ca
Department of Fisheries and Oceans (DFO)	604-666-0384
CANUTEC (Call collect)	888-226-8832 613-996-6666 *666 (cell) Information: 613-992-4624
Emergency Response Assistance Canada (ERAC)	800-265-0212
ERAP 2-0010-083	

LEAD AGENCIES & PRIORITY CONTACTS

Note: All numbers, unless otherwise indicated, are 24 hours.

BRITISH COLUMBIA

Emergency Management BC (EMBC)*	800-663-3456
[redacted]	

**In the event of an emergency, EMBC will notify the OGC, Ministry of Environment, Environment & Climate Change Canada, Ministry of Forests, Land & Natural Resources Operations, Northern Health Authority, and any affected municipalities.*

BC Oil & Gas Commission (OGC) - Incident Reporting Line	800-663-3456
Peace River Regional District	Admin: 800-670-7773
[redacted]	
Northern Health Authority	
Health Emergency Management BC (HEMBC)	On Call: 855-554-3622
[redacted]	
WORKSAFE BC - Fort St. John	866-922-4357
Daytime Reporting	888-621-7233
[redacted]	
Technical Safety BC	866-566-7233
BC Ministry of Transportation & Infrastructure	
South Peace Area Dawson Creek	Admin: 250-784-2363
[redacted]	
Argo Road Maintenance*	800-663-7623

**Service Area includes Dawson Creek, Tumbler Ridge, Chetwynd, Pouce Coupe, Mile 22, Mount Lemoray / Honeymoon Creek and Progress areas.*

BC Ministry of Environment	
Peace Region Office	Admin: 250-787-3411
[redacted]	
Spill Reporting Line	800-663-3456
Report a Poacher	877-952-7277
Public Works Association of BC (PWABC)	Office: 604-880-8585
Ministry of Forests, Lands & Natural Resource Operations	
Peace Forest District - Dawson Creek	Admin: 250-784-1200
[redacted]	
Forest Fire Reporting	800-663-5555 *5555 (cell)
Transportation of Dangerous Goods (TDG)	800-663-3456
Environment and Climate Change Canada	
Meteorological Services	604-664-9385

ALBERTA

Alberta Energy Regulator (AER)	800-222-6514*
Grande Prairie / High Level Field Office	
Wildfire Reporting	310-FIRE(3473)

**One call number for regulatory agency, Alberta Environment, spill reporting & sustainable resource development (lands, fish, forest, wildlife) & Environment Canada.*

County of Grande Prairie	Admin: 780-532-9727
[redacted]	
Alberta Health Services - Z5 North	844-755-1788
[redacted]	
Alberta Emergency Management Agency (AEMA) - NW	866-618-2362
[redacted]	
Alberta Boilers Safety Association (ABSA)	780-437-9100
Alberta Safety Services - Electrical Branch	Admin: 866-421-6929
Alberta Ministry of Transportation - Grande Prairie	Admin: 780-538-5310
[redacted]	
Alberta Occupational Health and Safety	866-415-8690
Transportation of Dangerous Goods (TDG)	800-272-9600
Workers' Compensation Board	866-922-9221
Environment and Climate Change Canada	
Meteorological Services	800-667-8676

EMERGENCY SERVICES

Note: All numbers, unless otherwise indicated, are 24 hours.

Ambulance	**911**
BC Ambulance Service Dispatch	800-461-9911
Air Ambulance (STARS)	888-888-4567
[redacted]	
Hospitals	
Beaverlodge Municipal Hospital	780-354-2136
Dawson Creek & District Hospital	250-782-8501
Queen Elizabeth II Hospital - Grande Prairie	780-538-7100
Poison Control Centre (Alberta)	800-332-1414
Poison Control Centre (British Columbia)	604-682-5050
Alberta First Call	800-242-3447
BC One Call	800-474-6886
Fire Departments	**911**
Hythe	[redacted]
Tomslake	

On the BC side, portions of the EPZ fall under Tomslake coverage. The rest of the BC field does NOT have fire coverage from any local fire department. These fires must be handled by NorthRiver Midstream, mutual aid partners, or contract oilfield fire fighting services. Local fire departments will only respond to motor vehicle accidents and medical emergencies unless specifically dispatched by EMBC or the Local Authority. On the AB side, the EPZ falls under Hythe coverage.

RCMP	**911**
Dawson Creek	250-784-3700
Beaverlodge	780-354-2485
Reception Centres	
Super 8 Dawson Creek	250-782-8899
1440 Alaska Avenue, Dawson Creek, BC	Fax: 250-784-1988
George Dawson Inn	250-782-9151
11705 - 8 Street, Dawson Creek, BC	Fax: 250-782-1617
Dawson Creek Lodge	250-782-8595
1748 Alaska Avenue, Dawson Creek, BC	

SUPPORT SERVICES

Note: All numbers, unless otherwise indicated, are 24 hours.

Mobile Air Monitoring*	
Commission Mobile Monitoring (OGC) - Fort St. John	800-663-3456
Firemaster Oilfield Services Inc. - Grande Prairie	877-342-3473
HSE Integrated Ltd. - Grande Prairie	888-346-8260
Priority Safety Services - Grande Prairie	866-619-7929
Trojan Safety Services - Grande Prairie	780-567-3440
Roy Northern Land & Environmental - Fort St. John	250-261-6644
Oilfield Fire Fighting / Safety Contractors*	
Safety Boss - Fort St. John	800-882-4967
Trojan Safety Services Ltd. - Fort St. John	250-785-9557
Bravo Target Safety - Grande Prairie	866-513-3779
Firemaster Oilfield Services - Grande Prairie	877-342-3473
HSE Integrated Ltd. - Grande Prairie	888-346-8260
Superior Fire Control Ltd. - Grande Prairie	877-882-0035
Well Control Specialists*	
Safety Boss - Fort St. John	800-882-4967
Firemaster Oilfield Services Inc. - Grande Prairie	877-342-3473
Capstone Blowout Recovery - Airdrie	866-347-3911
Ignition Services*	
Safety Boss Inc. - Fort St. John	800-882-4967
Firemaster Oilfield Services Inc. - Grande Prairie	877-342-3473
HSE Integrated Ltd. - Grande Prairie	888-346-8260
Superior Fire Control Ltd. - Grande Prairie	877-882-0035

**Dispatch support services at a Level 1 Emergency. Response times vary (1-5 hours), depending on the remoteness of the area and the location where the support is coming from.*

Emergency Response Management	
H_2Safety Services Inc. - Calgary	403-212-2332
Toll Free	888-216-2332
Spill Response	
Roy Northern Land & Environmental - Fort St. John	250-261-6644
SWAT Consulting - Grande Prairie	866-610-7928
Highmark Environmental - Fort St. John	250-261-6994
Eco-Web Ecological Consulting - Fort St. John	250-787-1110
Air Traffic Control	
NAV Canada	866-992-7433
Bus Transportation	
BC North Bus - Fort St. John	250-564-0161
Homer's Oilfield Services Charters - Dawson Creek	250-219-2247
Helicopter Companies* (Day Flying & Good Weather Only)	
Yellowhead Helicopters - Fort St. John	250-785-2331
Bailey Helicopters - Fort St. John	250-785-2518
Canadian Helicopters Ltd. - Fort St. John	780-429-6900
Highland Helicopters - Grande Prairie	780-539-3112

**If required, a helicopter with a loud hailer should be called out*

WCSS - Zone 6 - Coop "C"* 866-541-8888

Regional / Coop Custodian: Shawn Dore - Clean Harbors Bus: 250-785-4577
Cell: 250-261-9404

Equipment Location	Equipment Summary
Clean Harbors Surface Rentals 6715 - 85th Avenue Fort St. John, BC	52' OSCAR Trailer (Semi-truck) 40`Boom Cache Sea Can (winch tractor/trailer) 20' Wildlife Sea Can (winch tractor/trailer) Single Engine Barge (1 ton truck w/ 2 $^5/_{16}$" ball hitch & electric brakes) Work Boat ($^1/_2$ ton w/ 2" ball hitch) Drum Skimmer w/ Power Pak ($^1/_2$ ton truck) 400' Shallow Water Boom ($^1/_2$ ton truck)
4901 - 46 Ave Fort Nelson, BC	20' ISRU Sea Can (winch tractor/trailer) 2 Workboats ($^1/_2$ ton w/ 2" ball hitch)

WCSS - Zone 6 - Coop "T"* 866-541-8888

Regional Custodian: Clean Harbors Bus: 780-532-4331

Equipment Location	Equipment Summary
9601 - 156 Avenue Grande Prairie, AB	52' OSCAR Trailer (Semi-truck) 16' Winter OSCAR Trailer (3/4 ton truck 1/ 2-5/16" ball hitch) 2 Work Boats ($^1/_2$ ton w/ 2" ball hitch) 14' Wildlife Trailer (1/2 ton truck w/ 2" ball hitch)

Transport

Contact - Clean Harbors

Coop Custodian: Seven Generations Energy Ltd. Bus: 780-228-2292
Mike Clarke (Alternate): 587-298-0026
Sandra Miller (Alternate): 780-296-5822

Equipment Location	Equipment Summary
Cutbank Plant Site 10-10-65-05 W6M	20' ISRU Sea Can (winch tractor/trailer)

Directions: From Grande Prairie: Travel 68 km south on Hwy 40. Cross Cutbank River and turn east on Teddy Lane. Plant site is 2.2 km east.
From Grande Cache: Travel north 114 km on Hwy 40. Turn east on Teddy Lane. Plant is 2.2 km east.

**See website for more info (http://www.wcss.ab.ca)*

SURFACE DEVELOPMENT INFORMATION

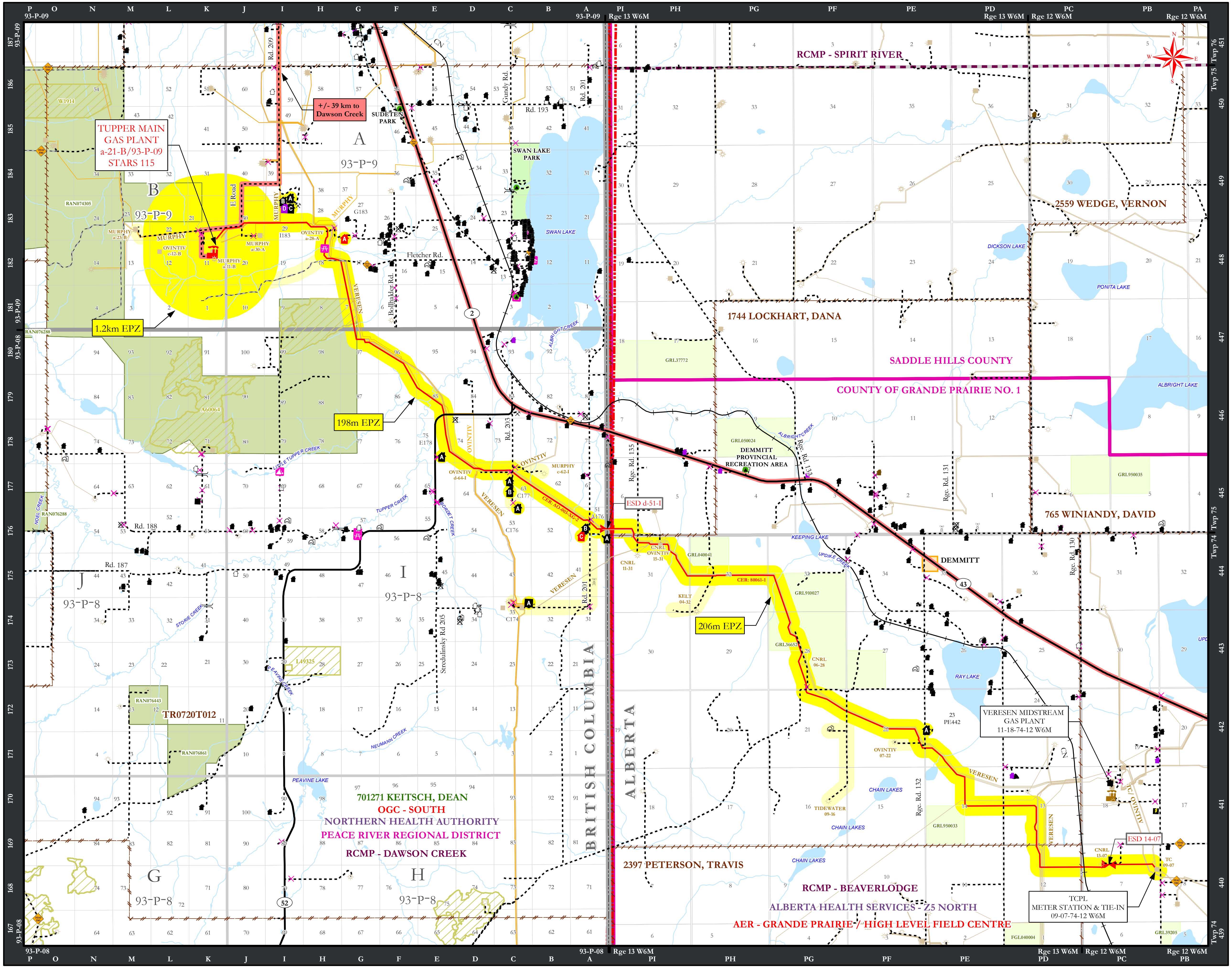
There is a total of 14 surface developments within or near the Tupper Main EPZ. This includes 12 occupied residences and 1 business and 1 manned oil & gas facility.

Note: Detailed surface development information can be found behind the white "Confidential Info" tab. Evacuation routes out of the area are shown on the map. Additionally, procedures for contacting and evaluating / sheltering affected parties, as well as procedures for isolating the HPZ, can be found in "Section 4: Emergency Response Procedures".

Schools / Bus Transportation

Peace Wapiti School Division No. 76	Admin: 780-532-8133
[redacted]	
Hythe Regional School	Admin: 780-356-3934
Peace River South School District 59	Admin: 250-782-8571
[redacted]	
Canalta Elementary School	Admin: 250-782-8403
Dawson Creek Secondary School - Central Campus	Admin: 250-784-7676

NORTHRIVER
MIDSTREAM



TUPPER MAIN

SOUTH PEACE ERP

NORTHRIVER MIDSTREAM

Draft Date: March 19, 2019 SLC	Scale: 1:75,000	Map: 8331
Revision Date: March 21, 2020 GLG	UTM ZONE 10 NAD83	

0 1 2 4 (km)

- ☼ Third Party Well
- ■ Third Party Facility
- Third Party Gas Plant
- ■ Facility
- Gas Plant
- ⋈ ESD
- Sour Third Party Pipeline
- Sweet Third Party Pipeline
- Gas Pipeline
- Trails
- Other Roads
- Winter Roads
- Main Hwy
- Divided Hwy
- Railway
- Airfield
- Access Route
- Sensitive
- Occupied
- ⌂ Vacant
- Business
- Trapper Cabin
- Hall
- Church
- ▲ Public Use
- ■ Occupied Facility
- ► River Flow Direction
- Hydrology
- Waterbody

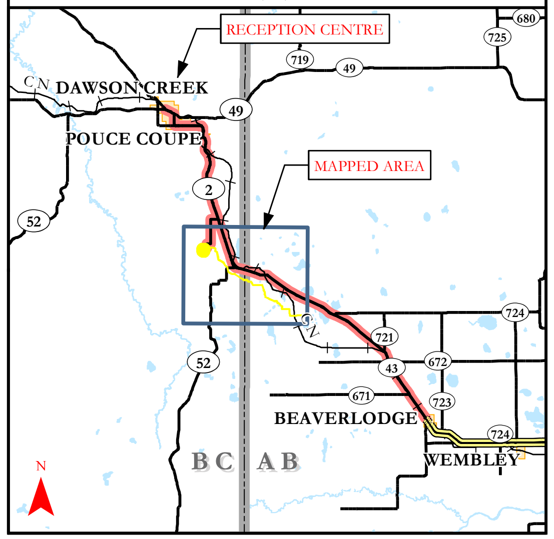
- ☒ Abandoned
- Boat Launch
- Bridge
- Communication Tower
- ◆ Dead End
- Farm Use Area
- ⚒ Gravel Pit
- ✕ Locked Gate
- ⚡ Power Station
- Recreation Area
- Washout
- ▲ Waste
- Urban Area
- 🟩 Grazing Tenure
- 🟩 Protected Area
- Cutblocks
- BC Oil and Gas Commission
- Health Authority
- Guides & Outfitters
- Local Authority
- RCMP
- Trapper Boundary
- ☐ Resident Quadrant Number i.e. NU10
- ● Egress EPZ
- ● EPZ

Note: All roads going off the map are continuous unless otherwise indicated.

AREA OVERVIEW MAP

0 25 50 75 (km)

1:1,500,000



MAP PRODUCED BY

H2Safety

h2safety.ca

Tupper Main a-21-B/93-P-09 Gas Plant Access

Directions to the Tupper Main Gas Plant a-21-B/93-P-09 Gas Plant

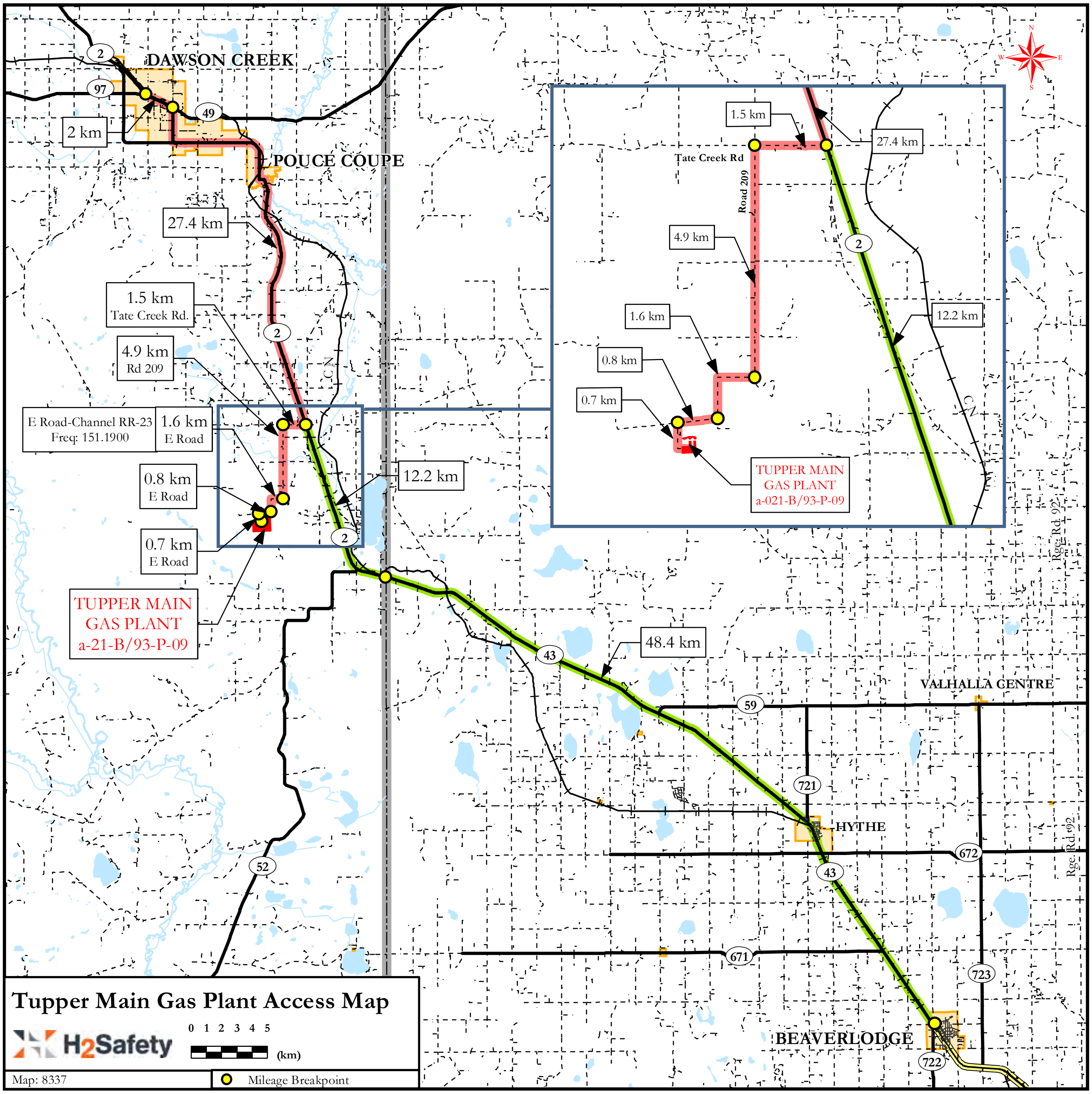
From the intersection of Highway 2 and Highway 97 in Dawson Creek, BC:

- Travel southeast on Highway 2 for 2 km.
- Stay right (south) on Highway 2 for 27.4 km.
- Turn right (west) on Tate Creek Rd for 1.5 km.
- Turn left (south) on Rd 209 for 4.9 km.
- Turn right (west) on an Unnamed Access road for 1.6 km.
- Turn right (west) on an Unnamed Access Road for 0.8 km.
- Turn left (south) and travel 0.7 km into the Tupper Main Gas Plant a-21-B/93-P-09 site.

From the intersection of Highway 43 and Highway 722 in Beaverlodge, AB:

- Travel northwest on Highway 43 for 48.4 km.
- Continue northwest as Highway 43 changes to Highway 2 and travel 12.2 km
- Turn left (west) on Tate Creek Rd for 1.5 km.
- Turn left (south) on Rd 209 for 4.9 km
- Turn right (west) on an Unnamed Access road for 1.6 km
- Turn right (west) on an Unnamed Access Road for 0.8 km
- Turn left (south) and travel 0.7 km into the Tupper Main Gas Plant a-21-B/93-P-09 site.

Refer to next page for map.



Tupper Main Gas Plant Access Map

Map: 8337

South Peace – Tupper Main ERP
CER Regulated Pipelines

Emergency Contact Information

For Emergencies involving inter-provincial pipelines, the Canada Energy Regulator is the primary management agency – they will be contacted by the Transportation Safety Board.

A pipeline is CER-regulated due to the fact that it crosses a Provincial Border.

This must be your first call

Transportation Safety Board (TSB)	24 Hr Incident Line	819-997-7887
	Facsimile	819-953-7876
	Email	PipelineNotifications@tsb.gc.ca

Call the TSB 24 Hr Incident Line when an incident meets the Immediately Reportable Events (see page 2 for criteria) for all Canada Energy Regulator (CER) regulated pipelines and facilities.

Both the phone notification and the input of information into the

CER's Online Event Reporting System (OERS): https://apps.cer-rec.gc.ca/ers

are required to occur as soon as possible and no later than three hours of the incident being discovered.

For all other events (non-immediate) companies are only required to input the information via the OERS.

Secondary Calls

Contact as needed **AFTER** contacting the TSB and CER.

BC Oil & Gas Commission (OGC)	24 Hr	800-663-3456
Alberta Energy Regulator (AER)	24 Hr	800-222-6514

Hazardous occurrences (under Part XVI of the Canada Oil and Gas Occupational Safety and Health Regulations) and incidents requiring medical evacuations are to be reported to the CER immediately.

CER Definition of an Emergency

CAN /CSA Z246.2-18 defines an emergency as “an event or imminent event, outside of the scope of normal operations that requires prompt coordination of resources to protect people, the environment, and property”.

Emergencies can result from numerous causes including pipeline and equipment failure, human error and natural perils such as tornadoes, hurricanes, floods, or earthquakes and terrorism or other criminal activities. Multi-hazard emergencies such as an earthquake causing pipeline breaks, fires and explosions, which result in injury and further property damage, can also occur.

Companies must consider all probable emergencies and have applicable procedures in place to deal with potential effects and threats to people, property and the environment, as determined through a formal hazard assessment.

CER Definition of an Incident

Section 52 of the Onshore Pipeline Regulations (OPR) requires companies to notify the Board of all incidents relating to the construction, operation, or abandonment of their pipelines. An “incident” is defined in section 1 of the OPR as an occurrence that results in:

1. The death of or serious injury to a person;
2. A significant adverse effect on the environment;
3. An unintended fire or explosion;
4. An unintended or uncontained release of low-vapour pressure (LVP) hydrocarbons in excess of 1.5 m3;
5. An unintended or uncontrolled release of gas or high-vapour pressure (HVP) hydrocarbons;
6. The operation of a pipeline beyond its design limits as determined under CSA Z662 or CSA Z276 or any operating limits imposed by the Board.

Companies are required to report a death or serious injury to a person only where the death or injury is a result of an occurrence that relates to the construction, operation, or abandonment of a “pipeline”. Whether a death or injury is related to the construction, operation, or abandonment of a pipeline will depend on whether the person who was killed or injured was working at the time of the incident and/or whether the work was a cause or contributing factor to the incident. It is important to note that, unlike the Canada Labour Code (CLC), the OPR does not differentiate between different types of “persons”. Therefore, companies must report all deaths or serious injuries to any person that occur relating to pipeline construction, operation, or abandonment regardless of whether or not that person was directly employed by the company.

The definition of “serious injury” in the OPR is not exhaustive and contains multiple injuries that qualify as serious, including “the fracture of a major bone”. The CER uses the following definition of “major bone”: skull, mandible, spine, scapula, pelvis, femur, humerus, fibula, tibia, radius, and ulna.

Immediately Reportable Events

Where regulations require an event to be reported “immediately”, companies must also consider whether the event meets any of the following definitions:

An Incident that Harms People or the Environment:

- A death;
- A serious injury (as defined in the OPR or TSB regulations);
- An unintended or uncontrolled LVP hydrocarbon release in excess of 1.5 m3 that leaves company property or occurs on or off the right of way;
- An unintended or uncontrolled sweet natural gas or hvp release >30,000 m3;
- Any unintended or uncontrolled release of sour natural gas or hydrogen sulfide; and/or
- A significant adverse effect on the environment.

Immediately Reportable Events, continued

A Rupture:

- an instantaneous release that immediately impacts the operation of a pipeline segment such that the pressure of the segment cannot be maintained.

A Toxic Plume:

- a band of service fluid or other contaminant (e.g. hydrogen sulfide or smoke) resulting from an incident that causes people, including employees, to take protective measures (e.g. muster, shelter-in-place or evacuation).

Where an event meets any of the above definitions, companies are required to notify the TSB Reporting Hotline at (819) 997-7887. Subsequently, the company is required to input the details required by both the TSB (see TSB regulations) and the CER into the OERS. The phone notification and the input of information into OERS are required to occur as soon as possible and no later than three hours of the incident being discovered. The goal of the initial phone notification is to allow the relevant agencies to mobilize a response to an incident, if required. Note that OERS will automatically determine whether the event meets the definition of an “Incident that Harms People or the Environment”, however the company will be responsible for specifically indicating whether the incident meets the definitions of “Rupture” and “Toxic Plume”.

For all other events that do not meet any of the definitions in this section, companies are not required to phone the TSB Reporting Hotline but must report the event as soon as possible and no later than twenty-four hours after the event was discovered.

Multiple Incident Types

It is possible that a single occurrence may result in multiple incident types. If multiple incident types occur as a result of a single occurrence, companies are expected to report those incident types under a single incident report.

Examples of situations where this might be the case include but are not limited to:

- A pipeline rupture (occurrence) where there is a release of gas (incident type) and an explosion (incident type);
- An industrial accident (occurrence) that causes a death (incident type), a serious injury (incident type) and a fire (incident type);
- An operational malfunction (occurrence) that causes an overpressure (incident type) and a release of product (incident type); or
- An operational malfunction (occurrence) that causes several concurrent or immediately consecutive overpressures (incident types).

In cases where an incident has occurred, and a second incident occurs during the response to the initial incident (e.g. a fire occurs during the clean-up of a spill), the second incident is considered distinct and should be reported separately.

The events that are reportable using the online reporting system are:

- Incidents under the *National Energy Board Onshore Pipeline Regulations (OPR), National Energy Board Processing Plant Regulations (PPR), and Canada Oil and Gas Drilling and Production Regulations (DPR)/Oil and Gas Drilling Regulations;*
- Unauthorized activities under the *CER Act* and *Pipeline Damage Prevention Regulations - Authorizations (DPR-A);*
- Pipeline damage and consent suspensions under the *Pipeline Damage Prevention Regulations - Obligations of Pipeline Companies (DPR-O);*
- Emergency burning or flaring under the PPR;

Multiple Incident Types, continued

- Hazard identification under the PPR;
- Suspension of operations under the PPR;
- Near-misses under the DPR;
- Serious accidents or incidents under the *Canada Oil and Gas Geophysical Operations Regulations/Oil* and *Gas Geophysical Operations Regulations;*
- Emergencies or accidents under the *Canada Oil and Gas Installation Regulations/Oil* and *Gas Installation Regulations; and*
- Accidents, illnesses, and incidents under the *Canada Oil and Gas Diving Regulations/Oil and Gas Diving Regulations.*

In the event that OERS is unavailable, companies are directed to report events to the TSB Reporting Hotline at 819-997-7887.

Reporting Timelines

Section 52 of the OPR requires companies to immediately notify the Board of any incident. Section 52 of the OPR also requires the submission of a Preliminary Incident Report (PIR) and a Detailed Incident Report (DIR) "as soon as is practicable". Generally, companies' initial notification of an incident will satisfy the PIR requirements. The information required for a DIR must be submitted within 12 weeks of reporting an incident. For complex incidents, companies may request an extension for submission of a DIR.

The CER and the TSB have adopted a single window reporting approach. However, in some areas, the TSB reporting requirements are somewhat different than the CER requirements. For additional details on the TSB reporting requirements, companies should refer to the TSB website (http://www.bst-tsb.gc.ca/eng/incidents-occurrence/index.asp).

Transportation Safety Board of Canada
Place du centre, 4th Floor
200 Promenade du Portage
Hull, Quebec K1A 1K8
Facsimile 819-953-7876

Supporting Information

The table below indicates the location of CER supporting documentation in this emergency response plan.

Supporting Information	Found in
CER Distribution	Foreword: Distribution List Page 3
Company 24/7 Emergency Number	Area Specific Information: Binder Cover
Area Map of CER Regulated Facilities	Area Specific Information
TSB Roles & Responsibilities	Section 5: External Agencies Federal Roles Chart
CER Roles & Responsibilities	Section 5: External Agencies Federal Roles Chart
Safety data sheets (SDS)	Area Specific Information
Health and Safety Plan	Please refer to the company's Health & Safety Plan located at the corporate head office.

Emergency Preparedness & Response Policy

Emergency Management Expectations

An effective emergency management program includes being prepared for emergencies, responding in the event of an emergency and ensuring that operations are able to continue safely and can recover in a timely, efficient manner.

Emergency management is critical to ensuring that people, the environment, the public, the organization's assets and reputation are protected in the event of an unanticipated hazard event, be it natural, technological or human-induced.

Emergency Management Preparedness

Emergency preparedness is a continuous process of all-hazards planning and coordination in order to effectively minimize the adverse effects and consequences inherent in any emergency incident. Through the use of such tools as exercises, proactive resource management and capability analysis, preparedness is one of the key pillars with which to ensure the adaptation of comprehensive approaches for the company's emergency management strategy. The emergency management process must include the following:

- Hazard Risk and Vulnerability Assessment
- Public Involvement
- Communications Planning
- Situational Awareness
- Crisis Management Plans
- Emergency Response Plans
- Emergency Management Resources
- Competence, Training and Awareness
- Exercises and Drills
- Record Keeping
- Distributions Lists (Internal and External)
- Continuous Improvement

Emergency Response Plans should contain:

- Communication procedures
- Emergency contacts
- Evacuation and Rescue plans
- Equipment locations and supply companies
- Spill response and containment (where required)
- Meet regulatory requirements
- Event classification
- Activation and Stand Down Levels
- Guidelines for medical emergencies
- Defined roles and responsibilities
- Maps and Emergency Planning Zones
- Mutual Aid Understandings (where applicable)

Confidential ERPs will be available at the field Incident Command Post and the Emergency Operations Centre.

Extended Emergencies

In an extended emergency, company responders will develop an Incident Action Plan utilizing forms found within ERP, which may include:

- ICS Form 201 – Incident Briefing
- ICS Form 202 – Incident Objectives
- Form A1 – Initial Emergency Report
- Form A4 – Incident Action Plan (IAP) Checklist

Emergency Response, Continuity and Recovery

In the event of an emergency, each business unit shall determine the level of emergency as per established protocols and respond according to their respective emergency response plans. Response includes the mobilization and ongoing management of resources, people, equipment and assets to manage the effects of an incident; functions inclusive of the Incident Command System (ICS), the company's primary response platform.

Each business unit shall establish, implement and maintain procedures for communicating information related to emergency management, including:

- Communication of plans and procedures to employees, operating partners, contractors, the supply chain, regulators and local communities; and
- Emergency and crisis communications to stakeholders, including emergency responders, regulators, the media, family members and the public.

Emergency Management Monitoring, Assessment and Continuous Improvement

Lessons learned and knowledge generated from monitoring results should be used to develop "improved practices", which are then shared widely. After emergencies or disasters occur, a systematic approach is used to learn lessons from the experience, increase effectiveness and improve emergency management practices and processes.

Manual Updating Procedures and Schedule

The company's Corporate and Site-Specific ERPs are to be updated annually and submitted to the CER on or before April 1st of each year, or when significant changes (either operational or identified from exercises/incidents and resulting debriefs) occur or are identified. If an update occurs outside of the January 1st to April 1st period, a letter must be submitted to the CER indicating that there have been no changes to operations since the ERP was last submitted. ERP updates are performed by a third-party company (H2Safety), whose expertise in the field provides company personnel with the education, training, and resources to excel in Emergency Response. Approvals for ERP updates will be carried out by the company's Emergency Management Coordinator.

Debriefing

Internal Debriefing

The Incident Commander, in consultation with the Lead Agency and/or other regulatory body, will order “Return to Normal” status.

- All response team members and on-site personnel, including contract personnel and emergency services, will be notified.
- All previous contacts including public, workers, landowners, government and industrial operators must also be notified of the end of the emergency.
- Ensure a media statement is prepared and delivered by Senior Management.
- Debriefing meeting(s) with company personnel (including insurance, legal, and human resources as appropriate) must be conducted.
- Debriefing meeting(s) to review effectiveness of the Emergency Response Plan must be conducted. Feedback and comments as a result of the debrief must be incorporated into the ERP revision and procedures. This feedback should be submitted to the ERP provider.
- Debriefing meeting(s) with residents, landowners, Lead Agency and other government agencies and all other impacted parties may be conducted.
- Document all "Return to Normal" activities.
- Complete response debriefing for all response teams. Submit, in writing, response findings and recommendations to the Incident Commander when applicable, which will be submitted to the overall report writer.

Public Debriefing

When the public has been impacted, company operations should provide the public information as soon after the emergency as possible, to answer any questions or concerns. This should be done by a senior company representative, a trained Media Advisor, or by the Incident Commander.

After an emergency, a number of additional items should be considered:

- Debriefings, as mentioned above.
- Crisis management for company personnel and for other members of the public that may have been significantly affected by the emergency.
- If the emergency is of a level where it has impacted the public, an information center may be established within the community where the emergency occurred to answer any questions posed by the public.
- Establish a means of compensating citizens who may have had out-of-pocket expenses (such as meals and lodging costs) as a result of the emergency.
- Through the media, provide details of the investigation into the incident that are pertinent to the public, as it becomes available.

Health and Safety Plan

The company's extensive Health and Safety program is to be implemented at all times during and after an incident. Training is provided to all company employees and contractors; all information and documentation can be found in the Health and Safety Manual.

Site Specific Control Points and Response

In the event of an incident (reported from an external source and/or confirmed by a drop in pressure), an operator would be sent out to visually confirm the need to shut down operations. Operators have the ability to manually trip the ESDs at the risers on the CER line. The operator would then immediately contact his/her supervisor and the TSB, and then work with internal support and outside agencies to determine a plan of action for resolving the source of the release.

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Tupper Main Non-Resident Landowner Information

PID	Name	Phone 1	Phone 2	Land Location
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

TUPPER MAIN - FACILITIES

LICENSEE	NAME	FACILITY ID	LOCATION	LATITUDE (DECIMAL DEGREES)	LONGITUDE (DECIMAL DEGREES)	LATITUDE (DEGREES MIN SEC)	LONGITUDE (DEGREES MIN SEC)	FACILITY TYPE	MAXIMUM ASSOCIATED H2S RELEASE VOLUME (m3)	ASSOCIATED WELL OR PIPELINE HPZ (m)	ASSOCIATED ON-SITE STORAGE HPZ (m)	ASSIGNED EPZ (m)	DISTANCE TO NEAREST RESIDENT (km)	STATUS
NORTH RIVER OPERATING														
NORTHRIVER MIDSTREAM G AND P CANADA INC.	NRM GP TUPPERCREEK A-021-B/093-P-09 001	BCGP0007676	A-021-B/093-P-09	55.5144316	-120.1308182	55° 30' 51.954"	-120° 7' 50.946"	GP	170.31 (1)	594 (1)	1200	1200	1.75	AC

(1) The largest pipeline EPZ and H2S release volume associated with this facility is of a sour third party Murphy Oil pipeline (PL 172-1) calculated at licensed conditions.

There may be hazards associated with third party assets in addition to the ones listed in the table above. For more information see the map(s).
All Facility locations listed in the table above also have manual block valves at these locations.

LEGEND

Facility: B=Battery CS=Compressor Station GP=Gas Plant GI=Gas Injection IP=Injection Plant GM=Gas Sales Meter PG=Gathering point PS=Pump Station TS=Test Facility TL=Terminal S=Satellite DH=Dehydrator UN=Unknown WI=Water Injection PT=Pipeline Terminal WD=Water Disposal OM=Oil Sales Meter WF=Well Facility PR=Pigging Receiver/Launcher WD=Water Disposal Facility WH=Water Hub
Status: A=Abandoned D=Discontinued O=Operating P=To Be Constructed S=Suspended AC=Active NW=New
Other: EPZ=Emergency Planning Zone ROW=Pipeline Right of Way WLB=Well Lease Boundary HPZ=Hazard Planning Zone

TUPPER MAIN - CER PIPELINES

LICENSEE	WATER CROSS	FROM		TO		START VALVE	START VALVE LATITUDE	START VALVE LONGITUDE	END VALVE	END VALVE LATITUDE	END VALVE LONGITUDE	LICENSE NO.	LINE NO.	LINE SEGMENT MODIFIER	ENBRIDGE PIPELINE NUMBER	PIPELINE NAME	SUB	OD (mm)	SEGMENT LENGTH (km)	WALL (mm)	LICENSED PRESSURE (kPa)	H2S (%)	THERMAL RADIATION HPZ (m)	ASSIGNED EPZ (m)	STATUS
NORTH RIVER SWEET OPERATING																									
NORTHRIVER MIDSTREAM G AND P PIPELINES INC.	-	A-021-B/093-P-09	GP	D-051-I/093-P-8	PL	-	-	-	ESD	55.4625	-120.0014	AO-003-XG-	2	-	AO-003-XG-2	12" Tupper AO-003-XG-2	NG	323.8	12.20	10.3	13,000	0	198	198	Z
NORTHRIVER MIDSTREAM G AND P PIPELINES INC.	RC	D-051-I/093-P-8	PL	14-07-074-12W6	PL	ESD	55.4625	-120.0014	ESD	55.3995	-119.8374	80061	1	-	80061-1	12" Tupper 80061-1	NG	323.8	16.60	10.3	13,000	0	206	206	Z

There may be hazards associated with third party assets in addition to the ones listed in the table above. For more information see the map(s).
All Facility, Well and ESD locations listed in the table above also have manual block valves at these locations.

LEGEND
Facility: B=Battery BE=Blind End CS=Compressor Station DH=Dehydrator GP=Gas Plant GS=Gas Gathering System IP=Injection Plant PN=Plant LH=Line Heater
MS=Meter Station PL=Pipeline PS=Pump Station S=Satellite WE=Well HD=Header JN=Junction UG=Underground cap or tie-in WF=Well Facility
Substance: AG=Acid Gas CO=Crude Oil FW=Fresh Water HV=High Vapour Pressure LV=Low Vapour Pressure NG=Natural Gas OE=Oil Effluent SG=Sour Gas
FG=Fuel Gas ST=Sweet Gas SW=Salt Water SE=Sour Oilwell Effluent SC=Sour Crude MG=Miscellaneous Gases OM=Oil Emulsion WS=Sour Water PW=Produced Water
UN=Unknown ML=Miscellaneous Liquids AA=Air
Status: A=Abandoned D=Discontinued N=Not Constructed/Approved O=Operating P=To Be Constructed U=Unknown Q=Active I=Inactive S=Suspended R=Removed
T=New V=Deactivated Z=Approved J=Out of Jurisdiction
Other: WALL=Wall Thickness OD=Outside Diameter EPZ=Emergency Planning Zone ROW = Pipeline Right of Way HPZ=Hazard Planning Zone

TUPPER MAIN - TANKS & BULLETS

FACILITY / LOCATION	SUBSTANCE	NO. OF TANKS	TANK VOLUME	ENVIRONMENT CANADA REGISTRATION REQUIRED? (1)	ENVIRONMENT CANADA ERP REQUIRED? (2)	HPZ (m)
Tupper Main GP **A-021-B/093-P-09**	Propane	2	1.89 m^3	Yes	No	200
		2	3.79 m^3			
	Condensate	2	320 m^3	No	No	1200
	Produced Water	5	2000 bbl	No	No	50
	Ethylene Glycol	1	400 bbl	No	No	50
		2	1000 gal			
	Compressor Oil	1	250 bbl	No	No	50
	Amine	1	250 bbl	No	No	50
	Waste Oil	1	1200 L	No	No	50
	Diesel Oil	1	500 gal	No	No	50

(1) E2 Schedules 2 and 3 only.

(2) E2 Schedules 2, 3, 4 and 5.

LEGEND

Other: HPZ=Hazard Planning Zone

NORTHRIVER 24-HOUR EMERGENCY

INCIDENT REPORTING LINE:	**844-667-8477**

GENERAL INQUIRIES:

[redacted]

Primary Incident Command Post:

[redacted]

Alternate Incident Command Post:

[redacted]

Or other nearby location

Local Emergency Operations Centre

[redacted]

Refer to the "Response Teams Phone List" yellow tab, behind the Section 2.0: Roles and Responsibilities blue tab for additional contact information.

OPERATION SUMMARY

The NorthRiver West Doe field is located in the Peace River Regional District and Saddle Hills County. The NorthRiver pipelines to the north of the West Doe 02-25-80-15 W6M Gas Plant are CER regulated, including the segment of pipeline transporting sour gas from the NorthRiver West Doe 02-25-80-15 W6M Gas Plant to NorthRiver Pouce Coupe Gas Plant at 05-23-80-13 W6M.

A re-injection well at 15-24-80-15 W6M is connected to a subsurface storage zone and allows for acid gas recovered at the plant to be safely stored. This well is equipped with a sub-surface control valve. A 250 meter pipeline (114mm/4inch) connects from the West Doe Gas Plant to the well. This pipeline is equipped with ESD's at each end. The acid gas that will be received and stored is expected to have a maximum 90% H_2S. The West Doe Gas Plant, re-injection well and associated pipeline and sweet gas pipelines to the south of the plant are regulated by the OGC.

HPZ / EPZ Information

The EPZ for the CER regulated pipeline was calculated utilizing an expected H_2S concentration of 0.01% with a resulting maximum EPZ of 77m. The EPZ for the West Doe Gas Plant is 2.4km due to a sour third party Tourmaline pipeline (PL 283-1). The acid gas disposal well located at 15-24-80-15 W6M, is expected to have a maximum 90% H_2S with an EPZ of 1.3km. The acid gas pipeline that runs from the 15-24 West Doe Gas Plant to the 15-24 well has a calculated EPZ of 1.7km.

On-Site Storage

Refer to the "West Doe Gas Plant" tab for on-site storage information.

Closest Urban Centre

The City of Dawson Creek is located approximately 20 km south of the West Doe 02-25-80-15 W6M Gas Plant EPZ and has a population of +/- 12,978.

Hydrology

There are numerous bodies of water intersecting or within the EPZ including; Doe Creek and Coleman Creek.

Highways

There are no major highways intersecting or within the EPZ.

Site Access

Refer to the following pages for access maps and directions. Where industrial roads exist, the pipelines can be accessed by road vehicle and off-road vehicles. Otherwise, helicopter access must be employed.

SAFETY EQUIPMENT

Operator / Truck Safety Equipment

Each field operator's truck contains a 30lb fire extinguisher, first aid kit, a radio and seasonal fire fighting equipment.

West Doe 02-25-80-15 W6M Gas Plant Safety Equipment

Item	Quantity
Fire Extinguishers & First Aid Kits / Equipment	Strategically located throughout
SCBA	6
Gas Detectors (Multi-head)	12
Emergency Transport Vehicle	1
Spill Equipment: Spill kits	4

Notification

The West Doe Gas Plant is manned 24 hours a day, 7 days a week. It is equipped with numerous monitoring and detection systems, including SCADA, to alert NorthRiver personnel of any conditions outside of normal operating range. The SCADA system monitors H_2S, LEL and fire alarms inside the plant, as well as H_2S monitoring along the facility fence line. All buildings located within the plant boundary that have rotary equipment are fitted with fire detection and vibration sensors. The gas plant is also equipped with visual alarms (beacons) located in all buildings located within the plant boundary and on the roof of the control room. The blue beacon identifies and H_2S alarm, the amber / orange identifies a general or process control alarm and the red identifies a fire or LEL alarm. Arrival time for company personnel responding to a call-out is 60 minutes.

SAFETY EQUIPMENT, cont.

Communications

Cell phones, plant telephones, and plant radios (02-25-80-15 W6M Plant only) are the primary methods of communication. Field operations personnel have radio equipment in their vehicles that are programmed with NorthRiver's VHF frequencies as well as the applicable Resource Road or Loading Channels for any radio controlled roads in their area. Refer to the NorthRiver Radio Communications Information page at the beginning of the Area Specific Information section for more information.

Ignition

Refer to "Ignition Services" under "Support Services" for a complete list of companies with ignition services.

Roadblock Kits

There are 4 roadblock kits located at the West Doe 02-25-80-15 W6M Gas Plant, 2 at the Dawson 11-26-78-17 W6M Gas Plant (security trailer) and 5 at the Tupper West 05-01-77-17 W6M Gas Plant. Initial roadblock locations have been pre-identified on the map a safe distance outside of the EPZ.

Muster Location

All personnel will muster at the gate at the facility access road.

AREA USERS & TIE-INS

Note: All numbers, unless otherwise indicated, are 24 hours.

Oil and Gas

Alliance Pipeline Ltd.	800-884-8811
AltaGas Ltd.	866-826-3830
ARC Resources Ltd.*	403-292-0434
Canadian Natural Resources Ltd.	888-878-3700
Leucrotta Exploration Inc.*	866-859-5962
Long Run Exploration Ltd.	866-574-7085
Pembina Pipelines (Plateau Pipe Line Ltd., Pouce Coupe)	800-360-4706
Repsol Oil & Gas Canada Inc.	403-237-1234
Tourmaline Oil Corp.*	877-504-4252

**There are tie-ins between NorthRiver and the noted companies. The NorthRiver ERP does not cover emergencies for other operations. Each riser with external company tie-ins is equipped with an ESD. NorthRiver will strive to provide support to any other industrial operator in the area on a best effort basis.*

Guides & Outfitters (WMU #359)

ID	Name	Phone
[redacted]	[redacted]	[redacted]

Trappers

Trapper ID	Name	Phone
733T006	[redacted]	[redacted]

Grazing Leases

There are no grazing leases intersecting or within the EPZ.

Non-Resident Landowners

Refer to West Doe Non-Resident Landowner Information sheet.

LEAD AGENCIES & PRIORITY CONTACTS

Note: All numbers, unless otherwise indicated, are 24 hours.

FEDERAL AGENCIES

Note: If the incident involves pipelines that cross the Alberta and British Columbia border, notify the Canada Energy Board (CER) / Transportation Safety Board (TSB).

Canada Energy Board		
TSB Incident Line (Pipeline emergencies)		819-997-7887
CER Incident Line (All other emergencies)		403-807-9473
TSB Fax		819-997-2239
Email		pipelinenotifications@tsb.gc.ca
Department of Fisheries and Oceans (DFO)		604-666-0384
CANUTEC (Call collect)		888-226-8832 613-996-6666 *666 (cell)
	Information:	613-992-4624
Emergency Response Assistance Canada (ERAC)		800-265-0212
ERAP 2-0010-083		

BRITISH COLUMBIA

Emergency Management BC (EMBC)*		800-663-3456
[redacted]		

**In the event of an emergency, EMBC will notify the OGC, Ministry of Environment, Environment & Climate Change Canada, Ministry of Forests, Land & Natural Resources Operations, Northern Health Authority, and any affected municipalities.*

BC Oil & Gas Commission (OGC) - Incident Reporting Line		800-663-3456
Peace River Regional District	Admin:	800-670-7773
[redacted]		
Northern Health Authority		
Health Emergency Management BC (HEMBC)	On Call:	855-554-3622
[redacted]		
WORKSAFE BC - Fort St. John		866-922-4357
Daytime Reporting		888-621-7233
[redacted]		
Technical Safety BC		866-566-7233
Environment and Climate Change Canada		
Meteorological Services		604-664-9385

LEAD AGENCIES & PRIORITY CONTACTS, cont.

Note: All numbers, unless otherwise indicated, are 24 hours.

BC Ministry of Transportation & Infrastructure		
South Peace Area Dawson Creek	Admin:	250-784-2363
[redacted]		
Argo Road Maintenance*		800-663-7623

**Service Area includes Dawson Creek, Tumbler Ridge, Chetwynd, Pouce Coupe, Mile 22, Mount Lemoray / Honeymoon Creek and Progress areas.*

BC Ministry of Environment		
Peace Region Office	Admin:	250-787-3411
[redacted]		
Spill Reporting Line		800-663-3456
Report a Poacher		877-952-7277
Public Works Association of BC (PWABC)	Office:	604-880-8585
Ministry of Forests, Lands & Natural Resource Operations		
Peace Forest District - Dawson Creek	Admin:	250-784-1200
[redacted]		
Forest Fire Reporting		800-663-5555 *5555 (cell)
Transportation of Dangerous Goods (TDG)		800-663-3456

ALBERTA

Alberta Energy Regulator (AER)		800-222-6514*
Grande Prairie / High Level Field Office		
Wildfire Reporting		310-FIRE(3473)

**One call number for regulatory agency, Alberta Environment, spill reporting & sustainable resource development (lands, fish, forest, wildlife) & Environment Canada.*

Saddle Hills County	Admin:	780-864-3760
[redacted]		
Alberta Health Services - Z5 North		844-755-1788
[redacted]		
Alberta Emergency Management Agency (AEMA) - NW		866-618-2362
[redacted]		
Alberta Boilers Safety Association (ABSA)		780-437-9100
Alberta Safety Services - Electrical Branch	Admin:	866-421-6929
Alberta Ministry of Transportation - Grande Prairie	Admin:	780-538-5310
[redacted]		
Alberta Occupational Health and Safety		866-415-8690
Transportation of Dangerous Goods (TDG)		800-272-9600
Workers' Compensation Board		866-922-9221
Environment and Climate Change Canada		
Meteorological Services		800-667-8676

EMERGENCY SERVICES

Note: All numbers, unless otherwise indicated, are 24 hours.

Ambulance		**911**
BC Ambulance Service Dispatch		800-461-9911
Air Ambulance (STARS)		888-888-4567
[redacted]		
Hospitals		
Dawson Creek & District Hospital		250-782-8501
Fort St. John Hospital and Health Centre		250-261-7310
Beaverlodge Municipal Hospital		780-354-2136
Queen Elizabeth II Hospital - Grande Prairie		780-538-7100
Poison Control Centre (Alberta)		800-332-1414
Poison Control Centre (British Columbia)		604-682-5050
Alberta First Call		800-242-3447
BC One Call		800-474-6886
Fire Departments*		**911**
Bonanza		
Central Peace Fire & Rescue - Spirit River, AB		[redacted]

**Assets in BC do NOT have fire coverage from any local fire department. All fires must be handled by NorthRiver Midstream, mutual aid partners, or contract oilfield fire fighting services. Local fire departments will only respond to motor vehicle accidents and medical emergencies unless specifically dispatched by EMBC or the Local Authority.*

RCMP		**911**
Dawson Creek		250-784-3700
Spirit River		780-864-3533
Reception Centres		
Super 8 Dawson Creek		250-782-8899
1440 Alaska Avenue, Dawson Creek, BC	Fax:	250-784-1988
George Dawson Inn		250-782-9151
11705 - 8 Street, Dawson Creek, BC	Fax:	250-782-1617
Dawson Creek Lodge		250-782-8595
1748 Alaska Avenue, Dawson Creek, BC		

SURFACE DEVELOPMENT INFORMATION

There is a total of 6 surface developments within or near the EPZ. This includes 4 occupied residences, 1 vacant property and 1 manned oil & gas facility.

Note: Detailed surface development information can be found behind the white "Confidential Info" tab. Evacuation routes out of the area are shown on the map. Additionally, procedures for contacting and evaluating / sheltering affected parties, as well as procedures for isolating the HPZ, can be found in "Section 4: Emergency Response Procedures".

Schools / Bus Transportation		
Peace River South School District 59	Admin:	250-782-8571
[redacted]		
Independent Schools		
Mountain Christian School*	Admin:	250-782-9528

** School District 59 handles the out of town busing on behalf of Mountain Christian School via bus transfer at Dawson Creek Secondary School.*

SUPPORT SERVICES

Note: All numbers, unless otherwise indicated, are 24 hours.

Mobile Air Monitoring*	
Commission Mobile Monitoring (OGC) - Fort St. John	800-663-3456
Firemaster Oilfield Services Inc. - Grande Prairie	877-342-3473
HSE Integrated Ltd. - Grande Prairie	888-346-8260
Priority Safety Services - Grande Prairie	866-619-7929
Trojan Safety Services - Grande Prairie	780-567-3440
Roy Northern Land & Environmental - Fort St. John	250-261-6644
Oilfield Fire Fighting / Safety Contractors*	
Safety Boss - Fort St. John	800-882-4967
Trojan Safety Services Ltd. - Fort St. John	250-785-9557
Bravo Target Safety - Grande Prairie	866-513-3779
Firemaster Oilfield Services - Grande Prairie	877-342-3473
HSE Integrated Ltd. - Grande Prairie	888-346-8260
Superior Fire Control Ltd. - Grande Prairie	877-882-0035
Well Control Specialists*	
Safety Boss - Fort St. John	800-882-4967
Firemaster Oilfield Services Inc. - Grande Prairie	877-342-3473
Capstone Blowout Recovery - Airdrie	866-347-3911
Ignition Services*	
Safety Boss Inc. - Fort St. John	800-882-4967
Firemaster Oilfield Services Inc. - Grande Prairie	877-342-3473
HSE Integrated Ltd. - Grande Prairie	888-346-8260
Superior Fire Control Ltd. - Grande Prairie	877-882-0035

**Dispatch support services at a Level 1 Emergency. Response times vary (1-5 hours), depending on the remoteness of the area and the location where the support is coming from.*

Emergency Response Management	
H_2Safety Services Inc. - Calgary	403-212-2332
Toll Free	888-216-2332
Spill Response	
Roy Northern Land & Environmental - Fort St. John	250-261-6644
SWAT Consulting - Grande Prairie	866-610-7928
Highmark Environmental - Fort St. John	250-261-6994
Eco-Web Ecological Consulting - Fort St. John	250-787-1110
Air Traffic Control	
NAV Canada	866-992-7433
Bus Transportation	
BC North Bus - Fort St. John	250-564-0161
Homer's Oilfield Services Charters - Dawson Creek	250-219-2247
Helicopter Companies* (Day Flying & Good Weather Only)	
Yellowhead Helicopters - Fort St. John	250-785-2331
Bailey Helicopters - Fort St. John	250-785-2518
Canadian Helicopters Ltd. - Fort St. John	780-429-6900
Highland Helicopters - Grande Prairie	780-539-3112

**If required, a helicopter with a loud hailer should be called out*

WCSS - Zone 6 - Coop "C"*		866-541-8888
Regional / Coop Custodian: Shawn Dore - Clean Harbors	Bus:	250-785-4577
	Cell:	250-261-9404

Equipment Location	Equipment Summary
Clean Harbors Surface Rentals 6715 - 85th Avenue Fort St. John, BC	52' OSCAR Trailer (Semi-truck) 40`Boom Cache Sea Can (winch tractor/trailer) 20' Wildlife Sea Can (winch tractor/trailer) Single Engine Barge (1 ton truck w/ 2 $^{5}/_{16}$" ball hitch & electric brakes) Work Boat ($^{1}/_{2}$ ton w/ 2" ball hitch) Drum Skimmer w/ Power Pak ($^{1}/_{2}$ ton truck) 400' Shallow Water Boom ($^{1}/_{2}$ ton truck)
4901 - 46 Ave Fort Nelson, BC	20' ISRU Sea Can (winch tractor/trailer) 2 Workboats ($^{1}/_{2}$ ton w/ 2" ball hitch)

WCSS - Zone 6 - Coop "T"*		866-541-8888
Regional Custodian: Clean Harbors	Bus:	780-532-4331

Equipment Location	Equipment Summary
9601 - 156 Avenue Grande Prairie, AB	52' OSCAR Trailer (Semi-truck) 16' Winter OSCAR Trailer (3/4 ton truck 1/ 2-5/16" ball hitch) 2 Work Boats ($^{1}/_{2}$ ton w/ 2" ball hitch) 14' Wildlife Trailer (1/2 ton truck w/ 2" ball hitch)

Transport

Contact - Clean Harbors

Coop Custodian: Seven Generations Energy Ltd.	Bus:	780-228-2292
	Mike Clarke (Alternate):	587-298-0026
	Sandra Miller (Alternate):	780-296-5822

Equipment Location	Equipment Summary
Cutbank Plant Site 10-10-65-05 W6M	20' ISRU Sea Can (winch tractor/trailer)

Directions: From Grande Prairie: Travel 68 km south on Hwy 40. Cross Cutbank River and turn east on Teddy Lane. Plant site is 2.2 km east.

From Grande Cache: Travel north 114 km on Hwy 40. Turn east on Teddy Lane. Plant is 2.2 km east.

**See website for more info (http://www.wcss.ab.ca)*

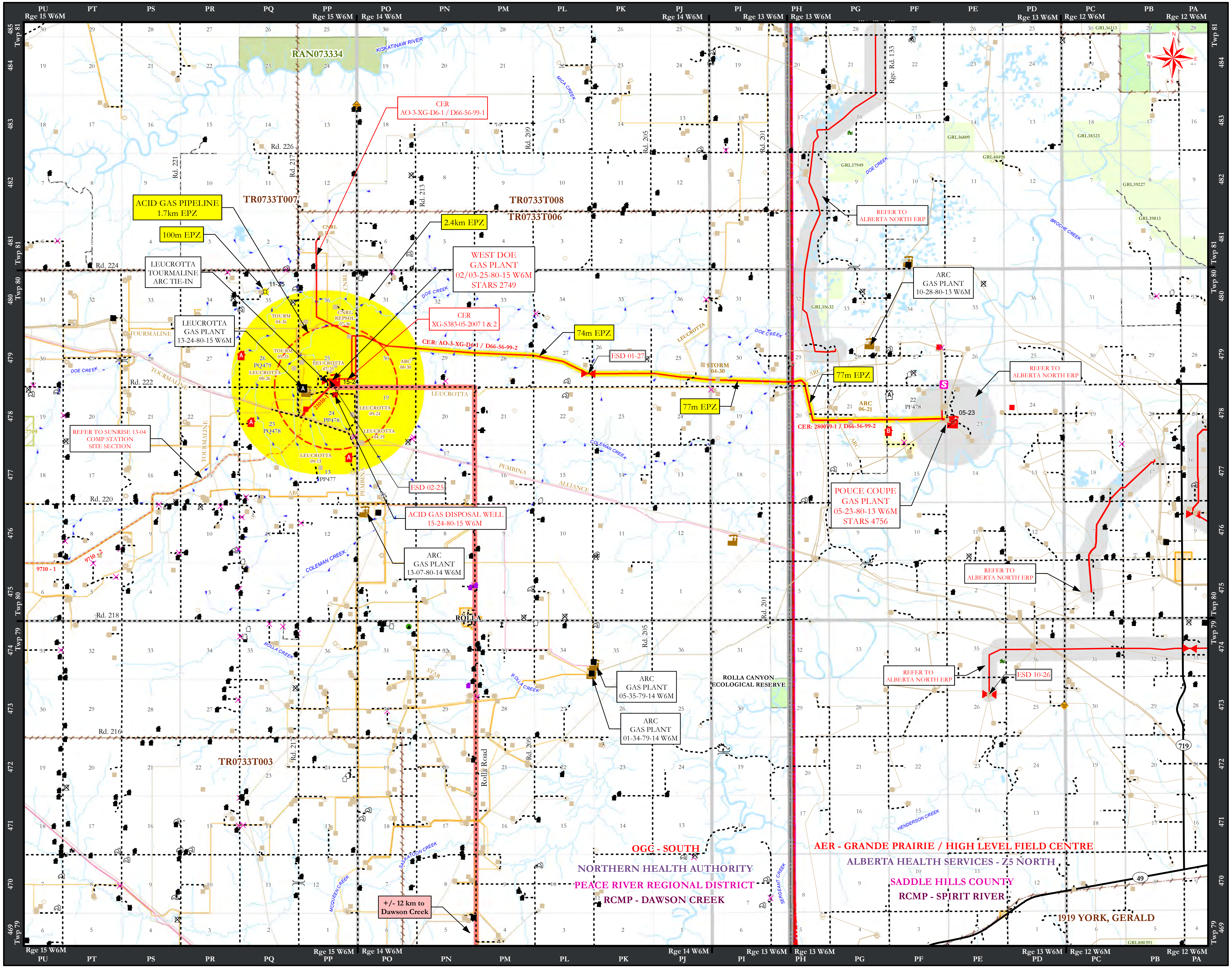
April, 2020
www.h2safety.ca

WEST DOE

WEST DOE
SOUTH PEACE ERP

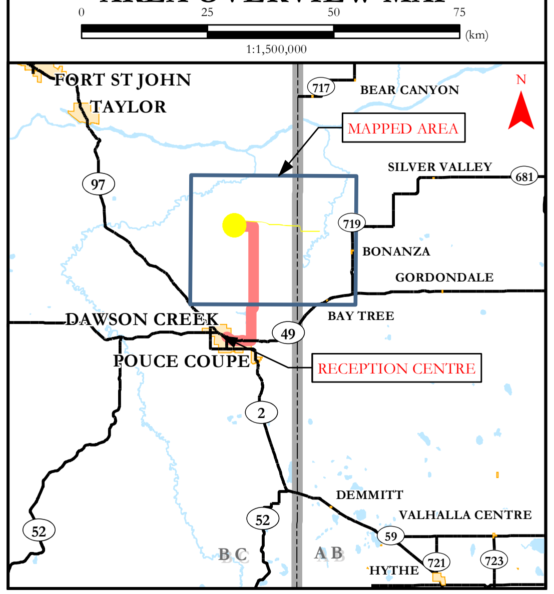
NORTHRIVER MIDSTREAM

Draft Date: March 21, 2019 SLC	Scale: 1:100,000	Map: 8328
Revision Date: March 27, 2020 GLG	UTM ZONE 10 NAD83	



Note: All roads going off the map are continuous unless otherwise indicated.

AREA OVERVIEW MAP



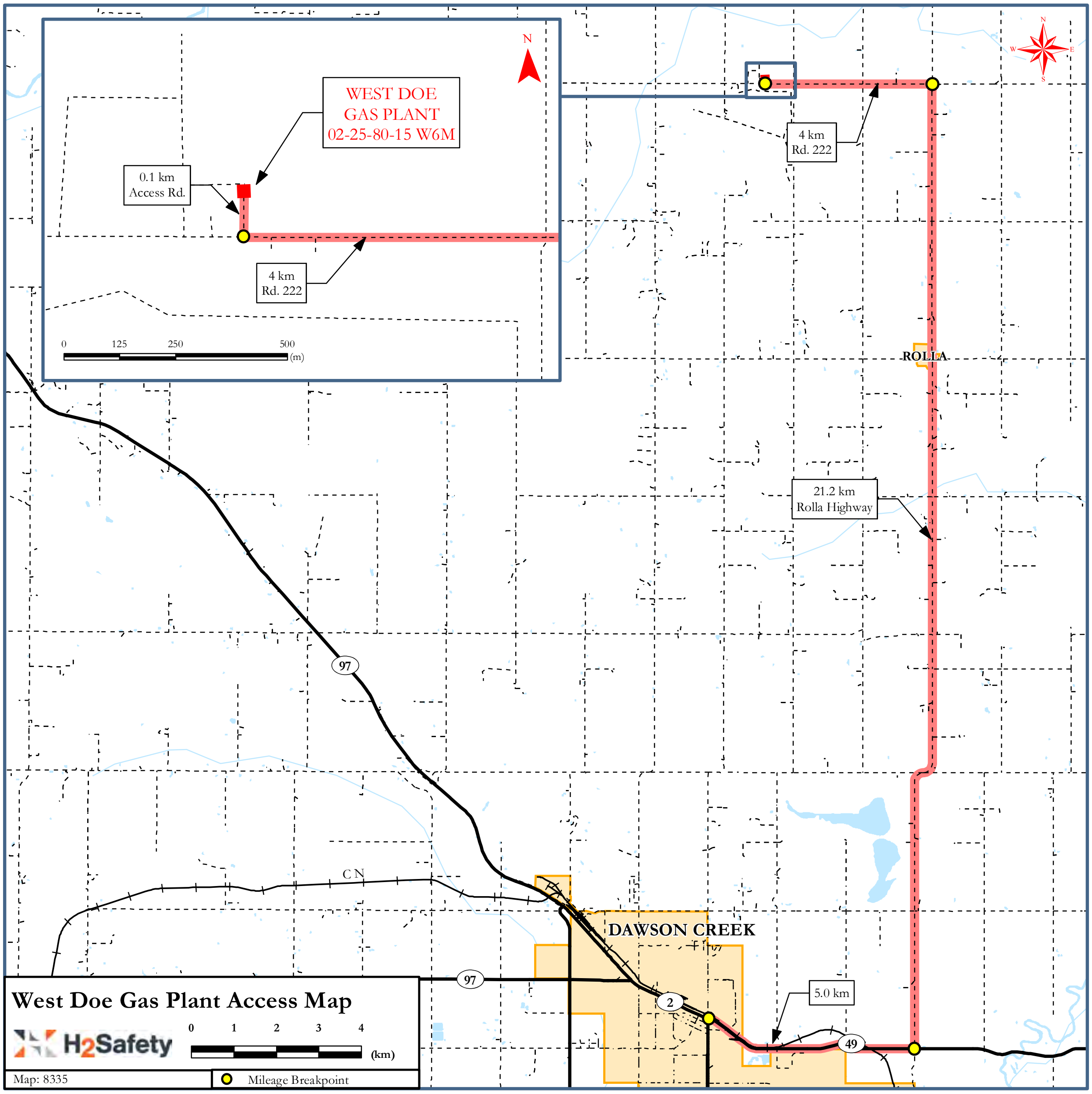
MAP PRODUCED BY H2Safety h2safety.ca

West Doe 02-25-80-15 W6M Gas Plant Access

Directions to the West Doe 02-25-80-15 W6M Gas Plant

From the traffic circle in Dawson Creek, BC:

- Travel east on Highway 49 for 5 km.
- Turn left (north) on Rolla Highway and travel 21.2 km.
- Turn left (west) on Rd. 222 and travel 4 km.
- Turn right (north) onto Access Road and travel 0.1 km into the West Doe Gas Plant 02-25-80-15 W6M.



South Peace – West Doe ERP
CER Regulated Pipelines

Emergency Contact Information

For Emergencies involving inter-provincial pipelines, the Canada Energy Regulator is the primary management agency – they will be contacted by the Transportation Safety Board.

**A pipeline is CER-regulated as it crosses a Provincial Border. **

This must be your first call

Transportation Safety Board (TSB)	24 Hr Incident Line	819-997-7887
	Facsimile	819-953-7876
	Email	PipelineNotifications@tsb.gc.ca

Call the TSB 24 Hr Incident Line when an incident meets the Immediately Reportable Events (see page 2 for criteria) for all Canada Energy Regulator (CER) regulated pipelines and facilities.

Both the phone notification and the input of information into the

CER's Online Event Reporting System (OERS): https://apps.cer-rec.gc.ca/ers

are required to occur as soon as possible and no later than three hours of the incident being discovered.

For all other events (non-immediate) companies are only required to input the information via the OERS.

Secondary Calls

Contact as needed **AFTER** contacting the TSB and CER.

BC Oil & Gas Commission (OGC)	24 Hr	800-663-3456
Alberta Energy Regulator (AER)	24 Hr	800-222-6514

Hazardous occurrences (under Part XVI of the Canada Oil and Gas Occupational Safety and Health Regulations) and incidents requiring medical evacuations are to be reported to the CER immediately.

CER Definition of an Emergency

CAN /CSA Z246.2-18 defines an emergency as “an event or imminent event, outside of the scope of normal operations that requires prompt coordination of resources to protect people, the environment, and property”.

Emergencies can result from numerous causes including pipeline and equipment failure, human error and natural perils such as tornadoes, hurricanes, floods, or earthquakes and terrorism or other criminal activities. Multi-hazard emergencies such as an earthquake causing pipeline breaks, fires and explosions, which result in injury and further property damage, can also occur.

Companies must consider all probable emergencies and have applicable procedures in place to deal with potential effects and threats to people, property and the environment, as determined through a formal hazard assessment.

CER Definition of an Incident

Section 52 of the Onshore Pipeline Regulations (OPR) requires companies to notify the Board of all incidents relating to the construction, operation, or abandonment of their pipelines. An “incident” is defined in section 1 of the OPR as an occurrence that results in:

1. The death of or serious injury to a person;
2. A significant adverse effect on the environment;
3. An unintended fire or explosion;
4. An unintended or uncontained release of low-vapour pressure (LVP) hydrocarbons in excess of 1.5 m3;
5. An unintended or uncontrolled release of gas or high-vapour pressure (HVP) hydrocarbons;
6. The operation of a pipeline beyond its design limits as determined under CSA Z662 or CSA Z276 or any operating limits imposed by the Board.

Companies are required to report a death or serious injury to a person only where the death or injury is a result of an occurrence that relates to the construction, operation, or abandonment of a “pipeline”. Whether a death or injury is related to the construction, operation, or abandonment of a pipeline will depend on whether the person who was killed or injured was working at the time of the incident and/or whether the work was a cause or contributing factor to the incident. It is important to note that, unlike the Canada Labour Code (CLC), the OPR does not differentiate between different types of “persons”. Therefore, companies must report all deaths or serious injuries to any person that occur relating to pipeline construction, operation, or abandonment regardless of whether or not that person was directly employed by the company.

The definition of “serious injury” in the OPR is not exhaustive and contains multiple injuries that qualify as serious, including “the fracture of a major bone”. The CER uses the following definition of “major bone”: skull, mandible, spine, scapula, pelvis, femur, humerus, fibula, tibia, radius, and ulna.

Immediately Reportable Events

Where regulations require an event to be reported “immediately”, companies must also consider whether the event meets any of the following definitions:

An Incident that Harms People or the Environment:

- A death;
- A serious injury (as defined in the OPR or TSB regulations);
- An unintended or uncontrolled LVP hydrocarbon release in excess of 1.5 m3 that leaves company property or occurs on or off the right of way;
- An unintended or uncontrolled sweet natural gas or hvp release >30,000 m3;
- Any unintended or uncontrolled release of sour natural gas or hydrogen sulfide; and/or
- A significant adverse effect on the environment.

Immediately Reportable Events, continued

A Rupture:

- an instantaneous release that immediately impacts the operation of a pipeline segment such that the pressure of the segment cannot be maintained.

A Toxic Plume:

- a band of service fluid or other contaminant (e.g. hydrogen sulfide or smoke) resulting from an incident that causes people, including employees, to take protective measures (e.g. muster, shelter-in-place or evacuation).

Where an event meets any of the above definitions, companies are required to notify the TSB Reporting Hotline at (819) 997-7887. Subsequently, the company is required to input the details required by both the TSB (see TSB regulations) and the CER into the OERS. The phone notification and the input of information into OERS are required to occur as soon as possible and no later than three hours of the incident being discovered. The goal of the initial phone notification is to allow the relevant agencies to mobilize a response to an incident, if required. Note that OERS will automatically determine whether the event meets the definition of an “Incident that Harms People or the Environment”, however the company will be responsible for specifically indicating whether the incident meets the definitions of “Rupture” and “Toxic Plume”.

For all other events that do not meet any of the definitions in this section, companies are not required to phone the TSB Reporting Hotline but must report the event as soon as possible and no later than twenty-four hours after the event was discovered.

Multiple Incident Types

It is possible that a single occurrence may result in multiple incident types. If multiple incident types occur as a result of a single occurrence, companies are expected to report those incident types under a single incident report.

Examples of situations where this might be the case include but are not limited to:

- A pipeline rupture (occurrence) where there is a release of gas (incident type) and an explosion (incident type);
- An industrial accident (occurrence) that causes a death (incident type), a serious injury (incident type) and a fire (incident type);
- An operational malfunction (occurrence) that causes an overpressure (incident type) and a release of product (incident type); or
- An operational malfunction (occurrence) that causes several concurrent or immediately consecutive overpressures (incident types).

In cases where an incident has occurred, and a second incident occurs during the response to the initial incident (e.g. a fire occurs during the clean-up of a spill), the second incident is considered distinct and should be reported separately.

The events that are reportable using the online reporting system are:

- Incidents under the *National Energy Board Onshore Pipeline Regulations (OPR), National Energy Board Processing Plant Regulations (PPR), and Canada Oil and Gas Drilling and Production Regulations (DPR)/Oil and Gas Drilling Regulations;*
- Unauthorized activities under the *CER Act* and *Pipeline Damage Prevention Regulations - Authorizations (DPR-A);*
- Pipeline damage and consent suspensions under the *Pipeline Damage Prevention Regulations - Obligations of Pipeline Companies (DPR-O);*
- Emergency burning or flaring under the PPR;

Multiple Incident Types, continued

- Hazard identification under the PPR;
- Suspension of operations under the PPR;
- Near-misses under the DPR;
- Serious accidents or incidents under the *Canada Oil and Gas Geophysical Operations Regulations/Oil* and *Gas Geophysical Operations Regulations;*
- Emergencies or accidents under the *Canada Oil and Gas Installation Regulations/Oil* and *Gas Installation Regulations; and*
- Accidents, illnesses, and incidents under the *Canada Oil and Gas Diving Regulations/Oil and Gas Diving Regulations.*

In the event that OERS is unavailable, companies are directed to report events to the TSB Reporting Hotline at 819-997-7887.

Reporting Timelines

Section 52 of the OPR requires companies to immediately notify the Board of any incident. Section 52 of the OPR also requires the submission of a Preliminary Incident Report (PIR) and a Detailed Incident Report (DIR) "as soon as is practicable". Generally, companies' initial notification of an incident will satisfy the PIR requirements. The information required for a DIR must be submitted within 12 weeks of reporting an incident. For complex incidents, companies may request an extension for submission of a DIR.

The CER and the TSB have adopted a single window reporting approach. However, in some areas, the TSB reporting requirements are somewhat different than the CER requirements. For additional details on the TSB reporting requirements, companies should refer to the TSB website (http://www.bst-tsb.gc.ca/eng/incidents-occurrence/index.asp).

Transportation Safety Board of Canada
Place du centre, 4th Floor
200 Promenade du Portage
Hull, Quebec K1A 1K8
Facsimile 819-953-7876

Supporting Information

The table below indicates the location of CER supporting documentation in this emergency response plan.

Supporting Information	Found in
CER Distribution	Foreword: Distribution List Page 3
Company 24/7 Emergency Number	Area Specific Information: Binder Cover
Area Map of CER Regulated Facilities	Area Specific Information
TSB Roles & Responsibilities	Section 5: External Agencies Federal Roles Chart
CER Roles & Responsibilities	Section 5: External Agencies Federal Roles Chart
Safety data sheets (SDS)	Area Specific Information
Health and Safety Plan	Please refer to the company's Health & Safety Plan located at the corporate head office.

Emergency Preparedness & Response Policy

Emergency Management Expectations

An effective emergency management program includes being prepared for emergencies, responding in the event of an emergency and ensuring that operations are able to continue safely and can recover in a timely, efficient manner.

Emergency management is critical to ensuring that people, the environment, the public, the organization's assets and reputation are protected in the event of an unanticipated hazard event, be it natural, technological or human-induced.

Emergency Management Preparedness

Emergency preparedness is a continuous process of all-hazards planning and coordination in order to effectively minimize the adverse effects and consequences inherent in any emergency incident. Through the use of such tools as exercises, proactive resource management and capability analysis, preparedness is one of the key pillars with which to ensure the adaptation of comprehensive approaches for the company's emergency management strategy. The emergency management process must include the following:

- Hazard Risk and Vulnerability Assessment
- Public Involvement
- Communications Planning
- Situational Awareness
- Crisis Management Plans
- Emergency Response Plans
- Emergency Management Resources
- Competence, Training and Awareness
- Exercises and Drills
- Record Keeping
- Distributions Lists (Internal and External)
- Continuous Improvement

Emergency Response Plans should contain:

- Communication procedures
- Emergency contacts
- Evacuation and Rescue plans
- Equipment locations and supply companies
- Spill response and containment (where required)
- Meet regulatory requirements
- Event classification
- Activation and Stand Down Levels
- Guidelines for medical emergencies
- Defined roles and responsibilities
- Maps and Emergency Planning Zones
- Mutual Aid Understandings (where applicable)

Confidential ERPs will be available at the field Incident Command Post and the Emergency Operations Centre.

Extended Emergencies

In an extended emergency, company responders will develop an Incident Action Plan utilizing forms found within ERP, which may include:

- ICS Form 201 – Incident Briefing
- ICS Form 202 – Incident Objectives
- Form A1 – Initial Emergency Report
- Form A4 – Incident Action Plan (IAP) Checklist

Emergency Response, Continuity and Recovery

In the event of an emergency, each business unit shall determine the level of emergency as per established protocols and respond according to their respective emergency response plans. Response includes the mobilization and ongoing management of resources, people, equipment and assets to manage the effects of an incident; functions inclusive of the Incident Command System (ICS), the company's primary response platform.

Each business unit shall establish, implement and maintain procedures for communicating information related to emergency management, including:

- Communication of plans and procedures to employees, operating partners, contractors, the supply chain, regulators and local communities; and
- Emergency and crisis communications to stakeholders, including emergency responders, regulators, the media, family members and the public.

Emergency Management Monitoring, Assessment and Continuous Improvement

Lessons learned and knowledge generated from monitoring results should be used to develop "improved practices", which are then shared widely. After emergencies or disasters occur, a systematic approach is used to learn lessons from the experience, increase effectiveness and improve emergency management practices and processes.

Manual Updating Procedures and Schedule

The company's Corporate and Site-Specific ERPs are to be updated annually and submitted to the CER on or before April 1st of each year, or when significant changes (either operational or identified from exercises/incidents and resulting debriefs) occur or are identified. If an update occurs outside of the January 1st to April 1st period, a letter must be submitted to the CER indicating that there have been no changes to operations since the ERP was last submitted. ERP updates are performed by a third-party company (H2Safety), whose expertise in the field provides company personnel with the education, training, and resources to excel in Emergency Response. Approvals for ERP updates will be carried out by the company's Emergency Management Coordinator.

Debriefing

Internal Debriefing

The Incident Commander, in consultation with the Lead Agency and/or other regulatory body, will order "Return to Normal" status.

- All response team members and on-site personnel, including contract personnel and emergency services, will be notified.
- All previous contacts including public, workers, landowners, government and industrial operators must also be notified of the end of the emergency.
- Ensure a media statement is prepared and delivered by Senior Management.
- Debriefing meeting(s) with company personnel (including insurance, legal, and human resources as appropriate) must be conducted.
- Debriefing meeting(s) to review effectiveness of the Emergency Response Plan must be conducted. Feedback and comments as a result of the debrief must be incorporated into the ERP revision and procedures. This feedback should be submitted to the ERP provider.
- Debriefing meeting(s) with residents, landowners, Lead Agency and other government agencies and all other impacted parties may be conducted.
- Document all "Return to Normal" activities.
- Complete response debriefing for all response teams. Submit, in writing, response findings and recommendations to the Incident Commander when applicable, which will be submitted to the overall report writer.

Public Debriefing

When the public has been impacted, company operations should provide the public information as soon after the emergency as possible, to answer any questions or concerns. This should be done by a senior company representative, a trained Media Advisor, or by the Incident Commander.

After an emergency, a number of additional items should be considered:

- Debriefings, as mentioned above.
- Crisis management for company personnel and for other members of the public that may have been significantly affected by the emergency.
- If the emergency is of a level where it has impacted the public, an information center may be established within the community where the emergency occurred to answer any questions posed by the public.
- Establish a means of compensating citizens who may have had out-of-pocket expenses (such as meals and lodging costs) as a result of the emergency.
- Through the media, provide details of the investigation into the incident that are pertinent to the public, as it becomes available.

Health and Safety Plan

The company's extensive Health and Safety program is to be implemented at all times during and after an incident. Training is provided to all company employees and contractors; all information and documentation can be found in the Health and Safety Manual.

Site Specific Control Points and Response

In the event of an incident (reported from an external source and/or confirmed by a drop in pressure), an operator would be sent out to visually confirm the need to shut down operations. Operators have the ability to manually trip the ESDs at the risers on the CER line. The operator would then immediately contact his/her supervisor and the TSB, and then work with internal support and outside agencies to determine a plan of action for resolving the source of the release.

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West Doe Non-Resident Landowner Information

PID	Name	Phone 1	Phone 2	Land Location
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
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[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
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[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
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[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

WEST DOE - FACILITIES

LICENSEE	NAME	FACILITY ID	LOCATION	LATITUDE (DECIMAL DEGREES)	LONGITUDE (DECIMAL DEGREES)	LATITUDE (DEGREES MIN SEC)	LONGITUDE (DEGREES MIN SEC)	FACILITY TYPE	MAXIMUM ASSOCIATED H2S RELEASE VOLUME (m3)	ASSOCIATED WELL OR PIPELINE HPZ (m)	ASSOCIATED ON-SITE STORAGE HPZ (m)	ASSIGNED EPZ (m)	DISTANCE TO NEAREST RESIDENT (km)	STATUS
NORTH RIVER OPERATING														
NORTHRIVER MIDSTREAM INC.	NorthRiver DOE 02-25-080-15 001	BCGP0007652	02-25-080-15W6	55.9570696	-120.2035362	55° 57' 25.451"	-120° 12' 12.730"	GP	1055.01 (1)	2400 (1)	900	2400 (1)	0.92	AC

(1) The largest EPZ and H2S release volume associated with this facility is of a sour third party Tourmaline pipeline (PL 283-1) calculated at licensed conditions.

There may be hazards associated with third party assets in addition to the ones listed in the table above. For more information see the map(s).
All Facility locations listed in the table above also have manual block valves at these locations.

LEGEND

Facility: B=Battery CS=Compressor Station GP=Gas Plant GI=Gas Injection IP=Injection Plant GM=Gas Sales Meter PG=Gathering point PS=Pump Station TS=Test Facility TL=Terminal
S=Satellite DH=Dehydrator UN=Unknown WI=Water Injection PT=Pipeline Terminal WD=Water Disposal OM=Oil Sales Meter WF=Well Facility PR=Pigging Receiver/Launcher
WD=Water Disposal Facility WH=Water Hub
Status: A=Abandoned D=Discontinued O=Operating P=To Be Constructed S=Suspended AC=Active NW=New
Other: EPZ=Emergency Planning Zone ROW=Pipeline Right of Way WLB=Well Lease Boundary HPZ=Hazard Planning Zone

WEST DOE - SOUR WELLS

LICENSEE	WELLNAME	LICENSE NO.	UWI	SURFACE LOCATION	SURFACE LATITUDE	SURFACE LONGITUDE	H2S (ppm)	GAS PROD. RATE (1000 m3/day)	H2S RELEASE RATE (m3/s)	SOUR HPZ (m)	VAPOUR FLAMMABILITY HPZ (m)	ASSIGNED EPZ (m)	DISTANCE TO NEAREST RESIDENT (km)	STATUS
NORTH RIVER SOUR OPERATING														
NORTHRIVER MIDSTREAM INC.	NORTHRIVER DOE 15-24-080-15	23946	100152408015W600	15-24-080-15W6	55.9552	-120.2017	900,000		6.5600	1300	166	1300	0.94	ACID GAS DISPOSAL

There may be hazards associated with third party assets in addition to the ones listed in the table above. For more information see the map(s).
All Well locations listed in the table above also have manual block valves at these locations.
Sour HPZ was calculated in ERCBH2S as Roberto Cusanelli at North River confirmed they have an exemption from the OGC to use it for their acid gas wells.

LEGEND

Other: UWI=Unique Well Identifier HPZ=Hazard Planning Zone EPZ=Emergency Planning Zone WLB=Well Lease Boundary HPZ=Hazard Planning Zone

WEST DOE - SOUR PIPELINES

LICENSEE	WATER CROSS	FROM		TO		START VALVE	START VALVE LATITUDE	START VALVE LONGITUDE	END VALVE	END VALVE LATITUDE	END VALVE LONGITUDE	LICENSE NO.	LINE NO.	LINE SEGMENT MODIFIER	ENBRIDGE PIPELINE NUMBER	PIPELINE NAME	UNIQUE LINE #	INCLUDES UNIQUE LINE #	SUB	OD (mm)	SEGMENT LENGTH (km)	WALL (mm)	LICENSED PRESSURE (kPa)	LICENSED H2S (%)	TEMP (°C)	Z	SEGMENT H2S RELEASE VOLUME (m3)	CUMULATIVE H2S RELEASE VOLUME (m3)	SOUR HPZ (m)	THERMAL RADIATION HPZ (m)	ASSIGNED EPZ (m)	STATUS
NORTH RIVER SOUR OPERATING																																
NORTHRIVER MIDSTREAM INC.	-	02-25-080-15W6	UN	15-24-080-15W6	WE	ESD	55.9571	-120.2035	-	-	-	21147	1	-	21147-1	POU 21147-1	1	1	AG	114.3	0.25	11.1	12,410	75.00	5	0.24	654.7619	654.761942	1680	28	1700	Q
NORTH RIVER SOUR DEACTIVATED																																
NORTHRIVER MIDSTREAM INC.	-	05-24-080-15W6	PL	02-25-080-15W6	UN	-	-	-	-	-	-	9	1	-	9-1	POU 9-1	2	2	SG	168.3	1.16	4.8	9,930	5.00	5						10	V
NORTHRIVER MIDSTREAM INC.	-	05-24-080-15W6		12-24-080-15W6		-	-	-	-	-	-	9710	3	-	9710-3	POU 9710-3	3	3	SG	168.3	0.10	4.8	9,930	4.00	5						10	V

There may be hazards associated with third party assets in addition to the ones listed in the table above. For more information see the map(s).
All Facility, Well and ESD locations listed in the table above also have manual block valves at these locations.

LEGEND

Facility: B=Battery BE=Blind End CS=Compressor Station DH=Dehydrator GM=Gas Sales Meter GP=Gas Plant GS=Gas Gathering System IP=Injection Plant PN=Plant LH=Line Heater
MS=Meter Station PG=Gathering Point PL=Pipeline PS=Pump Station S=Satellite WE=Well HD=Header JN=Junction UG=Underground cap or tie-in PR=Pigging Receiver/Launcher
Valve: CV=Check Valve ESD=Emergency Shutdown Valve
Substance: AG=Acid Gas CO=Crude Oil FW=Fresh Water HV=High Vapour Pressure LV=Low Vapour Pressure NG=Natural Gas OE=Oil Effluent SG=Sour Gas FG=Fuel Gas ST=Sweet Gas
SW=Salt Water SE=Sour Oilwell Effluent SC=Sour Crude MG=Miscellaneous Gases OM=Oil Emulsion WS=Sour Water PW=Produced Water UN=Unknown ML=Miscellaneous Liquids MP=Multiphase
Status: A=Abandoned D=Discontinued N=Not Constructed/Approved O=Operating P=To Be Constructed U=Unknown Q=Active I=Inactive S=Suspended R=Removed
T=New V=Deactivated Z=Approved J=Out of Jurisdiction
Other: HPZ=Hazard Planning Zone EPZ=Emergency Planning Zone WALL=Wall Thickness OD=Outside Diameter Z=Compressibility Factor GLR=Gas-To-Liquid Ratio GVF=Gas Volume Fraction
TEMP=Temperature ROW=Pipeline Right of Way

WEST DOE - CER PIPELINES

LICENSEE	WATER CROSS	FROM		TO		START VALVE	START VALVE LATITUDE	START VALVE LONGITUDE	END VALVE	END VALVE LATITUDE	END VALVE LONGITUDE	LICENSE NO.	LINE NO.	LINE SEGMENT MODIFIER	ENBRIDGE PIPELINE NUMBER	PIPELINE NAME	UNIQUE LINE #	INCLUDES UNIQUE LINE #	SUB	OD (mm)	SEGMENT LENGTH (km)	WALL (mm)	LICENSED PRESSURE (kPa)	EXPECTED PRESSURE (kPa)	LICENSED H2S (%)	EXPECTED H2S (%)	TEMP (°C)	Z	CUMULATIVE H2S RELEASE VOLUME (m3)	SOUR HPZ (m)	THERMAL RADIATION HPZ (m)	ASSIGNED EPZ (m)	STATUS
NORTH RIVER SOUR CER OPERATING																																	
NORTHRIVER MIDSTREAM CANADA PARTNER LIMITED	-	05-23-080-13W6	GP	01-27-080-14W6	PL	ESD	55.9477	-119.9290	ESD	55.9594	-120.0901	XG-D66-56-99	2	B	D66-56-99-2	CER XG-D66-56-99-2	1	1	NG	168.3	10.86	4.8	9,930	7,200	40.00	0.01	5	0.42	24	10	77	77	Q
NORTHRIVER MIDSTREAM CANADA PARTNER LIMITED	-	01-27-080-14W6	PL	16-25-080-15W6	PL	ESD	55.9594	-120.0901	-	-	-	XG-D66-56-99	2	A	D66-56-99-2	CER XG-D66-56-99-2	2	2,3	NG	168.3	6.69	4.8	9,930	7,200	40.00	0.01	5	0.42	23	10	74	74	Q
NORTHRIVER MIDSTREAM CANADA PARTNER LIMITED	-	16-25-080-15W6	PL	02-25-080-15W6	GP	-	-	-	ESD	55.9571	-120.2035	XG-S383-05-2007	4	-	S383-05-2007-2	CER XG-S383-05-2007-2	3	2,3	NG	168.3	1.98	4.8	9,930	7,200	40.00	0.01	5	0.42	23	10	71	71	Q
NORTH RIVER SOUR CER OPERATING - SHUT-IN																																	
NORTHRIVER MIDSTREAM CANADA PARTNER LIMITED	-	11-01-081-15W6	CS	16-25-080-15W6	PL	-	-	-	-	-	-	XG-D66-56-99	1	-	D66 56 99-1	CER XG D66 56 99-1	4	4	NG	168.3	3.45	4.8	9,930	0	40.00	0.00	5						Q
NORTHRIVER MIDSTREAM CANADA PARTNER LIMITED	-	16-25-080-15W6	PL	02-25-080-15W6	GP	-	-	-	ESD	55.9571	-120.2035	XG-S383-05-2007	3	-	S383-05-2007-1	CER XG-S383-05-2007-1	5	5	NG	168.3	1.88	4.8	9,930	0	40.00	0.00	5						Q

There may be hazards associated with third party assets in addition to the ones listed in the table above. For more information see the map(s).
All Facility, Well and ESD locations listed in the table above also have manual block valves at these locations.

LEGEND

Facility: B=Battery BE=Blind End CS=Compressor Station DH=Dehydrator GM=Gas Sales Meter GP=Gas Plant GS=Gas Gathering System IP=Injection Plant PN=Plant LH=Line Heater
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Valve: CV=Check Valve ESD=Emergency Shutdown Valve
Substance: AG=Acid Gas CO=Crude Oil FW=Fresh Water HV=High Vapour Pressure LV=Low Vapour Pressure NG=Natural Gas OE=Oil Effluent SG=Sour Gas FG=Fuel Gas ST=Sweet Gas
SW=Salt Water SE=Sour Oilwell Effluent SC=Sour Crude MG=Miscellaneous Gases OM=Oil Emulsion WS=Sour Water PW=Produced Water UN=Unknown ML=Miscellaneous Liquids MP=Multiphase
Status: A=Abandoned D=Discontinued N=Not Constructed/Approved O=Operating P=To Be Constructed U=Unknown Q=Active I=Inactive S=Suspended R=Removed
T=New V=Deactivated Z=Approved J=Out of Jurisdiction
Other: HPZ=Hazard Planning Zone EPZ=Emergency Planning Zone WALL=Wall Thickness OD=Outside Diameter Z=Compressibility Factor GLR=Gas-To-Liquid Ratio GVF=Gas Volume Fraction
TEMP=Temperature ROW=Pipeline Right of Way

WEST DOE - SWEET WELLS

LICENSEE	WELLNAME	LICENSE NO.	UWI	SURFACE LOCATION	SURFACE LATITUDE	SURFACE LONGITUDE	H2S (ppm)	VAPOUR FLAMMABILITY HPZ (m)	ASSIGNED EPZ (m)	DISTANCE TO NEAREST RESIDENT (km)	STATUS
NORTH RIVER SWEET STANDING											
NORTHRIVER MIDSTREAM INC.	NORTHRIVER DOE 11-35-080-15	10544	100113508015W604	11-35-080-15W6	55.9800	-120.2335	0		100	0.71	STANDING

There may be hazards associated with third party assets in addition to the ones listed in the table above. For more information see the map(s).
All Well locations listed in the table above also have manual block valves at these locations.

LEGEND

Other: UWI=Unique Well Identifier EPZ=Emergency Planning Zone WLB=Well Lease Boundary HPZ=Hazard Planning Zone

WEST DOE - SWEET PIPELINES

LICENSEE	WATER CROSS	FROM		TO		START VALVE	START VALVE LATITUDE	START VALVE LONGITUDE	END VALVE	END VALVE LATITUDE	END VALVE LONGITUDE	LICENSE NO.	LINE NO.	LINE SEGMENT MODIFIER	ENBRIDGE PIPELINE NUMBER	PIPELINE NAME	SUB	OD (mm)	SEGMENT LENGTH (km)	WALL (mm)	LICENSED PRESSURE (kPa)	H2S (%)	THERMAL RADIATION HPZ (m)	ASSIGNED EPZ (m)	STATUS
NORTH RIVER SWEET OPERATING																									
NORTHRIVER MIDSTREAM INC.	-	02-25-080-15W6	UN	12-24-080-15W6	PL	ESD	55.9571	-120.2035	-	-	-	9	2	-	9-2	POU 9-2	NG	273.1	0.95	6.3	8,275	0	102	113	Q
NORTHRIVER MIDSTREAM INC.	-	02-25-080-15W6	UN	12-24-080-15W6	PL	ESD	55.9571	-120.2035	-	-	-	21010	1	-	21010-1	POU 21010-1	NG	168.3	1.12	4.0	9,930	0	68	75	Q
NORTHRIVER MIDSTREAM INC.	-	02-25-080-15W6	UN	15-24-080-15W6	PL	ESD	55.9571	-120.2035	-	-	-	21147	2	-	21147-2	POU 21147-2	FG	60.3	0.25	3.2	1,896	0	10	11	Q
NORTHRIVER MIDSTREAM INC.	-	02-25-080-15W6	UN	15-24-080-15W6	PL	ESD	55.9571	-120.2035	-	-	-	21147	3	-	21147-3	POU 21147-3	MG	60.3	0.25	3.2	1,896	0	10	11	Q

There may be hazards associated with third party assets in addition to the ones listed in the table above. For more information see the map(s).
All Facility, Well and ESD locations listed in the table above also have manual block valves at these locations.

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Substance: AG=Acid Gas CO=Crude Oil FW=Fresh Water HV=High Vapour Pressure LV=Low Vapour Pressure NG=Natural Gas OE=Oil Effluent SG=Sour Gas
FG=Fuel Gas ST=Sweet Gas SW=Salt Water SE=Sour Oilwell Effluent SC=Sour Crude MG=Miscellaneous Gases OM=Oil Emulsion WS=Sour Water PW=Produced Water
UN=Unknown ML=Miscellaneous Liquids AA=Air
Status: A=Abandoned D=Discontinued N=Not Constructed/Approved O=Operating P=To Be Constructed U=Unknown Q=Active I=Inactive S=Suspended R=Removed
T=New V=Deactivated Z=Approved J=Out of Jurisdiction
Other: WALL=Wall Thickness OD=Outside Diameter EPZ=Emergency Planning Zone ROW = Pipeline Right of Way HPZ=Hazard Planning Zone

WEST DOE - TANKS & BULLETS

FACILITY / LOCATION	SUBSTANCE	NO. OF TANKS	TANK VOLUME	ENVIRONMENT CANADA REGISTRATION REQUIRED? (1)	ENVIRONMENT CANADA ERP REQUIRED? (2)	HPZ (m)
West Doe GP 02-25-080-15 W6M	Condensate	2	120 m^3	No	No	900
		1	160 m^3			
		1	40 m^3			
	Produced Water	1	750 bbl	No	No	50
	Methanol	5	1000 gal	No	No	50
	Corrosion Inhibitor	1	1000 gal	No	No	50
	Amine	1	400 bbl	No	No	50
		4	500 gal			
		2	50 bbl			
		1	125 bbl			
		1	150 bbl			
		1	500 bbl			
		1	300 bbl			
	Ethylene Glycol	3	25 bbl	No	No	50
		3	500 gal			
		1	500 bbl			
		1	1000 gal			
	Propane	2	3.79 m^3	No	No	200
	Hydrocarbon	1	250 bbl	No	No	50

(1) *E2 Schedules 2 and 3 only.*

(2) *E2 Schedules 2, 3, 4 and 5.*

LEGEND

Other: HPZ=Hazard Planning Zone