



Alberta Operations

Emergency Response Plan

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Revision History

This Emergency Response Plan is effective April 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 Issue	Reason For Revision	Section	Affected Pages
April 2020	New ERP Manual	All	All

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Alberta Operations ERP Distribution List

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- Sunset House Area
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- Sakwatamau Area
- E2 Plan - Sakwatamau Gas Plant 06-12-63-15 W5M
- Viking Area

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Section 1: Initial Response

A1 Initial Emergency Report Form

Five Step Initial Response Guide

Step 1 – Level of Emergency

Step 2 – Internal Notification

Step 3 – External Notification

Step 4 – Incident Briefing

Step 5 – Public Safety

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First On-Scene Actions

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

Incident Details <i>To be completed by the person involved or notified</i>				
Report taken by			Date / Time	
Name of person calling			Caller Telephone	
Incident Location (LSD / NTS)				
Event Summary				
Agencies Notified <input type="checkbox"/> Yes Who? <input type="checkbox"/> No				
Event Status <input type="checkbox"/> Incident contained or controlled <input type="checkbox"/> Intermittent control possible <input type="checkbox"/> Imminent control possible <input type="checkbox"/> Incident is uncontrolled				
Site Type <input type="checkbox"/> Well <input type="checkbox"/> Pipeline <input type="checkbox"/> Tank Farm/Storage <input type="checkbox"/> Battery/Plant/Facility <input type="checkbox"/> Other _____				
Incident Type <input type="checkbox"/> Sour Gas Release <input type="checkbox"/> Sweet Gas Release <input type="checkbox"/> Pipeline Break <input type="checkbox"/> Security (theft, threat, terrorism) <input type="checkbox"/> Loss of Containment <input type="checkbox"/> Fire/Explosion <input type="checkbox"/> Worker Injury/Fatality <input type="checkbox"/> Vehicle/Transportation <input type="checkbox"/> Liquid Spill <input type="checkbox"/> Other _____				

A1 Initial Emergency Report Form

Impacts			
Public Health and Safety	<input type="checkbox"/> Could be jeopardized <input type="checkbox"/> Is jeopardized		
Public Protection Measures Taken	<input type="checkbox"/> Notification <input type="checkbox"/> Evacuation <input type="checkbox"/> Shelter-in-place <input type="checkbox"/> Roadblocks		
Worker Injuries	<input type="checkbox"/> First Aid <input type="checkbox"/> Hospitalized <input type="checkbox"/> Fatality <input type="checkbox"/> Other _____		
Distance to nearest surface development	_____ km	Distance to nearest urban centre	_____ km
Details			
Release Impact	<input type="checkbox"/> On-Lease <input type="checkbox"/> Off-Lease Product _____		Amount _____
Gas Readings	H ₂ S _____ SO ₂ _____ LEL _____ Other _____		
Distance to nearest watercourse	_____ km	Weather Conditions	
Details			
Media Involvement?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Regulator Involvement?	<input type="checkbox"/> Yes <input type="checkbox"/> No
		Public Affairs/Community Relations Issues?	<input type="checkbox"/> Yes <input type="checkbox"/> 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 H₂Safety or Emergency Assessment in the App Store).
- Note: The OGC and the AER state that the licensee must use either the Incident Classification Matrix (BC) or the Assessment Matrix for Classifying Incidents (AB) to determine the Level of Emergency. If the incident overlaps more than one level, always choose the highest level.*



Step 2 - Internal Notification

- ❑ Follow the Internal Emergency Notification Flowchart to determine who needs to be notified.
 - ❑ Relay the information in the completed **A1** Initial Emergency Report Form.
 - ❑ Mobilize internal resources to the site, to the Incident Command Post (ICP), to the Corporate Emergency Operations Centre (CEOC), or place them on standby as required.
- Use the following resources:
- **Section 1: Initial Response (Internal Emergency Notification Flowchart)**
 - **Section 2: Roles & Responsibilities (Response Team Phone List)**
 - **Section 6: Forms (A1)**

Step 3 - External Notification

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

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

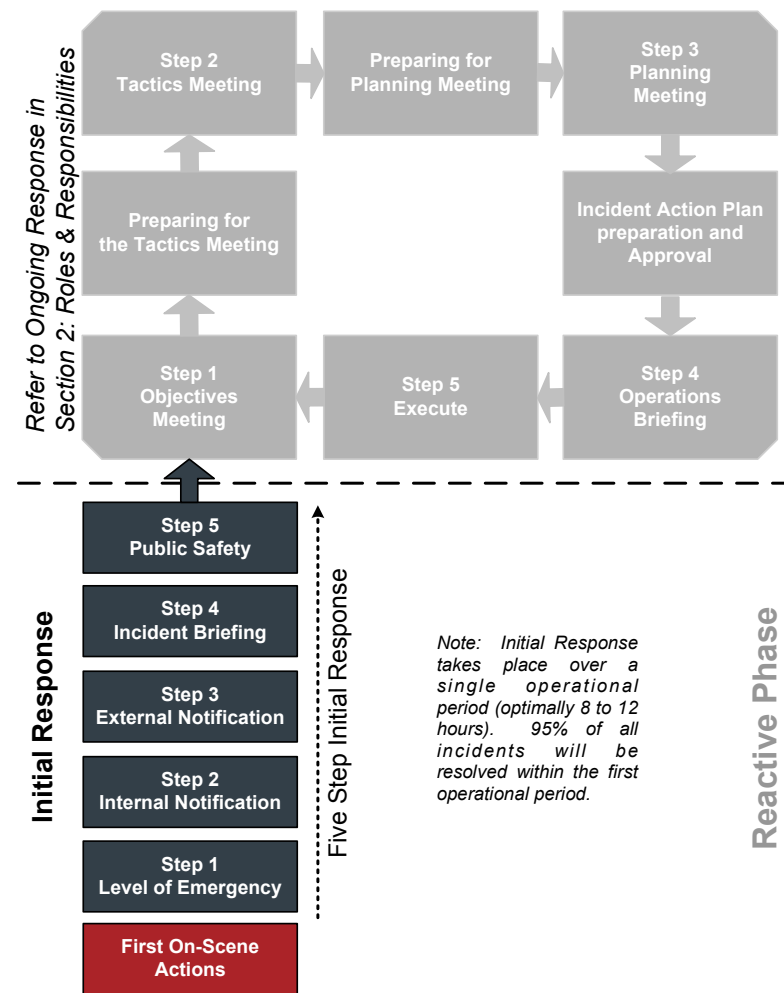
- ❑ Follow safety procedures to safely establish roadblocks wherever a road intersects with the EPZ and advise vehicles to reroute.
 - ❑ Record all vehicle encounters and air monitoring readings. Complete the following forms: **ICS 214, A5, B3 & B4**.
 - ❑ Gain permission from the Public Safety Group 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**



Five Step Initial Response Guide



Step 1 – Level of Emergency



Assessment Matrix for Classifying Incidents

Follow these 3 Steps to determine the Level of Emergency

Step 1 ↓ Table 1. Consequence of Incident		
Rank	Category	Example of Consequence in Category
1	Minor	<ul style="list-style-type: none"> No worker injuries. Nil or low media interest. Liquid release contained on site. Gas release impact on site only.
2	Moderate	<ul style="list-style-type: none"> First Aid treatment required for on-site worker(s). Local and possible regional media interest. Liquid release not contained on site. Gas release impact has potential to extend beyond site.
3	Major	<ul style="list-style-type: none"> Worker(s) requires hospitalization. Regional and national media interest. Liquid release extends beyond site – not contained. Gas release impact extends beyond site – public health / safety could be jeopardized.
4	Catastrophic	<ul style="list-style-type: none"> Fatality. National and international media interest. Liquid release off site not contained – potential for, or is, impacting water or sensitive terrain. Gas release impact extends beyond site – public health / safety jeopardized.

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

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

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

Under "Description" pick the description that currently fits the likelihood of the incident escalating. For example, if the incident is contained and controlled and there is no chance of additional hazards, the incident would receive a "Rank" of 1.

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

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

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

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

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

Note:

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

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

Revised June 2018

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

Spill Reporting Criteria

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

- A spill or release of any amount of materials which impacts water ways
- Hydrocarbons; 100 litres where the hydrocarbon contains no toxic materials and does not impact water ways
- Produced/salt water; 200 litres where the fluid contains no toxic materials
- Fresh water; 10,000 litres
- Drilling or invert mud; 100 litres
- Sour Natural gas; 10 kg or 15 m³ by volume where operating pressure is >100 PSI
- Condensate; 100 litres
- Any fluid including hydrocarbons, drilling fluids, invert mud, effluent, emulsions, etc. which contain toxic substances; 25 litres

Please refer to the BC Environmental Management Act; [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 m³ 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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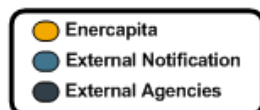
Internal Emergency Notification Flowchart

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Investigation of Complaints

Company representatives will be dispatched to investigate complaints received by outside sources (member of the public, 3rd party company etc.). If H₂S 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.



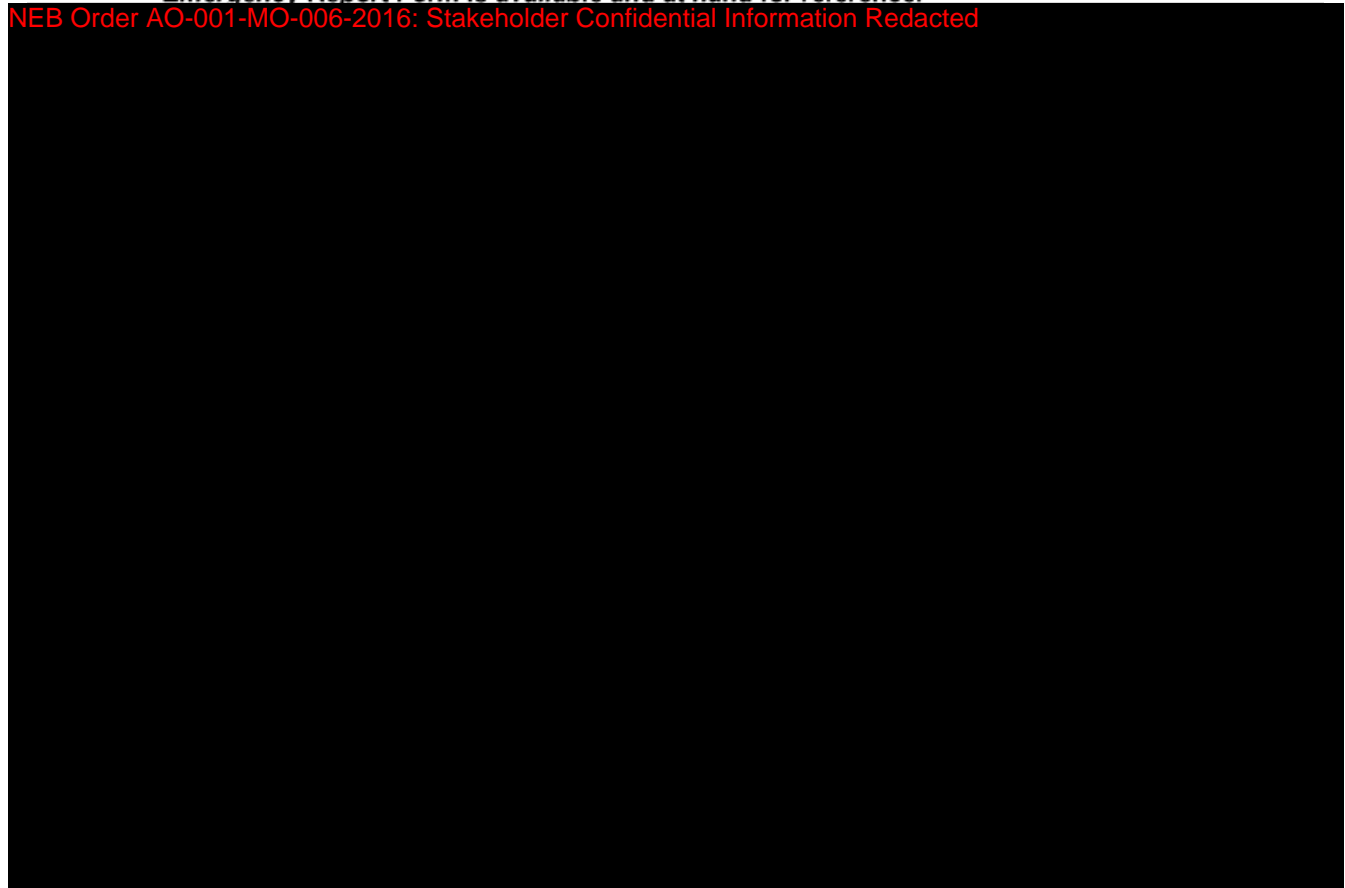
Note: After Initial Notifications are complete, please reference Step 4 – Incident Briefing and begin building the initial Organizational Structure (pg 3) within the ICS 201 Incident Briefing form.

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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.

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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.

-  Enercapita
-  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.

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Page 1 of 6

Current and Planned Objectives:	
Priorities: (1) Life Safety (2) Incident Stabilization (3) Environment & Property	
1. Ensure Safety of Citizens and Response Personnel:	4. Minimize Economic Impacts:
<input type="checkbox"/> 1a. Identify hazard(s) of released product.	<input type="checkbox"/> 4a. Consider tourism and local economic impacts.
<input type="checkbox"/> 1b. Establish site control (hot zone, warm zone, cold zone, & security).	<input type="checkbox"/> 4b. Protect public and private assets, as resources permit.
<input type="checkbox"/> 1c. Establish an Emergency Response Zone and Initiate Public Safety Actions.	<input type="checkbox"/> 4c. Establish damage claims process.
<input type="checkbox"/> 1d. Consider evacuations if needed.	5. Keep Stakeholders and Public Informed of Response Activities:
<input type="checkbox"/> 1e. Establish aircraft restrictions.	<input type="checkbox"/> 5a. Provide forum to obtain stakeholder input and concerns.
<input type="checkbox"/> 1f. Monitor air in impacted areas	<input type="checkbox"/> 5b. Provide stakeholders with details of response actions.
<input type="checkbox"/> 1g. Develop site safety plan for personnel and ensure safety briefings are conducted.	<input type="checkbox"/> 5c. Identify stakeholder concerns and issues, and address as practical.
2. Control the Source of the Release:	<input type="checkbox"/> 5d. Provide timely safety announcements.
<input type="checkbox"/> 2a. Complete emergency shutdown.	<input type="checkbox"/> 5e. Conduct regular news briefings.
<input type="checkbox"/> 2b. Conduct firefighting.	<input type="checkbox"/> 5f. Conduct public meetings, as appropriate.
<input type="checkbox"/> 2c. Initiate temporary repairs.	
3. Manage a Coordinated Response Effort:	
<input type="checkbox"/> 3a. Complete or confirm notifications.	
<input type="checkbox"/> 3b. Establish a unified command organization and facilities (command post, etc.).	
<input type="checkbox"/> 3c. Ensure mobilization and tracking of resources and account for personnel and equipment.	
<input type="checkbox"/> 3d. Complete documentation.	
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.**

```

graph TD
    IC[Incident Commander] --- IO[Information Officer]
    IC --- LO[Liaison Officer]
    IC --- SO[Safety Officer]
    IC --- OSGS[On-Site Group Supervisor]
    IC --- PSGS[Public Safety Group Supervisor]
    IC --- Doc[Documentation]
    OSGS --- SS[SITE SAFETY]
    OSGS --- C[Control]
    OSGS --- Cont[Containment]
    OSGS --- O1[Other]
    OSGS --- O2[Other]
    PSGS --- AM[Air Monitors]
    PSGS --- RB[Roadblocks]
    PSGS --- R[Rovers]
    PSGS --- T[Telephoners]
    PSGS --- RCR[Reception Centre Representative]
  
```

Incident Commander
Name _____
Number _____

Information Officer
Name _____
Number _____

Liaison Officer
Name _____
Number _____

Safety Officer
Name _____
Number _____

On-Site Group Supervisor
Name _____
Number _____

Public Safety Group Supervisor
Name _____
Number _____

Documentation
Name _____
Number _____

SITE SAFETY
Name _____
Number _____

Control
Name _____
Number _____

Containment
Name _____
Number _____

Other
Name _____
Number _____

Other
Name _____
Number _____

Other
Name _____
Number _____

Air Monitors
Name _____
Number _____

Roadblocks
Name _____
Number _____

Rovers
Name _____
Number _____

Telephoners
Name _____
Number _____

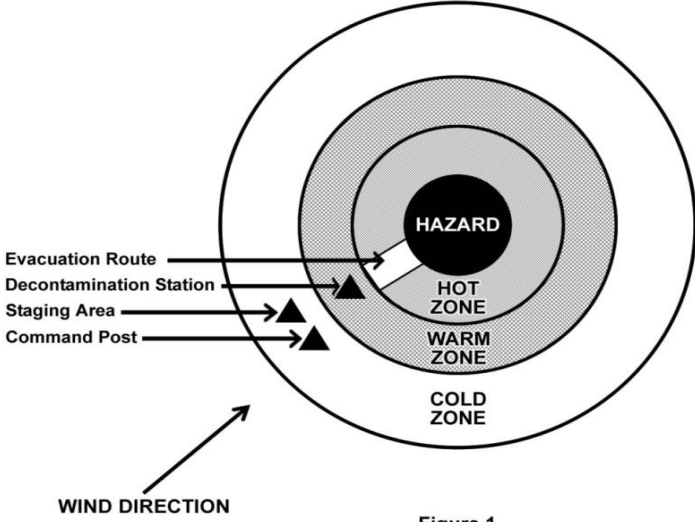
Reception Centre Representative
Name _____
Number _____

Other
Name _____
Number _____

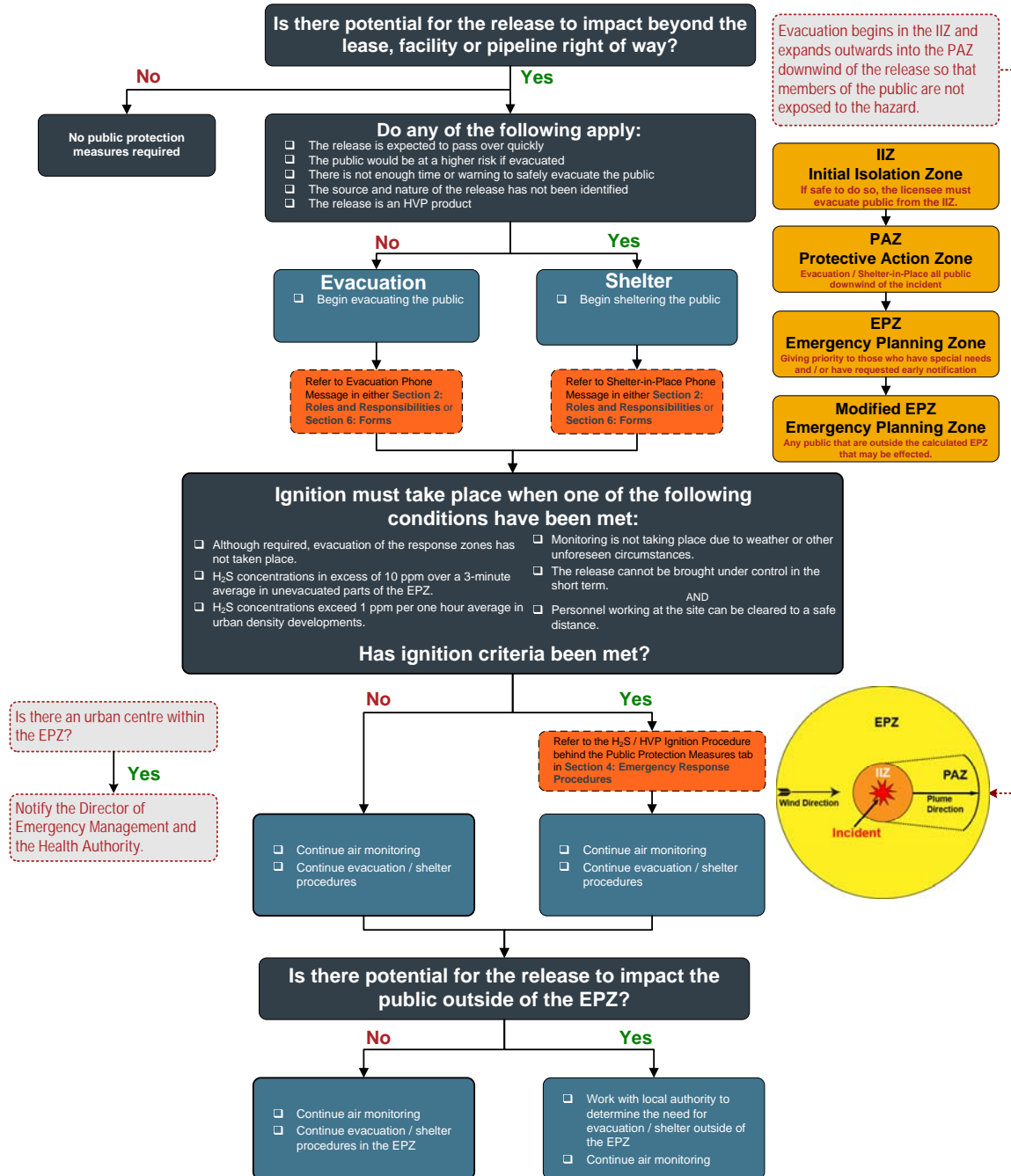
Note: Refer to ICS 207 Incident Organization Chart in Section 6: Forms (Blue Tab) for full command structure.

[illegible]

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

 <p style="text-align: center;">Figure 1 Protective Zones</p>	<ol style="list-style-type: none"> Is there a Hot Zone established? <input type="checkbox"/> Yes <input type="checkbox"/> No If so, Where? Is there a Warm Zone established? <input type="checkbox"/> Yes <input type="checkbox"/> No If so, Where? Is there a Cold Zone established? <input type="checkbox"/> Yes <input type="checkbox"/> No If so, Where? Remarks: (Include any information on evacuation route, etc.)
<ol style="list-style-type: none"> Include any site sketches or photos of the protective zones (if available): 	

Public Protection Measures Flowchart



Evacuation Requirements

Revised June 2018

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 H₂S and SO₂. In the absence of monitored readings, responders should advise the residents to Shelter-in-Place.

H ₂ S Requirements		SO ₂ Requirements	
1 to 10 ppm (3 minute average)	Individuals who requested notification so that they can voluntarily evacuate before any exposure to H ₂ S must be notified.	0.3 ppm (24-hour average)	Immediate evacuation of the area must take place.
Above 10 ppm (3 minute average)	Local conditions must be assessed and all persons must be advised to evacuate and/or shelter	1 ppm (3-hour average)	
* If monitored levels over the 3 minute interval are declining (i.e., three readings show a decline from 15 ppm to 10 ppm to 8 ppm over 3 minutes), evacuation may not be necessary even though the average over the 3 minute interval would be 11 ppm. Licensees should use proper judgement in determining if evacuation is required.		5 ppm (15-minute average)	

Note: This section is based on Alberta Regulations; however, the same standards will be followed by the company for operations in other provinces.

Section 1: Initial Response

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Section 2: Roles and Responsibilities

Field Response Team

Key Response Personnel

General Safety Equipment and Resource Lists

Operator, Truck & Other Safety Equipment

Field Response Team – Command Staff

Command Staff Roles Chart

Field Response Team – General Staff

Operations Section Roles Chart

Planning Section Roles Chart

Logistics Section Roles Chart

Finance / Admin. Section Roles Chart

Field Response Team – Public Safety Staff

Public Safety Roles Chart

Air Monitors Module

Reception Centre Rep Module

Roadblocks Module

Rovers Module

Telephoners Module

Ongoing Response

Planning “P”

Five Step Ongoing Response Guide

Objectives Meeting

Tactics Meeting

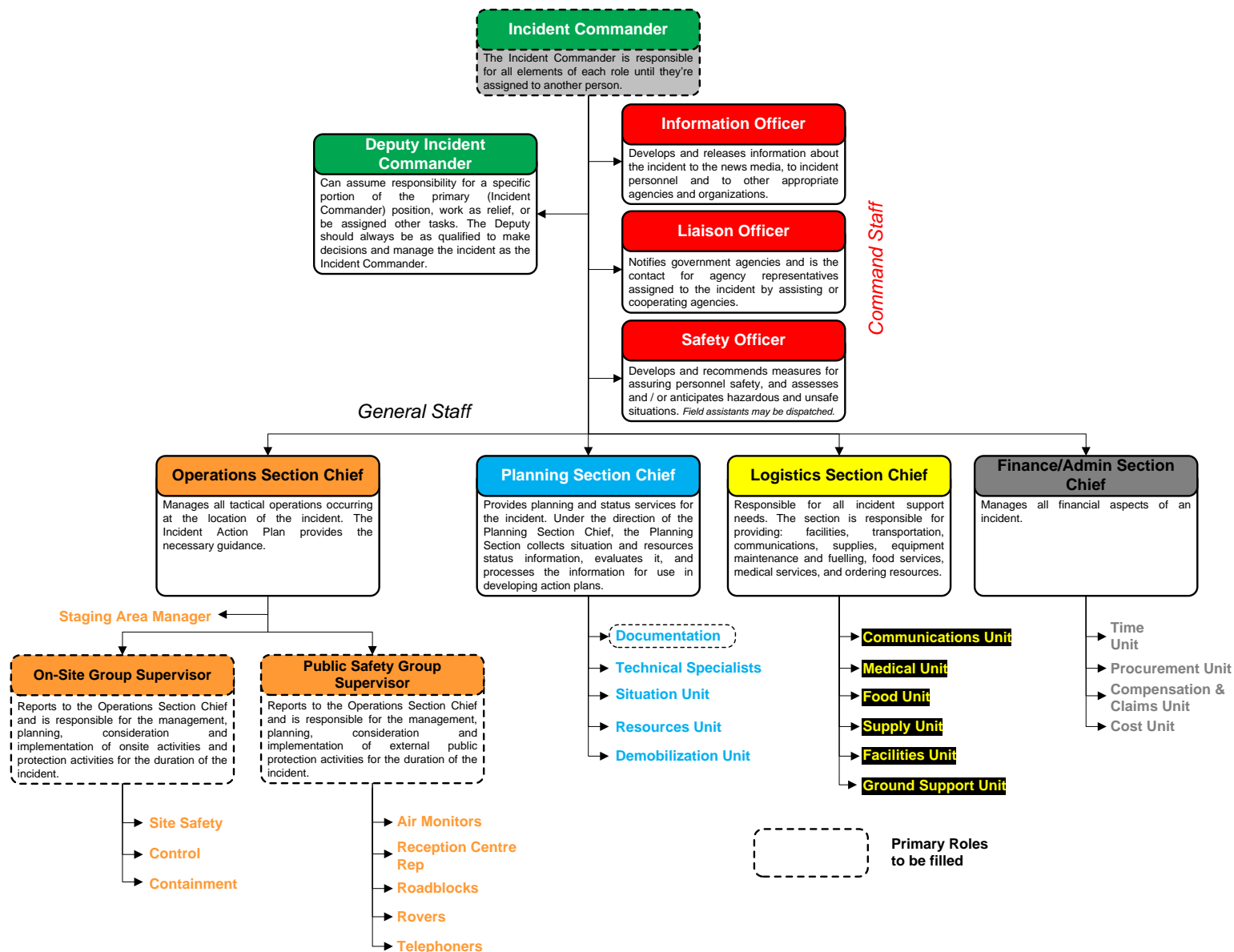
Planning Meeting

Operations Briefing

Response Teams Phone List

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Field Response Team



Section 2: Roles and Responsibilities

Key Response Personnel

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

Command Staff	Incident Commander	Area Foreman Lead Operator (Alternate Incident Commander)
On-Site	On-Site Group Supervisor	Lead Operators Please see the Response Teams Phone List (Yellow tab) or Area Specific Information (White tabs) for a list of Area Operators.
	Trained in Ignition (H₂S & HVP)	Area Foreman / Lead Operator
Public Safety	Public Safety Group Supervisor	Lead Operator Area Foreman (Alternate)
	Air Monitors / Roadblock / Rovers	Area Operators / Third-Party Service Please see the Response Teams Phone List (Yellow tab) or Area Specific Information (White tabs) for a list of Area Operators.
	Telephoners	Calgary EOC Support
	Reception Centre Representative	Area Operators / Calgary EOC Support Please see the Response Teams Phone List (Yellow tab) or Area Specific Information (White tabs) for a list of Area Operators.

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

General Safety Equipment and Resource Lists

Operator, Truck & Other Safety Equipment

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

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

Command Staff Roles				
Incident Commander	Deputy Incident Commander	Information Officer	Liaison Officer	Safety Officer
<p>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.</p> <p><i>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.</i></p> <p>Initial Response - *Refer to the 5 Step Initial Response Guide in Section 1: Initial Response*</p> <p>Step 1: Level of Emergency</p> <div><div><div>Emergency</div><div>Alert</div><div>Level 2</div><div>Level 3</div></div><div><div></div><div></div><div></div><div></div></div></div> <ul style="list-style-type: none"><input type="checkbox"/> 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.<input type="checkbox"/> 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 H₂Safety or Emergency Assessment in the App Store). <p>Step 2: Internal Notification</p> <ul style="list-style-type: none"><input type="checkbox"/> 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.<input type="checkbox"/> Contact required company resources and communicate the level of emergency. Refer to Section 2: Roles and Responsibilities / Response Team Phone List. <p>Step 3: External Notification</p> <ul style="list-style-type: none"><input type="checkbox"/> 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. <p>Step 4: Incident Briefing</p> <div><div><div><div><input type="checkbox"/> The following positions are always filled regardless of the size of the incident: Incident Commander, On-Site Group Supervisor and Documentation.</div><div><input type="checkbox"/> 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.</div><div><input type="checkbox"/> 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.</div><div><input type="checkbox"/> 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.</div><div><input type="checkbox"/> Conduct a role review with each of the positions above to ensure they clearly understand their roles and responsibilities.</div><div><input type="checkbox"/> 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.).</div><div><input type="checkbox"/> Activate the Incident Command Post (ICP). Refer to the Appendices for Incident Command Post activation guidelines.</div><div><input type="checkbox"/> Ensure the Planning Section posts and updates the status board with incident details.</div></div><div><div>Form ICS 201</div><div>Form ICS 207</div></div></div><p>Step 5: Public Safety</p><ul style="list-style-type: none"><input type="checkbox"/> 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.<input type="checkbox"/> Use the Public Protection Measures Flowchart located in Section 1: Initial Response to assist with determining if evacuation / shelter / ignition are required.<input type="checkbox"/> Ensure the affected public are contacted and advised to shelter or evacuate as required.<input type="checkbox"/> Establish Air Monitoring, Reception Centre Representatives, Roadblocks, Rovers, and Telephoners as required.<p>Ongoing Response - *Refer to the Five Step Ongoing Response Guide in Section 2: Ongoing Response*</p><ul style="list-style-type: none"><input type="checkbox"/> Establish a method to track responders and resources to ensure they are accounted for at all times.<input type="checkbox"/> Monitor implementation of IAP and revise as the situation dictates. Prepare for next operational period.<input type="checkbox"/> Support the Operations Section Chief in the preparation of an incident control and containment action plan.<input type="checkbox"/> Ensure each section chief has adequate staff, is not violating span of control and clearly understands the roles and responsibilities.<input type="checkbox"/> Conduct frequent Command Staff and General Staff meetings.<input type="checkbox"/> 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.<input type="checkbox"/> 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.<input type="checkbox"/> The Demobilization Unit will develop and implement objectives/strategies for demobilization.</div>	<p>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.</p> <ul style="list-style-type: none"><input type="checkbox"/> 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.<input type="checkbox"/> Record, update and maintain a chronological summary of the incident including:<ul style="list-style-type: none"><input type="checkbox"/> Names of personnel in each assigned position and their location<input type="checkbox"/> Control and containment measures<input type="checkbox"/> Environmental monitoring information<input type="checkbox"/> Injuries / deaths / missing persons<input type="checkbox"/> Phone calls<input type="checkbox"/> Actions and decisions<input type="checkbox"/> Status of the public protection actions<input type="checkbox"/> Manage the flow of traffic to and communication with the Incident Commander so that he can focus on managing the incident.<input type="checkbox"/> Conduct status update meetings.<input type="checkbox"/> Provide status to head office.<input type="checkbox"/> Deal with some day-to-day decision making.<input type="checkbox"/> Assume duties of the Incident Commander, if required.<input type="checkbox"/> Maintain communication with the Incident Commander. <div><div>Important</div><div><p>Prior to beginning any activities, each person in a role must:</p><ul style="list-style-type: none"><input type="checkbox"/> Obtain a completed ICS 201 Incident Briefing and ICS 207 Incident Organization Chart from the Incident Commander.<p>Throughout the duration of the incident, each person in a role must:</p><ul style="list-style-type: none"><input type="checkbox"/> Chronologically document all actions, decisions, contacts and requests on an ICS 214 Activity Log. Copies can be found in Section 6: Forms.<p>After the incident is over, each person in a role must:</p><ul style="list-style-type: none"><input type="checkbox"/> Assist with post-incident activities.<p>All forms referenced can be found in Section 6: Forms</p></div></div>	<p>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.</p> <ul style="list-style-type: none"><input type="checkbox"/> Receive incident briefing from the Incident Commander before contacting external agencies.<input type="checkbox"/> Prepare regular status updates that will be provided to internal company personnel to keep them apprised of the situation.<input type="checkbox"/> Identify and document any media involvement that has already taken place<input type="checkbox"/> 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.<input type="checkbox"/> Assist head office with the preparation of a preliminary media statement if required using the Preliminary Media Statement form.<input type="checkbox"/> Document all communications with the media using the Media Contact Log.<input type="checkbox"/> Develop a detailed media strategy for the incident.<input type="checkbox"/> Designate and prepare media briefing rooms away from the Incident Command Post.<input type="checkbox"/> Organize tours and photo opportunities if required.<input type="checkbox"/> Maintain communication with the Incident Commander.<input type="checkbox"/> Media releases must be coordinated with applicable regulatory agency.<input type="checkbox"/> If necessary, coordinate with and use broadcast media to notify residents in the hazard area.<input type="checkbox"/> 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.).	<p>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.</p> <div><div><div><div><input type="checkbox"/> Complete Regulatory First Call Communication Form.</div><div>Form A3</div></div><div><div><input type="checkbox"/> 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:<ul style="list-style-type: none"><input type="checkbox"/> Government regulator<input type="checkbox"/> Local authorities (counties, cities, towns, MDs, RDs, First Nations Reserves, etc.)<input type="checkbox"/> Health authority<input type="checkbox"/> Environment<input type="checkbox"/> Provincial emergency management organization<input type="checkbox"/> Other agencies</div><div><div><input type="checkbox"/> Keep track of all government correspondence using the Government Agency Contact Log.</div><div>Form C3</div></div><div><div><input type="checkbox"/> 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.</div><div><input type="checkbox"/> Conduct appropriate periodic briefings to keep agencies informed of planning actions.</div><div><div><input type="checkbox"/> Coordinate with any government agency representatives attending the ICP or REOC.</div><div><input type="checkbox"/> Coordinate with mutual aid groups.</div></div></div></div></div></div>	<p>The Safety Officer develops and recommends measures for assuring personnel safety, and assesses and / or anticipates hazardous and unsafe situations.</p> <ul style="list-style-type: none"><input type="checkbox"/> Ensure the site is evacuated if unsafe.<input type="checkbox"/> Initiate rescue plans if safe to do so.<input type="checkbox"/> Review the Incident Action Plan to identify and correct any potential occupational and health hazards.<input type="checkbox"/> Ensure work / rest guidelines are followed.<input type="checkbox"/> Continuously monitor workers for exposure to ensure they are wearing the required PPE.<input type="checkbox"/> Take appropriate action to mitigate or eliminate unsafe conditions, operations, or hazards.<input type="checkbox"/> Immediately stop any unsafe practices.<input type="checkbox"/> 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.<input type="checkbox"/> Document both safe and unsafe acts, corrective actions taken on the scene, accidents or injuries, and ways to improve safety on future incidents.<input type="checkbox"/> Investigate accidents that have occurred within the incident area.<input type="checkbox"/> Identify “Hot Zone” and declare when responders may enter it.<input type="checkbox"/> Ensure that responders inside the “Hot Zone” are accounted for and initiate search if required.<input type="checkbox"/> Prepare a site-specific health and safety plan.
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**.

General Staff Roles – Operations Section

Operations Section Chief	On-Site Group Supervisor	Staging Area Manager	Site safety	Control	Containment
<p>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.</p>	<p>On-Site Group Supervisor is responsible for coordinating all activities of Control, Containment and Site Safety at the scene of the emergency / incident.</p>	<p>The Staging Area Manager is responsible for managing all activities within a Staging Area.</p>	<p>Site Safety is responsible for responder safety and safety advice at all times at the scene of the emergency / incident.</p>	<p>Control is responsible for implementing measures designed to bring the incident under control or stop the incident.</p>	<p>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.</p>
<ul style="list-style-type: none">❑ 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 and the applicable government regulator.❑ Maintain continuous communications with the Incident Commander.	<ul style="list-style-type: none">❑ 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, etc.) and the applicable government regulator before making the decision to ignite a release. Refer to Section 4: Emergency Response Procedures.	<ul style="list-style-type: none">❑ Establish a staging area near the incident site and outside of the EPZ. When choosing a site for the staging area ensure the following conditions are met:<ul style="list-style-type: none">❑ 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.	<ul style="list-style-type: none">❑ 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.	<ul style="list-style-type: none">❑ 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.	<ul style="list-style-type: none">❑ 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.).
<div><div>Important</div><div><p>Prior to beginning any activities, each person in a role must:</p><ul style="list-style-type: none">❑ Obtain a completed ICS 201 Incident Briefing and ICS 207 Incident Organization Chart from the Incident Commander.<p>Throughout the duration of the incident, each person in a role must:</p><ul style="list-style-type: none">❑ Chronologically document all actions, decisions, contacts and requests on an ICS 214 Activity Log. Copies can be found in Section 6: Forms.<p>After the incident is over, each person in a role must:</p><ul style="list-style-type: none">❑ Assist with post-incident activities.<p>All forms referenced can be found in Section 6: Forms</p></div></div>					
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)

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**.

General Staff Roles – Planning Section

Planning Section Chief	Documentation Unit	Technical Specialists Unit	Situation Unit	Resources Unit	Demobilization Unit
<p>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.</p>	<p>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.</p>	<p>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.</p>	<p>The collection, processing, and organization of all incident information. The Situation Unit may prepare future projections of incident growth, maps, and intelligence information.</p>	<p>The Resources Unit is responsible for maintaining the status of all assigned resources at an incident.</p>	<p>The Demobilization Unit is responsible for developing the Incident Demobilization Plan.</p>
<ul style="list-style-type: none">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. <div><div>Form ICS 202</div><div>Form ICS 214</div><div>Form ICS 215</div><div>Form ICS 215a</div><div>Form ICS 230</div></div>	<ul style="list-style-type: none">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.<div><div>Form ICS 201</div></div><ul style="list-style-type: none">Be prepared to document the Incident Commander's status update meetings using whiteboards, PC or Action Logs.<div><div>Form ICS 214</div></div>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.<ul style="list-style-type: none">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. <div><div>Form ICS 201</div><div>Form ICS 214</div><div>Form ICS 231</div><div>Form ICS 233</div></div>	<ul style="list-style-type: none">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.	<ul style="list-style-type: none">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. <div><div>Form ICS 201</div><div>Form ICS 209</div><div>Form ICS 214</div></div>	<ul style="list-style-type: none">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. <div><div>Form ICS 203</div><div>Form ICS 204</div><div>Form ICS 207</div><div>Form ICS 211</div><div>Form ICS 214</div></div> <div><p>Important</p><p>Prior to beginning any activities, each person in a role must:</p><ul style="list-style-type: none">Obtain a completed ICS 201 Incident Briefing and ICS 207 Incident Organization Chart from the Incident Commander.<p>Throughout the duration of the incident, each person in a role must:</p><ul style="list-style-type: none">Chronologically document all actions, decisions, contacts and requests on an ICS 214 Activity Log. Copies can be found in Section 6: Forms.<p>After the incident is over, each person in a role must:</p><ul style="list-style-type: none">Assist with post-incident activities.<p>All forms referenced can be found in Section 6: Forms</p></div>	<ul style="list-style-type: none">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 cost effective. <div><div>Form ICS 214</div><div>Form ICS 221</div></div>

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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. <i>Note: Medical assistance to the public or victims of the emergency is an operational function.</i>	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.
<ul style="list-style-type: none">❑ 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.	<ul style="list-style-type: none">❑ 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.	<ul style="list-style-type: none">❑ 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. <i>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 Medical Unit. If there is a requirement for victims of an incident the local public ambulance service is most often utilized.</i>	<ul style="list-style-type: none">❑ 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.	<ul style="list-style-type: none">❑ 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.	<ul style="list-style-type: none">❑ 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.	<ul style="list-style-type: none">❑ 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.
<div><div>Important</div><div><p>Prior to beginning any activities, each person in a role must:</p><ul style="list-style-type: none">❑ Obtain a completed ICS 201 Incident Briefing and ICS 207 Incident Organization Chart from the Incident Commander.<p>Throughout the duration of the incident, each person in a role must:</p><ul style="list-style-type: none">❑ Chronologically document all actions, decisions, contacts and requests on an ICS 214 Activity Log. Copies can be found in Section 6: Forms.<p>After the incident is over, each person in a role must:</p><ul style="list-style-type: none">❑ Assist with post-incident activities.<p>All forms referenced can be found in Section 6: Forms</p></div></div>						

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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.
<ul style="list-style-type: none"> ❑ 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. ❑ 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. 	<ul style="list-style-type: none"> ❑ 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. 	<ul style="list-style-type: none"> ❑ 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. 	<div>Form B2</div> <ul style="list-style-type: none"> ❑ 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. ❑ All claims must be submitted to the Finance and Legal departments for processing and disbursement of funds. <ul style="list-style-type: none"> ❑ If applicable, Finance and Legal will deal with insurers as well as any other extraneous circumstances (affected parties want more, etc.). 	<ul style="list-style-type: none"> ❑ 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.

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

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Operations Section - Public Safety Roles

Public Safety Group Supervisor	Air Monitors	Reception Centre Rep	Roadblocks	Rovers	Telephoners
<p>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.</p> <p><input type="checkbox"/> Confirm communication links with the Incident Commander and Operations Section Chief. <input type="checkbox"/></p> <p><input type="checkbox"/> 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.</p> <p><input type="checkbox"/> In conjunction with the Incident Commander, Planning Section Chief, and Operations Section Chief, develop and implement an Incident Action Plan (IAP).</p> <p><input type="checkbox"/> Review resident lists, area user lists, reception centres, and telephone numbers within the ERP.</p> <p><input type="checkbox"/> If required, establish a Regional Emergency Operations Centre (REOC).</p> <p><input type="checkbox"/> Assign personnel to assume the following positions as required: Air Monitors, Reception Centre Representative, Roadblocks, Rovers, and Telephoners.</p> <ul style="list-style-type: none"><input type="checkbox"/> 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. <p><input type="checkbox"/> Dispatch Air Monitors at a Level 1 emergency (hand-held and mobile).</p> <ul style="list-style-type: none"><input type="checkbox"/> Dispatch trained personnel with the appropriate hand-held gas monitors to record concentrations at the nearest unevacuated residences downwind of the incident site.<input type="checkbox"/> Mobilize third party mobile air monitoring units.<input type="checkbox"/> Maintain communication with the applicable government regulator and environment agency regarding air monitoring needs and activities.<input type="checkbox"/> 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. <p><input type="checkbox"/> 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).</p> <ul style="list-style-type: none"><input type="checkbox"/> 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.<div><div>Form</div><div>B6</div><div>Form</div><div>B7</div><div>Form</div><div>B8</div></div><input type="checkbox"/> At a Level 1 Emergency it is required to notify any special needs residents and give them the option to evacuate.<input type="checkbox"/> If residences are evacuated, a reception centre must be established.<input type="checkbox"/> Determine and notify landowner / occupant(s) as soon as possible.<input type="checkbox"/> Ensure the schools / school buses are contacted to make arrangements for school age children (if applicable).<input type="checkbox"/> 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. <p><input type="checkbox"/> 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.).</p> <ul style="list-style-type: none"><input type="checkbox"/> Prepare Evacuation Notices and provide copies to Rovers.<div><div>Form</div><div>B5</div></div><input type="checkbox"/> Rovers can be used to assist with notifications, assist with evacuating special needs residents, assist with air monitoring, etc. <p><input type="checkbox"/> Determine the need for helicopters to identify human activity in the area.</p> <p><input type="checkbox"/> Determine the need for and location of Roadblocks to isolate and secure the area.</p> <ul style="list-style-type: none"><input type="checkbox"/> Ensure all Roadblock personnel are properly trained and have appropriate roadblock kits.<input type="checkbox"/> Ensure all Roadblock personnel have the legal authority to restrict access to the area. <p><input type="checkbox"/> 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.</p> <p><input type="checkbox"/> Regularly update the Incident Commander.</p> <p><input type="checkbox"/> Confirm communication links with: Air Monitors, Reception Centre, Roadblocks, Rovers, and Telephoners. Personnel should check in at scheduled intervals.</p> <p><input type="checkbox"/> Review and confirm evacuation of residents, area industrial users, transients, etc. from the area.</p> <p><input type="checkbox"/> Request that a Notice to Airmen (NOTAM) is issued to restrict the airspace above the EPZ.</p>	<p>Air Monitoring personnel are responsible for acquiring and providing air quality readings to the Public Safety Group Supervisor.</p> <p><input type="checkbox"/> Provide air monitoring readings to assist with decision making (evacuation / shelter / ignition).</p> <p><input type="checkbox"/> Obtain and check equipment and information (maps, forms, communications, reports, monitors, safety, and breathing equipment).</p> <p><input type="checkbox"/> Confirm communication links.</p> <p><input type="checkbox"/> Monitor closest downwind public location or residence.</p> <p><input type="checkbox"/> Monitor environment for adverse effects.</p> <ul style="list-style-type: none"><input type="checkbox"/> Record all readings on the Air Monitoring Log.<div><div>Form</div><div>A5</div></div> <p><input type="checkbox"/> Report all readings at established intervals to the Public Safety Group Supervisor.</p> <p><input type="checkbox"/> For your own safety, ensure Public Safety Group Supervisor is notified immediately if readings are approaching 10% LEL and / or 10 ppm H₂S.</p> <ul style="list-style-type: none"><input type="checkbox"/> Prepare Mobile Monitoring Plan.<div><div>Form</div><div>B2</div></div> <p><input type="checkbox"/> Where possible, provide evacuees with information regarding their property, livestock, and the incident.</p> <p><input type="checkbox"/> Forward all media and incident inquiries to the Information Officer.</p> <p><input type="checkbox"/> Report all names of evacuees who have registered at the reception centre to the Public Safety Group Supervisor.</p> <p><input type="checkbox"/> Address resident concerns and forward them to the Public Safety Group Supervisor.</p>	<p>Reception Centre Reps are responsible for establishing reception centres, managing evacuee accommodation, communication and documentation for compensation purposes.</p> <p><input type="checkbox"/> Confirm reception centre is available for use.</p> <p><input type="checkbox"/> Establish reception centre. Refer to Section 2: Roles & Responsibilities.</p> <p><input type="checkbox"/> Confirm communication links.</p> <p><input type="checkbox"/> Receive evacuees and maintain a Reception Centre Registration Log.<div><div>Form</div><div>B1</div></div></p> <p><input type="checkbox"/> Arrange for food and accommodations for the evacuees.</p> <ul style="list-style-type: none"><input type="checkbox"/> Provide evacuees with a place to request counselling services, if required. <p><input type="checkbox"/> Record and follow up on all evacuees who choose to make their own accommodation arrangements.</p> <p><input type="checkbox"/> Arrange for temporary care of livestock (if possible) and the security of evacuated property.</p> <p><input type="checkbox"/> Establish and oversee compensation administration activities at the reception centre.</p> <ul style="list-style-type: none"><input type="checkbox"/> Reimburse evacuees for their immediate out-of-pocket expenses and log details on a Resident Compensation Log.<div><div>Form</div><div>B2</div></div> <p><input type="checkbox"/> Where possible, provide evacuees with information regarding their property, livestock, and the incident.</p> <p><input type="checkbox"/> Forward all media and incident inquiries to the Information Officer.</p> <p><input type="checkbox"/> Report all names of evacuees who have registered at the reception centre to the Public Safety Group Supervisor.</p> <p><input type="checkbox"/> Address resident concerns and forward them to the Public Safety Group Supervisor.</p>	<p>Roadblock personnel are responsible for maintaining assigned roadblock positions, air monitor readings and communication with transients.</p> <p><input type="checkbox"/> In conjunction with the Public Safety Group Supervisor determine the need for and location of roadblocks.</p> <p><input type="checkbox"/> Pickup and check roadblock kits.</p> <p><input type="checkbox"/> Proceed to roadblock locations.</p> <p><input type="checkbox"/> Confirm communication links.</p> <p><input type="checkbox"/> Establish roadblocks to secure the EPZ.</p> <p><input type="checkbox"/> Follow the scripts and procedures in the ERP. Refer to either Section 2: Roles & Responsibilities or Section 6: Forms.</p> <p><input type="checkbox"/> Monitor area for H₂S and / or LEL with personal monitors and document readings on the Air Monitoring Log.<div><div>Form</div><div>A5</div></div></p> <p><input type="checkbox"/> Report all H₂S and / or LEL reading changes / increases to the Public Safety Group Supervisor.</p> <p><input type="checkbox"/> For your own safety, ensure the Public Safety Group Supervisor is notified immediately if readings are approaching 10% LEL and / or 10 ppm H₂S.</p> <ul style="list-style-type: none"><input type="checkbox"/> Record all incoming and outgoing traffic, personnel, and equipment on the Roadblock Log.<div><div>Form</div><div>B4</div></div> <p><input type="checkbox"/> Forward information given to you by people passing through your location to the Public Safety Group Supervisor.</p> <p><input type="checkbox"/> Maintain communication with the Public Safety Group Supervisor.</p> <p><input type="checkbox"/> Maintain roadblock locations. Do not leave until requested to do so by the Public Safety Group Supervisor or until relieved by other Roadblock personnel.</p> <p><i>Note: See Section 2: Roles & Responsibilities for a media script for Roadblock and Rover personnel.</i></p>	<p>Rovers travel to assigned locations to locate the public and personally provide public safety instructions and assistance as required.</p> <p><input type="checkbox"/> Confirm resident contact lists are available.</p> <p><input type="checkbox"/> Confirm communication links.</p> <p><input type="checkbox"/> Know safe routes in and out of the EPZ.</p> <p><input type="checkbox"/> Search for residents and transients in the Emergency Response and Planning Zones.</p> <p><input type="checkbox"/> Check all buildings including barns, shops, sheds, etc.<div><div>Form</div><div>B3</div></div></p> <p><input type="checkbox"/> Assist, as required, with the notification, evacuation or sheltering of persons within the EPZ. Record all contact with residents using the Resident Contact Log.<div><div>Form</div><div>B5</div></div></p> <p><input type="checkbox"/> Post Evacuation Notices for residents that are not at their residence.<div><div>Form</div><div>A5</div></div></p> <p><input type="checkbox"/> Follow the scripts and procedures in the ERP. Refer to Section 2: Roles & Responsibilities or Section 6: Forms.</p> <p><input type="checkbox"/> Monitor area for H₂S and / or LEL with personal monitors and document readings on the Air Monitoring Log.</p> <p><input type="checkbox"/> Report all H₂S and / or LEL reading changes / increases to the Public Safety Group Supervisor.</p> <p><input type="checkbox"/> For your own safety, ensure the Public Safety Group Supervisor is notified immediately if readings are approaching 10% LEL or 10 ppm H₂S.</p> <p><input type="checkbox"/> Report any suspicious behaviour to the Public Safety Group Supervisor who will notify the police as required.</p> <p><input type="checkbox"/> Maintain communication with the Public Safety Group Supervisor.</p> <p><i>Note: See Section 2: Roles & Responsibilities for a media script for Roadblock and Rover personnel.</i></p>	<p>Telephoners are responsible for the notification of impacted residences and businesses to provide public safety instructions.</p> <p><input type="checkbox"/> Confirm resident contact lists are available.</p> <p><input type="checkbox"/> Confirm communication links.</p> <p><input type="checkbox"/> In conjunction with the Public Safety Group Supervisor, determine who needs to be notified (residents, businesses, area users, etc.).<div><div>Form</div><div>B6</div><div>Form</div><div>B7</div><div>Form</div><div>B8</div></div></p> <p><input type="checkbox"/> 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.</p> <p><input type="checkbox"/> Contact special needs residents at a Level 1 Emergency and provide them with the option to evacuate.</p> <p><input type="checkbox"/> Contact the other residents and area users in the EPZ and advise them to evacuate or shelter.</p> <p><input type="checkbox"/> Contact the schools / school buses to make arrangements for school age children (if applicable).</p> <ul style="list-style-type: none"><input type="checkbox"/> Advise that buses in the affected area leave immediately and that buses should not enter the area.<input type="checkbox"/> Request a school administrator for the reception centre to assist in managing the children and releasing them to their guardians.<div><div>Form</div><div>B3</div></div> <p><input type="checkbox"/> 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.</p>
Located at the Incident Command Post (ICP) or the Regional Emergency Operations Centre (REOC).	Location will be assigned.	Location will be the reception centre.	Location will be assigned.	Location will be assigned.	Location will be Incident Command Post (ICP) or Regional Emergency Operations Centre (REOC).

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

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

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Air Monitor Roles

- ❑ Obtain and check equipment and information (maps, forms, communications, reports, monitors, safety, and breathing equipment).
- ❑ Confirm communication links.
- ❑ Monitor closest downwind public location or residence.
- ❑ Monitor environment for adverse effects.
- ❑ Record all readings on the Air Monitoring Log provided.
- ❑ Report all readings at established intervals to the **Public Safety Group Supervisor**.
- ❑ For your own safety, ensure the **Public Safety Group Supervisor** is notified immediately if readings are approaching the following levels: 10% LEL or 10 ppm H₂S.
- ❑ Prepare Mobile Monitoring Plan.
- ❑ Document activities using the ICS 214 Activity Log.
- ❑ Assist with post-incident activities.
- ❑ Monitor H₂S and LEL concentrations along the edge of the EPZ to determine if sheltering and/or evacuation criteria has been met beyond the EPZ.

Form

A5

Form

ICS 214

- ☐ Obtain and check equipment and information (maps, forms, communications, reports, monitors, safety, and breathing equipment).
- ☐ Confirm communication links.
- ☐ Monitor closest downwind public location or residence.
- ☐ Monitor environment for adverse effects.
- ☐ Record all readings on the Air Monitoring Log provided.
- ☐ Report all readings at established intervals to the **Public Safety Group Supervisor**.
- ☐ For your own safety, ensure the **Public Safety Group Supervisor** is notified immediately if readings are approaching the following levels: 10% LEL or 10 ppm H₂S.
- ☐ Prepare Mobile Monitoring Plan.
- ☐ Document activities using the ICS 214 Activity Log.
- ☐ Assist with post-incident activities.
- ☐ Monitor H₂S and LEL concentrations along the edge of the EPZ to determine if sheltering and/or evacuation criteria has been met beyond the EPZ.

Form
A5

Form
ICS
214

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.

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

- ❑ **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

<p>Sour Gas Release – Manned Operations</p> <ul style="list-style-type: none">• Critical / Special Sour Wells & EPZ includes a portion of urban density development or urban centre:<ul style="list-style-type: none">• 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. <p>The licensee must also:</p> <ul style="list-style-type: none">• 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. <p>• 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:</p> <p>The licensee must:</p> <ul style="list-style-type: none">• 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. <p>Downgrading Level of Emergency</p> <ul style="list-style-type: none">• The decision to downgrade an incident will be based on the air monitoring results.	<p>Sour Gas Release – Unmanned Operations</p> <ul style="list-style-type: none">• 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. <p>Air quality monitoring occurs downwind, with priority being directed to the nearest unevacuated residence or area where people may be present.</p> <p>The licensee is expected to provide monitored H₂S and SO₂ 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.</p> <p>HVP Product Release</p> <ul style="list-style-type: none">• 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.
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- **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.

- 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.

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

- 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.

The licensee is expected to provide monitored H₂S and SO₂ 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.

- 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.

Air Monitoring Log - Example

Form A5

Time	Location of Samples	H ₂ S (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 ₂ S 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.

[illegible]

* Estimate meteorological conditions where accurate readings are not available.

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.

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
- ☐ ICS 214 Activity Log

Form
A5

Form
ICS
214

Record information on the following forms located within this Section:

- ☐ Air Monitoring Log
☐ ICS 214 Activity Log

Form
A5

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

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: _____

[illegible]

ICS 214 Activity Log

[illegible]

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:

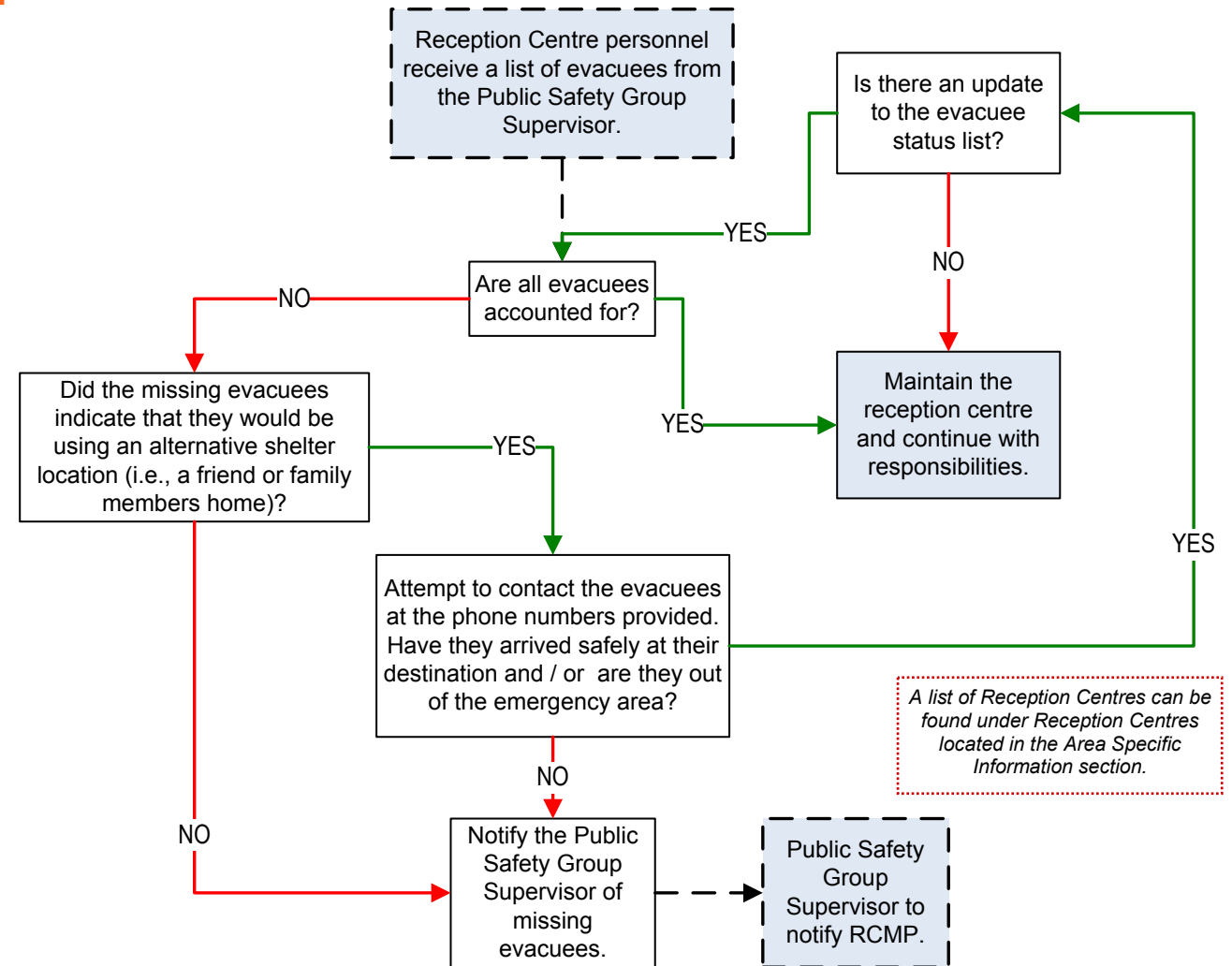
- ☐ Have a conference room of some type where a large number of people can gather.
- ☐ Have conferencing services including fax machine, internet access, and phone access.
- ☐ Be large enough to house all of the evacuees.
- ☐ Be outside of the hazard area.
- ☐ Allow residents to evacuate to the Reception 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 Registration Log - Example

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 safely then left to stay at a friend's house in Red Deer.
H131-B	Jane	Doe	3	3	19:12	19:28	555-555-5555	Jane and her 2 children arrived safely then left to stay with her mother in Bentley.
F122-A	James	Doe	5	3	19:20		555-555-5555	James, his wife and 1 child arrived safely. The other two children are away on a school trip. They will stay at the reception centre for the night.

Media Statement

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

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

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

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

Reception Centre Reps report to the **Public Safety Group Supervisor**.

Name: _____

Phone Number: _____

Reception Centre

Location: _____

Phone Number: _____

Wind Direction: _____

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 H₂S and / or LEL with personal monitors and document readings on the Air Monitoring Log. Form A5
- ☐ Report all reading changes / increases to the **Public Safety Group Supervisor**.
- ☐ For your own safety, ensure the **Public Safety Group Supervisor** is notified immediately if readings are approaching 10% LEL and / or 10 ppm H₂S.
- ☐ Move location of Roadblock immediately if readings are approaching 10% LEL and / or 10 ppm H₂S.
- ☐ Record all incoming and outgoing traffic, personnel, and equipment on the Roadblock Log. Form B4
- ☐ Forward information given to you by people passing through your location to the **Public Safety Group Supervisor**. Form ICS 214
- ☐ Document activities using the ICS 214 Activity Log.
- ☐ 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 (H₂S, CO, O₂, LEL)
 - ☐ Portable rotating emergency light
 - ☐ SCBA
 - ☐ Hand-held stop sign with reflective tape
 - ☐ Waterproof bag
- Optional**
- ☐ Caution tape
 - ☐ Rain suit
 - ☐ Road barrier

Tips

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

Choosing a Roadblock

1.

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

Before Departure

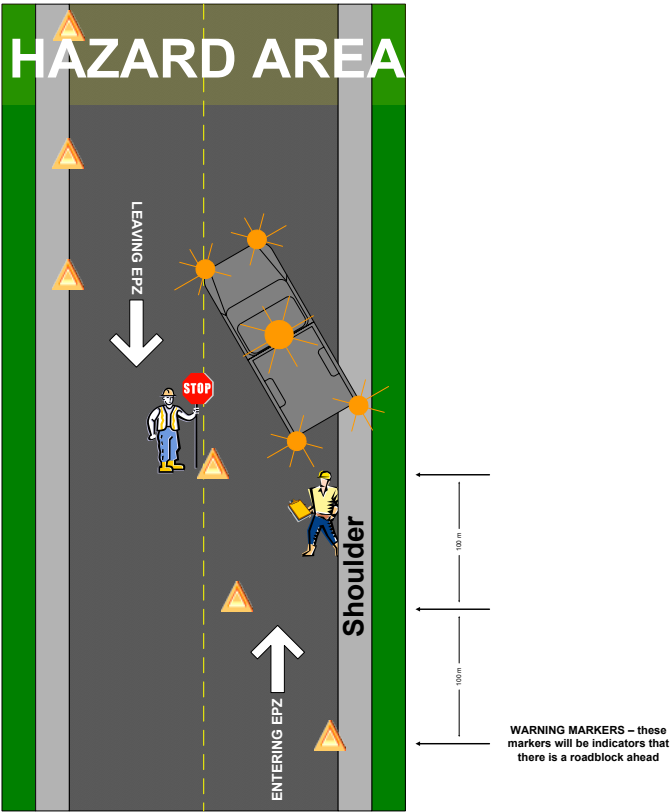
2.

- ☐ 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 H₂S and / or LEL is functioning properly.
- ☐ Check all communications devices.
- ☐ Check that the red signaling baton flashlight is working and has spare batteries.
- ☐ Confirm that you have enough copies of the Roadblock Log form.
- ☐ Confirm the location of the roadblock with the **Public Safety Group Supervisor** and make sure you have a safe route to the assigned location that does not cross the hazardous area.

Setting up a Roadblock

3.

- ☐ 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 H₂S 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 H₂S 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.



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**

How to Stop Traffic

4.

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

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

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

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

Roadblock Script

5a.

"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.

Media Statement

5b.

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

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

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

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

Be courteous but firm.

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

Record Information

6.

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.

B3 Resident Contact Log

Date: _____ Responder Name: _____

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

[illegible]

B4 Roadblock Log

Date: _____ Responder Name: _____

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

[illegible]

ICS 214 Activity Log

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

Personnel Assigned		
Name	ICS Position	Location

[illegible]

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.

☐ Post Evacuation Notices for residents that are not at their residence.

☐ Follow the scripts and procedures in the ERP.

☐ Monitor area for H₂S and / or LEL with personal monitors and document readings on the Air Monitoring Log.

☐ 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 H₂S.

☐ 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.

☐ Maintain communication with the **Public Safety Group Supervisor**.

☐ Assist with post-incident activities.

Form B3

Form B5

Form A5

Form ICS 214

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

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

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 H₂S and / or LEL is functioning properly.

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

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

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

B3 Resident Contact Log

Date: _____ Responder Name: _____

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

[illegible]

ICS 214 Activity Log

[illegible]

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

Form
B6

Form
B7

Form
B8

Form
B3

Form
ICS
214

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.

Who to Contact

1.

- ☐ 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 _____ of _____.
Is this the _____ residence at _____?
_____ is responding to a (potential) emergency at _____ 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 _____?

☐ 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? _____

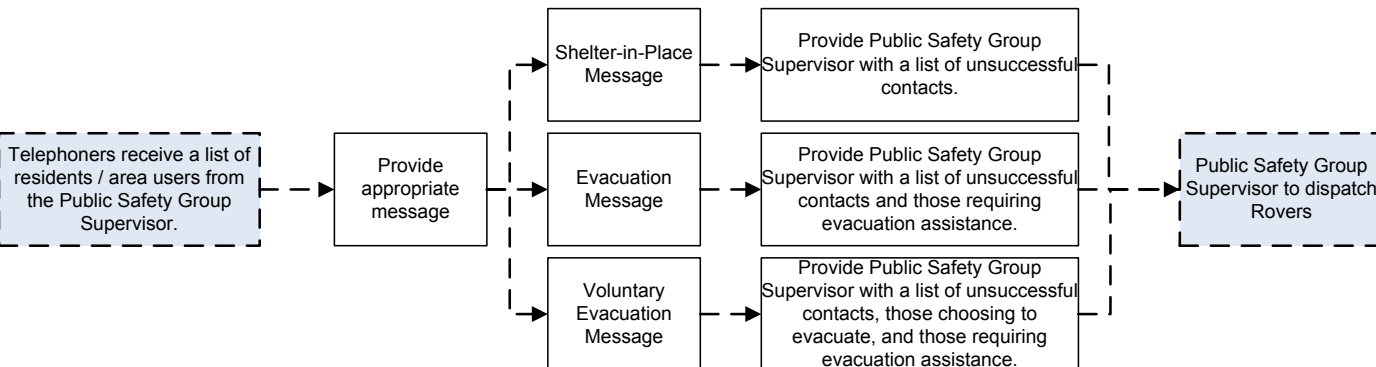
If you have any urgent questions, please contact _____ at _____.

Thank you for your cooperation.

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

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

Telephoner Communication Flow



2b.

Evacuation Phone Message

Hello, this is _____ of _____.
Is this the _____ residence at _____?
_____ is responding to a (potential) emergency at _____ 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 _____ 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 _____ at _____.

Thank you for your cooperation.

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

3.

Record Information

Record information on the following forms located within this section:

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

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: _____

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

B6 Early Notification / Voluntary Evacuation Phone Message

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

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

[illegible]

Initial Response:

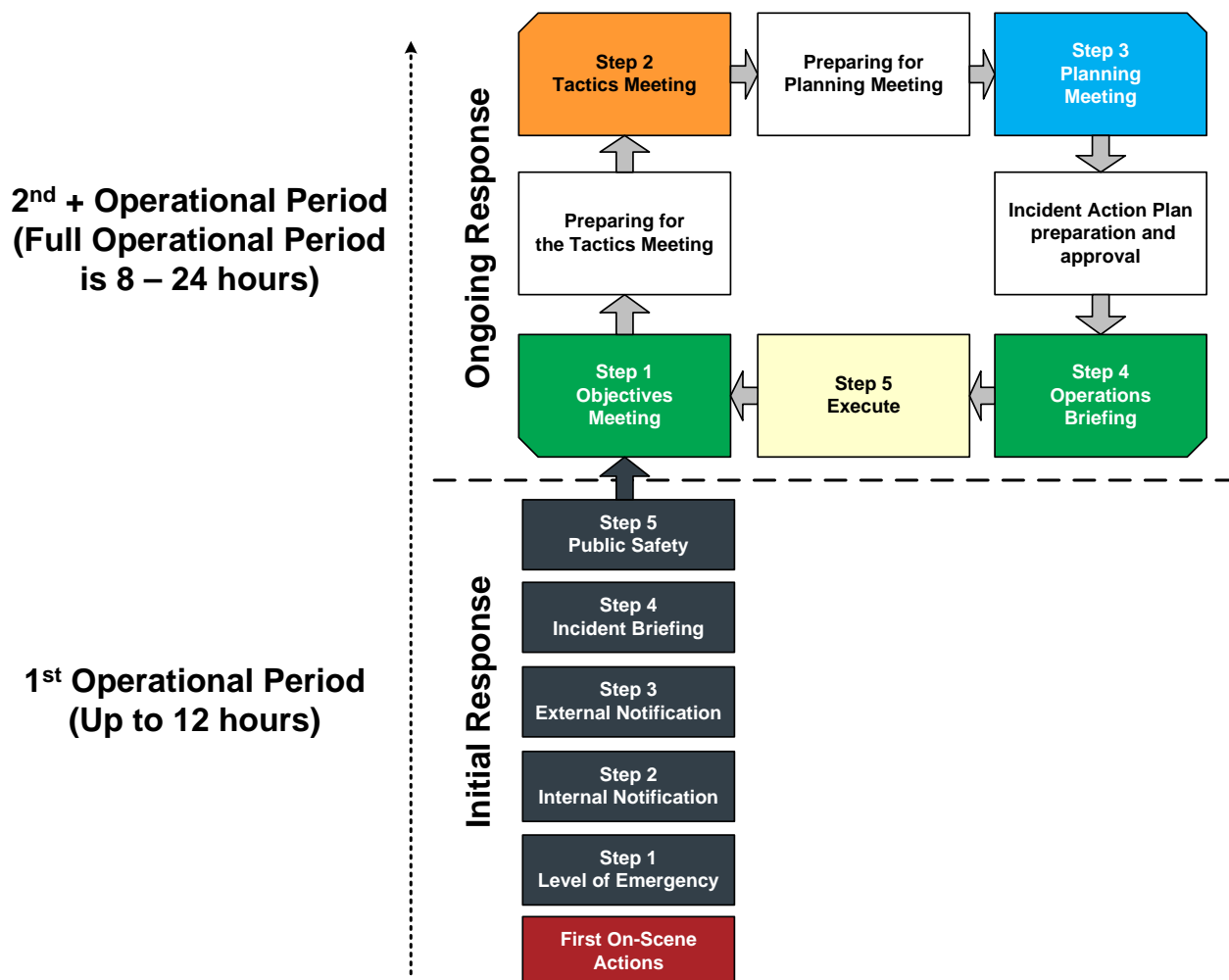
All incidents begin with the initial response (reactive phase) during the first operational period. At the onset of an emergency response an Initial Emergency Report (A1) Form is completed to determine the severity of the emergency and extent of the response. 95% of emergency responses begin and end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

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



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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.

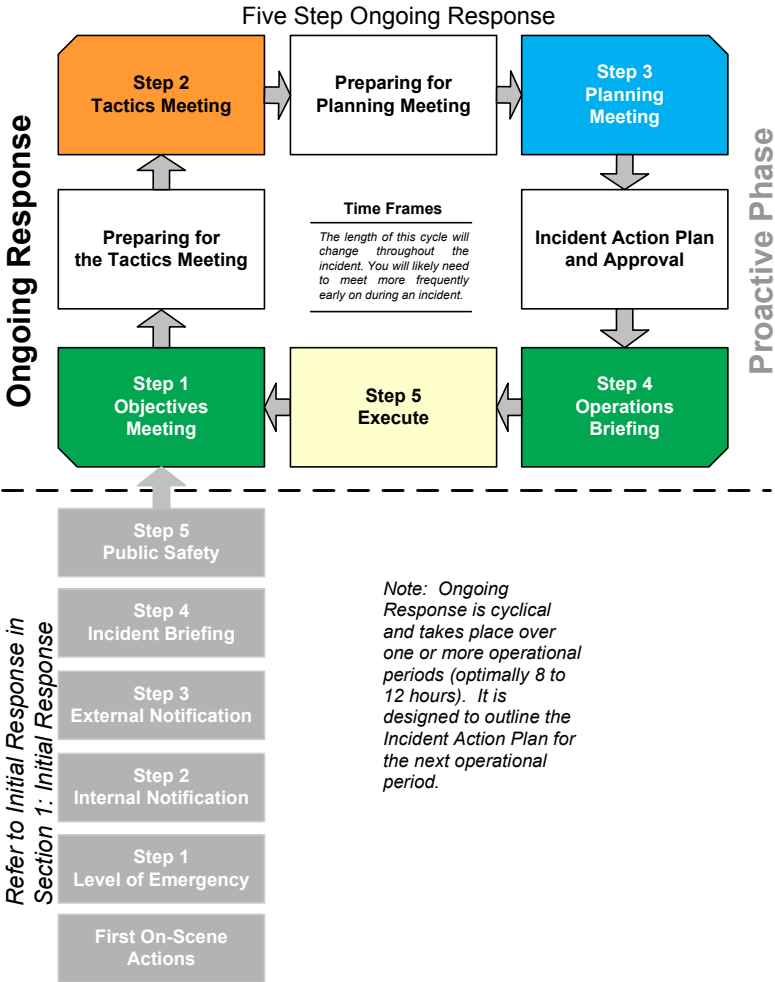
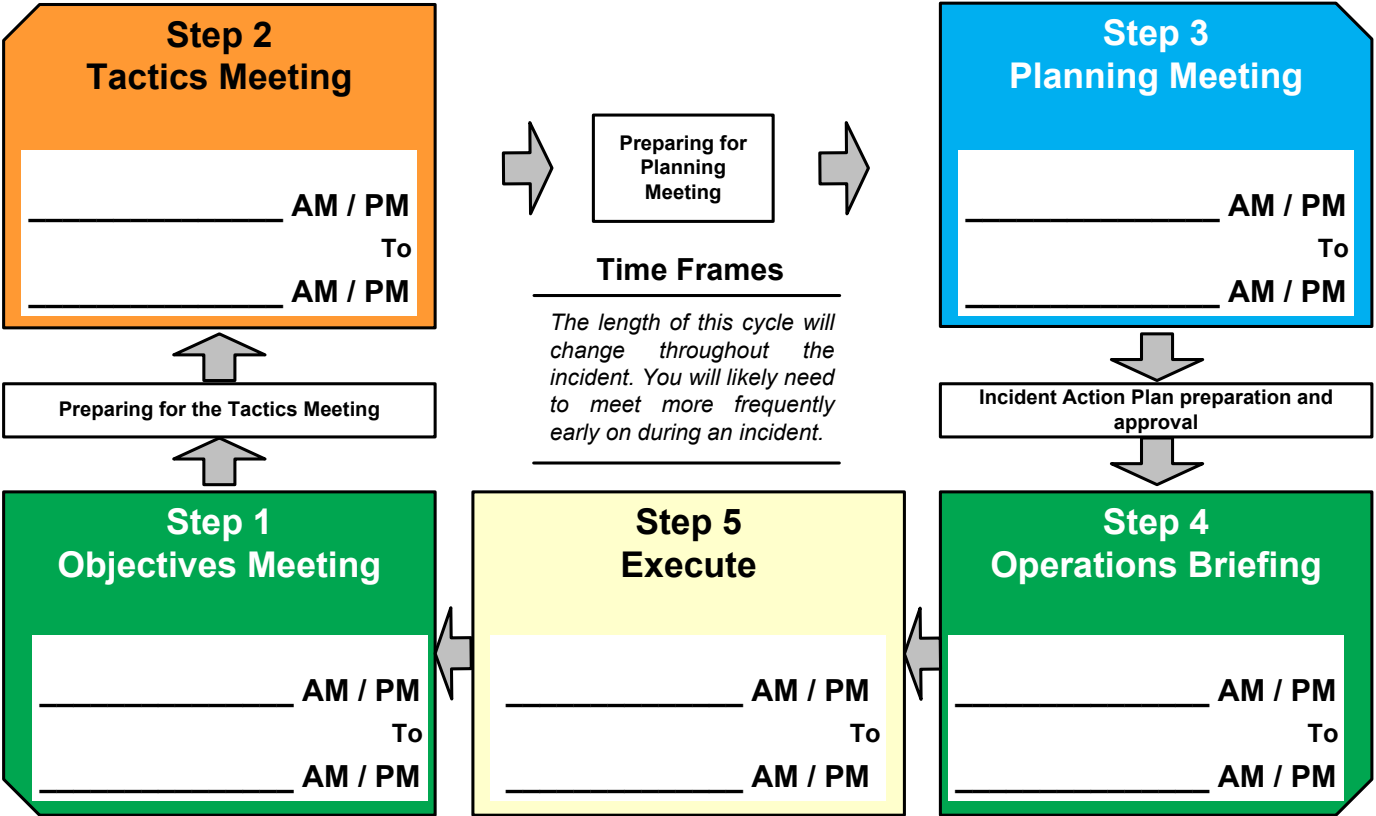
Document all actions, decisions, and conversations.

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
Guide



Owner: Incident Commander	Date:	Time:
Roles below will attend only if designated and available		
Attendees:		
<input type="checkbox"/> <i>Incident Commander:</i>	<input type="checkbox"/> <i>Planning Section Chief:</i>	
<input type="checkbox"/> <i>Deputy Incident Commander:</i>	<input type="checkbox"/> <i>Logistics Section Chief:</i>	
<input type="checkbox"/> <i>Operations Section Chief:</i>	<input type="checkbox"/> <i>Finance/Admin. Section Chief:</i>	
<input type="checkbox"/> <i>Planning Section Chief:</i>	<input type="checkbox"/> <i>Safety Officer:</i>	
<input type="checkbox"/> <i>Liaison Officer:</i>	<input type="checkbox"/> <i>Other:</i>	
<input type="checkbox"/> <i>Information Officer:</i>	<input type="checkbox"/> <i>Other:</i>	
Summary:		
<p>The objectives of this meeting are to:</p> <ul style="list-style-type: none"> • 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:		
<input type="checkbox"/> Status Update and review the ICS 201 Incident Briefing form.		
<input type="checkbox"/> Determine incident priorities. Reference the PPOST methodology.		
<input type="checkbox"/> Establish an incident organization that is capable of meeting initial and long-term challenges required to mitigate the incident.		
<input type="checkbox"/> Determine the incident response objectives and complete and ICS 202 Incident Objectives form. They must be SMART (Specific, Measurable, Attainable, Realistic, & Time Sensitive).		
<input type="checkbox"/> Identify initial staffing requirements and begin filling out the ICS 207 Incident Organizational Chart.		
<input type="checkbox"/> Identify and select incident support facilities.		
<input type="checkbox"/> Review the incident objectives for the next operational period so your management team can begin work on the IAP.		
<input type="checkbox"/> Document the incident status to relay to all responding personnel.		
Key Points:		
<ul style="list-style-type: none"> • 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:

Owner: Operations Section Chief	Date:	Time:
Roles below will attend only if designated and available		
Attendees:		
<input type="checkbox"/> Incident Commander:	<input type="checkbox"/> Planning Section Chief:	
<input type="checkbox"/> Deputy Incident Commander:	<input type="checkbox"/> Logistics Section Chief:	
<input type="checkbox"/> Operations Section Chief:	<input type="checkbox"/> Finance/Admin. Section Chief:	
<input type="checkbox"/> Planning Section Chief:	<input type="checkbox"/> Safety Officer:	
<input type="checkbox"/> Liaison Officer:	<input type="checkbox"/> Other:	
<input type="checkbox"/> Information Officer:	<input type="checkbox"/> Other:	
Summary:		
<p>The objectives of this meeting are to:</p> <ul style="list-style-type: none"> • 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:		
<input type="checkbox"/> Review ICS 209 Incident Status Summary.		
<input type="checkbox"/> Review incident objectives.		
<input type="checkbox"/> Define tactics to complete objectives set out during the Objectives Meeting.		
<input type="checkbox"/> Provide an operational update and identify tactics to deal with incident.		
<input type="checkbox"/> Identify roles and responsibilities that have to be performed to implement tactics.		
<input type="checkbox"/> Build on already established ICS 207 Incident Organization Chart, check span-of-control, and match up with ICS 215 assignments.		
<p>Complete the Operational Planning Worksheet, ICS 215 (Utilize one form for every established objective).</p> <ul style="list-style-type: none"> <input type="checkbox"/> Identify work assignments <input type="checkbox"/> Identify resources requirements to achieve each work assignment <input type="checkbox"/> Identify overhead staffing needs to support each work assignment <input type="checkbox"/> Identify specialized equipment and supply needs for each work assignment <input type="checkbox"/> Specify reporting times and location for personnel 		
<p>Complete the Incident Action Plan Safety Analysis, ICS 215A.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Identify potential hazard types <input type="checkbox"/> Identify mitigations for associated hazard types 		
<input type="checkbox"/> Identify support facilities and locations.		
Key Points:		
<ul style="list-style-type: none"> • 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:

Owner: Planning Section Chief	Date:	Time:
Roles below will attend only if designated and available		
Attendees:		
<input type="checkbox"/> Incident Commander:	<input type="checkbox"/> Planning Section Chief:	
<input type="checkbox"/> Deputy Incident Commander:	<input type="checkbox"/> Logistics Section Chief:	
<input type="checkbox"/> Operations Section Chief:	<input type="checkbox"/> Finance/Admin. Section Chief:	
<input type="checkbox"/> Planning Section Chief:	<input type="checkbox"/> Safety Officer:	
<input type="checkbox"/> Liaison Officer:	<input type="checkbox"/> Other:	
<input type="checkbox"/> Information Officer:	<input type="checkbox"/> Other:	
Summary:		
<p>The objectives of this meeting are to:</p> <ul style="list-style-type: none"> 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:		
<input type="checkbox"/> Review Incident Action Plan forms (ICS 202, 207, 209, 215, and 215A).		
<input type="checkbox"/> Review Command's incident objectives, priorities, decisions, and direction.		
<input type="checkbox"/> Provide briefing on current situation, resources at risk, weather forecast, and incident projections.		
<input type="checkbox"/> Operations Section Chief provides briefing on: <ul style="list-style-type: none"> <input type="checkbox"/> Current operations. <input type="checkbox"/> An overview on the proposed plan including strategy, tactics or work assignments, resource commitment, contingencies, organization structure, and needed support facilities. 		
<input type="checkbox"/> Review the proposed plan to ensure that Command direction, priorities, and operational objectives are met.		
<input type="checkbox"/> Delegate assignments and deadlines to appropriate staff members to assure timely and effective IAP development.		
Key Points:		
<ul style="list-style-type: none"> 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:

Owner: Incident Commander	Date:	Time:
Roles below will attend only if designated and available		
Attendees:		
<input type="checkbox"/> Incident Commander:	<input type="checkbox"/> On-Site Group Supervisor	
<input type="checkbox"/> Deputy Incident Commander:	<input type="checkbox"/> Public Safety Group Supervisor	
<input type="checkbox"/> Operations Section Chief:	<input type="checkbox"/> Air Monitor Team Lead	
<input type="checkbox"/> Planning Section Chief:	<input type="checkbox"/> Roadblock Team Lead	
<input type="checkbox"/> Liaison Officer:	<input type="checkbox"/> Rover Team Lead	
<input type="checkbox"/> Information Officer:	<input type="checkbox"/> Telephoner Team Lead	
<input type="checkbox"/> Planning Section Chief:	<input type="checkbox"/> Reception Centre Representatives	
<input type="checkbox"/> Logistics Section Chief:	<input type="checkbox"/> Other:	
<input type="checkbox"/> Finance/Admin. Section Chief:	<input type="checkbox"/> Other:	
<input type="checkbox"/> Safety Officer:	<input type="checkbox"/> Other:	
<input type="checkbox"/> Staging Area Manager:	<input type="checkbox"/> Other:	
Summary:		
<p>The objectives of this meeting are to:</p> <ul style="list-style-type: none"> • 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:		
<input type="checkbox"/> Planning Section Chief briefly walks through the IAP components and makes changes as needed.		
<input type="checkbox"/> Operations Section Chief conducts roll call of the Operation Section Supervisors and provides a briefing on emergency response.		
<input type="checkbox"/> Operations Section Chief briefs supervisory personnel on their assignments along with clarification on any of their issues and concerns.		
<input type="checkbox"/> Safety Officer covers major safety issues.		
<input type="checkbox"/> Logistics Section Chief covers logistical support of operations (communications, supply, transportation, medical, etc).		
<input type="checkbox"/> Finance / Admin. Section Chief covers time & cost tracking, procurement, and compensation process.		
<input type="checkbox"/> General Staff to cover issues applicable to Operations Section personnel.		
Key Points:		
<ul style="list-style-type: none"> • 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:

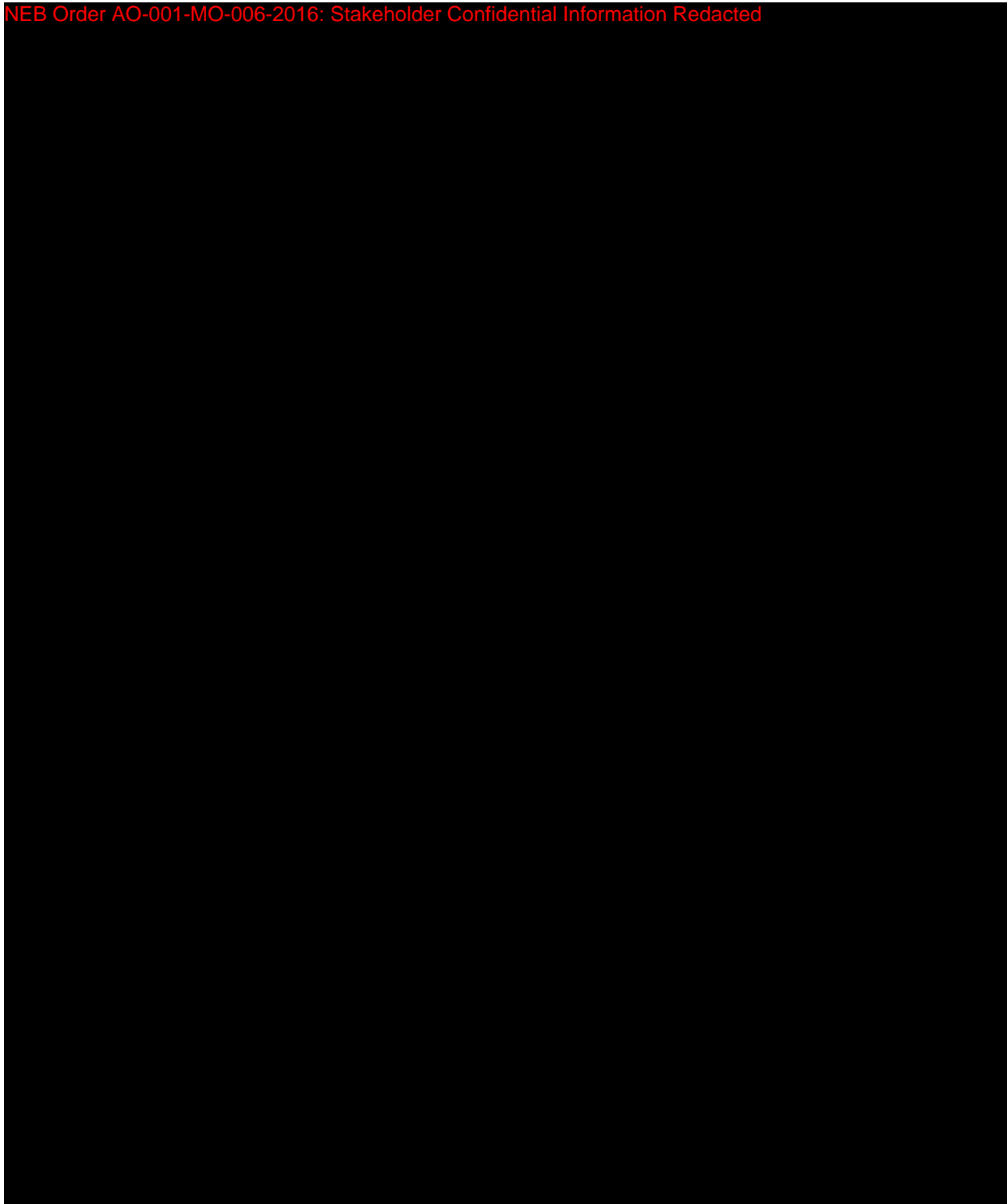


600, 435 - 4 Avenue SW, Calgary, AB T2P 3A8

Head Office: 403-294-9199

24 Hour Emergency: 866-556-7838

NEB Order AO-001-MO-006-2016: Stakeholder Confidential Information Redacted



Section 3: Communication & 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 Incident Commander in conjunction with the applicable regulatory agency. The Incident Commander will assign a Media Spokesperson to deliver the approved messages.

Media at the field level will be coordinated by the Information Officer with the Support of the Incident Commander. 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 Incident Commander and should be issued only by the designated 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 Information Officer or Incident Commander will identify any and all media spokespersons. The Information Officer or Incident Commander may serve as the on-site Media. 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. The Information Officer will, if required by the 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 Incident Commander. 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

Communication plans for contacting affected parties must be in place:

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

Information Disseminated to the Public

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

- **To the affected public at the onset of the incident:**
 - Type and status of the incident.
 - 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.

Information Disseminated to the Public, continued

- **To the general public during the incident:**
 - Type and status of the incident.
 - Location of the incident.
 - Areas impacted by the incident.
 - Description of the products involved.
 - Contacts for additional information.
 - Actions being taken to respond to the situation, including anticipated time period.
- **To the evacuated or sheltered public post-incident:**
 - Status of recovery.
 - Financial reimbursement information.
 - Contacts for additional information.

Preparing a Preliminary Media Statement

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

The preliminary statement shall contain:

- What, when, and where the incident occurred:
 - State the general nature and description of the incident.
 - Associate the incident location to the nearest major centre and the exact time the incident began or was discovered.
 - For example: At 11:00 am, today, September 13th, 2012, a warehouse at our battery location northeast of Wainwright caught on fire.
- Injuries / fatalities / damages:
 - Clearly distinguish the severity of the injuries sustained and if any fatalities occurred.
 - State the number of people currently receiving treatment.
 - 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:

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

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Section 4: Emergency Response Procedures

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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 the Shelter-in-Place Phone Message script to be used when contacting residents. Residents advised to shelter-in-place will be notified if additional measures are required, and when it is “all-clear”.

Evacuation

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

Evacuation is a viable public protection measure in circumstances when:

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

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 (H₂S) results in the produced sulphur dioxide (SO₂) 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

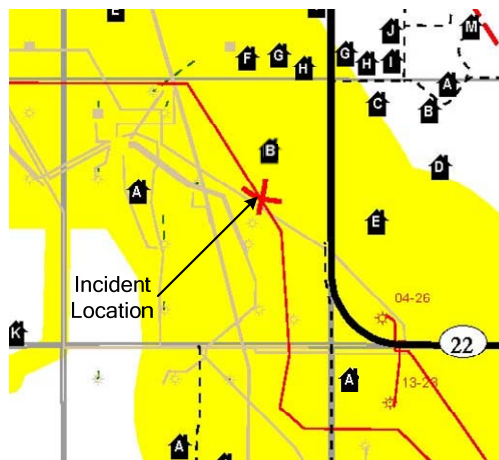
The company should receive authorization from local authorities or the RCMP before establishing roadblocks on public roads. The company must contact the RCMP and the transportation authority to have one-, two- or three-digit highways closed. However, if the safety of the public is in jeopardy, the company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

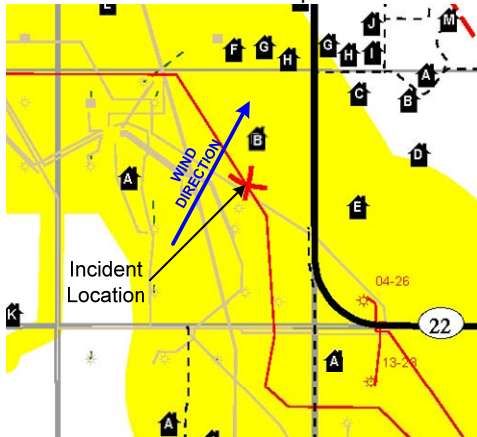
- a) Labeled on the map
- b) In the site specific tables
- c) As the yellow area on the map

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

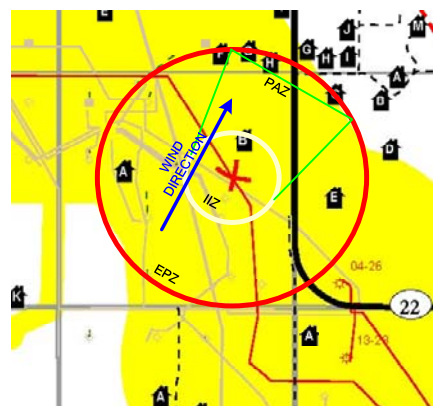
Look for wind direction indications such as flags, windsocks, direction of smoke, etc..

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

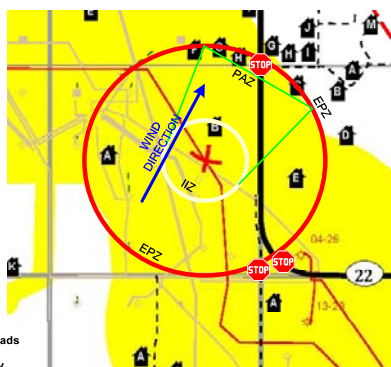


5. Isolate the hazard area with roadblocks

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.

Legend
 - - - - - Other Roads
 — Main Hwy

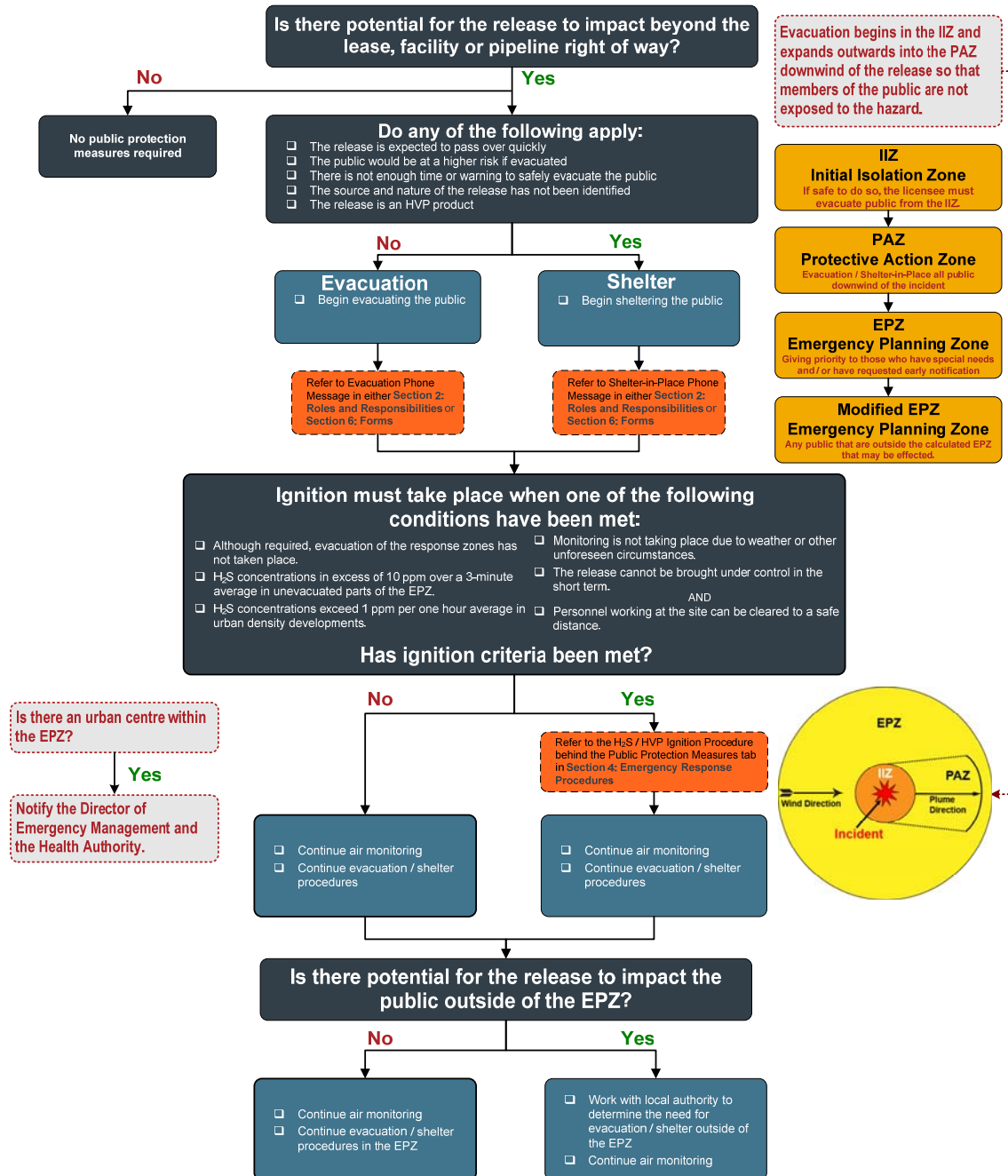


6. Following the appropriate provincial public protection measures chart, initiate public safety activities.

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.

Public Protection Measures, continued



Evacuation Requirements

Revised June 2018

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 H₂S and SO₂. In the absence of monitored readings, responders should advise the residents to Shelter-in-Place.

H ₂ S Requirements		SO ₂ Requirements	
1 to 10 ppm (3 minute average)	Individuals who requested notification so that they can voluntarily evacuate before any exposure to H ₂ S must be notified.	0.3 ppm (24-hour average)	Immediate evacuation of the area must take place.
Above 10 ppm (3 minute average)	Local conditions must be assessed and all persons must be advised to evacuate and/or shelter	1 ppm (3-hour average)	
* If monitored levels over the 3 minute interval are declining (i.e., three readings show a decline from 15 ppm to 10 ppm to 8 ppm over 3 minutes), evacuation may not be necessary even though the average over the 3 minute interval would be 11 ppm. Licensees should use proper judgement in determining if evacuation is required.		5 ppm (15-minute average)	

Pre-Ignition Considerations – On-Site Group Supervisor

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

Hydrogen Sulphide (H₂S)

- ☐ 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 H₂S concentrations in excess of 10 ppm over a 3-minute average in unevacuated parts of the EPZ.
- ☐ H₂S 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

No

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

Yes

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

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

H₂S / HVP Ignition Procedure

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.

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 H₂S Gas detector
- 4 Self contained breathing apparatus (positive pressure) with 30 minute air supply, includes 2 spare bottles
- 1 Radio equipped vehicle

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

Yes

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.

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.

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Alberta Petroleum Industry Release Reporting Requirements

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

Agency	Reportable Spills	Report Type	Report to
Alberta Energy Regulator (AER) - Oil & Gas Regulation	1) Any release that has caused, is causing, or may cause an adverse affect* 2) Any pipeline release regardless of volume 3) Any release greater than 2m ³ on-site 4) Any release off-site 5) Any release into a water body (as defined in the <i>Water Act</i>) or a watercourse, groundwater, or surface water (as stated in the <i>Release Reporting Regulation</i>) 6) Any release of substance listed as toxic, prohibited or restricted by CEPA 7) Any release that meets or exceeds the reporting threshold in the Environment Reporting Requirements column in the Release Reporting Thresholds table on the following page. Note: The AER Table of Reportable Releases found below further breaks down release types by industry activity.	Verbal	AER 24 Hour Number 800-222-6514
Alberta Energy Regulator (AER) - Environment Regulation		Written	Next business day following verbal report of spill, the AER forwards a copy of the Release Report form to the company to complete. The form is to be submitted with supporting documentation within 7 days to the local field centre (if the release caused adverse affect)*
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	AER 24 Hour Number 800-222-6514
		Written	Within 30 days
Alberta Transportation - Environmental and Dangerous Goods Emergencies (EDGE)	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 Environmental and Dangerous Goods Emergencies (EDGE) <i>1-800-272-9600</i>
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	AER 24 Hour Number 800-222-6514
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	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

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

Lead Agency Contact Numbers	
Alberta	
Alberta Energy Regulator (AER) Field Offices	
Spill Reporting Line	800-222-6514
Canada	
Alberta Transportation - Environmental and Dangerous Goods Emergencies (EDGE)	
Province Wide	800-272-9600
CANUTEC	
All Provinces	888-CAN-UTEC (888-226-8832) 613-996-6666
Western Canadian Spill Services (WCSS)	
Western Canada	866-541-8888
Canada Energy Regulator / Transportation Safety Board of Canada	
Incident Reporting Line	819-997-7887

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

* Definition of Adverse Affect

Is defined by the Environmental Protection Act as “impairment of or damage to the environment, human health or safety, or property.”

For the purpose of reporting, the industry shall use the following guidelines to assess whether the release may cause, is causing or has caused an adverse affect.

- Any third party impact (off-lease), e.g. crop damage, vegetation damage or livestock impact
- Unrecovered spilled substance likely to contaminate surface or groundwater
- Contaminated groundwater and / or surface water
- Release or spill has potential for offsite odour complaints
- Toxic or flammable release to air going off-site

See following page for spill / release quotas.

Alberta spill reporting
document updated
February 2020

Alberta Petroleum Industry

Release Reporting Requirements

All spills exceeding the spill/release quotas listed in the table on the following page MUST be reported immediately to the appropriate regulatory agency.				
Chemical Class	Substance / Example	T.D.G. Reporting Requirements		Alberta (AER) Reporting Requirements
		Road, Rail or Marine	Loss or Theft	
Spilled Liquid Substances	Hydraulic Oil	No TDG Reporting Requirements		Refined products follow TDG requirements
	Methanol	See Class 3 & 6.1		
	Natural Gas	See Class 2.1		30,000m³
	Crude Oil / Emulsion (Unrefined)	See Class 3		> 2m³ on-site
	Produced / Salt Water (Unrefined)	No TDG Reporting Requirements		Any release off-site (Report to local AER office and notify landowner)
	Condensate (Unrefined)	See Class 3		
	Ammonia	No TDG Reporting Requirements		Any release that has caused, is causing, or may cause an adverse effect
	Glycol			
	Drilling Waste (Unrefined)			Any release into a water body, or a watercourse, groundwater, or surface water
	Oilfield Waste (Unrefined)			
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 ₂ S Methane Propane Butane Natural Gas	Any quantity	Total quantity of 450 kg or more	All releases which could pose a danger, or any sustained release of 10 minutes or more
Class 2.2 Non-Flammable Gases	Compressed Air O ₂ N ₂ CO ₂		No TDG Reporting Requirements	
Class 2.3 Toxic Gases (poisonous or corrosive)	H ₂ S SO ₂ Hydrogen Cyanide Nitric Acid Anhydrous Ammonia		Any quantity	
Class 3 Flammable Liquids	Bitumen (Unrefined) Gasoline Diesel Methanol Demulsifiers Scale Inhibitors Lube Oil	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	Any release into a water body, or a watercourse, groundwater, or surface water
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	
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	
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 Chloride Mercuric Oxide Methanol Toxic Pesticides		Any quantity of Packing Group I	> 2m³ on-site Any release off-site (Report to local AER office and notify landowner) Any release that has caused, is causing, or may cause an adverse effect Any release into a water body, or a watercourse, groundwater, or surface water
Class 6.2 Infectious Substances	Infectious Substances affecting Humans / Animals	Any quantity of Category A or B	Any quantity	All releases
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	Discharge or radiation level exceeding 10 mSv/h at package surface & 200 u Sv/h, 1m from the package surface
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	> 2m³ on-site Any release off-site (Report to local AER office and notify landowner) Any release that has caused, is causing, or may cause an adverse effect Any release into a water body, or a watercourse, groundwater, or surface water
Class 9 Miscellaneous Products, Substances & Organisms, Environmentally Hazardous Substances	P.C.B. Asbestos	30 L or 30 kg of Packing Group II or III, or without Packing Group	No TDG Reporting Requirements	25 kg or 25 L
Other	Any well flowing uncontrolled, any burning of effluent from a well or facility and any fire where loss exceeds 2m³ of oil, or 30,000m³ of gas where damage to well head occurs			

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 Canada (ERAC) Plan. 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 H₂S 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
Saskatchewan	Saskatchewan Oil Spill Cooperative or Western Canadian Spill Services (WCSS)	See Website or 866-541-8888
Manitoba	MEP Environmental Products or Manitoba Producers Oil Spill Cooperative	204-632-4118 204-748-3095

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 is 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

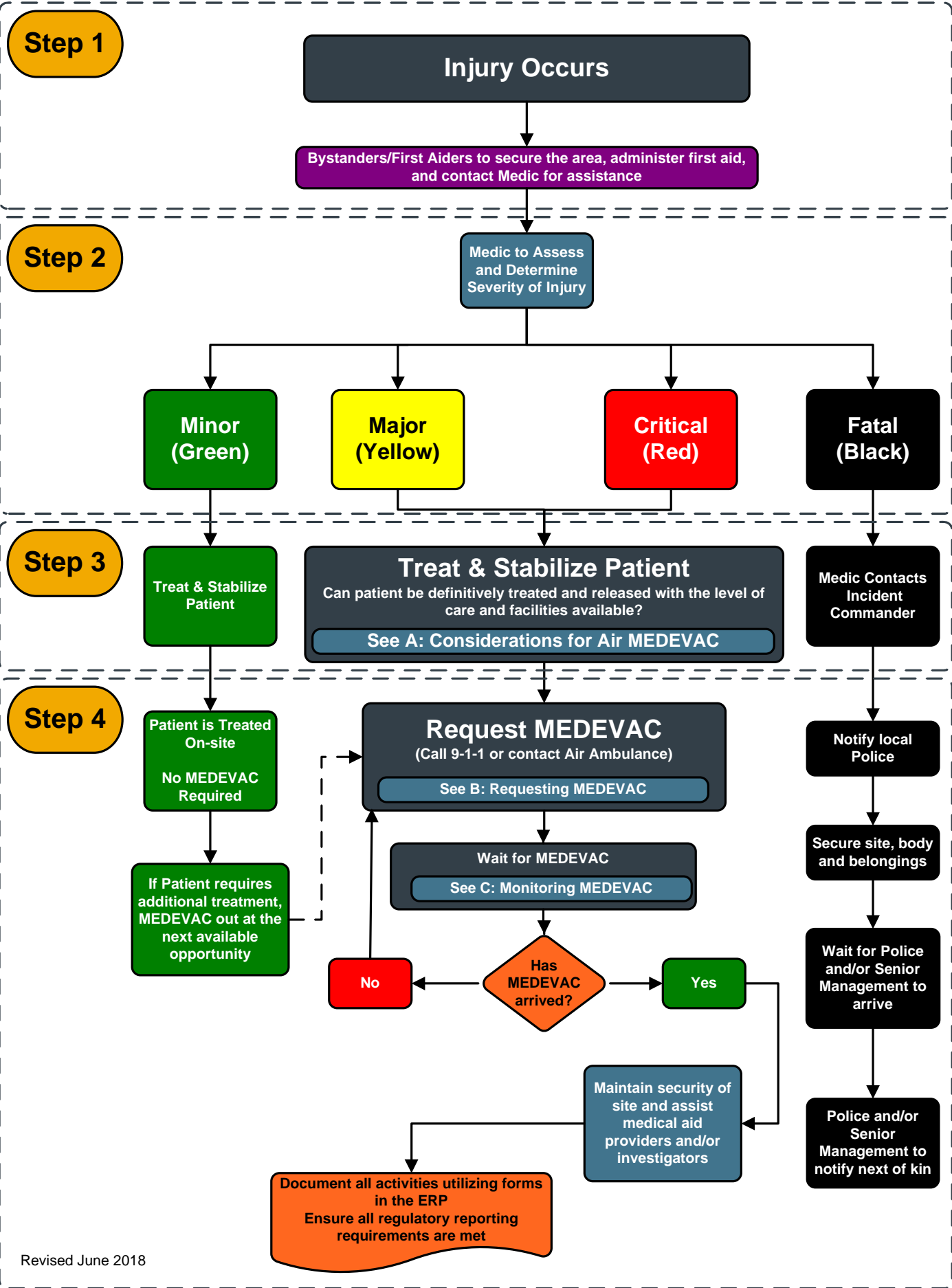
During the Notification of the Next-of-Kin, continued

- 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



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
Manitoba	800-689-6559
Saskatchewan	888-782-8247

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

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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

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

Persons making bomb threats generally have one of two motivations:

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

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

Security Incidents, continued

Bomb Appearance

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

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

Responding to Bomb Threats over the Phone

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

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

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

Responding to Bomb Threats Received in Writing

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

Security Incidents, continued

Supervisor Responsibilities after Receiving a Bomb Threat

The supervisor should then:

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

Evacuating the Facility

If it seems prudent to evacuate the building:

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

IED Evacuation Distances

Improvised Explosive Device (IED)
SAFE STAND OFF DISTANCE

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

Security Incidents, continued

Bomb Search Guidelines

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

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

Explosive Device Located

If a device or suspected device is located:

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

If there is an Explosion

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

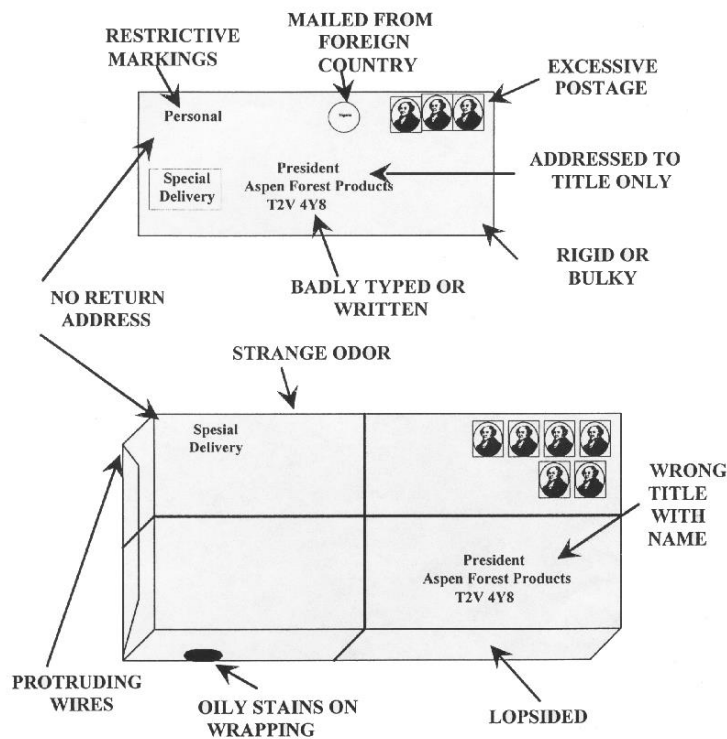
Suspicious Packages

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

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

Security Incidents, continued

Appearance of Suspicious Packages



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

Security Incidents, continued

Dealing with Suspicious Packages

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

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

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

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

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

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

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

Trespassing

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

Dealing with Trespassing

If any personnel encounter a trespasser:

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

Security Incidents, continued

Vandalism

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

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

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

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

Dealing with Vandalism

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

Terrorism

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

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

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

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.
- Accredite 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 contact@cyber.gc.ca or by phone at 1-833-292-3788.

Section 5: External Agencies

Provincial Notification Matrix

Provincial Lead Agency Roles

Government Consultation Summary

Specific Government Agency Roles

Local Authority

Health Services

Provincial Supporting Agency Roles

Federal Agency Roles

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Alberta

Notification Requirements for Key Government Agencies

Incident Type	Agency or Resource										Initial Responders			Lead Agencies			Supporting Agencies & Other Government Contacts									
Sour Gas / HVP Release (Uncontrolled)		a	✓	✓	✓	✓	✓	✓	✓	✓*	c			d	e	f										j
Chlorine Gas Release		a	✓	✓	✓	✓	✓	✓	✓		c			d	e	f	g									j
Sweet Combustible Gas Release		a	✓	✓	✓	✓	✓	✓	✓	✓*	c			d	e											j
Spill / Transportation Incident (Unrefined Products)**		a	✓	✓	✓	✓	✓	✓	✓	✓*	c			✓	e	f	g	h	i	j						
Spill / Rail or Trucking Incident (Refined Products)**		a	✓	✓	✓	✓	b	✓	✓	✓*	c			✓	e	f	g	h	i	j						
Serious Injury or Death (Including Vehicle Accidents)	✓		✓	✓	✓	✓				✓*	✓				✓											
Missing Person			✓							✓*																
Fire / Explosion / B.L.E.V.E.	✓	✓	✓	✓	✓			✓	✓*		c	✓		d	e			h		j						
Pressure Vessel or Piping Incident			✓	✓	✓	✓				✓*	c	✓			e	f										
Electrical Incident			✓	✓							c		✓		e											
Motor Vehicle Accident (No Injuries)			✓																							
Security Incident			✓	✓						✓*	c															
On-Site Incident Involving E2 Regulated Substance		a	✓	✓			b				c					f				i	j					

- ✓ Compulsory contact
- * CER is a compulsory contact only for emergencies involving CER regulated sites and inter-provincial pipelines.
- ** Refer to the Alberta Petroleum Industry Release Reporting Requirements chart included in the ERP.
- 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 Alberta Health Services (AHS) if the incident has the potential to impact public health (e.g., contaminated drinking water).

c) Contact Occupational Health & Safety and report when: an injury or accident results in death; an injury results in a worker being admitted to a hospital; a potentially serious incident (PSI) where a reasonable and informed person would determine that under slightly different circumstances, there would be a high likelihood for a serious injury to a person; there is an unplanned or uncontrolled explosion, fire or flood that causes a serious injury or that has the potential to cause a serious injury; there is a collapse or upset of a crane derrick or hoist or; there is a collapse or failure of any component of a building or structure necessary for its structural integrity.

d) Alberta Transportation EDGE (Environmental and Dangerous Goods Emergencies) is the first call for all transportation related spills/incidents. If spill is contained on-site, Alberta Transportation will contact the AER. If the spill moves off-site or into a waterbody, Alberta Transportation will contact Alberta Environment and Parks (AEP) and/or Environment & Climate Change Canada (ECCC). Contact Alberta Transportation or the RCMP if an oil & gas emergency affects a highway designated by 1, 2, or 3 digits (e.g., Hwy 2, Hwy 47, Hwy 837). Alberta Transportation and RCMP have the authority to shut down highways.

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

f) ECCC will be notified by AER as required for incidents involving regulated substances at E2 registered facilities, incidents involving PCBs or any spills on first nations lands, in National Parks, into river or lake systems containing fish, or onto railway right-of-way.

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

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

i) Contact the Department of Fisheries and Oceans Canada to report an oil spill that occurs in or around fresh and marine waters.

j) 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 infectious substances.

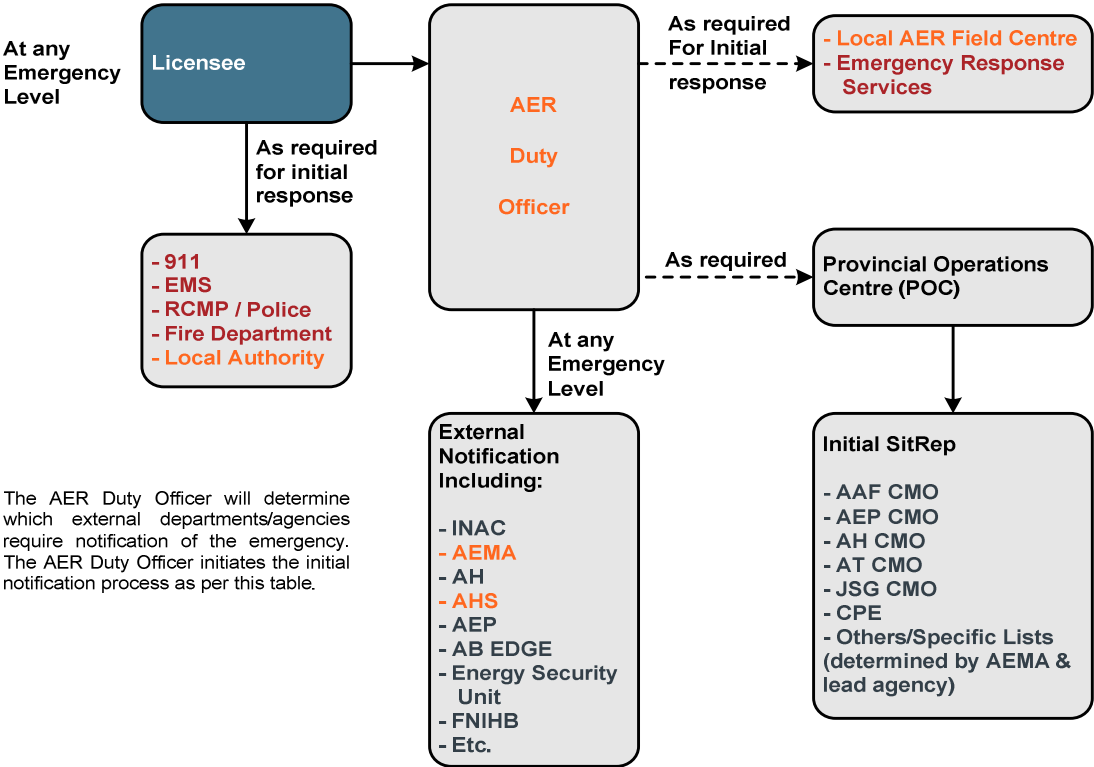
2 Alberta Energy Regulator is designated as the lead agency (single window approach) to implement the Gov't of Alberta Emergency Response Support Plan for a Petroleum Industry Incident.

3 Local Authorities include: cities, towns, villages, counties, municipal districts, improvement districts, special areas, Métis settlements, and first nations reserves.

4 Request that Alberta Emergency Management Agency identify the affected local authorities and implement Emergency Services. The Emergency Management Field Officer may provide assistance in contacting some or all of the local authorities.

5 Contact the Canada Energy Regulator (via the Transportation Safety Board of Canada) for emergencies involving CER regulated sites and inter-provincial pipelines.

6 Occupational Health and Safety - see c) for further details on this agency's role.



Common
Tasks

*Alberta Energy
Regulator (AER)

*AEMA

Local Authority

Alberta Health
Services (AHS)

Before the Incident

- ❑ All departments/agencies should participate in training and exercises for this plan and the Energy Resources Industry Emergency Support Plan (ERIESP).
- ❑ This plan will be reviewed as required.
- ❑ A join multi-department/agency exercise will be held as required.

- ❑ Confirm and act as lead Government of Alberta (GoA) organization in energy resources industry emergency preparedness and response.
- ❑ Set requirements for planning for, and responding to energy resources industry emergencies.
- ❑ Participate in exercises of this plan.
- ❑ Review and recommend changes to this plan.
- ❑ Maintain 24/7 telephone contact where energy resources industry emergencies can be reported.
- ❑ Maintain 24/7 emergency contact numbers where resources can be accessed to carry out a response to this plan.
- ❑ Make this plan available to stakeholders.
- ❑ Communicate changes to the plan with stakeholders
- ❑ Maintain emergency response resources.
- ❑ Act as Subject Matter Expert (SME).

- ❑ Act as the provincial coordinating agency in energy resources industry emergency responses as per the *Emergency Management Act*.
- ❑ Maintain list of 24 hour emergency contact numbers.
- ❑ Maintain 24 hour duty manager system.

- ❑ Work with the operator to effectively prepare for a petroleum industry incident. Provide input to the industrial operator's site-specific plan to ensure it is compatible with the Municipal Emergency Plan (MEP), where feasible.
- ❑ Participate in industrial operators' preparatory training and exercises where possible.
- ❑ Train personnel to carry out functions as assigned by MEP or procedures.
- ❑ Maintain 24 hour emergency contact numbers.
- ❑ Meaningful planning (including confirmation and coordination of roles and responsibilities) between the local authority and the licensee/operator has taken place.
- ❑ Details on municipal emergency response capacity and planning are found in the applicable municipal emergency plan.

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

Environmental Public Health 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 Environmental Public Health 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.

During the Incident

- ❑ The AER may activate the ERIESP based on the following criteria:
 - ❑ Level 2 or 3 emergencies (as defined by the AER)
 - ❑ Any level of emergency:
 - ❑ requires coordination of multi-agency response;
 - ❑ requires coordination of information and communication between departments/agencies and/or has significant provincial/national media interest.
- ❑ Elevations of the POC will be escalated by AEMA. Once the elevations level of the POC has been escalated, provincial-level emergency control will be coordinated by AEMA under the leadership of the lead agency.
- ❑ The AER will develop emergency objectives to guide the GoA response and support to duty holders and local authorities. AEMA will assist the AER by providing leadership and strategic policy direction for the GoA as per the *Government Emergency Management Regulation (AR 248/2007)*.
- ❑ GoA emergency management assistance will be provided to the local authority as requested and as long as is required by the local authority.

- ❑ Receive notification of energy resources industry emergencies.
- ❑ Determine the emergency level of an emergency through consultation with the duty holder.
- ❑ Dispatch AER representative to the site of the emergency, as required.
- ❑ Confirm that local resources have been notified as appropriate.
- ❑ Monitoring discharges and ensuring appropriate mitigation and response actions are taken to reduce the impact of liquid releases for land based spills and to ensure watercourses are protected.
- ❑ Confirm, plan and/or implement public safety actions taken to ensure the safety of the public and the environment, including issuing Fire Hazard Orders or requesting NOTAMS.
- ❑ As lead agency, provide coordination for departments/agencies and duty holder on site.
- ❑ Request a local authority liaison officer to be present at the REOC, if necessary.
- ❑ Activate the Energy Resources Industry Emergency Support Plan.
- ❑ Advise AEMA to escalate POC activation (if required).
- ❑ Identify and request initial provincial resources to support the emergency response, to be coordinated at the regional level if necessary through a local or regional EOC.
- ❑ Initiate consolidated Situation Reports through AEMA.
- ❑ Provide Situation Reports to AEMA if requested.
- ❑ Send an AER representative to the emergency location and/or the incident command post.
- ❑ Establish an EOC at the local AER Field Centre until the duty holder or local authority establishes a REOC. AER ECC will be expanded if a REOC is not established.
- ❑ Dispatch an AER representative to the REOC when it opens.
- ❑ Request the deployment of other provincial GoA department/agency representative to be present at the REOC, or the local AER Field Centre ECC.
- ❑ Provide timely situation reports, through AEMA, to other GoA departments/agencies activated by this plan.
- ❑ Notify all participants when the emergency has concluded and there is no longer any hazard to the public.

- ❑ Confirm AER has been notified.
- ❑ Conduct the notification in accordance with Section 5.3.
- ❑ Obtain a situation report from the AER, AEP, local authority, etc.
- ❑ Confirm the level of emergency.
- ❑ Elevate the POC as required.
- ❑ Notify the appropriate provincial officials as per standard operating procedures.
- ❑ Release consolidated Situation Reports in accordance with section 3.4.4.
- ❑ Coordinate the Government of Alberta response including requests for provincial/federal resources.
- ❑ Provide ongoing situation reports or briefing notes to appropriate provincial officials in accordance with the AEP or as requested.
- ❑ Notify partners and stakeholders when the event is over.

- ❑ Receive notification and work with the licensee/operator.
- ❑ In a petroleum industry incident, determine if the incident can be managed and the level of support that would be needed if required from AER and AEMA. If the local authority, licensees or operators are unable to manage the response, the AER with assistance from AEMA will manage the response.
- ❑ Send a local authority liaison officer to be present at the AER regional EOC if necessary.
- ❑ If AEMA is providing support provide regular situation reports.
- ❑ Respond to and assess the emergency incident.
- ❑ Establish contact with the industrial operator in order to:
 - ❑ Obtain additional hazard information.
 - ❑ Determine where road blocks 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.
- ❑ Initiate public protection measures, as necessary.
- ❑ May dispatch a representative to the Provincial Operations Centre (POC), when it is established, to coordinate the response, if requested.
- ❑ If necessary, declare a local State of Emergency.
- ❑ If the hazard area extends beyond the Emergency Planning Zone (EPZ), the county will coordinate evacuation of the public as well as reception centre establishment and maintenance with the industrial operator.
- ❑ When possible, work with all other responders to establish a single Regional EOC (REOC).
- ❑ Establish a public information service, including the use of the news media to inform and instruct the public of the emergency and of any protective actions to be taken.
- ❑ Coordinate news releases with the licensee, if required.
- ❑ Inform AEMA and the public when the emergency is over.

- ❑ 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 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 and incident.

After the Incident

- ❑ Complete a Post Incident Assessment (PIA) based on the scope of their involvement and the outcome.
- ❑ Integrate PIA into internal response processes.
- ❑ All departments/agencies will participate in a joint PIA to be coordinated by AER. Participation from each department/agency will be determined by the response to the emergency.
- ❑ Reports required by other regulatory authorities must be completed and delivered to the appropriate regulatory body within the time lines they prescribe.

- ❑ Conduct the PIA related to the response, as described by the ERIESP.
- ❑ As part of the PIA, recommend any mitigation actions that may improve the coordination of the GoA response, as described by the ERIESP.
- ❑ Establish processes to receive and address community concerns.
- ❑ Review and update the ERIESP, in consultation with AEMA.
- ❑ Communicate any changes to the ERIESP to applicable stakeholders.

- ❑ Participate in all PIAs related the ERIESP.
- ❑ Complete documentation or reporting in relation to the activation of the ERIESP and the emergency for all GoA-wide PIAs.

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

- ❑ Record and respond to health complaints or concerns from the public during and following and incident.
- ❑ Participate in stakeholder debriefings as necessary.

Note: The roles for the local authority(s) and regional health authority(s) are not outlined in the Energy Resources Industry Emergency Support Plan (ERIESP) Plan and will be coordinated during the public consultation program.

*AER - Alberta Energy Regulator

*AEMA - Alberta Emergency Management Agency

*AHS - Alberta Health Services

Revised June 2018



Lead Agency Roles



Lead Agency Roles



AB Emergency Services

Before the Incident

- The first level of emergency response is provided by fire and/or police services and may involve the activation of the Emergency Operations Centre (EOC). Other first responders, such as the RCMP and Emergency Medical Services, or EMS, have a provincial mandate but with a local presence through detachments or stations. These agencies are usually accessed through 911 and have internal dispatch arrangements.
- First responders work at the site level of an event and include police, fire and ambulance. Activities of first responders include medical response, firefighting and managing crowds or evacuation zones
 - When a local authority EOC is activated, police and fire first responder agencies provide situational awareness to the local authority and submit requests for support to the local authority EOC
 - First response services provided by a fire department are determined by the local authority responsible, and may include hazardous material incident response, road rescue, and medical rescue
 - Emergency Medical Services, or EMS, operates under the authority of the Alberta Health Services. No matter where an emergency happens in Alberta, AHS EMS can transport patients by either a ground ambulance or air ambulance – fixed wing airplane or helicopter.
 - AHS EMS staff actively participates in emergency planning, mock emergency exercises and other joint training initiatives to ensure emergency preparedness and response resources are identified and deployed quickly and effectively when they are needed most
 - Maintain readiness status for emergency notification
 - Participate in industrial operators' exercises where possible
 - Maintain 24 hour emergency contact numbers

During the Incident

- RCMP**
- RCMP or local police would also become involved if there are fatalities, as they are required to participate in the investigations. This could be through the medical examiner.
 - Maintain law and order and assist the operator with local security but would require discussion with the local police at the time.
 - The Office of the Fire Commissioner (OFC) has a working relationship with the RCMP and the RCMP may conduct selected duties of the Fire Commissioner where the fire's impact is not significant.
 - Assist with traffic control, crowd control, evacuation, and residence security.
 - Typically would not be involved in setting up or maintaining roadblocks unless the emergencies impacted or required the closure of 1, 2 and 3 digit Provincial or Secondary highways.
 - Establish and maintain communications with industrial operator.
 - Dispatch a representative to the off-site Regional Emergency Operations Centre, when established, to coordinate the response.
 - Coordinate with the industrial operator both the establishment and the administration of reception centres for evacuees.
 - Maintain a 24 hour emergency contact number where resources can be accessed for a response related to Emergency Response Plans.
- Fire**
- Respond to and assess emergency incident to the scope of their abilities.
 - Establish a unified OSCP / ICP (On-site Command Post / Incident Command Post).
 - Communicate to MEOC and provide site reps as required.
 - Assist with fire protection where trained personnel are available.
 - Provide emergency medical assistance, as required.
 - Coordinate news releases with the licensee, if required.
- EMS**
- Respond to and assess emergency incident to the scope of their abilities.
 - The Alberta Health Services provides and coordinates ambulance services within Alberta, including triage, treatment, transportation and care of casualties
 - Provide emergency medical assistance, as required. Emergency Medical Technicians (EMT) or Emergency Medical Responders (EMR) provide basic patient assessment and treatment including obtaining vital signs, administering oxygen and splinting extremities.
 - ALS ambulances have at least one paramedic with expanded training, scope of practice, and can provide advanced treatment in airway management and medication administration.

After the Incident

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

Government Consultation Summary

Type of Agency	Agency Name	Provided Specific Roles	Agreed to Generic Roles	Unable to Contact	Willing to consider a single REOC	Evacuation outside of the EPZ	Location of EOC	Suggested Reception Centres	Notes
Local Authority	Clear Hills County	✓			Yes, where possible	Unable to coordinate or assist	N/A	N/A	
Local Authority	MD of Greenview	✓			Yes, where possible	Unable to coordinate or assist	N/A	N/A	
Health Authority	Alberta Health Services – Zone 5	✓			Yes, where possible	Requires assistance	Virtual	N/A	

CLEAR HILLS COUNTY ROLES

Clear Hills 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. Clear Hills County must be contacted automatically at a Level 2 or 3 Emergency.

Please note: Clear Hills County will dispatch a representative to liaison with the Incident Commander/ Operations Chief at the Incident Command Post.

Responsibilities

- Initiates and manages the local disaster services response in accordance with County Policy.
- May dispatch representative(s) to the Government's Off-Site 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)
- If required, activates Municipal Emergency Operations Centre (MEOC) and coordinates activities at this centre. The MEOC is available to the Company for use as a REOC subject to limitations as may be imposed by Clear Hills County due to current operational requirements at the time.
- Upon request, may assist with set-up and administration of 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 in accordance with County Policy.
- May assist with Fire Protection in accordance with County Policy in areas where accessible.
- If necessary, may declare a local state of emergency to provide local authorities with special powers.
- Supports the Company in dealing with the emergency in accordance with County Policy.

Resources

There is 1 County Fire Department, located at Worsley and 3 Fire Departments on contract from Hines Creek, Fairview and Berwyn for the Hines Creek and east area, each with approximately 20 volunteer firefighters.

Please note: The Fire Departments are not equipped for Industrial Fire Protection and would be responsible for anything off-site or outside the Emergency Perimeter Zone (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 Clear Hills County have limited access or are extremely remote from any Fire Station.

Alberta Sustainable Resource Development - Peace Wildfire Management Area is responsible for Wildland Fire Protection in these areas. The County has no Special Constables. All policing duties are covered by the RCMP - Fairview Detachment. The Public Works Department employs about 6 personnel, which expands to 20 employees during the summer.

Emergency Medical Services are under Alberta Health, dial 911.

LOCAL AUTHORITY – M.D. OF GREENVIEW

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

Before the Event

- ☐ Work with the upstream operator to effectively prepare for an upstream petroleum industry incident. Provide input to the industrial operator's site-specific plan to ensure it is compatible with the Municipal Emergency Plan (MEP) where feasible.
- ☐ Participate in industrial operators' preparatory training and exercises where possible.
- ☐ Train personnel to carry out functions as assigned by MEP or procedures.
- ☐ Maintain 24 hour emergency contact numbers.

Upon the Notification of and during an Event

- ☐ Respond to and assess the emergency incident.
- ☐ Establish contact with the industrial operator in order to *(the following roles/responsibilities are entirely contingent upon the communication of accurate and timely information from the industrial operator to the MD of Greenview):*
 - ☐ Obtain additional hazard information.
 - ☐ Determine where roadblocks should be or are established.
 - ☐ Determine the direction of approach to the incident.
 - ☐ Determine if there are any injuries.
 - ☐ Find out what response and public protection actions have been taken by the upstream operation.
 - ☐ The location of the On-site Command Post (OSCP) and any Emergency Operations Centres (EOCs).
- ☐ Activate the MEP, when required.
- ☐ Manage the Local Authority's emergency response.
- ☐ Activate the emergency public warning system to alert people to life threatening hazards, as required.
- ☐ Activate the Municipal EOC (MEOC), as required.
- ☐ Initiate public protection measures, as necessary.
- ☐ May dispatch a representative to the Government EOC (GEOC), when it is established, to coordinate the response, if requested.
- ☐ If necessary, declare a State of Local Emergency.
- ☐ If the hazard area extends beyond the EPZ, the county will coordinate evacuation of the public and reception centre establishment and maintenance with the industrial operator.
- ☐ When possible work with all other responders to establish a single Regional EOC (REOC).

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

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

After the Event

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

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

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

Before the Event

- ☐ Maintain readiness status for emergency notification.
- ☐ Participate in industrial operators’ exercises where possible.
- ☐ Maintain 24 hour emergency contact numbers.

During the Event

- ☐ Respond to and assess emergency incident to the scope of their abilities.
- ☐ Establish a unified OSCP / ICP (On-site Command Post / Incident Command Post).
- ☐ *As available technology allows*, communicate to MEOC and provide site reps as required.
- ☐ Assist with fire protection where trained personnel are available.
- ☐ Provide emergency medical assistance, as required, *understanding that Alberta Health Services is primarily responsible for ground ambulances in the Peace Country Health region*.
- ☐ Provide timely news releases *with respect to the MD of Greenview*, if required.

After the Event

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

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

Phone: 1-844-755-1788

Email: edp@ahs.ca

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

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

Edmonton Main Office	780-735-1800	Edmontonzone.environmentalhealth@ahs.ca
Calgary Main Office	403-943-2295	Calgaryzone.environmentalhealth@ahs.ca
Lethbridge Main Office	403-388-6689	Southzone.environmentalhealth@ahs.ca
Grande Prairie Main Office	780-513-7517	Northzone.environmentalhealth@ahs.ca
Red Deer Main Office	403-356-6366	Centralzone.environmentalhealth@ahs.ca

www.ahs.ca/eph

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.

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Red Deer Main Office	403-356-6366	Centralzone.environmentalhealth@ahs.ca
www.ahs.ca/eph		

Common
Tasks

Common Tasks	Before the Incident <ul style="list-style-type: none"><input type="checkbox"/> All departments/agencies should participate in training and exercises for this plan and the Energy Resources Industry Emergency Support Plan (ERIESP).<input type="checkbox"/> This plan will be reviewed as required.<input type="checkbox"/> A joint multi-department/agency exercise will be held as required.
	*OHS <ul style="list-style-type: none"><input type="checkbox"/> Maintain and provide resources to support 24\7 employer reporting of incidents to OHS.<input type="checkbox"/> Maintain capacity for OHS attendance to a work site when warranted.
	*AAF <ul style="list-style-type: none"><input type="checkbox"/> Act as subject matter expert (SME) relating to agriculture and livestock impacts.<input type="checkbox"/> Act as the liaison between farming/ranching community and the Government of Alberta (GoA).<input type="checkbox"/> Maintain emergency response resources.
	*AT <ul style="list-style-type: none"><input type="checkbox"/> Maintain a 24/7 call centre (EDGE - Environmental and Dangerous Goods Emergencies) to receive emergency calls related to the transportation and handling of dangerous goods as well as environmental spills/releases/ incidents, and AER emergency notifications.<input type="checkbox"/> Act as SME for dangerous goods incidents.
	*CPE <ul style="list-style-type: none"><input type="checkbox"/> Maintain a team of trained Communications and Public Engagement personnel.<input type="checkbox"/> Activate crisis communications plan and crisis communications response.
	*JSG <ul style="list-style-type: none"><input type="checkbox"/> Maintain the list of Critical Infrastructure and key assets in the Province of Alberta.<input type="checkbox"/> Maintain and regularly test the Emergency Notification System.<input type="checkbox"/> Maintain awareness of threats, vulnerabilities, and risks related to human induced intentional hazards.
	*ABSA <ul style="list-style-type: none"><input type="checkbox"/> Review, accept and register pressure equipment designs and construction procedures that relate to pressure equipment.<input type="checkbox"/> Issue certificate of inspection permits for pressure equipment before the equipment is placed into service.<input type="checkbox"/> Ensure that regular inspections of in-service pressure equipment are conducted.<input type="checkbox"/> Keep records for pressure equipment that has been registered for use, or manufactured, in Alberta.<input type="checkbox"/> Examine, certify and register Pressure Welders and Welding Examiners, Power Engineers, and Pressure Equipment Inspectors.<input type="checkbox"/> Authorize and monitor, through quality management systems, organizations that have been permitted to conduct some of the activities subject to the regulations.<input type="checkbox"/> Conduct safety education and training.

During the Incident

<ul style="list-style-type: none"><input type="checkbox"/> The AER may activate the ERIESP based on the following criteria:<ul style="list-style-type: none"><input type="checkbox"/> Level 2 or 3 emergencies (as defined by the AER)<input type="checkbox"/> Any level of emergency:<ul style="list-style-type: none"><input type="checkbox"/> requires coordination of multi-agency response;<input type="checkbox"/> requires coordination of information and communication between departments/agencies and/or has significant provincial/national media interest.<input type="checkbox"/> Elevations of the POC will be escalated by AEMA. Once the elevations level of the POC has been escalated, provincial-level emergency control will be coordinated by AEMA under the leadership of the lead agency.<input type="checkbox"/> The AER will develop emergency objectives to guide the GoA response and support to duty holders and local authorities. AEMA will assist the AER by providing leadership and strategic policy direction for the GoA as per the <i>Government Emergency Management Regulation (AR 248/2007)</i>.<input type="checkbox"/> GoA emergency management assistance will be provided to the local authority as requested and as long as is required by the local authority.
<ul style="list-style-type: none"><input type="checkbox"/> Inspect the work activities and processes to ensure legislative standards are being met by all work site parties. (Attendance to be determined by Occupational Health and Safety management.)
Agriculture <ul style="list-style-type: none"><input type="checkbox"/> Act as SME relating to agriculture and livestock impacts.<input type="checkbox"/> Act as the liaison between farming/ranching community and GoA during energy resources industry emergencies.<input type="checkbox"/> Provide information relating to agricultural and livestock impacts to the GoA during energy resources industry emergencies. Forestry <ul style="list-style-type: none"><input type="checkbox"/> Notify forestry staff in the area of the emergency.<input type="checkbox"/> Forest Areas Wildfire Coordination Centres will notify duty holder if energy resources industry infrastructure is threatened by wildfire, where practical and in order of priority. Priority contact will be through the contact information indicated in the company's Industrial Wildfire Control Plan for the identified locations. Can fight wildfires started as the result of the energy resources industry product release.<input type="checkbox"/> Alberta Wildfire is responsible for managing all wildfires within the Forest Protection Area. Will suppress wildfires caused from industry operations when industry has appropriately shut-in the operation and notified Alberta wildfire to ensure the safety of first responders.
<ul style="list-style-type: none"><input type="checkbox"/> Handle inter-departmental communication as needed during energy resources industry emergencies.<input type="checkbox"/> Maintain ability to process calls for new emergencies.<input type="checkbox"/> Provide information on the impacts to transportation routes.<input type="checkbox"/> Provide response support if dangerous goods are released.
<ul style="list-style-type: none"><input type="checkbox"/> Confirm distribution of AER messaging. Provide support as required.
<ul style="list-style-type: none"><input type="checkbox"/> Provide intelligence and threat risk assessments when appropriate and when requested, in relation to critical infrastructure and key assets.<input type="checkbox"/> Communicate with owners and operators of critical infrastructure and key assets, through normal communication channels, or if necessary through the Emergency Notification System maintained by ASSIST.
<ul style="list-style-type: none"><input type="checkbox"/> Receive notification of an incident.<input type="checkbox"/> As required under the <i>Pressure Equipment Safety Regulation</i> Section 35, the accident scene must not be disturbed (except when it is absolutely necessary to prevent death or injury, or to prevent further property damage) unless approval to do so has been given by an ABSA Safety Codes Officer.

After the Incident

<ul style="list-style-type: none"><input type="checkbox"/> Complete a Post Incident Assessment (PIA) based on the scope of their involvement and the outcome.<input type="checkbox"/> Integrate PIA into internal response processes.<input type="checkbox"/> All departments/agencies will participate in a joint PIA to be coordinated by AER. Participation from each department/agency will be determined by the response to the emergency.<input type="checkbox"/> Reports required by other regulatory authorities must be completed and delivered to the appropriate regulatory body within the time lines they prescribe.
<ul style="list-style-type: none"><input type="checkbox"/> Ensure work site parties have implemented appropriate controls prior to re-entry by workers.<input type="checkbox"/> Investigate the incident if the incident is a reportable incident in line with current Alberta OHS Legislation.<input type="checkbox"/> Ensure internal investigation has been conducted and that identified corrective actions have been minimized to reduce recurrence of similar incidents.<input type="checkbox"/> Ensure health and safety committee or health and safety representative as defined by OHS legislation has been involved in internal investigations.
Agriculture <ul style="list-style-type: none"><input type="checkbox"/> Provide a summary of agriculture and livestock impacts during the PIA process. (if applicable)<input type="checkbox"/> Conduct agriculture and livestock impact assessments.<input type="checkbox"/> Implement response activities as required. Forestry <ul style="list-style-type: none"><input type="checkbox"/> Conduct forest impact assessment. (if applicable)
<ul style="list-style-type: none"><input type="checkbox"/> Provide a summary of transportation impacts during the PIA process. (if applicable)
<ul style="list-style-type: none"><input type="checkbox"/> Participate in all PIAs related to the ERIESP.<input type="checkbox"/> Coordinate key messaging with the AER.
<ul style="list-style-type: none"><input type="checkbox"/> Participate in all PIAs related to the ERIESP.<input type="checkbox"/> Communicate with owners and operators of critical infrastructure and key assets, through normal communication channels, or if necessary through the Emergency Notification System maintained by ASSIST.
<ul style="list-style-type: none"><input type="checkbox"/> Investigate accidents or unsafe conditions that involve pressure equipment. May:<ul style="list-style-type: none"><input type="checkbox"/> close all or part of the accident site for 48 hours (or longer if authorized by a Justice)<input type="checkbox"/> prohibit any person from entering the site for safety reasons or to preserve evidence<input type="checkbox"/> be accompanied by any person for assistance<input type="checkbox"/> inspect and photograph any thing<input type="checkbox"/> require any person to make full disclosure<input type="checkbox"/> require closure or disconnection of any thing<input type="checkbox"/> require to be performed any tests or evaluations<input type="checkbox"/> remove evidence<input type="checkbox"/> require production of documents

Supporting Agency Roles



Supporting Agency Roles

	Before the Incident	During the Incident	After the Incident
*AEP	<div><div><input type="checkbox"/> Maintain 24 hour emergency contact numbers and duty officer where resources can be accessed for a response related to this plan.</div><div><input type="checkbox"/> Maintain emergency response resources.</div><div><input type="checkbox"/> Maintain a specialty air monitoring team and equipment used to oversee and verify air monitoring during incident response.</div><div><input type="checkbox"/> Act as SME.</div><div><input type="checkbox"/> Prepare to act as lead agency when appropriate.</div></div>	<div><div><input type="checkbox"/> Ensure that non-energy industry resources environmental impacts are mitigated.</div><div><input type="checkbox"/> Provide expertise to mitigate the impacts of non-energy resources industry liquid releases on land and into watercourses.</div><div><input type="checkbox"/> Provide technical assistance related to emergency drinking water supply engineering.</div><div><input type="checkbox"/> Notify Fish and Wildlife staff in the area of the emergency.</div></div>	<div><div><input type="checkbox"/> Compile and maintain environment/emergency related records</div><div><input type="checkbox"/> Monitor environmental recovery, when required.</div></div>
*WCB	<div><div><p>The Workers' Compensation Board is a statutory corporation created by government under the Workers' Compensation Act to administer a system of workplace insurance for the workers and employers of the province of Alberta.</p><div><div><input type="checkbox"/> WCB has the overall responsibility for the administration of the workers' compensation system in Alberta.</div><div><input type="checkbox"/> Be a neutral and autonomous administrator of the worker's compensation system.</div><div><input type="checkbox"/> Strive to balance the interests of workers and employers.</div><div><input type="checkbox"/> Delivery of workers' compensation services to the workers and employers of Alberta.</div><div><input type="checkbox"/> Make decisions based on evidence, law and policy and fair, impartial and transparent processes.</div><div><input type="checkbox"/> Encourage safer workplaces and promote disability management.</div></div></div></div>	<div><div><p>Employer must report to WCB within 72 hours of being notified of an injury/illness that results in or will likely result in:</p><div><div><input type="checkbox"/> Lost time or the need to temporarily or permanently modify work beyond the date of accident</div><div><input type="checkbox"/> Death or permanent disability (amputation, hearing loss, etc.)</div><div><input type="checkbox"/> A disabling or potentially disabling condition caused by occupational exposure or activity (poisoning, infection, respiratory disease, dermatitis, etc.)</div><div><input type="checkbox"/> The need for medical treatment beyond first aid (assessment by a physician or chiropractor, physiotherapy, etc.)</div><div><input type="checkbox"/> Medical aid expenses (dental treatment, eyeglass repair/replacement, prescription medications, etc.)</div></div></div><div><p>Note: Immediately report fatalities and serious injuries to the OHS Contact Centre 1-866-415-8690.</p><div><div><input type="checkbox"/> Determines whether the injury or illness is caused by work.</div><div><input type="checkbox"/> Responds to all client inquiries forwarded by the Minister and all other elected officials.</div></div></div></div>	<div><div><div><input type="checkbox"/> Compensates injured workers for lost income, health care and other costs related to a work-related injury.</div><div><input type="checkbox"/> Safely restores injured workers through return-to-work services to a level of competitive employability.</div><div><input type="checkbox"/> Take reasonable measures to maintain a reasonable quality of life for severely injured workers through the provision of services allowed by legislation and policy.</div></div></div>

*ECCC

Before the Incident

Environment & Climate Change Canada's Environmental Emergencies Program (EEP) protects Canadians and their environment from the effects of environmental emergencies through provision of 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.*

*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.

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)

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.

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.

During the Incident

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.

- ☐ 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.

- ☐ 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.

- ☐ 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.

- ☐ 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.

After the Incident

- ☐ ECCC can conduct post-emergency assessments.
- ☐ Provide specialized advice in shoreline clean-up assessment techniques (SCAT).
- ☐ Provide Advise on mitigation and cleanup measures..

- ☐ Work closely with ECCC, The Canadian Coast Guard and other provincial environmental agencies.

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

- ☐ 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.

- ☐ 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>

Federal Agency Roles



Transport Canada
*CANUTEC

Before the Incident

- ☐ 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 infectious substances.
- ☐ Maintains records of over 3 million Safety Data Sheets (SDS).

*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.

*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).

During the Incident

- ☐ 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.

- 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.

- ☐ Public Safety Canada houses the Government Operations Centre at the hub of the national emergency management system. It's an advanced centre for monitoring and coordinating the federal response to an emergency.

After the Incident

- ☐ Maintain voice communication and written information records for two years for the protection of all parties.
-
- ☐ Terminate and de-mobilize.
 - ☐ Post-incident assessment and communication program.

- ☐ 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>

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

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 communicate 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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Current and Planned Objectives:	
Priorities: (1) Life Safety (2) Incident Stabilization (3) Environment & Property	
1. Ensure Safety of Citizens and Response Personnel:	4. Minimize Economic Impacts:
<input type="checkbox"/> 1a. Identify hazard(s) of released product.	<input type="checkbox"/> 4a. Consider tourism and local economic impacts.
<input type="checkbox"/> 1b. Establish site control (hot zone, warm zone, cold zone, & security).	<input type="checkbox"/> 4b. Protect public and private assets, as resources permit.
<input type="checkbox"/> 1c. Establish an Emergency Response Zone and Initiate Public Safety Actions.	<input type="checkbox"/> 4c. Establish damage claims process.
<input type="checkbox"/> 1d. Consider evacuations if needed.	5. Keep Stakeholders and Public Informed of Response Activities:
<input type="checkbox"/> 1e. Establish aircraft restrictions.	<input type="checkbox"/> 5a. Provide forum to obtain stakeholder input and concerns.
<input type="checkbox"/> 1f. Monitor air in impacted areas	<input type="checkbox"/> 5b. Provide stakeholders with details of response actions.
<input type="checkbox"/> 1g. Develop site safety plan for personnel and ensure safety briefings are conducted.	<input type="checkbox"/> 5c. Identify stakeholder concerns and issues, and address as practical.
2. Control the Source of the Release:	<input type="checkbox"/> 5d. Provide timely safety announcements.
<input type="checkbox"/> 2a. Complete emergency shutdown.	<input type="checkbox"/> 5e. Conduct regular news briefings.
<input type="checkbox"/> 2b. Conduct firefighting.	<input type="checkbox"/> 5f. Conduct public meetings, as appropriate.
<input type="checkbox"/> 2c. Initiate temporary repairs.	
3. Manage a Coordinated Response Effort:	
<input type="checkbox"/> 3a. Complete or confirm notifications.	
<input type="checkbox"/> 3b. Establish a unified command organization and facilities (command post, etc.).	
<input type="checkbox"/> 3c. Ensure mobilization and tracking of resources and account for personnel and equipment.	
<input type="checkbox"/> 3d. Complete documentation.	
Current and Planned Actions, Strategies and Tactics:	
Time:	Actions:
HHMM	
HHMM	
HHMM	
HHMM	
HHMM	
HHMM	
HHMM	
HHMM	
HHMM	

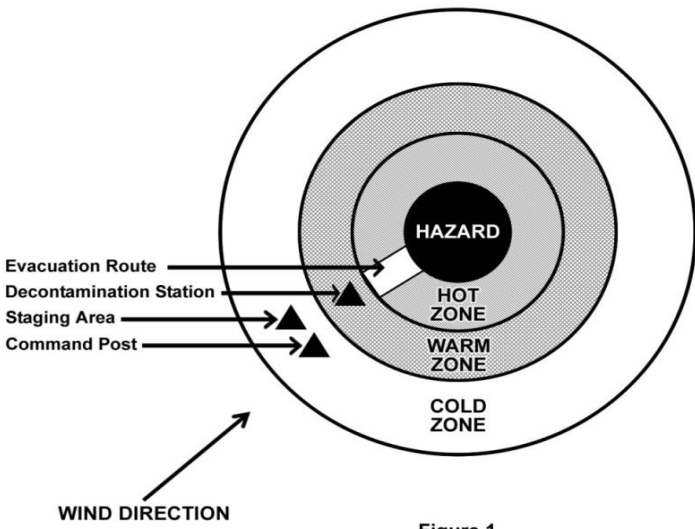
Current Organizational Structure: (draw in current response structure)*

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

<div style="border: 1px dashed black; padding: 5px; margin-bottom: 10px;"> Incident Commander Name _____ Number _____ </div>		
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%; border: 1px solid black; padding: 5px;"> On-Site Group Supervisor Name _____ Number _____ </div> <div style="width: 35%; border: 1px solid black; padding: 5px;"> Information Officer Name _____ Number _____ </div> <div style="width: 30%; border: 1px solid black; padding: 5px;"> Liaison Officer Name _____ Number _____ </div> </div>		
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%; border: 1px solid black; padding: 5px;"> Public Safety Group Supervisor Name _____ Number _____ </div> <div style="width: 35%; border: 1px solid black; padding: 5px;"> Safety Officer Name _____ Number _____ </div> <div style="width: 30%; border: 1px solid black; padding: 5px;"> Documentation Name _____ Number _____ </div> </div>		
<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> SITE SAFETY Name _____ Number _____ </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> Control Name _____ Number _____ </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> Containment Name _____ Number _____ </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> Other Name _____ Number _____ </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> Other Name _____ Number _____ </div> <div style="border: 1px solid black; padding: 5px;"> Other Name _____ Number _____ </div>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> Air Monitors Name _____ Number _____ </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> Roadblocks Name _____ Number _____ </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> Rovers Name _____ Number _____ </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> Telephoners Name _____ Number _____ </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> Reception Centre Representative Name _____ Number _____ </div> <div style="border: 1px solid black; padding: 5px;"> Other Name _____ Number _____ </div>	

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

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

 <p>Figure 1 Protective Zones</p>	<p>1. Is there a Hot Zone established?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p>If so, Where?</p>
	<p>2. Is there a Warm Zone established?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p>If so, Where?</p>
	<p>3. Is there a Cold Zone established?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p>If so, Where?</p>
	<p>4. Remarks: (Include any information on evacuation route, etc.)</p>
<p>5. Include any site sketches or photos of the protective zones (if available):</p>	

ICS 202 Incident Objectives

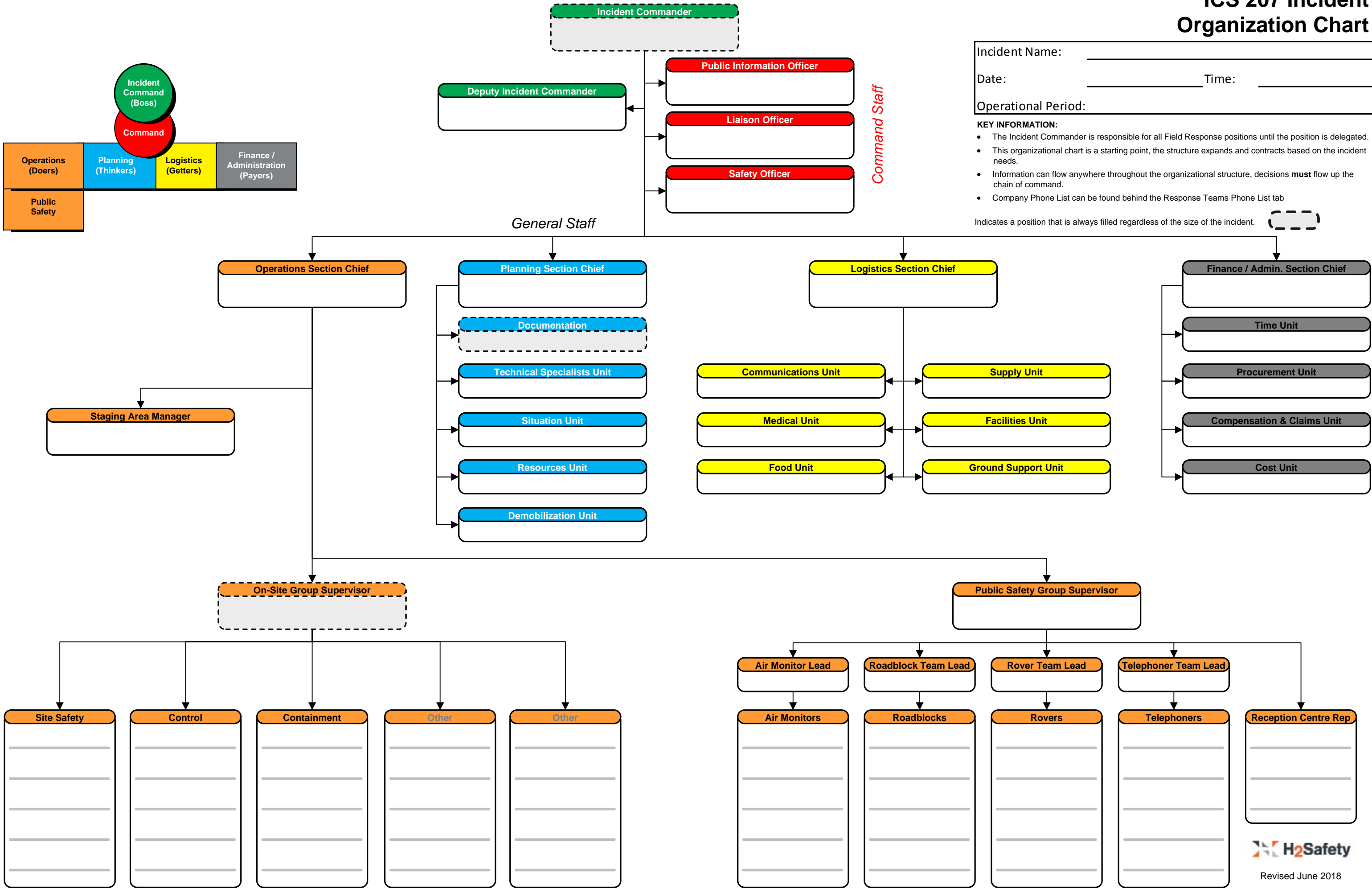
Incident Name:	
Date / Time Initiated:	
Prepared by:	ICS Position:
General Control Objectives for the Incident:	
1	
2	
3	
4	
5	
Weather Forecast:	
General Safety Message:	
<i>Note: Create and prioritize SMART (Specific, Measureable, Attainable, Realistic, & Time-Sensitive) objectives that address the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

ICS 203 Organization Assignment List

Incident Name			Operational Period (Date/Time)	
			From:	To:
Incident Commander(s)			Operations Section	
Agency	IC	Deputy	Chief	
			Deputy	
			Staging Area Manager	
			On-Site Group	
			Supervisor	
Safety Officer			Lead	
Assistant			Lead	
Information Officer			Lead	
Assistant			Lead	
Liaison Officer			Lead	
Assistant				
			Public Safety Group	
			Supervisor	
Agency Representatives			Lead	
Agency	Name		Lead	
			Lead	
			Lead	
			Lead	
			Lead	
			Branch – Division / Group	
			Branch Director	
			Deputy	
Planning Section			Division/Group	Lead
Chief			Division/Group	Lead
Deputy			Division/Group	Lead
Resources Unit			Division/Group	Lead
Situation Unit			Division/Group	Lead
Environmental Unit				
Documentation Unit			Branch – Division / Group	
Demobilization Unit			Branch Director	
Technical Specialists			Deputy	
			Division/Group	Lead
			Division/Group	Lead
Logistics Section			Division/Group	Lead
Chief			Division/Group	Lead
Deputy			Division/Group	Lead
Supply Unit				
Facilities Unit			Finance / Admin Section	
Ground Support Unit			Chief	
Communications Unit			Deputy	
Medical Unit			Time Unit	
Food Unit			Procurement Unit	
			Compensation / Claims Unit	
			Cost Unit	
Prepared By: (Resources Unit)			Date/Time	

Section 6: Forms

ICS 207 Incident Organization Chart



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? <input type="checkbox"/> Yes <input type="checkbox"/> 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 ₂ S	SO ₂	LEL
Level of Emergency:			
Incident Severity:		<input type="checkbox"/> Alert / Minor	<input type="checkbox"/> Level 1 <input type="checkbox"/> Level 2 <input type="checkbox"/> Level 3
Affect Medium: (Check all that apply)			
<input type="checkbox"/> Air	<input type="checkbox"/> Water	<input type="checkbox"/> Soil	<input type="checkbox"/> Other – Specify:
Site Type: (Select only 1)			
<input type="checkbox"/> Well (Active)		<input type="checkbox"/> Well (Abandoned/Suspended)	<input type="checkbox"/> Remote Sump
<input type="checkbox"/> Well (Drilling & Completions): Rig Name:			
<input type="checkbox"/> Battery/Plant/Facility		<input type="checkbox"/> Tank Farm/Storage	<input type="checkbox"/> Pipeline
<input type="checkbox"/> Riser (Pipeline)			
<input type="checkbox"/> Road or Road Structure		Name:	Location on Road:
<input type="checkbox"/> Other – Specify:			
Incident Type: (Check all that apply)			
<input type="checkbox"/> Sour Gas Release	<input type="checkbox"/> Sweet Gas Release	<input type="checkbox"/> Liquid Spills	
<input type="checkbox"/> Natural Disaster/Weather	<input type="checkbox"/> Fire/Explosion	<input type="checkbox"/> Drilling Kick	
<input type="checkbox"/> Worker Injury/Fatality	<input type="checkbox"/> Security (theft, threat, terrorism)	<input type="checkbox"/> Induced Seismicity	
<input type="checkbox"/> Well Bore Communication	<input type="checkbox"/> Pipeline Boring	<input type="checkbox"/> Vehicle/Transportation	
<input type="checkbox"/> Equipment/Structural Damage	<input type="checkbox"/> Pipeline Break	<input type="checkbox"/> Well Control	
<input type="checkbox"/> Other – Specify:			
Activity: (Check all that apply)			
<input type="checkbox"/> Construction (Road, Lease, Pipe)	<input type="checkbox"/> Drilling/Exploration	<input type="checkbox"/> Waste Management	
<input type="checkbox"/> Processing	<input type="checkbox"/> Well Fracturing	<input type="checkbox"/> Servicing	
<input type="checkbox"/> Repair	<input type="checkbox"/> Flaring (Emergency)	<input type="checkbox"/> Well Testing	
<input type="checkbox"/> Pressure Testing	<input type="checkbox"/> Transportation		
<input type="checkbox"/> Other – Specify:			

Consequence or Impacts: (Check all that apply, if none, leave blank)			
<input type="checkbox"/> Worker Safety (Injuries, Fatalities)		<input type="checkbox"/> Property	
<input type="checkbox"/> Economic (Loss of and/or damage to equipment or infrastructure, loss of production, work stoppage)			
<input type="checkbox"/> Other – Specify:			
Material Information:			
Is spill off lease?		<input type="checkbox"/> Yes - Estimated spill quantity: <input type="checkbox"/> No	
<input type="checkbox"/> Liquid Hydrogen (Crude, Oil, Diesel, Fuel)		<input type="checkbox"/> Toxic Gas Liquid (>1% Different Toxins)	
<input type="checkbox"/> Acid	<input type="checkbox"/> Emulsion (Oil, Gas, Water)	<input type="checkbox"/> Sweet Natural Gas	<input type="checkbox"/> Salt Water
<input type="checkbox"/> Methanol	<input type="checkbox"/> Non-Toxic Liquids	<input type="checkbox"/> Fresh Water	
<input type="checkbox"/> Sour Natural Gas	<input type="checkbox"/> Sour Liquids (<1% H ₂ S)	<input type="checkbox"/> Other – Specify:	
<input type="checkbox"/> Non-Toxic Gases (Nitrogen, Carbon Dioxide, Inert Gases)			
Area Information:			
Land Type:		Field Name:	
<input type="checkbox"/> Private Land <input type="checkbox"/> Crown Land			
Area Type: <input type="checkbox"/> Forest <input type="checkbox"/> Muskeg <input type="checkbox"/> Farmland <input type="checkbox"/> Residential <input type="checkbox"/> Other			
Access: <input type="checkbox"/> Helicopter <input type="checkbox"/> ATV <input type="checkbox"/> 4WD <input type="checkbox"/> 2WD <input type="checkbox"/> 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 <input type="checkbox"/> Clear <input type="checkbox"/> Cloudy <input type="checkbox"/> Other:			
Wind Direction N NE NW E SE S SW W			
Wind Strength <input type="checkbox"/> Calm <input type="checkbox"/> Moderate <input type="checkbox"/> Strong <input type="checkbox"/> Gusty			
Temperature °C			
Public / Worker Injuries / Medical Emergencies:			
<input type="checkbox"/> First Aid	<input type="checkbox"/> Hospitalization	<input type="checkbox"/> Fatality	<input type="checkbox"/> Other – Specify:
Notification: (Notify all agencies as required)			
<input type="checkbox"/> 911 (Police/RCMP, Fire, EMS)	<input type="checkbox"/> Energy Regulator (OGC, AER*, etc.)	<input type="checkbox"/> Local Authority (MD, County, Town, City)	<input type="checkbox"/> Health Authority
<input type="checkbox"/> Canada Energy Regulator (CER)	<input type="checkbox"/> Occupational Health & Safety (OH&S)	<input type="checkbox"/> Emergency Management Agency	<input type="checkbox"/> Ministry of Transportation
<input type="checkbox"/> Workers' Compensation Board (WCB)	<input type="checkbox"/> Emergency Response Assistance Canada (ERAC)	<input type="checkbox"/> Western Canadian Spill Services (WCSS)	<input type="checkbox"/> CANUTEC
<input type="checkbox"/> Transportation Dangerous Goods (TDG)	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other
<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other
*Request that the AER notify Alberta Environment & Parks (Forestry/Fish/Wildlife/Lands), 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:

Section 6: Forms

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																
		Total Resources Required:															Prepared by: Name: Position/Title: Date/Time: Signature:		
		Total Resources - Have on Hand:																	
		Total Resources Need to Order:																	

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? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Destination:		Notify:	<input type="checkbox"/> HQ	<input type="checkbox"/> Agency	<input type="checkbox"/> Region
		Name:			
		Date:			
Unit Leader responsible for collecting performance rating					
Unit / Personnel					
<p>You and your resources have been released subject to Sign-Off from the following:</p> <p>Demobilization Unit Leader – Check the appropriate box</p>					
Logistics Section					
<input type="checkbox"/> Supply Unit					
<input type="checkbox"/> Communications Unit					
<input type="checkbox"/> Facilities Unit					
<input type="checkbox"/> Ground Support Unit Leader					
Planning Section					
<input type="checkbox"/> Demobilization Unit					
Finance/Admin Section					
<input type="checkbox"/> Time Unit					
Other					
<input type="checkbox"/>					
<input type="checkbox"/>					
Remarks:					
Page		of		Prepared By: (Name and Position)	Signature:

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							

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

Incident Details <i>To be completed by the person involved or notified</i>					
Report taken by			Date / Time		
Name of person calling			Caller Telephone		
Incident Location (LSD / NTS)					
Event Summary					
Agencies Notified <input type="checkbox"/> Yes Who? <input type="checkbox"/> No					
Event Status <input type="checkbox"/> Incident contained or controlled <input type="checkbox"/> Intermittent control possible <input type="checkbox"/> Imminent control possible <input type="checkbox"/> Incident is uncontrolled					
Site Type <input type="checkbox"/> Well <input type="checkbox"/> Pipeline <input type="checkbox"/> Tank Farm/Storage <input type="checkbox"/> Battery/Plant/Facility <input type="checkbox"/> Other_____					
Incident Type <input type="checkbox"/> Sour Gas Release <input type="checkbox"/> Sweet Gas Release <input type="checkbox"/> Pipeline Break <input type="checkbox"/> Security (theft, threat, terrorism) <input type="checkbox"/> Loss of Containment <input type="checkbox"/> Fire/Explosion <input type="checkbox"/> Worker Injury/Fatality <input type="checkbox"/> Vehicle/Transportation <input type="checkbox"/> Liquid Spill <input type="checkbox"/> Other_____					

A1 Initial Emergency Report Form

Impacts			
Public Health and Safety		<input type="checkbox"/> Could be jeopardized <input type="checkbox"/> Is jeopardized	
Public Protection Measures Taken		<input type="checkbox"/> Notification <input type="checkbox"/> Evacuation <input type="checkbox"/> Shelter-in-place <input type="checkbox"/> Roadblocks	
Worker Injuries		<input type="checkbox"/> First Aid <input type="checkbox"/> Hospitalized <input type="checkbox"/> Fatality <input type="checkbox"/> Other _____	
Distance to nearest surface development		_____ km	Distance to nearest urban centre _____ km
Details			
Release Impact		<input type="checkbox"/> On-Lease <input type="checkbox"/> Off-Lease Product _____ Amount _____	
Gas Readings		H ₂ S _____ SO ₂ _____ LEL _____ Other _____	
Distance to nearest watercourse		_____ km	Weather Conditions
Details			
Media Involvement?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Regulator Involvement?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Public Affairs/Community Relations Issues?		<input type="checkbox"/> Yes <input type="checkbox"/> 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: <input type="checkbox"/> a.m. <input type="checkbox"/> p.m.	Duration of call:

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

<i>Name:</i> _____
<i>Contact number:</i> _____
<i>Description of the concern:</i> _____

How many people are you with right now?
<i>Adults</i> _____ <i>Children</i> _____
Can you provide the location of the incident?
<i>Location of the incident (address, legal, landmark, etc.):</i> _____

Where are you right now?
<input type="checkbox"/> <i>Home / Work</i> <input type="checkbox"/> <i>In a Vehicle</i> <input type="checkbox"/> <i>Outside</i> <input type="checkbox"/> <i>Other</i> _____
<i>If the resident is at home / work / outside tell them:</i>
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.
<i>If the resident is in a vehicle and cannot shelter-in-place tell them:</i>
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



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

General Incident Information			
AER contact:		Field centre:	
Licensee:	Caller:	Phone:	
E-mail address for release report:			
Licence #:	Pipeline line #:	Approval #:	
Incident location: ____/____/____/____ W ____ M			
Emergency level:			
Serious event? <input type="checkbox"/> Yes <input type="checkbox"/> No			
If yes, what kind of serious event? <input type="checkbox"/> Blowout <input type="checkbox"/> Explosion <input type="checkbox"/> Fire <input type="checkbox"/> Other control loss <input type="checkbox"/> Fracking <input type="checkbox"/> Casing failure			
Land type (jurisdiction): <input type="checkbox"/> Freehold <input type="checkbox"/> First Nations <input type="checkbox"/> Métis <input type="checkbox"/> CFB <input type="checkbox"/> Crown – Disposition #:			
Agencies notified:		Date:	
FIRST duty office (DO) contacted: <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, date & time DO was contacted:			
DO contact name:			

Release Details			
Volumes			
Substance*	Released (m ³ /10 ³ m ³)	Recovered (m ³ /10 ³ m ³)	Disposal/storage location
* For emulsion, break down oil & water if possible.			
Description of how the release volume was determined and verified (including calculations; e.g., spill length x width x depth):			
Area affected (length x width): m ²			
How was the area affected determined? (Aerial survey, perimeter walk, range finder, samples taken, etc.):			
Who delineated the spill area (environmental technologist, operator, etc.) and what process was used?			

<input type="checkbox"/> Reminded licensee to update the AER immediately if release volumes or area changes from what was originally reported.
<input type="checkbox"/> Asked for the immediate submission of photos of the entire spill site to the AER and communicated that photos of the cleanup will need to be submitted with the release report.
Cause of release (suspected or actual):

Impact		
Release off lease? <input type="checkbox"/> Yes <input type="checkbox"/> No (pipeline right-of-way is off lease)		
If yes, was the landowner notified? <input type="checkbox"/> Yes <input type="checkbox"/> No		Name of landowner/agency:
Release within disposition boundary? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Outside disposition – was leaseholder notified? <input type="checkbox"/> Yes <input type="checkbox"/> No		Name of leaseholder:
<input type="checkbox"/> If outside disposition, reminded licensee that they will need a TFA.		
Actual incident H ₂ S concentration (if applicable): % / ppm / mol/kmol		
Nearest town:	Distance and direction to town:	
Environment affected: <input type="checkbox"/> Air <input type="checkbox"/> Land <input type="checkbox"/> Water		
Distance of release to the nearest water body, watercourse, or waterway:		
How was this distance determined?		
Wildlife/waterfowl/livestock affected: <input type="checkbox"/> None <input type="checkbox"/> Habitat affected <input type="checkbox"/> Animals injured/killed		
Notes/description:		
Confirm how the release has been or will be contained:		
Confirm how the release has been or will be cleaned up:		
Evacuees (#):	People injured (#):	Fatalities (#):
Were members of the public affect? <input type="checkbox"/> Yes <input type="checkbox"/> No		
If yes, indicate if they were		
<input type="checkbox"/> notified <input type="checkbox"/> instructed to shelter in place <input type="checkbox"/> advised to evacuate		

Notes/description:
Media interest? <input type="checkbox"/> None <input type="checkbox"/> Local <input type="checkbox"/> Regional <input type="checkbox"/> National
Damage to public property? <input type="checkbox"/> Minor/no damage <input type="checkbox"/> Substantial (home covered in oil) <input type="checkbox"/> Extensive (home destroyed)

Pipeline Specific		
Hit? <input type="checkbox"/> Yes <input type="checkbox"/> No	Line #:	Test failure? <input type="checkbox"/> Yes <input type="checkbox"/> No
Normal operating pressure: kPa	Maximum operating pressure: kPa	
Is the pipeline shut in, depressured, and isolated? <input type="checkbox"/> Yes <input type="checkbox"/> No		
If yes, date & time:		
What is the total volume of liquid in the pipeline?		
Are there isolation valves? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, have they been activated? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Are there any other pipelines that tie into the failed line? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, have they been shut in/isolated? <input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Reminded the company to contact the AER before excavating the pipeline.		
<input type="checkbox"/> Reminded, advised, or directed the company that the pipeline is not to be returned to service without the AER's permission.		
Right-of-way (ROW)		
<input type="checkbox"/> Licensee has confirmed when the pipeline ROW and well were last checked. Date:		
How was the ROW surveillance conducted (from the air, by quad, on foot, using infrared, etc.)?		
<input type="checkbox"/> Requested that daily production volumes for the well/pipeline be submitted within 24 hours.		
Investigation information		
What operations are currently taking place (containment, sampling, line locating, retaining contractors/consultants, pipeline excavation, repair, site access, EM survey, etc.)?		

A5 Air Monitoring Log

Date: _____	Responder Name: _____
Page _____ of _____	Responder Position: _____

Time	Location of Samples	H ₂ S (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 ₂ S (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

Date:		Time Call Received:		Time Call Reported:	
Person Receiving Call:			What/Whom Call Directed To:		
Caller's Sex: <input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Unknown			Approximate Age:		
Accent: <input type="checkbox"/> Yes <input type="checkbox"/> No Type:		Familiar voice: <input type="checkbox"/> Yes <input type="checkbox"/> No Who:			
Threat (Exact Wording):					
Tips: <ul style="list-style-type: none"> • Listen carefully and remain calm. • Do not interrupt caller. • Attempt to keep caller talking. • Attempt to ask questions below. • Obtain as much information as you can while call is in progress. • Signal someone to call your supervisor; give him / her this information. • Do not hang up or disconnect your phone, even after the caller hangs up. • For telephone tracing, call the local telephone company and local police. 					
If bomb threat, ask the following questions:					
When will the bomb go off? (date and time)					
Where is it located?					
Why did you place it?					
What kind of bomb is it?					
What does it look like?					
What is your name?					
Where are you calling from?					
Was the caller familiar with company facilities, or employees? (e.g.: nicknames, familiarity with staff, etc.) <input type="checkbox"/> Yes <input type="checkbox"/> No					
Did caller appear familiar with building / facility by the description of the bomb location? <input type="checkbox"/> Yes <input type="checkbox"/> No					
Identifying Characteristics of Caller					
Voice		Speech		Language	
<input type="checkbox"/> Loud	<input type="checkbox"/> Fast	<input type="checkbox"/> Excellent	<input type="checkbox"/> Calm	<input type="checkbox"/> Office Machines	
<input type="checkbox"/> Soft	<input type="checkbox"/> Slow	<input type="checkbox"/> Good	<input type="checkbox"/> Angry	<input type="checkbox"/> Factory Machines	
<input type="checkbox"/> High Pitched	<input type="checkbox"/> Distinct	<input type="checkbox"/> Fair	<input type="checkbox"/> Rational	<input type="checkbox"/> Street Traffic	
<input type="checkbox"/> Deep	<input type="checkbox"/> Distorted	<input type="checkbox"/> Poor	<input type="checkbox"/> Irrational	<input type="checkbox"/> Airplanes	
<input type="checkbox"/> Raspy	<input type="checkbox"/> Stutter	<input type="checkbox"/> Foul Language	<input type="checkbox"/> Coherent	<input type="checkbox"/> Trains	
<input type="checkbox"/> Pleasant	<input type="checkbox"/> Nasal	<input type="checkbox"/> Accent	<input type="checkbox"/> Incoherent	<input type="checkbox"/> Animals	
<input type="checkbox"/> Intoxicated	<input type="checkbox"/> Slurred	<input type="checkbox"/> _____	<input type="checkbox"/> Deliberate /	<input type="checkbox"/> Party Atmosphere	
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> Serious	<input type="checkbox"/> Music	
Notify proper authorities as soon as possible. Have employees take a look around their immediate work stations for unusual packages. Evacuate building if necessary.			<input type="checkbox"/> Emotional	<input type="checkbox"/> Voices	
			<input type="checkbox"/> Laughing	<input type="checkbox"/> Quiet	
			<input type="checkbox"/> Nervous	<input type="checkbox"/> _____	
Name of the supervisor first notified:					

STARS[®] Site Number _____
 Location _____

Remote Site Landing Zone Reference Card

In the event of a SITE EMERGENCY
PHONE the STARS Emergency Link Centre[®]

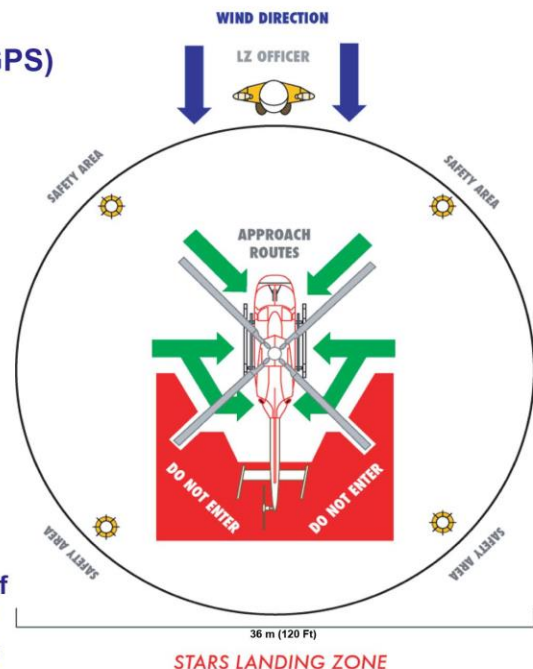
TOLL FREE **OR** **DIRECT**
1-888-888-4567 **403-299-0932**

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 H₂S

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



PRE-LANDING CHECKLIST

The STARS Emergency Link Centre will require the following information from the site:

TERRAIN
 level or sloping
 type of surface
 dust, loose snow,
 rocks, bushes,
 stumps, etc.

LANDING ZONE MARKINGS
 4 turbo flares
 4 road flares / strobes
 4 reflective flares
 4 highway cones (days only)
 extra strobes/flares/cones
 on upwind side

HAZARDS
 signs
 vehicles
 trees
 equipment
 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

[Insert Company Name] 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.

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: _____

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		
			<input type="radio"/> Shelter <input type="radio"/> Evacuate			<input type="radio"/> Yes <input type="radio"/> No	
			<input type="radio"/> Shelter <input type="radio"/> Evacuate			<input type="radio"/> Yes <input type="radio"/> No	
			<input type="radio"/> Shelter <input type="radio"/> Evacuate			<input type="radio"/> Yes <input type="radio"/> No	
			<input type="radio"/> Shelter <input type="radio"/> Evacuate			<input type="radio"/> Yes <input type="radio"/> No	
			<input type="radio"/> Shelter <input type="radio"/> Evacuate			<input type="radio"/> Yes <input type="radio"/> No	
			<input type="radio"/> Shelter <input type="radio"/> Evacuate			<input type="radio"/> Yes <input type="radio"/> No	
			<input type="radio"/> Shelter <input type="radio"/> Evacuate			<input type="radio"/> Yes <input type="radio"/> No	
			<input type="radio"/> Shelter <input type="radio"/> Evacuate			<input type="radio"/> Yes <input type="radio"/> No	
			<input type="radio"/> Shelter <input type="radio"/> Evacuate			<input type="radio"/> Yes <input type="radio"/> No	
			<input type="radio"/> Shelter <input type="radio"/> Evacuate			<input type="radio"/> Yes <input type="radio"/> No	
			<input type="radio"/> Shelter <input type="radio"/> Evacuate			<input type="radio"/> Yes <input type="radio"/> No	

Time	Resident name	Resident ID	Shelter / Evacuate	Number of people	Assistance or	Comments
------	---------------	-------------	--------------------	------------------	---------------	----------

B3 Resident Contact Log

				Inside	Outside	transportation required?	
			<input type="radio"/> Shelter <input type="radio"/> Evacuate			<input type="radio"/> Yes <input type="radio"/> No	
			<input type="radio"/> Shelter <input type="radio"/> Evacuate			<input type="radio"/> Yes <input type="radio"/> No	
			<input type="radio"/> Shelter <input type="radio"/> Evacuate			<input type="radio"/> Yes <input type="radio"/> No	
			<input type="radio"/> Shelter <input type="radio"/> Evacuate			<input type="radio"/> Yes <input type="radio"/> No	
			<input type="radio"/> Shelter <input type="radio"/> Evacuate			<input type="radio"/> Yes <input type="radio"/> No	
			<input type="radio"/> Shelter <input type="radio"/> Evacuate			<input type="radio"/> Yes <input type="radio"/> No	
			<input type="radio"/> Shelter <input type="radio"/> Evacuate			<input type="radio"/> Yes <input type="radio"/> No	
			<input type="radio"/> Shelter <input type="radio"/> Evacuate			<input type="radio"/> Yes <input type="radio"/> No	
			<input type="radio"/> Shelter <input type="radio"/> Evacuate			<input type="radio"/> Yes <input type="radio"/> No	
			<input type="radio"/> Shelter <input type="radio"/> Evacuate			<input type="radio"/> Yes <input type="radio"/> No	
			<input type="radio"/> Shelter <input type="radio"/> Evacuate			<input type="radio"/> Yes <input type="radio"/> No	
			<input type="radio"/> Shelter <input type="radio"/> Evacuate			<input type="radio"/> Yes <input type="radio"/> No	
			<input type="radio"/> Shelter <input type="radio"/> Evacuate			<input type="radio"/> Yes <input type="radio"/> No	
			<input type="radio"/> Shelter <input type="radio"/> Evacuate			<input type="radio"/> Yes <input type="radio"/> 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

[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 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 _____ <i>(your name)</i> _____ calling from _____ <i>(company name)</i> _____ .	
Is this the _____ <i>(name of residence / business)</i> _____ at _____ <i>(telephone number)</i> _____ ?	
_____ <i>(company name)</i> _____ is responding to a <i>(potential)</i> emergency at _____ <i>(location)</i> _____ 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?	
<i>Adults</i> _____	
<i>Children</i> _____	
Do you wish to leave your residence at this time?	
If Yes	Please travel in a <i>north / east / south / west</i> 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 _____ <i>(company name)</i> _____ at _____ <i>(telephone number)</i> _____ .	
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

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)

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.

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.

Section 6: Forms

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 Incident Commander, who will issue a press release at a later time.

Contact:

_____ Office: _____

_____ Fax: _____

*Note: Only the **Media Spokesperson** designated by the Incident Commander is to provide any specific information to the public or the media. Refer to page 1 of Section 3: Communications & Media for the generic media statement to be used by all other response personnel.*

C2 Media Contact Log

Date: _____ 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.
"[Insert Company Name] 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. [Insert Company Name] 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

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.
"[Insert Company Name] 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. [Insert Company Name] 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

Time	Call To	Call From	Agency	Contact Name	Telephone Numbers		Remarks / Comments
					Work	Fax	

Home #: _____

[illegible]

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Appendix A: ERP Scope, Training and Plan Maintenance

Scope

This plan defines the emergency response process related to all hazards affecting petroleum operations. This Emergency Response Plan (ERP) outlines the process for an Alert/Minor, Level-1, Level-2, or Level-3 emergency for any jurisdiction or incident type.

Plan Objectives

The primary objective of this Emergency Response Plan (ERP) is to define the incident management system and organizational structure, process and tools to respond effectively to all incidents regardless of size or complexity. It has been designed to be intuitive and have natural process flow utilizing the Incident Command System (ICS) and to comply with applicable regulations, standards, and industry best practices.

Purpose

This ERP clearly defines emergency response team roles, functions and duties to protect people, environment, and assets during an incident. This plan clarifies the following:

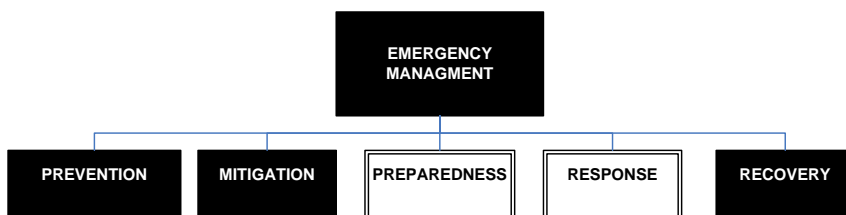
- Overall Incident Command System (ICS) response organization.
- Incident Command System (ICS) Roles and responsibilities.
- Guidance to determine the Alert or Emergency Level.
- Mechanisms to activate the ERP.
- Notification /communication requirements to stakeholders (public /government /responders).
- Documentation tools for accurate records management of events and decisions during an event.
- Guidance for post-emergency actions.

The intent of this Emergency Response Plan (ERP) is to define effective measures in place to:

- Notify and protect the workers and the public.
- Minimize environmental impact.
- Minimize asset and property loss.
- Regain steady state of operations.
- Minimize emergency response time.
- Maximize response effectiveness.
- Coordinate with government agencies and stakeholders.
- Minimize business and reputational impact.

This manual outlines the framework, tools and reference materials to facilitate a prompt, safe, efficient and properly managed response to all incidents regardless of size or complexity. Therefore this plan provides employees and contractors with practical tools that will guide them through the Preparedness and Response principles of Emergency Management.

Emergency Management Process Flow



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HEALTH, SAFETY AND ENVIRONMENTAL POLICY

The safety of workers and the protection of the environment are integral parts of the business operations of Enercapita Energy Ltd. The company will operate in a manner that minimizes adverse effects to the environment and ensures the safety and health of its employees, contractors and the public.

In fulfilling this commitment, Enercapita Energy Ltd. will maintain a safe work environment directed by acceptable industry practices and in compliance with legislative requirements. Enercapita believes that zero incidents are the only acceptable level and will work towards this goal each and every day.

Employees and contractors are responsible to work in a conscientious manner, which safeguards themselves, co-workers, the public and the environment.

We will strive to eliminate any foreseeable hazard that could possibly result in hazardous product releases/spills, fire, explosion, security breaches, loss or damage to property, personal injuries/illnesses, damage to the environment or danger to public safety.

Enercapita Energy Ltd. management, employees and contractors are collectively responsible for implementing the Health, Safety and Environmental Policy. To assist Enercapita employees and contractors in accomplishing these objectives; guidance and specific duties are described in the Corporate Safety Management Program and the Emergency Response Plans.

A handwritten signature in black ink, appearing to read "Duane Masse".

Duane Masse
Executive VP and Chief Operating Officer
Enercapita Energy Ltd.

October 2019

The information in this policy does not take precedence over any applicable government legislation, with which all employees and contractors must be familiar.

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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 Manager is responsible for ensuring that a semi-annual review of their ERP is conducted. The ERP Revision Request Form is located in this section and can be used to track this information and provide documentation in the case of an ERP assessment.
- Any requests for revisions to this plan should be forwarded to the applicable Area Manager for review. These revisions will be discussed with the company's Emergency Response Program Coordinator and H₂Safety Services Inc. Any significant changes including those resulting from exercises and incidents will require immediate updates sent out to all plan holders; less significant changes will be implemented during the ERP's next annual update.
- The company's Emergency Response Program Coordinator is responsible for ensuring that the plans and distribution lists are updated, training is performed, and new projects are included in the plan. Information in this plan will be verified and updated at least once a year.
- Old manuals must be sent to H₂Safety Services Inc. or destroyed. If a plan holder no longer requires their manual (job changes, position changes, etc.), it must be returned to the company's Emergency Response Program Coordinator to be tracked, reassigned, or destroyed.

The licensee must distribute changes in information that are instrumental to implementing the ERP to all required plan holders.

Errors identified in the ERP by the regulatory agency, licensee, and other party must be corrected immediately upon identification.

Modifications to New or Existing Operations

The licensee must submit a supplement for review and approval to the regulatory agency for all newly added wells, pipelines, well / pipeline tie-ins, facilities and operating areas prior to commencement of operations if there are new surface developments within the Emergency Planning Zone. For example, the EPZ for a new pipeline tie-in does not fall entirely within the existing Emergency Planning Zone and impacts a new residence / public facility / trapper cabin / etc. that was not previously included in the Emergency Response Plan. The licensee must conduct a public involvement program for all new members of the public. Before any new or major modifications to an existing facility / pipeline are brought on-stream, any additions or changes will be added to the Emergency Response Plan. If required, a site specific Emergency Response Plan will be developed. Meetings to review response plan requirements must be held before major facility modifications are commissioned.

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

ERP Revision Request Form

Plan Holder Name / Title / Company: _____

ERP Name: _____

Manual Number: _____

If any of the following items have changed, please check the box beside it and provide a description of the change in the space provided:

- ☐ Company information
- ☐ Mapping information
- ☐ Resident contact information
- ☐ Response staff information or capacity changes
- ☐ Facility additions, such as well or pipeline tie-ins
- ☐ Other

Description of the change:

Please attach additional pages and/or support documentation as required.

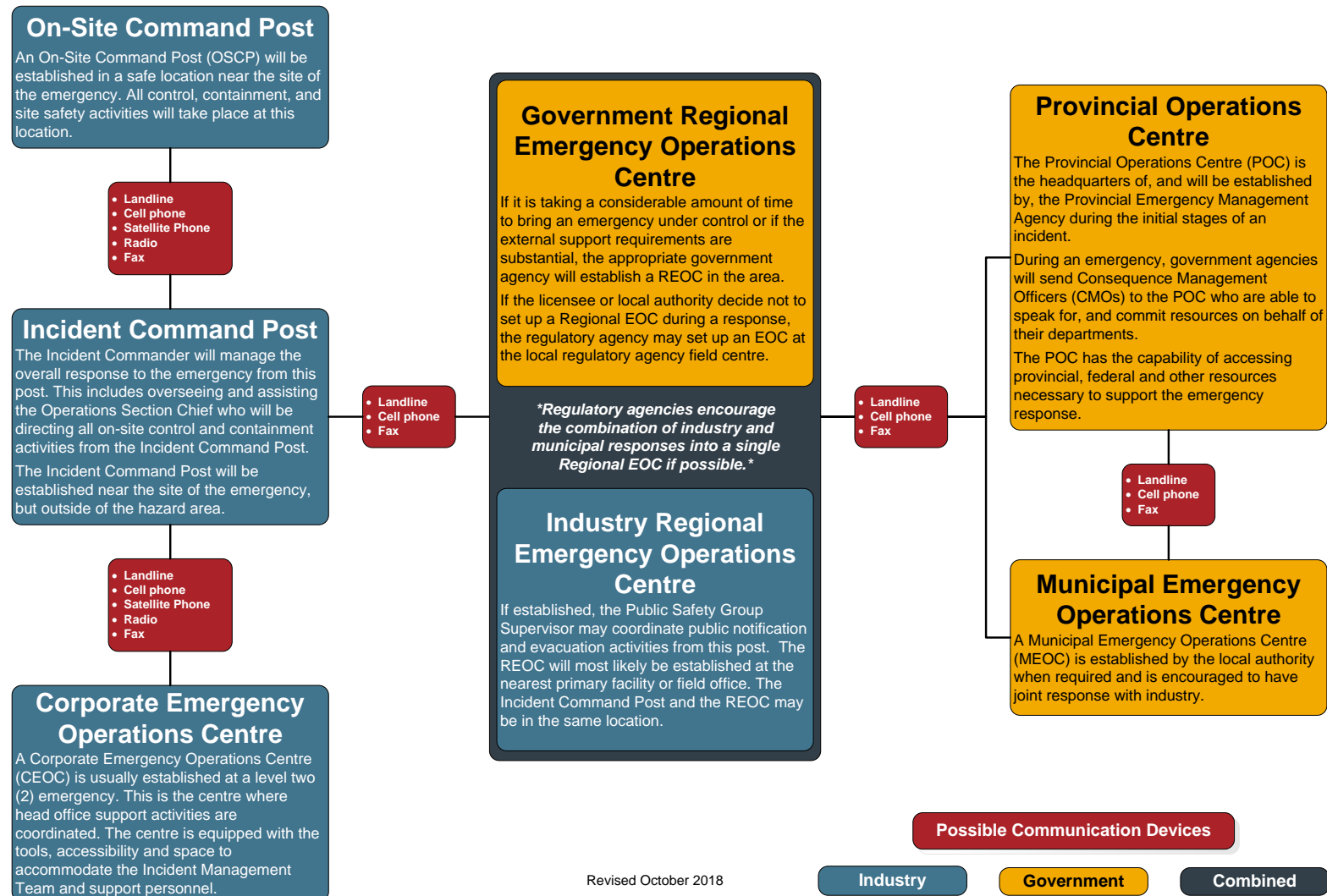
Please return the completed checklist to:

H₂Safety Services Inc.
210, 7260 – 12 Street SE
Calgary, AB T2H 2S5
Email: erp@h2safety.ca
Fax: 403-313-9180

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Appendix B: Incident Command Post (ICP)

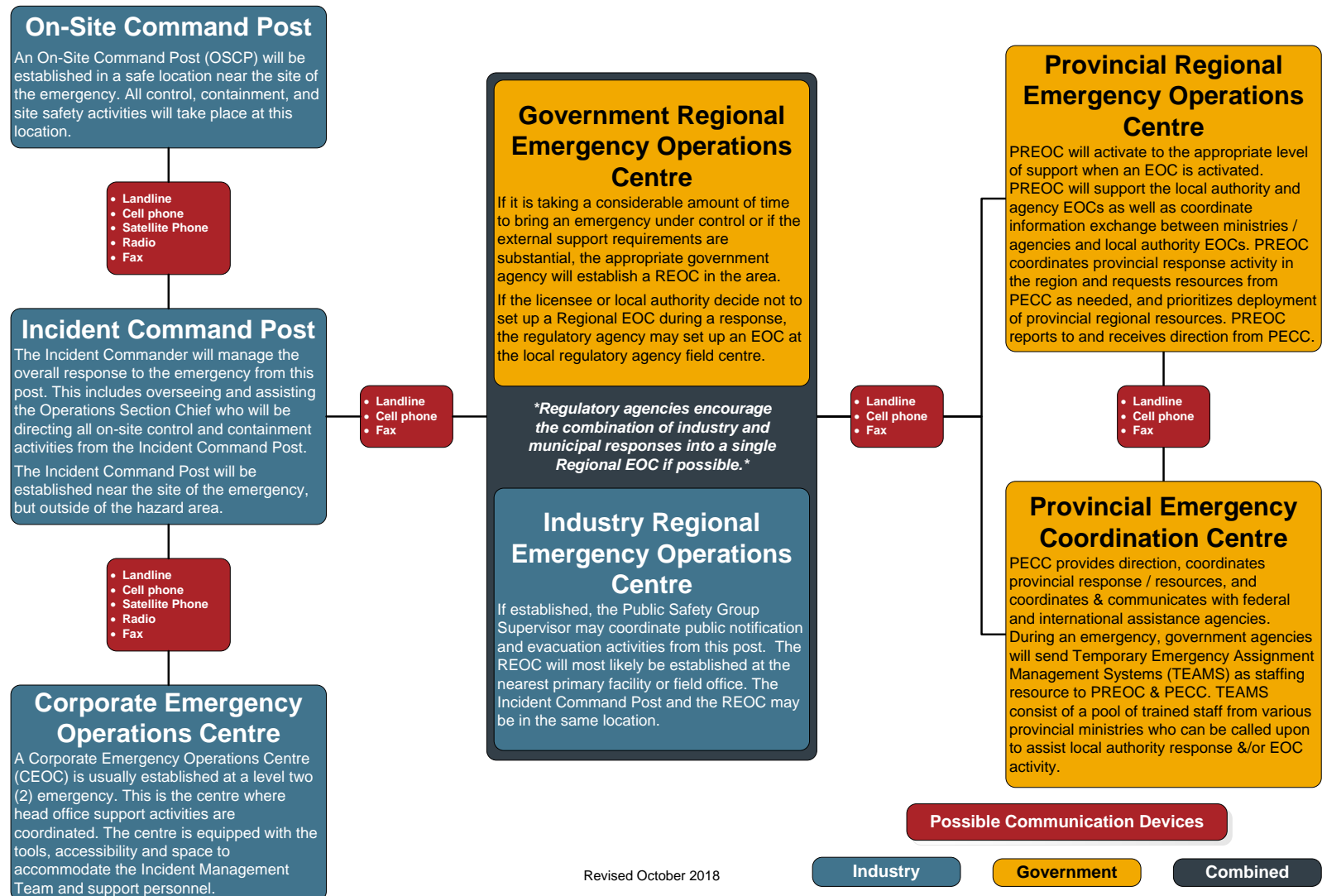
Communication Methods Between Command Posts - Alberta



Revised October 2018

Appendix B: Incident Command Post (ICP), continued

Communication Methods Between Command Posts - British Columbia



Appendix B: Incident Command Post (ICP), continued

ICP Activation and Setup

The Incident Command Post is activated by the Incident Commander.

The following tasks must be addressed once the ICP has been activated:

Position	Task
Incident Commander	<ul style="list-style-type: none"> <input type="checkbox"/> Establish briefings with the Field Response Team (FRT). <input type="checkbox"/> Ensure staffing is adequate for the task(s). <input type="checkbox"/> Consider the time difference, if applicable, and determine how time will be communicated throughout the incident.
Safety Officer	<ul style="list-style-type: none"> <input type="checkbox"/> Ensure the room / floor / building is secure. <input type="checkbox"/> Ensure a safe work area, i.e. remove clutter or cords causing slips, trips, falls, etc.
Information Officer	<ul style="list-style-type: none"> <input type="checkbox"/> 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. <input type="checkbox"/> Ensure inbound and outbound calls received or made are centrally logged. <input type="checkbox"/> Ensure responders have their office phones forwarded to their cell phones.
Logistics / IT Support	<ul style="list-style-type: none"> <input type="checkbox"/> Turn on all computers; ensure the relevant systems are operational and that they all have internet/email access. <input type="checkbox"/> Bring up any ERP related electronic tools (ie; H2CommandCentre) and ensure they are working and that they can all be displayed on various projectors / screens as required. <input type="checkbox"/> Check that printers are connected to the computers and working. Print a test page to confirm. <input type="checkbox"/> Check that the fax machine is setup and working. <input type="checkbox"/> Check that any phone conferencing systems are set up and working. <input type="checkbox"/> Ensure that telephone lines are available and active. <input type="checkbox"/> Ensure TVs are working properly and set up to local news or CNN. <input type="checkbox"/> Obtain any additional equipment as required.
Logistics / Security	<ul style="list-style-type: none"> <input type="checkbox"/> Ensure the room/floor/building is secure. Arrange for additional security if required. <input type="checkbox"/> 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. <input type="checkbox"/> 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. <input type="checkbox"/> Arrange for refreshments (coffee, food, water, etc.) for those working there, as well as sleeping space if required. <input type="checkbox"/> 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	<ul style="list-style-type: none"> <input type="checkbox"/> Determine which emergency response plans and other ERP tools are needed and pull them out to be readily accessible. <input type="checkbox"/> 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. <input type="checkbox"/> Ensure clocks are displaying the correct time, including any clocks with a different time zone. <input type="checkbox"/> 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. <input type="checkbox"/> As team members arrive, write their name in the appropriate position on the Field Response Team Assignment Chart. <input type="checkbox"/> Pass out documentation forms and provide an overview of the documentation process. <input type="checkbox"/> Ensure the latest contact list for Field Response Team members are available. <input type="checkbox"/> Begin documenting all actions, decisions and major events. Start-up H₂CommandCentre if available. <input type="checkbox"/> Continually update the laminated maps and charts as information becomes available (Field Response Team Assignment Chart, Emergency Status Board, etc.). <input type="checkbox"/> 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 addition to periodic briefings for status updates, the Incident Commander also has to conduct a meeting once the approved Incident Action Plan is in place. This meeting will outline the planned objectives and tasks and will ensure that resources required for implementation of the action plan are in available or en route.

At the end of each operational period, all departing members of the Field Response Team will be debriefed and must brief their replacements.

Documentation

It is critical to ensure that all ICP documentation is compiled, properly stored and readily available after the event. Proper documentation will aid in investigations, inquiries, debriefs and support for financial claims and budgets. Everything that happens during the Response/Recovery Operations should be recorded at the ICP. The forms at the back of this manual are designed to aid in this process

Appendix C: Toxic Gases

Hydrogen Sulphide (H₂S)

Background

Hydrogen sulphide (H₂S) is a flammable, colourless gas with a characteristic odour of rotten eggs that people can smell at low levels. It is also known as hydrosulphuric acid and sewer gas. H₂S occurs naturally in crude petroleum, natural gas, volcanic gases and hot springs. It can also result from bacterial breakdown of organic matter. Industrial sources include emissions from industrial paper plants; combustion of coal, fuel oil and natural gas (including gas flares); kraft paper mills; tanneries; and emissions from sewers and waste treatment facilities. Cigarette smoke is also a source of hydrogen sulphide.

H₂S is released primarily as a gas and spreads in the air. Its residence time in the atmosphere ranges from about one day to more than 40 days, depending on ambient temperature and other atmospheric variables, including humidity, sunshine and presence of other pollutants. The decreased temperatures and decreased levels of hydroxyl ions in northern regions in winter increase the residence time. When released H₂S gas is ignited, it will change into sulphur dioxide (SO₂), be carried into the atmosphere and dispersed over a larger area at lower concentrations.

Signs and Symptoms

Exposure to hydrogen sulphide may cause irritation to the eyes, nose or throat. It may also cause difficulty in breathing for some asthmatics. Brief exposures to high concentrations of hydrogen sulphide can cause a loss of consciousness and possibly death. In most cases, the person appears to regain consciousness without any other effects. However, in some individuals, there may be permanent or long-term effects such as headaches, poor attention span, poor memory and poor motor function. No health effects have been found in humans exposed to typical environmental concentrations of hydrogen sulphide (0.00011-0.00033 ppm).

Acute Exposure Effects

The effects on humans will vary depending on the duration and H₂S concentration of exposure. The health effects of acute exposure to H₂S are shown in the following table. Acute exposure reflects a range from a few seconds up to several weeks.

Hydrogen Sulphide Toxicity Table (BC Regulations)

Concentration (ppm)	Effects
Less than 1	Most people smell “rotten eggs”.
3 – 5	Odour is strong.
20 – 150	Nose and throat feel dry and irritated. Eyes sting, itch or water and “gas eye” symptoms may occur. Prolonged exposure may cause coughing, hoarseness, shortness of breath and runny nose.
150 – 200	Sense of smell is blocked (olfactory fatigue).
200 – 250	Major irritation of the nose, throat and lungs, along with headache, nausea, vomiting and dizziness. Prolonged exposure can cause fluid buildup in the lungs (pulmonary edema), which can be fatal.
300 – 500	Symptoms are the same as above, but more severe. Death can occur within 1-4 hours of exposure.
Above 500	Immediate loss of consciousness. Death is rapid, sometimes immediate.

Adapted from Hydrogen Sulfide in Industry, WorkSafe BC February 2010

Appendix C: Toxic Gases, continued

Acute Health Effects of Hydrogen Sulphide (AB Regulations)

Concentration in Air (ppm)	Description of Potential Health Effects
1	A noticeable odour that may be offensive to some individuals. People may temporarily experience mild symptoms of discomfort, including nausea, headache, and irritability due to the odour. Asthma symptoms may worsen.
10 – 20	An obvious offensive odour. Temporary eye irritation may occur after a single exposure and last several hours. Symptoms include mild itchiness, dryness, increased blink reflex and slight watering. Some people may experience headaches, nausea and vomiting. Symptoms of asthma, bronchitis or other forms of chronic respiratory disease may worsen.
50	A strong, intense offensive odour that may irritate eyes and breathing passages. Eyes may be itchy, stinging, and red with increased blinking, tearing and tendency to rub eyes. Breathing passages could feel tingly or sting, with increased tendency to clear throat and cough. Symptoms of pre-existing respiratory disease may worsen. No permanent injury to eyes or breathing passages is expected unless exposure is prolonged. Odour-sensitive individuals may experience headaches, nausea, vomiting and diarrhea.
100	Initially there is a strong objectionable odour that lessens with prolonged exposure due to olfactory "fatigue." Eyes and breathing passages are often irritated within one hour of exposure. Eyes may be sore, stinging, burning, tearing, redness, swelling of eyelids, and possible blurred vision. Respiratory irritation may include sore throat, cough, soreness or stinging of breathing passages, and wheezing. The symptoms of asthma, bronchitis or other forms of chronic respiratory disease will worsen. Odour may cause headache, nausea, vomiting and diarrhea.
250	There may or may not be an odour present due to olfactory paralysis. Eyes and breathing passages will become irritated within minutes of exposure, and the irritation will worsen with longer exposure. The outer surface of the eyes and inner eyelids will be inflamed, red and sore. Eyes will begin watering and tearing immediately and vision may be blurred. Eyes may be permanently harmed if exposure is prolonged. Respiratory irritation will include sore throat, cough, difficulty breathing, soreness of chest, and wheezing. Asthma symptoms will worsen. People may experience "systemic" effects, including headache, nausea and vertigo depending on duration of exposure.
500	No odour is present due to olfactory paralysis. Severe irritation and possible permanent injury to the eyes and breathing passages within 30 minutes of exposure. Lung and breathing passage damage may cause 'chemical pneumonia' following exposure if the exposure was prolonged. Systemic effects involving the central nervous system may occur within one hour of exposure and include headache, anxiety, dizziness, loss of coordination and slurred speech. People may lose consciousness or collapse suddenly, and die if exposure persists.

Appendix C: Toxic Gases, continued

Acute Health Effects of Hydrogen Sulphide (AB Regulations), continued

Concentration in Air (ppm)	Description of Potential Health Effects
750	No odour is present due to olfactory paralysis. Central nervous system effects will be most obvious, and could include anxiety, confusion, headache, slurred speech, dizziness, stumbling, loss of coordination, and other signs of motor dysfunction. People may lose consciousness, collapse suddenly and possibly die, if exposure continues for more than a few minutes. Lung and breathing passage damage will likely cause 'chemical pneumonia' among survivors.
1000	Immediate "knock-down" and loss of consciousness. Death within moments to minutes. Immediate medical attention needed if victim is to survive.

Adapted from: Technical Advisory Committee on Public Health and the Oil and Gas Industry, Environmental Public Health Manual for Oil and Gas Activities in Alberta, 2007

Source: Alberta Health Services, Environmental Public Health

<http://www.albertahealthservices.ca/assets/wf/eph/wf-eh-alberta-health-acute-exposure-health-effects-of-hydrogen-sulphide-and-sulphur-dioxide.pdf>

Appendix C: Toxic Gases, continued

Chronic Exposure Effects of Hydrogen Sulphide

Chronic effects from H₂S 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 (H₂S) 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 H₂S exposure.

Section I provides information on H₂S

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

H₂S is a colourless gas. It is heavier than air and tends to flow in ditches, trenches and low-lying areas.

H₂S 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 H₂S can no longer be detected by odour.

II. Health effects of hydrogen sulphide

H₂S 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 H₂S, 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 H₂S 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 burn 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 H₂S)

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 (SO₂)

Background

Sulphur Dioxide (SO₂) belongs to the family of sulphur oxide gases (SO₂). Sulphur is prevalent in raw materials including crude oil and coal, as well as in ore that contains common metals. Sulphur oxide gases form when fuels containing sulphur are burned and when gas is processed or metals are extracted from ore. Like other sulphur oxide gases, SO₂ dissolves in water or water vapour to form acid, and interacts with other gases and particles in the air to form sulphates and other products.

Sulphur dioxide is a colourless gas that is about 2.5 heavier than air. It has a sweet pungent odour, and can be detected by taste and smell at concentrations as low as 300 parts per billion (ppb). Acids that are formed when SO₂ (and nitrogen oxides) react with other substances in the air may be carried great distances before falling to earth as rain, fog, snow or dry particles. Acid rain damages forests and crops, changes the chemical make-up of soils, and increases the acidity of lakes and streams. Continued long-term exposure will affect the natural variety of plants and animals in an ecosystem. As well as contributing to smog, SO₂ emissions cause aesthetic damage and accelerate the decay of building materials and paints.

General guidelines dictate evacuation where SO₂ concentrations reach 5 ppm averaged over a 15 minute period. However, as a precaution, evacuation will be established under the criteria when the SO₂ level reaches 1 ppm for two to three hours, or averages 0.3 ppm over twenty-four hours.

Signs and Symptoms

Sulphur dioxide causes a wide variety of health and environmental impacts because of the way it reacts with other substances in the air. Acute and chronic exposure to SO₂ 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 SO₂ on sensitive asthmatics. Particularly sensitive groups include children, the elderly and those with existing heart or lung disease.

Sulphur Dioxide Toxicity Table (BC Regulations)

Concentration (ppm)	Effects
0.13	24 hour level (MWLAP Level B Criteria).
0.34	One hour average evacuation level (MWLAP Level B criteria).
2	Eight hour occupational Exposure Limit (BC WCB)
3 – 5	Odour threshold.
5	15 minute Occupational Exposure Limit (BC WCB)
8 – 12	Throat irritation, coughing, constriction in chest, tearing and smarting of the eyes.
10 – 50	5 – 15 minutes exposure produces increased irritation of eyes, nose, and throat, choking, coughing, and in some cases wheezing due to narrowing of the airways (which increases the resistance of the air flow).
150	Short-term endurance lost due to the severe eye irritation and because of the effects on the membranes of the nose, throat, and lungs.
500	Highly dangerous after exposure of 30 – 60 minutes.

Adapted from the Canada Safety Council Data Sheet "Sulphur Dioxide" No. B-4 Oil and Gas Commission November 2003.

Appendix C: Toxic Gases, continued

Acute Health Effects of Sulphur Dioxide (AB Regulations)

Concentration (ppm)	Acute Health Effects
0.1	Transient bronchoconstriction ¹ in sensitive exercising asthmatic individuals that ceases when exposure ceases. ²
0.3 – 1	Possible detection by taste or smell.
0.75	Transient lung function changes in healthy, moderately exercising, non-asthmatic individuals.
1 - 2	Lung function changes in healthy non-asthmatics. Symptoms in asthmatics would likely increase in severity. There may be a shift to clinical symptoms from changes detectable only via spirometry.
3	Easily detected odour.
6 – 12	May cause nasal and throat irritation.
10	Upper respiratory irritation, some nosebleeds.
20	Definitely irritating to the eyes; chronic respiratory symptoms develop; respiratory protection is necessary.
50 – 100	Maximum tolerable exposures for 30-60 minutes.
Greater than 100	Immediate danger to life (NIOSH recommendation).

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

² It should be noted that clinical studies on humans are generally designed to elicit a response and consequently subject study volunteers to challenging conditions such as exercising, mouth breathing, cold, dry air, etc. Real-life responses in asthmatics should be viewed as being individual-specific dependent on severity of asthma, whether the individuals are medicated or not, how cold and/or dry the air is, mouth breathing (vs. nose breathing, which can act as an effective scrubber mechanism) and exercise.

Adapted from: Technical Advisory Committee on Public Health and the Oil and Gas Industry, Environmental Public Health Manual for Oil and Gas Activities in Alberta, 2007

Source: Alberta Health Services, Environmental Public Health

<http://www.albertahealthservices.ca/assets/wf/eph/wf-eh-alberta-health-acute-exposure-health-effects-of-hydrogen-sulphide-and-sulphur-dioxide.pdf>

Appendix C: Toxic Gases, continued

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 (SO₂) 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 SO₂ exposure.

Section I provides information on SO₂

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

Section III depicts a summary of possible clinical management

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

I. Sulphur Dioxide

SO₂ is a colourless gas with a pungent odour detectable by the human nose at concentrations of about 0.5 to 0.8 ppm.

SO₂ is highly soluble in water resulting in the formation of sulphurous acid.

Approximately 90% of inhaled SO₂ is absorbed in the upper respiratory tract.

Asthmatics and individuals with underlying bronchial hyperactivity may be more susceptible to low level exposure to SO₂.

II. Health Effects of Sulphur Dioxide

SO₂ causes almost immediate coughing with significant exposure.

SO₂ causes irritation of the conjunctive and nasal mucosa at levels between 5 and 10 ppm.

Exposures of SO₂ 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 SO₂ 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 SO₂ 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), SO₂ 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 SO₂, 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 SO₂ (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 SO₂ 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 SO₂) or

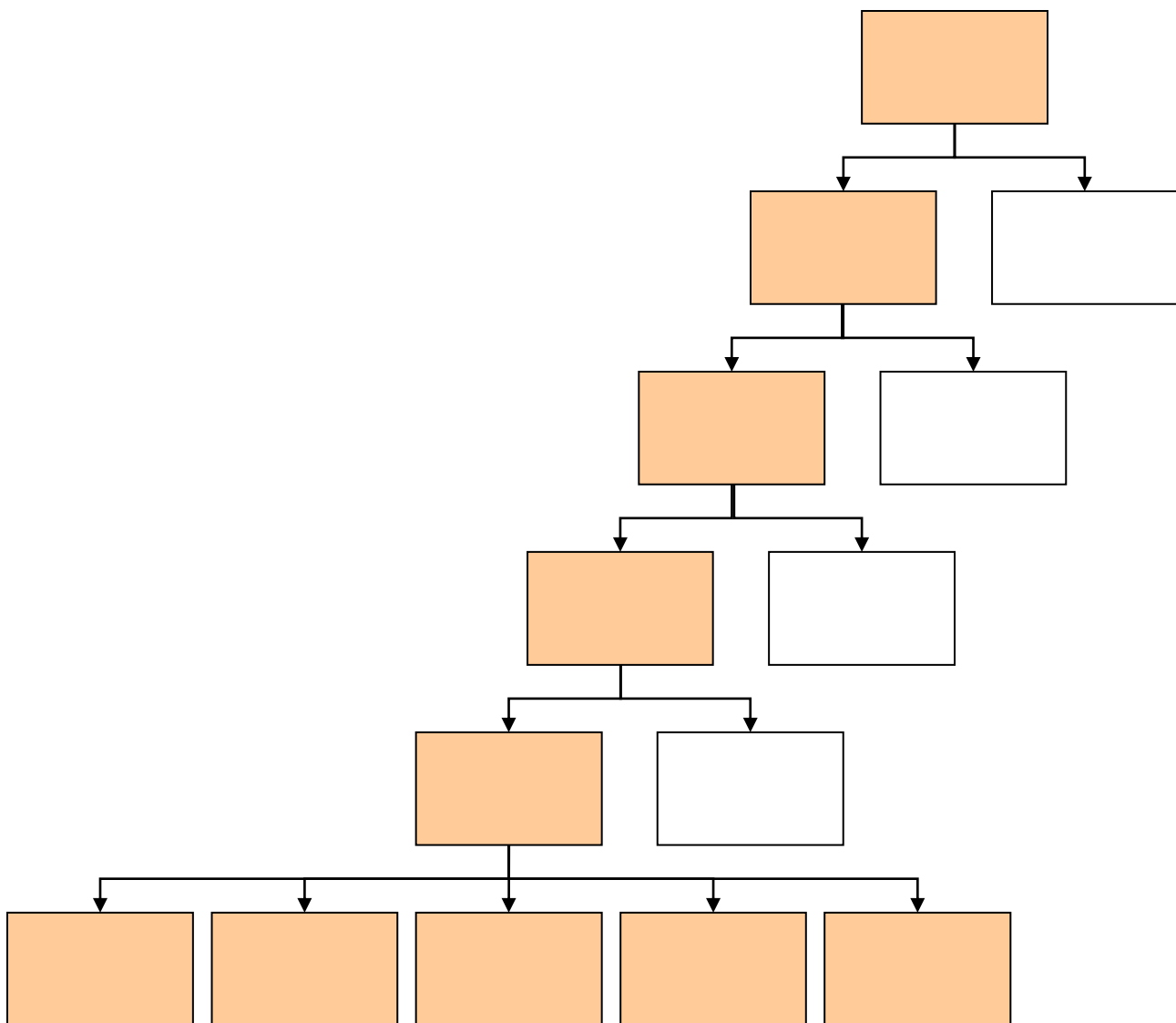
Known exposure, including "knockdown", with symptoms that require medical treatment and/or hospitalization.

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

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

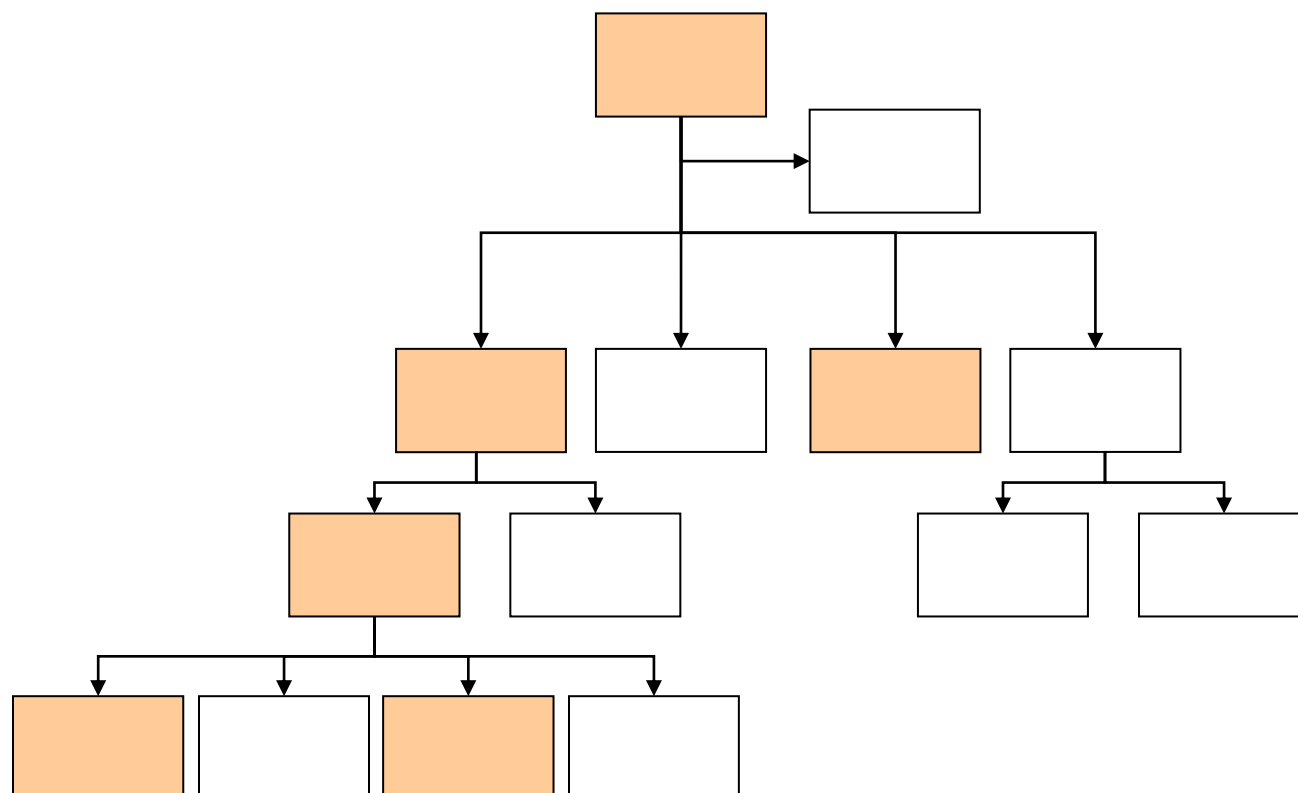
Management by Objectives – Objectives are ranked by priority, should be as specific as possible, must be attainable and if possible given a working time-frame. Objectives are accomplished by first outlining strategies (general plans of action), then determining appropriate tactics (how the strategy will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

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



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

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



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

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

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

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

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

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

Establishment and Transfer of Command – The highest ranking authority arriving 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.

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

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

Summary of Responsibilities

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

Command Ensures safety. Assumes overall responsibility for the incident.

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

Operations Implements the Incident Action Plan (IAP) focusing on control, containment, and site safety.

Public Safety Implements the Incident Action Plan (IAP) focusing on notification and evacuation of the public.

Planning Help create and track (document) the success of the Incident Action Plan (IAP).

Logistics Secure the resources and put them in place to allow Operations to implement the Incident Action Plan.

Finance/Admin Ensures procedures are in place to allow logistics to secure the resources (spending) and track and control the expenditures.

Communications Disseminates information and liaises with external agencies.

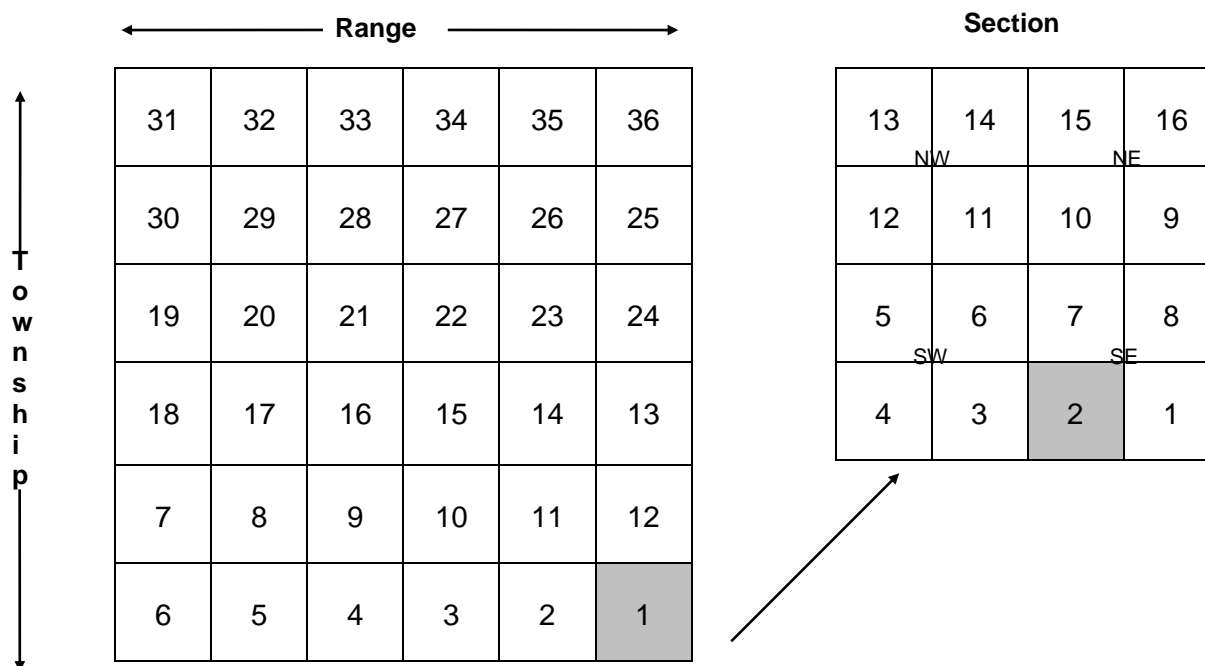
Communications is handled by the Information Officer once one has been appointed by the Incident Commander. The Information Officer is part of the Command Staff.

Appendix E: Land Descriptions

Dominion Land Survey (DLS) System

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

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



- 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:

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

Appendix E: Land Descriptions, continued

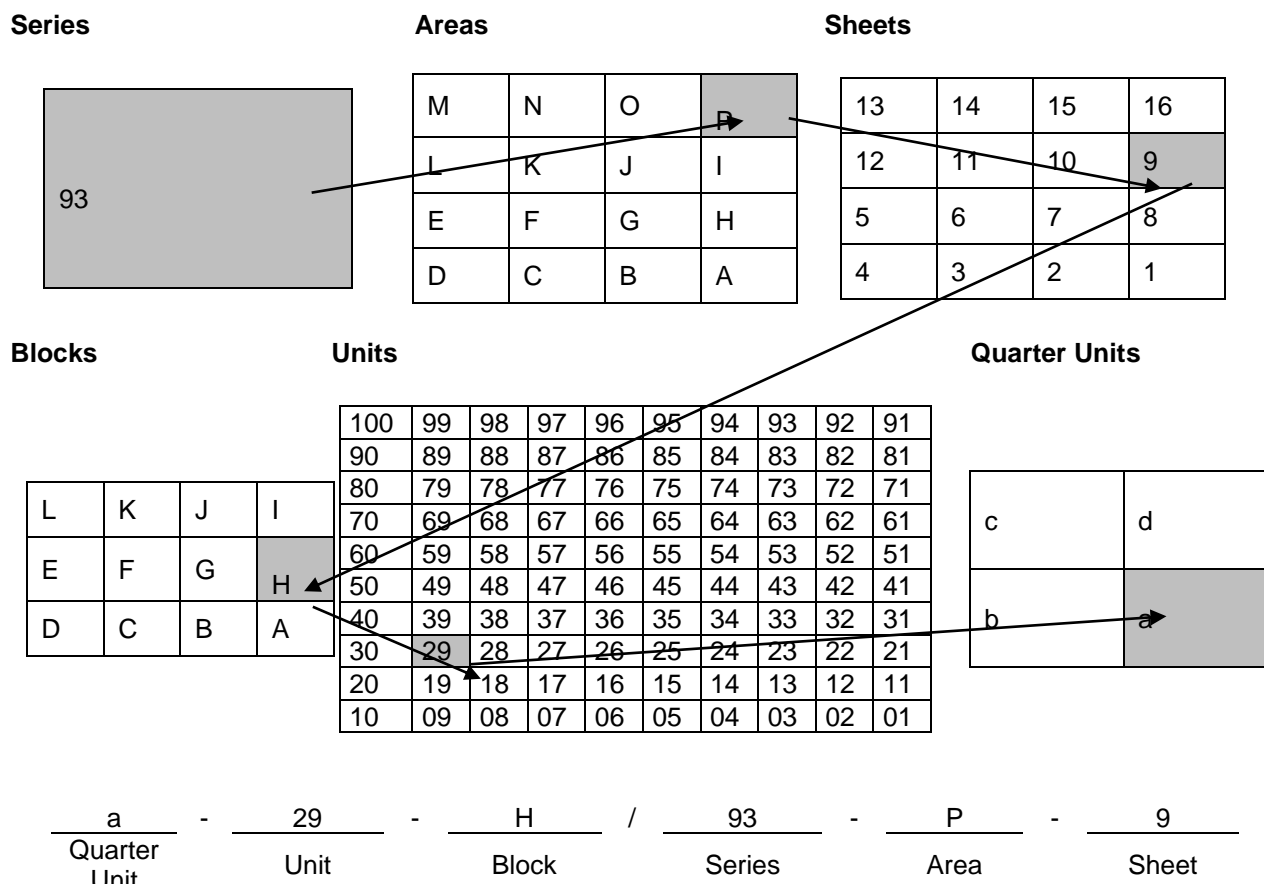
National Topographic System (NTS)

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



Appendix F: ERP Reference Material

Acronyms

Acronym	Meaning	Acronym	Meaning
ABSA	Alberta Boilers Safety Association	IIZ	Initial Isolation Zone
AEMA	Alberta Emergency Management Agency	INAC	Indigenous and Northern Affairs Canada
AER	Alberta Energy Regulator	LA	Local Authority
AH	Alberta Health	LBV	Line Block Valve
AHS	Alberta Health Services	LEL	Lower Explosive Limit
AT	Alberta Transportation	LPG	Liquefied Petroleum Gas
BLEVE	Boiling Liquid Expanding Vapour Explosion	MARS	Mapping and Response System
CANUTEC	Canadian Transport Emergency Centre	MD	Municipal District
CAPP	Canadian Association of Petroleum Producers	MEP	Municipal Emergency Plan
CEPA	Canadian Environmental Protection Act	MER	Ministry of Energy and Resources
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	SHA	Saskatchewan Health Authority
HVP	High Vapour Pressure	SO ₂	Sulphur Dioxide
HVPL	High Vapour Pressure Liquid	STARS	Shock Trauma Air Rescue Society
H ₂ S	Hydrogen Sulphide	TDG	Transportation of Dangerous Goods
IAP	Incident Action Plan	WCSS	Western Canadian Spill Service
ICS	Incident Command System	WHMIS	Workplace Hazardous Materials Information 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 H₂S or SO₂.

Alberta Energy Regulator (AER)

The AER ensures the safe, efficient, orderly, and environmentally responsible development of hydrocarbon resources over their entire life cycle. This includes allocating and conserving water resources, managing public lands, and protecting the environment while providing economic benefits for Albertans.

Alert (Alberta specific)

An incident that can be handled on-site by the licensee through normal operating procedures and is deemed to be a very low risk to members of the public.

Auto-ignition temperature

All NGL products are flammable and will flash at extremely low temperatures. An open flame or spark is not necessary to cause ignition. Any hot surface which exceeds the auto-ignition temperature of a product can cause a fire if the vapours reaching the hot surface are within their flammable range.

Best practices

A technique or methodology that, through experience and research, has proven to reliably lead to a desired result. A commitment to using the best practices in any field is a commitment to using all the knowledge and technology at one's disposal to ensure success.

Body of water

Streams, lakes, and rivers.

Boiling Liquid Expanding Vapour Explosion (BLEVE)

Boiling Liquid Expanding Vapour Explosion, which is associated with natural gas liquids and high vapour pressure liquids.

Boiling point

This is the temperature that a liquid changes to a gas. NGL products change to a gas at extremely low temperatures and will absorb heat from the surrounding environment during the phase change. Therefore, caution must be used when working with NGLs because contact with flesh can reduce the temperature of the flesh to the NGL boiling point and cause severe frostbite.

British Columbia Oil and Gas Commission (OGC)

The OGC is the lead agency for all regulated oil and gas related activities within British Columbia.

British Columbia Emergency Management (EMBC) (*British Columbia specific*)

Aids local governments in analyzing hazards and risks, develop and test emergency plans, train and organize emergency staff and volunteers. EMBC also manages all agencies in the event of an emergency or disaster, which cannot be handled locally.

Businesses

Industrial operators, retail outlet operators, suppliers, residents, outfitters, foresters and other entities that normally operate within the Emergency Planning Zone, but do not necessarily reside in the Emergency Planning Zone.

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 H₂S release rate greater than 2.0 m³/s or wells with lower H₂S release rates in close proximity to an urban centre as defined in ID 97-6: Sour Well Licensing and Drilling Requirements.

Emergency

A present or imminent event outside the scope of normal operations that requires prompt coordination of resources to protect the health, safety, and welfare of people and to limit damage to property and the environment.

Emergency Operations Centre (EOC)

An Emergency Operations Centre is a designated facility in a suitable location (i.e. head office, regional office, etc.) established by the permit holder to support Incident Command and to manage the larger aspects of an emergency. In a high-impact emergency, there may be a number of EOCs established to support the response. They may include the Incident Command Post, regional and corporate EOCs, a municipal EOC (MEOC), and the provincial government EOC (POC).

Emergency Awareness Zone (EAZ) (*British Columbia specific*)

A distance outside of the EPZ where public protection measures may be required due to poor dispersion of the hazard. This area is twice the radius of the Emergency Planning Zone (EPZ).

Emergency Planning Zone (EPZ)

The geographical area that surrounds a well, pipeline or facility containing hazardous product that requires specific emergency response planning by the licensee.

Emergency Response Plan (ERP)

A comprehensive plan to protect the public that includes criteria for assessing an emergency situation and procedures for mobilizing response personnel and agencies and establishing communication and coordination among the parties.

Emergency Support Team (EST)

Provides advice and logistical support to the Field Response Team and Incident Commander in particular. The team is comprised of head office personnel and any contract emergency experts.

EOC Director

The EOC Director activates the Corporate Emergency Operations Centre with staff to provide advice and support to the Incident Commander (Field Response Team).

Appendix F: ERP Reference Material, continued

Glossary of Terms, continued

EOC Director, continued

Note: If the emergency happens outside an area that has a site specific Emergency Response Plan, only then will the EOC Director assume or appoint the role of Incident Commander and dispatch a Field Response Team to the incident site.

ERCBH2S (*Alberta specific*)

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

Evacuation

Organized, phased, and supervised withdrawal of members of the public from dangerous or potentially dangerous areas to safe areas.

Tactical Evacuation – A measure to immediately move people to a safe area as part of emergency response and operations. Does not require approval from local authority but the local authority may enact an evacuation order, if required, and local authority must be advised if a tactical evacuation has occurred.

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

Explosive Limits (Lower and Upper)

Each gaseous hydrocarbon substance has a minimum (Lower Explosive Limit or LEL) and a maximum (Upper Explosive Limit or UEL) percentage in air below or above which combustion will not take place. Explosive limit and flammability limit are used interchangeable. The terms "Too Lean" and "Too Rich" are used for levels outside of the explosive range.

Facility

Any building, structure, installation, equipment, or appurtenance that is connected to or associated with the recovery, development, production, handling, processing, treatment, or disposal of hydrocarbon-based resources or any associated substance or wastes. This does not include wells or pipelines.

Field Response Team (FRT)

Company and contractor personnel directly involved in controlling the incident at the emergency site and from the EOC.

Fire Hazard (FH) Order (*Alberta specific*)

An order issued by the AER during an emergency to restrict public access to a specified area.

Functional Exercise

As described in CAN/CSA Z246.2-18, an activity designed to evaluate capabilities and multiple functions using simulated response. A functional exercise will simulate the deployment of resources and rapid problem solving. Participants will evaluate management of the command and coordination centres and assess the adequacy of emergency response plans and resources.

Gathering system

The network of pipelines, pumps, tanks, and other equipment that carries oil and gas to a processing plant or to other separation equipment.

Hazard

A situation with potential to harm persons, property, or the environment.

Appendix F: ERP Reference Material, continued

Glossary of Terms, continued

Hazard Planning Zone (HPZ) (British Columbia specific)

A geographical area (a) determined by using the hazard planning distance as a radius, and (b) within which persons, property or the environment may be affected by an emergency. Defined in Emergency Management Regulation.

Hazardous product

A substance released in quantities that may harm persons, property, or the environment.

High Vapour Pressure Liquids (HVPLs)

HVPLs have a vapour pressure greater than 240 kPa at 38°C (34.8 PSIG @ 100°F) and include ethane, propane, butane, and pentanes plus, either as a mixture or as a single component.

Note: Comparisons

Gasoline - Vapour pressure between 55 and 100 kPa at 38°C (8 - 14.5 PSIG @ 100°F).

Condensate - Often a component of a propane/butane mixture, has a vapour pressure of 59 to 72 kPa at 38°C (8.6 - 10.4 PSIG @ 100°F).

High Vapour Pressure (HVP) plume dispersion geometry

An uncontrolled release of NGL product on flat terrain will form a vapour plume as it disperses. If the vapour plume formed at the leak site has not been ignited, it will most likely reach its maximum size within the first half hour of the leak occurrence. Two unique features of an NGL plume are:

The downwind edge of the plume tends to spread out significantly forming a broad frontal edge.

Under certain conditions, the plume will travel upwind for a short distance.

High Vapour Pressure (HVP) pipeline

A pipeline system conveying hydrocarbons or hydrocarbon mixtures in the liquid or quasi-liquid state with a vapour pressure greater than 110 kilopascals absolute at 38°C. Some examples are liquid ethane, ethylene, propane, butanes, and pentanes plus.

High Vapour Pressure (HVP) products

HVP products have a vapour pressure greater than 240 kPa at 38°C (34.8 PSIG at 100°F) and include ethane, propane, butane and pentanes plus, either as a mixture or as a single component. A leak from a vessel or pipe containing HVP products can result in a BLEVE.

Hydrogen sulphide (H₂S)

A naturally occurring gas found in a variety of geological formations and also formed by the natural decomposition of organic matter in the absence of oxygen. H₂S is colourless, has a molecular weight that is heavier than air, and is extremely toxic. In small concentrations, it has a rotten egg smell and causes eye and throat irritations. Depending on the particular gaseous mixture, gas properties, and ambient conditions, a sour gas release may be:

Heavier than air (dense), so it will tend to drop towards the ground with time,

Lighter than air (buoyant), so it will tend to rise with time, or

About the same weight as air (neutrally buoyant), so it will tend to neither rise nor drop but with time disperse.

Hydrogen sulphide (H₂S) release rate

The rate that sour gas escapes into the atmosphere is often calculated for sour gas wells. It is usually defined in cubic metres per second (m³/s). The size of the emergency planning zone is estimated from the H₂S release rate.

Appendix F: ERP Reference Material, continued

Glossary of Terms, continued

Hydrogen sulphide (H₂S) release volume

The volume of sour gas that escapes into the atmosphere is often calculated for facilities that have a defined retention volume, usually defined in cubic metres. Emergency planning zone sizes are often estimated using the volume of H₂S that may be released from a facility. More sophisticated models may also incorporate the rate at which the release could occur and the nature of the gas and the atmospheric conditions when determining the emergency planning zone size.

Hyper-susceptible

A person or persons who may be abnormally reactive to a given exposure to toxins and whose reaction may occur in orders of magnitude greater than that of the susceptible population. Hypersusceptibles include those persons with impaired respiratory function, heart disease, liver disease, neurological disorders, eye disorders, severe anemia, and suppressed immunological function.

Ignition

Process of setting a hydrocarbon release on fire.

Ignition Team

Consists of at least two personnel trained in plume ignition.

Incident

An unexpected occurrence or event that requires action by emergency personnel to prevent or minimize the impacts on people, property, and the environment.

Incident classification

A system that examines the risk level to members of the public following an incident and assigns a level of emergency based on the consequence of the incident and the likelihood of the incident escalating.

Incident Command Post (ICP)

A designated place where the Incident Commander and staff is located. The ICP should be located outside of the hazard area, but close to the incident. The ICP may be a vehicle, trailer, fixed facility or any location suitable to accommodate the function.

Incident Commander

Manages the overall response to emergency incidents. The Incident Commander is responsible for: developing objectives, strategies and tactics that guide the response; assigning personnel to fill necessary positions; ensuring the safety of all personnel; keeping internal and external stakeholders updated; coordinating with other response agencies.

Incident Command System (ICS)

A standardized, on-scene, all-hazard incident management system. The Incident Command System (ICS) is flexible in that it can be adapted for large and small incidents.

Initial Isolation Zone (IIZ)

An area in close proximity to a continuous hazardous release where indoor sheltering may provide limited protection due to proximity of release.

Incident Management System

A system used to coordinate preparedness and incident management.

Isolating the release

Ensuring access to the hazard area is controlled.

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 H₂S has been released; the emergency is confined to the lease or company property.

Level 2 Emergency (*Alberta specific*)

There is no immediate danger outside the licensee's property or the right-of-way, but there is the potential for the emergency to extend beyond the licensee's property. Outside agencies must be notified. Imminent control of the hazard is probable but there is a moderate threat to the public and/or the environment. There may be local and regional media interest in the event.

Level 2 Emergency (*British Columbia specific*)

There is potential risk to the public or environment, as the emergency could extend beyond company property. However, control is still possible.

Level 3 Emergency (*Alberta specific*)

The safety of the public is in jeopardy from a major uncontrolled hazard. There are likely significant and ongoing environmental impacts. Immediate multi agency municipal and provincial government involvement is required.

Level 3 Emergency (*British Columbia specific*)

An immediate danger to the public or environment exists; control of the situation has been lost.

Licensee

The responsible duty holder as specified in legislation.

Liquid to gas expansion

NGL products will expand greatly when released to the atmosphere. For example, propane expands 272 times its liquid volume. Other products expand at different rates, but all have a high gas to liquid ratio.

Liquefied Petroleum Gas (LPG)

Mixture of heavier, gaseous hydrocarbons (butane and propane), liquefied as a portable source of energy.

Local Authority

A local authority is considered to be:

- 1) The council of a city, town, village or municipal district;
- 2) in the case of an improvement district or special area, the Minister of Municipal Affairs;
- 3) for a national park, the park superintendent or the park 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

Manitoba Growth, Enterprise & Trade – Petroleum Branch

The Manitoba Growth, Enterprise & Trade – Petroleum Branch administers The Mines and Minerals Act and related regulations governing the exploration, development, production, transportation and storage of crude oil and natural gas.

M.D.

Municipal District

Major (full-blown) exercise

As described in CAN/CSA Z246.2-18, a multi-agency, multi-jurisdictional activity involving actual deployment of resources in a coordinated response, as if a real emergency had occurred. The full-scale exercise includes the mobilization of units, personnel, and equipment. Participants will assess plans and procedures and evaluate coordinated responses under crisis conditions.

Maximum Operating Pressure (MOP)

The maximum licensed operating pressure for a vessel or pipeline or a section of it.

Ministry of Energy and Resources (MER)

MER is the lead regulatory agency for the upstream petroleum industry in Saskatchewan.

Mobile air quality monitoring

Use of sophisticated portable equipment to track substances such as H₂S or SO₂ 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.

Appendix F: ERP Reference Material, continued

Glossary of Terms, continued

NAV Canada

Canada's civil air navigation services provider, with operations coast to coast. NAV Canada provides air traffic control, flight information, weather briefings, aeronautical information services, airport advisory services, and electronic aids to navigation.

Notice to Airmen (NOTAM)

An order issued by Transport Canada restricting access to airspace in a defined area.

Notification

The distribution of project-specific information to participants that may be directly and adversely affected by the proposed energy development.

Odour complaint

A report that someone smells an offensive odour (may be sour gas) in the area.

Oil Spill Containment and Recovery Unit (OSCAR)

Trailer containing oil spill equipment for containment and recovery.

On-site command post (OSCP)

An emergency operations centre established in the immediate vicinity of the incident to provide immediate and direct response to the emergency and initially staffed by licensee personnel.

Partially controlled flow

A restricted flow of product at surface that cannot be shut off at the licensee's discretion with equipment 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).

Appendix F: ERP Reference Material, continued

Glossary of Terms, continued

Public facility (*Alberta specific*)

A public building, such as a hospital, rural school, or major recreational facility, situated outside of an urban centre that can accommodate more than 50 individuals and/or that requires additional transportation to be provided during an evacuation.

Public protection measures

The use of sheltering, evacuation, ignition, and isolation procedures to mitigate the impact of a hazardous release on members of the public.

Public Safety Group Supervisor

Member of the field response team. Individual charged with the responsibility of co-ordinating the evacuation or shelter of people in the emergency hazard Area. The Public Safety Group Supervisor reports to and may be located in the same location as the Incident Commander.

Publicly used development (*Alberta specific*)

Places where the presence of 50 individuals or less can be anticipated (e.g., places of business, cottages, campgrounds, churches, and other locations created for use by the non-resident public).

Publicly used facility (*British Columbia specific*)

Places where the presence of people can be anticipated. Examples include places of business, cottages, campgrounds, churches, and other locations created for use by the public. Includes any similar development the OGC may designate as a public facility.

Publicly used facility

Places where the presence of people can be anticipated. Examples include places of business, cottages, campground, churches, and other locations created for use by the public.

Reception centre

A centre established to register evacuees for emergency shelter, to assess their needs, and, if temporary shelter is not required because evacuees will stay elsewhere, to ascertain where they can be contacted.

Regional Emergency Operations Centre (REOC)

An operations centre established in a suitable location to manage the larger aspects of the emergency that is manned jointly by government and industry staff.

Residence

A dwelling that is occupied full time or part time.

Resident

Individual living in the area at a fixed location.

Resident data record

Form used to track the contact made with residents, businesses and transients.

Response zones (*Alberta specific*)

The Initial Isolation Zone (IIZ), Protective Action Zone (PAZ) and Emergency Planning Zone (EPZ).

Roadblock Crew

Personnel responsible for controlling access to the Emergency Hazard Area, reporting to the Public Safety Group Supervisor.

Appendix F: ERP Reference Material, continued

Glossary of Terms, continued

Rover

Member of the field response team. Individual responsible for assisting in the evacuation of the Hazard Area, reporting to the Public Safety Group Supervisor. May also be directed to shut-in / shut down equipment that may cause future safety hazards.

Rover Kit

A briefcase containing maps, forms, supplies and instructions needed by the Rover to carry out their duties.

S.A.B.A.

Supplied Air Breathing Apparatus.

S.C.B.A.

Self Contained Breathing Apparatus.

Serious injury

A serious injury includes the following:

- an injury that results in death;
- fracture of a major bone;
- amputation other than a portion of a finger or toe;
- loss of sight in an eye;
- internal haemorrhage;
- third degree burns;
- unconsciousness;
- An injury that results in paralysis (permanent loss of function).

Shelter-in-Place

Remaining indoors for short-term protection from exposure to toxic gas releases.

Sour gas

Natural gas, including solution gas, containing hydrogen sulphide (H₂S).

Sour gas release

An uncontrolled release of natural gas containing hydrogen sulphide (H₂S).

Sour multiphase product (*British Columbia specific*)

Any liquid that contains H₂S in the gas phase.

Sour multiphase pipeline (*British Columbia specific*)

A pipeline that transmits a multiphase product that contains more than 10 moles of H₂S per kilomole of natural gas in the gas phase.

Sour pipeline

Pipeline that conveys gas and/or liquid that contains sour gas.

Sour production facility

Facility that processes gas and/or liquid that contains sour gas

Sour well

An oil or gas well expected to encounter during drilling formations bearing sour gas or any oil or gas well capable of producing sour gas.

Appendix 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 H₂S release rate during the drilling state. The casing or open-hole flow configuration is used in arriving at this designation.

Standing well

A well that has been drilled and cased but not perforated. A company is generally allowed to leave the well as standing for up to one year.

State of local emergency

A declaration by a local authority providing the necessary authority, resources, and procedures at the municipal level to allow an emergency to be resolved effectively and efficiently.

Sulphur dioxide (SO₂)

A colourless, water-soluble, suffocating gas formed by burning sulphur in air; also used in the manufacture of sulphuric acid. SO₂ has a pungent smell similar to a burning match. SO₂ is extremely toxic at higher concentrations. The molecular weight of SO₂ is heavier than air; however, typical releases are related to combustion, which makes the gaseous mixture lighter than air (buoyant).

Surface development

Dwellings that are occupied full-time or part-time, publicly used development, public facilities, including campgrounds and places of business, and any other surface development where the public may gather on a regular basis. Surface development includes residences immediately adjacent to the EPZ and those from which dwellers are required to egress through the EPZ.

Susceptible

The subpopulation of persons who may be considered more sensitive to the effects of H₂S and SO₂, including the elderly, pregnant women, and the very young, particularly preschool-aged children.

Tabletop exercise

As described in CAN/ CSA Z246.2-18, an informal exercise generally used to review resource allocations and roles and responsibilities of personnel and to familiarize new personnel with emergency operations without the stress and time constraints of a major exercise.

Technically complete Emergency Response Plan (ERP)

A plan that meets all applicable requirements.

Telephoners

Telephoners place calls to residents as directed by the Public Safety Group Supervisor.

Threatening telephone call

Any communication that threatens the well-being of company personnel or property. A form is provided in the manual to capture data from or about a person who calls with a threatening message.

Transient

An individual that is temporarily in the area (e.g. camper, cross-country skier).

Appendix 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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ALBERTA OPERATIONS OVERVIEW



Draft Date: January 9, 2020 DC	Scale: 1:12,000,000	Map: 9427
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Revision Date: April 16, 2020 FSC	UTM ZONE 11 NAD83
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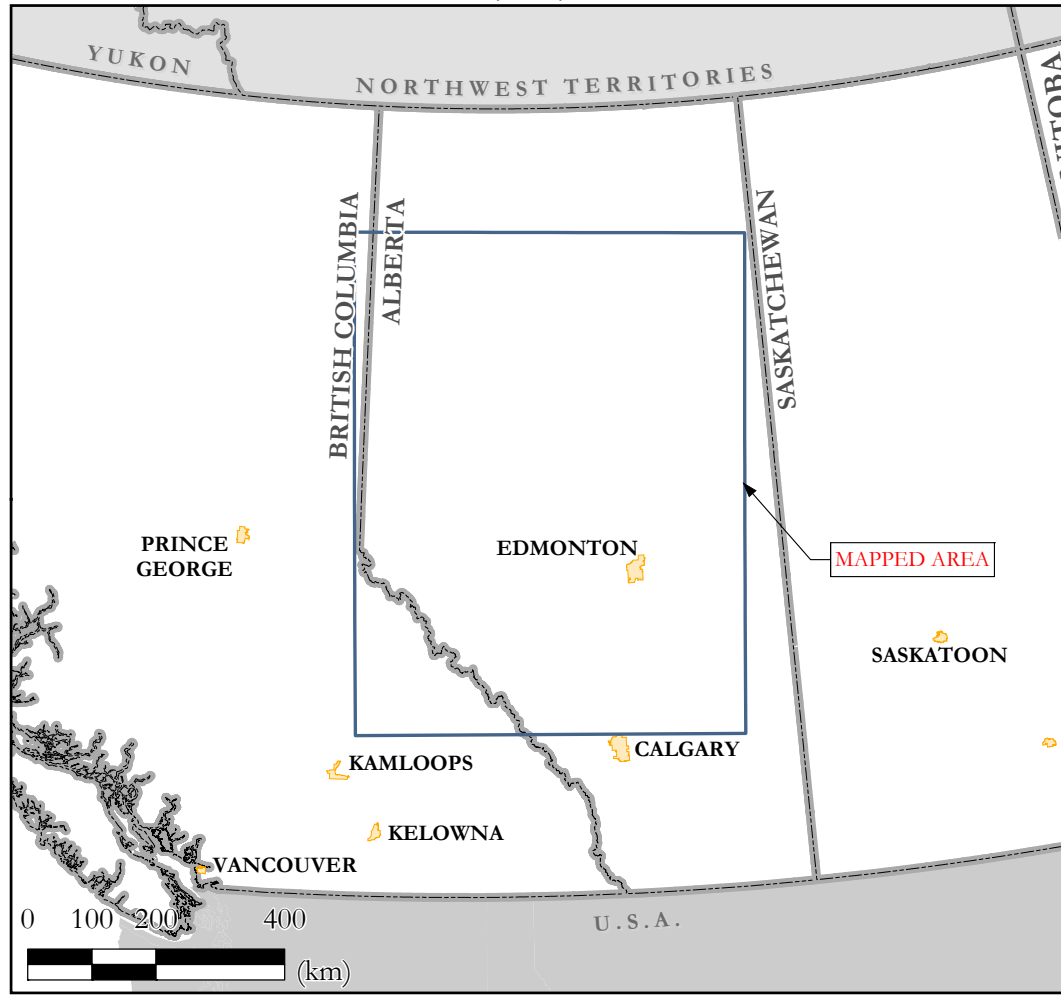
MAP PRODUCED BY






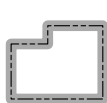

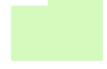


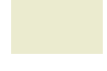



H2Safety
h2safety.ca

AREA OVERVIEW MAP

1:12,000,000



- | | | | |
|---|-----------------------------------|---|--|
| • Gas Well | — Gas Pipeline | — Highway |  Boundary Lake BC ERP |
| • Oil Well | - - - Discontinued Gas Pipeline |  Waterbody |  Alberta ERP |
| • Suspended Well | — Oil Pipeline |  Urban Area |  EPZ |
| • Well Location | - - - Discontinued Oil Pipeline |  Provincial Boundary | |
|  Gas Plant | — Misc. Fluids Pipeline |  Protected Area | |
|  Facility | — Water Pipeline |  First Nations Reserve | |
| | - - - Discontinued Water Pipeline |  Military Reserve | |
| | |  Metis Settlement | |

ENERCAPITA EMERGENCY CONTACTS
24 Hour Emergency Line 1-866-556-7838

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OPERATIONS SUMMARY

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SAFETY EQUIPMENT

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LEAD AGENCIES & PRIORITY CONTACTS

Note: All numbers, unless otherwise indicated, are 24 hours.

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SUPPORT SERVICES

Note: All numbers, unless otherwise indicated, are 24 hours.

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AREA USERS & TIE-INS

Note: All numbers, unless otherwise indicated, are 24 hours.

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EMERGENCY SERVICES

Note: All numbers, unless otherwise indicated, are 24 hours.

RCMP	911
Fairview	780-835-2211
Fire Departments	911
Clear Hills County Fire Department has two volunteer departments located in Worsley and Hines Creek with a number of rural fire trailers. Refer to Support Services for more fire fighting services.	
Ambulance	911
Worsley Ambulance	
Fairview Ambulance	
STARS Air Ambulance*	888-888-4567
<i>*Worsley Gateway Inn has a helicopter landing pad on site that can be used by STARS. Refer to Reception Centres for location and contact information.</i>	
Hospitals	
Worsley Community Health Centre	780-685-3752
Fairview Health Complex	780-835-6100
Alberta Poison & Drug Information Service	800-332-1414
Alberta One-Call	800-242-3447 www.albertaonecall.com

SURFACE DEVELOPMENT INFORMATION

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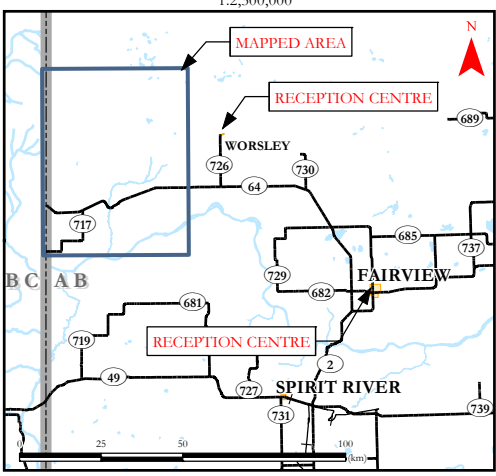
BOUNDARY LAKE ALBERTA
ALBERTA ERP



Draft Date: February 03, 2020 SO	Scale: 1:180,000	Map: 9499
Revision Date: May 20, 2020 SLC	UTM ZONE 11	NAD83



AREA OVERVIEW MAP



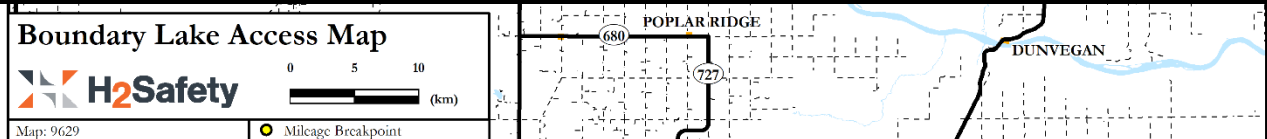
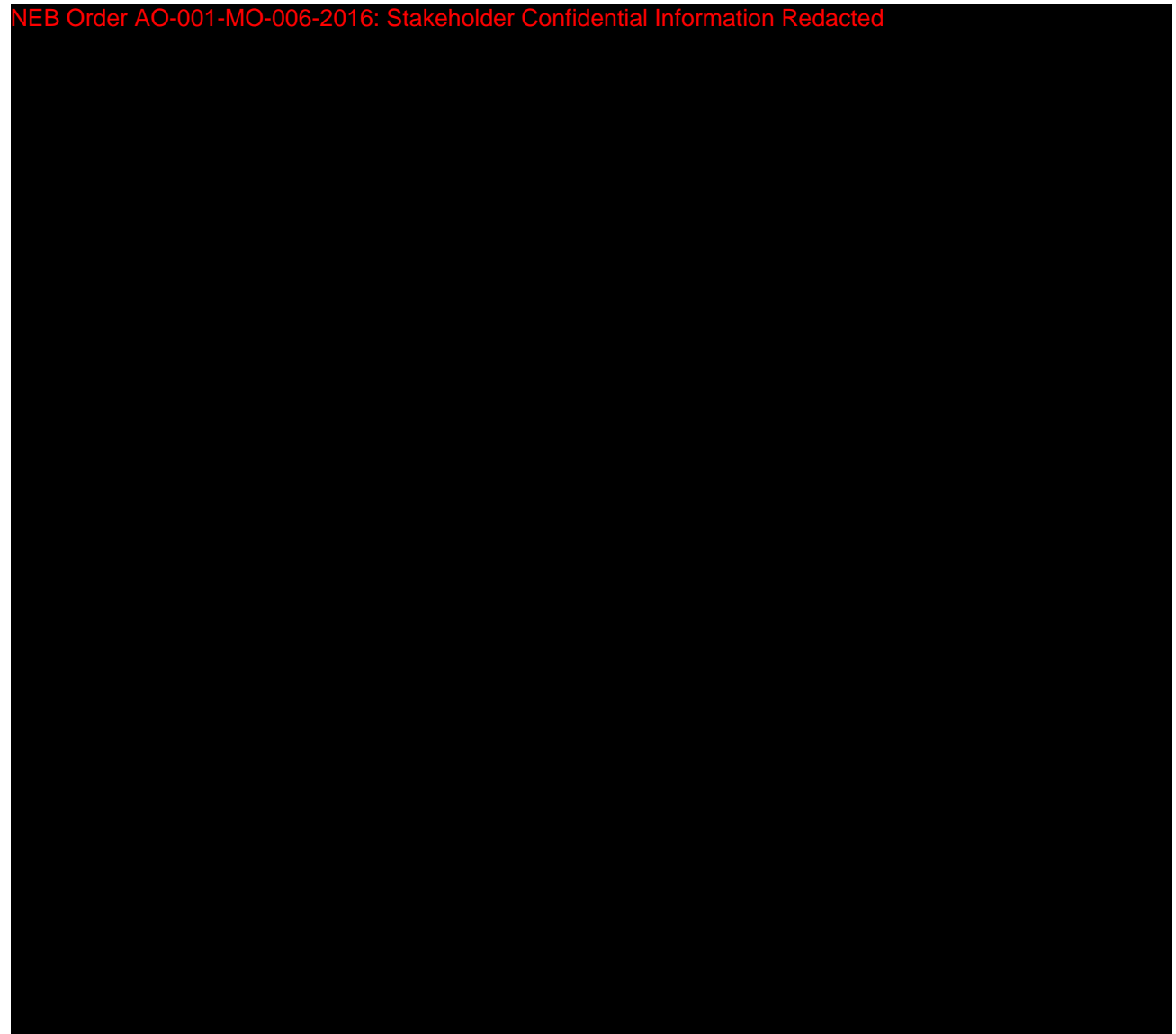
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	Gas Well		Gas Pipeline		Vacant		Hydrology
	Suspended Gas Well		Discontinued Gas Pipeline		Business		Waterbody
	Oil Well		Oil Pipeline		Trapper Cabin		Urban Area
	Suspended Oil Well		Discontinued Oil Pipeline		Fire Lookout		Protected Area
	Injection Well		Misc. Fluids Pipeline		Abandoned		Grazing Lease
	Service Well		Water Pipeline		Farm Use Area		Grazing Reserve
	Suspended Well		Discontinued Water Pipeline		Gravel Pit		AER Field Centre
	Third Party Facility		Other Roads		Locked Gate		Health Authority
	Third Party Gas Plant		Street		Staging Area		Local Authority
	Facility		Main Hwy		RCMP		Trapper Boundaries
	Gas Plant		Divided Hwy		Other EPZ		EPZ
	ESD		Railway		Egress EPZ		
			Airfield				

BOUNDARY LAKE ALBERTA FIELD ACCESS

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Boundary Lake Alberta - Facilities

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⁽¹⁾ The largest EPZ associated with this facility is of a sour suspended well (UWI 100122508612W602) on site.

LEGEND

Facility: B=Battery CP=Chemical Plant CS=Compressor Station GP=Gas Plant GS=Gas Gathering System IP=Injection Plant

LH=Line Heater MS=Meter Station PS=Pump Station S=Satellite TL=Terminals LR=Loading Rack WS=Water Source CT=Central Treating Plants

Status: A=Abandoned D=Discontinued N=Not Constructed/Approved O=Operating P=To Be Constructed S=Suspended AC=Active

UN=Unknown NW=New RT=Retired PE=Permitted

Other: EPZ=Emergency Planning Zone

Boundary Lake Alberta - Sour Wells

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LEGEND

Other: UWI=Unique Well Identifier EPZ=Emergency Planning Zone IIZ=Initial Isolation Zone PAZ=Protective Action Zone

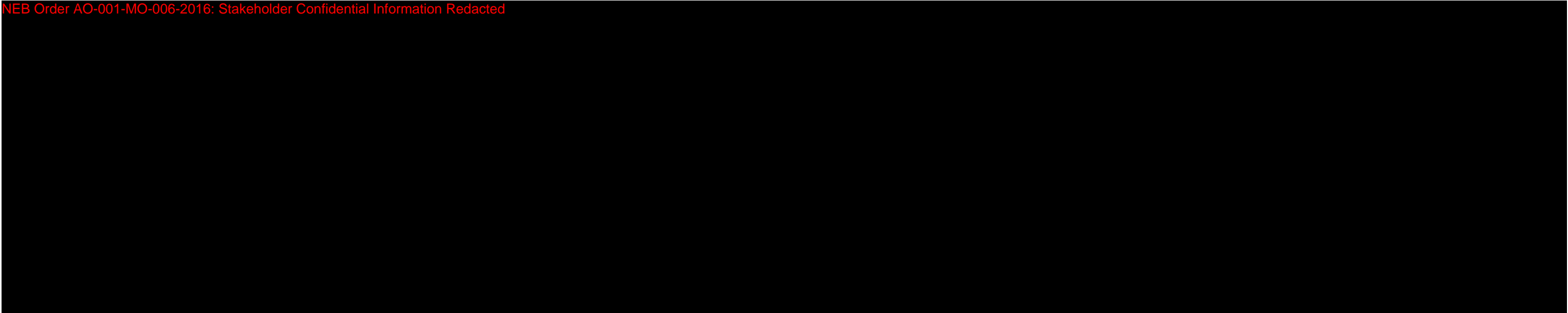
Boundary Lake Alberta - Sour Gas Pipelines

NEB Order AO-001-MO-006-2016: Stakeholder Confidential Information Redacted

LEGEND
Water Cross: CC=Creek Crossing LC=Lake Crossing OC=Overhead Crossing RC=River Crossing XA=Other Crossing
Facility: B=Battery BE=Blind End CP=Chemical Plant CS=Compressor Station GP=Gas Plant GS=Gas Gathering System IP=Injection Plant LH=Line Heater MS=Meter Station
PL=Pipeline PS=Pump Station S=Satellite WE=Well LR=Loading Rack TL=Terminals TF=Tank Farm RE=Reservoir
Valve: CV=Check Valve ESD=Emergency Shutdown Valve
Substance: CO=Crude Oil FG=Fuel Gas FW=Fresh Water HV=High Vapour Pressure LV=Low Vapour Pressure NG=Natural Gas OE=Oil Effluent SG=Sour Gas SW=Salt Water
MP=Multiphase NL=NGL
Status: A=Abandoned D=Discontinued N=Not Constructed/Approved O=Operating P=To Be Constructed U=Unknown Q=Active C=Cancelled S=Suspended R=Removed X=Not AER Regulated
Other: EPZ=Emergency Planning Zone IIZ=Initial Isolation Zone PAZ=Protective Action Zone Wall=Wall Thickness OD=Outside Diameter Z=Compressibility Factor
GLR=Gas-To-Liquid Ratio TEMP=Temperature

Boundary Lake Alberta - Sour Oil Pipelines

NEB Order AO-001-MO-006-2016: Stakeholder Confidential Information Redacted



LEGEND

Water Cross: CC=Creek Crossing LC=Lake Crossing OC=Overhead Crossing RC=River Crossing XA=Other Crossing
Facility: B=Battery BE=Blind End CP=Chemical Plant CS=Compressor Station GP=Gas Plant GS=Gas Gathering System IP=Injection Plant LH=Line Heater MS=Meter Station
PL=Pipeline PS=Pump Station S=Satellite WE=Well LR=Loading Rack TL=Terminals TF=Tank Farm RE=Reservoir
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Status: A=Abandoned D=Discontinued N=Not Constructed/Approved O=Operating P=To Be Constructed U=Unknown Q=Active C=Cancelled S=Suspended R=Removed X=Not AER Regulated
Other: EPZ=Emergency Planning Zone IIZ=Initial Isolation Zone PAZ=Protective Action Zone Wall=Wall Thickness OD=Outside Diameter Z=Compressibility Factor
GLR=Gas-To-Liquid Ratio TEMP=Temperature

Boundary Lake Alberta - Sweet Wells

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Boundary Lake Alberta - Sweet Wells

NEB Order AO-001-MO-006-2016: Stakeholder Confidential Information Redacted



LEGEND

Other: UWI=Unique Well Identifier

Boundary Lake Alberta - Sweet Pipelines

NEB Order AO-001-MO-006-2016: Stakeholder Confidential Information Redacted



Boundary Lake Alberta - Sweet Pipelines

NEB Order AO-001-MO-006-2016: Stakeholder Confidential Information Redacted

LEGEND

Water Cross: CC=Creek Crossing LC=Lake Crossing OC=Overhead Crossing RC=River Crossing XA=Other Crossing

Facility: B=Battery BE=Blind End CP=Chemical Plant CS=Compressor Station GP=Gas Plant GS=Gas Gathering System IP=Injection Plant LH=Line Heater

MS=Meter Station PL=Pipeline PS=Pump Station S=Satellite WE=Well LR=Loading Rack TL=Terminals RE=Reservoir

Substance: CO=Crude Oil FG=Fuel Gas FW=Fresh Water HV=High Vapour Pressure LV=Low Vapour Pressure NG=Natural Gas OE=Oil Effluent

SG=Sour Gas SW=Salt Water NL=NGL

Status: A=Abandoned D=Discontinued N=Not Constructed/Approved O=Operating P=To Be Constructed U=Unknown Q=Active C=Cancelled

S=Suspended R=Removed X=Not AER Regulated

Other: Wall=Wall Thickness OD=Outside Diameter

NOTES

All Enbridge sweet pipelines in the area are included above.

Boundary Lake 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/home/index>

are required to occur as soon as possible and no later than three hours of the incident being discovered.

For all other events (non-immediate) companies are only required to input the information via the OERS.

Secondary Calls

Contact as needed **AFTER** contacting the TSB and CER.

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 *NEB 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;
- Hazard identification under the PPR;

Multiple Incident Types, continued

- 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)	Available electronically to all personnel.
Health and Safety Plan	Please refer to the company’s Health & Safety Plan located at the corporate head office and stored electronically and available to personnel.

Emergency Preparedness & Response Policy

Emergency Management Expectations

An effective emergency management program includes being prepared for emergencies, responding in the event of an emergency and ensuring that operations are able to continue safely and can recover in a timely, efficient manner.

Emergency management is critical to ensuring that people, the environment, the public, the organization's assets and reputation are protected in the event of an unanticipated hazard event, be it natural, technological or human-induced.

Emergency Management Preparedness

Emergency preparedness is a continuous process of all-hazards planning and coordination in order to effectively minimize the adverse effects and consequences inherent in any emergency incident. Through the use of such tools as exercises, proactive resource management and capability analysis, preparedness is one of the key pillars with which to ensure the adaptation of comprehensive approaches for the company's emergency management strategy. The emergency management process must include the following:

- Hazard Risk and Vulnerability Assessment
- Public Involvement
- Communications Planning
- Situational Awareness
- Crisis Management Plans
- Emergency Response Plans
- Emergency Management Resources
- Competence, Training and Awareness
- Exercises and Drills
- Record Keeping
- Distributions Lists (Internal and External)
- Continuous Improvement

Emergency Response Plans should contain:

- Communication procedures
- Emergency contacts
- Evacuation and Rescue plans
- Equipment locations and supply companies
- Spill response and containment (where required)
- Meet regulatory requirements
- Event classification
- Activation and Stand Down Levels
- Guidelines for medical emergencies
- Defined roles and responsibilities
- Maps and Emergency Planning Zones
- Mutual Aid Understandings (where applicable)

Confidential ERPs will be available at the field Incident Command Post and the Corporate Emergency Response Centre.

Extended Emergencies

In an extended emergency, company responders will develop an Incident Action Plan utilizing forms found within ERP, which may include:

- ICS Form 201 – Incident Briefing
- ICS Form 202 – Incident Objectives
- Form A1 – Initial Emergency Report
- Form A4 – Incident Action Plan (IAP) Checklist

Emergency Response, Continuity and Recovery

In the event of an emergency, each business unit shall determine the level of emergency as per established protocols and respond according to their respective emergency response plans. Response includes the mobilization and ongoing management of resources, people, equipment and assets to manage the effects of an incident; functions inclusive of the Incident Command System (ICS), the company's primary response platform.

Each business unit shall establish, implement and maintain procedures for communicating information related to emergency management, including:

- Communication of plans and procedures to employees, operating partners, contractors, the supply chain, regulators and local communities; and
- Emergency and crisis communications to stakeholders, including emergency responders, regulators, the media, family members and the public.

Emergency Management Monitoring, Assessment and Continuous Improvement

Lessons learned and knowledge generated from monitoring results should be used to develop “improved practices”, which are then shared widely. After emergencies or disasters occur, a systematic approach is used to learn lessons from the experience, increase effectiveness and improve emergency management practices and processes.

Manual Updating Procedures and Schedule

The company's Corporate and Site-Specific ERPs are to be updated annually and submitted to the CER on or before April 1st of each year, or when significant changes (either operational or identified from exercises/incidents and resulting debriefs) occur or are identified. If an update occurs outside of the January 1st to April 1st period, a letter must be submitted to the CER indicating that there have been no changes to operations since the ERP was last submitted. ERP updates are performed by a third-party company (H2Safety), whose expertise in the field provides company personnel with the education, training, and resources to excel in Emergency Response. Approvals for ERP updates will be carried out by the company's Emergency Management Coordinator.

Debriefing

Internal Debriefing

The Incident Commander, in consultation with the Lead Agency and/or other regulatory body, will order "Return to Normal" status.

- All response team members and on-site personnel, including contract personnel and emergency services, will be notified.
- All previous contacts including public, workers, landowners, government and industrial operators must also be notified of the end of the emergency.
- Ensure a media statement is prepared and delivered by Senior Management.
- Debriefing meeting(s) with company personnel (including insurance, legal, and human resources as appropriate) must be conducted.
- Debriefing meeting(s) to review effectiveness of the Emergency Response Plan must be conducted. Feedback and comments as a result of the debrief must be incorporated into the ERP revision and procedures. This feedback should be submitted to the ERP provider.
- Debriefing meeting(s) with residents, landowners, Lead Agency and other government agencies and all other impacted parties may be conducted.
- Document all "Return to Normal" activities.
- Complete response debriefing for all response teams. Submit, in writing, response findings and recommendations to the Incident Commander when applicable, which will be submitted to the overall report writer.

Public Debriefing

When the public has been impacted, company operations should provide the public information as soon after the emergency as possible, to answer any questions or concerns. This should be done by a senior company representative, a trained Media Advisor, or by the Incident Commander.

After an emergency, a number of additional items should be considered:

- Debriefings, as mentioned above.
- Crisis management for company personnel and for other members of the public that may have been significantly affected by the emergency.
- If the emergency is of a level where it has impacted the public, an information center may be established within the community where the emergency occurred to answer any questions posed by the public.
- Establish a means of compensating citizens who may have had out-of-pocket expenses (such as meals and lodging costs) as a result of the emergency.
- Through the media, provide details of the investigation into the incident that are pertinent to the public, as it becomes available.

Health and Safety Plan

The company's extensive Health and Safety program is to be implemented at all times during and after an incident. Training is provided to all company employees and contractors; all information and documentation can be found in the Health and Safety Manual.

Site Specific Control Points and Response

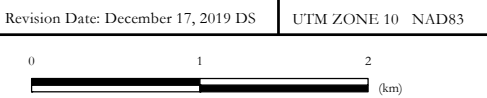
In the event of an incident (reported from an external source and/or confirmed by a drop in pressure), an operator would be sent out to visually confirm the need to shut down operations. Operators have the ability to manually trip the ESDs on the CER line. The operator would then immediately contact 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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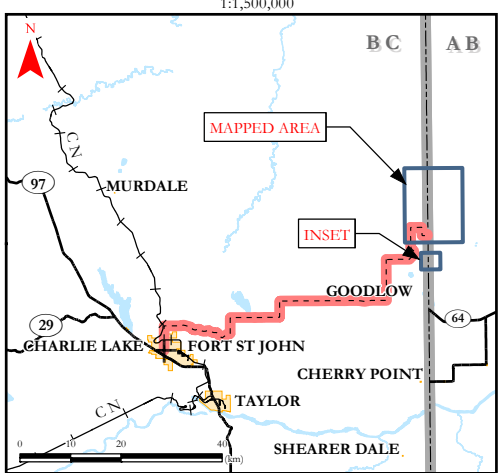
CER PIPELINES
BOUNDARY LAKE AREA



Draft Date: December 16, 2019 DS	Scale: 1:45,000	Map: 9390
Revision Date: December 17, 2019 DS	UTM ZONE 10	NAD83



AREA OVERVIEW MAP



- | | | |
|--------------------|-----------------------------|------------------------------------|
| Third Party Well | Third Party Pipeline | River Flow Direction |
| Gas Well | Gas Pipeline | Hydrology |
| Suspended Gas Well | Discontinued Gas Pipeline | Waterbody |
| Oil Well | Oil Pipeline | Urban Area |
| Suspended Oil Well | Discontinued Oil Pipeline | Cutblocks |
| Injection Well | Water Pipeline | Provincial Boundary |
| Suspended Well | Trails | BC Oil and Gas Commission |
| Well Location | Other Roads | Health Authority |
| Facility | Winter Roads/No Grade Roads | Local Authority |
| Facility | Main Hwy | RCMP |
| | Divided Hwy | Trapper Boundary |
| | Railway | Resident Quadrant Number i.e. NU10 |
| | Airfield | Egress EPZ |
| | Access Route | Other Existing EPZ |
| | | EPZ |

Boundary Lake Alberta - CER Pipelines

NEB Order AO-001-MO-006-2016: Stakeholder Confidential Information Redacted

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

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	Natural Gas, Sour
Common Synonyms	Methane, Sour Gas
Manufacturer / Supplier	Enercapita Energy Ltd. Suite 600, 435-4 th Avenue SW CALGARY, ALBERTA T2P 3A8 TEL: (403) 294-9199
Emergency Information	24 hour emergency numbers: 1-613-996-6666 (CANUTEC) 1-866-556-7838 (Enercapita Energy Ltd.)
Chemical Family	A mixture of light hydrocarbon gases that is untreated and comes directly from the wellhead. Natural gas with a Hydrogen Sulphide content greater than 10ppm (0.001% by volume) is considered sour. The composition and properties may vary significantly according to the source of gas.

2. HAZARDS IDENTIFICATION

GHS INFORMATION

Classification: Physical Hazard
 Flammable Gases – Category 1
 Gases Under Pressure – Compressed Gas

Classification: Health Hazard
 Acute Toxicity – Inhalation, Category 2
 Toxic to reproduction – Category 2
 Simple Asphyxiant – Category 1



Signal Word: **Danger**

Hazard Statements: Extremely flammable gas (H220)
 Contains gas under pressure; may explode if heated (H280).
 Contains poisonous hydrogen sulfide gas.
 Toxic if inhaled (H331).
 May cause respiratory irritation (H335).
 Suspected of damaging fertility or the unborn child.

Precautionary Statements

Prevention: Obtain special instructions before use.
 Do Not handle until all safety precautions have been read and understood.
 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 Ground and bond container and receiving equipment.
 Do not breathe mist, vapours or spray.
 Wash thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Use only outdoors or in a well-ventilated area.
 Wear protective gloves, protective clothing and eye protection.
 Wear respiratory protection.

Response: If INHALED – Remove person to fresh air and keep comfortable for breathing.
If exposed or concerned – get medical advice/attention.
Immediately call a POISON CENTRE or doctor.
Do NOT induce vomiting.
In case of fire – Do not extinguish unless leak can be stopped safely.
Eliminate all ignition sources if safe to do so.

Storage: Store in a well-ventilated place. Protect from sunlight.

Hazards Not Otherwise Classified: None

Ingredients with Unknown Toxicity: None

This material is considered hazardous by the OSHA Hazard Communication Standard, (29 CFR 1910.1200).

This material is considered hazardous by the Hazardous Products Regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Registry No.	Concentration *	Other Identifiers
Natural Gas	8006-14-2	100%	n/a
Methane	74-82-8	80-100%	CH ₄
Ethane	74-84-0	4-10%	C ₂ H ₆
Propane	74-98-6	1-5%	C ₃ H ₈
Hydrogen Sulphide	7783-06-4	0.001-10%	H ₂ S

*Gas concentrations are in percent by volume.

Natural gas may contain minor amounts of sulphur, nitrogen and oxygen containing organic compounds as well as trace amounts of heavy metals. The composition and properties may vary significantly according to the source.

4. FIRST AID MEASURES

Absorption / Skin Contact: First aid is normally not required. It is good practice to wash any chemical from the skin. Do not rub affected area, remove all non-adhering contaminated clothing.

Acute and delayed symptoms and effects: Product may cause skin irritation. Signs/symptoms include localized redness, swelling and itching.

Eye Contact: Immediately flush eyes with copious amounts of clean water for at least 15 minutes, while allowing drainage from eye. If contact lenses present, remove if easy to do so. Seek medical attention.

Acute and delayed symptoms and effects: May cause eye irritation or redness. Hydrogen Sulphide may cause eye irritation at 1-20ppm and acute conjunctivitis at higher concentrations. Above 50ppm, eye irritation may include redness, severe swelling, sensitivity to light and the appearance of “halos” around lights.

Ingestion: This material is a gas under normal atmospheric conditions and ingestion is unlikely.

Inhalation: If breathing difficulties develop, move victim away from exposure source and into area of fresh air if safe to do so. Give oxygen, artificial respiration or CPR if needed and trained to do so. Seek immediate medical attention.

Acute and delayed symptoms and effects: May be FATAL if inhaled. May cause drowsiness or dizziness. May cause respiratory irritation. Symptoms may include cough, sneezing, nasal discharge, headache, dizziness, confusion, loss of appetite

and/or loss of consciousness. This product contains Hydrogen Sulphide which may accumulate in confined spaces. Inhalation of Hydrogen Sulphide may cause loss of sense of smell, major irritation of the respiratory tract, headache, nausea, vomiting, dizziness or pulmonary edema, which can be fatal. At 250ppm eyes and breathing passages will become irritated within minutes of exposure. At 500ppm, severe irritation and possible permanent injury to the eyes and breathing passages within 30 minutes of exposure. Death can occur within 1 to 4 hours of continuous exposure. At 1000ppm, immediate "knock down" and loss of consciousness. Death within moments to minutes. Immediate medical attention is needed if victim is to survive.

Natural gas may act as an asphyxiant by displacing oxygen in the air, causing suffocation.

General Advice: In case of accident or if you feel unwell, seek medical attention immediately.

Note to Physicians: At high concentrations Hydrogen Sulfide may produce pulmonary edema, respiratory depression and/or respiratory paralysis. The first priority in treatment should be the consideration of 100% oxygen.

5. FIRE FIGHTING MEASURES

Flammable Properties: Extremely flammable gas. This material can be ignited by heat, sparks, flames, static electricity, pilot lights or electronic devices not intrinsically safe.

Specific Hazards Arising from the Chemical: Vapours may travel a significant distance to ignition sources and flash back. This material is sensitive to static discharge and may ignite, all storage containers and equipment must be grounded. Hydrogen Sulphide is heavier than air and may collect in low lying areas and confined spaces. Containers exposed to fire may explode or vent through pressure relief devices.

Protective Equipment and Precautions for Firefighters: For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing.

Exposed fire fighters must wear appropriately approved positive pressure self-contained breathing apparatus during fire fighting operations and other appropriate protective equipment as conditions warrant. Thermal protective gear should be used when conditions warrant. Cool containers exposed to fire with water, if it can be done safely.

Suitable Extinguishing Media:

Dry chemical or Carbon Dioxide (CO₂) is recommended.

Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

Unsuitable Extinguishing Media:

Foam

Water is recommended only to cool or protect materials or containers.

Hazardous Combustion Products: Combustion may yield oxides of carbon, oxides of sulphur and acrid smoke.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Product is extremely flammable. As an immediate precautionary measure, isolate spill or leak area for at least 100m in all directions. Contains poisonous Hydrogen Sulfide gas. Evacuate unauthorized personnel and isolate area. Remove all sources of ignition (heat, sparks, flame, impact, friction and electricity including internal combustion engines and power tools). Stay upwind and away from spill/release.

Environmental Precautions: Stop spill/release if it can be done safely. Water spray may be useful in minimizing or dispersing vapours. If spill occurs on water notify appropriate authorities.

Methods for Containment and Clean-up: Immediate cleanup of any spill is recommended. Prevent vapours from spreading to ventilation systems or confined spaces.

Other Information: Comply with all federal, provincial and local requirements for spill notification. Recommended measures are based on the most likely spillage scenarios for this material; however local conditions and regulations may influence or limit the choice of appropriate actions to be taken.

See Emergency Response Guidebook – Guide 115 for more information

7. HANDLING AND STORAGE

Handling:

Avoid inhalation of vapours.
Keep away from heat/sparks/open flames and hot surfaces. No smoking.
Use non-sparking tools and equipment.
Bond and ground all transfers.
Use good personal hygiene practices and wash thoroughly after handling.
Be aware of vapour accumulation in low lying areas or confined spaces.
Wear respiratory protection.

Storage:

Keep containers tightly closed and properly labelled. Store in cool, well ventilated areas away from heat and ignition sources. Store only in approved containers. Keep away from any incompatible material (see Section 10). Before working on or in containers that have contained this material, refer to appropriate regulations and references pertaining to cleaning, repairing, welding, or other operations. They may explode and cause injury or death.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	CAS Registry No.	ACGIH® TLV®	OSHA PEL	Alberta
Natural Gas	8006-14-2	Asphyxia	-----	-----
Methane	74-82-8	Asphyxia	-----	-----
Ethane	74-84-0	Asphyxia	-----	1000ppm 8hr OEL
Propane	74-98-6	Asphyxia	1000ppm TWA	1000ppm 8hr OEL
Hydrogen Sulfide	7783-06-4	1ppm TWA	10ppm TWA	10ppm 8hr OEL 15ppm Ceiling

Engineering Controls: Use only in well ventilated areas. If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required. Equipment should be explosion proof.

Personal Protective Equipment (PPE)

Eye/Face Protection:



The use of eye/face protection is not normally required. Avoid pressurized gas contact with eyes. Depending on conditions of use, safety glasses may be necessary.

Skin Protection:



Avoid skin contact. Wear protective clothing as appropriate to protect against skin contact.

Respiratory Protection:



Where there is a potential for airborne exposure above the exposure limit or in situations where oxygen is less than 19.5%, the following respirators may be used:

- A supplied air breathing apparatus (SABA).
- A full face piece self-contained breathing apparatus (SCBA).

General Hygiene Considerations: Remove clothing that has been contaminated. Eye wash and quick-drench shower facilities should be available in the work area.

Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Gas - Compressed
Appearance	Colorless
Odour	Rotten Egg odour
Odour Threshold	0.0047ppm for Hydrogen Sulfide
pH	Not applicable
Freezing Point	-183°C (Methane)
Initial Boiling Point	-161°C (Methane)
Flash Point	Not Available
Evaporation Rate	No Data
Lower Flammable / Explosive Limit	5.0% (Methane)
Upper Flammable / Explosive Limit	15.0% (Methane)
Vapour Density (air =1)	0.56 (Methane)
Viscosity	Not applicable
Solubility	Slightly soluble in water
Flammability	Extremely Flammable
Partition Coefficient	Not available
Auto-Ignition Temperature	537°C (999°F)

Product is a complex mixture and will vary according to production. Data represents typical values only and is not intended to be specifications.

10. STABILITY AND REACTIVITY

Reactivity: Contact with incompatible materials. Sources of ignition. Exposure to heat.

Chemical Stability: This product is stable under normal conditions and anticipated use.

Possibility of Hazardous Reactions: Nothing anticipated under normal conditions. Hazardous polymerization will not occur.

Conditions to Avoid: Avoid high temperatures and all possible sources of ignition. Heat will increase pressure in the storage tank.

Incompatible Materials: Avoid storing near acids, aluminum chloride, chlorine, chlorine dioxide, halogens and oxidizing agents.

Hazardous Decomposition Products: Nothing anticipated under normal conditions.

11. TOXICOLOGICAL INFORMATION**Product Mixture Toxicity:**

Oral: Not applicable
Dermal: Not applicable
Inhalation: Not available

Chemical Name	CAS Registry No.	LD ₅₀ oral	LD ₅₀ dermal	LC ₅₀
Natural Gas	68410-63-9	Not available	Not available	Not available
Methane	74-82-8	Not available	Not available	Not available
Ethane	74-84-0	Not available	Not available	Not available
Propane	74-98-6	Not available	Not available	Not available
Hydrogen Sulfide	7783-06-4	-----	-----	444 ppm (rat)

Likely Routes of Exposure: Eye contact, Skin Contact, Inhalation.

Target Organs: Skin, Eyes, Respiratory system, Central Nervous system, Peripheral nervous system.

Symptoms (including delayed and immediate effects)

Inhalation: Fatal if inhaled. This material contains hydrogen sulfide, a poisonous gas with the smell of rotten eggs. The smell disappears rapidly because of olfactory fatigue so odour may not be a reliable indicator of exposure. Effects of overexposure are illustrated in section 4.

Light hydrocarbon gases are simple asphyxiants and can cause anesthetic effects at high concentrations. Symptoms of overexposure, which are reversible, can include shortness of breath, drowsiness, headaches, confusion, decreased coordination and vomiting. Continued exposure can lead to hypoxia, rapid breathing, unconsciousness and death.

Eye Irritation / Corrosion: Not expected to be irritating. Contact with pressurized gas may cause momentary swelling and eye damage.

Skin Irritation / Corrosion: May cause skin irritation. Symptoms include localized redness, swelling and itching.

Ingestion: Not anticipated.

Skin Sensitization: Not expected to be a skin sensitizer.

Respiratory Sensitization: No expected to be a respiratory sensitizer.

Specific Target Organ Toxicity (Single Exposure): Not expected to cause organ effects from single exposure.

Specific Target Organ Toxicity (Repeated Exposure): Not expected to cause organ effects from repeated exposure.

Mixture Carcinogenicity: Not expected to cause cancer. This product does not contain any carcinogens listed by ACGIH, IARC, NTP or OSHA.

Mixture Reproductive Toxicity: Not expected to cause reproductive toxicity.

Mixture Germ Cell Mutagenicity: Not expected to cause heritable genetic effects.

12. ECOLOGICAL INFORMATION

Toxicity: Petroleum gases will readily evaporate from the surface and would not be expected to have significant adverse effects in the aquatic environment.

Mobility in Water: Due to the extreme volatility of petroleum gases, air is the only environmental compartment in which they will be found.

Other Adverse Effects: None anticipated, yet no information available.

13. DISPOSAL CONSIDERATIONS

This material is a gas and would not typically be managed as a waste.

14. TRANSPORT INFORMATION

Canadian (TDG)

Shipping Description:	UN 1971, Natural Gas, Compressed – Toxic by Inhalation
TDG Class:	Class 2.1 – Flammable Gas
Packing Group:	None

15. REGULATORY INFORMATION

Canada (DSL)

The components of this product are in compliance with the chemical notification requirements of the NSN Regulations under CEPA, 1999.

16. OTHER INFORMATION

Date of Preparation:	01-March-2019
SDS Reviewed By:	Safety Department – Enercapita Energy Ltd.
Previous Issue Date:	11-Aug-2016
Basis for Revision:	Updated entire SDS for compliance with current GHS requirements.

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	Natural Gas – Sweet
Common Synonyms	Methane, Sweet Gas, Fuel Gas
Manufacturer / Supplier	Enercapita Energy Ltd. Suite 600, 435-4 th Avenue SW CALGARY, ALBERTA T2P 3A8 TEL: (403) 294-9199
Emergency Information	24 hour emergency numbers: 1-613-996-6666 (CANUTEC) 1-866-556-7838 (Enercapita Energy Ltd.)
Chemical Family	A mixture of light hydrocarbon gases that is untreated and comes directly from the wellhead. Natural gas with a Hydrogen Sulphide content of less than 10ppm (0.001% by volume) is considered sweet. The composition and properties may vary significantly according to the source of gas.

2. HAZARDS IDENTIFICATION

GHS INFORMATION

Classification: Physical Hazard

H220 – Flammable Gases – Category 1

H280 – Gases Under Pressure – Compressed Gas

Simple Asphyxiant – Category 1

Classification: Health Hazard

none



Signal Word:

Danger

Hazard Statements:

Extremely flammable gas (H220)

Contains gas under pressure; may explode if heated (H280).

May displace Oxygen and cause rapid suffocation.

Precautionary Statements

Prevention:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Response:

If INHALED – Remove person to fresh air and keep comfortable for breathing.

If exposed or concerned – get medical advice/attention.

Leaking gas fire – Do Not extinguish, unless leak can be stopped safely.

In case of leakage, eliminate all ignition sources.

Storage:

Store in a well ventilated place. Protect from sunlight.

Hazards Not Otherwise Classified: None

Ingredients with Unknown Toxicity: None

This material is considered hazardous by the OSHA Hazard Communication Standard, (29 CFR 1910.1200)

This material is considered hazardous by the Hazardous Products Regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Registry No.	Concentration *	Other Identifiers
Natural Gas	8006-14-2	100%	n/a
Methane	74-82-8	80-100%	CH ₄
Ethane	74-84-0	4-10%	C ₂ H ₆
Propane	74-98-6	1-5%	C ₃ H ₈

*Gas concentrations are in percent by volume.

4. FIRST AID MEASURES

Absorption / Skin Contact: First aid is normally not required. It is good practice to wash any chemical from the skin. Do not rub affected area, remove non-adhering clothing that is contaminated.

Acute and delayed symptoms and effects: Product may cause skin irritation. Signs/symptoms include localized redness, swelling and itching.

Eye Contact: Immediately flush eyes with copious amounts of clean water for at least 15 minutes, while allowing drainage from eye. If contact lenses present, remove if easy to do so. Seek medical attention.

Acute and delayed symptoms and effects: May cause eye irritation or redness.

Inhalation: If breathing difficulties develop, move victim away from exposure source and into area of fresh air if safe to do so. Give oxygen, artificial respiration or CPR if needed and trained to do so. Seek immediate medical attention.

Acute and delayed symptoms and effects: Natural gas may act as an asphyxiant by displacing oxygen in the air, causing suffocation. Central nervous system depression can occur if product is present in concentrations that will reduce the oxygen content of air below 18% (vol). Symptoms may include headache, light-headedness, drowsiness, disorientation, vomiting and seizures. May cause respiratory irritation. Symptoms include cough, sneezing, nasal discharge, headache, hoarseness and nose and throat pain.

Ingestion: This material is a gas under normal atmospheric conditions and ingestion is unlikely.

General Advice: In case of accident or if you feel unwell, seek medical attention immediately.

Note to Physicians: Symptoms may not appear immediately.

5. FIRE FIGHTING MEASURES

Flammable Properties: Extremely flammable gas. This material can be ignited by heat, sparks, flames, static electricity, pilot lights or electronic devices not intrinsically safe.

Specific Hazards Arising from the Chemical: Vapours may travel a significant distance to ignition sources and flash back. This material is sensitive to static discharge and may ignite, all storage containers and equipment must be grounded.

Containers exposed to fire may explode or vent through pressure relief devices.

Protective Equipment and Precautions for Firefighters: For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing.

Exposed fire fighters must wear appropriately approved positive pressure self-contained breathing apparatus during fire fighting operations and other appropriate protective equipment as conditions warrant. Thermal protective gear should be used when conditions warrant. Cool containers exposed to fire with water, if it can be done safely.

Suitable Extinguishing Media:

Dry chemical or Carbon Dioxide (CO₂) is recommended.

Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

Unsuitable Extinguishing Media:

Foam

Water is recommended only to cool or protect materials or containers.

Hazardous Combustion Products: Combustion may yield carbon monoxide, carbon dioxide and acrid smoke.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Product is extremely flammable. As an immediate precautionary measure, isolate spill or leak area for at least 100m in all directions. Evacuate unauthorized personnel and isolate area. Remove all sources of ignition (heat, sparks, flame, impact, friction and electricity including internal combustion engines and power tools). Stay upwind and away from spill/release.

Environmental Precautions: Stop spill/release if it can be done safely. Water spray may be useful in minimizing or dispersing vapours. If spill occurs on water notify appropriate authorities.

Methods for Containment and Clean-up: Immediate cleanup of any spill is recommended. Prevent vapours from spreading to ventilation systems or confined spaces.

Other Information: Comply with all federal, provincial and local requirements for spill notification. Recommended measures are based on the most likely spillage scenarios for this material; however local conditions and regulations may influence or limit the choice of appropriate actions to be taken.

See Emergency Response Guidebook – Guide 115 for more information

7. HANDLING AND STORAGE

Handling:

Avoid inhalation of vapours.

Keep away from heat/sparks/open flames and hot surfaces. No smoking.

Use non-sparking tools and equipment.

Bond and ground all transfers.

Use good personal hygiene practices and wash thoroughly after handling.

Be aware of vapour accumulation in low lying areas or confined spaces.

Storage:

Keep containers tightly closed and properly labelled. Store in cool, well ventilated areas away from heat and ignition sources. Store only in approved containers. Keep away from any incompatible material (see Section 10). Before working on or in containers that have contained this material, refer to appropriate regulations and references pertaining to cleaning, repairing, welding, or other operations. They may explode and cause injury or death.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	CAS Registry No.	ACGIH® TLV®	OSHA PEL	Alberta
Natural Gas	8006-14-2	Asphyxia	-----	-----
Methane	74-82-8	Asphyxia	-----	-----
Ethane	74-84-0	Asphyxia	-----	1000ppm 8hr OEL
Propane	74-98-6	Asphyxia	1000ppm TWA	1000ppm 8hr OEL

Engineering Controls: Use only in well ventilated areas. If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required. Equipment should be explosion proof.

Personal Protective Equipment (PPE)

Eye/Face Protection:



The use of eye/face protection is not normally required. Avoid pressurized gas contact with eyes. Depending on conditions of use, safety glasses may be necessary.

Skin Protection:



Avoid skin contact. Wear protective clothing as appropriate to protect against skin contact.

Respiratory Protection:



Where there is a potential for airborne exposure above the exposure limit or in situations where oxygen is less than 19.5%, the following respirators may be used:

- A supplied air breathing apparatus (SABA).
- A full face piece self-contained breathing apparatus (SCBA).

General Hygiene Considerations: Remove clothing that has been contaminated. Eye wash and quick-drench shower facilities should be available in the work area.

Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Gas - Compressed
Appearance	Colorless
Odour	Faint hydrocarbon odour
Odour Threshold	Not applicable
pH	Not applicable
Freezing Point	-183°C (Methane)
Initial Boiling Point	-161°C (Methane)
Flash Point	Not available
Evaporation Rate	No Data
Lower Flammable / Explosive Limit	5.0% (Methane)
Upper Flammable / Explosive Limit	15.0% (Methane)
Vapour Density (air =1)	0.56 (Methane)
Viscosity	Not applicable
Solubility	Slightly soluble in water

Flammability	Extremely Flammable
Partition Coefficient	Not available
Auto-Ignition Temperature	537°C (Methane)

Product is a complex mixture and will vary according to production. Data represents typical values only and is not intended to be specifications.

10. STABILITY AND REACTIVITY

Reactivity: Contact with incompatible materials. Sources of ignition. Exposure to heat.

Chemical Stability: This product is stable under normal conditions and anticipated use.

Possibility of Hazardous Reactions: Nothing anticipated under normal conditions. Hazardous polymerization will not occur.

Conditions to Avoid: Avoid high temperatures and all possible sources of ignition. Heat will increase pressure in the storage tank.

Incompatible Materials: Avoid storing near acids, aluminum chloride, chlorine, chlorine dioxide, halogens and oxidizing agents.

Hazardous Decomposition Products: Nothing anticipated under normal conditions.

11. TOXICOLOGICAL INFORMATION

Product Mixture Toxicity:

Oral:	Not applicable
Dermal:	Not applicable
Inhalation:	Unlikely to be harmful. Asphyxiant may limit oxygen. LC50/LD50 >20,000ppm Gas

Component	CAS No.	LD50 oral	LD50 dermal	LC50
Natural gas	8006-14-2	Not available.	Not available.	Not available.
Methane	74-82-8	Not available.	Not available.	Not available.
Ethane	74-84-0	Not available.	Not available.	Not available.
Propane	74-98-6	Not available.	Not available.	Not available.

Likely Routes of Exposure: Eye contact, Inhalation.

Target Organs: Skin, Eyes, Respiratory system, Central Nervous system.

Symptoms (including delayed and immediate effects)

Inhalation: Light hydrocarbon gases are simple asphyxiants and can cause anesthetic effects at high concentrations. Symptoms of overexposure, which are reversible, can include shortness of breath, drowsiness, headaches, confusion, decreased coordination and vomiting. Continued exposure can lead to hypoxia, rapid breathing, unconsciousness and death.

Eye Irritation / Corrosion: Not expected to be irritating. Contact with pressurized gas may cause momentary swelling and eye damage.

Skin Irritation / Corrosion: Not anticipated.

Ingestion: Not anticipated.

Skin Sensitization: Not expected to be a skin sensitizer.

Respiratory Sensitization: No expected to be a respiratory sensitizer.

Specific Target Organ Toxicity (Single Exposure): Not expected to cause organ effects from single exposure.

Specific Target Organ Toxicity (Repeated Exposure): Not expected to cause organ effects from repeated exposure.

Mixture Carcinogenicity: Not expected to cause cancer. This substance is not listed as a carcinogen by IARC, NTP or OSHA.

Mixture Reproductive Toxicity: Not expected to cause reproductive toxicity.

Mixture Germ Cell Mutagenicity: Not expected to cause heritable genetic effects.

12. ECOLOGICAL INFORMATION

Toxicity: Petroleum gases will readily evaporate from the surface and would not be expected to have significant adverse effects in the aquatic environment.

Mobility in Water: Due to the extreme volatility of petroleum gases, air is the only environmental compartment in which they will be found.

Other Adverse Effects: None anticipated, yet no information available.

13. DISPOSAL CONSIDERATIONS

This material is a gas and would not typically be managed as a waste.

14. TRANSPORT INFORMATION

Canadian (TDG)

Shipping Description:	UN 1971, Natural Gas, Compressed
TDG Class:	Class 2.1 – Flammable Gas
Packing Group:	None

15. REGULATORY INFORMATION

Canada (DSL)

The components of this product are in compliance with the chemical notification requirements of the NSN Regulations under CEPA, 1999.

16. OTHER INFORMATION

Date of Preparation: 01-March-2019
SDS Reviewed By: Safety Department – Enercapita Energy Ltd.
Previous Issue Date: 08-December-2015
Basis for Revision: Updated entire SDS for compliance with current GHS requirements.

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	Produced Water - Sour
Common Synonyms	Salt Water, Formation Water
Manufacturer / Supplier	Enercapita Energy Ltd. Suite 600, 435-4 th Avenue SW CALGARY, ALBERTA T2P 3A8 TEL: (403) 294-9199
Emergency Information	24-hour emergency numbers: 1-613-996-6666 (CANUTEC) 1-866-556-7838 (Enercapita Energy Ltd.)
Chemical Family	Waste stream water containing salts and a mixture of aliphatic and aromatic hydrocarbons and small amounts of sulphur and nitrogen compounds. Produced water with a Hydrogen Sulphide content greater than 10ppm is considered sour.

2. HAZARDS IDENTIFICATION

GHS INFORMATION

Classification: Physical Hazard
None

Classification: Health Hazard
Acute Toxicity – Inhalation, Category 2
Eye Irritation – Category 2A



Signal Word: **Danger**
Hazard Statements: Fatal if inhaled
 Causes serious eye irritation

Precautionary Statements

Prevention: Do not breathe mist, vapours or spray.
 Wash thoroughly after handling.
 Use only outdoors or in a well-ventilated area.
 Wear protective gloves, protective clothing and eye protection.
 Wear respiratory protection.

Response: If INHALED – Remove person to fresh air and keep comfortable for breathing.
 If IN EYES – Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If exposed or concerned – get medical advice/attention.
 Immediately call a POISON CENTRE or doctor.
 If Eye irritation persists – get medical advice/attention.

Storage: Store in a well-ventilated place. Keep container tightly closed.
 Store locked up.

Disposal: Dispose of contents / container in accordance with applicable regional, national and local laws and regulations.

Hazards Not Otherwise Classified: Not applicable
Ingredients with Unknown Toxicity: None

This material is considered hazardous by the OSHA Hazard Communication Standard, (29 CFR 1910.1200).

This material is considered hazardous by the Hazardous Products Regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Registry No.	Concentration *	Other Identifiers
Water	7732-18-5	85-99%	H ₂ O
Sodium chloride	7647-14-5	0-5%	NaCl
Hydrogen Sulphide	7783-06-4	0.001-10%	H ₂ S
Petroleum	8002-05-9	<0.1%	Crude Oil

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. FIRST AID MEASURES

Absorption / Skin Contact: Flush skin with water or shower. Seek medical attention if irritation develops or large area of contact. Wash contaminated clothing before reuse.

Acute and delayed symptoms and effects: May cause skin irritation. Symptoms may include localized redness, swelling and / or itching.

Eye Contact: Immediately flush eyes with copious amounts of clean water for at least 15 minutes, while allowing drainage from eye. If contact lenses present, remove if easy to do so. Call a poison center or doctor if you feel unwell.

Acute and delayed symptoms and effects: May cause eye irritation. Symptoms may include redness, swelling, pain, tearing and / or blurred vision. Hydrogen Sulphide may cause eye irritation at 1-20ppm and acute conjunctivitis at higher concentrations. Above 50ppm, eye irritation may include redness, severe swelling, sensitivity to light and the appearance of "halos" around lights.

Inhalation: If breathing difficulties develop, move victim away from exposure source and into area of fresh air, if safe to do so. Give oxygen, artificial respiration or CPR if needed and trained to do so. Seek immediate medical attention.

Acute and delayed symptoms and effects: May be FATAL if inhaled. May cause respiratory irritation. Symptoms may include cough, sneezing, nasal discharge, headache and nose and throat pain. This product contains Hydrogen Sulphide which may accumulate in confined spaces. Inhalation of Hydrogen Sulphide may cause loss of sense of smell, major irritation of the respiratory tract, headache, nausea, vomiting, dizziness or pulmonary edema, which can be fatal. At 250ppm eyes and breathing passages will become irritated within minutes of exposure. At 500ppm, severe irritation and possible permanent injury to the eyes and breathing passages within 30 minutes of exposure. Death can occur within 1 to 4 hours of continuous exposure. At 1000ppm, immediate "knock down" and loss of consciousness. Death within moments to minutes. Immediate medical attention is needed if victim is to survive.

Ingestion: If material is swallowed, **DO NOT** induce vomiting. Never give anything by mouth because this material can enter the lungs and cause severe damage. If victim is drowsy or unconscious and vomiting, lower victim's head in an effort to prevent vomit from entering lungs. Seek immediate medical attention.

Acute and delayed symptoms and effects: May cause gastrointestinal irritation. Symptoms may include abdominal pain, stomach upset, nausea, vomiting and / or diarrhea.

General Advice: In case of accident or if you feel unwell, seek medical attention immediately.

Note to Physicians: Symptoms may not appear immediately. For inhalation of Hydrogen Sulphide, consider oxygen.

5. FIRE FIGHTING MEASURES

Flammable Properties: Not flammable or combustible by WHMIS criteria. When heated, this material may evolve toxic and flammable Hydrogen Sulphide or Sulphur Dioxide. Trace hydrocarbons may burn if product is involved in a fire.

Specific Hazards Arising from the Chemical: Flammable, poisonous and/or lethal concentrations of gases may be found in confined or poorly ventilated storage spaces. These gases can accumulate; ensure no sources of ignition are present. Under normal conditions this material has no risks of explosion and is not sensitive to static discharge. This product is not sensitive to mechanical impact.

Protective Equipment and Precautions for Firefighters: Isolate immediate hazard area.

Inhalation or contact with material may irritate or burn skin and eyes. Fires may produce irritating, corrosive or toxic gases. Exposed fire fighters must wear appropriately approved positive pressure self-contained breathing apparatus during firefighting operations and other appropriate protective equipment as conditions warrant. Hydrogen Sulphide is an extremely toxic, flammable gas. Hydrogen Sulphide is heavier than air and may accumulate in low lying areas. Do not enter without wearing specialized equipment suitable for the situation. Firefighter's normal protective clothing (Bunker Gear) will not provide adequate protection. Chemical protective clothing (e.g. chemical splash suit) may be necessary.

Suitable Extinguishing Media: Dry chemical, carbon dioxide, water spray or foam is recommended. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

Unsuitable Extinguishing Media: Not applicable.

Hazardous Combustion Products: Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of nitrogen and sulphur may also be formed. The combustion products of hydrogen sulfide (e.g., sulfur dioxide) are skin contact and inhalation hazards.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Evacuate personnel and isolate area. Use Personal Protective Equipment as appropriate.

Environmental Precautions: If safe to do so, stop leak and dyke spill. Prevent material from entering sewers, waterways or low areas.

Methods for Containment and Clean-up: Contain spill. Small spills may be soaked up with sawdust, sand or other inert absorbent material. Shovel or sweep up material and remove. Large spills should be removed with explosion proof vacuum equipment. Large pools may be covered with foam to prevent vapour evolution.

Other Information: Comply with all federal, provincial and local requirements for spill notification. Recommended measures are based on the most likely spillage scenarios for this material; however local conditions and regulations may influence or limit the choice of appropriate actions to be taken.

7. HANDLING AND STORAGE

Handling: Avoid eye and skin contact with liquid, use appropriate PPE (see section 8). Do not breathe vapours. Use with adequate ventilation to control the generation of vapours. Where inadequate refer to section 8 on respiratory protection.

Storage: Store in cool, well ventilated areas. Confined spaces and head spaces in storage tanks may contain flammable concentrations of gases and vapours. No other special requirements.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	CAS Registry No.	ACGIH® TLV®	OSHA PEL	Alberta
Water	7732-18-5	Not applicable	Not applicable	Not applicable
Sodium Chloride	7647-14-5	Not applicable	Not applicable	Not applicable
Hydrogen Sulphide	7783-06-4	1ppm TWA	10ppmTWA	10ppm 8hr OEL 15ppm ceiling
Petroleum	8002-05-9	Not available	500ppm TWA	Not available

Engineering Controls: Use only in well ventilated areas. If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required. Equipment should be explosion proof.

Personal Protective Equipment (PPE)

Eye/Face Protection:



Avoid contact with eyes. Non vented chemical goggles are recommended where splashing of product into the eyes is likely to occur. Depending on conditions of use, a face shield may be necessary.

Skin Protection:



Avoid skin contact. Wear protective clothing as appropriate to protect against skin contact. The use of gloves impervious to the specific material handled is advised to prevent skin contact. Suggested protective materials: Nitrile (Viton adequate for short exposure to liquid).

Respiratory Protection:



Where there is a potential for airborne exposure above the exposure limit, the following respirators may be used:

- A supplied air breathing apparatus (SABA).
- A full face piece self-contained breathing apparatus (SCBA).

General Hygiene Considerations: Remove clothing that has been contaminated. Eye wash and quick-drench shower facilities should be available in the work area.

Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Colourless to grey to dark brown
Odour	Mild hydrocarbon odour or rotten eggs
Odour Threshold	0.0047ppm for Hydrogen Sulphide
pH	4.7 – 8.5
Freezing Point	-10 to 0°C (variable) water
Initial Boiling Point	100°C (variable) water
Flash Point	Not applicable
Evaporation Rate	Not available
Lower Flammable / Explosive Limit	Not available
Upper Flammable / Explosive Limit	Not available
Vapour Density (air =1)	<1
Relative Density (water = 1)	1.0 – 1.1 (variable)
Solubility	Soluble in Water
Partition Coefficient	Not available
Viscosity	Not available
Auto-Ignition Temperature	Not available

Product is a complex mixture and will vary according to production. Data represents typical values only and is not intended to be specifications.

10. STABILITY AND REACTIVITY

Reactivity: Contact with incompatible materials. Sources of ignition. Exposure to heat.

Chemical Stability: This product is stable under normal conditions and anticipated use.

Possibility of Hazardous Reactions: Nothing anticipated under normal conditions. Hazardous polymerization will not occur.

Conditions to Avoid: Avoid high temperatures and contact with incompatible materials.

Incompatible Materials: Avoid storing near strong oxidizers (eg. Chlorine).

Hazardous Decomposition Products: May evolve irritant fumes and gases. Hazardous sulphur dioxide and related oxides of sulphur may be generated upon combustion.

11. TOXICOLOGICAL INFORMATION

Product Mixture Toxicity:

Oral:	Not available
Dermal:	Not available
Inhalation:	Not available

Component Toxicity:

Chemical Name	CAS Registry No.	LD ₅₀ oral	LD ₅₀ dermal	LC ₅₀
Water	7732-18-5	>90mL/kg (rat)	Not available	Not available
Sodium Chloride	7647-14-5	3000mg/kg (rat)	>10000mg/kg (rabbit)	>42000mg/m ³ (rat)
Hydrogen Sulphide	7783-06-4	Not available	Not available	444ppm (rat)
Petroleum	8002-05-9	4300mg/kg (rat)	Not available	Not available

Likely Routes of Exposure: Eye contact, skin contact, inhalation, ingestion and/or skin absorption.

Target Organs: Skin, eyes, gastrointestinal tract, respiratory system, lungs, blood, cardiovascular system, bone marrow, liver, reproductive system and /or central nervous system.

Symptoms (including delayed and immediate effects)

Inhalation: May be fatal if inhaled. May cause respiratory irritation. Symptoms may include cough, sneezing, nasal discharge, headache, hoarseness and nose and throat pain. Inhalation of accumulated Hydrogen Sulphide may cause conditions that are described in section 4.

Eye Irritation / Corrosion: May cause serious eye irritation. Symptoms may include redness, swelling, pain, tearing and/or blurred vision. Hydrogen Sulphide may cause eye irritation at 1-20ppm and acute conjunctivitis at higher concentrations. Above 50ppm, eye irritation may include redness, severe swelling, sensitivity to light and the appearance of "halos" around lights.

Skin Irritation / Corrosion: May cause mild skin irritation, repeat exposure may cause cracking or dermatitis. Symptoms include redness, swelling and itching.

Ingestion: May cause gastrointestinal irritation. Symptoms include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Skin Sensitization: No information available.

Respiratory Sensitization: No information available.

Effects of Long-Term (Chronic) Exposure

Target Organs: Skin, eyes, gastrointestinal tract, respiratory system, lungs, blood, cardiovascular system, bone marrow, liver, reproductive system and /or central nervous system.

Chronic Effects: Prolonged or repeated contact may dry skin and cause irritation. Hydrogen Sulphide may reduce lung function, cause neurological effects such as headaches, nausea, depression, and personality changes. May also cause eye and mucous membrane irritation and damage to cardiovascular system.

Carcinogenicity: Product is not classified as a carcinogen.

Toxicological effects of Petroleum only

Carcinogenicity: Petroleum is listed as a Group 3 carcinogen by IARC. It is also listed as an OSHA carcinogen.

Germ Cell Mutagenicity: Not available.

Reproductive Toxicity: Some studies exist which report a link to crude oil and reproductive effects including menstrual disorders.

Teratogenicity: Not available.

12. ECOLOGICAL INFORMATION

Toxicity: No information available. Classification: No classified hazards.

Persistence and Degradability: No information available.

Other Adverse Effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

13. DISPOSAL CONSIDERATIONS

Determine waste classification at time of disposal. Conditions of use which result in chemical or physical change of this material could subject it to regulation as a hazardous waste. The generator of a waste is always responsible for making proper hazardous waste determinations and needs to ensure disposal is in accordance with all applicable federal, provincial or local regulations.

14. TRANSPORT INFORMATION

Canadian (TDG)

Shipping Description: This product is not regulated under TDG (Canada).

15. REGULATORY INFORMATION

Canada (DSL)

The components of this product are in compliance with the chemical notification requirements of the NSN Regulations under CEPA, 1999.

16. OTHER INFORMATION

Date of Preparation: 01-March-2019
SDS Reviewed By: Safety Department – Enercapita
Previous Issue Date: 09-Aug-2016
Basis for Revision: Updated all sections for GHS compliance.

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.