ERP Revision Date	Details of Revision	Pages Affected
May 2020	Changes to Sections 3.1, 3.2, 3.3, 3.4, 3.5 & 5.0 Changes to Site Sections: Bivouac & CER Regulated All EPZ calculations All area maps + overview map	Section 3.1: pages 1-4 Section 3.2: pages 1-2 Section 3.3: pages 1-4 Section 3.4: pages 1-6 Section 3.5: pages 1-4 Bivouac: pages 3-6, 9-14 CER: pages 1-4
June 2019	Full annual ERP update	All

ERP CORE*	SITE SPECIFIC		
Date	Date	Details of Revision	Pages
March 2017 – June 2018 updates	June 13, 2018	Changes to the Core Full annual ERP update (Removed Ekwan, Sierra and CEPA)	Table of Contents Section 1.1 - All Section 2.1 – All Section 2.5 – pgs 3-10, 15-16 Section 3.0 - All Section 4.0 – All
March 2015 March 2017 - Updates	June 2017	Changes to the Core Changes to Sections 3.1, 3.2, 3.3, 3.4 - Contact Information Section 3.5 - Updated Distribution List Site Specific Information - Updates to Contact Information.	Various
March 2015	June 2016	Sections 3.1 to 5.0 and all the site sections.	All
March 2015	June 2015	Full annual ERP update.	All

Version	Revision	Date	Details of Revision	Pages
1	1	September 2014	Update ERP with Initial Notification and Response Information (due to updated OGC regulation - BC Minor Incident Reporting).	Section A (orange tab)
1	1	June 2014	Full annual ERP update.	All
1	0	June 2013	Full annual ERP update in new ICS	All

*			format.	
	1	0	July 2012	Site Section – Sierra.	2
	1	0	June 2012	Binder Cover, Title Page Section 3.4 and Section 4.2 Site Section - Drilling / Completions / Servicing / Workovers.	1, 3 6, 7 i
	1	0	May 2012	Full update of ERP and its components.	All

ERP core is represented by green and blue tabs

RAINBOW LAKE BC
2020

EMERGENCY RESPONSE PLAN

Rainbow Lake Gas Plant

24 Hour Emergency

780-956-8090

BC OGC Emergency Number

1-800-663-3456

INITIAL NOTIFICATION AND RESPONSE

British Columbia Regulatory Flow Diagram
British Columbia Incident Classification Matrix & Emergency Levels
Form A: BC Minor Incident Reporting Form
ICS Form 201: Incident Briefing

1.0 ACTIVATION / PROCEDURES

1.1 Activation Charts and Graphics
1.1.1 First on Scene Strategy
1.1.2 Initial Response Overview
1.1.3 Initial Site Size Up / Hazard Identification
1.1.4 Initial Notification Flowchart
1.1.5 Corporate Response Management Plan Activation - Emergency Event
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1.3.2 Deputy Incident Commander
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1.3.4 Site Safety
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1.3.6 Liaison Officer
1.3.7 Public Information Officer
1.3.8 Safety Officer
1.3.9 ICS Process Advisor
1.3.10 Operations Section Chief
1.3.11 Planning Section Chief
1.3.12 Situation Unit Leader
1.3.13 Resource Unit Leader
1.3.14 Documentation Unit Leader
1.3.15 Technical Specialists
1.3.16 Logistics Section Chief
1.3.17 Finance/Administration Section Chief
1.3.18 Staging Area Manager
1.3.19 Public Protection Supervisor and Group Leader(s)
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1.3.21 Roadblock Team
1.3.22 Telephone Notification Team
1.3.23 Air Monitoring Team
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1.0 ACTIVATION / PROCEDURES, continued

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Initial

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1.5.3 Form 3: Media Inquiry
1.5.4 Form 4: Bomb Threat
1.5.5 ICS Form 211: Check In / Out List
1.5.6 ICS Form 213: Resource Request
1.5.7 ICS Form 214: Activity Log
1.5.8 ICS Form 214a: Individual Log
1.5.9 ICS Form 215a: Incident Action Plan Safety Analysis
1.5.10 ICS Form 233: Open Action Tracker

Public Safety

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- 2.1.2 Release Reporting Requirements (non-retail)
- 2.1.3 Government Initial Notification Protocol
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- 2.2.2 Air Monitoring Protocol
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- 2.2.6 Shelter-in-Place
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- 2.4.4 Response Facilities
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3.0 DIRECTORY

3.1 Response Team

3.2 Emergency Services

3.3 Government Agencies

3.4 Support Services

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4.0 SITE SPECIFIC

4.1 General Area Information

5.0 CEPA E2 SUPPLEMENT (*if applicable only*)

INITIAL NOTIFICATION AND RESPONSE

British Columbia Regulatory Flow Diagram
British Columbia Incident Classification Matrix & Emergency Levels
Form A: BC Minor Incident Reporting Form
ICS Form 201: Incident Briefing

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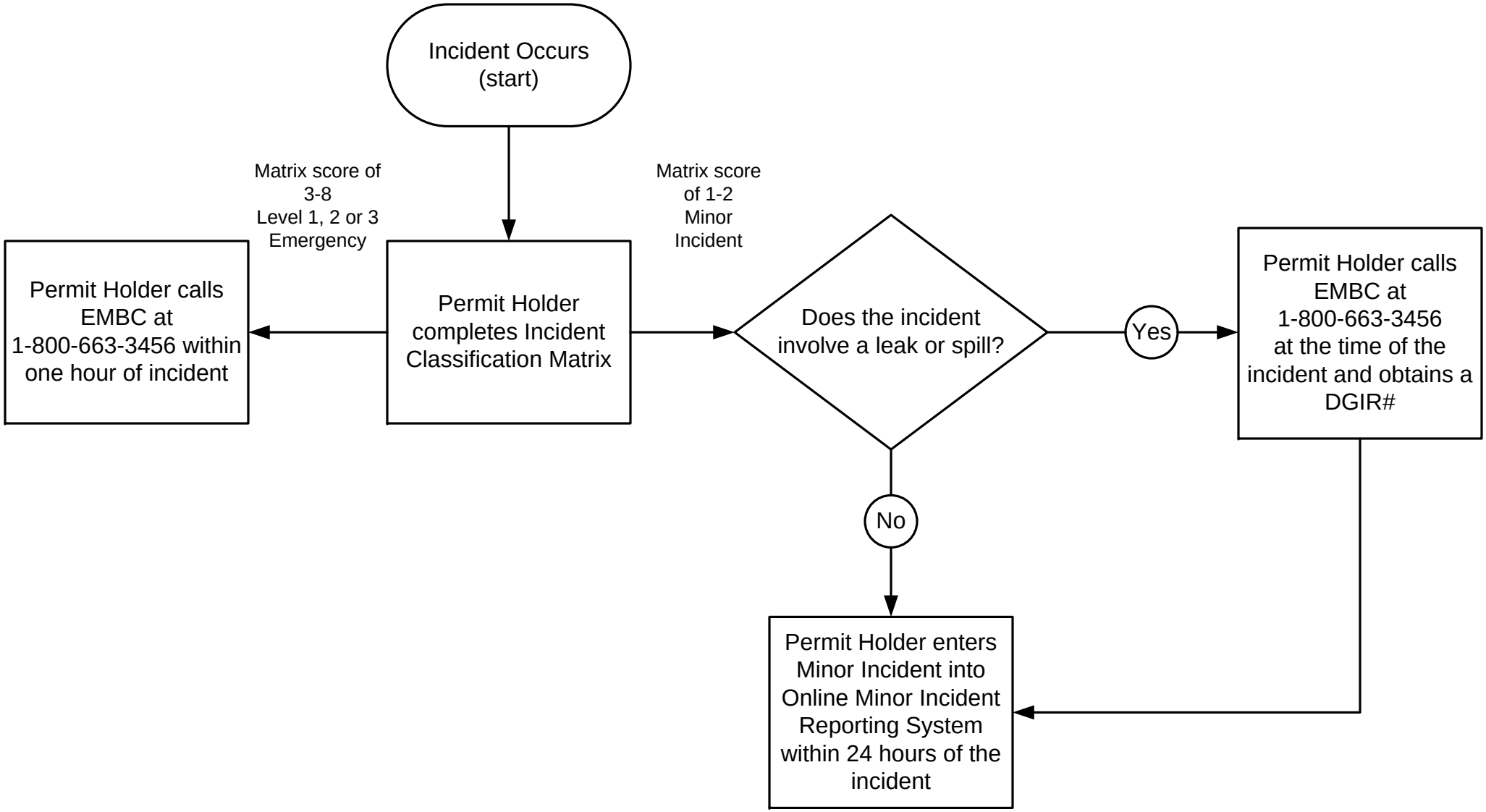
BRITISH COLUMBIA REGULATORY FLOW DIAGRAM



DGIR = Dangerous Goods Incident Report

INCIDENT CLASSIFICATION MATRIX

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

TABLE 1. CONSEQUENCE RANKING

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

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

TABLE 2. PROBABILITY RANKING

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

TABLE 3. INCIDENT RISK SCORE AND CLASSIFICATION

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

RISK SCORE	ASSESSMENT RESULT
Minor (1-2)	**Notification Only;** permit holder must notify the Commission online within 24 hours using the Form A: Minor Incident Notification Form. In addition to Form A, spills must also be reported to EMBC.
Moderate (3-4)	**Level-1 Emergency;** immediate notification (call EMBC)
Major (5-6)	**Level-2 Emergency;** immediate notification (call EMBC)
Serious (7-8)	**Level-3 Emergency;** immediate notification (call EMBC)

SEE OVER

Updated: 07-March-2019
Effective: 07-March-2019

OGC Incident Classification Matrix

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

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

Updated:07-March-2019
Effective:07-March-2019

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; 10Kg 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, Spill Reporting Regulation Schedule "Reporting Levels for Certain Substances" for determiningreportable spillage amounts of other substances:

OTHER REPORTABLE INCIDENTS

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

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

FORM A: MINOR INCIDENT NOTIFICATION FORM

Physical Address: 6534 Airport Road,
Fort St. John, B.C. V1J 4M6
Mailing Address: Bag 2, Fort St. John, B.C. V1J 2B0
Phone: (250) 794-5200
emp@bcogc.ca

This form is to be used for incidents which do not meet OGC Level 1, 2, or 3 Classification

*Minor incidents must be reported to the Commission within **24** hours through the Commission's Online Minor Incident Reporting System, operated through KERMIT.*

MISCELLANEOUS INFORMATION		A
Risk Score: (attach risk matrix)	DGIR #:	
Incident Date (YYYY-MM-DD):	Incident Time (24 hour clock): ☐ PST ☐ MST	

INFORMATION OF PERSON REPORTING INCIDENT	B
Permit holder Name:	Reported by (name):
Phone Number:	Alternate Number:
E-mail:	Fax Number:

INCIDENT DETAILS	C

SITE TYPE		D
Select only one type.		
☐ Well (Active)	☐ Well (Abandoned/Suspended)	☐ Remote Sump
☐ Battery/Plant/Facility	☐ Tank Farm/Storage	☐ Pipeline
☐ Riser (pipeline)	☐ Well (Drilling & Completions): Rig Name:	
☐ Road or Road Structure: Name:	Location on road:	
☐ Other (specify):		

INCIDENT TYPE			E
Check all that apply.			
☐ Spill (Gas, liquid, solid) If yes to leak or spill, contact EMBC.	☐ Fire/Explosion	☐ Drilling Kick	
☐ Security (theft, threat, sabotage, terrorism)	☐ Induced Seismicity	☐ Well Bore Communication	
☐ Pipeline Boring	☐ Vehicle	☐ Equipment/Structural Damage	
☐ Other: Specify:			

ACTIVITY			F
Check all that apply.			
☐ Construction (road, lease, pipeline, facility)	☐ Drilling/Exploration	☐ Waste Management	
☐ Processing (natural gas, petroleum liquids, other)	☐ Well Fracturing	☐ Servicing	
☐ Repair	☐ Flaring (emergency)	☐ Well Testing	
☐ Pressure testing	☐ Transportation		
☐ Other: Specify:			

CONSEQUENCE OR IMPACTS		N/A ☐	G
Check all that apply. If none, select N/A.			
☐ Worker Safety (injuries)	☐ Property (government, public, private)	☐ Economic (loss of and/or damage to equipment or infrastructure, loss of production, work stoppage)	
☐ Other Specify:			

ASSETS	H
GEOPHYSICAL PROGRAM (A UTM location must be filled out in the Location Section)	
Geophysical #: Program Name:	
Client Name:	
WELL	
Well Authorization #	
Location of well: NTS _____-_____-_____ /_____-_____-_____ or DLS _____, SEC _____, TWP _____, RGE _____ W6M	
FACILITY	
Facility #	
Location of facility: NTS _____-_____-_____ /_____-_____-_____ or DLS _____, SEC _____, TWP _____, RGE _____ W6M	

PROJECT (PIPELINES) (A UTM location must be filled out in the Location Section)	
Project Location: NTS From _____-_____-_____ /_____-_____-_____ NTS To _____-_____-_____ /_____-_____-_____ or DLS From _____, SEC _____, TWP _____, RGE _____ W6M DLS To _____, SEC _____, TWP _____, RGE _____ W6M	
Project #	Pipeline Segment #
Pipeline Installation ID#:	Installation Type:
OTHER LOCATION *Any asset that does not apply to above such as a road, remote sump, borrow pit, etc.* *(A UTM location must be filled out in the Location Section.)*	
Location Type:	Location Description :
LOCATION	
Location of asset: NTS _____-_____-_____ /_____-_____-_____ or DLS _____, SEC _____, TWP _____, RGE _____ W6M	
UTM (NAD 83 Zone):	_____m easting _____m northing
GPS: Latitude:	Longitude:

AREA INFORMATION	I
Land Type: ☐ Private Land ☐ Crown Land	Field Name:
Access: ☐ ATV ☐ Helicopter ☐ Four-wheel-drive ☐ Two-wheel-drive ☐ Unknown	
Name of road the asset is located on:	
Km where the incident occurred:	
Distance to nearest residence/public facility:	Nearest City/Town/Public Camp:

CAUSE		J
Check all that apply.		
☐ Third Party	☐ Manufacturing Defect	☐ Corrosion (internal, external)
☐ Employee (procedural, behavioural)	☐ Natural (weather, flood, fire)	☐ Failure (materials, mechanical, equipment, system)
☐ Geological	☐ Over Pressuring Equipment	
☐ Unknown at this time Explain:		
☐ Other Factors (specify):		

CAUSE/REMEDIAL ACTIONS	K
Describe the cause and remedial actions in more detail:	

WEATHER				L
Weather Conditions:	☐ clear	☐ cloudy	☐ other (specify):	
Wind Direction: From:	☐N ☐NE ☐NW ☐E ☐SE ☐S ☐SW ☐W			
Wind Strength:	☐ calm	☐ moderate	☐ strong	☐ gusty
Temperature:	°C			
Comments:				

NOTIFICATION		M
What government agencies has the permit holder notified:		
☐ EMBC	☐ Ministry of Environment	☐ Ministry of Transportation
☐ Public Works	☐ WorkSafe BC	☐ Local Health Authority
☐ Regional/Municipal Authority	☐ RCMP	☐ Ministry of Forests, Lands and Natural Resource Operations
☐ National Energy Board	☐Other (specify):	

INFORMATION FOR SPILLS ONLY	N
Is spill off lease? ☐ Yes ☐ No	
Spill Material Type: ☐ Corrosive ☐ Emulsion (oil, gas, water) ☐ Liquid Hydrocarbon (crude, oil, diesel, fuel) ☐ Methanol ☐ Non-Toxic Gases (Nitrogen, Carbon Dioxide, Inert Gases) ☐ Non Toxic Liquids ☐ Salt Water ☐ Sour Natural Gas ☐ Sour Liquid ☐ Sweet Natural Gas ☐ Toxic Gas ☐ Toxic Liquid ☐ Fresh Water ☐ Other (specify):	
Amount Spilled: ☐ **bbl** ☐ **m^3** ☐ **litre**	
Does Material contain any H2S? ☐ Yes ☐ No ☐ Unknown If Yes, how much? ppm	
Has spill been cleaned up? ☐ Yes ☐ No ☐ N/A	
Date of Clean Up/Proposed Clean Up: (mmm dd, yyyy) if applicable	
Estimated Cost of clean-up: $ if applicable	

	O
PLEASE NOTE: "All incidents involving a pipeline must submit a Form D: Permit Holder Post Incident Report Form within 60 days by email to EMP@bcogc.ca. A Permit Holder Post Incident Report Form may be required to be submitted for other minor incidents upon request by a Commission employee." The form can be found on the Commission's website.	
Permit Holder Post Incident Report Required: ☐Yes ☐ No	

ICS FORM 201: INCIDENT BRIEFING

Facility Name:		Incident Location (LSD/NTS):
Time of Event:	Time Zone:	Date of Event (mm/dd/yy):
Level of Emergency: ☐ Alert Level ☐ Level 1 ☐ Level 2 ☐ Level 3		
Incident Commander Name & Phone Number:	ICP Location / Phone Number:	STARS / 911 Notified: ☐ Yes ☐ No
On Site Supervisor Name & Phone Number:	On Scene Command Post Location:	

Initial Emergency Summary:

Safety Considerations:

Map Sketch:

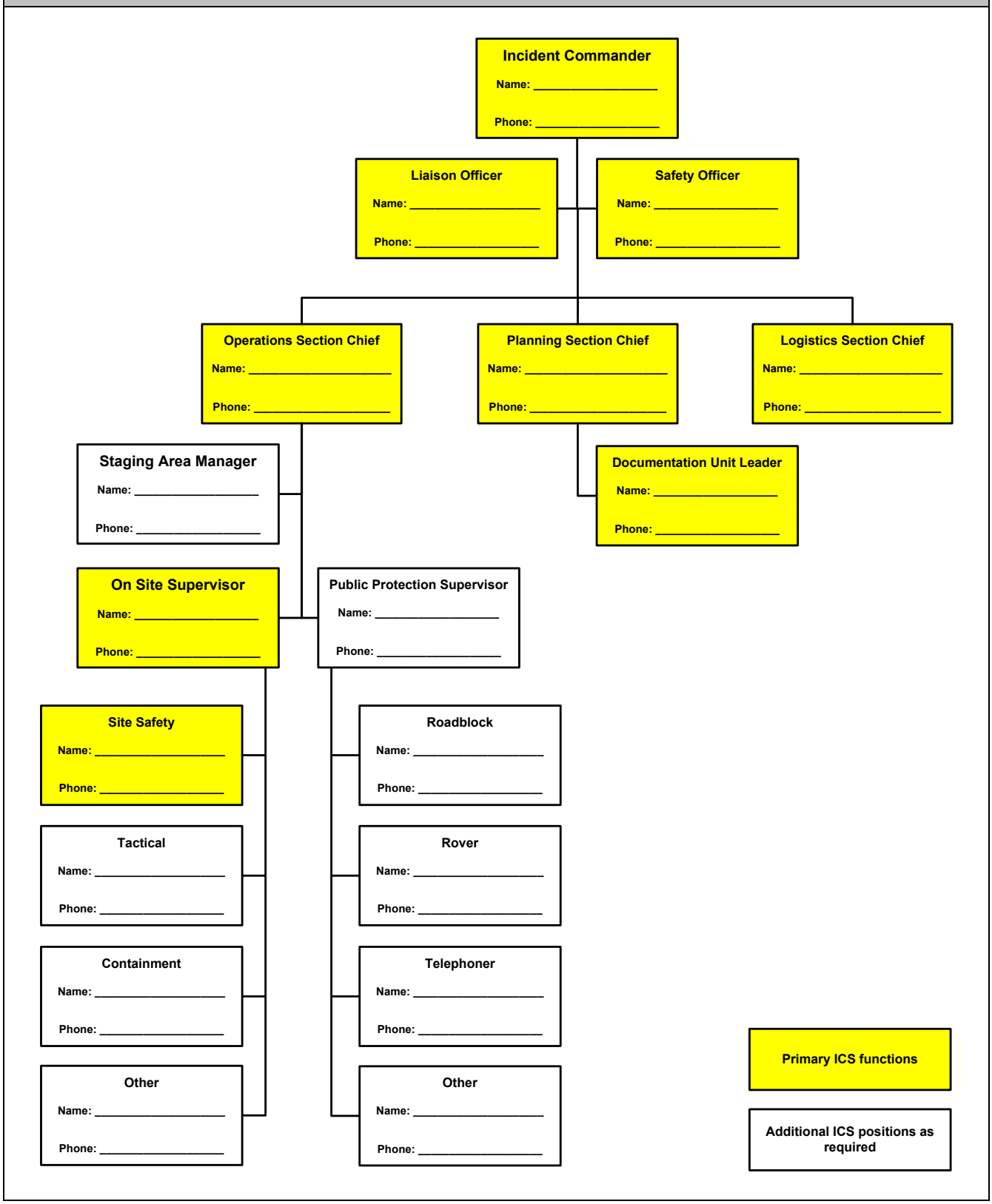
Note: Maps can be drawn or attached here.

Priorities	Problems	Objectives
Life Safety		
Incident Stabilization		
Environment / Property		
Stakeholder Management		

Internal and External Notifications:

Agency / Person(s)	Time Called	Notes

Current Organizational Structure:



Note: Refer to Form 2: Primary ICS Functions found in SECTION 1.5 FORMS (GREEN TAB) for an expanded ICS structure.

Current and Planned Actions:		
Time	Actions	Status
HHMM		
HHMM		
HHMM		
HHMM		
HHMM		
HHMM		
HHMM		
HHMM		
HHMM		
HHMM		
HHMM		
HHMM		

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

1.0 ACTIVATION / PROCEDURES

1.1 Activation Charts and Graphics

1.1.1 First On Scene Strategy 1
1.1.2 Initial Response Overview 3
1.1.3 Initial Site Size Up / Hazard Identification 5
1.1.4 Initial Notification Flowchart 7
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The following section 1.1 contains the following redactions:

- 1.1.4: This section contains security sensitive information, the disclosure of which would create a real and substantial risk that its disclosure will impair the security of pipelines, buildings, structures or systems. It is protected from publication under Clause 1(a)(ii) of NEB Order AO-001-MO-006-2016.
- 1.1.5: This section contains security sensitive information, the disclosure of which would create a real and substantial risk that its disclosure will impair the security of pipelines, buildings, structures or systems. It is protected from publication under Clause 1(a)(ii) of NEB Order AO-001-MO-006-2016.

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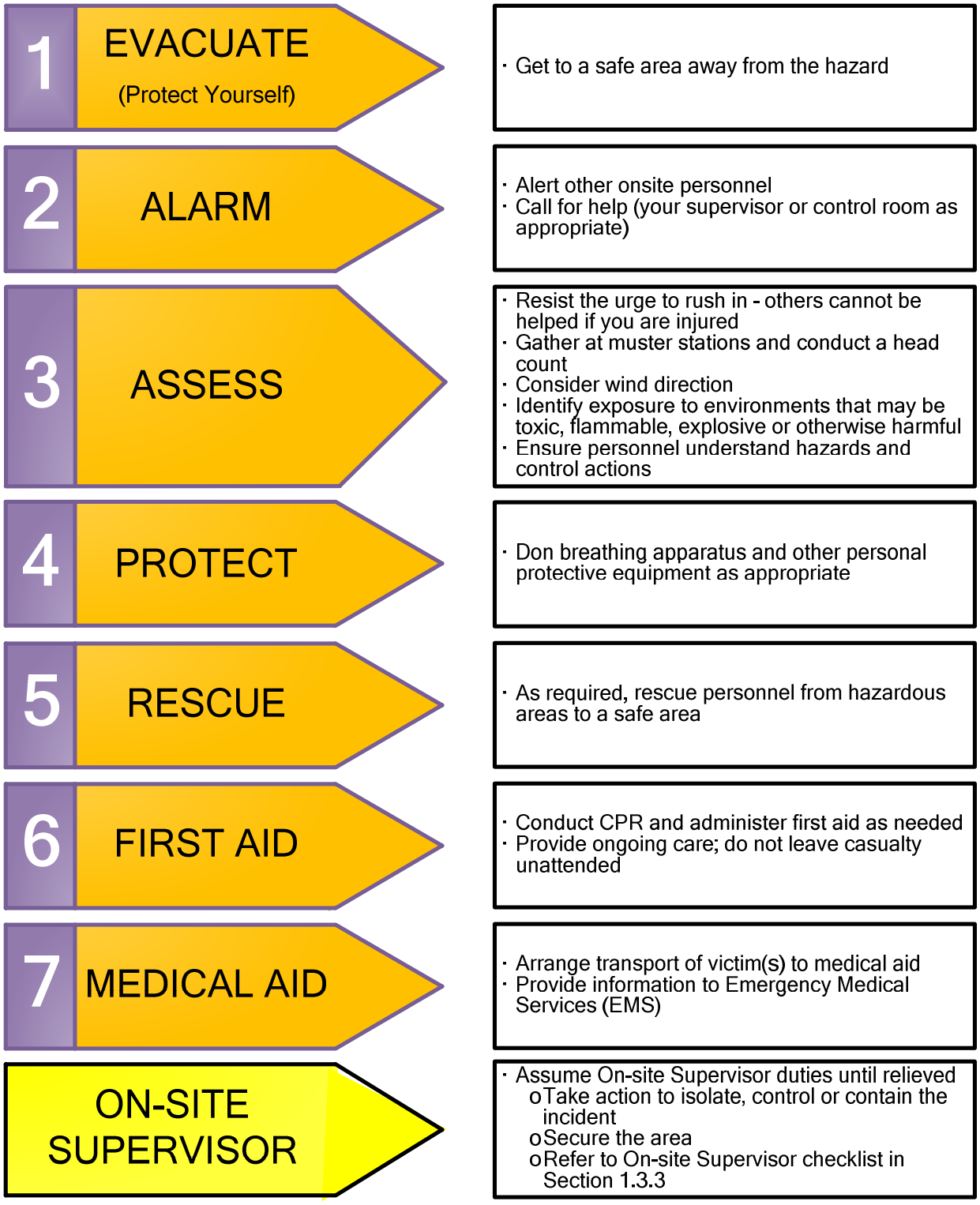
1.1.1 *First On Scene Strategy*



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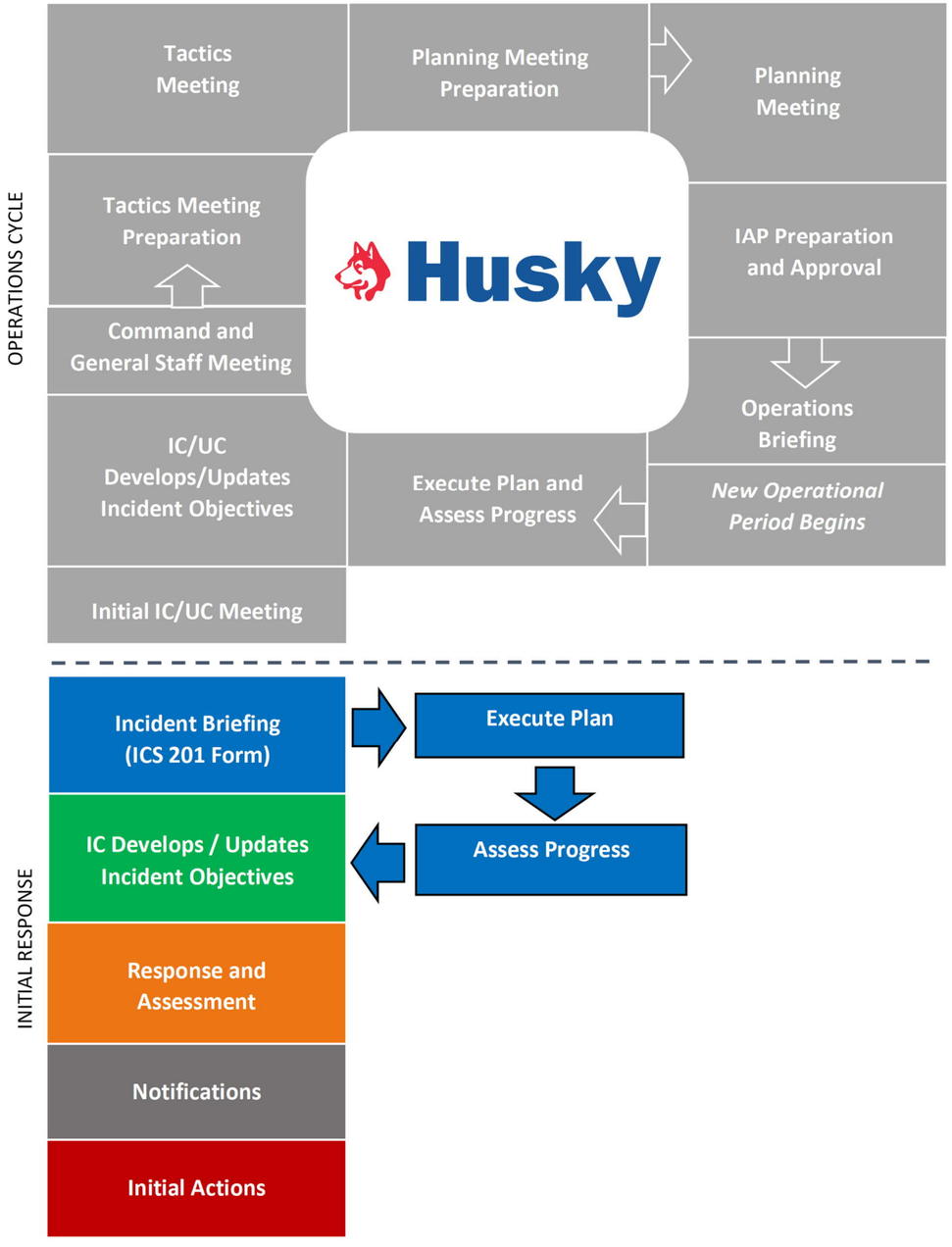
1.1.2 *Initial Response Overview*



Initial Actions	• First On-Scene Strategy – 7 Steps • Assign On-Site Supervisor • Initial Site Size-Up	• Initial Hazard Identification • Immediate Resource Requirements • Incident Stabilization
Notifications	<u>On Scene</u> On Site Supervisor notifies: • 9-1-1 / Medical / Fire (as required) • Designated Incident Commander I.e. supervisor / line management • Request additional Resources (as required)	<u>Incident Command Post (ICP)</u> Incident Commander / IMT ensures the following are notified (as applicable): • On Site Supervisor (if not already on scene) • Husky CRMT On-Call Deputy Director • Line Management • Regulator and other agencies • AHJ – Authority having Jurisdiction (i.e. RM) • Nearby Public / Landowners / Stakeholders • Additional Resources (as required)
Response and Assessment	<u>On Site Supervisor (Operations Section)</u> • Supervise all on scene response actions • Conduct initial size-up or reassessment • Develop plan of action • Communicate with Command o Position, Condition, Progress, Needs • Assigned on site roles (span of control) • Brief tactical teams • Ensure events are documented	<u>Incident Command / IMT</u> • Gain situational awareness and clarify immediate needs from OSS • Discuss / approve OSS plan of action • Establish IMT positions and personnel • Assess response activities and adjust as required • Begin ICS 201 Form
IC Develops / Updates Incident Objectives	<u>On Site Supervisor (Operations Section)</u> • Complete initial briefing and/or update IC or Operations Section Chief (OSC) • All relevant incident information must be communicated • Confirm timing of incident briefing / regular status updates	<u>Incident Command / IMT</u> • Develop / Update Objectives [Utilize P-POST] • Complete ICS 201 Form • Confirm On Site Organization Chart • Set update cycle and next meeting(s) • Prepare for Incident Briefing
Incident Briefing (ICS 201 Form)	<u>On Site Supervisor (Operations Section)</u> • Receive and communicate response objectives and actions to on site responders • Update IC or Operations Section Chief (OSC) • Set schedule for updates with OSC.	<u>Incident Command / IMT</u> • Conduct Incident Briefing (use ICS 201) • Communicate Incident Objectives and actions to all responders. • Clarify issues & concerns • Discuss planned operations and direction • Identify incident escalation potential and communicate current Emergency Level • Set update cycle and next meetings

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1.1.3 *Initial Site Size Up / Hazard Identification*

At any incident, there are four strategic priorities that need to be understood prior to any assessment or re-assessment of the situation:

1. **Life Safety** is always the first priority.
   Consider the safety of all people in the immediate area, including your own.
2. **Incident Stabilization** – control and containment.
3. **Environment and property** conservation.
4. **Stakeholder Management**.

Before the situation can be classified as an Alert, Level 1, Level 2 or Level 3 Emergency, the On Site Supervisor and Incident Commander, in conjunction with the Lead Agency, should consider the following questions as they relate to the above priorities:

What is the problem?

- Are there other hazards or potential impacts?
- What is the quantity and nature of product or material?
- What is the type, condition and behaviour of container? (e.g. well, pipeline, vessel)
- Is the situation stable or unstable?
- Is there a potential for escalation of the incident?

What are the modifying conditions?

- Location – Remote, populated, difficult terrain, access, land spill or involving water
- Time - Time of day, response time
- Weather conditions - Temperature, wind direction, wind speed, weather forecast

What are the potential impacts?

- What is the impact to people? Life safety, injury/fatality, toxic or flammable release, public evacuation, impacts to drinking water
- What is the impact to the environment? Navigable water, lakes, rivers and streams, soil/ground water, wildlife/habitat, recreational use
- What is the external exposure? Media, regulatory, community, government
- What is the business exposure? Company assets, reputation, non-compliance, loss

What is the extent of control measures?

- Internal resources, amount and training of personnel, Personal Protective Equipment (PPE) and control equipment
- External resources – Oil Spill Co-ops, ERAC, municipal emergency responders and government agencies
- What is the probability that the emergency can be contained or controlled within a short time?

Once the situation has been assessed, Husky will use the OGC Emergency Levels Matrix (Section 1.2.1) to classify and report an incident to the Lead Agency.

The Husky Incident Commander declares the initial Alert or Emergency Level in order to immediately communicate and activate internal response resources.

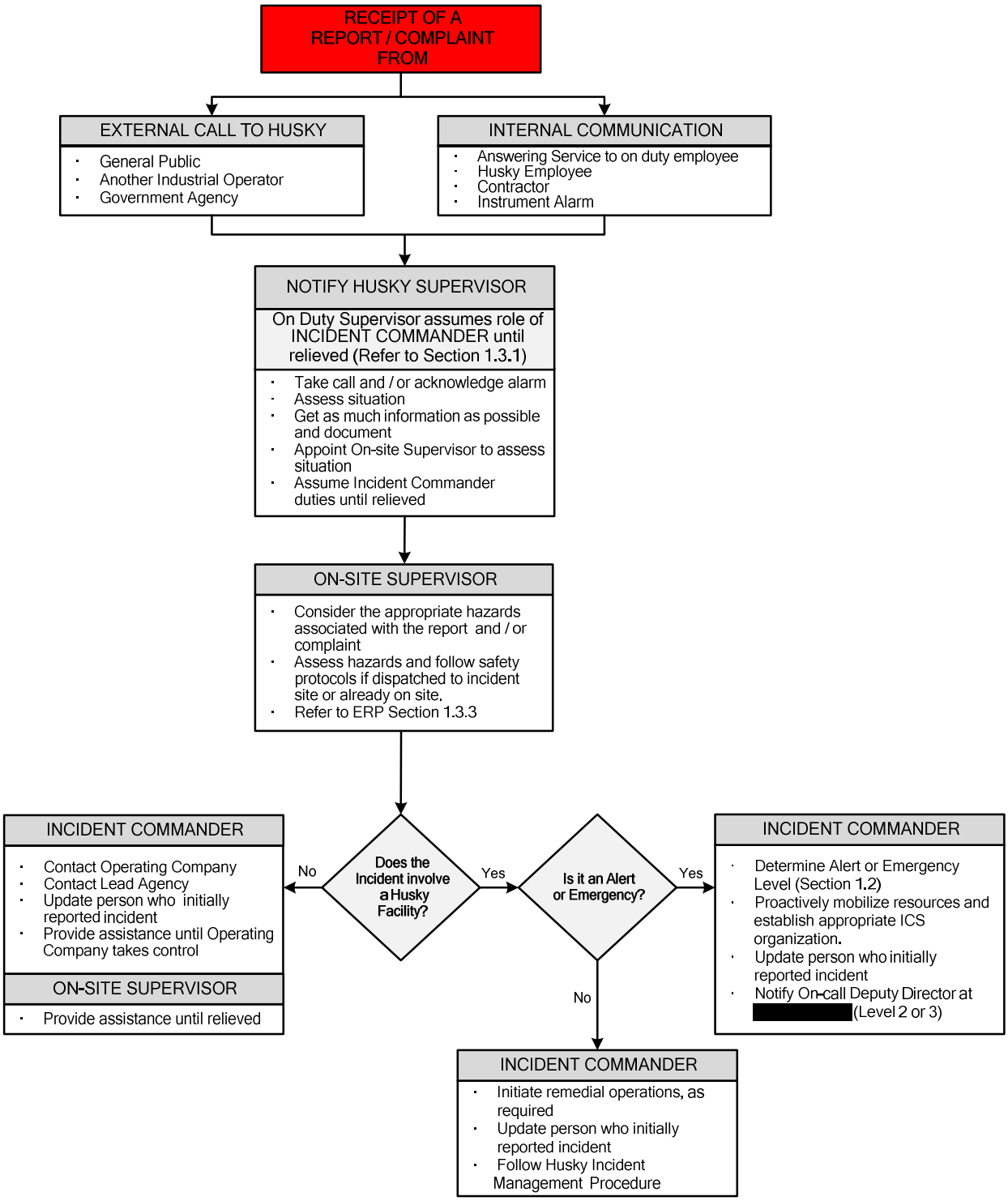
Husky must contact the Lead Agency to confirm the Emergency Level and clarify the specifics of the incident, immediately after it has communicated and activated internal response resources and required First Responders.

Once the situation improves, Husky must consult with the Lead Agency (OGC and EMBC) before making any decision to downgrade or stand-down an emergency. The Lead Agency will consult with other applicable agencies (e.g. local authority, Regional Health Authority) and confirm with Husky that the emergency downgrade or stand-down is appropriate. Husky must keep all notified and evacuated persons and the media informed of the status of an emergency.

Husky must keep all notified and evacuated persons and the media informed of the status of an emergency. As part of the post-incident activities, the following information needs to be provided to the evacuated or sheltered public:

- Incident Recovery / Status,
- Information on how the public can be reimbursed for out of pocket expenses, and,
- Husky contact for additional information.

1.1.4 *Initial Notification Flowchart*



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1.1.5 *Corporate Response Management Plan Activation - Emergency Event*

Emergency Notification Protocol:
All level 2 and 3 emergencies shall be reported to the On Call Deputy Director immediately once safe to do so.

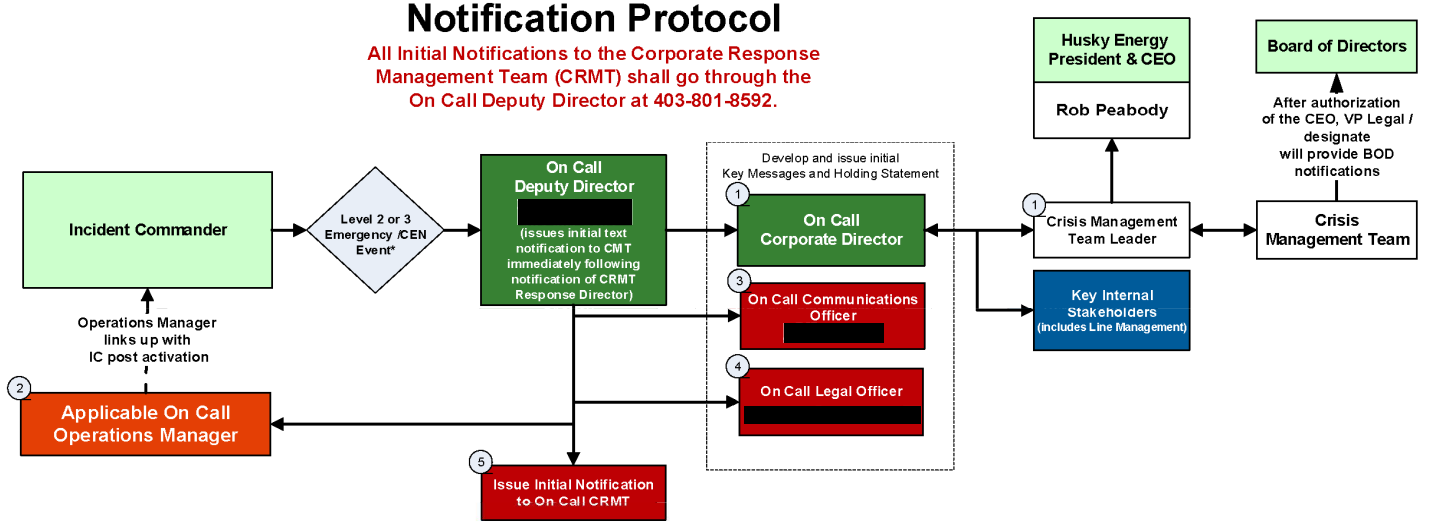
***(CEN) Corporate Event Notification:**
The Corporate Event Notification Procedure requires that the On Call Deputy Director and applicable Line Management be notified of certain event types within 1 hour of the BU representative being notified.

Important Notification Protocol:
All initial notifications shall be made via direct communication with the appropriate contact person either in person or via phone conversation. The following positions must be contacted via direct communication:

- Incident Commander or equivalent
- Line Manager
- CRMT Deputy Director
- CRMT Corporate Director
- CRMT Communications Officer
- CRMT Legal Officer
- CRMT Operations Manager
- Crisis Management Team (CMT) Leader

Initial Corporate Notification Protocol

All Initial Notifications to the Corporate Response Management Team (CRMT) shall go through the On Call Deputy Director at 403-801-8592.



Local / Field Initial Notification Requirements

Incident Commander/ BU Representative or designate shall:

- Activate Local Emergency Services
- Determine the level of emergency or whether the incident requires Corporate Event Notification
- Notify On Call Deputy Director at [redacted]
- If time permits notify line management (may also request notification of line management be completed by the On-Call Deputy Response Director)
- Notify local / lead regulatory agencies

Emergency Level Definitions

Emergency levels are defined by individual site level emergency plans. In all instances a declared Level 2 or 3 emergency requires a mandatory notification to the On Call Deputy. For Alert or Level 1 emergencies it a discretionary notification.

Corporate Event Notification (CEN) Events Types

Notification is required for each of the Event Types summarized below. Refer to the Corporate Event Notification Procedure (Appendix A) for a more detailed Description of criteria and thresholds.

Actual or Potential Serious Injury and Fatalities (SIF)

Non-Occupational Death – Onsite death of a Husky employee or Husky contractor not known to have resulted from a work-related incident or exposure.

Missing Person – Missing person and assumed victim of incident, or lost person at sea / man-over-board (MOB)

Fire and/or explosions – Uncontained, being suppressed, requires external resources or multiple responders; or shut in/down of facility, process unit or living quarters

Tier 1 Process Safety Event

Public Safety – Public safety measures including external notifications

Spill – into a sensitive environment and/or greater than 100 m3 and/or requires regional spill response resources and/or impacts multiple wildlife

Transportation – Loss of product by road or rail and Husky is consignor

Reputation and Regulatory – Stop Work Order, enforcement notice, potential business interruption, negative image from complaint or claim.

Husky Asset Damage – Resulting in unplanned production loss and could impact other BUs, or any offshore collision

Induced Seismicity – seismic events which result from Husky operations or 3rd party operations where Husky has active operations

Community – Potential impact related to public safety order / declaration of local state of emergency (wildfire, typhoon, tornado)

Security – Sabotage, terrorism, threat or deliberate action aimed at people, equipment, facilities, assets or operations

Natural Hazard – Potential impact related to wildlife, seismic, or weather

Office / Operations Closure – directly related to an emergency or as a precaution due pending or ongoing inclement weather or a security risk

Communicable Disease – Abnormally widespread sickness, or 15% absenteeism (BU or site-specific location)

Severity A MIO As classified by IS Operations

Corporate Response Management Team Initial Notification Requirements

On Call Deputy Director shall:

- Notify On Call Corporate Director, appropriate Operations Manager, Communications Officer, Legal Officer
- Send text notification to CMT, CRMT Director and applicable BU line management
- Activate / Alert On Call Corporate Response Management Team
- Send Corporate Event Notification (if applicable)

On Call Corporate Director shall:

- Work with Communication Officer and Legal Officer to develop initial Key Messages and Holding Statement
- Ensure notification of CMT Leader and applicable BU line management.

CRMT shall:

- Notify regulators and stakeholders as requested by the Incident Commander
- Issue external communications as required
- Issue internal communications to applicable staff

HOIMS
Husky Operational Integrity Management System

Corporate Emergency Notification Procedures

On Call Deputy Director
[redacted] (24 Hour)

Corporate Communications
[redacted] (24 Hour)

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ICS FORM 201: INCIDENT BRIEFING

Facility Name:		Incident Location (LSD/NTS):
Time of Event:	Time Zone:	Date of Event (mm/dd/yy):
Level of Emergency: ☐ Alert Level ☐ Level 1 ☐ Level 2 ☐ Level 3		
Incident Commander Name & Phone Number:	ICP Location / Phone Number:	STARS / 911 Notified: ☐ Yes ☐ No
On Site Supervisor Name & Phone Number:	On Scene Command Post Location:	

Initial Emergency Summary:

Safety Considerations:

Map Sketch:

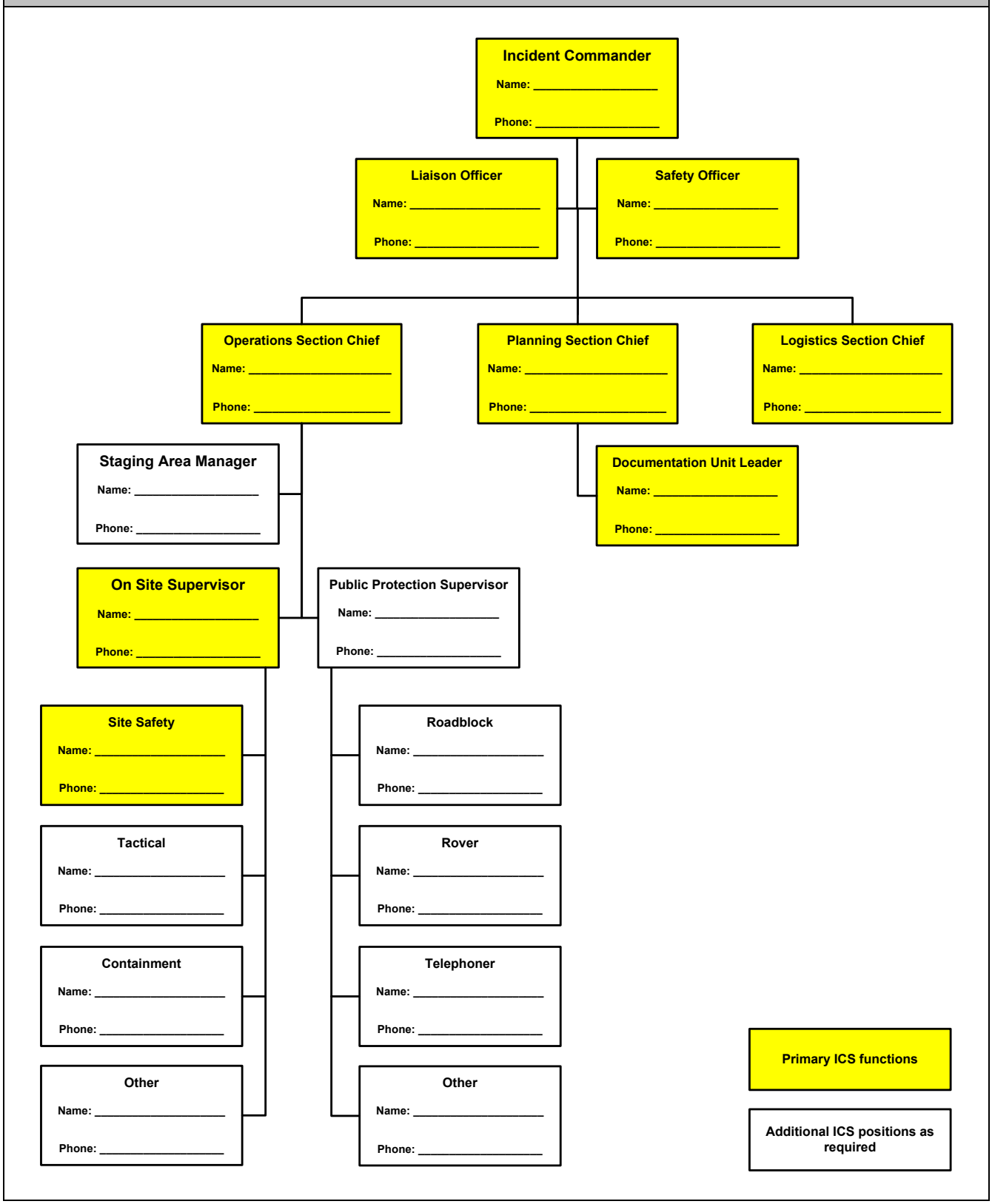
Note: Maps can be drawn or attached here.

Priorities	Problems	Objectives
Life Safety		
Incident Stabilization		
Environment / Property		
Stakeholder Management		

Internal and External Notifications:

Agency / Person(s)	Time Called	Notes

Current Organizational Structure:



Note: Refer to Form 2: Primary ICS Functions found in SECTION 1.5 FORMS (GREEN TAB) for an expanded ICS structure.

Current and Planned Actions:		
Time	Actions	Status
HHMM		
HHMM		
HHMM		
HHMM		
HHMM		
HHMM		
HHMM		
HHMM		
HHMM		
HHMM		
HHMM		
HHMM		

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

1.1.7 *Incident Response Team Initial Briefing Agenda*

On Site Supervisor / Incident Commander Briefing

PURPOSE

Provide the IC with information regarding the incident situation, actions taken, on site organizational structure and resources allotted to the incident so a 201 can be completed and an Initial IC/UC briefing can be completed.

Brief the IC on the following:

- Where, when, what happened and how?
- Impacts or potential impacts to Life Safety, Incident Stabilization, Environment/Property, and Stakeholder Management
- Current actions and status
- Resources on site, ordered, and en-route
- IRT Organizational structure

FACILITATOR / DURATION

- Current On Site Supervisor
- Duration approx. 15-20 min

GROUND RULES

- Ensure no distraction during briefing
- Phones on vibrate / silent
- Stick to the agenda

AGENDA

1. Time of the incident
2. Location of the incident
3. On Site Command Post location
4. Staging area location
5. Incident details
6. Impacts or potential impacts to Life Safety, Incident Stabilization, Environment/Property, and Stakeholder Management
7. Actions taken and status
8. Notifications completed
9. Resource assignments
10. Resources ordered and en-route
11. IRT organizational structure
12. Transfer of command from IC to OSC (when and who)
13. Methods of communication and frequency of updates

Note: Ensure pictures, videos and documentation is sent to IC to provide situational awareness of the incident and response.

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1.1.8 *Situation Status Update Meeting Agenda*

PURPOSE

Provide communicate periodic critical updates regarding the incident and status of ongoing operations and planned activities. This feedback is critical to provide situational awareness, status on key information, operational support, and allow IMT to adjust current and planned actions. This information is continuously gathered from various sources including field observers, debriefs, stakeholders, etc

WHEN

- As needed. Meeting may be called at any time to review critical updates or current activities. Meeting may include the entire IMT or only certain functions as necessary.
- Duration approx. 15 min

FACILITATIOR / DURATION

- Current Incident Commander (or Planning Section Chief if available)
- **Duration approx. 30 min**

GROUND RULES

- Presenter front and centre
- Phones on vibrate / silent
- No texting
- No sidebar conversations
- Stick to the agenda

AGENDA

1. Safety Update on incident operations and related activities
2. Situation update (current operations, weather, etc.)
3. Review overall Objectives and status
4. Provide any critical update / information
5. Review action items (ICS 233)
6. Conduct round robin of Command (Officers) & General (Chiefs) staff members and other key functions to provide
    a. Status reports
    b. Status of work
    c. Needs / action items
7. Summary of any new action items and their priorities
8. Reassessment and determination of Emergency Level – clearly communicated to team
9. Decide upon and communicate time for next Situation Status Update Meeting

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1.2 Level of Emergency

1.2.1 British Columbia Incident Classification Matrix & Emergency Levels 1

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INCIDENT CLASSIFICATION MATRIX

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

TABLE 1. CONSEQUENCE RANKING

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

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

TABLE 2. PROBABILITY RANKING

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

TABLE 3. INCIDENT RISK SCORE AND CLASSIFICATION

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

RISK SCORE	ASSESSMENT RESULT
Minor (1-2)	**Notification Only;** permit holder must notify the Commission online within 24 hours using the Form A: Minor Incident Notification Form. In addition to Form A, spills must also be reported to EMBC.
Moderate (3-4)	**Level-1 Emergency;** immediate notification (call EMBC)
Major (5-6)	**Level-2 Emergency;** immediate notification (call EMBC)
Serious (7-8)	**Level-3 Emergency;** immediate notification (call EMBC)

SEE OVER

Updated: 07-March-2019
Effective: 07-March-2019

OGC Incident Classification Matrix

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

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

Updated:07-March-2019
Effective:07-March-2019

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; 10Kg 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, Spill Reporting Regulation Schedule "Reporting Levels for Certain Substances" for determiningreportable spillage amounts of other substances:

OTHER REPORTABLE INCIDENTS

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

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

Examples of a Sour Well Level 1 Potential Emergency

Sour zone is open and any of the following is occurring:

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

Examples of a Sour Well Level 2 Emergency

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

Examples of a Sour Well Level 3 Major Emergency

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

Examples of a Production/Pipeline/Facility Level 1 Potential Emergency

- Minor damage of Company property.
- Spot fire that can quickly be controlled.
- Verified alarm or credible notification of any situation that has a definite risk to life.

Examples of a Production/Pipeline Facility Level 2 Emergency

- Serious injury to Company employees or contract personnel.
- Fire/explosion/release where imminent control of the hazard is probable.
- Severe weather threat such as tornado, which threatens operations and personnel.

Examples of a Production/Pipeline Facility Level 3 Emergency

- Fatality or life threatening injury to an employee, contractor or the public.
- Explosion with extensive damage to public facilities.
- Major fire in a populated area or forest/prairie wild fire.
- Major spill extending beyond Company property.

The Emergency Level is determined in conjunction with the OGC.

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1.3 Response Team Duties

1.3.1 Incident Commander 1
1.3.2 Deputy Incident Commander 3
1.3.3 On Site Supervisor 5
1.3.4 Site Safety 7
1.3.5 On-site group leaders and on-site resources 9
1.3.6 Liaison Officer 11
1.3.7 Public Information Officer 13
1.3.8 Safety Officer 15
1.3.9 ICS Process Advisor 17
1.3.10 Operations Section Chief 19
1.3.11 Planning Section Chief 21
1.3.12 Situation Unit Leader 23
1.3.13 Resource Unit Leader 25
1.3.14 Documentation Unit Leader 27
1.3.15 Technical Specialists 29
1.3.16 Logistics Section Chief 31
1.3.17 Finance/Administration Section Chief 33
1.3.18 Staging Area Manager 35
1.3.19 Public Protection Supervisor and Group Leader(s) 37
1.3.20 Rover Team 41
1.3.21 Roadblock Team 43
1.3.22 Telephone Notification Team 45
1.3.23 Air Monitoring Team 47
1.3.24 Reception Centre Team 49
1.3.25 Security Team 51
1.3.26 Search and Rescue Team 53

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1.3.1 *Incident Commander*

Functional Role	Key Communications	Forms
• Person in charge of Husky emergency response including safety and health of personnel and public • Activates Husky Emergency Response Plan (ERP) to manage emergency or support mutual aid • Sets objectives using ICS Form 201	• On Site Supervisor • Section Chiefs • Notification to the Corporate Response Management Team • Command Staff	• ICS Form 201: Incident Briefing • Form 2: Primary ICS Functions • Situation Status Update Meeting Agenda • ICS Form 214a: Individual Log

Order of consideration depends on the specific factors of each emergency.

☑	Initial Tasks	Note
❑	Clarify information / record data and assess the situation.	
❑	Start filling out ICS Form 201: Incident Briefing.	
❑	Appoint or dispatch an On Site Supervisor and backup as required.	
❑	Assess hazards and risk to life safety (workers / public / responders).	
❑	Proactively mobilize resources / responders. Assign necessary ICS positions.	
❑	Classify and communicate initial Alert or Emergency Level (and hazard zone).	
❑	Notify the On Call Deputy Director of any declared Level 2 or 3 emergencies.	
❑	Determine objectives - **Life Safety is # 1 Priority.**	
❑	Ensure that adequate documentation is being maintained - Refer to Section 1.5 Forms.	

Alert	Level 1	Level 2	Level 3	Actions by Alert or Emergency Level
❑				Ensure the Lead Agency is notified if public or media is contacted.
❑				Ensure On Call Deputy Director is notified if public, media or Lead Agency is contacted. Obtain advice and support.
	❑	❑	❑	Activate the Incident Command Post (ICP).
	❑	❑	❑	Ensure the Local Authority is notified if media is contacted, municipal roads are blocked and / or if implementing public protection.
	❑	❑	❑	Ensure the Lead Agency is notified of the Emergency Level, related status and action plan information.
	❑	❑	❑	Mobilize Air Monitoring Unit(s) for possible toxic releases.
	❑	❑	❑	Ensure RCMP is notified / updated if provincial roads need to be blocked.
	❑	❑	❑	Ensure notification to other required government agencies.
		❑	❑	Ensure proactive public protection activities are implemented. Set up roadblocks, secure identified hazard zone with mandatory evacuation or shelter-in-place strategies, with priority: those closest, those downwind and the rest of the zone.

☑	Ongoing Tasks	Note
❑	Establish an appropriate ICS organization. Proactively assign other response functions and delegate responsibilities, using Form 2: Primary ICS Functions.	
❑	Approve media releases.	
❑	Develop and display response objectives in ICP.	
❑	Document your conversations and activities (consider appointing a documentation person).	
❑	**Documentation - If solicitor-client privilege has not yet been established with the legal department, this should be discussed with the Corporate Director.**	
❑	Obtain Safety Officer's input and assessment of hazard / risk to personnel.	
❑	Continually re-evaluate actual / potential risks to life safety, to the environment, the business impact and company reputation impact.	
❑	Ensure the appropriate ERP information is being referenced and followed, e.g. Public protection methods, incident specific response and site specific considerations.	
❑	Re-classify and communicate Alert or Emergency Level – post in ICP.	
❑	Regularly conduct Incident Briefings to confirm status (gaining / losing), refine objectives and the response priorities.	
❑	Ensure air monitoring and evacuations continue.	
❑	Ensure adequate safety and environmental protection measures are in place.	
❑	Determine your 24-hour staffing requirements as required – utilize Logistics.	
❑	Shift Change: Communicate your shift change to all direct reports. Fully brief your relief on events and status of actions being taken.	
❑	Authorize any call down of the emergency in conjunction with the Lead Agency. They will consult with other government agencies as applicable and confirm with Husky that the emergency call-down is appropriate.	

☑	Demobilization - Post Incident Tasks	Note
❑	Confirm that any non-essential personnel or services are released.	
❑	Ensure all responders are notified of the call down.	
❑	Request the Corporate Response Management Team (Human Resource Officer) to arrange Critical Incident Stress Debriefing for personnel who could be psychologically impacted.	
❑	Commission the preparation of incident investigation and reporting.	
❑	Conduct an incident response debriefing meeting with key responders.	
❑	Ensure all documentation from the responders is collected and consolidated.	
❑	Ensure that commitments made to any public or agencies are followed up.	
❑	Ensure any public expense claims have been collected and are processed.	
❑	Submit all documentation to the Planning Section Chief (if appointed) or collect and organize in preparation for the incident investigation.	

1.3.2 *Deputy Incident Commander*

Functional Role	Key Communications	Forms
• Orders carry the same authority as the Incident Commander • Assist Incident Commander with response duties, as required / requested. Duties may include: o Assume the role of key responder until others are assigned o Assist in setting up the ICP	• Incident Commander • Command Staff • Section Chiefs • As requested by IC: o Notification to the On Call Deputy Director o Updates to CRMT Operations Support	• ICS Form 201: Incident Briefing • Form 2: Primary ICS Functions • ICS Form 214a: Individual Log

Order of consideration depends on the specific factors of each emergency.

☑	Initial Tasks	Note
❑	Clarify information / help IC record data and assess the situation.	
❑	Help IC assess hazards and risk to life safety (workers / public / responders).	
❑	Help IC mobilize resources / responders. Build your team - get big fast!	
❑	Help IC classify and communicate initial Alert or Emergency Level (and hazard zone).	
❑	As requested by IC: notify the Corporate Director.	
❑	Help IC determine objectives - **Life Safety is # 1 Priority**.	
❑	Help IC ensure that documentation is being maintained - Refer to Section 1.5 Forms.	

Alert	Level 1	Level 2	Level 3	Actions by Alert or Emergency Level ♦ Assist the Incident Commander, as requested, to:
	❑	❑	❑	Ensure the Lead Agency is notified of the Emergency Level, related status and action plan information.
❑	❑	❑	❑	Ensure On Call Deputy Director is notified if public, media or regulatory agency is advised. Obtain advice and support.
		❑	❑	Ensure the Local Authority is notified if media is contacted, municipal roads are blocked and / or if implementing public protection.
	❑	❑	❑	Notify the Local Authority and Regional Health Authority if media is contacted.
	❑	❑	❑	Mobilize air monitoring unit(s) for possible toxic releases.
	❑	❑	❑	Ensure RCMP and highway authority are notified / updated if provincial roads need to be blocked.
	❑	❑	❑	Ensure notification to other required government agencies.
		❑	❑	Ensure proactive public protection activities are implemented. Set up roadblocks, secure identified hazard zone with mandatory evacuation or shelter-in-place strategies, with priority: those closest, those downwind and the rest of the zone.

☑	Ongoing Tasks	Note
♦ **As Requested:**		
❑	Assist IC in proactive assignment of personnel and delegation of responsibilities.	
❑	Support IC development and display response objectives in ICP.	
❑	Help IC document conversations and activities (consider appointing a documentation person).	
❑	Obtain Safety Officer's input and assessment of hazard / risk to personnel.	
❑	Continually re-evaluate actual / potential risks to life safety, to the environment, the business impact, and company reputation impact.	
❑	Help IC ensure the appropriate ERP information is being referenced and followed, e.g. Public Protection Methods, Incident Specific Responses and Site Specific Considerations.	
❑	Assist IC in classifying and communicating Emergency Level – post in ICP.	
❑	Help IC regularly conduct Incident Briefings to confirm status (gaining / losing) and refine objectives and the response priorities.	
❑	Help IC ensure regulatory agencies are regularly informed of incident status. As appropriate, request Public access restrictions and Notice to Airmen (NOTAM).	
❑	Help IC ensure air monitoring and evacuation.	
❑	Help IC ensure safety and environmental protection measures are in place.	
❑	Determine your 24-hour staffing requirements as required – utilize Logistics.	
❑	Shift Change: Communicate your shift change to all direct reports. Fully brief your relief on events and status of actions being taken.	
❑	Support IC with call down decision in conjunction with the Lead Agency. They will consult with other government agencies as applicable and confirm with Husky that the emergency call-down is appropriate.	

☑	Demobilization - Post Incident Tasks	Note
♦ **As Requested:**		
❑	Help IC confirm that any non-essential personnel or services are released.	
❑	Support IC in ensuring that all responders are notified of the call down.	
❑	As directed by IC, request the Corporate Director to arrange Critical Incident Stress Debriefing for personnel who could be psychologically impacted.	
❑	Support preparation of incident investigation and reporting.	
❑	Help conduct an incident response debriefing meeting with key responders.	
❑	Help ensure all responder documentation is collected and consolidated.	
❑	Help ensure that commitments made to public or agencies are followed up.	
❑	Help ensure public expense claims have been collected and are processed.	
❑	Support submission of documentation to Planning Section Chief (if appointed) or directly to the Incident Commander.	

1.3.3 *On Site Supervisor*

Functional Role	Key Communications	Forms
• Manage the tactical on-site response and safety of all on-site personnel • When requested by the Incident Commander, supervise other field-based functions (e.g. Roadblock Crews) until a Public Protection Supervisor (and/or Roadblock Leader) is appointed	• Incident Commander or Operations Section Chief if appointed • Site Safety • Direct reports on-site	• Form 2: Primary ICS Functions • ICS Form 211: Check In / Out List • ICS Form 214a: Individual Log • Section 1.1.3 Initial Size Up / Hazard Identification

Order of consideration depends on the specific factors of each emergency.

☑	Initial Tasks	Note
❑	**Senior Husky On Site Representative** – assume Husky ERP On Site Supervisor role	
❑	**If already on site**, follow First On Scene Strategy: ○ Evacuate – Protect yourself. Direct workers to safe muster areas, conduct a head count and provide instructions. ○ Alarm – Call for help, alert others. ○ Assess – Understand the hazards. ○ Protect – Don personal protective equipment. ○ Rescue – Rescue personnel as required. ○ First Aid – Conduct CPR and administer first aid. ○ Medical Aid – Arrange for medical aid and care for casualties.	
❑	**If dispatched to a potential incident location**: ○ Proceed with caution – as required, monitor / check for hazards. ○ Approach from an upwind or crosswind direction. ○ Ensure PPE such as breathing apparatus is within arm's reach. ○ Assume danger; resist the urge to rush in – inspect site from a distance. ○ Use the buddy system - wait for backup as required. ○ Maintain communications with Incident Commander. ○ When at or near site, follow First On Scene Strategy.	
❑	Assess hazards and potential risks, e.g. fire, explosion, toxicity, oxygen deficiency, ignition sources, and any restrictions to safe access and evacuation routes.	
❑	Identify and secure the perimeter of the Hot Zone.	
❑	Ensure access to the incident site is restricted to authorized personnel. Until Public Protection Supervisor is appointed – work with Incident Commander to keep people away from the hazard and implement proactive public protection actions with priority: those closest to the hazard and those downwind.	
❑	Only when safety is assured, take immediate actions to gain control, shut down, isolate, de-pressure or contain incident following safe work procedures.	

Alert	Level 1	Level 2	Level 3	Actions by Alert or Emergency Level
❑	❑	❑	❑	Until Public Protection Supervisor is appointed – work with Incident Commander to keep people away from the hazard and implement proactive public protection actions with priority: those closest to the hazard, those downwind and the rest of the hazard area.
			❑	Implement ignition procedures as required. The On Site Supervisor is empowered to independently implement the ignition procedures at any time it is believed workers or the public cannot be protected from escaping gases. See Section 2.2.8 for Ignition Guidelines.

☑	Ongoing Tasks	Note
❑	Continually re-assess hazards and risk to life safety.	
❑	Develop and maintain control of all on-site personnel and on-site group leaders.	
❑	Request resources needed or anticipated. Resources waiting for assignment should remain at the Staging Area to eliminate congestion on-site.	
❑	Document your communications and actions (consider appointing a documentation person).	
❑	With the Incident Commander, define and prioritize critical issues.	
❑	Conduct meetings with on-site leaders, review action plan, communications and safety, especially prior to work being undertaken within the Hot Zone.	
❑	Allow the appropriate amount of time to develop clear and safe on-site response action plans. Talk through on-site response action plan before implementing.	
❑	Determine your 24-hour staffing requirements as required – utilize Logistics.	
❑	Shift Change: Communicate your shift change to all direct reports. Fully brief your relief on events and status of actions being taken.	

☑	Demobilization - Post Incident Tasks	Note
❑	Confirm that any non-essential personnel or services are released.	
❑	Ensure all responders are notified of the call down.	
❑	Participate in the incident response debriefing meeting if requested.	
❑	Submit all documentation to the Planning Section Chief (if appointed) or directly to the Incident Commander.	

1.3.4 *Site Safety*

Functional Role	Key Communications	Forms
• Safety backup / site safety person • Provide advice to On Site Supervisor on safety procedures	• On Site Supervisor • On-site group leaders • On-site responders • Safety Officer	• ICS Form 215a: Incident Action Plan Safety Analysis • ICS Form 214a: Individual Log

Authority

- The Site Safety has the authority to alter or suspend any **on-site** activities that pose an immediate life safety threat. For all other activities that are considered unsafe, site safety may recommend corrective actions.

Order of consideration depends on the specific factors of each emergency.

☑	Initial Tasks	Note
❑	Report to the On Site Command Post (OSCP). Check-in with On Site Supervisor and obtain a briefing. **Life Safety is # 1 Priority.**	
❑	Identify current and potential responder safety hazards and life safety risks.	
❑	Promptly and clearly make safety concerns known to the On Site Supervisor.	
❑	Manage or support safe medical response.	
❑	Stop and/or prevent unsafe acts.	
❑	Ensure incident scene is undisturbed except for emergency remedial actions and is recorded by diagrams and/or photographs.	
❑	Determine your staffing requirements (Assistant Site Safety, replacement).	
❑	Ensure that adequate documentation is being maintained - Refer to Section 1.5 Forms.	

☑	Ongoing Tasks	Note
❑	Immediately make safety concerns known to the On Site Supervisor.	
❑	Identify hazardous situations associated with the incident.	
❑	Ensure that air quality, water quality and any other toxicological monitoring is performed as required.	
❑	Provide advice to the On Site Supervisor regarding establishment of Hot Zone.	
❑	As required, communicate with Safety Officer and get necessary support.	
❑	Understand the current ICS organization and supervisory span of control. If there are more than 7 personnel reporting to the On Site Supervisor, expand the ICS structure and appointment of Group Leaders.	

☑	Ongoing Tasks	Note
❑	Assist the On Site Supervisor to ensure the appropriate safety requirements are being followed. For example: o Use of appropriate personal protective equipment (PPE). o Safe and adequate lighting is in place as necessary. o First aid and burn kits are readily available. o Only radios designed and approved for use in flammable atmospheres are to be used in the hot zone (i.e. 'intrinsically safe'). o Proper grounding and bonding procedures are adhered to. o Responders park vehicles in safe locations upon arrival and there is no mass convergence or congestion that limits site access/egress. o Workers who show signs of stress, fatigue or other adverse symptoms are demobilized and sent for treatment if necessary.	
❑	Assist the On Site Supervisor to ensure that appropriate safety and environmental protection measures are in place.	
❑	Determine your 24-hour staffing requirements as required – utilize Logistics.	
❑	Shift Change: Communicate your shift change to all direct reports. Fully brief your relief on events and status of actions being taken.	

☑	Demobilization - Post Incident Tasks	Note
❑	Advise the On Site Supervisor of any need to arrange Critical Incident Stress Debriefing for personnel who could be psychologically impacted.	
❑	Determine if your position will require follow-up actions before leaving site.	
❑	Deactivate your position when authorized by the On Site Supervisor.	
❑	As requested, participate in the incident response debriefing meeting.	
❑	As requested, support preparation of incident investigation and reporting	
❑	Submit all documentation to the Planning Section Chief (if appointed) or directly to the Incident Commander.	

1.3.5 *On-site group leaders and on-site resources*

Functional Role	Key Communications	Forms
• Tactical on-site control and/or containment operations, as directed by the On Site Supervisor	• On Site Supervisor • On-site group leaders • Site Safety • Any personnel who directly report to you	• ICS Form 214a: Individual Log

Order of consideration depends on the specific factors of each emergency.

☑	Initial Tasks	Note
❑	Report to the On Site Command Post (OSCP). Check-in with the On Site Supervisor and obtain a briefing. **Life Safety is # 1 Priority.**	
❑	Identify current and potential safety hazards and life safety risks.	
❑	**If already on site**, follow First On Scene Strategy: ○ Evacuate — Protect yourself. Direct workers to safe muster areas, conduct a head count and provide instructions. ○ Alarm — Call for help, alert others. ○ Assess — Understand the hazards. ○ Protect — Don personal protective equipment. ○ Rescue — Rescue personnel as required. ○ First Aid — Conduct CPR and administer first aid. ○ Medical Aid — Arrange for medical aid and care for casualties.	
❑	Ensure unprotected personnel do not enter hazardous areas (Hot Zone).	
❑	As requested by the On Site Supervisor, help secure the perimeter of the Hot Zone.	
❑	Only when safety is assured, and as requested by the On Site Supervisor, take immediate actions to gain control, shut down, isolate, de-pressure or contain incident following safe work procedures.	
❑	You have the right and responsibility to refuse any work assignments that you believe are unsafe.	

Alert	Level 1	Level 2	Level 3	Actions by Alert or Emergency Level
❑	❑	❑	❑	As directed by the On Site Supervisor, keep people away from the hazard and implement proactive life safety actions with priority: those closest to the hazard, those downwind.

☑	Ongoing Tasks	Note
❑	Continually re-assess hazards and risk to life safety.	
❑	Ensure that adequate documentation is being maintained - Refer to Section 1.5 Forms.	
❑	Develop and maintain control of all personnel who directly report to you.	
❑	Request resources needed or anticipated. Resources waiting for assignment should remain at the Staging Area to avoid congestion on-site.	
❑	Review planned on-site response actions and assess on-site communications and safety precautions.	
❑	Ensure that you and your group have appropriate training and clearly understand the hazards and assigned tasks.	
❑	Conduct pre-job meetings to ensure you understand your tasks, communications (verbal, signals), rescue, and control / containment procedures.	
❑	Allow the appropriate amount of time to develop safe tactical on-site action plans.	
❑	Talk through on-site response action plan before implementing to confirm that everyone in the group understands the hazards and their assigned tasks.	
❑	Safely conduct tactical operations as planned, continuing to evaluate the risk to you and your group.	
❑	Continue to monitor situation and modify response accordingly.	
❑	Direct the group members as required. Stop any unsafe operations.	
❑	Maintain on-going communication with the On Site Supervisor and individual members of your group.	
❑	Watch the group members for signs of stress, fatigue and heat or cold exposure.	
❑	Determine your 24-hour staffing requirements as required.	
❑	Shift Change: Communicate your shift change to all direct reports. Fully brief your relief on events and status of actions being taken.	

☑	Demobilization - Post Incident Tasks	Note
❑	Confirm that any non-essential personnel or services are released.	
❑	Ensure all personnel who directly report to you are notified of the call down.	
❑	Participate in the incident response debriefing meeting if requested.	
❑	Submit all documentation to the Planning Section Chief (if appointed) or directly to the Incident Commander.	

1.3.6 *Liaison Officer*

Functional Role	Key Communications	Forms
• Initial notification to applicable government agencies • Point of contact for assisting or cooperating agency representatives	• Incident Commander • Assisting or cooperating agency representatives • Command Staff • Corporate External Liaison Officer	• ICS Form 201: Incident Briefing • ICS Form 214a: Individual Log

Order of consideration depends on the specific factors of each emergency.

☑	Initial Tasks	Note
❑	As directed, go to the Incident Command Post and/or obtain a status briefing from the Incident Commander.	
❑	Clarify the classification of Alert or Emergency Level and understand how it was determined (current situation and potential to increase in severity).	
❑	Review Section 2.1.1 Contact Requirements by Incident Type (Notification Matrix).	
❑	Make all required notifications to the Leady Agency and other government agencies. Document details of each conversation and the name of the agency representative contacted. ○ If you are in doubt whether a particular agency should be notified, make the notification, even if it is a courtesy notification.	
❑	Advise the Incident Commander of any outstanding questions or concerns from the Lead Agency, Local Authority or other government agencies.	
❑	Identify affected contractors working for Husky at the time of the incident and confirm whether the contractor's head office has been or needs to be notified.	
❑	Confirm Incident Commander or Deputy Incident Commander has notified the On Call Deputy Director of any emergency.	
❑	Link up with the Corporate External Liaison Officer to coordinate actions.	

Alert	Level 1	Level 2	Level 3	Actions by Alert or Emergency Level
❑	❑	❑	❑	Notify and regularly update the Lead Agency of the Alert or Emergency Level, status and action plan.
❑	❑	❑	❑	Confirm the Incident Commander or Deputy Incident Commander has notified the On Call Deputy Director if public, media or the Local Authority is advised.
		❑	❑	Notify the Local Authority if media is contacted, municipal roads are blocked and / or if implementing public protection.
	❑	❑	❑	Notify the Local Authority and Regional Health Authority if media is contacted.
	❑	❑	❑	Ensure RCMP is notified / updated if provincial roads need to be blocked.
❑	❑	❑	❑	Notify and regularly update all other required agencies as per Section 2.1.1 Contact requirements by Incident Type.

☑	Ongoing Tasks	Note
❑	Document your conversations and activities (consider appointing a documentation person).	
❑	Distinguish agencies and categorize them into two groups: o Cooperating agency representatives (observing/providing advice). o Assisting agency representatives (providing resources and support).	
❑	With IC approval, re-assign assisting agencies to the Operations Section, and cooperating agencies to the Planning Section.	
❑	If you are asked to contact a potential supporting agency e.g. the RCMP, confirm with Logistics Section Chief who will contact potential supporting agencies to ensure duplicate calls are not made. When the call is made: o Provide your name, response position and contact numbers. o Briefly explain the situation and clarify the support required. o Confirm whether or not they will be able to provide support and a safe location to meet a Husky representative e.g. Staging Area. o Obtain name / phone number of agency representative being dispatched and the estimated time of arrival. o Immediately update Logistics Section Chief, the Public Protection Supervisor and the Incident Commander of the results and details of the mobilization of any supporting agency.	
❑	Ensure the Lead Agency is regularly provided updates of incident status.	
❑	Participate in planning meetings, providing limitations and capability of assisting agency resources.	
❑	With review and approval from the Incident Commander, ask the Lead Agency: o If they will issue public access restrictions. o To contact NAVCANADA to issue a Notice to Airmen (NOTAM) for closure of air space above the incident site.	
❑	Handle requests from agencies for Husky liaison personnel to be present at any activated agency emergency operations centre(s).	
❑	Determine your 24-hour staffing requirements as required – utilize Logistics.	
❑	Shift Change: Communicate your shift change to the Incident Commander and Command Staff. Fully brief your relief on events and status of actions being taken.	
❑	When requested by the IC, contact the Lead Agency to obtain approval for any call down of the emergency in conjunction with them.	

☑	Demobilization - Post Incident Tasks	Note
❑	Ensure all agencies are notified of the call down.	
❑	Ensure that commitments made to any agencies are completed.	
❑	Participate in the incident response debriefing meeting.	
❑	Submit all documentation to the Planning Section Chief (if appointed) or directly to the Incident Commander.	

1.3.7 *Public Information Officer*

Functional Role	Key Communications	Forms
• Point of contact for local media and general public inquiries • Work closely with Husky Corporate Communications and with any involved agency communications staff.	• Incident Commander • Husky Corporate Communications Officer • Command Staff • Local media	• Form 3: Media Inquiry • ICS Form 214a: Individual Log

Order of consideration depends on the specific factors of each emergency.

☑	Initial Tasks	Note
❑	Obtain a status briefing from the Incident Commander.	
❑	Determine if local media are required to broadcast public safety messages (TV, radio, etc.). If yes, action this immediately with the concurrence of the Local Authority.	
❑	Separate verified 'known facts' from unverified information or hearsay.	
❑	Identify and document any media involvement that has already taken place.	
❑	Proactively complete Form 3: Media Inquiry.	
❑	Determine who is the Husky Corporate Communications Officer in Calgary and exchange location and telephone / fax contact numbers and email addresses.	
❑	Advise the Corporate Communications Officer of facts and media involvement.	
❑	Proactively request communications support from Calgary as anticipated.	
❑	Confirm agencies that have been notified or involved with the IC and/or Liaison Officer and identify potential need to align media releases.	
❑	Work closely with the Incident Commander and Corporate Communications Officer in Calgary to ensure that information released to the general public must include confirmation that Husky is responding to the incident.	
❑	Follow Husky Media and Press Release Guideline (Section 2.3.1). The Incident Commander, Corporate Director and Legal need to review and approve all media statements before release. Note: All media releases should be submitted to the regulator before release.	

Alert	Level 1	Level 2	Level 3	Actions by Alert or Emergency Level
❑	❑	❑	❑	Confirm the Lead Agency and Local Authority is notified if/when media is contacted.
❑	❑	❑	❑	Confirm the Incident Commander has notified the CRMT of media inquiries or when media is contacted.
	❑	❑	❑	Confirm the Liaison Officer has notified all other required agencies as per Section 2.1.1 Contact Requirements by Incident Type (Notification Matrix).
	❑	❑	❑	Be prepared to travel to, or send a designate to any government REOC.
	❑	❑	❑	Collect information about any community relations issues identified and ensure that issues are resolved.

☑	Ongoing Tasks	Note
❑	Document your conversations and activities (consider appointing a scribe).	
❑	Maintain current information summaries and/or displays on the incident and provide information on status of incident to assigned personnel.	
❑	Assign assistants as needed to handle all general public inquiries and community relations issues at the local level.	
❑	Communicate regularly with the Husky Corporate Communications Officer in Calgary.	
❑	Ensure that personnel DO NOT RELEASE: o Names of injured or deceased. o Nature of injuries. o Any opinion as to the cause of the incident.	
❑	In the event of an emergency with significant public or media concern, set up an Information Centre from which media can work.	
❑	**Media Access:** The number one priority in any emergency is life safety, including the safety of any media representatives. During an emergency, media access to the incident site is strictly prohibited, unless the Public Information Officer has received approval from the Husky Incident Commander. o If denied, provide explanation to media that for their own safety, they are denied access to area. o If access is granted, limited numbers of media personnel should be safely escorted by Husky personnel while on Husky property and activities such as photographing / filming are only allowed when safe to do so and in compliance with Husky requirements.	
❑	Determine your 24-hour staffing requirements as required – utilize Logistics.	
❑	Shift Change: Communicate your shift change to the Incident Commander and with the Husky Corporate Spokesperson in Calgary. Fully brief your relief on events.	

☑	Demobilization - Post Incident Tasks	Note
❑	Discuss longer-term communications needs (news releases / conferences).	
❑	Ensure the CRMT Communications Officer is notified of the call down.	
❑	Ensure that any required post incident media releases are completed.	
❑	Deactivate your position when authorized by the Incident Commander.	
❑	Participate in the incident response debriefing meeting.	
❑	Submit all documentation to the Planning Section Chief (if appointed) or directly to the Incident Commander.	

1.3.8 *Safety Officer*

Functional Role	Key Communications	Forms

• Primary concern is the safety of responders
  ○ Public Protection Supervisor is responsible for off-site public safety
• Provide advice to Incident Commander on safety procedures and ERP implementation
• Has the authority to alter or suspend any activities that pose an immediate life safety threat
	• Incident Commander
	• Operations section personnel, as required, such as:
	  ○ Site Safety
	• Corporate Safety & Security Officer
		• ICS Form 201: Incident Briefing
		• ICS Form 214a: Individual Log

Order of consideration depends on the specific factors of each emergency.

☑	Initial Tasks	Note
❑	Report to the Incident Command Post (ICP). Check in with Incident Commander and obtain a briefing. **Life Safety is # 1 Priority.**	
❑	Identify current and potential responder safety hazards and life safety risks.	
❑	Promptly and clearly make safety concerns known to Incident Commander.	
❑	Stop and/or prevent unsafe acts.	
❑	Ensure incident scene is undisturbed except for emergency remedial actions and is recorded by diagrams and/or photographs.	
❑	Determine your staffing requirements (assistant, Site Safety, replacement).	
❑	Ensure that adequate documentation is being maintained - Refer to Section 1.5 Forms.	
❑	Link up with the Corporate Safety & Security Officer and review situation.	

☑	Ongoing Tasks	Note
❑	Aggressively make safety concerns known to the Incident Commander.	
❑	Identify hazardous situations associated with the incident.	
❑	Ensure that air quality, water quality and any other toxicological monitoring is performed as required.	
❑	Provide advice to the Incident Commander regarding the ERP and ICS implementation.	
❑	Maintain communication with the Corporate Safety & Security Officer and get necessary support.	
❑	Participate in Incident Briefings.	
❑	Understand the current ICS organization and supervisory span of control. If there are more than 7 personnel reporting to the On Site Supervisor, expand the ICS structure and appointment of Group Leaders.	

☑	Ongoing Tasks	Note
❑	Help the Incident Commander ensure the appropriate safety requirements are being followed. For example: o Use of appropriate personal protective equipment (PPE). o Safe and adequate lighting is in place as necessary. o First aid and burn kits are readily available. o Only radios designed and approved for use in flammable atmospheres are to be used in the hot zone (i.e. 'intrinsically safe'). o Proper grounding and bonding procedures are adhered to. o Responders park vehicles in safe locations upon arrival and there is no mass convergence or congestion that limits site access/egress. o Workers who show signs of stress, fatigue or other adverse symptoms are demobilized and sent for treatment if necessary.	
❑	Assist Liaison Officer with notification and/or communication with Occupational Health & Safety, as requested.	
❑	Help IC ensure safety and environmental protection measures are in place.	
❑	Determine your 24-hour staffing requirements as required – utilize Logistics. (Only one Safety Officer will be assigned for each incident. The Safety Officer may have assistants as necessary.)	
❑	Shift Change: Communicate your shift change to the Incident Commander, Corporate Safety & Security Officer and all direct reports. Fully brief your relief on events and status of actions being taken.	

☑	Demobilization - Post Incident Tasks	Note
❑	Advise the IC of any need to arrange Critical Incident Stress Debriefing for personnel who could be psychologically impacted.	
❑	Determine if your position will require follow-up actions before leaving ICP.	
❑	Deactivate your position when authorized by the Incident Commander.	
❑	Participate in the incident response debriefing meeting.	
❑	Support preparation of incident investigation and reporting.	
❑	Submit all documentation to the Planning Section Chief (if appointed) or directly to the Incident Commander.	

1.3.9 *ICS Process Advisor*

Functional Role	Key Communications	Forms
• Provide support and guidance to the Incident Commander on the implementation of the Incident Command system • Assist the Incident Commander by running activities of the ICP, such as planning meetings • As requested, act as the conduit for communication from the ICP to the CRMT in Calgary	• Incident Commander • Command Staff • Deputy Director • Planning Section Chief	• ICS Form 214a: Individual Log

Order of consideration depends on the specific factors of each emergency.

☑	Initial Tasks	Note
❑	As directed, go to the ICP.	
❑	Identify and provide support as required by Incident Commander.	
❑	Assist Incident Commander with activation of ICP and building the response team.	
❑	Ensure the ICP is appropriately staffed / augment as required.	
❑	Documentation - If solicitor-client privilege has not yet been established with the legal department, this should be discussed with the Incident Commander and / or Corporate Response Management Team (CRMT).	

☑	Ongoing Tasks	Note
❑	Assist in the development of Incident Action Plans.	
❑	Ensure all information is appropriately posted on the display boards in ICP.	
❑	Maintain communication with the Corporate Response Management Team as required.	
❑	With the Incident Commander and Planning Section Chief, establish an ICP Briefing Schedule (approximately every 30 minutes).	
❑	Provide support / resources to assist in: o Emergency management (setting objectives, clarification of priorities, assigning and tracking status of assigned tasks). o Managing internal and external information flow, implementing effective documentation. o Supporting the Incident Commander in identifying and facilitating activation of response teams or corporate personnel and resources.	

☑	Demobilization - Post Incident Tasks	Note
❑	Conduct the post incident ICP team debriefing to capture what worked well and identify improvement opportunities.	
❑	Ensure all your documentation is consolidated.	
❑	Submit all documentation to the Planning Section Chief (if appointed) or directly to the Incident Commander.	

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1.3.10 *Operations Section Chief*

Functional Role	Key Communications	Forms
If the situation escalates in severity or complexity, duties may include: • Direct and coordinate all Operations Section personnel • Conduct tactical operations to carry out the Incident Action Plan	• Incident Commander • Section Chiefs • On Site Supervisor • Public Protection Supervisor • Staging Area Manager	• ICS Form 201: Incident Briefing • ICS Form 214a: Individual Log

Order of consideration depends on the specific factors of each emergency.

☑	Initial Tasks	Note
❑	Obtain a situation update from the Incident Commander.	
❑	As approved by the Incident Commander, get a status update directly from the On Site Supervisor and Public Protection Supervisor (if appointed).	
❑	Confirm objectives, current Emergency Level, hazard area, and the status of Incident Action Plan implementation.	
❑	Communicate with and support the On Site Supervisor to assess hazards and risk to life safety (workers / public / responders). **Life Safety is # 1 Priority.**	
❑	Identify current and potential operations section resource needs (on-site, off-site and staging).	
❑	Clarify key response positions assigned and ensure that a designated Staging Area Manager and Public Protection Supervisor are designated.	
❑	Manage objectives and implement using ICS Form 201.	
❑	Help the Incident Commander to ensure that adequate documentation is being maintained - Refer to Section 1.5 Forms.	

Alert	Level 1	Level 2	Level 3	Actions by Alert or Emergency Level
❑	❑			Prudently over-respond to unconfirmed situations.
	❑			Ensure public in hazard area is offered assisted voluntary evacuation.
	❑			Ensure the Local Authority is notified if public is offered assisted voluntary evacuation or media is contacted.
	❑	❑	❑	Ensure mobilization of air monitoring unit(s) for sour gas or other toxic incidents.
		❑	❑	Ensure proactive public protection activities are implemented with roadblocks to secure defined hazard area and mandatory evacuation or shelter-in-place actions with priority: those closest, those downwind and the rest of the hazard area.
		❑	❑	Notify Liaison Officer if any public roads are blocked.

☑	Ongoing Tasks	Note
❑	Confirm status (gaining / losing) and work with direct reports and with IC approval, refine tactical objectives and response priorities.	
❑	Continually re-evaluate actual / potential risks to life safety, the environment, the business impact and company reputation impact.	
❑	Confirm that a Staging Area has been established in a safe location.	
❑	Obtain Safety Officer's input and assessment of hazard / risk to personnel. Continue communicating closely with Safety Officer.	
❑	Advise the Incident Commander, the Public Protection Supervisor and other response team members of the hazards involved with the current on-site operations and the expectations for mitigation (or potential for escalation).	
❑	Ensure that Responders Safety Control Zones are defined to control response and maximize responder safety.	
❑	Decide if multiple On Site Supervisors are required for span of control or to manage different sites and provide leadership to all direct reports. ○ For example, one On Site Supervisor could manage tactical source control at one site and another On Site Supervisor could manage another site such as river spill containment and recovery.	
❑	Determine your 24-hour staffing requirements as required – utilize Logistics.	
❑	Shift Change: Communicate your shift change to all direct reports. Fully brief your relief on events and status of actions being taken.	
❑	Support IC with call down decision in conjunction with the Lead Agency.	

☑	Demobilization - Post Incident Tasks	Note
❑	Ensure that any non-essential personnel or services are released and all operations section responders are notified of the call down.	
❑	Ensure that commitments made to public are completed.	
❑	Ensure that personnel who could be psychologically impacted are identified and provided a Critical Incident Stress Debriefing and required support.	
❑	Participate in the incident response debriefing meeting.	
❑	Submit all documentation to the Planning Section Chief (if appointed) or directly to the Incident Commander.	

1.3.11 *Planning Section Chief*

Functional Role	Key Communications	Forms
• Assist the Incident Commander in establishing priorities and objectives and in developing the Incident Action Plans • Provide technical support • Develop and manage documentation • Identify internal resources needed to assist in planning	• Incident Commander • Technical Resources • Documentation • Logistics • Corporate Planning Manager	• ICS Form 201: Incident Briefing • ICS Form 214a: Individual Log

Order of consideration depends on the specific factors of each emergency.

☑	Initial Tasks	Note
❑	Obtain information update/record data and clarify the situation.	
❑	Develop and implement a documentation keeping, collection and dissemination process.	
❑	Refer to technical data; identify and confirm the appropriate hazard zone with the Incident Commander and Command staff.	
❑	Appoint an assistant to help with Documentation including: o Establishing a plan to collect and keep records. o Posting Situation Reports. o Posting/Recording the Emergency Level, incident objectives and priorities.	
❑	Participate in Incident Briefing meetings as requested.	
❑	Compile and display incident status information.	
❑	Consider 6 hour, 12 hour and 24 hour issues related to manpower and resource requirements. Draw on the resources of the Corporate Response Management Team as necessary.	
❑	Engage Technical Specialists to help with the situation analysis and the development of action plans.	
❑	Review strategies and resources required to implement plans. Discuss with the Incident Commander.	
❑	Help the Incident Commander through the identification of priorities and objectives and the development of Incident Action Plans.	
❑	Maintain an ICS Form 214a: Individual Log to document key elements of your conversations or activities.	
❑	Ensure that adequate documentation is being maintained - Refer to Section 1.5 Forms.	
❑	Link up with the Corporate Planning Manager to advise of situation and status of Incident Action Plan(s).	

☑	Ongoing Tasks	Note
❑	Determine your 24-hour staffing requirements as required – utilize Logistics.	
❑	Shift Change: Communicate your shift change to all direct reports. Fully brief your relief on events and status of actions being taken.	

☑	Demobilization - Post Incident Tasks	Note
❑	Ensure that all documentation is completed and consolidated.	
❑	Participate in the incident response debriefing meeting if requested.	
❑	Consolidate all documentation that has been submitted, including that submitted directly to the Incident Commander. Ensure documentation is available and accessible to all required parties (ie. Husky Management).	

1.3.12 *Situation Unit Leader*

Functional Role	Key Communications	Forms
• Point person for information management, which may include both unclassified and classified information • Responsible for collecting, processing and organizing information relating to incident growth, mitigation or intelligence activities • May prepare future projections, maps and intelligence information	• Planning Section Chief • Other ICP personnel • Support staff	• ICS Form 201: Incident Briefing • ICS Form 214a: Individual Log

Order of consideration depends on the specific factors of each emergency.

☑	Initial Tasks	Note
❑	Receive an initial briefing from the Planning Section Chief or Incident Commander.	
❑	Begin collection and analysis of incident data as soon as possible.	
❑	Assist in the development of the ICS Form 201: Incident Briefing during the reactive phase.	
❑	Prepare and maintain the Incident Command Post and Situation Status Display in conjunction with Operations Section Chief & Planning Section Chief.	
❑	Collect, process, organize and disseminate incident information relating to status of current operations, include growth, mitigation, or other incident activities.	
❑	Conduct situation briefings at Incident Management Team meetings/briefings as required.	
❑	Request field observers and additional staff to assist you with maintaining the Incident Command Post Situation Status Display as needed.	
❑	Assist Documentation Unit Leader in recording/maintaining event logs as necessary.	

☑	Ongoing Tasks	Note
❑	Maintain ICS Form 214a: Individual Log and forward to Documentation Unit Leader	
❑	As requested by the Planning Section Chief, prepare periodic future predictions of incident growth (trajectories, plume dispersion models, etc.).	
❑	Develop routine and critical report schedule with Planning Section Chief and Incident Commander/Unified Command.	
❑	Provide maps, charts, overlay imagery and photographic services, if required.	
❑	Conduct situation briefings at Incident Management Team meetings/briefings as required.	
❑	Assist in maintaining ICS Form 201, if requested.	
❑	Update all forms, maps, etc. on the Incident Situation Status Display periodically by setting up information management process with owners of the information.	
❑	Facilitate planning cycle meetings and briefings.	

☑	Ongoing Tasks	Note
❑	Provide periodic predictions on incident potential.	
❑	Coordinate with Public Information Officer/Liaison Officer on the current situation status and resource status so that release of information is accurate.	
❑	Ensure the accuracy of all information being produced by Planning Section units with special attention to Incident Commander Critical Information Requirements (CIRs).	
❑	Facilitate tactics development process.	
❑	Determine the need to create an Information Management Plan to establish a process of maintaining situational awareness through formal information flow.	
❑	Managing flow of information from the field and within the Incident Management Team using the Situation Unit Leader.	
❑	Develop other Incident Supporting Plans (e.g., decontamination, demobilization, shoreline cleanup and assessment plans), as required.	
❑	Confirm required internal and external notifications and ongoing updates have been made with Situation Unit Leader and Liaison Officer.	

1.3.13 *Resource Unit Leader*

Functional Role	Key Communications	Forms
• Responsible for maintaining the status of all assigned tactical resources and personnel • This is achieved by overseeing the check-in of all tactical resources and personnel, and maintaining a status-keeping system indicating the current location and status of all resources	• Planning Section Chief • Other ICP personnel • Support staff	• ICS Form 211: Check In / Out List • ICS Form 213: Resource Request • ICS Form 214a: Individual Log

Order of consideration depends on the specific factors of each emergency.

☑	Tasks	Note
❑	Obtain briefing and special instructions from Planning Section Chief.	
❑	Establish the ICS Form 211: Check In / Out List function at the Incident Command Post (ICP) and all established incident facilities.	
❑	Work with Staging Area Manager(s) to ensure they are using the ICS Form 211 process to track equipment and personnel arriving and departing the staging area.	
❑	Prepare Form 2: Primary ICS Functions chart, working with each staff officer, section chief and unit leader.	
❑	Ensure appropriate resource tracking process is established and communicated.	
❑	Maintain resource summary of all tactical resources checked in at the incident.	
❑	Provide status reports to appropriate requesters.	
❑	Work with Operations and Logistics to review ICS Form 213: Resource Request and provide input on resources available in staging.	
❑	Coordinate with the Situation Unit Leader to maintain and post the status and location and assignments of all tactical resources.	
❑	Provide resources and organization information to Situation Unit Leader for situation status display.	
❑	Ensure that resource status display is up-to-date and accurate.	
❑	Debrief with Planning Section Chief at the end of each shift or as directed.	

☑	Ongoing Tasks	Note
❑	Attend meetings and briefings as required.	
❑	Maintain ICS Form 214a: Individual Log and forward to Documentation Unit Leader.	

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1.3.14 *Documentation Unit Leader*

Functional Role	Key Communications	Forms
• Maintains accurate, up-to-date incident files • Records all incident events when they happen • Clearly maintains ICS Form 201 • Assists in planning with the preparation of a final report	• Planning Section Chief • Incident Commander • Other ICP personnel • Support staff	• ICS Form 201: Incident Briefing • ICS Form 214: Activity Log • ICS Form 214a: Individual Log • ICS Form 233: Open Action Tracker • Compile all other forms being used in the incident

Order of consideration depends on the specific factors of each emergency.

☑	Initial Tasks	Note
❑	As directed, go to the Incident Command Post and obtain a status briefing from the Incident Commander or from the Planning Section Chief.	
❑	Start tracking events – especially the communication / decisions made by the Incident Commander (i.e. sit down by the Incident Commander and start recording events).	
❑	Consider using a local computer to assist with documentation.	
❑	Support the Incident Commander, Planning Section Chief and Public Information Officer as requested, collecting and displaying the most current incident data (e.g. status updates, maps, meeting schedule, etc.)	
❑	Be prepared to document the Incident Commander's status update meetings (probably each ½ hour, as decided by the Incident Commander). Use whiteboards, PC or log forms.	
❑	Assist with documenting current events and preparing the Incident Action Plan and ICS Response Organization.	
❑	Participate in planning meetings, capturing key information, decisions made, commitments and situation status.	
❑	Co-ordinate activities of additional administrative support, as required.	
❑	Provide and/or exchange status report updates with the Corporate Response Management Team as required.	
❑	Provide additional support as directed.	

☑	Ongoing Tasks	Note
❑	Determine your 24-hour staffing requirements as required – utilize Logistics.	
❑	Shift Change: Fully brief your relief on events and status of actions being taken. Communicate your shift change to the Incident Commander and Planning Section Chief (if appointed).	

☑	Demobilization - Post Incident Tasks	Note
❑	Ensure that all documentation is completed and consolidated.	
❑	Submit all documentation to the Planning Section Chief (if appointed) or directly to the Incident Commander.	

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1.3.15 *Technical Specialists*

Functional Role	Key Communications	Forms
• Provide technical advice and support	• Planning Section Chief • Operations Section Chief • ICS Supervisors, as directed • Support services	• ICS Form 214a: Individual Log

Order of consideration depends on the specific factors of each emergency.

☑	Initial Tasks
❑	As directed, go to the Incident Command Post and obtain a status briefing from the Incident Commander or from the Planning Section Chief.
❑	Maintain a ICS Form 214a: Individual Log to document key elements of your conversations or activities.
❑	Utilize special skills to support incident operations, as required.
❑	Make recommendations regarding necessary technical support from contractors, services and consultants.
❑	Provide applicable subject matter expertise which may include but not be limited to: ○ Engineering ○ Source control and/or containment ○ Plume modeling - fire, weather, environmental ○ Emergency organization and management ○ Toxicology ○ Spill clean-up and wildlife information
❑	Assist the Planning Section Chief in setting objectives and preparing planning strategies and tactics.
❑	Provide additional support as directed.

☑	Ongoing Tasks	Note
❑	Determine your 24-hour staffing requirements as required – utilize Logistics.	
❑	Shift Change: Fully brief your relief on events and status of actions being taken.	

☑	Demobilization - Post Incident Tasks	Note
❑	Ensure that all documentation is completed and consolidated.	
❑	Submit all documentation to the Planning Section Chief (if appointed) or directly to the Incident Commander.	

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1.3.16 *Logistics Section Chief*

Functional Role	Key Communications	Forms
• Assist response teams with procurement of resources and manpower to help manage the incident	• Incident Commander • Other Chiefs, as necessary • Support services • Corporate Logistics Manager	• ICS Form 213: Resource Request • ICS Form 214a: Individual Log

Order of consideration depends on the specific factors of each emergency.

☑	Initial Tasks
❑	As directed, go to the Incident Command Post and obtain a status briefing from the Incident Commander or from the Planning Section Chief.
❑	Maintain a Time and Event Record to document key elements of your conversations or activities.
❑	Notify and mobilize requested resources (internal and external).
❑	Track the status of ordered resources and their estimated time of arrival. Complete ICS Form 213: Resource Request.
❑	Review the longer-term resource requirements with the Planning Section Chief and arrange for the additional resources.
❑	Place additional resources on standby as necessary to address incident escalation.
❑	Determine food, accommodation, transportation, bathroom facility requirements and make the appropriate arrangements.
❑	Provide additional support as directed.
❑	Link up with the Corporate Logistics Manager and keep them apprised of resources requested.

☑	Ongoing Tasks	Note
❑	Determine your 24-hour staffing requirements as required.	
❑	Shift Change: Communicate your shift change to the Incident Commander and fully brief your relief on events and status of actions being taken.	

☑	Demobilization - Post Incident Tasks	Note
❑	Ensure that all documentation is completed and consolidated.	
❑	Advise all persons contacted of the call down status.	
❑	Ensure all standby resources are advised of the call down status.	
❑	Assemble response related cost summaries and forward information to the Finance/Administration Section Chief.	
❑	Ensure all ERPs used during the incident are refreshed and returned to Emergency Response Team members.	
❑	Submit all documentation to the Planning Section Chief (if appointed) or directly to the Incident Commander.	

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1.3.17 *Finance/Administration Section Chief*

Functional Role	Key Communications	Forms
• Assist response teams with establishing cost tracking systems • Ensure PO's/AFE's are established as required • Process expense claims	• Incident Commander • Other Chiefs, as necessary • Support services • Corporate Finance Manager	• ICS Form 213: Resource Request • ICS Form 214a: Individual Log

Order of consideration depends on the specific factors of each emergency.

☑	Initial Tasks
❑	As directed, go to the Incident Command Post and obtain a status briefing from the Incident Commander or from the Planning Section Chief.
❑	Maintain a ICS Form 214a: Individual Log to document key elements of your conversations or activities.
❑	Participate in Incident Briefing meetings as requested.
❑	Request PO's / AFE's from the Corporate Finance Manager.
❑	Set up cost tracking processes and ensure financial records are maintained throughout the incident.
❑	Ensure on-duty time is recorded and that the time records are collected.
❑	Provide the reception center with procedures to handle expenses incurred by affected public.
❑	Process expense claims on a timely basis, particularly claims from affected public.
❑	Ensure workers' compensation claims related to the response, are processed expediently.
❑	Provide additional support as directed.
❑	Link up with the Corporate Finance Manager for assistance as required.

☑	Ongoing Tasks	Note
❑	Determine your 24-hour staffing requirements as required – utilize Logistics.	
❑	Shift Change: Communicate your shift change to the Incident Commander and fully brief your relief on events and status of actions being taken.	

☑	Demobilization - Post Incident Tasks	Note
❑	Ensure that all documentation is completed and consolidated.	
❑	Advise all persons contacted of the call down status.	
❑	Ensure all standby resources are advised of the call down status.	
❑	Assemble response related cost summaries and prepare management summary report.	
❑	Submit all documentation to the Planning Section Chief (if appointed) or directly to the Incident Commander.	

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1.3.18 *Staging Area Manager*

Functional Role	Key Communications	Forms
• Manage Staging Area resources that are positioned waiting and available for tactical assignment	• Incident Commander until an Operations Section Chief is appointed. • Logistics Section Chief • On Site Supervisor • Public Protection Supervisor • Staging Area resources	• Form 211: Check In / Out List • ICS Form 214a: Individual Log

Order of consideration depends on the specific factors of each emergency.

☑	Initial Tasks	Note
❑	Obtain briefing and clarify the location of the emergency / hazardous area and the wind direction.	
❑	Clarify your assigned instructions and the preferred Staging Area location.	
❑	Review ERP map to identify the preferred Staging Area to be set up.	
❑	Make sure the Staging Area will be located in a safe area, away from hazards, in an accessible location upwind and, if possible, uphill from the incident site.	
❑	As required, confirm that Husky has permission (e.g. from landowner) to establish a Staging Area at this location.	
❑	Identify current and potential Staging Area support requirements.	
❑	Clarify safest entry and egress routes to the Staging Area.	
❑	Ensure availability and functionality of communications equipment, any required personal protective equipment (PPE) and monitoring equipment.	
❑	As directed, proceed safely to chosen location and establish Staging Area in a safe accessible location.	
❑	Set up the Staging Area as follows: ○ Place vehicle in a highly visible area near the entrance to control and monitor traffic flow into and out of the Staging Area. ○ Engage the four-way flashers on vehicle. ○ If available, wear a reflective or illuminated traffic vest so you are visible to traffic. ○ Communicate location of Staging Area as well as the access and egress routes. ○ Provide initial briefings to incoming resources as they arrive. ○ Document all resources entering or leaving the Staging Area.	
❑	Keep the Incident Commander (or Operations Section Chief, if appointed) aware of available resources at the Staging Area.	

☑	Ongoing Tasks	Note
❑	Ensure Staging Area has been established in a safe location.	
❑	Document all resources entering or leaving the Staging Area.	
❑	Provide updates regarding the resources at the Staging Area.	
❑	As required, ensure there are required provisions (food, fuel, washrooms, and rest areas) for personnel deployed to the Staging Area.	
❑	Immediately report significant problems or issues.	
❑	Request additional support as required.	
❑	Maintain a record of purchase orders, bills received and other financial documentation.	
❑	Determine your 24-hour staffing requirements as required – utilize Logistics.	
❑	Shift Change: Communicate your shift change to all direct reports. Fully brief your relief on events and status of actions being taken.	

☑	Demobilization - Post Incident Tasks	Note
❑	Ensure that any non-essential personnel or services are released and all Staging Area personnel are notified of the call down.	
❑	Participate in the incident response debriefing meeting if requested.	
❑	Submit all documentation to the Planning Section Chief (if appointed) or directly to the Incident Commander.	

1.3.19 *Public Protection Supervisor and Group Leader(s)*

Functional Role	Key Communications	Forms
• Manage all public protection activities • Responsible for accounting for personnel at the Husky site that are not involved with the incident, including site security	• Incident Commander • Command Staff • Public Protection Unit • Once involved, leaders of supporting agencies involved in public protection support (e.g. RCMP, Local Authority)	• ICS Form 214a: Individual Log • Ensure all applicable Public Safety forms are being distributed and used

Order of consideration depends on the specific factors of each emergency.

☑	Initial Tasks
❑	Obtain a status briefing from the Incident Commander.
❑	Clarify Alert or Emergency Level and implement urgent public safety actions.
❑	Ensure proactive public safety notifications and actions are implemented as required.
❑	Refer to Section 2.2 for additional information regarding public protection methods.
❑	Maintain real time tracking of all public safety activities and status.
❑	Proactively mobilize personnel to fill anticipated or needed public protection roles. Use Logistics. Dispatch the above services to the Staging Area and direct them to initiate their responsibilities.
❑	Assess the potential of the incident to impact public outside of Husky's site.
❑	Clarify location and the hazard area.
❑	Review site map, wind direction, determine or estimate hazard area.
❑	Proactively mobilize personnel to conduct public protection activities, e.g. o Rover Team o Roadblock Team o Reception Centre Team o Air Monitoring Team(s) o Telephone Notification Team
❑	Discuss sheltering and evacuation requirements with the Incident Commander. Focus evacuation or sheltering activities on the residents and businesses downwind and in close proximity to the hazard.
❑	If it is safe to evacuate public - do so. If conditions are unsafe to evacuate, promptly call and give shelter-in-place notification to residents and businesses.
❑	Assign additional public safety response personnel as required. (e.g. Telephone Notification Team Lead and approximately 1 Telephoner for every 5 residences; Rovers and any helicopters used for evacuation or surveillance.)
❑	Ensure that air monitoring is mobilized for incidents, as required - Use Logistics.
❑	Coordinate proactive public safety notifications and actions: o In the absence of monitored downwind toxicity readings, Telephoners to call and advise residents to shelter in place until known that it would be safe for residents to evacuate. o Rovers to travel and personally notify and provide assistance as required to residents and transients.
❑	Maintain real time tracking of all public safety activities and status. (Section 1.5 Forms).
❑	**Ensure the following public safety actions by Emergency Level are implemented.**

Alert	Level 1	Level 2	Level 3	Actions by Alert or Emergency Level
	❑	❑	❑	Mobilize air monitoring units as required, depending on the emergency.
	❑			Issue the voluntary evacuation to all stakeholders within the hazard area by telephone (Telephoners) and/or by sending personnel to notify in person (Rovers).
	❑			Those stakeholders requiring assistance to voluntarily evacuate will be requested to Shelter-in-Place while waiting for assistance from Husky.
	❑	❑	❑	As required, establish Reception Centre to register evacuees who have evacuated. If limited resources, request that the Corporate Response Management Team establish the Reception Centre.
		❑	❑	Establish roadblocks and isolate hazard area. Identify roadblock locations. Ensure location is clearly visible and able to facilitate the turn-around of vehicles.
		❑	❑	Incorporate wind direction information when assigning evacuation priorities and selecting evacuation routes.
		❑	❑	Residents or industrial operators who voluntarily evacuated during a Level 1 are to have their locations revisited to confirm that they have evacuated.
		❑	❑	Direct a Rover to initiate mandatory evacuation of the hazard area. Distribute and post Form 9: Notice of Evacuation on all residences and industrial operations in the hazard area.
		❑	❑	Ensure proactive public protection activities are implemented. Priorities for public protection are the people: 1. Nearest the hazard in all directions. 2. Downwind of the hazard out to the edge of the defined hazard area and possibly beyond. 3. In the rest of full hazard area.
		❑	❑	Continue air monitoring and hazard area evacuation.
		❑	❑	A shift in wind direction will require immediate re-evaluation of the public safety response priorities and the need for additional evacuation and/or sheltering.
		❑	❑	Work closely with the Local Authority, Health Services and other supporting agencies, as required.
		❑	❑	As required, advise the Incident Commander to task Liaison Officer to ask the Lead Agency or Local Authority: o If they will issue public access restrictions.
		❑	❑	Prepare to monitor air quality conditions beyond the hazard area in the area downwind. Air monitoring will assist in determining the appropriate public protection methods beyond the hazard area. Provide local authority air quality data in order to facilitate the appropriate notifications.

☑	Ongoing Public Protection Tasks	Note
❑	Ensure each Telephoner knows exactly which message to deliver to each residence and business. As required, instruct Telephoner Team to contact principals of schools to inform them of students who may be affected by the incident.	
❑	Maintain real time tracking of all public safety activities and status of public contacted. (Section 1.5 Forms).	
❑	Provide required support to the Reception Centre Team Lead and Reception Centre Staff. ○ Ensure that the Reception Centre Team is recording names of evacuees and crosschecking names to the confidential ERP resident lists. ○ If evacuees decide to leave the centre, staff should attempt to obtain and record their destination and a contact number. ○ Address and assist with accommodation and food requirements. ○ Make arrangements to compensate evacuees' out-of-pocket expenses. ○ **NOTE:** The school is responsible for school students until the children are dropped off at home (if safe to do so) or otherwise reunited with their parents. Therefore, if school busses (with children) are being sent to the Reception Centre, request that a school official (e.g. Principal or Teacher) come to the Reception Centre to care for the students.	
❑	Provide air monitoring information on a regular basis to the Local Authority and appropriate government agencies (e.g.: Environment, Health).	
❑	Continually re-evaluate actual / potential risks to life safety and company reputation impact and keep Incident Commander advised.	
❑	Ensure the appropriate ERP information is being referenced and followed (e.g. Public protection methods, response and site specific considerations).	
❑	Regularly participate in Incident Briefings to confirm status (gaining / losing) and refine objectives and the response priorities.	
❑	Determine your 24-hour staffing requirements as required – utilize Logistics.	
❑	Shift Change: Communicate your shift change to all direct reports. Fully brief your relief on events and status of actions being taken.	

☑	Demobilization - Post Incident Tasks	Note
❑	Confirm that any non-essential personnel or services are released.	
❑	Ensure that all documentation from the responders is collected and consolidated.	
❑	Ensure that the following information is provided to the Public that has been Evacuated or Sheltered in Place: ○ Incident Recovery / Status, ○ Information on how the public can be reimbursed for out of pocket expenses, and, ○ Husky contact for additional information.	
❑	Ensure that commitments made to any public or agencies are followed up.	
❑	Ensure any public expense claims have been collected and are processed.	
❑	Participate in the incident response debriefing meeting.	
❑	Submit all documentation to the Planning Section Chief (if appointed) or directly to the Incident Commander.	

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1.3.20 *Rover Team*

Part of the Public Protection Unit

Functional Role	Key Communications	Forms
• As directed, travel to assigned locations to locate the public and personally provide public safety instructions and assistance • If requested, lead and coordinate the activities of other Rovers	• Public Protection Supervisor or Leader • Other Rover personnel • **NOTE:** Until a Public Protection Supervisor is assigned, you will report directly to the Incident Commander	• Form 6: Air Monitoring Record • Form 9: Notice of Evacuation • Form 10: Public Contact Record

Order of consideration depends on the specific factors of each emergency.

☑	Initial Tasks
❑	Report to and follow the instructions of the Public Protection Supervisor (or Leader) and clarify current Emergency Level.
❑	Clarify the location of the emergency / extent of hazardous area and the wind direction.
❑	Ensure you have appropriate personal protective equipment (PPE), communications equipment and monitoring equipment to safely complete your assignments.
❑	Refer to ERP map and determine a safe route (in and out) of your assigned residence locations and/or your transient search areas. Be sure you understand your assignment and confirm the location of the Reception Centre.
❑	**Protect yourself.** Monitor H_2S, SO_2 and LEL levels on the way to your assigned location.
❑	As instructed, drive safely to Staging Area or directly to your assigned residence locations and/or within transient search areas.
❑	Maintain ongoing / frequent contact with the Public Protection Supervisor (or Leader) for your own safety, so he/she clearly understands your travel route and can visualize your exact location.
❑	Upon arrival at your assigned location(s): ○ Confirm your arrival and ensure the Public Protection Supervisor (or Leader) understands exactly where you are located. ○ Ensure you understand exactly what information and safety instructions the Public Protection Supervisor (or Leader) wants you to provide to the public.
❑	**ONLY WHEN DIRECTED:** Notify public at each specific location and provide appropriate safety instructions and evacuation support as directed by the Public Protection Supervisor (or Leader).
❑	Report back to the Public Protection Supervisor (or Leader) and confirm results of each notification and the status of your public protection activities. Request support as required.
❑	Document as much information as possible regarding each notification and the status of your public protection activities.
❑	**Ensure the following external public safety actions by Emergency Level are implemented.**

Alert	Level 1	Level 2	Level 3	Actions by Alert or Emergency Level
❑	❑			Only when directed, travel to and provide courtesy notification to residents, businesses and public in the area.
	❑			Only when directed, travel to and provide assisted voluntary evacuation notice to all stakeholders within the hazard area.
	❑	❑		Confirm and provide public with the location of the Reception Centre; make note of evacuees who decide to voluntarily evacuate.
		❑	❑	WHEN DIRECTED: Provide evacuation notice to all stakeholders within the hazard area. As required, Husky will request that stakeholders shelter-in-place until they can safely be evacuated.
		❑	❑	Residents or businesses who voluntarily evacuated during a Level 1 are to have their locations revisited to confirm that they have evacuated.
		❑	❑	As directed, distribute and post Form 9: Notice of Evacuation on all residences and industrial operations in the hazard area.
		❑	❑	Ensure proactive public protection activities are implemented. Priorities for public protection are the people: 1. Nearest the hazard in all directions. 2. Downwind of the hazard out to the edge of the defined hazard area and possibly beyond. 3. In the rest of full hazard area.
		❑	❑	Continue air monitoring and hazard area evacuation. A shift in wind direction will require immediate re-evaluation of the public safety response priorities and the need for additional evacuation and/or sheltering.
		❑	❑	Work closely with any supporting agencies, if involved.
		❑	❑	Monitoring of downwind air quality conditions will determine the appropriate public protection methods beyond the hazard area.

☑	Ongoing Public Protection Tasks	Note
❑	**Protect yourself.** Use hand-held LEL monitor to test atmosphere.	
❑	Check all possible locations for people (e.g. sheds, barns, garages, shops, cabins).	
❑	**Maintain ongoing / frequent contact with the Public Protection Supervisor** (or Leader) for your own safety, so he/she clearly understands your travel route and can visualize your exact location and status of your notifications.	

☑	Demobilization - Post Incident Tasks	Note
❑	Ensure that all documentation is completed and consolidated.	
❑	Participate in the incident response debriefing meeting if requested.	
❑	Submit all documentation to the Planning Section Chief (if appointed) or directly to the Incident Commander.	

1.3.21 *Roadblock Team*

Part of the Public Protection Unit

Functional Role	Key Communications	Forms
• When directed, establish your roadblock in the assigned safe location • If requested, lead and coordinate the activities of other Roadblock personnel	• Public Protection Supervisor or Leader • Other Roadblock personnel • **NOTE:** Until a Public Protection Supervisor is assigned, you will report directly to the Incident Commander	• Form 6: Air Monitoring Record • Form 8: Roadblock Record • ICS Form 214a: Individual Log

Order of consideration depends on the specific factors of each emergency.

☑	Initial Tasks
❑	Report to and follow the instructions of the Public Protection Supervisor (or Leader).
❑	Clarify the location of the emergency / hazardous area and the wind direction.
❑	Clarify current Emergency Level and objectives and your assigned roadblock location.
❑	Confirm the location of the designated Reception Centre and how evacuees would travel there from your roadblock location (refer to ERP map).
❑	Obtain a roadblock kit from pre-designated locations. If not nearby, do not go back for a roadblock kit; instead request that it brought out to you at your assigned roadblock location.
❑	Redirect all media inquiries to the Public Information Officer. Refer to Section 2.3 for guidance on dealing with the media.
❑	As instructed, drive safely to Staging Area or directly to your assigned roadblock location.
❑	As required or requested, monitor LEL levels on the way to your assigned location.
❑	Upon arrival at your assigned roadblock location: ○ Contact and ensure that the Public Protection Supervisor (or Leader) clearly understands and can visualize exactly where you are located. ○ Ask and confirm whether you are to 'stand by' or setup your roadblock.
❑	Safety Considerations: ○ Park your vehicle at the side of the road with 4-way flashers and flashing light if available. ○ Ensure you are highly visible area to oncoming traffic. ○ Wear a high-visibility reflective vest if one is available. ○ Your location should not create a traffic hazard or obstruction, or impede other emergency services. It should allow vehicles to easily turn around, e.g. at intersecting crossroads.
❑	**ONLY WHEN DIRECTED:** Establish your roadblock in the assigned safe location. Do not completely block the road – leave at least one lane open.
❑	Must report safety issues to the Public Protection Supervisor. IE: Vehicle driving past roadblock.
❑	For high traffic speed or volume locations, consider the following additional safety precautions: ○ Advance Warning - to alert motorists that there is a roadblock ahead, to encourage them to slow down and allow them to better analyze the situation. ○ Transition Area – to provide some indication and room for motorists to easily understand and follow safe driving techniques, to turn or turn around without creating an accident.
❑	Document as much information as possible regarding those leaving and information regarding vehicles turned away or driving past your roadblock. IE: License plates, number of occupants, etc.
❑	**Ensure the following external public safety actions by Emergency Level are implemented.**

Alert	Level 1	Level 2	Level 3	Actions by Alert or Emergency Level
	❑			As requested, prepare for assignment and/or travel to Staging Area or to your designated Roadblock location – Do not block roads until directed to do so.
		❑	❑	**WHEN DIRECTED:** Establish your roadblock in the assigned safe location.
		❑	❑	Ensure proactive public protection activities are implemented with the following life safety priorities: 1. Nearest the hazard in all directions. 2. Downwind of the hazard out to the edge of the defined hazard area and possibly beyond. 3. In the rest of full hazard area.
		❑	❑	Use hand-held LEL monitor to test atmosphere periodically.
		❑	❑	A shift in wind direction will require immediate re-evaluation of the public safety response priorities and roadblock locations.
		❑	❑	Maintain roadblock position until you are instructed otherwise.
		❑	❑	Work closely with any supporting agencies, if involved.
		❑	❑	Monitoring of downwind air quality conditions will determine the appropriate public protection methods beyond the hazard area.

☑	Ongoing Public Protection Tasks	Note
❑	Use hand-held LEL monitor to test atmosphere periodically.	
❑	Document as much information as possible regarding those leaving and information regarding vehicles turned away or driving past your roadblock.	
❑	Provide evacuees with the preferred route to the Reception Centre.	
❑	Maintain roadblock position until you are instructed otherwise.	
❑	Shift Change: Fully brief your relief on events and status of actions being taken.	

☑	Demobilization - Post Incident Tasks	Note
❑	**WHEN DIRECTED:** Remove / safely demobilize roadblock location and any warning signs or barriers.	
❑	Ensure that all documentation is completed and consolidated.	
❑	Ensure that the roadblock location is tidy and returned to pre-incident condition.	
❑	Participate in the incident response debriefing meeting if requested.	
❑	Submit all documentation to the Planning Section Chief (if appointed) or directly to the Incident Commander.	

1.3.22 *Telephone Notification Team*

Part of the Public Protection Unit

Functional Role	Key Communications	Forms
• As directed, notify assigned residences and businesses and provide public safety instructions • If requested, lead and coordinate the activities of the Telephoner Team	• Assigned residences/ businesses • Public Protection Supervisor or Leader • **NOTE:** Until a Public Protection Supervisor is assigned, you will report directly to the Incident Commander	• Form 10: Public Contact Record • Form 11: Shelter-in-Place Message • Form 12: Voluntary Evacuation Message • Form 13: Requirement to Evacuate Message • Form 15: Evacuee Concerns Record

Order of consideration depends on the specific factors of each emergency.

☑	Initial Tasks
❑	Report to and follow the instructions of the Public Protection Supervisor (or Leader) and clarify current Emergency Level.
❑	Clarify the location of the emergency / extent of hazardous area and the wind direction.
❑	Ensure you have Telephoner messages / scripts, communications equipment and documentation forms to complete your assignments.
❑	**Prepare:** ○ Be sure you understand: ➢ Notification Priorities (e.g. nearest, those downwind and those in the rest of hazard area) ➢ Exactly what message to deliver to <u>each</u> assigned residence or business. ○ Identify the location of each of your assigned residence or business. (Refer to ERP map.) ○ Confirm Reception Centre location and the preferred route from each assigned residence or business to the Reception Centre. ○ Review ERP Confidential Public information details / special needs (e.g. possible transportation or medical concerns) for each assigned residence or business.
❑	**ONLY WHEN DIRECTED:** Notify assigned residences and businesses and provide location-specific public safety instructions to each assigned residence or business. ○ Ask and confirm the name and current location of each person you call as their telephone could be call-forwarded to a cellular telephone or another land line location.
❑	Report back to the Public Protection Supervisor (or Leader) and confirm results of each notification. **Immediately report** - people requiring assistance or people who did not answer their telephone (or other issues, eg. answering machine/voice mail) so that a Rover can be dispatched to the location.
❑	Husky may request that stakeholders shelter-in-place until they can safely be evacuated.
❑	Provide ongoing frequent reassurance to any public that is sheltered in place. Explain calmly to those who want to leave that for their own safety, it is extremely important that they stay indoors until the potential hazard outside no longer exists.
❑	Only as directed, contact principals of schools to inform the school of students who may be affected by the incident.
❑	Document as much information as possible regarding each notification and the status of your public protection activities.
❑	**Ensure the following external public safety actions by Emergency Level are implemented.**

Alert	Level 1	Level 2	Level 3	Actions by Alert or Emergency Level
❑	❑			Only when directed, call and provide courtesy notification to residents and businesses.
	❑			Only when directed, call and provide voluntary evacuation notice to all stakeholders within the hazard area.
	❑	❑		Confirm and provide public with the location of the Reception Centre; make note of evacuees who decide to voluntarily evacuate.
		❑	❑	**WHEN DIRECTED:** Call and provide evacuation notice to all stakeholders within the hazard area. ○ Notify assigned residences and businesses. ○ Provide location-specific public safety instructions to each assigned residence or business. ○ **Husky may request that stakeholders shelter-in-place until they can safely be evacuated.**
		❑	❑	Provide ongoing frequent reassurance to any public that is sheltered in place. Explain calmly to those who want to leave that for their own safety, it is extremely important that they stay indoors until the potential hazard outside no longer exists.
		❑	❑	Immediately notify the Public Protection Supervisor (or Leader) if unable to contact and speak directly to any assigned residence or business, so that a Rover can be promptly dispatched to the location.
		❑	❑	A shift in wind direction will require immediate re-evaluation of the public safety response priorities and the need for additional evacuation and/or sheltering.
		❑	❑	Report back to the Public Protection Supervisor (or Leader) and confirm results of each notification and the status of your public protection activities. Request support as required.

☑	Ongoing Public Protection Tasks	Note
❑	Be sure you understand exactly what message to use for each residence or business.	
❑	Document as much information as possible regarding each notification and the status of your public protection activities.	
❑	Report back to the Public Protection Supervisor (or Leader) and confirm results of each notification and the status of your public protection activities.	

☑	Demobilization - Post Incident Tasks	Note
❑	As directed, complete all assigned post incident notifications and updates.	
❑	Ensure that all documentation is completed and consolidated.	
❑	Participate in the incident response debriefing meeting if requested.	
❑	Submit all documentation to the Planning Section Chief (if appointed) or directly to the Incident Commander.	

1.3.23 *Air Monitoring Team*

Part of the Public Protection Unit

Functional Role	Key Communications	Forms
• As directed, travel to assigned downwind locations to locate and monitor air quality at assigned locations • If requested, lead and coordinate the activities of other mobile air monitoring crews	• Public Protection Supervisor or Leader • Rover / Roadblock personnel • **NOTE:** Until a Public Protection Supervisor is assigned, you will report directly to the Incident Commander	• Form 6: Air Monitoring Record • ICS Form 214a: Individual Log

Order of consideration depends on the specific factors of each emergency.

☑	Initial Tasks
❑	Report to and follow the instructions of the Public Protection Supervisor (or Leader) and clarify current Emergency Level.
❑	Clarify the location of the emergency / extent of hazardous area and the wind direction.
❑	Ensure you have appropriate personal protective equipment (PPE), communications equipment and accurate / calibrated monitoring equipment to safely complete your assignments.
❑	Refer to ERP map and determine your assigned monitoring locations and/or route. Be sure you understand your assignment.
❑	Confirm the Public Protection Supervisor's (or Leader's) requirements regarding reporting frequency and immediate reporting concentrations (higher level threshold).
❑	**Protect yourself.** Continuously monitor and record H_2S, SO_2 and LEL levels.
❑	As instructed, drive safely to Staging Area or directly to your assigned monitoring location.
❑	Document the time and location of any non-zero toxic gas or explosive gas readings on your monitors and advise the Public Protection Supervisor of the results. **NOTE:** Be sure to clarify if readings are in PPB or PPM.
❑	Use your monitoring unit systems and / or the Air Monitoring Record to ensure all readings are documented.
❑	Confirm that the Public Protection Supervisor (or Leader) clearly understands your travel route and can visualize exact location of reported readings. Provide wind direction and speed updates.
❑	Report any issues or concerns to the Public Protection Supervisor (or Leader) and request support as required.
❑	Maintain ongoing documentation of all readings and monitoring results at specific locations and times.
❑	**Ensure the following external public safety actions by Emergency Level are implemented.**

Alert	Level 1	Level 2	Level 3	Actions by Alert or Emergency Level
	❑	❑	❑	Mobilize air monitoring units as required, depending upon the emergency.
	❑	❑	❑	Drive to the area instructed and establish base air quality readings.
		❑	❑	Move the air monitoring units outward from the site of the emergency as downwind public are confirmed to be evacuated.
		❑	❑	Continue monitoring air quality with priority directed to nearest unevacuated residence and downwind locations from the site of the emergency.
		❑	❑	Monitor and incorporate wind direction information when assigning evacuation priorities and selecting evacuation routes.
		❑	❑	Priorities for air monitoring and other public protection activities are: 1. Nearest the hazard in all directions. 2. Downwind of the hazard out to the edge of the defined hazard area and possibly beyond. 3. In the rest of full hazard area.
		❑	❑	A shift in wind direction will require immediate re-evaluation of the public safety response priorities and the need for additional evacuation and/or sheltering.
		❑	❑	Work closely with other supporting agencies, as required
		❑	❑	Prepare to monitor air quality conditions beyond the hazard area in the area downwind. Monitoring of air quality will assist in determining the appropriate public protection methods beyond the hazard area. As directed, provide the Local Authority air quality data in order to facilitate the appropriate notifications.

☑	Ongoing Public Protection Tasks	Note
❑	**Protect yourself.** Continuously monitor and record H_2S, SO_2 and LEL levels.	
❑	Report results to the Public Protection Supervisor (or Leader) as per your agreed upon reporting frequency and/or immediate reporting concentrations.	

☑	Demobilization - Post Incident Tasks	Note
❑	Ensure that all documentation is completed and consolidated.	
❑	Participate in the incident response debriefing meeting, if requested.	
❑	Submit all documentation to the Planning Section Chief (if appointed) or directly to the Incident Commander.	

1.3.24 *Reception Centre Team*

Part of the Public Protection Unit

Functional Role	Key Communications	Forms
• As directed, travel to and activate the Reception Centre • Receive and register evacuees at the Reception Centre • As requested, manage all other Reception Centre staff	• Evacuees and others that arrive at the Reception Centre • Public Protection Supervisor or Leader	• Form 14: Reception Centre Registration Record • Form 15: Evacuee Concerns Record • Form 16: Daily Expenses Claim • ICS Form 214a: Individual Log

Order of consideration depends on the specific factors of each emergency.

☑	Initial Tasks
❑	Report to and follow the instructions of the Public Protection Supervisor (or Leader).
❑	Prepare Reception Centre forms / supplies as needed.
❑	Mobilize additional personnel as needed to assist at the Reception Centre.
❑	**WHEN DIRECTED:** Travel to and activate Reception Centre.
❑	Obtain the keys for the Reception Centre from the local administrator.
❑	Redirect all media inquiries to the Public Information Officer. Refer to Section 2.3 for guidance on dealing with the media.
❑	Set up and prepare to receive and register public.
❑	Clarify the name and contact number of the Public Information Officer.
❑	Document information about people who have checked in, where they are planning on staying and how they can be contacted on Form 14: Reception Centre Registration Record.
❑	Regularly report arrival of evacuees back to the Public Protection Supervisor (or Leader). **Immediately report** – medical issues, security issues, arrival of media or other significant issues.
❑	Provide ongoing frequent reassurance to any evacuees who decide to stay at the Reception Centre. Explain calmly that the reason they were evacuated is for their own safety, and it is important that they stay out of the area until the potential hazard no longer exists.
❑	If a school bus (with children) arrives, notify the Public Protection Supervisor (or Leader) to request that a school official (e.g. Principal or Teacher) be asked to come to the Reception Centre to care for the students.
❑	**Ensure the following external public safety actions by Emergency Level are implemented.**

Alert	Level 1	Level 2	Level 3	Actions by Alert or Emergency Level
	❑	❑	❑	Open the Reception Centre when directed to do so.
		❑	❑	Assist people in locating alternate accommodation if needed.
		❑	❑	Make Form 16: Daily Expenses Claim available to the evacuees.
		❑	❑	Frequently update Public Protection Supervisor (or Leader) regarding those who have checked in.
		❑	❑	Relay information on any issues related to the evacuation of the hazard area to the Public Protection Supervisor (or Leader).

Alert	Level 1	Level 2	Level 3	Actions by Alert or Emergency Level
		❑	❑	Relay issues identified by the evacuees to the Public Information Officer. Use Form 15: Evacuee Concerns Record.
		❑	❑	If requested by the Public Protection Supervisor (or Leader), provide or post status updates or media reports (supplied by the Public Information Officer) in a visible area in the Reception Centre.
		❑	❑	Work closely with the Local Authority, Health Authority and other supporting agencies, as required.

☑	Ongoing Public Protection Tasks	Note
❑	Reception Centre Staff considerations: ○ Be calm, sensitive, understanding, and express reassurance to evacuated people. ○ Try to project an attitude of confidence and positive expectations, as evacuees will be looking to Husky representatives for assurance. ○ Provide accurate, consistent and clear information on the status of the emergency, compensation policies and guidelines. ○ Attempt to reunite families as quickly as possible. ○ Be prepared to listen to how people are feeling and what they have experienced. ○ Provide care and support to evacuees who may be emotionally upset. Evacuees may be experiencing strong emotional reactions such as grief, fear, anxiety, helplessness, confusion and anger. These are all normal reactions under the circumstances.	
❑	Determine your 24-hour staffing requirements as required – utilize Logistics.	
❑	Shift Change: Communicate your shift change to the Public Protection Supervisor and all direct reports. Fully brief your relief on events and status of actions being taken.	

☑	Demobilization - Post Incident Tasks	Note
❑	Ensure all direct reports are notified of the call down.	
❑	As directed, complete all assigned post incident notifications and updates.	
❑	**WHEN DIRECTED:** Make arrangements to close up Reception Centre after returning it to pre-incident condition.	
❑	Ensure that all documentation is completed and consolidated.	
❑	Participate in the incident response debriefing meeting if requested.	
❑	Submit all documentation to the Planning Section Chief (if appointed) or directly to the Incident Commander.	

1.3.25 *Security Team*

Part of the Personnel Protection Unit

Functional Role	Key Communications	Forms
• Site or Facility Security • When requested, lead all other Security personnel	• Public Protection Supervisor (or the Personnel Protection Leader, if appointed) • Other Security personnel • Police, if involved	• ICS Form 214a: Individual Log

Order of consideration depends on the specific factors of each emergency.

☑	Initial Tasks
❑	Protect yourself - First On Scene – 7 Steps.
❑	Follow site-specific emergency procedures.
❑	Check-in with Public Protection Supervisor (or the Personnel Protection Leader, if appointed) and obtain a briefing to clearly understand security issues and required tasks.
❑	**Secure and do not allow access to the Husky site** - unless authorized by the Public Protection Supervisor (or the Personnel Protection Leader, if appointed).
❑	Identify security concerns, threats and action plan. **Life Safety is # 1 Priority.**
❑	Consider need for backup security staff and/or Police support.
❑	Document the names of all personnel approved to enter the site with details of who their reporting supervisor will be and where they will be located.
❑	Ensure that Security personnel do not enter hazardous areas (Hot Zone).
❑	Request resources needed or anticipated. Maintain control of all personnel reporting to you.
❑	Redirect all media inquiries to the Information Officer. Refer to Section 2.3 for guidance on dealing with the media.
❑	Confirm that all Security personnel understand the issue, hazards and their assigned tasks.
❑	Provide ongoing Security Services as directed by the Public Protection Supervisor (or the Personnel Protection Leader, if appointed).

☑	Ongoing Personnel Protection Tasks	Note
❑	**Protect yourself.** Continue to assess hazards and potential risks.	
❑	Report to and follow instructions of the Public Protection Supervisor (or the Personnel Protection Leader, if appointed).	

☑	Demobilization - Post Incident Tasks	Note
❑	Ensure that all documentation is completed and consolidated.	
❑	Participate in the incident response debriefing meeting if requested.	
❑	Submit all documentation to the Planning Section Chief (if appointed) or directly to the Incident Commander.	

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1.3.26 *Search and Rescue Team*

Part of the Personnel Protection Unit

Functional Role	Key Communications	Forms
• Locate and if necessary rescue personnel who are unaccounted for (at the Muster Points) • If requested, lead personnel that are involved in Search and Rescue operations	• Public Protection Supervisor (or the Personnel Protection Leader, if appointed) • Other Search and Rescue personnel	• ICS Form 214a: Individual Log

Order of consideration depends on the specific factors of each emergency.

☑	Initial Tasks
❑	Protect yourself - First On Scene – 7 Steps.
❑	Follow site-specific emergency procedures.
❑	Check-in with Public Protection Supervisor (or the Personnel Protection Leader, if appointed) and obtain a briefing to clearly understand who is missing and where they might be found.
❑	Identify safety hazards and risks of the search and rescue. **Life Safety is # 1 Priority.**
❑	Consider wind direction, backup requirements and appropriate safety practices.
❑	Ensure that Search and Rescue teams have proper personal protective equipment (PPE) and any unprotected personnel do not enter hazardous areas (Hot Zone).
❑	Request resources needed or anticipated. Maintain control of all personnel reporting to you.
❑	Talk through the Search and Rescue action plan before implementing, to confirm that everyone in the group understands the hazards and their assigned search areas.
❑	Safely conduct Search and Rescue operations as planned.
❑	Direct the group members as required. Stop any unsafe Search and Rescue operations.
❑	Maintain on-going communication with Public Protection Supervisor (or the Personnel Protection Leader, if appointed) and individual members of your group.
❑	Ensure that any casualties are rescued to safe areas so that revival and medical aid activities can be administered.

☑	Ongoing Personnel Protection Tasks	Note
❑	**Protect yourself.** Continue to assess hazards and potential risks.	
❑	Report to and follow instructions of the Public Protection Supervisor (or the Personnel Protection Leader, if appointed).	

☑	Demobilization - Post Incident Tasks	Note
❑	Ensure that all documentation is completed and consolidated.	
❑	Participate in the incident response debriefing meeting if requested.	
❑	Submit all documentation to the Planning Section Chief (if appointed) or directly to the Incident Commander.	

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1.4 General Scenario Response

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The following section 1.4 contains the following redactions:

- 1.4.4: This section contains information about Husky's contractors and suppliers, the disclosure of which would reasonably be expected to prejudice Husky's competitive position. It is protected from publication under Clause 1(a)(iii) of NEB Order AO-001-MO-006-2016.
- 1.4.16: This section contains information about Husky's contractors and suppliers, the disclosure of which would reasonably be expected to prejudice Husky's competitive position. It is protected from publication under Clause 1(a)(iii) of NEB Order AO-001-MO-006-2016.
- 1.4.28: This section contains information about Husky's contractors and suppliers, the disclosure of which would reasonably be expected to prejudice Husky's competitive position. It is protected from publication under Clause 1(a)(iii) of NEB Order AO-001-MO-006-2016.
- 1.4.29: This section contains security sensitive information, the disclosure of which would create a real and substantial risk that its disclosure will impair the security of pipelines, buildings, structures or systems. It is protected from publication under Clause 1(a)(ii) of NEB Order AO-001-MO-006-2016.

1.4.1 *Public Concern*

Husky Oil personnel will contact and maintain communications with directly impacted members of the public. This will keep the public informed of the situation and of actions being taken to protect their safety. Despite the efforts of all Husky personnel, extenuating circumstances may lead to complaints by the affected public.

The four most common concerns are:

- Operational impacts (noise, flaring, spills)
- Odours (hydrogen sulphide [H_2S], sulphur dioxide [SO_2], total hydrocarbon content)
- Physical impact (lease management, property damage, public hazard)
- Health issues

Any odour concern must be investigated and acted upon immediately. Follow the air monitoring procedure provided in Section 2.2.2

Public complaints may escalate to work-site security breaches or crime. The safety of project workers, equipment and facilities is of primary importance to Husky. Depending on the severity of the issue, the situation might be handled by the On Site Supervisor. The situation and response will be logged for trend analysis and reported to Husky management, according to reporting guidelines. If the issue is severe enough, RCMP assistance will be requested. Husky's on-site representative will liaise with the RCMP in implementing the response.

1.4.2 *Medical Emergency*

First 4 Minutes after Injury

- Follow First On Scene Strategy (Section 1.1.1).
- Call for help and indicate the need for the Automated External Defibrillator (AED) and a trained user at the nearest safe location where AED can be used.
    - AEDs are NOT intrinsically safe.
- Provide first aid to the best of your ability (e.g. CPR if appropriate and you are trained to do so, control of bleeding, maintaining an open airway, and spinal protection), until trained personnel and equipment arrive.
- Deal with work specific injuries (e.g. chemical or heat burns, frost bite, eye injuries, heat stress, gassing etc.)
- Request any other resources required.

First 60 Minutes after Injury

- If safe to do so, move casualty(s) to safe area(s) for further medical assessment and treatment.
- Follow AED sequence and provide first aid care and treatment within scope of training until transport is available and worker transferred.
- Assess the need for transport to a Health Centre or Unit via an Emergency Conveyance Vehicle (ECV), ambulance or via Medevac.
- Organize ECV, ambulance or Medevac by calling 911 from a land line
- Take first professional Advanced Life Support actions to stabilize casualty(s).
- Determine closest ambulance location, any required specialized equipment and response time (one-way).

First Four Hours after Injury

- Casualty(s) should be at a Health Centre or Unit if transported via ECV, ambulance or Medevac.
- Medical personnel will assess condition or patient(s), provide necessary treatment, monitor progress and follow up.
- Husky Health Advisor contacts the Medical Provider, as required.

Time after Injury: Dependant on Case

- Appropriate medical care or specialist required for treatment of the injury or illness.

1.4.3 *Confined Space Rescue*

A confined rescue team is comprised of a minimum of two entry personnel and a minimum of two backup with medical aid standing by.

When choosing to rescue personnel from confined spaces, be sure of the following factors:

- Is the team properly trained?
- Is the team competent and confident in dealing with this type of situation?
- Is the appropriate equipment available to do the rescue?
- Are there standby personnel in the event of escalation?
- Is a competent rescue coordinator or team captain available to take control of an emergency situation and direct the members towards their defined objectives?

Communication

An important component to the success or failure of a confined space rescue operation will be communication between the members and the Incident Commander. Methods of communication during this type of operation need to be appropriate for the situation, known and understood by all the responders. The types used may include the following:

Verbal Signals

Radios may be used if distance between the rescuers poses a problem. Be sure to use intrinsically safe radios. Be sure to have pre-set communication protocols that everyone understands and is familiar with. Do not use ‘slang’ type words. These may be confusing while working under stress and/or under mask (SCBA or SABA).

Visual Signals

Use of hand signals or other visual objects such as a flashlight or flags are acceptable visual signals.

Tactical and Audible Signals

Physical movement using objects such as pulling on a rope or audible forms such as sounds from air horns or tapping on the side of a wall may be utilized but must be distinguishable from normal entry noises or simple movement while inside.

Equipment

It is important to use the appropriate equipment for the task to be performed. Some equipment may have a specialized function, while other pieces may be utilized in many different situations. Always keep equipment properly maintained and readily available. Examples of equipment for conducting confined space extrication include:

- Basket Stretcher
- Full Body Harness
- Flashlight and other lighting systems
- Tripod and Rigging
- Ropes
- Communication Systems

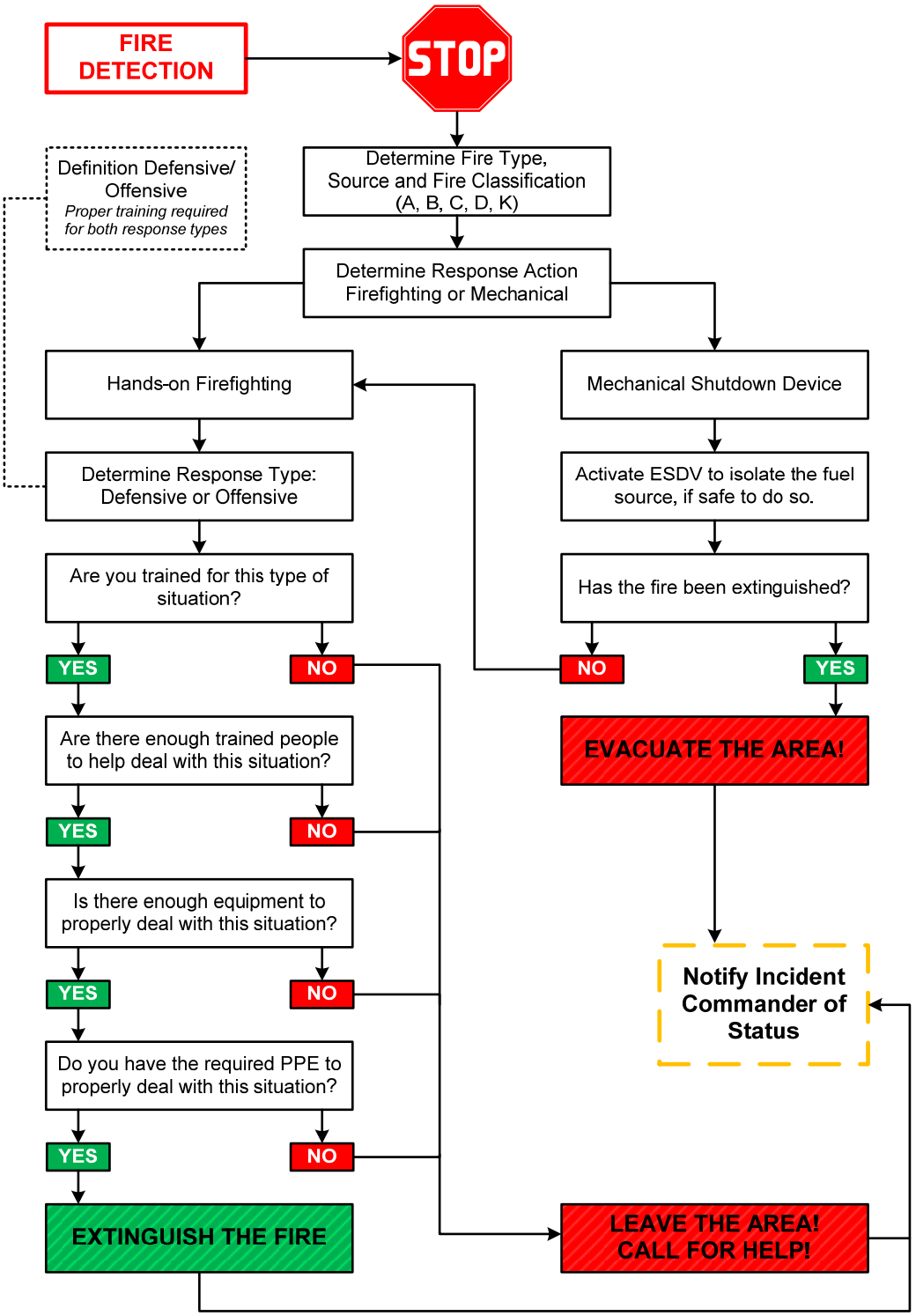
1.4.4 *Fire / Explosions*

There are three main classes of fire - common fires (ABC) and two specialty classes (DK).

A	Class A fires involve common combustibles such as wood, paper, cloth, rubber, trash and plastics. They are common in typical commercial and home settings, but can occur anywhere these types of materials are found.
B	Class B fires involve flammable liquids' gases, solvents, oil, gasoline, paint, lacquers, tars and other synthetic or oil-based products. Class B fires often spread rapidly and, unless properly secured, can re-flash after the flames are extinguished.
C	Class C fires involve energized electrical equipment, such as wiring, controls, motors, data processing panels or appliances. They can be caused by a spark, power surge or short circuit and typically occur in locations that are difficult to reach and see.
D	Class D fires involve combustible metals such as magnesium and sodium. Combustible metal fires are unique industrial hazards which require special dry powder agents.
K	Class K fires involve combustible cooking media such as oils and grease commonly found in commercial kitchens. The new cooking media formulations used in commercial food preparation require a special wet chemical extinguishing agent that is specifically suited for extinguishing and suppressing these extremely hot fires that have the ability to re-flash.
Note: Although ABC and BC Dry Chemical extinguishers can control a fire involving electronic equipment, the National Fire Code (NFPA 75-1999 edition), Section 6-3-2, specifically advises against dry-chemical extinguishers for fires involving computers or other delicate electronic equipment due to the potential damage from residues. Standard for the Protection of Electronic Computer/Data Processing Equipment 6-3.2 listed extinguishers with a minimum rating of 2-A shall be provided for use on fires in ordinary combustible materials, such as paper and plastics. Dry chemical extinguishers shall not be permitted.	

The safety of people, environment, and operations are paramount during a fire response, and all efforts should be made to extinguish the fire as quickly as possible. During a fire response where Aqueous Film Forming Foam (AFFF) is used, whether Legacy AFFF or Modern AFFF, containment is a priority. The Environmental Advisor assigned to the asset should be contacted immediately to support containment efforts.

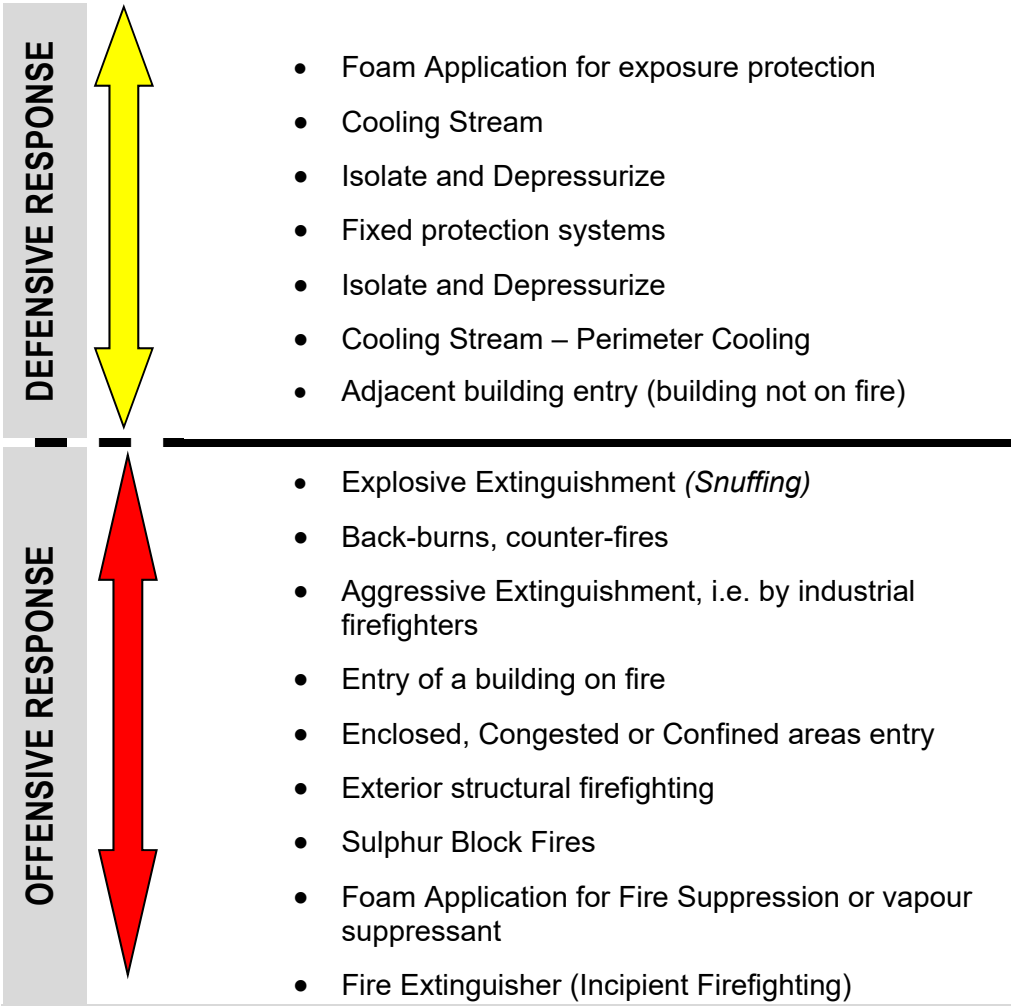
Fire Response Decision Tree



- For hydrocarbon release fires, proactively mobilize industrial fire responders (e.g. [redacted] with proper training and equipment as required.
- Consider notifying the local fire department (for perimeter control only).

Fire Response – Defensive and Offensive

The following diagram shows examples of offensive and defensive response scenarios.



Note: Other than small incipient fires, Husky's philosophy to fire will primarily be defensive.

Process Fire Checklist

- Follow First On Scene Strategy (Section 1.1.1).
- Isolate fuel source or extinguish fire if safe to do so.
- Confirm situation and location – it is still possible for an explosion to occur.
- For hydrocarbon release fires, proactively mobilize industrial fire responders [redacted] with proper training and equipment as required.
- Consider notifying the local fire department (for perimeter control only).
- Establish Responder Safety Control Zones perimeters.
- Shut down, isolate and depressurize related process equipment, if safe to do so.
- Develop an Incident Action Plan and site safety plan.

Defensive Strategy:

- Cool exposures.
- Cool affected area.
- Attempt to prevent fire from advancing.

Offensive Strategy:

- Extinguish fire.
- Direct valve / source isolation.
- Establish personnel accountability system by location and function and keep records of:
  - All responders and support personnel on site,
  - All those in hazardous areas,
  - All on breathing apparatus (e.g. record of remaining air).
- Ensure all fixed fire protection equipment operates as designed (e.g. deluge system).
- Obtain resources as required.

Unit Fires

The primary fire risks in process units are hydrocarbons above their flash points. It is crucial that Process Operators know how to immediately safely isolate every line and vessel in either unit and to prevent a fire from spreading.

If a large fire occurs, do the following:

- Follow First On Scene Strategy (Section 1.1.1).
- From a safe, upwind location, open up the hydrant monitors and cool the fire and adjacent exposures.
- From a safe distance, flush any pooled hydrocarbons to the sewer.
- Set up the portable fire monitors and begin supplemental cooling.
- For hydrocarbon release fires, proactively mobilize industrial fire responders [redacted] with proper training and equipment as required.
- Consider notifying the local fire department (for perimeter control only).
- If any firefighting activities are conducted downwind of the fire, wear breathing apparatus.
- If the fire is in a position or location that prohibits offensive actions, instruct the unit panel operator to shut down and depressurize the unit immediately.

Flare Line Failure

- Follow First On Scene Strategy (Section 1.1.1).
- Initiate emergency response in accordance with operating procedures.
- Initiate alternative measures required to isolate and depressurize units without accessing the failed part of the flare system.
- Manually activate the quick seals if automatic controls fail.
- For hydrocarbon release fires, proactively mobilize industrial fire responders [redacted] with proper training and equipment as required.
- Consider notifying the local fire department (for perimeter control only).

Dangerous Goods

Fire Control

Exercise caution in selecting a fire extinguishing method since there are many factors to be considered in a dangerous goods incident. Water may be ineffective in fighting fires involving some materials as its effectiveness depends greatly on the method of application.

Fires involving a spill of flammable liquids are generally controlled by applying a fire fighting foam to the surface of the burning material. Fighting flammable liquid fires requires foam concentrate which is chemically compatible with the burning material; correct mixing of the foam concentrate with water and air, and careful application and maintenance of the foam blanket. The selection of the agent and method depends on many factors such as incident location, exposure hazards, size of the fire, environmental concerns, as well as the availability of extinguishing agents and equipment at the scene. There are two general types of firefighting foam:

Regular foam

- Examples of regular foam are protein-base, fluoro-protein and aqueous film forming foam (AFFF). Some flammable liquids, including many petroleum products, can be controlled by applying regular foam.

Alcohol-resistant foam

- Alcohols, ketones and other flammable liquids that are water soluble require application of alcohol-resistant foam. These types of fires may be difficult to control and require a higher foam application rate than other flammable liquid fires (see NFPA/ANSI Standards 11 and 11A for further information).

Water Reactive Materials

Water is sometimes used to flush spills and to reduce or direct vapours in spill situations.

Some materials can react violently or even explosively with water. In these cases, consider letting the fire burn or leaving the spill alone (except to use a dike to prevent its spreading) until additional technical advice can be obtained. Refer to the North American Emergency Response Guide - a PDF copy of ERG2016 is available at: http://www.tc.gc.ca/eng/canutec/guide-menu-227.htm. The applicable guides clearly warn of these potentially dangerous reactions.

For water reactive materials, technical advice is required because:

- Water may cause an explosion inside a ruptured or leaking container.
- Water may be needed to cool adjoining containers to prevent their rupturing (exploding) or further spread of the fires.
- Water may be effective in mitigating an incident involving a water-reactive material only if it can be applied at a sufficient flooding rate for an extended period. The products from the reaction with water may be more toxic, corrosive, or otherwise more undesirable than the product of the fire without water applied.

Vapour Control

Limiting the amount of vapour released from a pool of flammable or corrosive liquids is an operational concern. It requires the use of specialized equipment, appropriate chemical agents, and skilled personnel wearing proper protective clothing. Before engaging in vapour control, get advice from an authoritative source as to the proper tactics.

Vapour control methods need to be selected for the specific material involved and performed in a manner that will mitigate, not worsen, the incident. There are several ways to minimize the amount of vapours escaping from pools of spilled liquids, such as:

- Special foams,
- Adsorbing agents,
- Absorbing agents, and
- Neutralizing agents

When specific hazardous materials at a refinery or storage facility are known, the facility should pre-select and stockpile vapour control agents in case of a spill. If the available foam is inappropriate for use, response personnel are likely to use water spray. Because water is being used to form a vapour seal, care needs to be taken not to churn or further spread the spill during application.

Fire Involving Electrical Systems

- Follow First On Scene Strategy (Section 1.1.1).
- Full and proper isolation of the electrical system needs to be done before exposing responders to any electrical equipment.
- When an emergency is first discovered, notify the Control Room.
- All electrical equipment needs to be treated as energized until proven otherwise by testing.
    - Most electrical buildings have multiple power sources.
    - All potential sources need to be considered before response action is taken.
- Under no circumstances may any Husky employee or responder other than qualified electrical employees enter a substation. ALL emergencies in the fenced area need to be phoned into the electric service provider.
- If responding to a person-down event in an electrical building, make certain that the person is not in contact with any live or potentially live electrical components.
- Do not fight any fire on an electrical system until that electrical system is isolated and has been confirmed as isolated by testing for absence of voltage. The building may be entered if conditions (smoke, arcing etc.) permit. If the fire in an electrical building is non-electrical in origin and fighting it will not cause debris, the fire may be extinguished using carbon dioxide (CO_2) only.
- Battery Banks: Most electrical rooms have UPS battery banks. The UPS system needs to be isolated by turning off the DC output of the UPS before attempting firefighting.
    - Carbon dioxide extinguishers have a refrigerating effect, which might damage the battery cases.
    - Damaged battery cases may leak acid onto the floor and equipment.
- Transformers: Oil filled transformers need to be isolated at two points before attempting to fight a transformer fire.
    - The transformer's high voltage feeder and the associated low voltage breaker need to be isolated.
    - These isolation points may or may not be in the immediate vicinity of the transformer itself.
- Operations should be prepared to handle the operations and the shutdown of the unit(s) that will be affected by the power loss.

Fires at Heights

- Fires might occur at heights and may not be accessible to fire fighters.
- Apply cooling water to the fire from the ground using aerial devices, mobile elevated platforms, ground monitors and elevated monitors.
- Extinguish only by isolating the fuel.
- As the cooling and absorption water is applied, the unit should be shut down and depressurized.

Vehicle Fires

- Follow First On Scene Strategy (Section 1.1.1).
- For small fires only (e.g. passenger compartment, electrical malfunction, fires contained to contents of cargo space or trunk, engine fires), a defensive strategy applies:
    - Use vehicle ABC type handheld fire extinguisher.
- For larger fires or fires involving fuel or storage tanks, an offensive strategy applies:
    - Call for assistance (if safe to do so).
    - Evacuate the immediate area by at least 25 metres.
    - Stand by, evaluate the situation, and wait for assistance.

Grass / Forest Fires

Small grass fires (primarily along roadways):

- Use shovels, back pack water sprayers and/or ABC type handheld portable fire extinguishers.
- Use only a defensive strategy.
- If grass fires enter coulees, river or creek banks or forests, do not continue. Contact the Wildfire Reporting Line at **1-800-663-5555 or #5555 on cell** for assistance.

Large grass/forest fires:

Do not attempt to extinguish. This could be potentially dangerous. Contact the local fire department and local forest protection office for assistance.

- For large threatening grass/forest fires that have the possibility of involving pipelines, facilities, plants, or well sites etc.
- Contact the Wildfire Reporting Line at **1-800-663-5555 or #5555 on cell** for assistance.
    - Isolate or shut in facilities if safe to do so. Notify Incident Commander and evacuate if situation dictates.
    - Call in offensive fire response specialists (i.e. professional industrial firefighters).

Personnel Safety

- Determine the minimum number of personnel required to operate during a wildfire event
- Ensure evacuation alerts are issued during a wildfire event and wildfire emergency evacuation procedures are followed.

Temporary Safe Areas

- Identify individuals that have smoke intolerances and ensure early priority evacuation arrangements.
- If using a temporary safety area(s), ensure adequate space is determined for number of personnel.
- Alternative safety area(s) should be identified to account for smoke drift that would compromise the primary area.
- The temporary safe areas should be gravel, mineral soil or frequently mowed grass.
- If practical the site should have a water source.
- Ideally the site should have alternate access routes and/or have a helicopter landing area.
- The site should have a GPS location that is documented in the Emergency Response Plan.
- The site should have adequate space for the personnel, vehicles and equipment that would normally be expected to utilize the safe area including helicopters.

Water Supply

- Have an adequate water supply for the purpose of firefighting.
- Identify natural water sources such as streams and small lakes in the immediate area.
- Ensure access to natural water sources for tanker trucks and/or portable pump set-ups are developed and identified.
- If natural water sources are not available, consider developing a water storage facility on the site.
- Non-draining borrow pits or tanks may be used for storing large volumes of water.
- Identify the availability of large water tankers in the region.
- Consider the use of agricultural water delivery systems to move water long distances for the protection of facilities.
- Consider the use of wildfire suppression sprinkler systems (portable or permanent) for structural protection in conjunction with the local fire department or local emergency response agency.

Access Roads/Evacuation Routes

- If there is potential for the main access to be cut off by a wildfire, alternative emergency evacuation routes (two-way access) should be identified and developed including potential helicopter landing sites for remote sites.
- Identify adjacent waterways that can be accessed by boat if applicable.
- Provide Wildfire and other Emergency Service personnel with the ability to open locked gates.
- The road should provide two-way access with a travel surface of not less than 6.1 metres.
- A roadway curvature radius should be at least 30 metres, measured from the centerline. This is a standard for Fire Department access.
- Road gradient should not exceed 10 percent.
- Dead-end roadways that are more than 90 metres in length should be constructed with a turnaround at the terminus having no less than 18 metres turning radius or a hammerhead “T” alternate turnaround.
- All gates should be located at least 9 metres off the main roads and should not open outward.

All-Terrain Vehicles

The operations of ATVs in wildland areas pose a significant liability for the ignition of a wildfire. These types of fires typically originate from a component of the exhaust system coming into contact with flammable organic material or vegetation. During the operation of an ATV organic material such as grass and moss can accumulate around the exhaust system. The material is dried and heated to its ignition temperature by the hot exhaust system. Smoldering materials can then fall to the ground and ignite dry grass or vegetation which in turn can result in a wildfire.

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

- Operators of ATVs need to stop on a regular basis and remove accumulations of organic material and vegetation from around all components of the exhaust system. The frequency of this cleaning will be dependent on the terrain and weather conditions. For example, the operator must frequently stop and clean the exhaust after traveling through a muskeg area during the spring.
- ATVs should be equipped with an appropriate tool according to the type of ATV to assist the operator in the removal of accumulations of debris from around the exhaust system. Hot or burning materials that are removed from the ATV must be cooled or extinguished with water or by burying in mineral soil.
- ATVs should be parked on sites that contain bare mineral soil. Avoid parking in areas with cured grass or other fine fuels which are highly flammable.
- Operators need to be particularly vigilant during the spring of the year when grass and other fine fuels will quickly ignite and spread to heavier fuels.
- Restrict or limit the use of ATVs during prolonged periods of extreme fire danger, particularly in the spring of the year.
- The exhaust system should be inspected by the operator on a regular basis to identify and remedy any malfunctions which may further contribute to the ignition of a wildfire.
- During the fire season, ATVs should be equipped with basic firefighting tools which may include: a canvas or plastic water pail, water, back pack water bag (full of water), shovel, Pulaski, fire extinguisher. Tools will be restricted by the amount of space available on the ATV but must include a container of water and a fire extinguisher.
- Operators must be familiar with the protocol for reporting a wildfire in their area of operation. They must have the communication equipment and technology necessary to contact fire authorities.
- Prior to operating an ATV at the start of a work day, the operator should ensure that there are not any accumulations of organic material or vegetation surrounding any components of the exhaust system.

Oil company personnel and contractors utilizing ATVs should be educated about the potential of ATVs to start fires and what they can do to prevent fires from occurring and what to do should a fire occur. Daily safety briefings could include awareness of fire potential and mitigation.

1.4.5 *Motor Vehicle Accident*

This is a general guideline for any accident involving company personnel, company vehicles, or on company operated roads:

- Follow First On Scene Strategy (Section 1.1.1).
- Contact emergency services (911, STARS, etc.) if necessary and safe to do so.
- Move the vehicle out of the traveled roadway, if it is clear, safe and legal.
- Turn off the ignitions of the cars involved, if safe to do so.
- Notify your immediate supervisor and/or designated Incident Commander.
- Secure the area and make sure that people are not out in traffic (in harm's way) to prevent potential additional accidents.
- Mark the scene of the accident with flares or reflective triangles.
- Assess hazards and, if safe to do so:
    - Make a first aid check of all persons involved in the accident.
    - Get medical attention for anyone who may need it.
    - If a person is unconscious or complains of neck or back pain, it is best not to move them until qualified medical personnel arrive.
    - In some situations, you may have no choice but to move them for their own safety. If you are in that type of situation, try to move them as steadily and slowly as possible while supporting their neck and back. The less movement, the better.
- Notify Husky HSE, completing all required Husky accident documentation.
- Exchange insurance information with any other parties involved in the collision.
- Obtain the names and contact information of any witnesses to the collision.
- Make a quick diagram of where the vehicle occupants were seated and indicate the vehicles' direction of travel and lane. Also note the date, time and weather conditions.
- If possible, get a copy of the police report of the accident.

1.4.6 *Transportation of Dangerous Goods Incident*

The following information has been extracted from the North American Emergency Response Guide (ERG 2016) which provides guidance for first responders during the initial phase of a dangerous goods or hazardous materials transportation incident. This information will assist responders in making initial decisions upon arriving at the scene of a dangerous goods incident. It should not be considered as a substitute for emergency response training, knowledge or sound judgment. ERG 2016 does not address all possible circumstances that may be associated with a dangerous goods incident. It is primarily designed for use at a dangerous goods incident occurring on a highway or railroad. Be mindful that there may be limited value in its application at fixed facility locations.

Initial Actions

- Follow First On Scene Strategy (Section 1.1.1)
- **APPROACH CAUTIOUSLY FROM UPWIND OR CROSSWIND.**
    - If wind direction allows, consider approaching the incident from uphill.
    - Resist the urge to rush in; others should not be helped until the situation has been fully assessed. Stay clear of all spills, vapours, fumes, smoke and suspicious sources.
    - Do not walk into or touch spilled material.
    - Avoid inhalation of fumes, smoke and vapours even if no dangerous goods are known to be involved. Do not assume that gases or vapours are harmless because of lack of a smell.
    - Use caution when handling empty containers as they may still present hazards until they are cleaned and purged of all residues.
- **SECURE THE SCENE.** Without entering the immediate hazard area, isolate the area and ensure the safety of people and the environment. Keep people outside the safety perimeter. Allow enough room to move around freely and remove equipment.

- **IDENTIFY THE MATERIAL INVOLVED**
  - Refer to Safety Data Sheet(s).
  - If shipping documentation is available, call the emergency response telephone number listed.
  - If documentation or emergency response telephone is not available, contact Environmental & Dangerous Goods Emergencies (EDGE) and provide as much of the following information as can safely be obtained:
    - Your name, call back telephone number, FAX number
    - Location and nature of problem (spill, fire, etc.)
    - Name and identification number of material(s) involved
    - Shipper, consignee and point of origin
    - Carrier name, rail car or truck number
    - Container type and size
    - Quantity of material transported and released
    - Local conditions (weather, terrain, proximity of schools, hospitals, waterways, etc.)
    - Injuries and exposures
    - Local emergency services that have been notified
  - Refer to the North American Emergency Response Guide - A PDF copy of ERG 2016 is available at this website: http://www.tc.gc.ca/eng/canutec/guide-menu-227.htm

- **ASSESS THE SITUATION.** Consider the following:
  - Is there a fire, a spill or a leak?
  - What are the weather conditions?
  - What is the terrain like?
  - Who and what is at risk: people, property and/or the environment?
  - What actions should be taken? Is an evacuation necessary?
  - Is diking necessary?
  - What resources (human and equipment) are required and are they readily available?
  - What can be done immediately?
- **OBTAIN HELP.** Call for assistance from qualified personnel.
- **DECIDE ON SITE ENTRY.** Any efforts made to rescue persons, protect property or the environment need to be weighed against the possibility that you could be at risk. Enter the area only when wearing appropriate protective gear (PPE) for the chemicals involved.
- **RESPOND AND CONTINUALLY REASSESS THE SITUATION AND MODIFY YOUR RESPONSE ACCORDINGLY.** Respond in a safe and appropriate manner. Rescue casualties when it is safe to do so and evacuate if necessary. Maintain control of the site. The first duty is to consider your own safety and then the safety of people in the immediate area.

1.4.7 *Pipeline Release*

In oilfield gathering systems, gas pipelines and produced oil or emulsion pipelines may have common elements in the response issues associated with leaks in that they each may carry some portion of oil, gas and water. The primary difference between these lines is the relative portion of the oil, gas and water contained in the lines. Gas lines are predominately gas filled and may include limited amounts of hydrocarbon liquids or water. Oil and emulsion lines have larger portions of liquids and water in them. Either way, an incident involving pipelines in a gathering system may require response actions that address the following:

- Downwind hazards associated with pipeline systems carrying sour gases.
- Hazards associated with ignition of the gas or associated liquids.
- Environmental impact of the release.
- Toxicity issues of the gases or liquids.
- Containment of spilled liquids near the leak.

Pipelines downstream of processing facilities generally, but not always, transport single phase gas or single phase liquids and the response issues tend to be more singularly focused. Regardless of the pipeline system, it is paramount for the responders to have a clear understanding of the gas or effluent that is being transported through the pipeline systems so that they understand the hazards and can properly lay out appropriate Response Objectives.

Leak Analysis – Gas Pipelines and High Gas-Liquid-Ratio Oil/Emulsion Lines

A moderate to large leak in a mainline is indicated by one or a combination of the following:

- A rapid or noticeable drop in pipeline pressure.
- Low-pressure alarms or shutdowns are triggered.
- Significant noise caused by the depressurization of the gas across the leak.
- Downwind LEL monitors pick up hydrocarbon gas levels.
- Downwind H_2S monitors pick up sour gas levels or sour gas odours are identified by the public or workers.
- An easily observable loss of pressure in a pipeline section after shutdown and closure of block valves.
- Significant staining of ground or collection of liquid on ground or on surface of free water.
- An observable cloud emanating from the pipeline.

A small leak in the mainline system is indicated by one or a combination of the following:

- Mild or moderate staining of ground or collection of liquid on ground or on surface of free water.
- Constant gas bubbling to water surface
- Localized stress of vegetation along the pipeline right of way.
- A slow but continuing loss of pressure in a pipeline section after shutdown and closure of block valves, which may take some time to confirm the pressure loss.
- H_2S or LEL levels are measured in proximity to the pipeline right of way.

A very small leak might require extensive and prolonged investigation to locate.

Leak Analysis – Liquid Pipelines

A moderate to large leak in a mainline is indicated by:

- A decrease in delivered volume rate without change in pumping rate.
- An unexplained negative balance between in and out volumes of the pipeline system.
- An unexplained decrease in the operating line pressure.
- An easily observable loss of pressure in a pipeline section after shutdown and closure of block valves.
- Staining of ground or collection of liquid on ground or on surface of free water.

A small leak in the mainline system is indicated by:

- A consistent loss in the volumetric balance on hourly, daily, monthly basis.
- A slow but continuing loss of pressure in a pipeline section after shutdown and closure of block valves, which may take some time to confirm the pressure loss.
- Staining of ground or collection of liquid on ground or on surface of free water.

A very small leak might require extensive and prolonged investigation to locate.

1.4.8 *Petroleum Spills*

The types of emergency containment and recovery efforts depend on the type of spill. Containment and recovery response actions focus on minimizing the effects of the spill on the surrounding area.

Clean-up activities will be conducted after containment and recovery actions are completed. Clean-up and disposal of contaminated material and site remediation work will continue until the spill site is returned, as nearly as possible, to pre-spill conditions and company environmental specialists and regulatory agencies are satisfied.

Husky is an active member of Western Canadian Spill Services (WCSS) in western Canada, and other area oil spill co-operatives. The applicable local area oil spill contingency manual is a supplement to this Emergency Response Plan and provides the Incident Commander with additional guidance in responding to a hydrocarbon or produced water spill into a watercourse.

The WCSS Oil Spill Contingency Plan outlines contact lists and details regarding equipment access. In addition the Western Canadian Spill Services (WCSS) provides detailed procedures for conducting spill containment and recovery operations under a variety of conditions (e.g. on land, on water, under ice etc.) Cooperative members may be available to assist Husky with initial spill control, but the company responsible for the spill assumes liability.

1.4.8.1 Initial Spill Response Actions

- Follow First On Scene Strategy (Section 1.1.1).
- Personnel should be dispatched to investigate the potential leak with appropriate personal protective equipment.
- Size up considerations for a spill site:
  - Are there any nearby public (workers, traffic, residents) that would need to be evacuated or diverted from the spill area?
  - Is there a fire or explosion hazard? What is the ignition source?
  - Is there H_2S or other toxin 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?
- Relay information to internal company contacts, government agencies and if required, landowner, spill response contractors and the designated Public Information Officer.

1.4.8.2 Cooperative Spill Response

Cooperative volunteers on behalf of WCSS may be involved in a limited capacity. WCSS does not provide response personnel; they can assist with equipment and offer advice, with spill response activities under the following conditions:

- Spills of unknown origin – at the request and under direction from the lead regulatory agency
- Initial spill response – to assist a member company with initial spill response in a watercourse

The WCSS Oil Spill Contingency Plans use a modified version of the Incident Command System that closely aligns with Husky's Incident Command System.

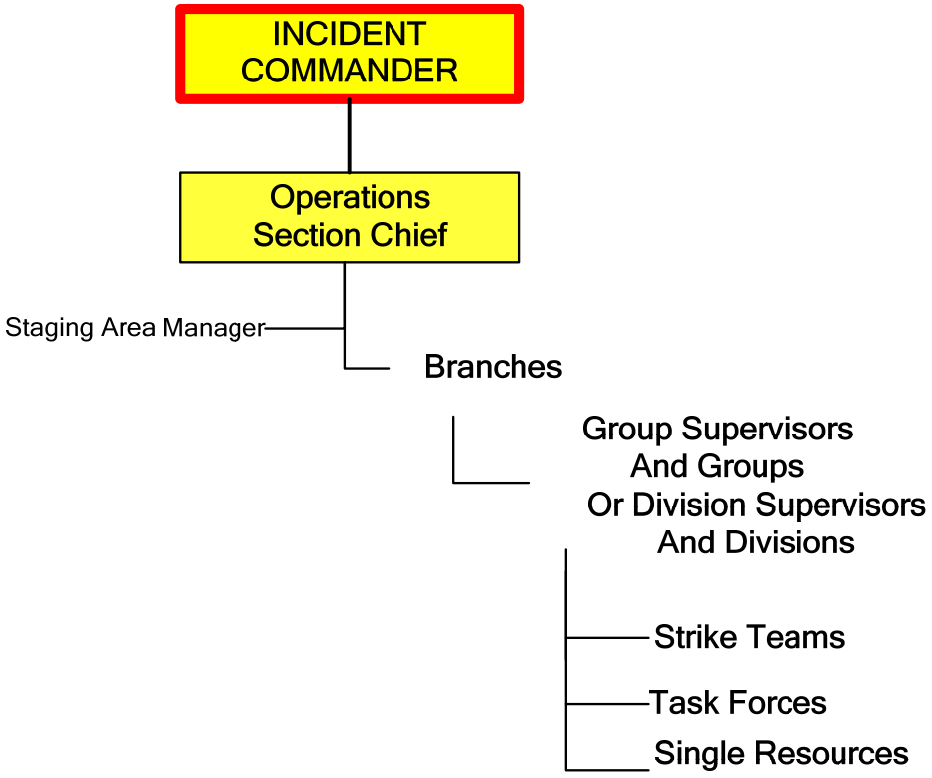
The following pages contain reference information for petroleum spills that may be encountered in various terrain conditions. For more detailed information, refer to the applicable local Oil Spill Co-op Contingency Plan. For more information regarding oil spill co-operatives, contact Husky Emergency Management or go to Western Canadian Spill Services Ltd. web page at: http://www.wcss.ab.ca

1.4.8.3 ICS Organization

The Husky Incident Command Organization may need to expand to ensure that an effective span of control is maintained with no more than 7 personnel reporting to one supervisor. Following the unity and chain of command ICS principles will ensure that all workers on a spill site are reporting to only one supervisor.

The Area Oils Spill Co-op manual (or Husky site-specific spill plan) provides detail on how the ICS Operations Section may be expanded expand by adding supervisory levels, as required.

E.g.:



1.4.8.4 Control and Containment

- If possible and safe, immediately shut off the source of the spill.
- Prioritize and set up containment and collection points
- Where possible, prevent a spill from entering a watercourse.
- Use safest and simplest method to get job done within resource and safety capabilities.
    - Isolate and depressurize (ESDs, manual block valves, manual valve isolation).
    - Plug and patch (e.g. fix faulty valve or hole in drum).
    - Absorb or adsorb (e.g. applying adsorbent pads to oil spill).
    - Transfer (e.g. removing product to waste truck or new container).
    - Containerize (e.g. put leaking drum into over-pack drum).
    - Reposition (e.g. upright or roll and chock leaking container).
    - Others (e.g. hot-tap, vent and burn, flaring).
- Contain the spill – containment is a priority for limiting environmental damage.
- Contain as close to source as safe and practical.
- Avoid excessive walking or driving on the spill area.
- Consider ground disturbance guidelines.
- Determine where bell holes or trenches would be most effective.
- Keep trenches as shallow and narrow as possible, to prevent additional clean-up and minimize groundwater impact. Supplement with berms where possible.
- Use practical containment tools and equipment including shovels, dump trucks, sand bags, plastic bags, heavy earth moving equipment, "Plug and Patch", foam, salvage covers, adsorbents, booms, hose, redwood plugs, etc.
- If weirs are installed, they should be able to handle large flow rates and surges.
- Surface run off may have to be diverted from the spill site if wet conditions are present.

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

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

1.4.8.5 Land Spills

Land spills will spread outward from the initial spill point toward lower-lying areas. Penetration downward into the soil will also occur at a rate that is dependent on the soil type and the nature of the product spilled. During spills in winter, petroleum will spread under the snow making definition of the extent of the spill area difficult.

The Incident Commander and ICS Operations personnel should:

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

1.4.8.6 Spills into a Watercourse

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

The rate of spill movement will depend on the current speed of the water and the time of year. Current may flow faster in the deepest channels in the river and slower in shallower areas, due to varying volumes of water. Flow in a watercourse will also be faster in the spring, because of snowmelt entering the watercourse from the surrounding area. River currents in summer and fall will be generally slower than in the spring. Wind and wave action will also affect the rate and direction of spill travel.

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

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

Time Required For Object to Travel 30 meters (100 feet) (seconds)	Surface Current Speed			Boom Angle (degrees)
	(km/hr)	(m/s)	(miles/hour)	
216	0.5	0.14	0.3	60°
108	1.0	0.28	0.6	60°
72	1.5	0.42	0.9	60°
54	2.0	0.56	1.2	45°
43	2.5	0.69	1.5	45°
36	3.0	0.83	1.9	45°
31	3.5	0.97	2.1	15°
27	4.0	1.11	2.5	15°
24	4.5	1.25	2.8	15°
22	5.0	1.39	3.1	15°
18	6.0	1.67	3.7	15°

Note: In currents faster than 6.0 km/h (3.7 mi/hr), or in excessively turbulent waters, the use of containment booms may be impractical and other containment or protection methods such as the use of diversion or exclusion booms may be required.

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

Containment

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

1.4.8.7 Spills into Water Bodies

In the absence of any current or wind, spills on water bodies such as lakes will spread out in all directions from the site of the spill until a uniform stable thickness is reached. If a wind and/or current are present, the spill will move with the wind or current until it reaches the shoreline.

Wave action in the water body may also affect the spill causing oil-in-water or water-in-oil emulsions to form, making recovery and clean-up efforts more difficult.

Containment

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

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

1.4.8.8 Spills into Wetlands or Muskeg

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

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

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

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

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

Natural recovery should be considered if:

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

Containment

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

1.4.8.9 Spills on Ice

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

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

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

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

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

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

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

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

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

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

The following table will assist the Incident Commander and ICS Operations personnel determine the permissible loads on ice based on the effective ice thickness.

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

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

WEIGHT-BEARING CAPACITY FOR STATIONARY LOADS AND WORKING ON ICE		
Permissible Load	Effective Ice Thickness inches (centimetres)	
	Lake	River
2,200 lbs (1000 kg)	8.0 (20.0)	9.1 (22.8)
4,400 lbs (2000 kg)	12.0 (30.0)	14.0 (35.0)
8,800 lbs (4000 kg)	18.0 (45.0)	21.0 (52.5)
17,600 lbs (8000 kg)	24.0 (60.0)	27.0 (67.5)
50,000 lbs (23,000 kg)	44.0 (110.0)	50.0 (125.0)
99,000 lbs (45,000 kg)	59.0 (147.5)	68.0 (170.0)
150,000 lbs (68,000 kg)	71.0 (177.5)	82.90 (205.0)
240,000 lbs (109,000 kg)	91.0 (227.5)	105.0 (262.5)

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

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

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

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

1.4.8.10 Spills under Ice

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

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

Containment

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

Containment operations are normally accomplished by constructing slots in the ice. Ice slots allow petroleum products trapped under the ice to rise to the surface and travel to an appropriate recovery point.

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

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

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

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

1.4.8.11 Spills in Broken Ice

The risk to Life Safety of the personnel attempting spill response in broken ice conditions using existing technology is extreme. Emergency operations in broken ice conditions during spring thaw or winter freeze-up are extremely difficult. When oil is mixed with floating ice or covered by a very thin ice cover, ice interferes with the collection of the oil and could damage containment and recovery equipment. The presence of ice also makes the use of boats difficult.

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

Containment

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

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

Log booms are deployed at an angle away from the containment site. Logs are spaced to allow spilled materials and water to move directly toward the containment site, while diverting the ice toward the opposite shore, allowing the ice to pass around the containment site. Refer to the local Geographical Response Plan or Oil Spill Contingency Plan for additional information.

1.4.8.12 Spill Control Point Descriptions

Control points are pre-identified downstream locations on watercourses that allow for the staging and deployment of oil spill containment and recovery equipment in response to oil spills. 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.

Husky provides additional control points information in Geographic Response Plans and in the site-specific sections of the Emergency Response Plan, for certain areas.

Each oil spill cooperative conducts control point evaluation for the whole geographic co-op area. **WCSS's policy is that it is the responsibility of cooperative members to review the identified control points downstream from their operations** and ensure that they are assessed for potential spill response activities.

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. Control point listings should include a site description, site diagram, access description, landowner/occupant phone number, site suitability and any other information related to the site.

1.4.8.13 Containment, Recovery and Clean-up Options

The methods chosen for containment, recovery and clean-up is dependent on-site conditions and the equipment available. A summary of common options are presented in the following tables:

Containment / Recovery Method	Technique Description	Comments
General notes: All methods are subject to areas being accessible for personnel and equipment, to allow for containment and recovery activities. All necessary safety precautions should be undertaken for personnel who work near any open water. Oil spill containment equipment, work and safety boats, and a work crew need to be available to conduct the Containment or Diversion Boom methods. When using earth/sand dikes or containment weirs, damage may be caused by evacuation and construction in the watercourse and along the banks. Consult an environmental professional before commencing any work. Also, a work crew with shovels, earth-moving equipment, earth or sand, piping, sandbags and/or sheets of metal or wood may be required.		
Earth or Sand Dike (All seasons)	Earth or sand at or near the site is used to contain spilled material on flat or sloped surfaces. Sandbags filled with soil or sand are used to contain spill. Augment with poly-sheeting if available. **For watercourse containment**, dikes are used across very shallow streams and intermittent creeks to contain flowing oil. Dikes can also be used to contain spilled materials along a shoreline.	Sufficient dry earth, gravel or sand needs to be available to contain spill. Earth may be frozen. Surface disturbance to remove earth or sand may result in erosion, especially on steep slopes. Work crews and/or earth-moving equipment are required to build dike. **For on-ice containment**, effective ice thickness needs to be sufficient to support the weight of manpower and equipment required to build dike. Earth or sand placed on ice needs to be removed before spring break-up. Work crews and/or earth-moving equipment are required to build dike. **For watercourse containment**, flowing may be caused if stream or creek is dammed (a containment weir may be used to alleviate this problem).
Snow or Ice Dike (Winter only)	Snow or ice at or near the site is used to contain spilled material on flat or sloped surfaces. Augment with poly-sheeting if available.	Effective ice thickness needs to be sufficient to support the weight of manpower and equipment required to build dike. Sufficient snow or water needs to be available to contain spill. Snow or ice dike will melt quickly in warm weather. Contaminated snow or ice may need to be removed or stored for treatment. Work crews and/or earth-moving equipment are required to build snow dike. Water spraying equipment may be required to construct and maintain an ice dike.

Containment / Recovery Method	Technique Description	Comments
Sorbent Dike (All seasons)	Sorbent material is used to contain spill.	Useful only in small spills, as purchase of large quantities of sorbent is expensive and impractical. Contaminated sorbent may need to be replaced or squeezed out during incident. Contaminated sorbents need to be disposed in compliance with government legislation. Sufficient sorbent or sorbent boom, work crews and storage containers or a lined storage area for contaminated sorbents needs to available to build sorbent dike.
Sorbent boom (Spring to Fall)	Sorbent booms may be used in narrow, low flow streams or rivers to remove small amounts of surface oil. Chicken wire or containment boom may be used to back up sorbent boom.	Sorbent boom use is only viable in low flow watercourses, as boom is not very sturdy and breaks easily. (Chicken wire or containment boom may be used behind sorbent boom to reinforce sorbent boom and prevent breakage). Sorbent boom also has no skirt allowing large amounts of oil to easily flow under it. Sorbent boom will pick up sheen but not large amounts of oil. Sorbent boom is not very effective in cold weather. Large amounts of sorbent boom are expensive, and needs to be replaced in the watercourse when saturated. Used sorbent needs to be stored and disposed of in compliance with government legislation. Sorbent boom, work crew and possibly boats may be required.
Sorbents (Spring to Fall)	The method is used in isolated areas to clean up small amounts of oil.	Clean-up is labour-intensive and time-consuming. Limited access to site may make this method difficult or impossible. Sorbents are not very effective on weathered oil or in cold weather. Sorbents may freeze to the surface. Sorbents needs to be disposed of properly to comply with government regulations. Sufficient sorbent, work crews and storage containers or a lined storage area for contaminated sorbents needs to be available.
Trench or Sump (All seasons)	A trench or sump is excavated downslope on sloping terrain to limit surface or subsurface spill movement. Work crews and/or earth-moving equipment are required to build trench or sump, as well as plastic or other impermeable sheeting for a trench liner.	Clean topsoil should be removed before trench construction. Frozen soil, bedrock close to the surface or soil type (e.g. sand) may make this option impractical. Surface disturbance to remove earth or sand may result in erosion or further penetration in sandy soil. Ensure no other pipelines or underground utilities are in the excavation area.

Containment / Recovery Method	Technique Description	Comments
Containment Boom (Spring to Fall)	A containment boom is placed in the watercourse in wetland to prevent migration of the spilled material down-stream of the containment point or into non-contaminated areas.	If water is too shallow, or current is too fast, the containment boom may not be effective in containing the oil. Choose the correct type of boom for watercourse conditions.
Containment Weir (Spring to Fall)	Containment weirs are physical dams with culverts or pipes constructed in the dam to allow free water movement while containing surface oil. **For wetland or muskeg**, containment weirs are also used to maintain a constant water level at spill site for easy oil recovery	**For watercourses**, containment weirs are used in shallow streams and creeks and are suitable for maintaining a constant water level at the site and preventing flooding. **For wetland or muskeg**, access to the site by manpower and equipment may be limited. Building of containment weirs may be labour-intensive and time-consuming if done manually.
Diversion Boom (Spring to Fall)	Diversion booms are used in large or swift rivers to divert spilled material to calmer water for containment and recovery. May be used in combination with containment boom.	High current speeds or turbulence may make deployment impossible, or may cause deployed boom to fail, releasing spilled material downstream.
Vacuum Truck	Muskeg or wetland areas need to be accessible. A vacuum truck is used to recover spilled material from a trench, trench or water surface in areas accessible by trucks or heavy equipment.	Surface disturbance and soil damage may result from movement of the vacuum truck to and from the site. Topsoil may need to be stripped from the site before undertaking recovery activities. Use rig matting as required.
Pumping of Spilled Material into Storage	A pump is used to recover spilled material from a dike, trench, wetlands, muskeg and watercourses – in areas not accessible by vacuum trucks.	Pumps need to be safe for use at the spill site and be compatible with the product to be pumped. Surface disturbance and soil damage may result from movement of the pump and storage equipment to the site. Skid tanks, tanker trucks, port-a-tanks, fuel bladders, permanent tanks or a lined excavated area need to be available to provide storage for the recovered material. A work crew and power supply for the pump need to also be available. **For watercourse recovery**, the technique will generate large volumes of contaminated water that will require storage.

Containment / Recovery Method	Technique Description	Comments
Skimmers	Used to skim oil from water surface or remove oil/water mixture for storage. Drum or disc skimmers will pick up thinner layers of oil on slow moving water.	Skimmer will need sufficient water depth to float. Debris and vegetation may clog skimmer, making oil pickup difficult. A suction, floating weir, disc or drum skimmer, pump and work crew are required to undertake method. A secure storage facility (tanker, portable tanks, fuel bladders or excavated, lined storage site) is also required. **For watercourse recovery**, skimmer will need sufficient water depth to float. Weir skimmers work best on thicker layers of oil in flowing water. Will generate large quantities of water/oil mixture. Drum or disc skimmers will pick up thinner layers of oil on slow moving water.
Fresh Water Flushing	Water is flushed through an area to push oil that is in vegetation or on the water surface toward a collection point for recovery. The method can be used in conjunction with trenches.	The method is not suitable for areas with extensive vegetation or obstructions. Physical damage may be caused to sensitive environmental areas. Pumps, a power supply, hoses, hot or cold water, and a work crew are required. A lined, excavated area or storage tanks may be required to hold water for treatment or testing.
Ice Slotting	Ice slots are cut into ice on rivers to collect oil moving under the ice. The technique is best used for rivers with current, as oil will be moved toward slot by current.	Effective ice thickness needs to be sufficient to support the weight of manpower and equipment required to build slot. The location of the spill needs to be confirmed by drilling holes downstream of the spill source before constructing the ice slot. Total containment of spilled petroleum in an ice slot is unlikely, due to material trapped under ice. Snowmobiles, communications gear, and ice augers may be required to determine the location of the spill. Work crews, chain saws and/or a backhoe or ditch witch are required to construct an ice slot. A recovery device such as a heat-traced ice skimmer is required to recover spilled material. Storage tanks or a lined excavated storage area may be required to store recovered oil/water mixture.

Containment / Recovery Method	Technique Description	Comments
Manual Removal by Work Crew and/or Equipment (Winter)	A work crew or earth-moving equipment are used to remove thick oil or contaminated snow and ice.	Effective ice thickness needs to be sufficient to support the weight of manpower and equipment required. Manual removal may be a difficult and time-consuming process. A work crew with hand tools or earth-moving equipment (e.g. backhoe) and operators, as well as ice cutting equipment, may be required. Lined storage area or storage drums are required to store contaminated material before treatment or disposal. Oil present in snow may be skimmed off during spring thaw.
Steaming of Ice Surface	Steam is used to melt ice surface to aid in spill clean-up. The technique may be used in association with other clean-up and recovery techniques.	Effective ice thickness needs to be sufficient to support the weight of manpower and equipment required. A work crew with steaming equipment is required to undertake this method.
Snow or Ice Melting	Snow or ice is removed from the clean-up site and melted in heated tanks to allow spilled material to be skimmed off the surface of the melt water. The technique may be used in association with other clean-up and recovery techniques.	Contaminated snow or ice needs to be removed from clean-up site and placed in melting tanks. The method may be labour-intensive and time-consuming, as melting is not be very efficient for clean-up of large volumes of petroleum-contaminated ice. In very cold temperatures, sufficient heat may not be available in the tanks to melt ice. A work crew, heating tanks, skimming equipment, transfer vehicles and operators are required. A lined storage facility for storage of contaminated ice or snow before melting may also be required, as well as storage tanks for storing recovered petroleum.

1.4.8.14 Disposal and Remedial Operations

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

1.4.9 *Loss of Well Control*

If well control is lost, the safety of on-site personnel is the highest priority. Mitigating environmental damage and preserving the equipment to the extent possible is of secondary importance.

Drilling & Completions on-site

As soon as loss of well control is identified:

- Stop work immediately.
- Sound the alarm.
- Evacuate all non-essential personnel to the predetermined muster station.
- Contact Emergency Services if required.
- Utilize on site personnel to secure the site and initial public safety as required (i/e roadblocks, rovers).
- Situation assessment will be completed by the Well-Site Supervisor.
- Operations will be notified as indicated in the FLIRP.
- Site safety assessment will be completed to identify safety concerns and safe access to the well.
- If safe to do so, the Well-Site Supervisor will begin standard well control response procedures.
- In the event the well control cannot be established, or the well is not safe to access, the IMT will be activated to support well control activities.
- Drilling or Completions or Production Operations will assume the role of the Incident Commander and declare the Level of Emergency.
- The Incident Commander will determine whether the Husky Well Control Team should be notified.
- Local Operations will assist as required with Public Protection Measures.
- Complete any other internal or external notifications as required.

NOTE: Well Control Emergency Response Plans have been developed for some areas and can be referenced.

Drilling & Completions off-site

As soon as loss of well control is identified:

- Stop work immediately.
- Sound the alarm.
- Evacuate all non-essential personnel to the predetermined muster station.
- Contact Emergency Services if required.
- Utilize on site personnel to secure the site and initial public safety as required (i/e roadblocks, rovers).
- Situation assessment will be completed.
- Operations will notify E&PS and deploy appropriate groups.
- Site safety assessment will be completed to identify safety concerns and safe access to the well.
- If safe to do so, operations will begin standard well control response procedures.
- In the event the well control cannot be established, or the well is not safe to access, the IMT will be activated to support well control activities.
- Drilling & Completions or Production Operations will assume the role of the Incident Commander and declare the Level of Emergency.
- The Incident Commander will determine whether the Husky Well Control Team should be notified.
- Local Operations will assist as required with Public Protection Measures.
- Complete any other internal or external notifications as required.

NOTE: Well Control Emergency Response Plans have been developed for some areas and can be referenced.

1.4.10 *Shallow Gas Encounter - During Drilling*

The main concern regarding a shallow gas encounter during drilling is the potential for the gas to ignite, resulting in injuries to personnel or damaged or lost equipment.

As soon as shallow gas is encountered:

- Close the diverter immediately.
- Activate the igniter at the flare tanks.
- Activate the emergency shutdown of the drilling equipment.
- Sound the alarm.
- Evacuate all non-essential personnel from the area, moving upwind of the leak or to the designated muster point.
- Notify the Supervisor.
- Provide emergency medical attention to anyone injured.
- Secure the site to prevent anyone from entering it.
- Ensure that evacuees are safe and secure.
- Take a head count of all the evacuees and compare with the site roster to identify potential missing individuals.

If required:

- Get assistance to evacuate or to provide fire-fighting resources.
- Initiate internal and external notifications, as required.
- Allow gas to vent.
- Monitor gas flow from a safe distance.

When all audible and visible signs indicate the gas flow has subsided:

- Assess the area using a portable lower explosive limit (LEL) detector to determine if the work environment is safe.

If the work environment is unsafe:

- Withdraw to a safe location.
- Allow more time for venting.

When it is safe to return to the rig:

- Check the rig thoroughly to identify any damage.

If the rig is not damaged:

- Restart the rig.
- Monitor the rig closely during start-up to identify any damage or malfunction.

1.4.11 *General Guidelines for Chemical Hazards*

1.4.11.1 High Vapour Pressure (HVP) Product Release

The initial actions are directed toward those nearest the release and those downwind to the edge of the EPZ, and further depending on monitoring results. The actual hazard however depends upon:

i. Size of hole or rupture.
   a. Hazards vary widely from a small pinhole.
ii. Product flow rate.
   a. Pipeline flowing conditions, at the time of the failure, have a great effect on the initial conditions at the leak location,
   b. Even after block valves have been closed, line pack can contribute greatly to the volume of product released.
iii. Meteorological conditions.
   a. Ambient temperature, wind speed, cloud cover, day or night, humidity, etc., all influence the speed of the vapour plume.
iv. Terrain.
   a. Flat or undulating countryside affects the potential for hazardous vapour accumulations

The type, volume, hazards of the product in addition to the potential or immediate impact to people, property and the environment are all characteristics to be assessed.

- Identify the area impacted by the spill and implement Responder Safety Control Zones.
- Monitor weather conditions on a continuous basis as they may impact response control operations.
- Identification of the following site conditions need to be made:
   - Areas where vapours are likely to accumulate and restrict access (e.g. downwind, low areas, confined spaces, etc.)
   - Hazards as they relate to shutting in the spill source and site specific conditions such as accessibility, presence of power lines, pipelines, fire hazard, etc.
   - Site stability from both a manpower and equipment standpoint (e.g. steep slope, overhanging banks, unstable soil, thin ice, etc.)
   - Proximity to water bodies (e.g. streams, rivers, lakes, etc.)

Hazards

- Fire / explosion - danger from fire or explosion exists when escaping vapour mixes with air to a concentration within the upper explosive limit (UEL) and lower explosive limit (LEL).
- Ignition sources - sources of ignition to the gas / air mixture are vehicles, equipment, electrical switches, hot water heaters, house furnaces (e.g. pilot lights), stones or rocks being moved violently against other hard objects near the escaping gas, and static electricity.
- Extremely low temperatures – cold may cause severe freezing to persons in close proximity when liquids expand to a gaseous state.
- Oxygen deficiency - a serious health hazard may exist due to the lack of oxygen in the area of the release.
- Toxicity - exposure to dangerous concentrations or due to a lack of oxygen.
- Meteorological conditions
    - Weather conditions need to be monitored on a continuous basis to ensure that changes do not adversely affect responder safety and control operations.
    - Dispersion is strongly dependent on the meteorological conditions prevailing at the time of release, particularly the wind speed and the degree of turbulence in the atmosphere.
    - Turbulence in the air is generated because of the difference in temperatures of different layers of atmosphere – during the day, ground temperature is high and air close to the ground is warmer than the air higher up.
    - Rate of decrease in temperature with height governs degree of turbulence (atmospheric stability).
- Other than meteorological conditions, factors that have the most influence on dispersion are the momentum of the release and the effective density of the material released.

Public Safety

- Evacuation is recommended for incidents in which the plume is visible and it is determined that the public is able to safely egress from the area. A decision to evacuate should be made by qualified individuals based on LEL monitor readings.
- Sheltering is the primary public protection measure for an HVP product release. For flammable or explosive releases, the Shelter-in-Place message should instruct the public to extinguish all ignition sources.
- Evacuation should only proceed when safe to do so and after an assessment of:
    - The size and expected duration of the release
    - Egress routes
    - Current and expected meteorological conditions
    - The potential for unexpected ignition

1.4.11.2 Liquefied Petroleum Gas / Butane Release

The primary concern in responding to an LPG / butane release is to ensure the safety of all on-site personnel and public that could be affected, especially if the release increases in size or is ignited. There are no residual environmental consequences associated with an LPG / butane release. The principal concern is removing potential ignition sources to avoid detonation of the vapour plume. LPG vapours are heavier than air and will tend to collect in low lying areas, well cellars, and sumps if winds are calm.

LPG / butane bullets are fitted with self-closing valves. If a sudden drop in feeder line pressure occurs, the valve closes. However, a release may continue if it is as a result of a small tear or pin hole in a line or fitting where the pressure drop is insufficient to actuate the valve. In this case, manually closing the valve may stop the release.

Except for large storage bullets, the most appropriate course of action if the release cannot be safely stopped is to isolate the release site and allow the LPG to escape and disperse into the atmosphere.

- Follow First On Scene Strategy (Section 1.1.1).
- Notify immediate supervisor and/or designated Incident Commander.
- Isolate release location (e.g. mobilize roadblocks) for 1.6 km (1 mile) around incident site.
- Assess hazards and remove potential ignition sources, if safe to do so.
- Stop product flow and isolate source, if possible.
- Protect the public by advising residents to evacuate a safe distance (more than 1.6 km or 1 mile from incident site).
- Inform first responders (e.g. police, fire or ambulance) about the hazards.
- If the release cannot be safely stopped, keep the release site isolated. For an LPG release, consider allowing the LPG to escape and disperse into the atmosphere if safe to do so.
- Airspace above release can be closed by NAV Canada using a Notice to Airmen (NOTAM).
- Monitor air quality at incident site to ensure safety of responders.
- Notify Environment Canada (verbally via provincial contact numbers and then a written report to Environment Canada within 10 days).

Emergency Response Assistance Canada (ERAC)

As Husky is a member of Emergency Response Assistance Canada (known as ERAC), Husky personnel can call on assistance from ERAC to control and eliminate the source of a release from any stationary tank with a capacity of ≥ 450 litres.

Upon verification with the designated Husky authorized individual, ERAC will respond to an incident if requested, but the decision to activate ERAC should be made by the Incident Commander based on:

- the potential risks to people if the release is allowed to continue,
- the possibility of accidentally igniting the vapour plume from an ignition source at the facility.

ERAC will provide response to an incident for the following products with capacities of 450 litres or greater: propane, butane, propylene, butylene, isobutene, isobutylene, and butadiene - 1, 3 (stabilized).

1.4.11.3 Natural Gas Liquids (NGL) Product Release

There is a potential for a fire or explosion due to the high flammability of the escaping vapours, and the opportunity for accidental ignition from an unsuspected source (e.g. pilot lights, electrical switches, cigarettes, vehicles, cellular phones, pagers).

The primary hazard associated with high vapour pressure (HVP) products is direct exposure to flame. Upon release, the following two types of product ignition may occur:

- Immediate ignition could result in a jet fire.
- Delayed ignition after the HVP plume has grown to its maximum size (i.e. within approximately 30 minutes) jet fire or an explosion, with an associated pressure wave that could damage eardrums, break glass, etc.
- The largest hazard area for emergency response planning is based on a flash fire associated with a delayed ignition. There is no specific model currently provided by regulators for calculation of the EPZ for HVP product release.

There can also be a potential for hydrocarbon narcosis which is an intoxicating effect caused by overexposure to hydrocarbon vapours. Close to the release, the atmosphere may be oxygen deficient. Individuals who come into direct contact with the release risk the hazard or exposure to extremely low temperatures with the potential to cause severe freezing.

Identifying a Natural Gas Liquids (NGL) Release

Product releases may be indicated by notification from outside sources of any of the indications (listed below), notification from personnel at the site of a product leak, leaks noticed while conducting aerial or ground right of way patrols, or alarm conditions announced from the SCADA system or leak detection system.

The following are some indications of a potential NGL leak release:

- Noise of escaping vapour
- Plume of white spray - condensation and freezing moisture in the atmosphere
- Hydrocarbon smell (sometimes thought to be natural gas)
- White fog-like plume drifting into low areas
- Moisture forming on windshields
- White cloud at varying vertical heights escaping from the release site (“a geyser”)
- Vehicles engines stalling or racing diesel engines
- Ice build-up on exposed pipe or frozen ground around an underground pipe
- Brown vegetation, which is an indication of soil saturation
- Yellow-stained snow, which may be an indication of NGL accumulation under the snow

NGL Safety Precautions

WARNING: Never enter an NGL release vapour cloud

- Weather conditions, especially wind direction, should be continuously monitored and response plans altered in changing conditions, to assure the safety of company personnel and the public.
- Prior to proceeding to a potential leak site, response personnel should ensure that they are wearing the appropriate fire retardant clothing and that the required personal protective equipment (flare gun, gas detector, etc.) is readily available.
- Route vehicles arriving on-site around any vapour clouds (monitoring wind conditions and considering elevations).
- Use intrinsically safe equipment (e.g. flashlights, radios and continuous gas detectors with audible alarms).
- Eliminate or shut off all potential sources of ignition in the immediate area.
- Do not carry any ignition sources (cell phones, lighters, matches).
- Pinpoint the leak location as accurately as possible, using all available sources of information.
- Explore on foot, using the buddy system if possible.
- Wear appropriate protective clothing (fire retardant clothes, splash resistant gloves, etc.).
- Use gas detectors to monitor leak sites and identify areas containing vapours.

1.4.11.4 Sour Gas Release

For any incident that has the potential to impact public safety, refer to Responder Duties and Public Safety Guidelines.

Initial Response

- Follow First On Scene Strategy (Section 1.1.1).
- Isolate and secure the release location. As a safety precaution, the potentially hazardous area should be secured using roadblocks or other barriers. In the initial assessment, establish Responder Safety Control Zones – define Hot Zone and cordon off. Company or contract personnel will be assigned as Roadblocks Crews. Additional roadblock assistance may be obtained from police, provincial highway crews, local authorities or contractors.
- Roadblocks should be placed in locations that are clearly visible to oncoming traffic. The roadblocks should also be located at intersections or pull-outs to enable traffic to easily turn around or take detour routes. Ideally, Husky should receive authorization from local authorities or the police before establishing roadblocks on public roads. However, if the safety of the public is in jeopardy, company responders should be prepared to quickly restrict access to the area before contacting these agencies.
- If possible, and if procedure can be done safely, stop the flow of gas.
- Secure the EPZ.
- Provide notification to activate response activities, public protection and government reporting procedures.
- Assess the need for residents to shelter-in-place or evacuate a safe distance away as appropriate. Provide necessary assistance.
- Notify the Lead Agency, local authorities, RCMP and Regional Health Authority of situation and any potential risks to the public.

The hazardous area resulting from a gas release is dependent upon the nature of the release, the volume of the gas escaping and meteorological factors such as wind direction, wind speed and atmospheric stability. The Initial Isolation Emergency Planning Zone will be cordoned off by roadblocks and evacuated (or the public may temporarily shelter-in-place until they can be safely evacuated). Evacuation should commence with those downwind and closest to the release.

Life Safety will always be the top strategic priority

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

1.4.11.5 Ethanol and Associated Chemicals Hazards

The production of ethanol at Lloydminster uses large volumes of grain and a number of hazardous chemicals, including gasoline, acids, and caustics. SDS information is available in designated binders for all chemicals on site.

Hazards associated with ethanol and associated chemicals include fire, spills, toxic emissions (e.g. H_2S, volatile organic compounds (VOCs), sulfur dioxide), and human injuries (e.g. eye injuries, skin irritation or burns, inhalation hazards, poisoning).

Fire hazards are so unique to ethanol production that a separate pre-fire plan and fire response procedures have been developed for them. Refer to the Lloydminster Upgrader Complex Pre-Fire Plan.

Chemicals and other materials or by-products with particular hazards are:

- Grain – may form explosive mixture in air; dust hazards.
- Sulfuric acid – reacts violently with water; contact with reactive metals (e.g. aluminum) may result in the generation of flammable hydrogen gas.
- Enzymes – may induce sensitization and allergic reactions in sensitized individuals; releases may adversely affect environment.
- Ethanol / denatured ethanol – incompatible with strong oxidizers, potassium dioxide, bromine pentafluoride, acetyl bromide, acetyl chloride, platinum and sodium.
- Gasoline – incompatible with strong oxidizers.
- Carbon dioxide – incompatible with dusts of various metals; forms carbonic acid in water.
- Hydrogen sulfide (H_2S) – toxic or fatal inhalation hazard depending on concentration, heavier than air so collects in low-lying areas, incompatible with strong oxidizers, strong nitric acid, metals
- Sulfur dioxide – reacts with water to form sulfurous acid.
- Nitric oxide – extremely toxic by inhalation and symptoms of overexposure may not become apart for up to 72 hours; exposure to rapidly expanding gas can cause frostbite; as an oxidizer, it will support and enhance combustion; can react with oxygen (in air) to generate nitrogen dioxide; reacts with water to form acid.
- VOCs – may include acetaldehyde, acrolein, formaldehyde, 2-furaldehyde, methanol, acetic acid and lactic acid.
- Anhydrous Ammonia – ammonia bullet rupture – toxic to fish, therefore spill of process liquids containing ammonia present an environmental hazard to fish if material enters rivers or lakes.

1.4.11.6 Chlorine Dioxide (ClO_2) Release

- Chlorine dioxide (ClO_2) is a yellowish orange solution that gases off immediately upon the release from a storage vessel or broken line.
- Chlorine dioxide's (ClO_2) has a strong, unpleasant odour similar to chlorine. Though Chlorine dioxide (ClO_2) provides adequate warning of hazardous concentrations due to its odour, it is more dense and heavier than air in which habituation could occur in low lying areas and could potentially not be detected.
- In the presence of sunlight, chlorine dioxide's (ClO_2) vapours in the air will decompose to chlorine and oxygen.
- Chlorine dioxide (ClO_2) is a highly flammable and reactive gas. Chlorine dioxide (ClO_2) in confined air spaces having concentrations above 10% gas is at an explosive concentration and can be ignited by almost any form of energy, such as sunlight, heat or sparks.
- Contact with chlorine dioxide (ClO_2) can irritate the skin and eyes causing eyes to water and seeing halos around lights. Breathing chloride dioxide (ClO_2) can irate the lungs causing coughing/wheezing and shortness of the breath. Higher exposures can cause pulmonary edema (fluid buildup in the lungs) and severe shortness of breath requiring immediate medical attention.

Chlorine Dioxide (ClO_2) Response Guidelines

- Follow First On Scene Strategy (Section 1.1.1).
- Ensure appropriate personal protective equipment (PPE) for protection from a chlorine dioxide (ClO_2) release includes full face mask, supplied air respirator (a Self-Contained Breathing Apparatus (SCBA) or Supplied Air Breathing Apparatus (SABA)) and butyl or nitrile for rubber suits, gloves and rubber boots. Note: Level 'A' personal protective equipment (PPE) are not normally present at Husky sites however manufacturer or response contractors working will utilize d Level 'A' personal protective equipment (PPE) during a release.
- Chlorine dioxide (ClO_2) gas in air can be measured using colorimetric indicating tubes (e.g. Gastec or Draeger). Use tubes capable of measuring from <1 parts per million (ppm) to ~10 parts per million (ppm).
- An emergency shower and eye wash should be in the work area next to the chlorine dioxide (ClO_2) release.
- In event of a fire involving chlorine dioxide (ClO_2), first stop flow of chlorine gas. Once chlorine has been consumed, fight the fire as appropriate for the material that is burning.
- For spills of liquefied gas, vapours of chlorine dioxide can be subsided by using suppression methods (i.e. oil skim, foam) and neutralization agents (i.e. sodium thiosulphate). Chlorine dioxide vapors are soluble in water and can be knocked down with a water fog however, the chlorine dioxide maybe still active and can be desorbed into the air even in a diluted form. The chlorine dioxide must be chemically neutralized to make it inert. Do not spray water on chlorine as it can result in boiling, frothing and vapour.
- Control any liquid runoff as it will contain decomposition products such as hydrochloric acid.

Chlorine Dioxide (ClO_2) Defensive Response

- Follow First On Scene Strategy (Section 1.1.1).
- Immediately evacuate personnel to an area with fresh air (upwind, crosswind, upslope).
  - Extend shelter or evacuation as circumstances dictate.
- Use emergency shower and wash body with water and soap.
  - Contain runoff if at all possible.
  - Use eyewash station if required. Wash eyes for 10-15 minutes, dispose of contact lenses.
  - Seek medical attention if exposed to gas.
- Conduct required emergency notifications.
  - Notify manufacturer or distributor to provide assistance or arrange a response; consider notifying a Dangerous Goods response contractor.
- Do not enter or remain in areas where Self-Contained Breathing Apparatus (SCBA) or Supplied Air Breathing Apparatus (SABA) are required (i.e. 3 parts per million (ppm) or greater).
- Use a chlorine oxide (ClO_2) gas detector.
- Determine wind direction and short-term forecast.
- Obtain chlorine oxide (ClO_2) Safety Data Sheet (SDS) sheet.
- Establish Responder Safety Control Zones (refer to Section 2.5.2 Responder Safety Control Zones):
  - Hot Zone.
  - Warm Zone (Decontamination Zone).
  - Cold Zone.
- Use Level A personal protective equipment (PPE) (fully encapsulated entry suit) to enter areas with a known or suspected chlorine dioxide (ClO_2) gas release.
  - Self-Contained Breathing Apparatus (SCBA), Supplied Air Breathing Apparatus (SABA) and fire response personal protective equipment (PPE) (bunker gear) is not sufficient. **DO NOT USE IN A CHLORINE DIOXIDE GAS RELEASE.**
  - The manufacturer, distributor or response contractors will provide emergency response and will be properly equipped with Level A personal protective equipment (PPE) protection.
- Contractors are required to use Level A personal protective equipment (PPE) if entering the gas hazard area. Level B personal protective equipment (PPE) is required if likely to be exposed to (splashed by) liquid chlorine dioxide (ClO_2). Level B personal protective equipment (PPE) consists of:
  - Chemical resistant gloves (both inner and outer layers).
  - Self-Contained Breathing Apparatus (SCBA) (or Supplied Air Breathing Apparatus (SABA), with escape Self-Contained Breathing Apparatus (SCBA)).
  - Chemical resistant outer boots.
  - Hardhat with face shield.
  - Hooded chemical resistant clothing (sufficient to protect against splashes, not gas).

- Do not spray water directly on the spill or at the leak source.
    - Note that chlorine dioxide can react explosively with many common substances, including hydrocarbons and hydrogen. Contact with water can result in boiling, frothing and rapid creation of vapour.
    - Foam is the preferred agent to suppress vapour. Alternatively use a water fog or other suppressor.
- Work in open, unconfined areas only (upwind, crosswind, upslope).
- Contain runoff:
    - By-products are corrosive hydrochloric and hypochloric acids.
- Contact and assemble an emergency repair team.
- Establish a decontamination station.
    - Pools, hoses, scrub brushes, disposal containers.
    - Medical Assessment Unit should be on standby.
- Decontaminate responders and affected area (as required).
- Proper disposal of runoff and personal protective equipment (PPE) that cannot be decontaminated.
    - Liquid chlorine dioxide (ClO_2): neutralize with sodium thiosulphate (recommended), sodium sulphite, sawdust, wood chips or white liquor (sodium hydroxide and sodium sulphide).
    - Gaseous chlorine dioxide (ClO_2): can be reduced in sodium hydroxide solution containing hydrogen peroxide as the reducing agent.
    - Consult Ministry of Environment for preferred disposal procedures.

1.4.12 *Hazards Associated with Grain Storage and Movement*

Special precautions must be taken when dealing with the movement and storage of large quantities of grain.

With flowing grain, the most common hazard is entrapment within the grain. When grain is being unloaded from a bin or silo by an auger that is typically located in the bottom centre of the bin, the flow is off the top and down through the center of the grain. On the surface of the grain, a funnel shaped cone is formed. Approximately 85 cubic feet of grain can be unloaded in a minute by a 10" auger. Due to this rapid movement, it is very easy for a person to be trapped when grain is being unloaded. Furthermore, because the grain exerts force on the trapped person, once someone is engulfed past their knees, it is almost impossible to pull them out of the grain.

Grain bridging or grain stuck to the side of a vessel can also lead to human entrapment. Once a person is covered by about 12" of grain (approximately 300 lbs of grain), they are not able to free themselves. Grain bridges or sticking grain should be broken up from outside the vessel only or using proper safety procedures as outlined below.

To free a victim trapped or buried in grain:

- Shut off the auger to stop the flow of grain. Disable the power to prevent anyone else from re-starting the auger.
- Turn on ventilation fans to supply fresh air to the victim.
- Call 911.
- Cut holes on opposite sides of the bin so that the grain flows away from the victim. (If a hole is cut in only one side, it is possible to topple a bin as all the grain flows out in only one direction.)

Grain Bin Entry

If it is necessary to enter a bin or silo:

- Always lock-out and tag-out power to augers before entering.
- Have at least two observers during grain bin entry.
- Use a body harness secured to the outside of the bin when entering.
- Use hand signals to communicate.
- Work from top to bottom when cleaning grain bin walls.

1.4.13 *Effects of Hydrogen Sulphide (H_2S)*

Background

Hydrogen sulphide (H_2S) is a flammable, colourless gas with a characteristic odour of rotten eggs that people can smell at low levels. It is also known as hydro-sulphuric acid and sewer gas. H_2S occurs naturally in crude petroleum, natural gas, volcanic gases and hot springs. It can also result from bacterial breakdown of organic matter. Industrial sources include emissions from industrial paper plants; combustion of coal, fuel oil and natural gas (including gas flares); kraft paper mills; tanneries; and emissions from sewers and waste treatment facilities. Cigarette smoke is also a source of hydrogen sulphide.

H_2S is released primarily as a gas and spreads in the air. Its residence time in the atmosphere ranges from about one day to more than 40 days, depending on ambient temperature and other atmospheric variables, including humidity, sunshine and presence of other pollutants. The decreased temperatures and decreased levels of hydroxyl ions in northern regions in winter increase the residence time. When released as a gas, H_2S will change into sulphur dioxide (SO_2) and sulphuric acid (H_2SO_4).

Signs and Symptoms

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

Acute Exposure Effects

The effects on humans will vary depending on the duration and H_2S concentration of exposure. The health effects of acute exposure to H_2S are shown in the following table. Acute exposure reflects a range from a few seconds up to several weeks.

Characteristics

The impact of H_2S on people varies depending on personal health, concentration and length of exposure. The common characteristics of H_2S are as follows:

- Extremely toxic.
- Found in decaying organic matter, natural oil and gas, silos and sewers.
- Found as a gas at temperatures above -60ºC.
- Colourless.
- Flammable – burns to form SO_2.
- Odour of rotten eggs at low concentrations – kills all sense of smell at higher concentrations.
- Will tend to disperse more slowly in sheltered, calm or low lying areas.
- At lower concentrations (20 – 50 ppm) irritates mucous membranes (eyes, throat, lungs), causes headache, dizziness, nausea, may cause pulmonary edema (an abnormal build-up of fluid in the air sacs of the lungs) upon prolonged exposure.
- High concentrations (500 – 1000 ppm) causes paralysis of the respiratory centre in the brain – breathing stops, suffocation occurs.
- Kills the sense of smell quickly.
- Can incapacitate of lead to death without warning.

Acute Health Effects of Hydrogen Sulphide

Concentration in Air (ppm)	Description of Potential Health Effects
1	Noticeable odour. May be considered “offensive” by some individuals. Certain individuals may experience mild symptoms of general discomfort, nausea, headache and irritability in direct response to odour. Possible aggravation of symptoms among asthmatics that may or may not be secondary to odour. Appearance of symptoms will depend on severity of asthmatic condition. Any effects would be transient. No symptoms related to direct toxicity expected among normal individuals.
10	Obvious offensive odour. Minimum concentration causing eye irritation after a single exposure lasting several hours according to some authorities. Irritation of eyes at this concentration has not been well established. Any irritation of the eyes is expected to be transient and fully reversible. Symptoms would be very mild (*i.e.* possible itchiness, dryness, increased blink reflex, slight watering). No damage or permanent injury to the eyes. Could aggravate pre-existing eye conditions (*e.g.* conjunctivitis). Odour-related symptoms could include headache, nausea and vomiting depending on the individual and the duration of exposure. Possible aggravation of symptoms among individuals with asthma, bronchitis or other forms of chronic respiratory disease.
20	Obvious offensive odour. Possible irritation of the eyes. Effects would be mild and fully reversible. Effects could include itchiness, dryness, tearing and slight redness. The likelihood of effects would increase with increasing duration of exposure. No damage or permanent injury to the eyes would be expected. Could aggravate pre-existing eye conditions (*e.g.* conjunctivitis). Odour-related symptoms could include headache, nausea and/or vomiting depending on the individual and the duration of exposure. Possible aggravation of symptoms among individuals with asthma, bronchitis or other forms of chronic respiratory disease.
50	Strong and intense, but not intolerable odour. Possible irritation of the eyes and breathing passages. Eye irritation could present as itchiness, stinging, redness of eye, redness of eyelids, tearing, increased blink reflex and increased tendency to “rub” eyes. Severity of symptoms will vary with duration of exposure. Possible aggravation of pre-existing eye conditions. Possible eye injury after several days of exposure. Respiratory irritation could present as “tingling” or stinging sensation in throat and nasal passages, sore throat, increased tendency to “clear” throat, and cough. Likely aggravation of symptoms among asthmatics and individuals with pre-existing respiratory disease. Symptoms expected to be transient and reversible. No permanent injury expected unless exposure is prolonged. Strong possibility of odour-related symptoms, including headache, nausea, vomiting and/or diarrhea among odour-sensitive individuals.

Concentration in Air (ppm)	Description of Potential Health Effects
100	Strong objectionable odour initially, becoming less intense due to olfactory "fatigue" with continued exposure. Increasing possibility of irritation of eyes and breathing passages within one hour of exposure. Symptoms of eye irritation could present as soreness, stinging or burning sensation of eyes, tearing, redness of eyes, redness and swelling of eyelids, possible blurred vision. Symptoms of respiratory irritation could include sore throat, cough, soreness or stinging of breathing passages, and possible wheezing. Definite aggravation of symptoms among individuals with asthma, bronchitis or other forms of chronic respiratory disease. Odour could induce headache, nausea, retching and vomiting.
250	Odour may or may not be distinguishable due to olfactory paralysis. Irritation of eyes and respiratory tract within several minutes of exposure, becoming severe with longer exposure. Eye irritation very likely to present as conjunctivitis with possible corneal involvement (*i.e.* definite redness of eyes and swelling of eyelids, and soreness of eyes). Immediate and excessive watering and tearing of eyes, with possible blurred vision. Very real possibility of permanent eye injury if exposure is prolonged. Respiratory irritation would present as sore throat, cough, difficulty breathing, soreness of chest, and/or possible wheezing. Symptoms might be protracted. Definite aggravation of asthma. Some possibility of "systemic" symptoms, including headache, nausea and vertigo depending of duration of exposure.
500	Odour is not distinguishable due to olfactory paralysis. Severe irritation, and possibly injury, to the eyes and breathing passages within 30 minutes of exposure. Post-exposure, 'chemical pneumonia' may appear due to damage to the lungs and breathing passages if exposure is prolonged. "Systemic" effects with central nervous system involvement may occur within one hour of exposure. Symptoms could include headache, anxiety, dizziness, loss of coordination and slurred speech, progressing to loss of consciousness and/or sudden collapse or 'knockdown'. Effects could become life-threatening if exposure persists.
750	Odour is not distinguishable due to immediate olfactory paralysis. Signs of nervous system involvement will dominate the clinical picture, and could include anxiety, confusion, headache, slurred speech, dizziness, stumbling, loss of coordination, and other signs of motor dysfunction… which could progress to abrupt "knock-down" and loss of consciousness and possibly death, if exposure continues for more than a few minutes. Definite possibility of chemical pneumonia among survivors post-exposure from damage to the lungs and the breathing passages.
1,000	Immediate "knock-down" and loss of consciousness. Death within moments to minutes. Immediate resuscitation and medical attention needed if victim is to survive.

Source: Alberta Health and Wellness, Environmental Public Health Field Manual for Oil and Gas Activities in Alberta

1.4.14 *Medical Treatment for Hydrogen Sulphide (H_2S) Exposure*

(Please note: This information was provided by a medical source other than the Provincial Regional Health Authorities.)

1.4.14.1 Hydrogen Sulphide (H2S)

- Hydrogen Sulphide is a colorless gas. It is heavier than air and tends to flow in ditches,
  trenches and low-lying areas.
- Hydrogen Sulphide is clearly recognizable in small concentrations at around I 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 Hydrogen Sulphide can no longer be detected by odor.

1.4.14.2 Health Effect of Hydrogen Sulphide

- Hydrogen Sulphide can be rapidly fatal. It acts by paralyzing the respiratory control center 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.

1.4.14.3 Acute Exposure

Acute exposure may include the following symptoms and signs:

Central Nervous System (CNS)

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 (H_2S) 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.

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 sulfide 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. keratoconjunctivitis) 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.

1.4.14.4 Approach to the Worker with Suspected Hydrogen Sulfide Exposure

Although this document refers only to H_2S, it is important for the clinician to keep in mind the possibility of co-exposure to numerous other agents. Sulfur dioxide may have been present if there has been combustion of hydrogen sulfide. Sulfur dioxide does not cause loss of consciousness but is a respiratory tract irritant. Therefore, the management of sulfur dioxide intoxication is similar to that for hydrogen sulfide. Other agents capable of causing asphyxia include carbon monoxide (toxic asphyxia) as well as a wide array of gases that act as simple asphyxiates (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 sulfide (or other industrial) intoxication. There are two facets to the history in such cases:

Exposure history: Exposure History attempts to define, in qualitative terms, the likelihood of, and amount of exposure to hydrogen sulfide. 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 sulfide and historical data on air measurements. For suspected exposures, the workplace can often provide useful estimates regarding the level of exposure, although such data may require several days to reconstruct.

Clinical history: The physician should attempt to establish the presence of as many of the symptoms as possible associated with H_2S exposure. Determining the presence of respiratory tract irritation (conjunctivitis, rhinitis, and tracheitis) is of particular importance since this symptom distinguishes hydrogen sulfide from several other asphyxiates 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 sulfide intoxication. Rather, testing is aimed at characterizing the sequels of intoxication, as well as to rule out other causes for the presentation.

Treatment

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

- On arrival - check blood gases and assess for lactic acidosis. Take chest film and repeat as necessary keeping in mind the delayed possibility of pulmonary edema. ECG may assist as arrhythmias and bradycardia are not uncommon. Temporary T wave depression may occur and ECG may mimic infarction.
- For the unconscious patient, give oxygen using mechanical ventilation with positive end-expiratory pressure.
- Assess for associated musculoskeletal 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.

1.4.14.5 Guidelines for Return to Work (RTW)

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

1. Possible exposure, without symptoms
2. Possible exposure, with symptoms (that are compatible with H_2S)
3. 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. Where assistance is required in making the appropriate RTW recommendation consider contacted Husky Energy's medical service provider, [redacted]

1.4.15 *Effects of Sulphur Dioxide (SO_2)*

Background

Sulphur Dioxide (SO_2) belongs to the family of sulphur oxide gases (SO_x). Sulphur is prevalent in raw materials including crude oil and coal, as well as in ore that contains common metals. Sulphur oxide gases form when fuels containing sulphur are burned and when gas is processed or metals are extracted from ore. Like other sulphur oxide gases, SO_2 dissolves in water or water vapour to form acid, and interacts with other gases and particles in the air to form sulphates and other products.

Sulphur dioxide is a colourless gas that is about 2.5 heavier than air. It has a sweet pungent odour, and can be detected by taste and smell at concentrations as low as 300 parts per billion (ppb). Acids that are formed when SO_2 (and nitrogen oxides) react with other substances in the air may be carried great distances before falling to earth as rain, fog, snow or dry particles. Acid rain damages forests and crops, changes the chemical make-up of soils, and increases the acidity of lakes and streams. Continued long-term exposure will affect the natural variety of plants and animals in an ecosystem. As well as contributing to smog, SO_2 emissions cause aesthetic damage and accelerate the decay of building materials and paints.

General guidelines dictate evacuation where SO_2 concentrations reach 5 ppm averaged over a 15 minute period. However, as a precaution, evacuation will be established under the criteria when the SO_2 level reaches 1 ppm for two to three hours, or averages 0.3 ppm over twenty-four hours.

Signs and Symptoms

Sulphur dioxide causes a wide variety of health and environmental impacts because of the way it reacts with other substances in the air. Acute and chronic exposure to SO_2 affects the respiratory system. Acute exposure effects, with increasing exposure, include irritation of the eye, nose and throat, choking, coughing, bronchitis and pneumonia. Exposure to low concentrations can aggravate chronic pulmonary diseases, such as asthma and emphysema. Co-exposure to cold or dry air may further exacerbate the respiratory effects of SO_2 on sensitive asthmatics. Particularly sensitive groups include children, the elderly and those with existing heart or lung disease.

Characteristics

This is a choking gas, unlike H_2S, and one wants to move to an area where the discomfort is not experienced.

- Formed by the combustion of H_2S or sulphur and is non-flammable.
- Found as a gas at temperatures above -10°C.
- Has the odour that occurs when a wood match is extinguished.
- Highly irritating – dissolves to form sulphuric acid.
- At lower concentrations irritates the eyes, nose and throat, causes difficulty in breathing and shortness of breath.
- Causes pulmonary edema (fluid in the lungs) at high concentrations – may be fatal.
- Effects on heavy smokers are more severe.

Acute Health Effects of Sulphur Dioxide

Concentration of SO_2 (PPM)	Acute Health Effects
0.1	Transient bronchoconstriction[1] in sensitive exercising asthmatic individuals that ceases when exposure ceases[2]
0.3 - 1	Possibly detected by taste or smell
0.75	Transient lung 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.

Source: Alberta Health and Wellness, Environmental Public Health Field Manual for Oil and Gas Activities in Alberta

1.4.16 *Medical Treatment for Sulphur Dioxide (SO_2) Exposure*

(Please note: This information was provided by a medical source other than the Provincial Regional Health Authorities.)

Sulphur Dioxide (SO_2)

- Sulphur dioxide (SO_2) is a colourless gas with a pungent odour detectable by the human nose at concentrations of about 0.5 to 0.8 ppm.
- Sulphur dioxide (SO_2) is highly soluble in water resulting in the formation of sulphurous acid.
- Approximately 90% of inhaled sulphur dioxide (SO_2) is absorbed in the upper respiratory tract.
- Asthmatics and individuals with underlying bronchial hyperactivity may be more susceptible to low level exposure to sulphur dioxide (SO_2).

Health Effects of Sulphur Dioxide

- Sulphur dioxide (SO_2) causes almost immediate coughing with significant exposure.
- Sulphur dioxide (SO_2) causes irritation of the conjunctive and nasal mucosa at levels between 5 and 10 ppm.
- Exposures of sulphur dioxide (SO_2) as low as 8 ppm has been associated with symptoms of cough, phlegm, wheezing and exertional dyspnea.
- Acute high-dose exposures leading to severe injury are unusual, parenchyma! lung damage occurs above 50 ppm.

Acute Exposure - may include the following symptoms and signs:

Respiratory

- Inhaled sulphur dioxide (SO_2) is a moderate to strong respiratory irritant. Reddening of the throat and nose may occur. Repeated exposure to 10 ppm has caused nosebleeds.
- Sensitivity varies among people, short exposure to low concentrations may produce a reversible decrease in lung function; symptoms may include chest tightness.
- Exposure to high concentrations of sulphur dioxide (SO_2) has caused severe airways obstruction, hypoxia and pulmonary edema. The effects of pulmonary edema include coughing and shortness of breath which can be delayed until hours or days after the exposure; these symptoms are aggravated by physical exertion. Survivors of high concentration exposures may suffer chemical bronchopneumonia and bronchiolitis obliterans, which can be fatal after a few days. Delayed chemical pneumonitis and bronchial asthma can also result.

Dermal

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

Ocular

- Eye irritation may result in smarting of the eyes and tearing. In severe cases (high concentrations in a confined area) sulphur dioxide (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.

Approach to the Worker with Suspected Sulphur Dioxide Exposure

Although this document refers only to SO_2, it is important for the clinician to keep in mind the possibility of co-exposure to numerous other agents.

History

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

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

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

Investigations

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

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.

Guidelines for Return to Work (RTW)

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

1. Possible exposure, without symptoms;
2. Possible exposure, with symptoms (that are compatible with $SO_{2)}$ or
3. 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. Where assistance is required in making the appropriate RTW recommendations, consider contacting Husky Energy's medical service provider, [redacted]

1.4.17 *Working in Remote Locations*

Working in remote areas means that assistance, if required, may come from some distance away and may take longer than if the work were occurring in a more accessible area. Workers must be self-sufficient during the time taken for help to arrive.

While conducting work on the ground:

- An on-site medic and first aid tent will be present.
- Armed wildlife monitors will be present.
- Workers must be prepared for changing weather conditions.
- The following PPE must be used or be present:
    - Reflective vest
    - Hearing protection
    - ATV helmets
    - Bear spray
    - Insect repellent
    - Flash light
    - Survival kit including the following – tarp or shelter, fire starting materials, signal devices, knife, nylon cord
    - Sunblock
    - Class II First Aid Kit
    - Survival rations and water
    - Satellite phones
    - Two-way radio with aviation frequencies
    - GPS receiver (SPOT-GPS will be utilized for this project)

1.4.18 *Wildlife Encounter*

Basic Response

- Ensure personnel safety.
- Advise everyone in the area of the wildlife danger.
- Notify appropriate person (Supervisor) of what happened and any other details.
- Notify BC Environment at **1-877-952-7277** to report wildlife-human interactions where public safety is at risk.

Bears

- If you see a bear, stay calm.
- Stop and assess the situation. Don't run, crouch down or play dead too soon.

If the bear is unaware of you:

- Leave the area, detour around the bear or wait it out.
- If you can't avoid the bear, gently alert it to your presence by moving upwind, waving your arms and calling out in a calm voice.

If a bear approaches you or you surprise it:

- Don't run. Talk in a calm voice.
- Slowly back away in the direction from which you came.
- If the bear keeps following you, stand your ground.
- If you're carrying bear spray, get it in your hand, point the nozzle away from you and check the wind direction to make sure the spray will not blow back on you.
- Try to figure out if the bear is acting in self-defence or if it's seeking food.
- If the bear attacks, fight back.
- Kick, punch or hit the bear with a rock, chunk of wood or whatever is handy.

Using Bear Spray:

If a bear approaches slowly or follows at a distance, fire two or three short bursts of spray between you and the bear while you continue backing away. The spray will create a cloud of deterrent which may stop the bear. Make sure you have enough left to spray the bear in the face at short distance if it keeps coming.

Cougars

These large cats have been known to attack people. They are silent stalkers/hunters and very difficult to spot. If faced with a cougar, it's best to behave as if dealing with a dog – do not run away. Retreat facing the cougar, do not stare into its eyes. Make yourself as big as possible and fight as hard as you can if necessary.

Moose

A fully grown moose can weigh up to 800 kg. If you find yourself between a female moose and her calves – beware!

An angry moose will protect her offspring at all costs. Moose have bad eyesight but can smell and hear very well and are extremely well adapted to live and travel in almost all terrain.

If you see its ears laid back and/or the hair on its "hump" stand up, it's angry or afraid and may charge. Moose kick with their front feet as well as their hind feet.

Response

- Try to get behind a tree if a moose charges. If a moose attacks you, get down on the ground, cover your head as well as you can, stay very still. Don't wave your arms after you are on the ground.
- Another option is to raise your hands over your head and spread out your fingers. Hold your arms still, don't wave them. Sometimes the moose will think that you are another animal bigger than he is.

1.4.19 *Extreme Cold Considerations*

Hypothermia

Definition: The body's normal temperature (37°C/ 98.6°F) drops to or below 95°F (35°C).

Assessment of Patient

- A patient who is cold, alert, has uncontrollable shivering and normal vital signs is considered to have mild hypothermia.
- A patient who is cold and has any of the following signs or symptoms is considered to have moderate or severe hypothermia:
  - Depressed vital signs, such as slow heart rate and/or slow respiration
  - Altered level of consciousness, including slurred speech, staggering gait, decreased mental skills, or the lack of response to verbal or painful stimuli
  - No shivering despite being very cold – below 90°F (30°C)

Basic Treatment for Hypothermia (Land Temperatures)

- Contact the paramedic to provide transport to a medical facility.
- Prevent further heat loss:
  - Insulate from the ground; move the person to a warm, dry area. Do not leave the person alone.
  - Protect from the wind, eliminate evaporative heat loss by removing wet clothing (once patient has adequate shelter) and replace with warm, dry clothing or wrap the person in blankets.
  - Insulate the patient, including head and neck.
  - Cover the patient with a vapour barrier (such as blue tarp, large piece of plastic, large garbage bags, etc.)
- Provide warm, sweet drinks if alert. Do not give alcohol, drinks with caffeine or permit patient to use tobacco.
- Provide basic First Aid care; encourage the patient to move their arms and legs to create muscle heat if they are alert. If not, place warm bottles or hot packs in the arm pits, groin, neck and head areas. DO NOT rub the person's body or place them in a warm water bath. This may stop their heart.

Basic Treatment for Hypothermia (Water Temperatures)

- If possible, contact the paramedic to provide transport to the medical facility. Loss of body heat is up to 25 times faster in water.
- Conserve body heat:
  - DO NOT remove any clothing. Button, buckle, zip and tighten any collars, cuffs, shoes, and hoods- the layer of trapped water closest to the body provides a layer of insulation that slows heat loss. Keep the head out of the water and put on a hat or hood.
  - Remove the person from the water as soon as possible or climb on anything floating. DO NOT attempt to swim unless a floating object or another person can be reached. Swimming or other physical activity uses the body's heat and reduces survival time by about 50%.
  - If it is not possible to get out of the water, wait quietly. Conserve body heat by folding arms across the chest, keeping thighs tight together, bending knees and crossing ankles. If another person is in the water, huddle together with chests held closely.
- If it is possible to remove a person from the water, attempt to maintain body heat by sitting or lying closely together, covering them with blankets or providing a vapour barrier.
- Wait for medical care.

Frost Bite

Definition: Freezing occurring in the deep layers of skin and tissue.

Assessment of Patient

A patient is considered to have frostbite when the following conditions are observed:

- Pale, waxy-white skin colour
- Skin is hard and numb

Frostbite usually affects the fingers, hands, toes, feet, ears and nose.

Basic Treatment for Frostbite

- Prevent further heat loss:
  - Insulate from the ground; move the person to a warm, dry area. Do not leave the person alone.
  - DO NOT rub the affected area as rubbing causes skin and tissue damage.
  - Place the affected area in a warm water bath and monitor the temperature to SLOWLY warm the tissue. Do not pour warm water directly on the affected area; it will warm the tissue too quickly, causing damage. Warming can take 25-40 minutes. After the area has been warmed, it may become puffy and blister and/or it may have a burning feeling or numbness.
- Wrap the injured area. When normal feeling, movement and skin colour have returned, the affected area should be dried and wrapped to keep warm.

NOTE: If there is a chance the affected area may get cold again, DO NOT WARM THE SKIN. Skin that has been warm but becomes cold again will suffer severe tissue damage.

- Contact the paramedic as soon as possible.

How to Protect Workers

- Recognize the environmental and workplace conditions that lead to potential cold-induced illnesses and injuries.
- Learn the signs and symptoms of cold-induced illnesses / injuries and what to do to help the worker.
- Train the workers about cold-induced illnesses and injuries.
- Select proper clothing for cold, wet, and windy conditions. Layer clothing to adjust to changing environmental temperatures. Wear a hat and gloves, in addition to underwear that will keep water away from the skin.
- Take frequent short breaks in warm, dry shelters to allow the body to warm up.
- Perform work during the warmest part of the day.
- Avoid exhaustion or fatigue; energy is needed to keep muscles warm.
- Use the buddy system (work in pairs).
- Drink warm, sweet beverages (sugar water, sport-type drinks). Avoid drinks with caffeine and alcohol.
- Eat warm, high-calorie foods.
- Workers face an increased risk when:
    - A predisposing health condition exists such as cardiovascular disease, diabetes and hypertension;
    - Certain medications are being taken; check with a medical professional if the meds being taken create a risk factor in cold environments; Individuals are in poor physical condition, have a poor diet or they are older.

1.4.20 *Missing or Overdue Personnel / Aircraft / Vehicles*

This section addresses potential emergencies associated with Husky personnel (employees or contractors) who may become lost or stranded during the course of normal workplace activities.

It also identifies initial actions if contact is lost with an aircraft chartered to transport Husky personnel or material, or if an aircraft is overdue.

Initial Response

- If an employee or aircraft has failed to routinely report in, notify the immediate supervisor and senior Husky representative on site.
- Follow site-specific working alone procedures and notifications.
- Attempt to establish and maintain contact with personnel or aircraft.
- Organize and dispatch personnel to rescue or assist if conditions permit and general location is known.
- Contact outside help as required (e.g. RCMP, Search and Rescue).
- Upon discovery of missing personnel or downed aircraft, initiate rescue and administer first aid as required.
- Initiate evacuation and transportation as required.
- Notify Corporate Director of situation and keep them updated.
- Maintain contact with search and rescue team.
- Complete documentation for preparation of report.

1.4.21 *Ice Breakthrough*

Ice crossings must not be performed before the ice has been checked for thickness and evaluated for safe load-carrying capacity.

As soon as someone observes that a vehicle has broken through the ice:

- Report the ice breakthrough and location to your supervisor.
- Identify initial manpower resources:
  - On Site Supervisor
  - Site Safety
  - Ice Rescue Team
  - Ice Assessment Team
- Identify initial equipment resources:
  - Personal Flotation Devises (PFD)
  - Harnesses
  - Shoreline anchors
  - Ice Cleats
  - Chainsaws and appropriate safety gear
  - Ice auger
  - Current velocity meter
  - Ice thickness measuring stick
  - Communications equipment
  - Rescue equipment (ladder, throw bags, sled, reach pole, rope, etc.)
- Broadcast a traffic or work-site advisory, stopping all potential traffic or work in the immediate area, on the communication system.
- Secure the area to prevent further traffic from entering the area.
- If it is safe to do so, rescue the operator.
- Have the operator cared for by those on site.

If specialized resources are required to attempt a rescue:

- Utilize an ice evaluation team to conduct an assessment of ice-covered water.
- Ensure workers are protected against exposure to cold, that warm-up facilities and food have been provided, and designate a rest area off the ice.
- Conduct a safety briefing and review ice assessment procedures.
- Identity an ice rescue team, ready equipment and position rescue team slightly upstream of the assessment team.
- Anchor two-man ice assessment team with ropes and harnesses to shore.
- Ice assessment team will proceed from the shore and drill one test hole in the ice to determine:
  - Ice thickness
  - Current velocity
  - Water depth below ice
  - Current direction of water flow
- If the ice is safe to continue, the On Site Supervisor may declare the weight bearing capacity to be sufficient to rescue individuals. All workers who remain on the ice should wear personal flotation devices.

1.4.22 *Helicopter Safety*

All response personnel working around or travelling on helicopters should:

- Be aware of the helicopter's main rotor blade and tail rotor blade at all times.
- Approach towards and disembark from the front or side of the helicopter, in a crouched position. Never approach or disembark the helicopter from the rear.
- Approach towards and disembark from the helicopter on the down slope or downhill side. Never approach or disembark the helicopter from an uphill position.
- Do not load or unload cargo without permission from the pilot.
- Avoid raising your arms or cargo above shoulder height.
- Avoid throwing objects in the vicinity of a helicopter.
- Ensure all light objects are secure and not allowed to become caught in the helicopter rotor downwash.
- Ensure personnel are not standing near the helicopter's approach path during landing or departure path during take-off.
- Avoid approaching the helicopter during engine start-up or shutdown.
- Shield eyes against blown dust or particles.

During helicopter slinging operations, response personnel should:

- Follow all proper safety procedures for working around helicopters.
- Never travel on helicopters involved in slinging operations.
- Take direction from the Loadmaster in charge of flight operations.
- Communicate with the pilot using radios and appropriate hand signals.
- Prepare helipad by removing loose debris and keep helipad clear during flight operations.
- Remove loose objects from the vicinity of landing area.
- Only use multi-stranded steel core long-lines, cables, or lanyards and appropriate hook-up equipment for the helicopter type.
- Only use baskets and nets designed for helicopter slinging operations.
- Ensure that load to be slung is secure in a helicopter basket or net, and equipment will not come loose in flight.
- Keep clear of helicopter approach and take-off paths when a helicopter is carrying sling loads.

1.4.23 *Downed Aircraft*

Response to in-flight emergencies is the responsibility of the air crew. If an in-flight emergency results in an emergency landing at an airstrip or at some other location, Husky will actively support regulatory agencies, the aircraft operator, and public responders in executing the appropriate response to the extent possible. Husky's on-site representative will be the liaison with the response teams unless an alternate is assigned.

If the emergency landing of an aircraft is identified:

- Confirm that the civil air operations and aircraft operator have been notified.
- Determine what response, if any, has been initiated.
- Determine what support Husky's on-site staff and contractors can provide.
- Initiate internal notifications.
- Monitor the progress of the situation.
- Notify on-site workers to stand by.
- Provide assistance, as required.
- Monitor ongoing work-site activities and determine if a work stand-down is necessary for the safety of ongoing operations.

If emergency landing results in ice breakthrough:

- Report the ice breakthrough and location to the Husky base of operations.
- Broadcast a traffic or work-site advisory, stopping all potential traffic of work in the immediate area, on the communication system.
- Secure the area to prevent further traffic from entering the area.
- Notify the RCMP immediately.
- Notify Transport Canada promptly for accident investigation.

If it is safe to do so:

- Rescue the operator and passengers of the aircraft.
- Provide First Aid to operator and passengers by those on site.

If specialized resources are required to attempt a rescue:

- Mobilize rescue resources, including emergency medical staff, ice profiling personnel and equipment.
- Develop a safety plan for the rescue.
- Rescue individuals as quickly as possible.

When those involved in the incident have been rescued, and as soon as it is safe to do so:

- Conduct a risk assessment for removing as much fuel from the aircraft as possible, to limit the amount of fuel spilled during the recovery.
- Report any fuel spilled to **BC Environment at 1-800-663-3456.**
- Use a vacuum truck to clean up the spill.
- Mobilize spill response equipment, as necessary.
- Initiate an Event report, including details of spilled product, spill size, location, status and injuries.
- Report any releases to **BC Environment at 1-800-663-3456**.

If an aircraft is missing:

- Contact flight operations at local airports
- Enlist the help of air service operator or owner of the aircraft
- Support the civil air authorities as they execute their search and rescue procedures.

1.4.24 *Natural Disasters*

The following information has been compiled to provide guidance in response to severe weather and natural hazards. The following guidelines are based on information developed by Environment Canada for inclusion in emergency response plans. For additional information and updates, refer to: https://www.getprepared.gc.ca/index-en.aspx

Natural hazards include but are not limited to:

- Earthquakes
- Flooding / excessive water in basins
- Severe storms
- Tornadoes

Earthquakes

Basic Response:

- Ensure personnel safety.
- Notify appropriate person (e.g. supervisor) of what happened and other details.

During an earthquake:

- When an earthquake starts, take cover immediately.
- Move to a safe place nearby if need be. Stay there until the shaking stops.
- If you are indoors - stay away from windows and shelves with heavy objects. Follow the instructions: 'Drop, Cover, Hold'.
    - DROP - under heavy furniture such as a table, desk, bed or any solid furniture.
    - COVER - your head and torso to prevent being hit by falling objects.
    - HOLD - onto the object that you are under so that you remain covered. If you can't get under something strong, or if you are in a hallway, flatten yourself or crouch against an interior wall.
- If you are outdoors
    - Stay outside.
    - Go to an open area away from buildings.
- If you are in a vehicle
    - Pull over to a safe place where you are not blocking the road. Keep roads clear for rescue and emergency vehicles.
    - Avoid bridges, overpasses, underpasses, piping, buildings or anything that could collapse.
    - Stop the car and stay inside. Do not attempt to get out of your car if downed power lines are across it. Wait to be rescued.

In an earthquake, avoid:

- Doorways. Doors may slam shut and cause injuries.
- All windows, glass and heavy objects.
- Moving equipment including elevators. If you are in an elevator during an earthquake, hit the button for every floor and get out as soon as you can.
- Downed power lines – stay at least 10 metres away to avoid injury.
- Coastlines. Earthquakes can trigger large ocean waves called tsunamis.

After an earthquake:

- Be prepared for aftershocks.
- Take instructions from the Incident Commander or listen to the radio or television for information from authorities. Follow their instructions.
- Place telephone receivers back in their cradles; only make calls if emergency services are required.
- Wear sturdy shoes and protective clothing to prevent injury from debris, especially broken glass.
- Check for structural damage and other hazards. If you suspect the workplace is unsafe, leave, report the unsafe conditions and do not re-enter.
- Do not waste food or water as supplies may be limited.
- Do not turn on light switches or restart equipment until you are sure there are no gas leaks or flammable liquids spilled and the equipment is not damaged.
- Do not flush toilets if you suspect sewer lines may be broken.
- Carefully clean up any spilled hazardous materials, if possible to do so safely. Wear proper hand and eye protection.
- Check on your neighbours around the facility after looking after immediate personnel on site. Help to organize and assist with rescue measures if people are trapped or call for Local Authority emergency assistance if you cannot safely help them.
- Beware of secondary effects.
    - Although ground shaking is the major source of earthquake damage, secondary effects can also be very destructive.
    - These include landslides, saturated sandy soils becoming soft and unstable, flooding of low-lying areas and tsunamis washing over coastlines.

Flooding / Excessive water in basins

Basic Response:

- Ensure personnel safety.
- Notify appropriate person (e.g. supervisor) of what happened and other details.

If flooding is imminent:

- Take action to shut down, isolate and de-pressure process equipment, as required.
- Shut in electricity and electrical equipment as required.
    - Do NOT attempt to shut off electricity if water is already present.
    - The combination of water and live electrical current can be lethal.
    - Leave the area immediately and only enter when it is proven safe.
- Move critical equipment and records to higher ground if safe to do so.
- Remove hazardous materials and dangerous goods from the flood area to prevent pollution if safe to do so.
- As required, remove toilet bowls and plug sewer drains and toilet connections with a wooden stopper.
- In some cases, buildings or equipment may be protected with sandbags or polyethylene barriers. This approach requires specific instructions from the Incident Commander working closely with local emergency officials.

During a flood:

- Keep communication lines open and listen to your radio to find out what areas are affected, what roads are safe, and where to go if you are asked to evacuate.
- If you need to evacuate:
    - Take action to shut down, isolate and de-pressure process equipment, as required.
    - Vacate your workplace when you are advised to do so by the Incident Commander and/or local emergency authorities. Ignoring such a warning could jeopardize your safety, the safety of your coworkers or those who may need to come to your rescue.
    - Follow the evacuation route specified. Don't take shortcuts. They could lead you to a blocked or dangerous area.
    - Never cross a flooded area.
        - If you are on foot, fast water could sweep you away.
        - If you are in a vehicle, do not drive through flood waters or underpasses. The water may be deeper than it looks and your vehicle could get stuck or swept away by fast water.
    - Avoid crossing bridges if the water is high and flowing quickly.
        - If you are caught in fast-rising waters and your vehicle stalls, leave it and save yourself and your passengers.

Excessive water in basins:

- Advise BC Environment of potential issues. Any loss of process water containment needs to be reported as an environmental contravention.
- Identify resource requirements to assist with water movement.

Re-entering your workplace:

- Do not re-enter flooded work areas until the Incident Commander under advisement of qualified personnel (e.g. electricians, structural engineers) has determined it is safe to do so.
- Use extreme caution when returning to your workplace after a flood.
    - Look for evidence that the area and buildings are structurally safe.
    - Look for buckled walls or floors.
    - Watch for holes in the floor, bent or broken piping, broken glass and other potentially dangerous debris.
    - Flood water can be heavily contaminated with sewage and other pollutants which can cause sickness and infections.
    - Equipment that may have been flooded poses a risk of shock or fire.
- Do not use any equipment, heating, pressure, or sewage systems (including appliances) until they have been thoroughly cleaned, dried, inspected and deemed safe to operate.
- Electrical components and panels need to be cleaned, dried, and tested by a qualified electrician to ensure that they are safe.
- Depending on the area and extent of damage, government approvals may be required prior to reconnecting power and/or restarting operations.

Other flood considerations:

- If you suspect that drinking water has been contaminated, don't drink it.
- Items that have been flood-damaged may have to be discarded according to local regulations.
- Documentation - all critical documents that have been damaged can be frozen (in a freezer) until they are needed. After the clean-up, Husky HSE, regulatory and legal advisors can help determine whether the flood-damaged documents, or just the information in them, need to be retained.
- Maintain good hygiene during flood clean-up. Minimize contact with floodwater or anything that may have been in contact with it. Keep children away from contaminated areas during clean-up operations.

Severe Storms

When a severe storm is on the horizon, the Meteorological Service of Canada issues watches, warnings and advisories through radio and television stations, the Weather Office Website, https://weather.gc.ca/forecast/canada/index_e.html?id=BC, automated telephone information lines and Environment Canada's Weather radio.

General Precautions:

- If a severe storm is forecast, secure everything that might be blown around or torn loose. Flying objects can injure people and damage property.
- Assess potential hazards and take actions to reduce the danger of equipment falling and causing other damage during a storm.
- If you are in a vehicle, stop the vehicle away from trees or power lines that might fall on you. Report where you are and stay there.
- Subsequent actions depend upon potential hazards and the type of damage anticipated.

Blizzards

- If a blizzard or heavy blowing snow is forecast, you may want to limit travel or string a lifeline between buildings if you have to move between them during a storm.
- When a winter storm hits, stay indoors if at all possible.
- If you need to go outside, ensure others know where you are going. Report your status regularly.
- Dress for the weather. Outer clothing should be tightly woven and water-repellent. Wear a hat. Jackets should have hoods. Most body heat is lost through the head.
- In wide-open areas, visibility can be virtually zero during blizzards or periods of heavy blowing snow and a person can easily lose their way.
- If you need to travel on roads during a winter storm, do so during the daytime and let someone know your route and expected arrival time.
- If your car gets stuck in a blizzard or snowstorm, remain calm and stay in your car. Allow fresh air in your car by opening the window slightly on the sheltered side – away from the wind. You can run the car engine about 10 minutes every half-hour if the exhaust system is working well. Be aware of exhaust fumes and check the exhaust pipe periodically to make sure it is not blocked with snow. Remember that you can't smell potentially fatal carbon monoxide fumes.
- To keep your hands and feet warm, exercise them periodically. In general, it is a good idea to keep moving to avoid falling asleep. If you do try to shovel snow, avoid overexerting yourself. Overexertion in the bitter cold can cause death as a result of sweating or a heart attack.

Hail

- If hail is forecast, assess potential hazards and take action to reduce the danger of equipment, building or vehicular damage.
- Take cover when hail begins to fall. Hail comes down at great speed, especially when accompanied by high winds. People can be seriously injured by hail.
- If possible, stay indoors and keep away from windows, glass doors and skylights which can shatter if hit by hailstones. Avoid using the telephone during a storm, and do not touch metal objects.
- If outdoors, take shelter and avoid any low lying areas that may flood.

Heavy Rain / Freezing Rain

- When heavy rain is forecast, consider checking the site drainage to reduce the possibility of flooding.
- Ice from freezing rain accumulates on trees, power lines and buildings. If you need to go outside when a significant amount of ice has accumulated, pay attention to branches or wires that could break due to the weight of the ice and fall. Also look for ice build-up on roofs or overhangs.
- Never touch downed power lines. A hanging power line could be charged (live) and you would run the risk of electrocution. Remember also that ice, branches or power lines can continue to break and fall for several hours after precipitation has ended.
- When freezing rain is forecast, avoid driving. Even a small amount of freezing rain can make roads extremely slippery. Wait several hours after freezing rain ends so that road maintenance crews have enough time to spread sand or salt on icy roads.
- Rapid onsets of freezing rain combined with the risk of blizzards increase the chances for extreme hypothermia.

Lightning

- Always take shelter during periods of lightning.
- To estimate how far away the lightning is, count the seconds between the flash of lightning and the thunderclap. Each second is about 300 metres. If you count fewer than 5 seconds, take shelter immediately. If fewer than 30 seconds, look for shelter and take cover.
- If at all possible, wait 30 minutes after the last lightning strike in a severe storm before resuming work outside.
- If you are outside in the open, do not lie flat. Crouch down with your feet close together and your head down (the "leap-frog" position). By minimizing your contact with the ground, you reduce the risk of being electrocuted by a ground charge.
- Do not use equipment that may conduct electricity.

Thunderstorms

- Before a severe thunderstorm, consider shutting down and isolating any non-essential electrical equipment. Regularly check for weather updates.
- During thunderstorms, stay away from items that conduct electricity, such as telephones, sinks and metal piping.
- If you are outdoors when a thunderstorm hits, take shelter immediately, preferably in a building but failing this, in a depressed area such as a ditch, culvert or cave. Be aware of areas that may flood during periods of heavy rain.
- Never seek shelter under a tree.

Tornadoes

Warning signs include:

- Severe thunderstorms, with frequent thunder and lightning.
- An extremely dark sky, sometimes highlighted by green or yellow clouds.
- High humidity and an almost still wind with low hanging clouds with 'fingers' of cloud extending downward and curling back upwards.
- A rumbling or whistling sound.
- A funnel cloud at the base of a thundercloud, often behind a curtain of heavy rain or hail.

Environment Canada has a responsibility for warning the public when conditions exist that may produce tornadoes. It does this through radio, television, newspapers, its internet site, http://weather.gc.ca/forecast/canada/index_e.html?id=AB

as well as through its weather phone lines.

What to do during a tornado

If you are inside:

- Take shelter in a small interior ground floor room such as a bathroom, closet or hallway.
- Protect yourself by taking shelter under a heavy table or desk.
- Stay away from windows, outside walls and doors.

If you are in an office or multi-story building:

- Take shelter in an inner hallway or room, ideally in the basement or on the ground floor.
- Do not use the elevator.
- Stay away from windows.
- Stay out of large buildings with wide-span roofs which may collapse if a tornado hits. Find shelter elsewhere, preferably in a building with a strong foundation.

If no shelter is available:

- Lie down in a ditch away from vehicles or light portable trailers or mobile homes.
- Beware of flooding from downpours and be prepared to move.

If you are driving:

- If you spot a tornado in the distance, drive to the nearest solid shelter.
- If a tornado is close, get out of your vehicle and take cover in a low-lying area, such as a ditch.

In all cases:

- Get as close to the ground as possible, protect your head and watch for flying debris.
- Do not chase tornadoes – they are unpredictable and can change course abruptly.
- A tornado is deceptive. It may appear to be standing still but may actually be moving toward you.

1.4.25 *Nuclear Gauge Emergency Procedures*

Nuclear process control radioactive sources and their lead and steel containers are designed to meet stringent fire, explosion and corrosion tests. Failure by either the radioactive source encapsulation or the shielded source housing can create radioactive contamination and radiation exposure problems in the workplace.

If any nuclear process control gauges are involved in or impacted by an emergency, contact the Radiation Safety Officer (RSO) immediately.

The Maintenance Department maintains specific procedures for qualified personnel to follow for nuclear gauges involved in fires or explosions.

The Canadian Nuclear Safety Commission (CNSC) is to be notified immediately of any incident involving a sealed radioactive source, they can be contacted at **1-613-995-0479.**

1.4.26 *Control of Birds and Wildlife on Ponds and Other Hazardous Areas*

1.4.26.1 Groups Affected

The *Control of Birds and Wildlife on Ponds and Other Hazardous Areas Recommended Practice* pertains to Husky Energy (Husky) facilities that operate ponds and waste management facilities containing potentially hazardous substances including:

- Husky Lloydminster Upgrader (HLU)
- Husky Lloydminster Refinery
- Prince George Refinery
- Rainbow Lake Gas Plant
- Sunrise Thermal Facility
- Tucker Thermal Plant
- Upstream facilities
- Oil Spill Sites

All Husky facilities where bird or wildlife injury is a risk must use this Recommended Practice as a minimum requirement; however, site-specific procedures may also be developed that exceed the practices recommended in this document.

1.4.26.2 Purpose

The purpose of the *Control of Birds and Wildlife on Ponds and other Hazardous Areas Recommended Practice* is to provide information, regulatory obligations and mitigation strategies to aid Husky employees and associated contractors working on Husky facilities to avoid impacting birds and other wildlife that may come into contact with harmful substances on or around Husky facilities. It is important that Husky facilities show due diligence by employing bird and other wildlife control measures that are appropriate and cost-effective.

1.4.26.3 Policy Statement

This Recommended Practice is aligned with Husky's Health Safety and Environment Policy and HOIMS Element 8 Environmental Stewardship which aims to:

- Operate responsibly to minimize the environmental impact of how we conduct our business. Leave a positive legacy behind us when operations cease.

The expectation is that:

- Environmental impact is monitored and reported to demonstrate compliance with relevant local, provincial, national and international regulations and to ensure that any commitments are honoured.

1.4.26.4 Personnel Health and Safety

Safe Bird and Wildlife Capture

Attempts to rescue oiled birds or wildlife may be suspended due to bad weather, unsafe footing or other unsafe operating conditions.

Captured birds or wildlife are often aggressive and should be regarded as dangerous. Birds with sharp beaks will often aim for the eyes of their captors or produce puncture wounds. The toenails or claws on many birds can produce scratches that may lead to infection.

Handling oiled birds or wildlife may result in personnel contacting oil products which are toxic to both animals and humans. Care should be taken to minimize contact with these products. Safety Data Sheets (SDS) for the expected hydrocarbon or chemical products with which birds may have come in contact should be consulted to ensure that proper personal protective equipment is being worn before handling a bird. See Section 1.4.26.9 for information about capture, handling and transport of birds.

Diseases (Zoonoses) from Contact with Birds

A zoonosis is any infectious disease that can be transmitted to humans from animals (either domestic or wild). Such diseases have the potential to be dangerous to human health. Many modern diseases, even epidemic diseases, started out as zoonoses. There is good evidence that diseases such as measles, influenza, smallpox, and diphtheria became a problem for humans through this route. Recently, West Nile virus, Severe Acute Respiratory Syndrome (SARS) and Avian Influenza (Bird Flu) are known to have been transmitted originally from animals.

Bird or other wildlife diseases may one of the following types:

- bacterial (e.g., Camplyobacteriosis, Salmonellosis);
- viral (e.g., West Nile Virus, Newcastle Disease, Bird Flu H5N1);
- fungal (e.g., Aspergillosis);
- or parasitic (e.g., mites).

Bird diseases may be transmitted to humans through one of the following routes:

- orally (e.g., ingestion of feces through poor hygiene practices);
- inhalation of particles (e.g., viruses, spores or bacteria);
- or through skin contact.

While it is unlikely that the limited and short term contact personnel may have with birds will result in disease transmission, it is an important issue to be aware of the hazards of handling birds. Compliance with the common sense safe handling practices outlined in the following section, General Health and Safety Rules for Handling Birds will significantly reduce the risk of injury or disease transmission.

General Health and Safety Rules for Handling Birds

The following common sense rules apply to handling of birds and other wildlife.

- Immuno-compromised or pregnant personnel must not have direct contact with birds.
- Personnel are required to wear appropriate clothing and protective equipment when handling birds and other wildlife. Long pants and long-sleeved shirts should be worn to minimize the risk of cuts and scratches.
- Heavy gloves are not recommended for capturing birds as they reduce handling ability which may lead to injuries to the bird. Heavy gloves will be necessary, however, when handling large or aggressive birds, for example seagulls or hawks.
- Light gloves can be worn when dealing with smaller birds and latex gloves can be considered in these cases. When using work gloves, it is important to use a fresh pair to ensure that any oil or chemicals that may be on used gloves are not transferred to an otherwise un-oiled or healthy bird that is a candidate for release.
- Jewelry should not to be worn while handling birds as the bird may be attracted to bright surfaces and may try to peck at the worker.
- All bird and wildlife handling personnel are required to have current tetanus shots.
- Clean and treat all cuts and scratches immediately, especially if sustained while handling birds and other wildlife.
- Personnel will wash hands and face with soap and water after handling birds and other wildlife and before eating, drinking, or smoking.

1.4.26.5 Environmental Impact

This practice was developed to prevent bird and other wildlife oiling and mortality.

1.4.26.6 Regulatory Framework

Failure to mitigate impacts to wildlife could lead to enforcement action under any or each of the following statutes:

Federal

- The *Migratory Birds Convention Act (MBCA)* (1994) is administered by Environment Canada's (EC's) Canadian Wildlife Service. The Act implements a treaty between Canada and the United States that co-ordinates a system to prevent the indiscriminate harvest or destruction of migratory birds. The Act applies to all lands and bodies of water in Canada and to the activities of all organizations, industries and individuals. Compliance with the *MBCA* and the Migratory Birds Regulation is mandatory. Section 5.1(1) of the *MBCA* prohibits depositing or permitting the deposit of a substance harmful to migratory birds in waters or an area frequented by birds. Section 6 of the Migratory Birds Regulation prohibits the disturbance, destruction or taking of a nest, egg or nest shelter of a migratory bird. The *MBCA* covers more than 700 species including migratory game birds, migratory insectivorous birds, migratory nongame birds, waterfowl, shorebirds, songbirds and seabirds. Most raptors, blackbirds, upland game birds, pelicans and cormorants are excluded. However, they may be covered under provincial or other federal legislation. The Act applies to all lands and bodies of water in Canada and to the activities of all organizations, industries and individuals. The Act can be enforced by Parks Canada, RCMP and

provincial enforcement officers. Under the current regulatory framework pursuant to the *MBCA*, Environment Canada recommends that proponents avoid conducting project-related activities during times that have the potential to harm migratory birds or their active nests.

'Incidental take' refers to the killing of migratory birds, and/or the disturbance or destruction of their nests or eggs resulting directly or indirectly from human activities, where the primary objective of the activity is not the killing of migratory birds and/or the disturbance or destruction of their nests or eggs. Environment Canada expects due diligence be exercised to avoid harm to migratory birds.

- The *Species at Risk Act* (*SARA*) established Schedule 1 as the list of species to be protected on all federal lands in Canada. *SARA* also applies to all lands in Canada for Schedule 1 bird species cited in the *MBCA* and Schedule 1 aquatic species as determined by Fisheries and Oceans Canada. Please refer to the *Species of Concern that occur in Husky Operating Areas* document for further references.

- The Canadian Wildlife Service will have jurisdiction on any event where oil has affected a migratory bird or species at risk.

British Columbia

- Section 34 of the *British Columbia Wildlife Act* states that a person commits an offence if the person, except as provided by regulation, possesses, takes, injures, molests or destroys a bird or its egg, the nest of an eagle, peregrine falcon, gyrfalcon, osprey, heron or burrowing owl, or the nest of a bird not referred to previously when the nest is occupied by a bird or its egg. Section 26(1)(a) states that a person commits an offence if the person hunts, takes, traps, wounds or kills wildlife that is an endangered species or threatened species.

- The *Environmental Management Act (EMA)* includes directives regarding how to dispose of waste in a way that protects human health and the quality of water, land and air.

1.4.26.7 Bird Control Measures

All bird control measures to be implemented should be in place prior to March 31 of every year. Some general wildlife control measures should be in place year-round (*e.g.* fencing).

Birds need not be controlled or deterred from storm water management ponds, industrial runoff control systems or domestic wastewater lagoons as they are deemed to meet applicable environmental criteria and not be hazardous.
The following references were reviewed to determine the bird control options that are most suitable for Husky Operations:

- Bird Hazing and Frightening Methods and Techniques (with emphasis on containment ponds) (Marsh 1991);
- Evaluation of the Efficacy of Products and Techniques for Airport Bird Control (Transport Canada 1998); and
- Bird Hazing Manual: Techniques and Strategies for Dispersing Birds from Spill Sites (Gorenzel and Salmon 2008).

Bird control options for Husky's Operations may include the following:

- **Bird Control Radar Systems-** 360 degree continuous monitoring with up to 256 programmable control zones for areas in size from under 1 ha to over 10 km^2 and up. Automated detection & non-lethal hazing of birds & other wildlife. Deterrent device options include Long Range Acoustic Devices (LRADs), lasers and conventional devices (propane cannons, bioacoustics & effigies).
- **Biosonics -** Species-specific alarm and distress calls have been known for over 30 years to be effective at dispersing some, but not all, species of birds. Because broadcast systems are mobile and versatile, distress/alarm calls can be very useful. Alarm/distress calls also can be used to create agitation in birds, thus enhancing the dispersal effect of other techniques.
- **Reflecting Tape -** Reflecting tape is an elastic, three-layered tape that has a silver metal layer coated on one side and a coloured (usually red) synthetic resin on the other side (Bruggers *et al.* 1986). This type of tape flashes when it reflects sunlight, and produces a humming or crackling noise when it stretches or flaps in the wind. Because of its noise and reflective features, reflecting tape has been used to deter birds in agricultural settings and over ponds.
- **Human Effigies / Scarecrows -** Scarecrows are a flexible deterrent technique. They can be deployed on land or water, are mobile, and are inexpensive to construct. Scarecrows can be used in combination with other control products to enhance the overall deterrent effect. Over the long-term, however, scarecrows have proven to be ineffective. Their best use is in circumstances where temporary and local control is sufficient.

- **Falconry -** This is a highly effective technique but may not be useful on ponds as birds may dive to escape predators thus covering themselves with the hazardous material.
- **Radio-controlled Model Aircraft** - This is an effective technique, but skilled operators are needed.
- **Bird Exclusion Nets** - Actual physical barriers include devices and materials to cover or surround an area (netting and fencing). Bird-exclusion netting is made out of polyethylene, other synthetic materials, or cotton and is available in a variety of mesh sizes. It would not be practical to use these exclusion products where birds must be kept out of large areas due to high costs. These devices would be most useful in situations where the risk was confined, or for deterring birds from landing at specific sites such as nest sites.
- **Overhead Wires and Lines** - A grid, or series of parallel lines, of fine wire or monofilament line is strung on a level plane over the area from which birds are to be excluded. The spacing of the lines varies from approximately 1.5 to 12 m, depending on the species and feature to be treated. Sometimes wires/lines around the sides of the area are required as well.
- **Bird Balls™** - This is a relatively new and promising product that has been used to exclude water birds from industrial ponds in the western United States since 1993. Birds are denied access to a pond by covering the entire water surface of the pond with these high-density polyethylene (HDPE) 4-inch diameter spheres. The balls “hide” the water surface from the birds, although birds could probably land in the pond, and the balls would shift aside. Problem could be that balls would become covered in hazardous substances and would need cleaning. Wildlife Control Technology, Inc. is the sole North American distributor (Wildlife Control Technology, Inc. 2010).

It is recommended that a variety of deterrents be employed for better results.

The following techniques are **not** recommended due to hazards they present, ineffectiveness and/or fire risk at Husky facilities:

- Flares, pyrotechnics, firearms, gas cannons
- High intensity sound
- Ultrasonic
- Predator models (plastic owls)
- Lights

Currently the following facilities are using control options. Please contact them for further information.

- Husky Lloydminster Upgrader - high tension wires (installed 2009)
- Prince George Refinery - flagging, predator decoys, aerators

1.4.26.8 Incident Response

In situations where bird and other wildlife may be impacted by harmful substances including petroleum hydrocarbons, the incident should be treated as reportable and the Corporate Incident Management Flowpath and *Incident Management Code of Practice* must be followed. In the event of an oil spill, Husky's *Spill Management Recommended Practice* must be followed.

Internal reporting requirements include:

- The Environmental Coordinator is to be notified of any sick or injured wildlife found on a Husky site.
- Operations and Environmental staff should be notified immediately of the incident.
- Any death or oiling of multiple birds or wildlife has the potential to cause a media incident and Husky's Investor Relations and Corporate Communications group should be notified.

External reporting requirements include:

- Operations will notify the closest Animal Hospital that an animal will be transported to it. Husky's goal is that any identified animal should receive medical attention within one hour.
- If a spill affects birds or other wildlife, the Canadian Wildlife Service must be contacted. Canadian Wildlife Service will have jurisdiction in the following areas:
    - Providing information on the migratory bird resource and species at risk (under CWS jurisdiction) in the area of a spill (this includes damage assessment and restoration planning after the event);
    - Minimizing the damage to birds by deterring unoiled birds from becoming oiled;
    - Ensuring the humane treatment of captured migratory birds and species at risk by determining the appropriate response and treatment strategies, which may include euthanizing, or cleaning and rehabilitation.
- If oiled wildlife is found in Saskatchewan, Saskatchewan Environment must be contacted.
- Western Canada Spill Services (WCSS) should be contacted;
- In addition, the *Incident Management Code of Practice* must be followed with respect to other external reporting requirements.

A Corporate Incident Report form will be filled out for any bird or wildlife that has been injured or oiled. If birds or wildlife are oiled it should be classified as a Serious Incident (2) at a minimum.

1.4.26.9 Capture, Handling and Transport of Oiled or Injured Birds and Other Wildlife

In the event that a bird or other wildlife does become trapped in a pond or exposed to a hazardous substance, an effort must be made and documented to rescue the animal. Operations personnel will coordinate retrieval of the animal. No employee may be put at risk in order to retrieve an animal.

Action Plan

An action plan should be developed before attempting to capture an oiled bird or wildlife. A bird capture team consists of two or more people. The team should be familiar with the bird's natural history and behaviour, as this knowledge will allow them to implement capture with minimal stress on the bird.

Capture and Handling of Birds or Other Wildlife

Equipment most commonly used for capture includes: dip nets, capture cloths (usually towels) and cardboard transport containers or boxes. Note that Western Canada Spill Services (WCSS) has bird hazing equipment in the equipment trailers.

Birds and other wildlife impacted by oil are vulnerable and can be injured or stressed by capture. The capture of an oiled bird or other wildlife should be done as quickly as possible and with minimal noise and pursuit to reduce stress to the bird. If the bird is not captured following three or four attempts, the capture team should consider giving the bird a chance to rest. Continuing pursuit of a stressed bird may result in injury or drowning.

Small birds such as sandpipers can be cupped in the hand. Medium-sized birds, such as ducks can be handled by using the body hold. Large oiled birds (*e.g.* Canada geese) are often handled using the buddy system. If a dip net is available, place the dip net in front of a large moving bird and let the bird enter the net. Do not attempt to swat the bird as it can easily be injured by the stiff rim of the net. Once the bird is in the net, the rim can be turned sideways against the netting to prevent escape. As soon as the bird is caught, open the net and cover the bird with a towel for removal.

The following are some basic rules for handling birds that are safe for both the bird and the handler:

- Approach bird or wildlife from behind or from the side if at all possible.
- Eye contact should not be made with the animal as the bird will see this as a threat and try to flee. Remember that the bird perceives you as a predator.
- If handling a bird alone, hold the bird at waist level and away from the face to avoid injury; use a firm grip and restrain the head first, but do not grasp the neck.
- Always maintain control of the bird's head, only letting go when the bird is in the transport container.
- Do not grip the bird too tightly as this may restrict its breathing. If holding the beak closed, be careful not to block the nares (nostrils) or the bird will not be able to breathe.
- Cover the bird with a towel as it will help you to get a grip on the animal and it will minimize visual contact which may allow the animal to calm down.
- Speak softly to the bird once it has been captured as this will minimize stress on the bird.

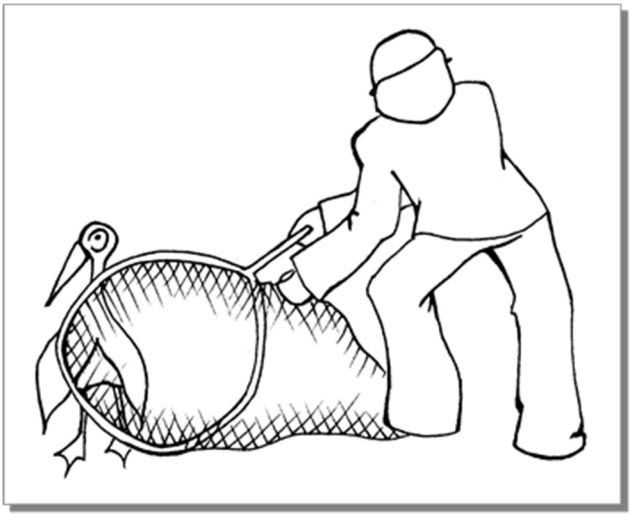


Figure 1– Capture Technique

Transporting Birds or Other Wildlife

Cardboard transport containers, approximately twice the size of the bird, should be used. Approved bird transportation boxes are available from suppliers.

The following are guidelines for transporting birds.

Place paper or cloth towels on the bottom of the container to absorb oil and droppings.

Holes should be cut in the sides of the container for ventilation. Oil on freshly oiled birds will usually emit vapors – thus good container ventilation is essential. Note that these vapors can also affect humans and care must be taken to minimize human exposure. Usually, only one bird is placed in a transport container. An exception can be made in the case of compatible species which are not aggressive towards each other.

Label the container with the following information: date, time, location of capture, and any noted injury and nature of contaminate.

Leave adequate space between each container (at least 12 cm) to ensure adequate ventilation. Pieces of wood can be used as separators to prevent containers from being forced together. Containers should be secured to prevent load-shifting during transport.

Keep the container and the bird in a quiet place and minimize temperature extremes around the container until transport is available. The temperature inside the transport vehicle should be 20°C to 21.2°C. If the bird is wet, has a large open wound or is emaciated, the temperature should be raised to around 26.5°C. Transport containers provide good insulation, so it is possible for the birds to overheat during transport. Signs of overheating include panting or open mouth breathing and, in some cases, seizures. If you think that a bird is overheated, it can be misted with cool water.

Check the birds periodically (once per hour), to monitor their conditions. Do not check the bird too frequently, as this will produce added stress.

Never check on a bird by placing your face or eyes close to the holes in a container or close to the openings.

The bird should not be exposed to human voices or music, or to domestic animals while in the container.

Dead Wildlife

Wildlife that is found dead and un-oiled must be taken to the local government Fish and Wildlife office for disposal. If dead migratory birds are found, personnel are directed by the Environment Canada to delivery such birds to provincial authorities for an avian virus analysis from September 3, 2009 to September 2, 2010.

Oiled wildlife is considered hazardous material. Contact your Environmental Coordinator for advice. It is not recommended that large dead wildlife be handled (*e.g.*, deer, bears). Contact your local fish and wildlife office for assistance.

Refer to Section 1.4.26.9 for information pertaining to capture, handling and transport of oiled, injured or dead birds and other wildlife.

1.4.27 *Notification of Next-of-Kin*

This guideline applies for Notification of Next-of-Kin for:

- A serious injury
- A fatality
- Company personnel may be involved in an emergency who are unharmed, but are not able to contact family members to advise of their status
- Other situations where Husky may need to contact family members of its staff.

Contractor Next-of-Kin Notification

- If an employee of a contractor employed by Husky is injured, the Incident Commander and Corporate Director will ensure that the contractor's head office is notified. The Contractor is responsible for their own employees notification of Next-of-Kin
- In the case where a contractor is a small operation, or with no office, Husky will request that the RCMP identify and notify the next of kin.

Employee Next-of-Kin Notification

The Incident Commander is responsible for the notification of Next-of-Kin and this will be coordinated by the Corporate Director and Human Resources. Husky will request that notification be made by RCMP Victim Services, accompanied, if possible, by the most senior company field representative or appropriate Husky representative known by the family. Consideration should also be given to having next of kin notification support by clergy or a representative of the deceased religious background, if available.

If a company employee is seriously injured, missing or killed, it is the responsibility of the Incident Commander to ensure that Husky provides prompt notification to the Police so that the immediate family is notified as quickly as possible.

Note: Death can never be declared by Husky no matter how obvious

Policy

- In telephone or radio communications, personnel are to exercise extreme discretion regarding the names of the injured or deceased. If at all possible, use secure landlines when having any such discussions.
- Under no circumstances are the names of casualties or missing persons to be released. The release of names will only be done by the appropriate authorities.
- In the case of death of a Husky employee or Contractor employee, the Next-of-Kin notification should be done in person by the RCMP and, when possible, with assistance of a Husky representative. However, notification is not to occur until a medical doctor or medical examiner with the RCMP has pronounced the casualty legally dead.
- If the incident involves the death or serious injury of a member of the public, local police will be contacted by the Incident Commander (or designate) and asked to notify the Next-of-Kin.
- The Incident Commander will ask that the Corporate Director task Human Resources staff to provide the necessary support to help shield affected families from excessive media harassment, if required.

Considerations

- The On Site Supervisor should attempt to obtain names of all witnesses to the accident and make any notes that may assist in obtaining written statements from witnesses in case the Police ask for the following information:
    - Deceased's proper name, address, date of birth, and other identifiers
    - All facts surrounding accident/reason for death
    - Time and location of incident
    - Exact time of death, if known
    - Names of attending physicians when death was pronounced
    - Names of attending officers and / or witnesses
- Police, Medical Examiner, Occupational Health and Safety, and a member of Husky's Corporate Response Management Team and/or senior management may travel to the site to meet with the Incident Commander and the On Site Supervisor. All material and equipment involved in a fatal accident are to remain untouched until cleared for removal by the Police.
- The On Site Supervisor should attempt to document all valuables belonging to the deceased before turning them over to the Medical Examiner. A signed receipt should be obtained from the person taking custody of these materials.

Guidelines - for Husky personnel supporting RCMP Victim Services

While the RCMP Victim Services have their own protocol, Husky believes that initial notification to Next-of-Kin of a death or serious injury may be difficult and usually very emotional but it is also very important.

Some helpful points for Husky personnel supporting RCMP Victim Services are:

- **Triple check** the casualty's identity before notifying the family.
    - Confirm the relationship of the casualty to the relative being notified.
    - Notification will attempt to be made in person. In cases where the Next-of-Kin are remote to the emergency scene, the police should be requested to notify the immediate family, possibly without a company presence.
    - In the case of death, no notification should be given to Next-of-Kin until a medical doctor confirms the casualty's condition. If the Next-of-Kin do not live in the vicinity, notification should be routed through the police.
    - Identify the time and location of the accident and the current location of casualty.
- The most senior company field representative or appropriate Husky representative known by the family should be considered to accompany the police in making notifications. Should the appropriate person be unavailable, the Incident Commander together with the Corporate Director will assign a staff member so there is no unnecessary delay in making notifications. Consideration should also be given to having next of kin notification support by clergy or a representative of the deceased religious background, if available.
- Identify the time and location of the accident and the current location of the casualty.
- Present facts without speculation. Do not discuss personal perceptions of liability or fault. Offer assistance, such as transportation to the hospital.
- Advise the family that a company representative will attempt to contact them to discuss any immediate and future needs. Follow up on this commitment.

The notified individual should not be left alone after initial notification is given.

1.4.28 *Post Incident Procedures*

Post-Incident procedures may involve five major activities and are usually coordinated by the Incident Commander and On Site Supervisor. The Corporate Director will be responsible for any corporate contacts and the Liaison Officer will contact involved government agencies.

Post-incident activities are:

- Emergency Call-down Notification
- Assist public / landowners / workers
- Site cleanup and / or repairs
- Review and Debriefing
- Incident Investigation Reports and Records

Emergency Call-Down Notification

- The Incident Commander in consultation with the Lead Agency and/or other regulatory body and members of the Corporate Response Management Team 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 Corporate Communications.
- 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 ERP must be conducted.
- 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.

Assist Public / Workers

Prior to the "Return to Normal" signal:

- Ensure that all evacuated areas are safe to re-enter;
- Transportation is available for returning evacuees if required and;
- Residences and other buildings are ventilated and monitored for gas pockets before allowing re-entry.

After Call-down:

- All evacuees are contacted within 24 hours of resettlement to check their situation and follow-up meetings are conducted with area users to resolve any concerns they may have.
- All work areas, safety equipment, machinery and tools are cleaned, repaired and returned to their proper location.
- Maintain security until all residents / workers have returned to their homes / worksites.
- Ensure appropriate resident / landowner / worker expense / damage claims are promptly collected and processed.
- Arrange to communicate with the residents / landowners / workers to answer questions and address concerns.
- Document assistance activities.
- Review needs for Critical Incident Stress Debriefing with [redacted], response personnel and appropriate public.
    - Husky uses [redacted] to deliver a full suite of counselling services including Critical Incident Stress Debriefing (CISD) for affected persons. Husky has provided training to leaders to identify what to watch for, and how to forward a recommendation, and has clarified that [redacted] will ensure qualified staff are selected to perform the debriefing.

Site Cleanup and / or Repairs

- If serious injury or death has occurred, the scene must be left undisturbed.
- Secure incident site until all investigations are completed.
- Prioritize cleanup activities and restore the site to normal operating conditions utilizing all available staff.
- Conduct any safety or environmental inspections.
- Document all cleanup activities.

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.).

Documentation recorded must be retained for five (5) years and provided to the BC OGC upon request.

Incident Investigation Reports and Records

Incident investigation reports and records are coordinated by the Incident Commander who will ensure that the following steps are completed:

- Analyze and review all documentation and physical evidence to establish probable cause of incident.
- Review effectiveness of response procedures including safety standards utilized, media and public relations actions and environmental control measures. Identify the strengths and weaknesses of the process and the response.
- Evaluate effectiveness of internal and external communications systems, notification and call-down efforts.
- Identify the legal and environmental consequences resulting from the incident or response.
- Estimate current and future expenses related to the incident.
- Prepare a comprehensive corporate report recommending incident prevention measures, improvements to emergency response procedures and required company policy changes.
- Ensure all responders, employees, contractors and involved government and community agencies are recognized for their efforts.
- Collect all documentation from all field, contract services and corporate response members.
- Photograph, video and tape-record as much information as possible.
- Ensure all statements, time and event logs, forms, etc. are indexed for storage.

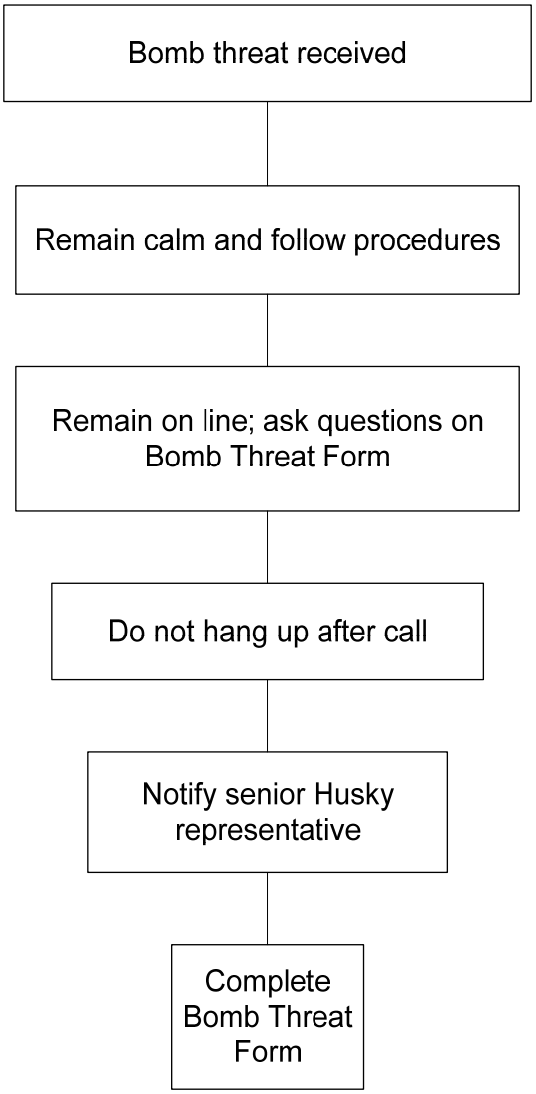
The OGC requires an Operator Incident Summary Report (2 copies) for a Level 2 and 3 incident to be filed within 30 days.

1.4.29 *Security Issues (Criminal Acts)*

Telephone Bomb Threat

[redacted]

Bomb Threat Flow Chart



Response Actions

[redacted]

Incident Commander (Senior Husky representative):

[redacted]

Search Procedures

[redacted]

Guidelines

[redacted]

[redacted]

Receipt of Suspicious Letters or Packages

[redacted]

[redacted]

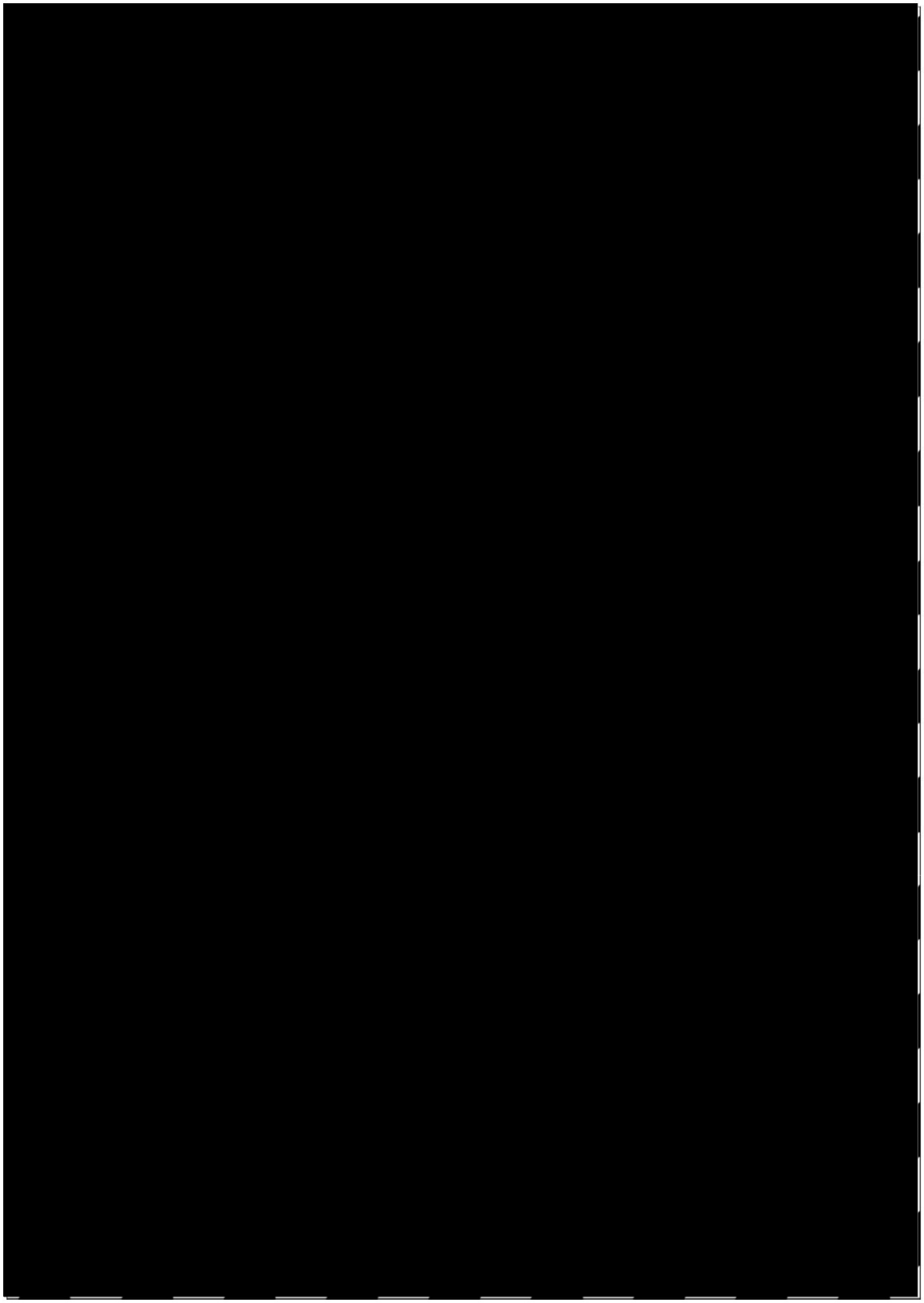
Terrorism

[redacted]

Response Actions

[redacted]

Suspicious Person / Trespasser



Protesters, Demonstrations and Blockades

[redacted]

Response Actions:

[redacted]

ERP Response Levels:

Normal	[redacted]
Alert	
Level 1	
Level 2	
Level 3	

Protester Statement

[redacted]

Active Assailant Situation

[redacted]

Evacuate (Run)

[redacted]

Take Cover (Hide)

[redacted]

Take action (Fight)

[redacted]

HOW TO RESPOND WHEN LAW ENFORCEMENT ARRIVES

[redacted]

How to react when law enforcement arrives:

[redacted]

Information to provide 911 operators:

[redacted]

Hostage Situation

[redacted]

Full Evacuation

[redacted]

Partial Evacuation

[redacted]

Cyber Security Incidents Affecting Industrial Control Systems

[redacted]

Industrial Control System Cyber Incident Reporting Process

[redacted]

1. Identify Incident

[redacted]

2. Troubleshoot Incident

[redacted]

3. Notify IS Service Desk

[redacted]

[redacted]

[redacted]

Vandalism

[redacted]

Criminal Activity, Reporting Incidents and Crime Scene Preservation

[redacted]

[redacted]

Criminal Activity Level	Actions	Who to Contact	Follow-up Actions
No Immediate Threat (Level 1)	[redacted]		
Crime in Progress (Level 2)			

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Royal Canadian Mounted Police / Gendarmerie royale du Canada

REPORTING CRITICAL INFRASTRUCTURE ISSUES TO THE POLICE

ELECTRICAL, OIL AND GAS SITES

- Use this form to report mischief (vandalism) and/or theft occurrences on Electrical, Oil and Gas Sites;
- Form must be completed for all such occurrences on Electrical, Oil and Gas Sites properties that are being reported;
- If a vehicle has been stolen from a property, you must contact your local Police to arrange to complete a Stolen Vehicle Report in addition to this report concerning any other mischief or theft that occurred during the matter;
- **If the offence occurred within the last 24 hours, contact your local Police for immediate police attention in addition to completing this form.**
- **When completed, print and submit this form by fax to your local Police**. The assigned Investigator will contact you with the associated file number as soon as practicable. You may also call the Detachment to obtain the file number if it is required sooner.

YOUR INFORMATION

Full Name _____ **Date of Birth** (yyyy-mm-dd) _____

Home Address _____ **Phone #** _____

Email Address _____ **Alternate Phone #** _____

Company Name _____ **Company Fax #** _____

Company Address _____

SITE INFORMATION

Site Address _____

Site Function (ex. gas plant) _____

Site Previously Targeted? Yes ☐ No ☐

Yes, approximate date last targeted? _____

Surveillance, alarmed or video available? Yes ☐ No ☐

What type of vehicle can access the site? (select all that apply)

☐ Car/Van ☐ Truck ☐ ATV

PROVIDE BELOW INFORMATION ONLY IF YOUR COMPANY IS A CONTRACTOR FOR THE SITE OWNER

Owner Name _____ **Contact Phone #** _____

OFFENCE INFORMATION

Date & Time of Discovery (yyyy-mm-dd tt:tt) _____

Date & Time Range Suspected (yyyy-mm-dd tt:tt) _____ **to** _____

Who Found/Reported Incident _____ **Phone #** _____

How Was Entry Made

Was there disruption to operation or safety concerns as a result of the issue to property?

Offence Type (select all that apply)

Theft over $5000 (Total Value of good stolen) ☐ **Theft Under $5000 (Total Value of goods stolen)** ☐

Mischief to Property (Damage to vehicles, fence, buildings, disruption of work) ☐ **Break and Enter** ☐

Trespassing ☐

Is it obvious that physical evidence has been left at the scene?

What was taken (detailed description-ie wooden spool with copper wire and markings on spool. Mention size, color of markings & location of item)

Value of Goods Taken $ _____ **Value of Property Damage** $ _____ **Repair Costs** $ _____

OFFENCE INFORMATION

Suspect Name(s) (if known)

Briefly describe what happened to the best of your knowledge. Include any observations as to how the suspect committed the offence.

Retain a copy from the Police for you, your company and your contracting partner

Companies do not forget to forward to ASSIST for their tracking. Your security coordinator will help.
For ASSIST matters, email assist@gov.ab.ca or phone (24/7) 780-644-2680

Your Signature: _____

FOR POLICE USE ONLY

File Number

Police Agency

Date/Time Received

INVESTIGATOR INFORMATION

Rank

Full Name

Email

Phone #

UCR Scoring Codes

8999.1054 – Oil Theft
8999.1055 – Oil Field Equipment Theft
8999.1056 – Mischief to Oilfield Property
8999.3073 – Critical Infrastructure Site

Up to four codes can be entered by police.
Break and Enter/Critical Infrastructure site et al.

Date/Time File # Sent to Co.

Security Support - During Incidents

[redacted]

Trespassing

[redacted]

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1.5 Forms

Initial

1.5.1 ICS Form 201: Incident Briefing 1
1.5.2 Form 2: Primary ICS Functions 5
1.5.3 Form 3: Media Inquiry 7
1.5.4 Form 4: Bomb Threat 9
1.5.5 ICS Form 211: Check In / Out List 11
1.5.6 ICS Form 213: Resource Request 13
1.5.7 ICS Form 214: Activity Log 15
1.5.8 ICS Form 214a: Individual Log 17
1.5.9 ICS Form 215a: Incident Action Plan Safety Analysis 19
1.5.10 ICS Form 233: Open Action Tracker 21

Public Safety

1.5.11 Form 5: Incoming Call Record 23
1.5.12 Form 6: Air Monitoring Record 25
1.5.13 Form 7: Rover Communication Record 27
1.5.14 Form 8: Roadblock Record 29
1.5.15 Form 9: Notice of Evacuation 31
1.5.16 Form 10: Public Contact Record 33
1.5.17 Form 11: Shelter-in-Place Message 35
1.5.18 Form 12: Voluntary Evacuation Message 37
1.5.19 Form 13: Requirement to Evacuate Message 39
1.5.20 Form 14: Reception Centre Registration Record 41
1.5.21 Form 15: Evacuee Concerns Record 43
1.5.22 Form 16: Daily Expenses Claim 45

The following section 1.5 contains the following redactions:

- 1.5.4: This section contains security sensitive information, the disclosure of which would create a real and substantial risk that its disclosure will impair the security of pipelines, buildings, structures or systems. It is protected from publication under Clause 1(a)(ii) of NEB Order AO-001-MO-006-2016.

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ICS FORM 201: INCIDENT BRIEFING

Facility Name:		Incident Location (LSD/NTS):
Time of Event:	Time Zone:	Date of Event (mm/dd/yy):
Level of Emergency: ☐ Alert Level ☐ Level 1 ☐ Level 2 ☐ Level 3		
Incident Commander Name & Phone Number:	ICP Location / Phone Number:	STARS / 911 Notified: ☐ Yes ☐ No
On Site Supervisor Name & Phone Number:	On Scene Command Post Location:	

Initial Emergency Summary:

Safety Considerations:

Map Sketch:

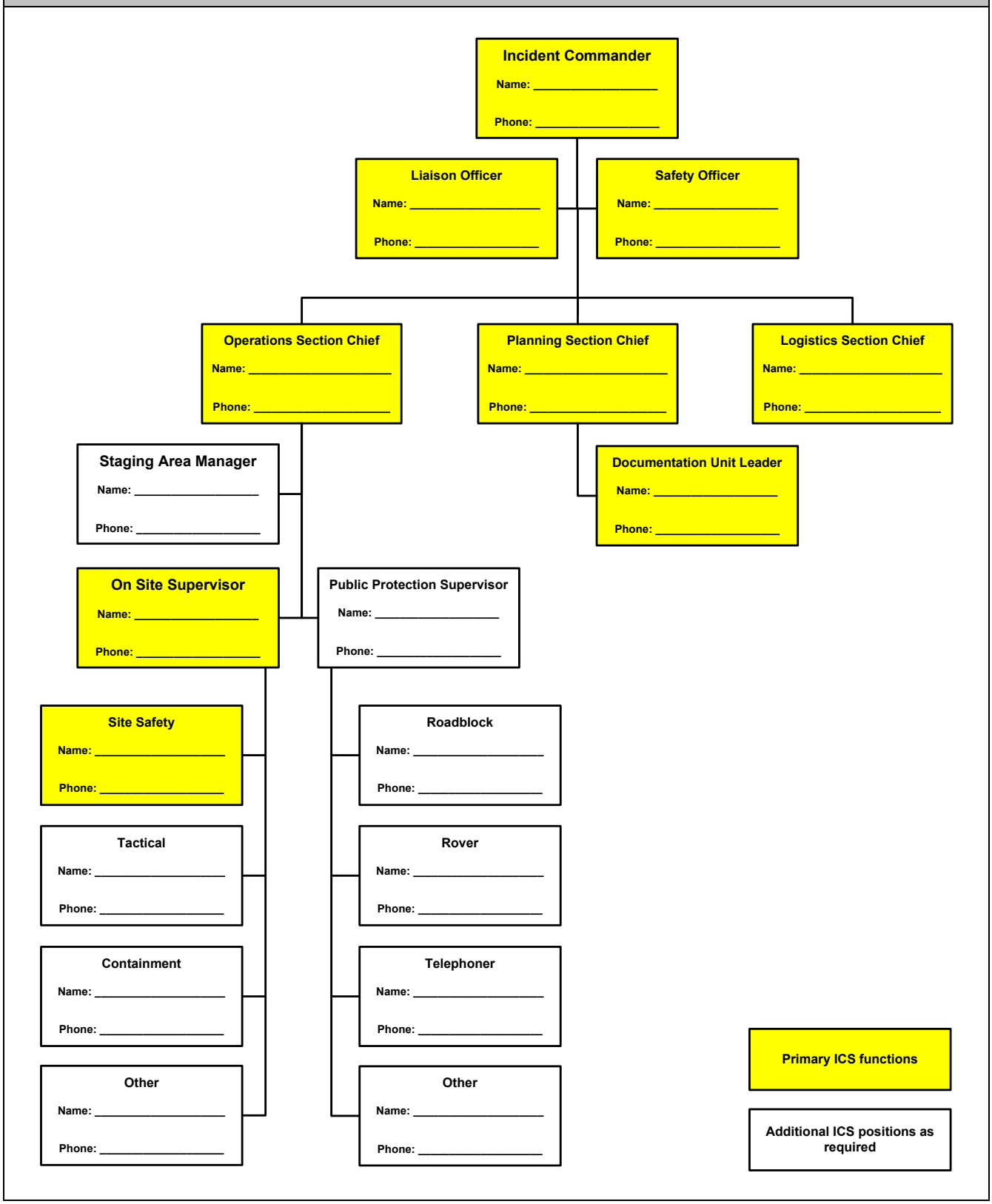
Note: Maps can be drawn or attached here.

Priorities	Problems	Objectives
Life Safety		
Incident Stabilization		
Environment / Property		
Stakeholder Management		

Internal and External Notifications:

Agency / Person(s)	Time Called	Notes

Current Organizational Structure:

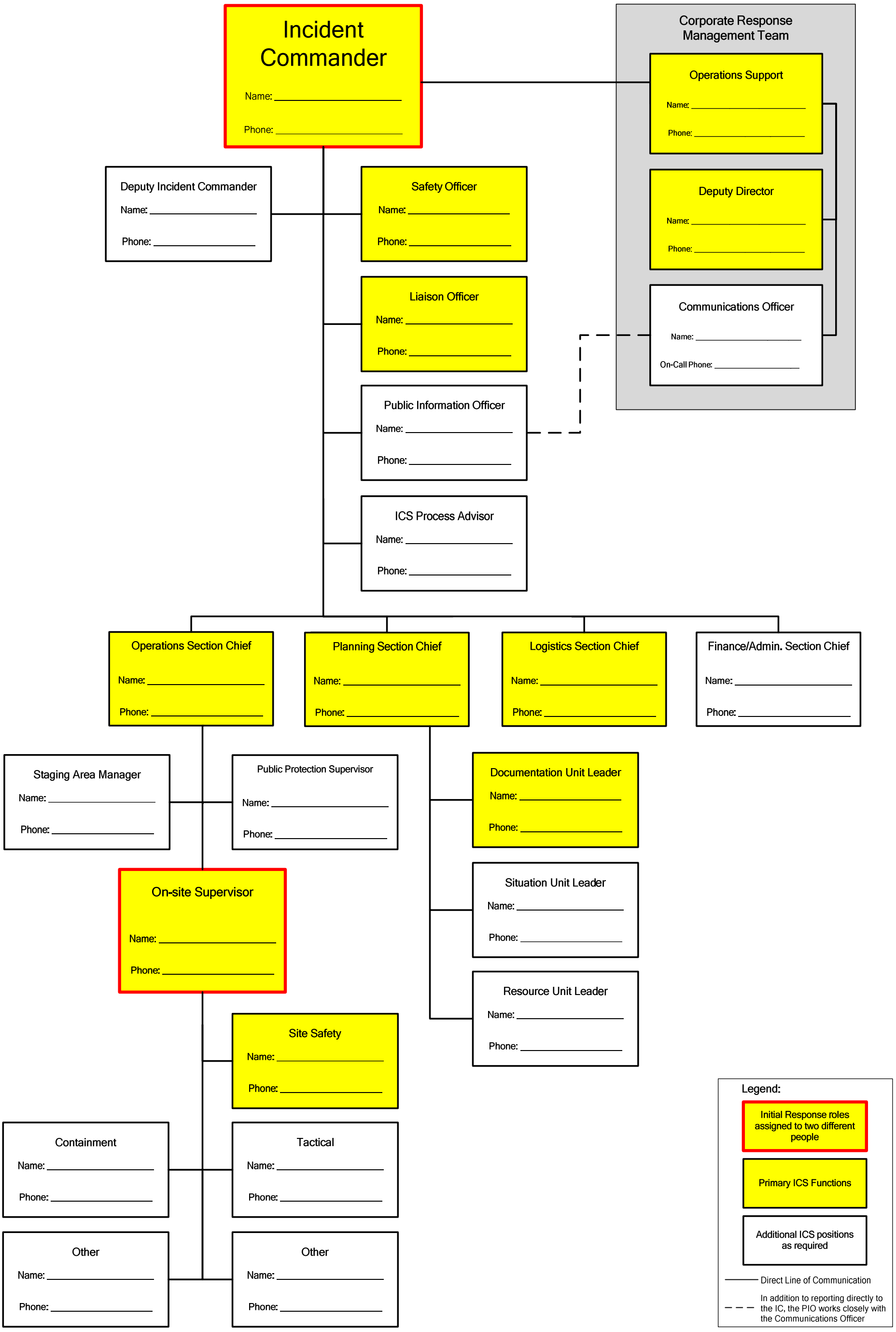


Note: Refer to Form 2: Primary ICS Functions found in SECTION 1.5 FORMS (GREEN TAB) for an expanded ICS structure.

Current and Planned Actions:		
Time	Actions	Status
HHMM		
HHMM		
HHMM		
HHMM		
HHMM		
HHMM		
HHMM		
HHMM		
HHMM		
HHMM		
HHMM		
HHMM		

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

1.5.2 *Form 2: Primary ICS Functions*



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1.5.3 *Form 3: Media Inquiry*

Area		**Incident Name**			
Prepared by		**Position**		**Date**	
				Page _____	of _____

USE THESE PROMPTS AS A GUIDE WHEN RESPONDING TO A CALL FROM A REPORTER:		
1. "We have a spokesperson to answer your questions."		
2. "_____ (Husky Public Information Officer) has requested your inquiry to be forwarded immediately. You will be called as soon as possible."		
Reporter's Name:		Media Affiliation:
Phone Number:	Fax Number:	Deadline:
Information Requested:		
Action Taken:		
3. "I will forward your inquiry to our spokesperson, who will get back to you as soon as possible."		
Deliver this information to the Husky Public Information Officer IMMEDIATELY		
NOTE: Until a Public Information Officer is appointed, the Incident Commander is the media contact.		

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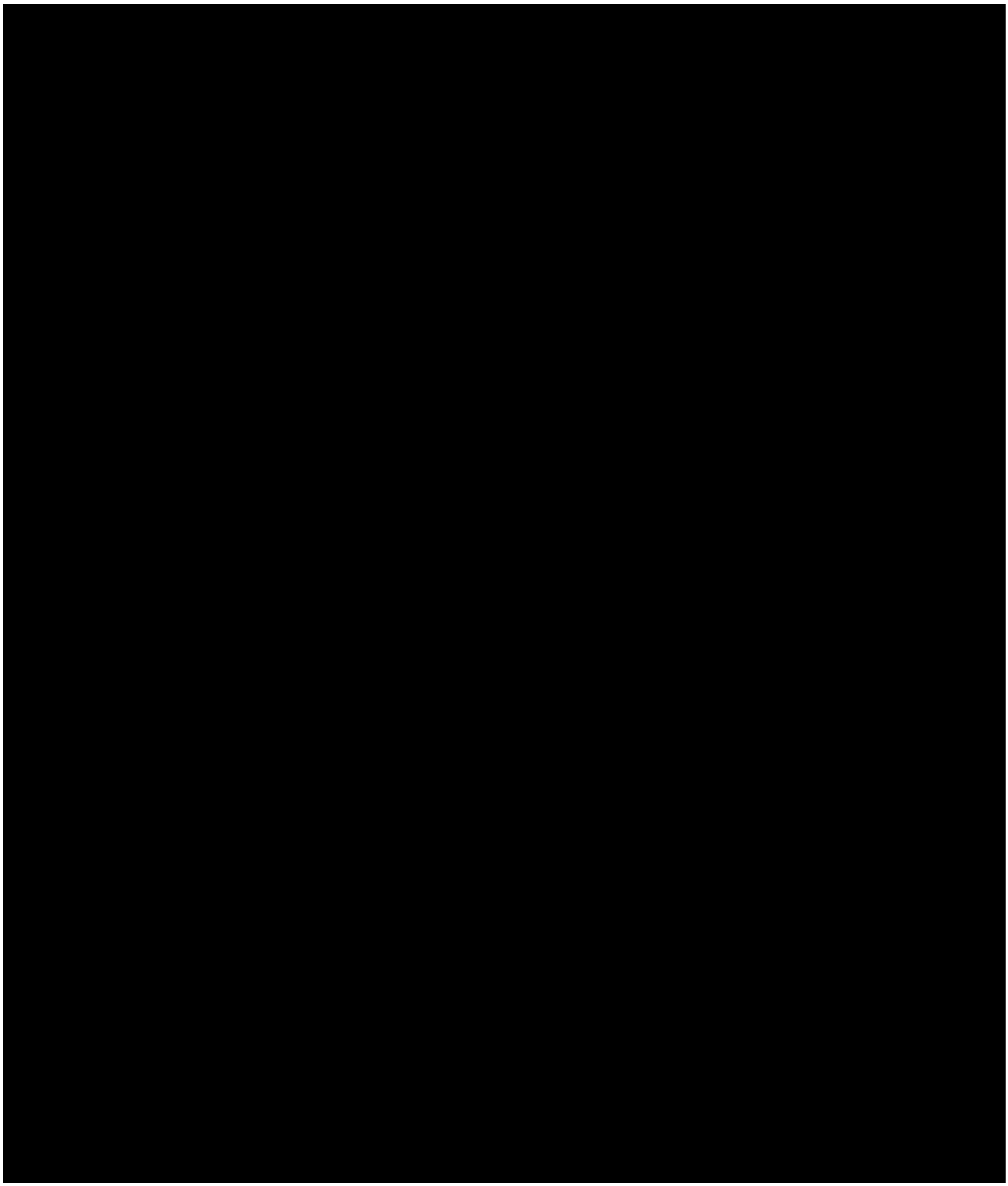
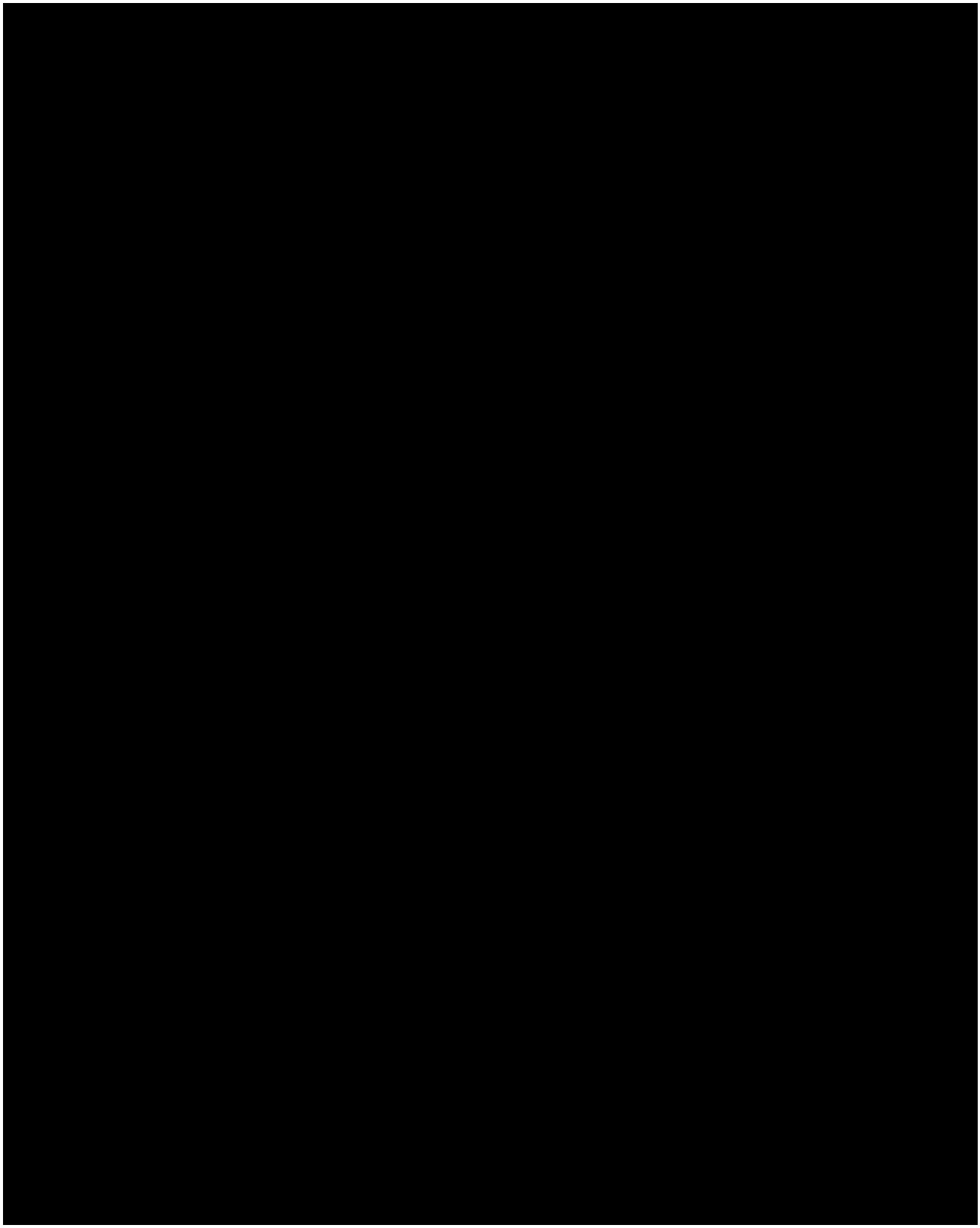
1.5.4 *Form 4: Bomb Threat*



Form 4: Bomb Threat (page 2)



1.5.5 *ICS Form 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 or Equipment	Date of Check-in	Supervisor Name	Total # of Personnel	Incident Assignment	Assigned	Available	Date of Check-out	Demobilization Date

ICS Form 211: Check In / Out List (page 2)

Name of Company or Equipment	Date of Check-in	Supervisor Name	Total # of Personnel	Incident Assignment	Assigned	Available	Date of Check-out	Demobilization Date
Notes:								

1.5.6 *ICS Form 213: Resource Request*

Incident Name:

Requestor

Qty	Resource Kind	Urgent (yes / no)	Descrption	Assigned Area	Ref #	Description / Supplier	ETA	Rental / Price	Demobilization Date

Suggested source(s) of supply	Requested by	Date

General Purpose / Description

Logistics

Notes	Logistics Signature	Date

Finance

Notes	Planning (Resource Unit Leader) Signature	Date

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1.5.7 *ICS Form 214: Activity Log*

Incident Name:		
Date Prepared:		Time Prepared:
Name:		ICS Position:
Operational Period (Date/Time)	Date From: _____ Time From: _____	Date To: _____ Time To: _____

Activity Log	
Time	Major Events

ICS Form 214: Activity Log (page 2)

Activity Log	
Time	Major Events
Prepared by (Name and Position):	Signature:

ICS 214a Individual Log

Name: _____

Date: _____

Incident Name: _____

ICS Role: _____

Guidance Notes:

- This log provides a place for individual responders to capture information and notes during the response to an emergency incident.
- Key facts should be logged with the Documentation Unit / Planning on the Incident Event Log.
- Do not erase or scratch out mistakes or changes. Simply run a single line through the text so that it is still legible.
- Do not remove any pages from this book.
- When you are finished with the book draw a line under your last comment and sign underneath the line. Hand the book to the Documentation Unit before you leave the EOC.
-
- Please consult the CRMT Legal Officer if you have questions or concerns regarding privilege or confidentiality.

Privileged and Confidential

Event:	Date:
	By:

___ : ___ am ___ pm ___	
___ : ___ am ___ pm ___	
___ : ___ am ___ pm ___	
___ : ___ am ___ pm ___	
___ : ___ am ___ pm ___	
___ : ___ am ___ pm ___	

Privileged and Confidential

1.5.9 *ICS Form 215a: Incident Action Plan Safety Analysis*

Incident Name:	Date Prepared:	Time:
Operational Period (Date/Time)	Date From: _____ Time From: _____	Date To: _____ Time To: _____

Incident Area	Hazards / Risks	Mitigations

Prepared By: (Safety Officer)	Approved By: (Operations Section Chief)
Signature:	Signature:

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1.5.10 *ICS Form 233: Open Action Tracker*

Incident Name:			Prepared by:			ICS Position:		
Date Initiated:			Time Initiated:					
No.	Description	Action Owner	Briefed	Start Date	Status	Notes	Target Date	Completion Date
1			☐					
2			☐					
3			☐					
4			☐					
5			☐					
6			☐					
7			☐					
8			☐					
9			☐					
10			☐					
11			☐					
12			☐					
13			☐					
14			☐					

ICS Form 233: Open Action Tracker (page 2)

No.	Description	Action Owner	Briefed	Start Date	Status	Notes	Target Date	Completion Date
15			☐					
16			☐					
17			☐					
18			☐					
19			☐					
20			☐					
21			☐					
22			☐					
23			☐					
24			☐					
25			☐					
26			☐					
27			☐					
28			☐					
29			☐					
30			☐					

1.5.11 *Form 5: Incoming Call Record*

Date:	Time of Call:	Prepared By:

CALLERS INFORMATION

Caller's name: (ask caller to spell first and last names) First: Last:	Phone No.:
Caller's current location:	
Location of incident	
Have you contacted anyone else?	

ASK THE CALLER

Has anyone been injured?	❒ Yes	❒ No	If yes, explain:
Are there people in immediate danger?	❒ Yes	❒ No	If yes, explain:
Has the area been evacuated?	❒ Yes	❒ No	If yes, evacuated to where?
Incident Description:			

CURRENT ACTIONS

Time*	Event / Action / Notifications made

***Use 24 Hour clock (e.g. 8:30 PM = 2030)**

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1.5.12 *Form 6: Air Monitoring Record*

Area _____ **Incident Name** _____

Prepared by _____ **Position** _____ **Date** _____

Time of Last Update _____ **Page** _____ of _____

Time*	SO_2 Reading (ppm)	H_2S Reading (ppm)	LEL %	Estimated Wind Conditions		Location of Reading/Remarks	Footnote #
				From Direction	Speed (km/h)		
Footnotes:							

***Use 24 Hour clock (e.g. 8:30 PM = 2030)**

Form 6: Air Monitoring Record (page 2)

Area _____ **Incident Name** _____

Prepared by _____ **Position** _____ **Date** _____

Time of Last Update _____ **Page** _____ of _____

Time*	SO_2 Reading (ppm)	H_2S Reading (ppm)	LEL %	Estimated Wind Conditions		Location of Reading/Remarks	Footnote #
				From Direction	Speed (km/h)		
Footnotes:							

***Use 24 Hour clock (e.g. 8:30 PM = 2030)**

1.5.13 *Form 7: Rover Communication Record*

Area _____ **Incident Name** _____

Prepared by _____ **Position** _____ **Date** _____

Time of Last Update _____ **Page** _____ of _____

Resident Name	Location ERP Map # and Legal Location	Phone Plus Alternate Number	Early Notification Required	Contacted	Require Assistance	Evacuated	Sheltered in Place	Checked in

***Use 24 Hour clock (e.g. 8:30 PM = 2030)**

Form 7: Rover Communication Record (page 2)

Area _____ **Incident Name** _____

Prepared by _____ **Position** _____ **Date** _____

Time of Last Update _____ **Page** _____ of _____

Resident Name	Location ERP Map # and Legal Location	Phone Plus Alternate Number	Early Notification Required	Contacted	Require Assistance	Evacuated	Sheltered in Place	Checked in

*Use 24 Hour clock (e.g. 8:30 PM = 2030)

1.5.14 *Form 8: Roadblock Record*

Area _____ **Incident Name** _____

Prepared by _____ **Position** _____ **Date** _____

Page _____ of _____

Time* Enter	Time* Exit	Vehicle Description	License Plate	Driver's Name	No. of Passengers	Destination	Footnote #
Footnotes:							

***Use 24 Hour clock (e.g. 8:30 PM = 2030)**

Form 8: Roadblock Record (page 2)

Area _____ **Incident Name** _____

Prepared by _____ **Position** _____ **Date** _____

Page _____ of _____

Time* Enter	Time* Exit	Vehicle Description	License Plate	Driver's Name	No. of Passengers	Destination	Footnote #
Footnotes:							

**Use 24 Hour clock (e.g. 8:30 PM = 2030)

1.5.15 *Form 9: Notice of Evacuation*

NOTICE OF MANDATORY EVACUATION

HUSKY OIL is experiencing a problem at _____:

Date: _____ Posted By: _____

You are required to

PLEASE PROCEED IMMEDIATELY

to the

_____

where our representative can provide additional information and assistance.

Please select an evacuation route that avoids traveling downwind of the incident.

Call our 24-hour emergency number if you require assistance.

1-877-262-2111

We apologize for this inconvenience.

This page has been left blank intentionally.

1.5.16 *Form 10: Public Contact Record*

Area		**Incident Name**			
Prepared by		**Position**		**Date**	
Time of Last Update				**Page**	of

Time*	Name of Contact	No. of People on Property	S, E, O, U**	Notes

*** Use 24 Hour clock (e.g. 8:30 PM = 2030)**

**** S = Shelter, E = Evacuation, O = Other, U = Update Message Given**

Form 10: Public Contact Record (page 2)

Area		**Incident Name**			
Prepared by		**Position**		**Date**	
Time of Last Update				**Page**	of

Time*	Name of Contact	No. of People on Property	S, E, O, U**	Notes

**Use 24 Hour clock (e.g. 8:30 PM = 2030)

** S = Shelter, E = Evacuation, O = Other, U = Update Message Given

1.5.17 *Form 11: Shelter-in-Place Message*

Script:

Hello, this is (responders name) calling from Husky Oil. Is this the (name of residence/business) at (telephone number)? Husky is responding to a potential emergency at the _____.

A (type and status of incident) has developed that affects the (describe area). The incident involves (describe product).

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 you cannot contact to get indoors? (Yes) (No) *

If yes, ask the resident what is the location of the person(s).

Be assured we will be sending someone to find the person(s) as soon as possible.

Which children are in which schools? *

Be assured the school(s) will be contacted and instructed to keep the children at school or to return the bus back to the school.

Please read the Shelter-In-Place Instructions in Section 2.2 - Public Protection Methods

***Ensure all comments are documented on the "Public Contact Record"**

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1.5.18 *Form 12: Voluntary Evacuation Message*

Script:

Hello, this is (your name) of Husky Oil.

Have I reached the (family name/ business name) at (their telephone number)? We are calling you about the _____.

A (type and status of incident) has developed, which requires us to undertake corrective actions at the site. There is no danger to you at this time and we fully expect to resolve the problem within (timeframe). It is safe for you to remain at your home (business). However, we would like you to be prepared to evacuate should problems deteriorate and we require you to leave the area.

If you are uncomfortable staying at your home (business), you may proceed outside of the area. We will assist you in making arrangements for alternate accommodation and issue forms so that you can claim your expenses resulting from this inconvenience.

Regardless of whether you choose to stay or go, information updates will be available by calling 877-262-2111 If at any time you choose to leave, it is important that you check in so that we can record information about where to reach you when the status at the site improves or deteriorates. Our representative will be able to address questions or issues you may have.

Script: Are you currently planning to stay at your residence? * (Record answer on the Public Contact Record)

IF YES:

We will keep you informed about the status of the incident. However, please feel free to call 877-262-2111 at any time for updates. Should you decide to leave, simply call us and one of our representatives will be available to assist you. Thank you for your cooperation. Goodbye.

IF NO:

(Gather contact information*. Give directions that allow egress away from the site and upwind.) We will keep you informed about the status of the incident. However, please feel free to call 877-262-2111 at any time for updates. Thank you for your cooperation. Goodbye.

***Ensure all comments are documented on the "Public Contact Record"**

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1.5.19 *Form 13: Requirement to Evacuate Message*

Script:

Hello, this is (your name) of Husky Oil.

Have I reached the (family name/business name) at (their telephone number)? We are calling you about the _____.

A (type and status of incident) has developed that affects the (describe area). You are in no immediate danger. However, a control issue is likely. You are required to evacuate, or leave, your (residence/business) immediately and proceed to the Reception Centre located at (location). Again, there is no immediate danger at this time. While leaving please ensure you obey the rules of the road and drive safely as we are contacting all of the residents in the affected area and giving them the same instructions.

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

Are you able to proceed to the Reception Centre without assistance and can you immediately inform all others at your location of the evacuation requirements? *

IF YES:

It is important that you all check into the Reception Centre so that we can record information about where to reach you when the status at the site improves or deteriorates. Also, the Reception Centre is where we will issue forms so that you can claim your expenses resulting from this inconvenience. Finally, our representative at the Reception Centre will be able to address questions or issues you may have.

Wind is currently blowing from the _____ toward the _____. For your safety, we recommend you use the following route. *(Describe a route that avoids taking the resident in downwind proximity to the site. Use your map as a reference).*

IF NO:

An assistant will be dispatched to your residence *(refer to sheltering instructions).*

Do you understand these instructions? Do you understand that there is no need to panic and that you need to proceed to the Reception Centre calmly? (If not, clarify the instructions, as necessary).

If you have any problems evacuating, please call me back immediately.

My name is: _____ My number is: _____ Thank you for your cooperation. Goodbye.

***Ensure all comments are documented on the "Public Contact Record"**

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1.5.20 *Form 14: Reception Centre Registration Record*

Area _____ **Incident Name** _____

Prepared by _____ **Position** _____ **Date** _____

Time of Last Update _____ **Page** _____ of _____

Time*	Name	Map No.	Intended Destination	Telephone	Remarks/Issues/Commitments	Footnote #
**List all people from each residence who have checked in.						
Footnotes:						

***Use 24 Hour clock (e.g. 8:30 PM = 2030)**

Form 14: Reception Centre Registration Record (page 2)

Area _____ **Incident Name** _____

Prepared by _____ **Position** _____ **Date** _____

Time of Last Update _____ **Page** _____ of _____

Time*	Name	Map No.	Intended Destination	Telephone	Remarks/Issues/Commitments	Footnote #
**List all people from each residence who have checked in.						
Footnotes:						

***Use 24 Hour clock (e.g. 8:30 PM = 2030)**

1.5.21 *Form 15: Evacuee Concerns Record*

Area _____ **Incident Name** _____

Prepared by _____ **Position** _____ **Date** _____

Page _____ of _____

ISSUES:

Name: _____ Date: _____ Time*: _____

RESOLUTION:

Name: _____ Date: _____ Time*: _____

***Use 24 Hour clock (e.g. 8:30 PM = 2030)**

Form 15: Evacuee Concerns Record (page 2)

Area _____ **Incident Name** _____

Prepared by _____ **Position** _____ **Date** _____

Page _____ of _____

ISSUES:

Name: _____ Date: _____ Time*: _____

RESOLUTION:

Name: _____ Date: _____ Time*: _____

***Use 24 Hour clock (e.g. 8:30 PM = 2030)**

1.5.22 *Form 16: Daily Expenses Claim*

Area _____ **Incident Name** _____

Prepared by _____ **Position** _____ **Date** _____

Page _____ of _____

Name:		
Mailing Address:		
Address While Evacuated:		
Telephone Number: Home:	While Evacuated:	Cell:
Location of Your Residence:		
Period Expenses Incurred From (Date):	From:	To:
Expenses (please attach receipts):	Accommodation:	
	Meals:	
	Transportation (____ km x $_ .__/km)	
	Other Reasonable Daily Expenses:	
	Other Reasonable Daily Expenses:	
	TOTAL:	
		Signature

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2.0 GUIDELINES

2.1 Government Notification Requirements

2.1.1 Notification Matrix for British Columbia 1
2.1.2 Release Reporting Requirements (non-retail) 3
2.1.3 Government Initial Notification Protocol 5
2.1.4 Lead Agency Roles 7
2.1.5 Supporting Agency Roles 9
2.1.6 Federal Agency Roles 11

The following section 2.1 contains the following redactions:

- 2.1.2: This section contains security sensitive information, the disclosure of which would create a real and substantial risk that its disclosure will impair the security of pipelines, buildings, structures or systems. It is protected from publication under Clause 1(a)(ii) of CER Order AO-001-MO-006-2016.

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British Columbia

Notification Requirements for Key Government Agencies

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

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

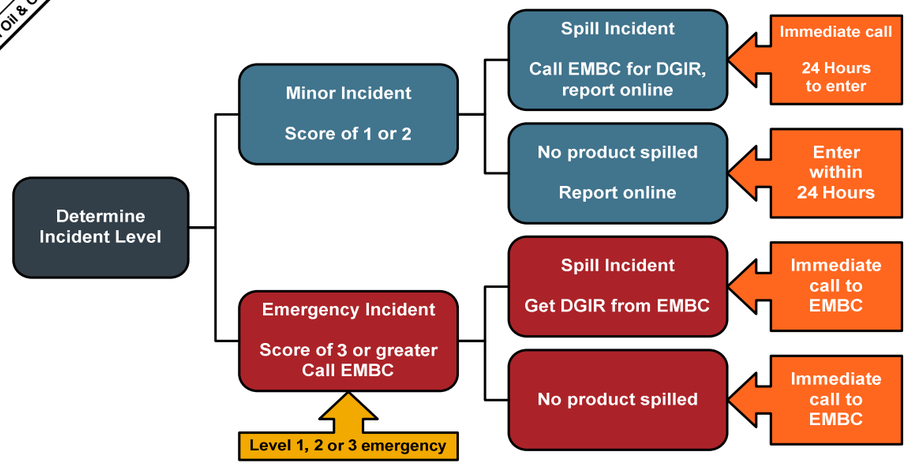
✓ Compulsory contact

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

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

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

OGC Incident Reporting Process



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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

British Columbia Notification Matrix

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BRITISH COLUMBIA PETROLEUM INDUSTRY SPILL / RELEASE REPORTING REQUIREMENTS

All spills exceeding the spill/release quotas listed in the table below must be reported immediately to the appropriate regulatory agency.

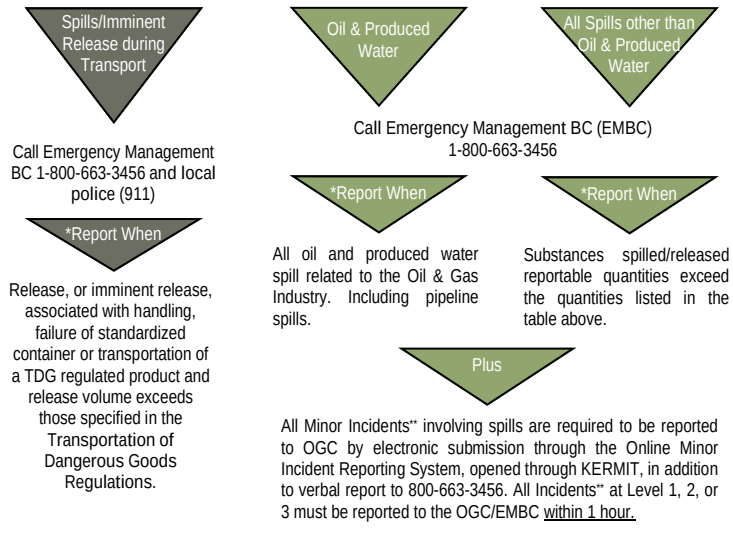
Chemical Class	Substance / Example	T.D.G. Reporting Requirements Road, Rail or Marine	B.C. (OGC / EMBC) Reporting Requirements
Spilled Liquid Substances	Natural Gas	Any quantity	10 kg or 15m^3 if there is a break in a pipeline or fitting operated above 100 psi that result in an uncontrollable release of natural gas
	Crude Oil / Emulsion	Any quantity of Packing Group I or II 30 L or 30 kg of Packing Group III	100 L on-site / Any release off-site
	Salt Water	No TDG Reporting Requirements	200 L / Any release off-site
	Drilling or Invert Mud	No TDG Reporting Requirements	100 L on-site / Any release off-site (Any fluid which contains toxic substances: 25 L)
	Condensate	Any quantity of Packing Group I or II 30 L or 30 kg of Packing Group III	
	Fresh Water	No TDG Reporting Requirements	10,000 L
	Any fluid with toxic substances	No specific TDG Reporting Requirements as it falls into many classes	25 L
Class 1 Explosives	Ammunition Nitro-glycerine	Any quantity of Packing Group II	All releases which could pose a danger, or 50 kg
Class 2.1 Flammable Gases	H_2S Methane Propane Butane Natural Gas	Any quantity	10 kg
Class 2.2 Non-Flammable Gases	Compressed Air O_2 N_2 CO_2		
Class 2.3 Toxic Gases (poisonous or corrosive)	H_2S SO_2 Hydrogen Cyanide Nitric Acid Anhydrous Ammonia		5 kg
Class 3 Flammable Liquids	Lube Oil	No TDG Reporting Requirements	100 L, report anything that may have an adverse affect
	Gasoline Corrosion Inhibitor Diesel Demulsifiers Methanol Scale Inhibitors	Any quantity of Packing Group I or II 30 L or 30 kg of Packing Group III	
Class 4.1 Flammable Solids	Calcium Resinate Naphthalene Crude		25 kg
Class 4.2 Spontaneously Combustible	Activated Carbon Potassium Sulphide Phosphorus		
Class 4.3 Dangerous when Wet	Molten Sulphur Calcium Carbide Sodium Activated Carbon		
Class 5.1 Oxidizing Substances	Calcium Nitrate Ammonium Nitrate Bleaches		50 kg or 50 L
Class 5.2 Organic Peroxides	Methyl Ethyl Ketone Peroxide Succinic Acid Peroxide		1 kg or 1 L
Class 6.1 Poisonous Toxic Substances	Arsenic Corrosion Inhibitor Lead Acetate Mercuric Oxide Toxic Pesticides		5 kg or 5 L, report anything that may have an adverse affect
Class 6.2 Infectious Substances	Infectious Substances affecting Humans / Animals	Any quantity of Category A or B	All releases which could pose a danger, or more than 1 kg or 1 L
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 of the conveyance; and 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.	All releases which could pose a danger to public safety
Class 8 Corrosives	Acids Amine Bases Batteries Caustic Corrosion Inhibitor	Any quantity of Packing Group I or II 30 L or 30 kg of Packing Group III	5 kg or 5 L, report anything that may have an adverse affect
Class 9 Miscellaneous Products, Substances & Organisms, Environmentally Hazardous Substances	P.C.B. Asbestos Substances not regulated by the *Transportation of Dangerous Goods Act*	30 L or 30 kg of Packing Group II or III, or without Packing Group	30 L or 30 kg of Packing Group II or III, or without Packing Group
Other	**Refined products follow TDG reporting requirements**		

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

Does the release or anticipated release exceed the quantity in the table and endanger or could it endanger public safety?

No: No further action from a TDG perspective.

Yes: Emergency report by telephone must be made to local authorities responsible for responding to emergencies. Refer to Release or Anticipated Release Report - Road, Rail or Marine.



REPORTING OF SPILLS / RELEASES IS REQUIRED TO THE FOLLOWING AGENCIES:

BRITISH COLUMBIA	
Emergency Management BC (EMBC)	800-663-3456
BC Oil & Gas Commission (OCG)	
CANADA	
CANUTEC	
All Provinces	888-CAN-UTEC (888-226-8832) 613-996-6666
Western Canadian Spill Services (WCSS)	
Western Canada	866-541-8888

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 not listed here. Specifically items 14 to 25.

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

CANADA ENERGY REGULATOR (CER)

The Following Spill Events Are Immediately Reportable to the CER:

- 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
- Any spill/release that could have a significant adverse effect on the environment.
- Rupture: an instantaneous release that immediately impacts the operation of a pipeline segment such that the pressure of the segment cannot be maintained.
- 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).

CER / Transportation Safety Board of Canada (TSB)	
Incident Reporting line	819-997-7887
CER Online Event Reporting System (OERS)	
https://apps.cer-rec.gc.ca/ers/home/index	

HUSKY EMERGENCY ON-CALL NUMBERS:

Husky CRMT 24 Hour Number On-Call Deputy Director	[redacted]
ERAC 24 Hour Number Husky Oil ERAP #: [redacted] LPG Transportation by Rail and Road	800-265-0212
ERAC 24 Hour Number Husky Oil ERAP #: [redacted] Class 3 - Flammable Liquids by Rail movement only	

*** Report When:** The release or anticipated release: exceeds quantity in the table AND endangers, or could endanger, public safety.

**** Incident Level:** as defined by the OGC Incident Classification Matrix, see Section 1.2.2 of the ERP.

Note:

Written reports must be submitted to Emergency Management BC and Oil and Gas Commission.

Consult with Area Environmental Advisor for assistance in preparation of written reports and for internal tracking purposes.

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

Please refer to section 8.16 of the Transportation of Dangerous Goods Regulations (TDGR) for conditions under which a loss or theft report must be made.

April 2020

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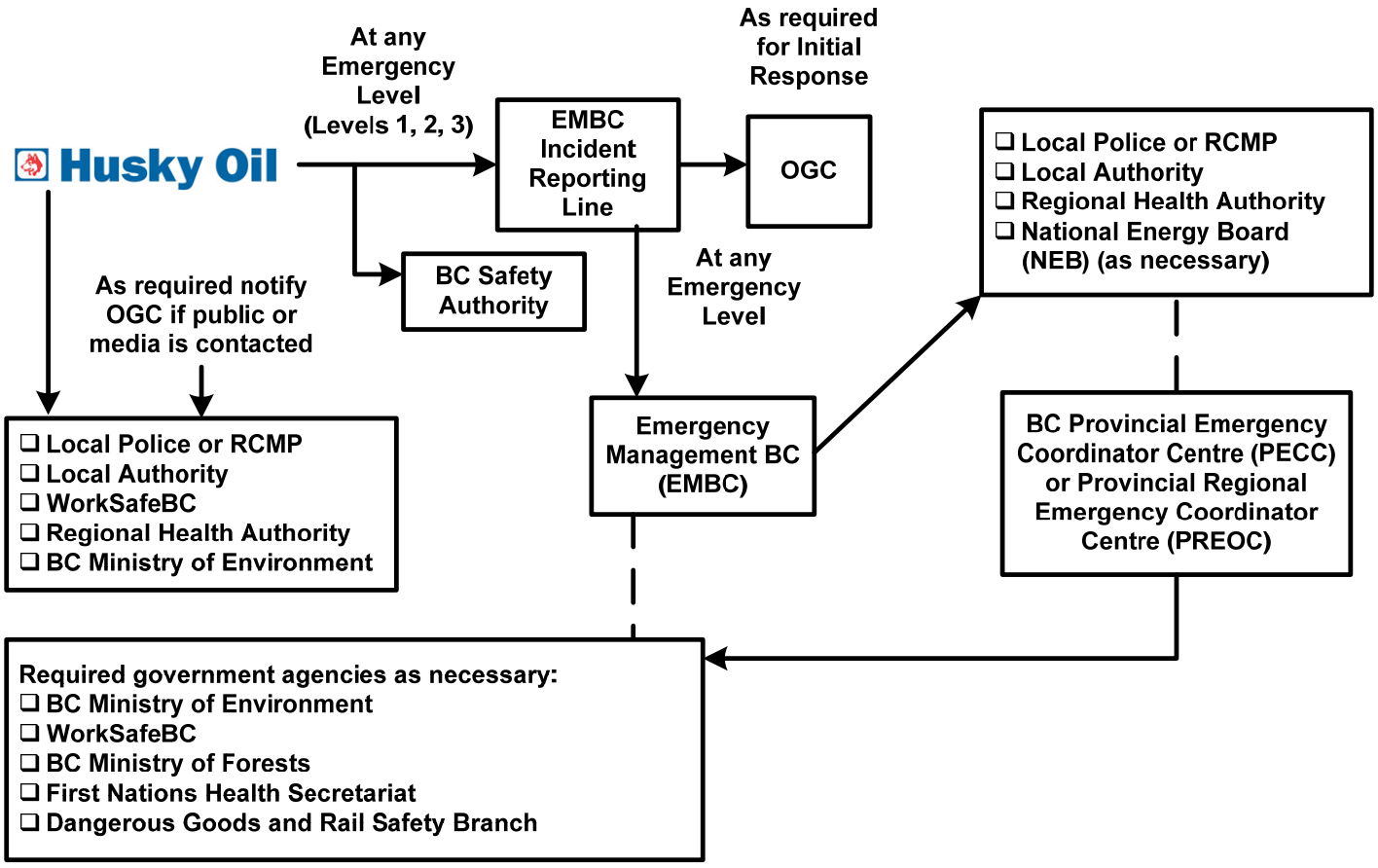
2.1.3 *Government Initial Notification Protocol*

Emergency Management BC (EMBC) and the BC Oil and Gas Commission (OGC) must be notified immediately, once it is safe to do so, through the EMBC / OGC Emergency Reporting Line at any Emergency Level. BC Safety Authority has requested that they also be notified for any Level 1, 2, or 3 Emergency

The Emergency Level is determined by Husky and confirmed through consultation with the OGC. If required to assist with the initial response, Husky will contact other agencies and services, such as the Local Authority (e.g. Regional District), local Regional Health Authority and the RCMP.



Husky is accountable for all required regulatory notifications

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Lead Agency Roles

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

*OGC - Oil & Gas Commission *EMBC - Emergency Management BC - Provincial Emergency Program * Emergency Services - as managed / operated by the Local Authority

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Lead Agency Roles

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

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

Supporting Agency Roles

	Before the Incident	During the Incident	After the Incident
Ministry of Environment	❒ Provide regulatory oversight and monitor the situation to ensure that the Responsible Party (RP) is taking appropriate actions. **Can liase with FLNRO to provide:** ❒ Species and ecosystem protection policy. ❒ Water protection and sustainability policy ❒ Conservation and resource management enforcement	Before, during and after an emergency the Ministry of Environment could be called upon to provide expertise, technical advice and/or policy direction regarding: ❒ Environmental emergency response (including hazardous materials) ❒ Air, land and water quality standards ❒ Pollution prevention and waste management ❒ Water and air monitoring and reporting ❒ Environmental assessment ❒ Environmental monitoring ❒ Parks, wilderness and protected areas. ❒ Provide regulatory oversight and monitor the situation to ensure that the Responsible Party (RP) is taking appropriate actions. ❒ May provide a representative to the Incident Command Centre, the Off-Site Command EOC and the OGC Emergency Operations Centre (EOC) and / or the Provincial Emergency Operations Centre (PREOC) on a 24-hour basis. ❒ In a larger scale incident, based on risk, additional ministry resources such as IMTs (Incident Management Teams) may be deployed to establish unified command and monitor, augment, or take over the response if the RP fails to take appropriate action as deemed necessary by the EERO or Provincial Incident Commander. ❒ May assist the RP to ensure that other required agencies and affected stakeholders are contacted. ❒ May provide assistance with hazardous waste management. ❒ May conduct sampling for monitoring and enforcement purposes.	
***MFLNRO**	❒ Five key agencies are housed within the Ministry of Forests, Lands and Natural Resource Operations: Wildfire Management Branch, Dam Safety, Flood Safety, GeoBC and the River Forecast Centre. ❒ Develop, deliver and promote innovative and effective wildfire management practices to clients. ❒ Maintain a 24 hour emergency contact number where resources can be accessed for a response related to Emergency Response Plans. ❒ The Ministry of Forests, Lands and Natural Resource Operations is identified to provide personnel, equipment, supplies, telecommunications equipment, aviation support and weather information to assist in emergency response operations. ❒ The Ministry of Forests and Range is the designated key agency for wildfires.	Before, during and after an emergency the Ministry of Forests, Lands and Natural Resource Operations could be called upon to provide expertise, technical advice and/or policy direction regarding: ❒ Forest stewardship policy ❒ Land use planning ❒ Water use planning and authorizations ❒ Drought management ❒ Dam and dike safety and regulation ❒ Flood plain management ❒ GeoBC and information management ❒ Pests, disease, invasive plants and species ❒ Wildfire management	❒ Participate in event debriefings. ❒ Complete a “lessons-learned” process based on the scope of their involvement and the outcome.
Ministry of Transportation and Infrastructure	❒ Maintain a 24 hour emergency contact number where resources can be accessed for a response related to Emergency Response Plans. ❒ In the event of an emergency, the Highway Department’s Operations, Maintenance and Re- construction team plays an important role to ensure the public is safe and transportation routes are available for accessing emergency services. ❒ Ministry of Transportation and Infrastructure oversees provincial highways identified as emergency response routes - a network of pre-identified routes that can best move emergency services and supplies to where they are needed in response to a major disaster. ❒ Disaster Response Routes (DRRs) are a critical part of the overall emergency transportation system. ❒ Responsible for the construction, maintenance and operation of public roads.	Before, during and after an emergency the Ministry of Transportation and Infrastructure (MoTI) could be called upon to provide expertise, technical advice and/or policy direction regarding: ❒ Highway construction and maintenance ❒ Safety and protection of provincial road and bridge infrastructure ❒ Transportation planning and policy ❒ MoTI can: ❒ Authorize the closure of provincial transportation routes, including highways and inland ferries, where the safety of the public is at risk. ❒ Assist in public notification through the DriveBC website, as well as posting advisories on overhead message boards along designated routes. ❒ Coordinate and arrange for transportation, engineering and construction resources. ❒ Rebuild and restore provincial highways that are impacted by an emergency. ❒ Major agencies, boards and commissions within MoTI that have identified responsibilities within the Emergency Program Management Regulation are BC Rail, BC Transit and BC Ferries. ❒ During an emergency, BC Rail will: ❒ Provide priority movement of emergency personnel, equipment and supplies. ❒ In cooperation with Transport Canada, assist in railway crashes and derailments in the conduct of rescue operations, removal of debris and the cleanup of hazardous material. ❒ Provide railcars for emergency facilities. ❒ Provide specialized equipment. ❒ During an emergency, BC Transit will coordinate requirements for public transportation, including school and privately owned buses. ❒ During an emergency, BC Ferries is required to provide priority loading for emergency personnel, equipment and supplies and ensure ferries are available to serve as reception centres, hospitals, response centres or other emergency facilities.	❒ Work with appropriate local and federal entities to facilitate the restoration of roadways and utilities.
***PSPC**	The Roles & Responsibilities listed below for Public Services and Procurement Canada (PSPC) are only in relation to the Alaska Highway (97) in British Columbia, north of mile 83.5 (km 133) to the border of British Columbia and Yukon Territories at km 968. In conjunction with the BC Ministry of Transportation & Infrastructure (MOTI) and the provincial maintenance contractor, PSPC may: ❒ Maintain a 24 hour emergency contact number where resources can be accessed for a response related to Emergency Response Plans. ❒ Hold responsibility for the acquisition of contracts for the maintenance and operation of the Alaska Highway. ❒ Oversee Alaska Highway response routes - a network of pre-identified routes that can best move emergency services and supplies to where they are needed in response to a major disaster.	In conjunction with the BC Ministry of Transportation & Infrastructure (MOTI), PSPC, and the provincial maintenance contractor may be called upon to: ❒ Provide expertise, technical advice and/or policy direction regarding: ❒ Highway construction and maintenance ❒ Safety and protection of provincial road and bridge infrastructure ❒ Transportation planning and policy ❒ Play an important role to ensure the public is safe and transportation routes are available for accessing emergency services. ❒ Assist in the coordination of roadblock locations along the highway. ❒ Authorize closure of the Alaska Highway where the safety of the public is at risk. ❒ Assist in public notification of an emergency through the MOTIs DriveBC website, as well as posting advisories on overhead message boards along designated routes. ❒ Coordinate and arrange for transportation, engineering and construction resources. ❒ Handle inter-departmental communication as needed during energy resources industry emergencies. ❒ Maintain ability to process calls for new emergencies. ❒ Provide information on the impacts to transportation routes. ❒ Provide response support if dangerous goods are released.	❒ Work with appropriate local and federal entities to facilitate the restoration and re-opening of the Alaska Highway. ❒ Complete a “lessons learned” process based on the scope of involvement and provide any feedback to the industrial operator. ❒ Provide a summary of transportation impacts during the post incident review process. ❒ Participate in multi-agency debriefings.

*MFLNRO - Ministry of Forests, Lands and Natural Resource Operations

*PSPC - Public Services and Procurement Canada

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Supporting Agency Roles

	Before the Incident	During the Incident	After the Incident
Ministry of Health	❒ Provide public health measures, including epidemic control and immunization programs. ❒ Provide and coordinate ambulance services and triage, treatment, transportation and care of casualties. ❒ Provide the continuity of care for patients evacuated from hospitals or other health institutions and for medically dependant patients from other care facilities. ❒ Provide standard medical units consisting of emergency hospitals, advanced treatment centres, casualty collection units and blood donor packs. ❒ Monitor potable water supplies. ❒ Inspect and regulate food quality with the assistance of the Minister of Agriculture. ❒ Provide critical incident stress debriefing and counselling services. ❒ Provide support services for physically challenged or medically disabled people affected by an emergency. ❒ Maintain a 24 hour emergency contact number where resources can be accessed for a response related to Emergency Response Plans. ❒ Provide input on public health issues related to a petroleum incident.	Before, during and after an emergency the Ministry of Health could be called upon to provide expertise, technical advice and/or policy direction regarding: ❒ Health service delivery ❒ Public health planning and response ❒ Community and home support services ❒ Mental health ❒ Communicable disease prevention ❒ During an emergency the Ministry of Health will provide the continuity of care both for patients evacuated from hospitals or other health institutions and for medically dependent patients from other care facilities; The Ministry will also provide emergency psychosocial services. ❒ Ensure appropriate Health entities have been notified of the incident. ❒ Ensure appropriate Executive and Public Health personnel have been notified of the incident. ❒ Carry out evacuation of medically dependent and vulnerable populations, as needed. ❒ Transport incident casualties as required. ❒ Triage and provide medical care to incident casualties as required. ❒ Decontaminate incident casualties that present to health care facilities, as needed. ❒ Relay health hazard information to the public. ❒ Monitor water and air quality, as it relates to public health. ❒ Coordinate the public health response to the incident. ❒ Address the psychosocial aspects of the aftermath of an event. ❒ Arrange with Health Canada and the Public Health Agency of Canada for federal support, if needed.	❒ Participate in event debriefings. ❒ Complete a "lessons-learned" process based on the scope of their involvement and the outcome. ❒ Continue with public health and environmental health monitoring as required. ❒ Continue to address the psychosocial aspects of recovery.
WorksafeBC	WorkSafeBC is a provincial body set up to maintain a safe, healthful working environment at job sites throughout the province. In addition to providing employers and workers with guidance and assistance when they are setting up health and safety programs, WorkSafeBC, has specific workplace responsibilities. Under the Workers Compensation Act, WorkSafeBC is responsible for: ❒ Inspecting places of employment. ❒ Investigating accidents and the causes of industrial diseases. ❒ Issuing orders and directions specifying means of preventing injuries and industrial disease. ❒ Assisting and advising employers and workers in developing health and safety programs. ❒ Educating workers about health and safety. ❒ Providing living allowances, rehabilitation, and retraining for workers injured on the job. ❒ Collecting contributions to an accident fund from employers and distributing money from the fund to injured workers. ❒ Maintain a 24 hour emergency contact number where petroleum industry incidents can be reported. ❒ Receive Emergency Response Plans. ❒ Attend critical sour well meetings.	**Employer must immediately report the following types of incidents** to WorkSafeBC's emergency and accident reporting phone line whether there is an injury or not: ❒ Any incident that kills, causes risk of death, or seriously injures a worker ❒ Any blasting accident that results in injury, or unusual event involving explosives ❒ A diving incident that causes death, injury, or decompression sickness requiring treatment ❒ A major leak or release of a dangerous substance ❒ A major structural failure or collapse of a structure, equipment, construction support system, or excavation ❒ Any serious mishap ❒ Employer must also report incidents that require the employee to seek medical attention or cause time-loss from work.	❒ Prompt investigation of incidents should be conducted so that other employees will not get injured in the same way. Everyone in the business has a role to play, and you must report accidents and incidents to your supervisor. ❒ According to the Regulation, an employer must immediately undertake an investigation into the cause of any accident or other incident that: ❒ Is required to be reported under the Act? ❒ Results in injury to a worker requiring medical treatment? ❒ Does not involve injury to a worker, or involves only minor injury not requiring medical treatment, but has a potential for causing serious injury to a worker? ❒ Is an incident required by regulation to be investigated? ❒ Submit an employer's incident investigation report to WorkSafe BC.
Ministry of Agriculture	Examples of emergency management activities carried out by the Ministry of Agriculture are: ❒ Providing advice to farmers, aqua-culturalists and fishers on the protection of crops, livestock and provincially managed fish and marine plant stocks. ❒ Through EMBC, provide support to impacted agricultural industries and coordinate support and/or managing agricultural animal relocation. ❒ Assisting the Ministry of Health with inspection and monitoring of food safety and quality. ❒ Coordinate with Canadian Food Inspection Agency the response to animal disease and plant health. ❒ Administering provision of crop insurance to cover damage from disasters or emergencies.	Before, during and after an emergency the Ministry of Agriculture may be called upon to provide expertise, technical advice and/or policy direction regarding: ❒ Agriculture ❒ Aquaculture and food industry development ❒ Animal health ❒ Crop/plant protection ❒ Food safety and quality ❒ Crop insurance	
Technical Safety BC	❒ Technical Safety BC (formerly BC Safety Authority) is an independent, self-funded organization mandated to oversee the safe installation and operation of technical systems and equipment across the province. ❒ In addition to issuing permits, licenses and certificates, we work with industry to reduce safety risks through assessment, education and outreach, enforcement, and research.	❒ Technical Safety BC implements a business continuity plan in the event of a natural disaster. This plan ensures that Technical Safety BC resumes safety services as soon as possible. ❒ Though Technical Safety BC is not a first responder, they will provide technical support including inspection services to the recovery team relating to the technical equipment and systems covered by the Safety Standards Act (e.g., gas, electrical, elevating devices, boiler and pressure vessel technologies) after first ensuring the safety of its employees. ❒ Starting in the planning phase and through collaboration with other agencies, Technical Safety BC can provide most value to the public and best support the other agencies.	❒ Technical Safety BC tracks and investigates incidents and hazards that are reported to inform awareness and prevention initiatives ❒ Technical Safety BC does not investigate all reported incidents and may not follow-up with a notification unless there is an intention to investigate. ❒ Technical Safety BC will contact duty holders within 24 hours of the next regular business day following the report of an incident if more information is required or an investigation is planned to occur.
HEMBC North	Health Emergency Management BC (HEMBC) is a program under the Provincial Health Services Authority (PHSA). HEMBC provides the expertise, education, tools, and support specifically for the BC Health Sector to effectively mitigate, prepare for, respond to, and recover from the impacts of emergency events; ensuring the continuity of health services. There is a HEMBC team in each BC health authority. HEMBC-North deals specifically with Northern Health. ❒ Maintain a 24-hour emergency/on call contact number for notification and activation of the health system in Northern BC.	❒ For emergency events that require immediate connection with Northern Health, please call HEMBC on call (24/7) - **855-554-3622.** HEMBC will notify / activate the appropriate Northern Health programs (ie. Public Health, Acute Care etc.) based on the nature of the event / emergency. Please include this number in industry ERPs for the use of permit holders in contacting Northern Health on an emergency basis. ❒ Notify/activate the appropriate Northern Health programs (i.e. Public Health, Acute Care, etc.) based on the nature of the incident/emergency event.	

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Source of information: "The All-Hazard Plan" Emergency Management British Columbia 2012, Northern Health Emergency Response Roles and Responsibilities 2016, Emergency Management BC Emergency Response Roles & Responsibilities 2016, OGC Roles & Responsibilities OGC website 2012, WorkSafeBC Roles and Responsibilities 2017

*HEMBC - Health Emergency Management BC North

Federal Agency Roles

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

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

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

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

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

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

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

*Indian Oil & Gas Canada

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

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

IOGC's general responsibilities are to:
❒ identify and evaluate oil and gas resource potential on Indian reserve lands;
❒ encourage companies to explore for, drill and produce these resources through leasing activity;
❒ ensure equitable production, fair prices and proper collection of royalties on behalf of First Nations; and
❒ secure compliance with and administer the regulatory framework in a fair manner.

IOGC operates pursuant to the *Indian Oil and Gas Act* and *Indian Oil and Gas Regulations, 1995*, as well as other relevant legislation and guidelines (see Acts and Regulations). Oil and gas activity on First Nation reserve lands depends on agreements involving First Nation band councils, oil and gas companies, and Indian Oil and Gas Canada.

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

*ECCC - Environment & Climate Change Canada *DFO – Canadian Department of Fisheries & Oceans *ISC – Indigenous Services Canada *FNIHB - First Nation & Inuit Health Branch *RO - Regional Operations *IOGC - Indian Oil & Gas Canada

Canada

Federal Agency Roles

Canada

	Before the Incident	During the Incident	After the Incident
Transport Canada *CANUTEC	❒ Regulate the handling, offering for transport and the transport of dangerous goods by all modes in order to ensure public safety. ❒ Maintain a 24 hour emergency telephone service. ❒ Federal regulations require that CANUTEC be contacted in the event of an incident or accident involving dangerous goods and infections substances. ❒ Maintains records of over 3 million Safety Data Sheets (SDS).	❑ Assist emergency response personnel in handling dangerous good emergencies including advice on ❑ Chemical, physical and toxicological properties and incompatibilities of the dangerous goods ❑ Health hazards and first aid ❑ Fire, explosion, spill or leak hazards ❑ Remedial actions for the protection of life, property and the environment ❑ Evacuation distances ❑ Personal protective clothing and decontamination ❑ CANUTEC staff does not go to the site of an incident, however, should on-site assistance be required, CANUTEC can assist in the activation or industry emergency response plans. ❑ Provide communication links with the appropriate industry, government or medical specialists.	❒ Maintain voice communication and written information records for two years for the protection of all parties.
***Emergency Response Assistance Canada**	Emergency Response Assistance Canada (ERAC) is a not for profit cooperative organization built by industry for industry providing safe, timely effective, sustainable, cost effective flammable liquids and gases emergency preparedness and response assistance to all Plan Participants and Stakeholders of ERAC. ❒ ERAC will act on behalf of the Plan Participant to develop, submit, update, and respond to the requirements of the Plan Participant ERAP submitted to and approved by Transport Canada. ❒ ERAC provides a network of experienced, trained Technical Advisors (TAs), Remedial Measures Advisors (RMAs) and Response Teams who respond to rail, road and stationary tank incidents involving flammable gases, Class 2.1 Liquefied Petroleum Gas (LPG) emergencies and Flammable Liquids Class 3 rail transport and road cargo tank transport emergencies. The emergency responders are constantly available through a 24 hour activation telephone number. ❒ Once a year, there is Regional Training that is held in each region for the Remedial Measures Advisors, Technical Advisors, Response Team Leaders, Alternate Team Leaders as well as all Response Team Members to test their skills and update them on any new developments. Also, once every two years, National Training Session is held for all the Remedial Measures Advisors, Technical Advisors, Response Team Leaders and Alternate Team leaders across Canada.	Provides emergency response to plan participants who transport the following products by road or rail, or those who store these products in tanks with capacities of 450 litres or greater. These products are gases at standard temperatures and pressure, and include: Propane (UN1978), Butane (UN1011), Propylene (UN1077), Butylene (UN1012), Isobutene (UN1969), Isobutylene (UN1055), and NGL (UN1075). It is recognized that these products may contain a concentration of condensate and/or quantities of other elements including hydrogen sulphide. ❒ Response is also provided to emergencies involving Butadiene – 1,3 (stabilized) (UN1010). In addition we respond to the following Flammable Liquids transported by rail only: UN1170 Ethanol UN1202 Diesel Fuel UN1203 Gasoline UN1267 Petroleum Crude Oil UN1268 Petroleum Distillates N.O.S. UN1863 Fuel Aviation, Turbine Engine UN1987 Alcohols, N.O.S. UN1993 Flammable Liquid, N.O.S. UN3295 Hydrocarbons, Liquid, N.O.S. UN3475 Ethanol and Gasoline Mixture UN3494 Petroleum Sour Crude Oil, Flammable, Toxic ❒ If LPG/Flammable Liquid Incident, Emergency Call Centre Operator receives an activation (notification) phone call. ❒ Emergency Call Centre Operator sends group email to Home Based Coordinator. ❒ Home Based Coordinator / Technical Advisor conferenced into call to assist with information gathering. ❒ Caller requires technical advice. ❒ Home Based Coordinator / Technical Advisor provides technical advice. ❒ Caller requests response team. ❒ Confirm plan participant involvement. ❒ Plan participant notified of activation. ❒ Home Based Coordinator / Technical Advisor activate plan. ❒ Mobilization phase ERAC-002. ❒ Initial incident size-up. ❒ Damage and spill assessment. ❒ Develop Incident Action Plan. ❒ Execute IAP & initiate planning for next operational period. ❒ Update Emergency Call Centre Operator and Home Based Coordinator.	❒ Terminate and de-mobilize. ❒ Post-incident assessment and communication program.
***PSC**	❒ Public Safety Canada works with provincial and territorial officials to ensure first responders and emergency management personnel are well-prepared through education, support and exercises. ❒ Responsible for promoting and coordinating the preparation of departmental emergency management plans as well as coordinating the government's response to an emergency through the Government Operations Centre (GOC).	❑ Public Safety Canada houses the Government Operations Centre at the hub of the national emergency management system. It's an advanced centre for monitoring and coordinating the federal response to an emergency.	❒ In the event of a large-scale natural disaster where response and recovery costs exceed what individual provinces and territories could reasonably be expected to bear on their own, PS provides financial assistance to the provincial and territorial governments through the Disaster Financial Assistance Arrangements (DFAA). Assistance is paid to the province or territory – not directly to individuals or communities. The provincial or territorial governments design, develop and deliver disaster financial assistance, determining the amounts and types of assistance that will be provided to those who have experienced losses.

*Canada Energy Regulator Roles & Responsibilities

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

As lead regulatory agency, the CER:

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

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

*Transportation Safety Board Mandate

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

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

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

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

In identifying the causes and contributing factors of a transportation incident, it is not the function of the Board to assign fault or determine civil or criminal liability. However, the Board does not refrain from fully reporting on the causes and contributing factors merely because fault or liability might be inferred from the Board's findings. No finding of the Board should be construed as assigning fault or determining civil or criminal liability. Findings of the Board are not binding on the parties to any legal, disciplinary, or other proceedings.
http://www.bst-tsb.gc.ca/eng/qui-about/mission-mandate.asp

*ERAC - Emergency Response Assistance Canada *CANUTEC - Canadian Transport Emergency Centre *CER - Canada Energy Regulator *TSB - Transportation Safety Board *PSC - Public Safety Canada

2.2 Public Protection Methods

2.2.1 Introduction 1
2.2.2 Air Monitoring Protocol 1
2.2.3 Description of Public Safety Zones 4
2.2.4 Evacuation Guidelines 4
2.2.5 Public Protection Decision Tree 7
2.2.6 Shelter-in-Place 8
2.2.7 Roadblocks 10
2.2.8 Ignition Guidelines 11

The following section 2.2 contains the following redactions:

- 2.2.8: This section contains security sensitive information, the disclosure of which would create a real and substantial risk that its disclosure will impair the security of pipelines, buildings, structures or systems. It is protected from publication under Clause 1(a)(ii) of NEB Order AO-001-MO-006-2016.

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2.2.1 *Introduction*

Four methods are used to safeguard the public against exposure to potentially dangerous situations:

1. Evacuation
2. Shelter-in-Place
3. Ignition
4. Isolation

Isolation involves securing the hazardous area immediately around the incident and preventing access by the public, for example, by setting up roadblocks.

For the purposes of this ERP, the term public means:

Residents, transients, other industrial operators and any other people that may be impacted by an event at a Husky operation including workers not presently on shift and non-essential personnel who are not dealing directly with a response to an incident.

2.2.2 *Air Monitoring Protocol*

The area operations' atmosphere is monitored with sensitive equipment to track and record the presence and concentrations of H_2S and SO_2 during normal operations (proactive), during an incident and ongoing during a response.

The information generated from air quality monitoring is used to:

- Track the release
- Determine if evacuation and/or sheltering criteria have been met
- Determine if areas considered for evacuation are safe to do so
- Identify roadblock locations
- Assist in determining if the emergency can be downgraded

The following site-specific information is considered when deploying the type and numbers of air quality monitoring units:

- Access and egress points
- Area topography
- Population density
- Proximity to urban centres
- Local conditions

Air quality monitoring needs to occur downwind, with priority being directed to the nearest un-evacuated residence, or areas where people may be present. Monitored H_2S and SO_2 information needs to be made available to the Lead Agency and the Local Authority as well as the public on a regular basis throughout an emergency.

Note: Be sure to clarify if readings are in Parts Per Billion (PPB) or Parts Per Million (PPM) or percent (%).

Husky needs to decide whether to dispatch mobile air quality monitoring equipment or place it on standby at a Level 1 Emergency depending where the equipment is located and the amount of time it will take to get it to the area of the incident.

Note: When notified of a release, Husky needs to investigate the source and send out air quality monitoring unit(s) upon confirmation of its location.

Downwind Mobile Air Quality Monitoring Requirements

Downwind Mobile Air Quality Monitoring Requirements (As Published in OGC-OD-C&E-2700, Table 3)			
	Level One Emergency	**Level Two Emergency**	**Level Three Emergency**
Sour Well	If estimated time of arrival is greater than the estimated time for gas to surface[1], then dispatch to site. If estimated time of arrival is less than the estimated time for gas to surface, place on standby.	Deploy unit(s) from well site and commence mobile air quality monitoring[2].	Continue mobile air quality monitoring.
Special Sour Well	If the calculated EPZ includes a portion of an urban density development, mobile air quality monitoring unit must be on the lease during sour drilling, completion, servicing, or testing of potential sour zones. Request additional air quality monitoring unit(s). OR If there is no urban density development, a mobile air quality monitoring unit(s) must be dispatched to the well site at a Level One Emergency.	Deploy unit(s) from well site and commence mobile air quality monitoring. Request additional air quality monitoring unit(s), if required.	Continue mobile air quality monitoring. Request additional air quality monitoring unit(s), if required.
Production Facilities Containing Sour Gas	Deploy unit(s) to area of release and commence mobile air quality monitoring.	Continue mobile air quality monitoring. Request additional air quality monitoring unit(s), if required.	Continue mobile air quality monitoring. Request additional air quality monitoring unit(s), if required.

[1] An estimated time for gas to surface should be based on the time to circulate bottoms-up.

[2] If a mobile air quality monitoring unit has not arrived on site by the time that gas has reached the surface, ignition criteria may have been met for a partially controlled or uncontrolled release.

North American Emergency Response Guidebook

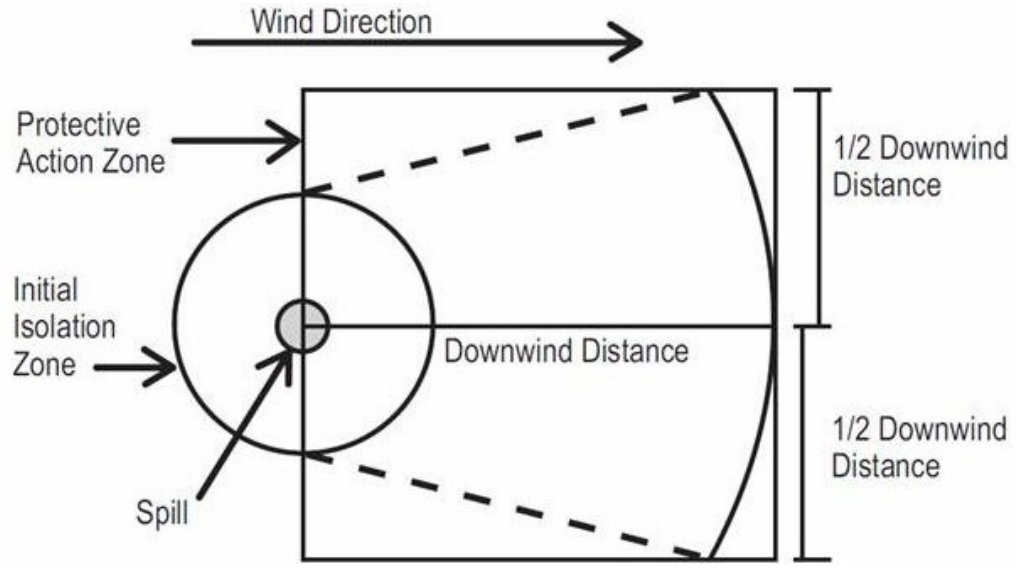
The Emergency Response Guidebook (ERG 2016) was developed jointly by Canada, the U.S., Mexico and Argentina for use by fire fighters, police and other emergency services personnel who may be the first to arrive at a dangerous goods incident. ERG 2016:

- Is primarily a guide to aid first responders in quickly identifying the specific or generic hazards of the material(s) involved in the incident
- Includes general information to protect themselves and the public during the initial response phase of the incident.
- Provides guidance about the initial isolation and protective action distances to protect those closest to the hazard first and then those who are downwind.
- Is a practical, proven response process that has been refined and adopted by First Responders.

Within the Emergency Response Guidebook, first responders are told to:

- Direct all persons to move, in a crosswind direction, away from the spill or release to the distance specified for the Initial Isolation Zone.
- Look up the initial Protective Action Distance in the Emergency Response Guidebook for a given material, spill or release size; determine whether it is day or night; identify the downwind distance and determine the most appropriate protective actions to consider.

The Protective Action Zone (PAZ) is defined within the North American ERG as a square, whose length and width are the same as the downwind distance. The square shape of the area in which protective actions should be taken (the PAZ) is shown in the figure below, extracted from the North American ERG.



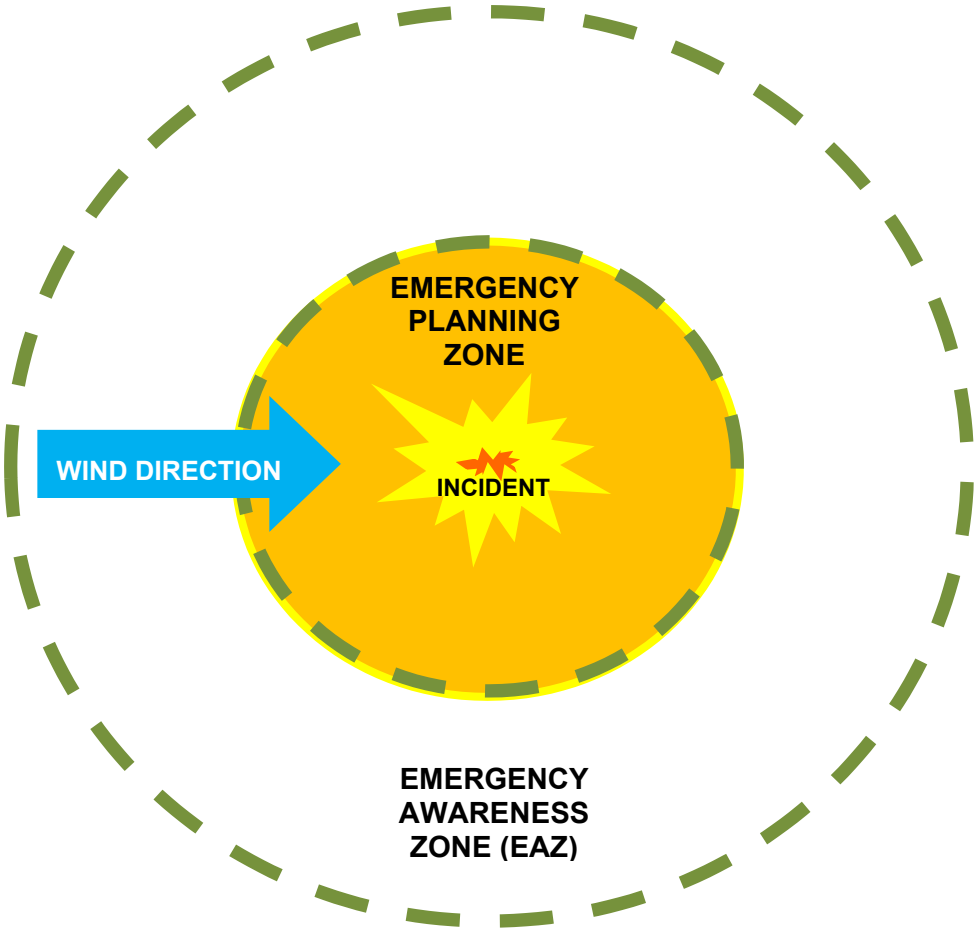
2.2.3 *Description of Public Safety Zones*

Emergency Planning Zone (EPZ) – an area surrounding a facility, pipeline, or well where residents or other members of the public may be at highest risk during the early stages of an uncontrolled release of toxic materials such as H_2S for which the licensee needs to have a specific emergency response plan.

- For a pipeline, the EPZ is a circular distance around the release point, not the entire pipeline length.
- The EPZ for a facility is the largest EPZ for a pipeline that comes in or out of the facility.

Emergency Awareness Zone (EAZ) – the area twice the radius of the Emergency Planning Zone (EPZ)

B.C. Emergency Planning Zone



2.2.4 *Evacuation Guidelines*

Evacuation is the primary public protection measure during a release of sour gas if the public can be safely removed from the area. If area conditions are safe, evacuation should take place as soon as possible - before a release has the potential to affect people and to avoid any exposure to the hazard.

Shelter-in-place may not be a viable public protection measure within close proximity during an incident depending on release volume, size, duration and meteorological conditions. In such situations, assisted evacuation may be necessary to protect public safety. The public safety aspects of shelter-in-place are to be continuously re-evaluated during an incident

Public Evacuation begins with those in closest proximity to the incident site and expands outward and downwind of the release based on the following:

EPZ Evacuation by Emergency Level:

Level 1

- In some cases, where there are large numbers of residents, notify or evacuate residents in accordance with any details within the site specific section.
- Alert mobile monitoring equipment and be ready for a callout or mobilize monitoring equipment if location is remote.
- Prepare for evacuation in case of escalation of the situation.

Level 2

- Set up roadblocks to isolate the EPZ.
- Send out monitoring crew; initiate mobile monitoring.
- **Initiate evacuation of emergency planning zone (EPZ).** The public evacuation within the EPZ residents will be conducted in the following prioritized order:
  - Those located in close proximity to the incident site in all directions.
  - Those downwind to the edge of the EPZ, and beyond the EPZ based on the monitored levels of H_2S in accordance with the “Evacuation Guidelines for H_2S and SO_2” table (next page).
  - Those in the remainder of the EPZ , as the wind direction may change.
- Rovers should be dispatched to notify any transients and assist and individuals who have indicated they require assistance or have special needs and/or individuals who cannot be contacted by telephone.

Level 3

- Ensure all level 1 and 2 actions are taking place.
- Continue evacuation and/or sheltering. Expand EPZ as required.

Husky needs to continuously assess and act on the need to expand the evacuation area based on the monitored levels of H_2S and as dictated by the specifics of the incident itself.

In the absence of the ability to take monitored readings, responders should advise residents to shelter-in-place.

Husky needs to assist any public who require evacuation assistance.

While Husky can advise residents to evacuate, the Local Authority or Regional Health Authority has to declare a state of emergency before mandatory evacuation can occur. Husky must advise residents to evacuate if the need arises.

A shift in wind direction will require immediate re-evaluation of the need for additional evacuation and/or sheltering.

Notification and Evacuation Outside of the EPZ

When necessary, notification and evacuation will take place outside the EPZ in accordance with the company's arrangement with the Local Authority. The notification mechanisms will be based on monitored air quality and other situations that might arise during the emergency. Evacuation of the area outside the EPZ is based on the requirements from the "Evacuation Guidelines for H_2S and SO_2" table above and will be coordinated with the Local Authority.

British Columbia Notification and Evacuation Requirements Outside the EPZ In Un-Evacuated Areas	
H_2S Concentrations	**Requirement**
1 – 9 ppm	Individuals must be informed of the concentrations and advised to leave. All other individuals should consider leaving the area and seek medical advice if health symptoms develop.
10 ppm	Immediate evacuation of the area must take place or the release must be ignited.
NOTE: H_2S evacuation level - when downwind monitoring at the nearest un-evacuated downwind residence, outside the Emergency Planning Zone, indicates a level of 10 ppm, evacuation procedures will be initiated if safe to do so.	
SO_2 Concentrations	**Requirement**
1 ppm	Voluntary.
2 ppm	Evacuation of the area should begin.
5 ppm	Mandatory evacuation of the area.

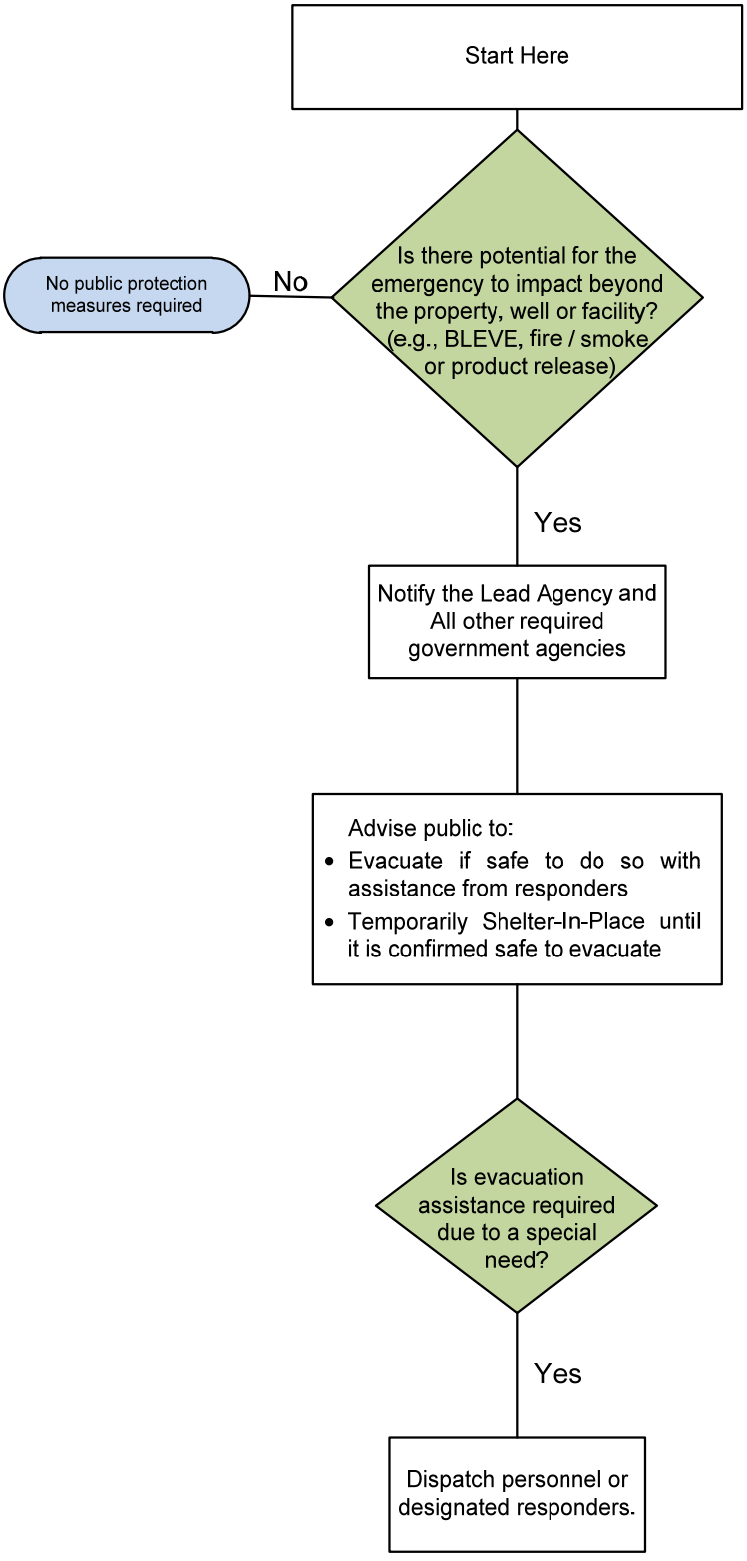
Source: Page 23 of OGC-OD-C+E-2700 BC OGC ERP Requirements (November, 2004)

Media releases should outline the region that meets the mandatory evacuation requirement.

General Camp Evacuation Guideline - Follow Camp-Specific Emergency Procedures

- ☐ Sound the alarm – protect yourself and direct others to safety.
- ☐ Notify designated local Incident Commander.
- ☐ Incident Commander activates the local Emergency Response Plan.
- ☐ Incident Commander activates the Public Protection Supervisor function.
- ☐ Incident Commander may appoint a Public Protection Supervisor.
- ☐ Activated responders will follow assigned ERP duties in Section 1.3.
- ☐ Activate camp sweeps.
- ☐ Restrict access to the area.
- ☐ Activate maintenance contractors to shut down camp.
- ☐ Ensure Emergency Services are dispatched, as required.

2.2.5 *Public Protection Decision Tree*



2.2.6 *Shelter-in-Place*

If evacuation is not possible, Shelter-in-Place can be used to protect members of the public under certain conditions. Shelter-in-Place is the practice of going or remaining safely indoors during an outdoor release of a hazardous substance.

If wind direction changes, immediately re-evaluate the need for additional evacuation and/or sheltering.

Shelter-in-Place Guidelines

Shelter-in-Place is the most effective response during the first few hours of a toxic release to the atmosphere. Being outdoors would carry a higher risk. Shelter-in-Place creates a protective buffer from higher (more toxic) concentrations that may exist outdoors. It is based on using a building that is not too drafty for Canadian winter weather conditions.

Shelter-in-Place is most effective when the movement of outside air into the building is minimized. Stay indoors until the hazard has passed or until other appropriate emergency actions can be taken (such as evacuation).

Examples of when the public may be asked to Shelter-in-Place:

- Occupied buildings are within or near toxic or explosive gas plumes
- Residents are waiting for evacuation assistance
- The toxic gas plume impacts portions of the available evacuation routes
- The source and nature of the release has yet to be determined
- The toxic release is expected to be of short duration (several minutes to half an hour)
- Extreme weather conditions compromise the ability of the public to safely evacuate
- Insufficient time or warning to safely evacuate
- When evacuation carries an unacceptable level of risk

All persons advised to Shelter-in-Place are to be notified if additional measures are required, and when it is “all clear”.

Shelter-In-Place Instructions

- 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.
- Extinguish indoor wood burning fires.
  - If possible, close flue dampers.
- Turn off appliances or equipment that either:
  - Blow out or use indoor air, such as:
    - Bathroom and kitchen exhaust fans.
    - Built-in vacuum systems.
    - Clothes dryers.
    - Gas fireplaces.
    - Gas stoves.
  - Suck in outside air, such as:
    - Heating, ventilation and air conditioning (HVAC) systems for apartments, commercial or public facilities.
    - Fans for heat recovery ventilators or energy recovery ventilators (HRV/ERV).
- Turn down furnace thermostats to a minimum setting and turn off air conditioners.
- Leave open all inside doors.
- Avoid using the telephone, except for emergencies, so that you can be contacted by emergency response personnel.
  - Call the company emergency numbers:
    - 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.
- Wait in an interior room upstairs for further instruction.
- Even if you see people outside, do not leave until told to do so.
- If you are unable to follow these instructions, please notify emergency response personnel.
- After the hazardous substance has passed through the area, you will receive an "all clear" message. 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.

2.2.7 *Roadblocks*

Roadblocks will be established to prevent public exposure to the hazard as required. Husky or contract personnel will man the roadblocks with possible additional help from mutual aid partners, RCMP, transportation authorities and local authorities.

Roadblocks should be placed in locations that are clearly visible to oncoming traffic and must be positioned to enable traffic to easily turn around. Intersections are good locations for roadblocks.

Each roadblock location should have the following equipment as a minimum:

- hand-held explosive gas detectors and / or H_2S monitors, if appropriate, radio communication, road barriers, flares and / or flashing lights, maps, Roadblock Record forms and applicable personal protective equipment etc.

Personnel who are manning roadblock locations that could be exposed to the hazard must be trained in the use of hand-held monitoring equipment and personal protective equipment as appropriate. Personnel who are not trained with this equipment must be restricted to roadblock locations that the Public Protection Supervisor can assure will be in a safe area at all times.

Ideally, Husky should receive authorization from local authorities or the Ministry of Transportation before establishing roadblocks on public roads. For local roads contact the local authorities. For roads overseen by the Ministry of Transportation, contact the Ministry. If in doubt, contact the RCMP who will contact the appropriate authority and offer their assistance. In BC, it is often the area's road maintenance contractor who will be called to establish and maintain a road closure. If the safety of the public is in jeopardy, Husky must be prepared to quickly restrict access to the area before contacting these agencies.

The local authority, e.g. county, municipality, or town, may, if warranted, declare a Local State of Emergency. This State of Emergency grants the local authority special powers to do such things as road closures or declare a mandatory evacuation.

The following information should be provided to the RCMP, the transportation / highway authorities, and the local authority when they are contacted:

- The nature, location and extent of the emergency.
- Suggestions where the roadblocks should be located.
- Wind speed and direction.
- Number of people living within the emergency planning zone.

The public must also be prevented from flying into the airspace above a gas release. Transport Canada can be contacted through NAV Canada to request the issuance of a NOTAM (Notice to Airmen). A NOTAM will restrict airspace access.

When a railway, highway or navigable watercourse passes through a Husky EPZ, any required special response procedures along with the corresponding contact information will be included within the applicable site specific information tab. Contact to these agencies must be initiated to prevent the public and their company personnel exposure to a potential hazard.

Transients and/or industrial operators utilizing pipeline rights-of-way will be identified by ground rovers and/or aerial surveillance. All pre-identified industrial operators, potential area users and their contact information is included within the applicable site-specific information tab.

Roadblock Statement
""I am with Husky and we have an emergency ahead. This situation is serious enough to warrant restricting access beyond this point and I am asking you to take an alternate route."

2.2.8 *Ignition Guidelines*

Ignition is an important component of emergency response procedures for addressing public and worker safety during a sour gas release.

When H_2S is ignited, it is converted to SO_2. The heat of combustion carries the SO_2 gases high into the atmosphere. The resulting SO_2 concentrations that reach ground level are generally not expected to be sufficiently concentrated to be dangerous. Furthermore, once the escaping gases are burning, workers are no longer exposed to the possibility of an unexpected explosion from un-ignited gases. Ignition does not negate the requirement for continued evacuation or shelter-in-place procedures.

Ignition equipment will be on-site ready for use before sour operations begin. If an Alert or Emergency is declared, the On Site Supervisor will review the ignition procedures and confirm that the equipment is operational and is in a position to deploy quickly.

The On Site Supervisor is empowered to independently implement the ignition procedures at any time it is believed workers or public cannot be protected from the escaping gases. If worker or public safety issues are not at immediate risk, with time permitting, the On Site Supervisor may wish to discuss the ignition requirement with the Incident Commander and the OGC. Such discussions are particularly relevant if regained well control is imminent. OGC senior staff may insist on igniting a release if the company does not agree to ignite the release or if the company is not prepared to take the necessary steps.

Ignition Criteria

Husky is expected to take immediate steps to prepare for ignition at the earliest signs of a release or a well control problem to ensure there will be no delay. For manned well operations, prompt ignition mitigates the threat of H_2S exposure that could threaten public safety during a major sour gas release. During a sour well control problem, ignition discussions between Husky and the OGC should occur at pre-set intervals until the well is brought under control.

Husky is required to ensure that all sour wells have an ignition system such as a flare gun on site during all drilling, completion, well testing or workover operations in the sour zone(s).

Husky needs to:

- Keep the OGC informed about the ignition situation and ignite a sour gas flow to the atmosphere in accordance with the following Assessment and Ignition Criteria Flowchart unless discussions with the OGC determine that ignition may be delayed,
- Ensure that appropriate ignition equipment is available during all operations, and
- Assign the decision-making authority to ignite the release to a Husky representative on site.

The ignition team should be certified in ignition procedures and properly equipped to ignite the release within the planned time limits for which the EPZ was designed. OGC senior staff may make the decision to ignite a release if Husky does not agree to ignite the release or is not prepared to take the necessary steps. Ignition does not negate the need for continuing with evacuation as there may be residual pockets of H_2S or SO_2 in the area.

HVP Product Release

Following an incident, the hazard associated with an HVP product release may be controlled or minimized by deliberately igniting the release. 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, Husky should take steps to minimize any chance of unplanned ignition in the area.

Assess the following prior to HVP product ignition:

- 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. (Will egress be affected?)
- Whether ignition will improve or worsen public safety.
- Whether wind direction has been determined and is continually monitored.
- Whether the possibility of an explosion has been assessed (i.e. obstruction or regions of congestion within the perimeter of the dispersing vapour cloud).

If the ignition criteria are met for either sour gas or HVP product, ignition must take place within 15 minutes of the decision to ignite.

Assessment and Ignition Criteria

During a release of H_2S assess the following:

- Detectable concentration of H_2S and/or flammable gases near the source of the release and within the EPZ.
- Risk of exposure/injury to the public or response workers.
- Duration of the release and potential volume.
- Proximity to residences, public facilities, towns or urban centres.
- Safety of ignition team (hazard area identification, protective gear).
- Status of evacuations.
- Weather conditions.
- Fire hazard after ignition in relation to adjacent forested or cropland area.
- Impacts to livestock and other values at risk including property, timber, or infrastructure.

↓

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

- Personnel working at site can be cleared to a safe distance.
- Although required, evacuation of the response zones has not taken place.
- Monitoring results indicate H_2S concentrations in excess of 15 ppm over a 15 minute average in unevacuated parts of the EPZ. IF MONITORED LEVELS ARE DECLINING, THEN THE SITUATION NEEDS TO BE CONTINUOUSLY ASSESSED FOR IGNITION.
- Monitored H_2S concentrations exceed 1 ppm (1-hour average) in urban density developments.
- Monitoring is not taking place due to weather or other unforseen circumstances.
- The release cannot be brought under control in the short term (ignition decision will be made in consultation with the OGC).
- The well is experiencing an uncontrolled flow, the well effluent has reached the surface, no immediate change of control and the flow, if not ignited, could lead to loss of life.
- The well is flowing sour gas to surface and safety of residents cannot be assured because:
- Evacuation of residents within the emergency response planning zone CANNOT be accomplished; or
- Monitoring results indicate H_2S levels of 15 ppm for 15 minutes in unevacuated areas; or
- Monitoring is not taking place due to some unforeseen circumstances, such as bad weather or communication breakdown.
- *Monitored H_2S concentrations exceed 1 ppm (1-hour average) in urban density developments*
- For special sour wells, as determined by OGC immediate ignition of a well may be required.

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

↓

Carry out pre-ignition planning.
Attempt ignition

Ignition Team

The ignition team will be knowledgeable in sour well ignition and properly equipped to ignite the well within the planned time limits for which the EPZ was designated. The Incident Commander is responsible to ensure the ignition of the well. The On Site Supervisor will be part of a two-person backup Ignition Team. The backup Ignition Team remains in visual contact with the Ignition Lead and communicates with the Incident Commander or Operations Section Chief, if appointed. They remain available for emergency rescue of the Ignition Lead.

Ignition Equipment

If ignition is required, a safety company will supply all necessary equipment.

Ignition Procedures

[redacted]

Post-ignition Procedures

- The On Site Supervisor will immediately advise the Incident Command Post by radio when ignition has been accomplished.
- Air monitoring equipment will be directed by the Public Protection Supervisor to acknowledge changes in air quality readings in the un-evacuated areas and commence reporting SO_2 readings.
- Evacuation of the EPZ will continue.
- The ignited release will be monitored to ensure the ignition is sustained. Ignition equipment and workers involved in ignition operations will remain on standby.
- The EPZ will be expanded to any areas where SO_2 readings exceed criteria for notification and evacuation beyond the EPZ.

2.3 Media

2.3.1 Media and Press Release Guideline 1

The following section 2.3 contains the following redactions:

- 2.3.1: This section contains security sensitive information, the disclosure of which would create a real and substantial risk that its disclosure will impair the security of pipelines, buildings, structures or systems. It is protected from publication under Clause 1(a)(ii) of NEB Order AO-001-MO-006-2016.

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2.3.1 *Media and Press Release Guideline*

The Incident Commander, Corporate Director and Legal need to review and approve all media statements before release.

Note: All media releases should be shared with the regulator before release. The CRMT Communications Officer will act as the company spokesperson for all planned communications to the media during an emergency, unless otherwise delegated.

In the absence of the CRMT Communications Officer, the Corporate Director will assume the role of company spokesperson.

Depending on the severity of an emergency, the media may attempt to contact company representatives in person at the incident site or close to the site. These representatives could include rovers, roadblock personnel, on-site personnel or other people the media deem credible to represent the company.

If you are approached by media:

- Be polite.
- Never use the phrase "No comment."
- If a more senior person is immediately available at your location, redirect the inquiry to that person.
- If you are the most senior person at your location, advise the media that you are not the best person to answer their question, you will have the right person contact them.
- Obtain their contact information and advise that someone will be in contact with them shortly.
- Gather the information on the Media Inquiry Form, if possible.
- Forward the Media Inquiry Form or any call back commitments to your supervisor as soon as possible. The media will be working to a deadline.
- The supervisor will pass on the Media Inquiry Form or call back commitments to the Public Information Officer or Communications Officer for response.
- Be careful not to confirm or deny information or facts. Again, simply state that you are not the best person to answer their questions.

Although a media release may indicate information about the number of people injured, **NEVER** disclose any information about the names of those injured or the extent of their injuries. In cases where it is not possible to pass along the information to a more senior company representative, the following statement may be released. You must notify Corporate Communications at the number in the statement that media was at site.

Media Statement
"We are in the early stages of gathering information on this situation. Of utmost priority is the safety and protection of the public and all responders. Information will be available as soon as we know more. Feel free to leave your contact number with me or call our Corporate Communications department at [redacted]."

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2.4 Plan Principles

2.4.1 Purpose of this ERP 1
2.4.2 ICS Structure 3
2.4.3 ICP Integration 9
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2.4.5 Record Keeping 15
2.4.6 Training 16

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2.4.1 *Purpose of this ERP*

The purpose of this Emergency Response Plan (ERP) is to clearly define the response system and organization structure to effectively respond to any security, emergency or business continuity incident regardless of size or complexity.

This ERP defines emergency response team roles, functions and duties to protect people, the environment and assets threatened in an emergency. This ERP also describes the actions necessary to manage key stakeholder communications and return conditions to normal. Emergency response actions that may be implemented include, but are not limited to, the following situations:

- Public concern
- Fires or explosions
- Serious injuries or fatalities
- Spills or hazardous product releases including an H_2S release
- Hydrocarbon releases
- Major property or equipment damage
- Security breach or threat
- Vehicle accidents
- Natural disasters (e.g. tornadoes, earthquakes, severe weather conditions)
- Business Continuity Event such as loss of information services functionality or normal work location

This Plan clarifies the:

- Overall Incident Command System (ICS) response organization and structure
- Area specific hazards
- Activation procedures
- Guidance for determining the Emergency Level
- Roles and responsibilities of specific ICS positions
- Notification and communication requirements to the public, government agencies and Husky management
- Stakeholder communication processes to support timely, effective and on-going notification of the public, media, regulators, government agencies, contractors and Husky employees and their families
- General incident response protocols / scenarios
- Documentation tools and requirements for noting and maintaining accurate record of events and decisions made during an emergency
- Guidance regarding post-emergency actions
- Training, drills and exercise expectations
- Available internal resources and contact information for external resources and contractors

Husky's response organization follows Incident Command System principles and features that include:

1. Common terminology
2. Modular organization
3. Management by objectives
4. Incident Action Plan (IAP)
5. Manageable span of control
6. Chain of command and unity of command
7. Response facilities
8. Comprehensive resource management
9. Unified command
10. Integrated communications

Corporate Commitment

Husky is committed to providing a robust and effective Emergency Management program which takes into account the elements of security, emergency management and business continuity. As part of this overall strategy, Husky has created and maintains its Emergency Response Plans that incorporate and integrate the processes and protocols required to address all facets of adverse events. Husky is committed to responsible corporate citizenship, operational integrity and environmental stewardship.

Operational integrity at Husky means conducting all activities safely and reliably so that the public is protected, impact to the environment is minimized, the health and wellbeing of employees is safeguarded, contractors and customers are safe, and physical assets (such as facilities and equipment) are protected from damage or loss.

This Emergency Response Plan has been developed to meet or exceed the requirements of all applicable governing agencies and regulatory bodies where the Company operates. It complies with Husky's Emergency Management Standards as outlined in the Husky Operational Integrity Management System (HOIMS), a systematic approach to anticipating, identifying and mitigating hazardous situations within the Company's operations. The plan takes into account an area-specific hazard/risk analysis and outlines the necessary resources, personnel, logistics and initial actions to facilitate a prompt, coordinated and rational approach to any emergency.

This Emergency Response Plan is considered an all-hazards plan which can manage a variety of security and emergency incidents and the early phases of a business continuity scenario when effectively implemented. Where hazard specific plans exist, such as spill response, fire safety / pre-fire, security and business continuity these plans shall be referenced for additional response guidance and resources.

2.4.2 *ICS Structure*

Husky's emergency management organization is based on the Incident Command System (ICS). Common terminology has been developed to identify major functions, personnel and responsibilities. By adopting ICS principles and terminology, Husky is better equipped to align with mutual aid partners and government agencies in training, simulations and emergency response efforts.

Husky uses ICS to manage all emergencies regardless of nature, size or complexity.

The Incident Commander has overall responsibility to assess current impacts and potential hazards, determine the emergency classification (Alert, Level 1, 2, or 3), set objectives, plan strategies and implement tactics.

At the onset of any incident, Husky requires that the following two key ICS roles be filled and that they be filled by different persons:

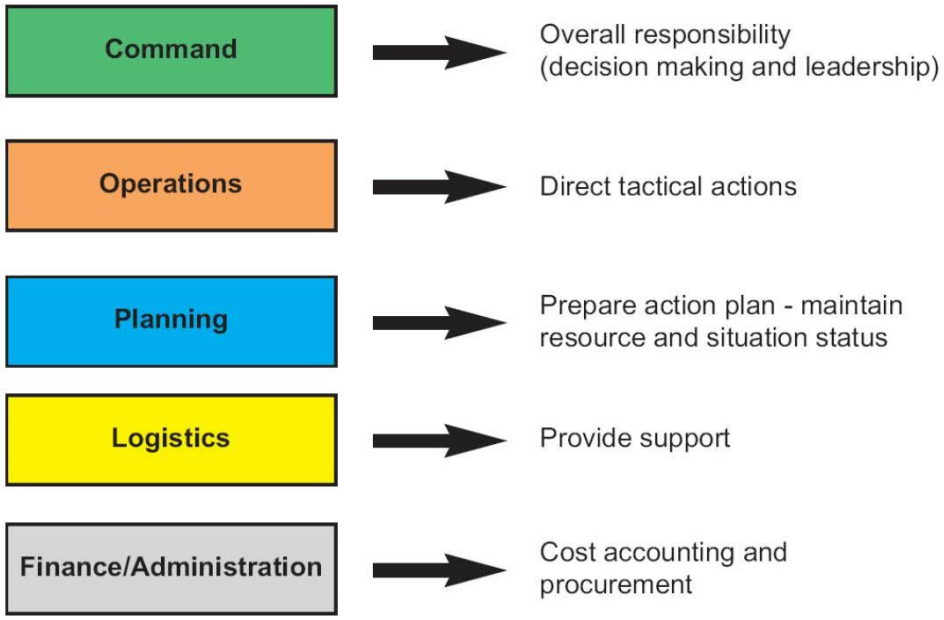
Incident Commander Typically filled by the most senior field-based Husky representative available (e.g. Production Superintendent or District Manager). It is essential that a Husky representative be available to assume this role on a 24 hour basis.

An Incident Commander coordinates and directs all local response activities. They are responsible for the safety and health of all personnel and public and for the protection of the environment.

On Site Supervisor Initially filled by the first responder or senior Husky representative.

Responsible for all tactical on-site control operations and the safety of all on-site personnel.

There are five major management functions that are the foundation upon which the ICS organization develops, they are:



Incident Command

The command function can be carried out in two ways:

- As a single command where the Incident Commander has complete responsibility for incident management.
- As a Unified Command where one or more other agencies or organizations that have responsibility and/or jurisdiction share incident management.

Single Command

The Incident Commander is in charge of overall field based emergency response, mobilizing staff to respond, setting objectives and priorities, notifying the Corporate Response Management Team (CRMT) of the situation and taking action to ensure the health and safety of personnel and the public and to minimize environmental damage.

Based on known and potential impacts, the Incident Commander may proactively appoint individuals to fill additional ICS roles thereby keeping their workload manageable. Until the Incident Commander delegates others to fill an ICS role, they are expected to perform all necessary ICS command and general staff responsibilities.

The Incident Commander coordinates and directs all local response activities. They are responsible for the safety and health of all personnel and the public and for the protection of the environment. Within Husky, the Incident Commander role may be initially filled by Control Room staff but this is usually transferred to the most senior Husky representative as they become available (e.g. Production Superintendent or District Manager). The Incident Commander may appoint one or more Deputies. A Deputy Incident Commander needs to be as qualified as the Incident Commander. A Deputy Incident Commander may be designated to:

- Perform specific tasks as requested by the Incident Commander.
- Perform the incident command function in a relief capacity.
- Represent an assisting agency that shares jurisdiction.

Unified Command

If Unified Command is needed, Incident Commanders, representing agencies or jurisdictions that share responsibility for the incident, manage the response from a single Incident Command Post. Under Unified Command, a single coordinated Incident Action Plan will direct all activities. The Incident Commanders will supervise a single Command and General Staff organization and speak with one voice.

The Incident Commanders may appoint one or more Deputies, if applicable, from the same agency or from other agencies or jurisdictions.

A formal transfer of command during an incident always requires a “Transfer of Command Briefing” for the incoming Incident Commander and notification to all personnel that a change in command has taken place.

Command Staff

The following Command Staff report directly to the Incident Commander:

Safety Officer

- Monitors safety conditions, assesses hazardous and unsafe situations and develops measures for assuring the safety of all assigned personnel.
- Advises the Incident Commander on issues regarding incident safety, however may exercise emergency authority to stop unsafe acts if personnel are in imminent danger.
- Works closely with the Operations Section to ensure the safety of tactical and support personnel. Only one Safety Officer will be named to an incident.
- May have assistants as necessary that might represent other agencies or jurisdictions.

Liaison Officer

- The primary contact for supporting or cooperating agencies that are assisting at an incident.
- Assists the Incident Commander by serving as a point of contact for agency representatives who are helping to support the operation.
- Provides briefings to, and answers questions from, the supporting agency representatives. There is only one Liaison officer on any incident, although very large incidents may require the use of assistants.

Public Information Officer

- A Public Information Officer may be assigned to communicate with local media though they would only be appointed with approval of the Corporate Director and the Calgary-based CRMT Communications Officer.
- The Husky Calgary-based CRMT Communications Officer is the primary point of contact for media or other organizations seeking information directly about the incident or event. They assume responsibility for managing all media issues.
- If assigned, the field-based Public Information Officer will establish a one-window media communications link with the Calgary-based CRMT Communications Officer to ensure an effective, coordinated media response at both the field and corporate level.

ICS Process Advisor

- This is an additional Command Staff role that has been added to ICS by Husky.
- Provides advice and support to Incident Commander regarding ICS implementation.

General Staff

General Staff personnel fulfill the needs of the remaining four management functions. General Staff are made up of four ICS Sections: Operations, Planning, Logistics and Finance/ Administration and report directly to the Incident Commander.

Operations Section

The Operations section carries out the Incident Action Plan. They are responsible for tactical control and containment operations at the incident site working to reduce immediate hazards, save lives and property, establish situation control, and restore normal conditions.

The Operations section may be involved in actions on-site and off-site:

- On-site operations are physical activities undertaken to directly mitigate the emergency, to protect human life, health and property and / or the environment from the physical impact of an event (i.e. putting out the fire, stopping the source of a spill, rendering medical aid, etc.).
- Off-site operations coordinate public safety activities and measures such as the establishment of roadblocks, public evacuation and / or sheltering-in-place, mobile air monitoring and management of a reception centre.

The On Site Supervisor role (which is part of the Operations Section) is the first ICS position undertaken in an incident.

The Operations Section directs many response resources. To maintain a manageable span of control, each ICS supervisor should have no more than five direct reports. An Operations Section Chief is usually not appointed unless the incident is large, complex or there is a span of control issue.

However, there are situations where the Incident Commander may promptly assign an Operations Section Chief such as when Husky is supporting a Contractor ERP response effort or providing mutual aid support so that there is ongoing communication with the On Site Supervisor.

Planning Section

If a Planning Section is deemed necessary, the Incident Commander will designate a Planning Section and Chief. If no Planning Section is established, the Incident Commander will perform all the planning functions.

A Planning Section Chief gathers, analyzes and disseminates information and intelligence, manages the planning process, compiles the Incident Action Plan and manages technical specialists. It is up to the Planning Section Chief to activate any needed additional staffing to complete these tasks.

Planning Section Major Activities

The Planning Section duties are to:

- Collect, evaluate, and display incident intelligence and information.
- Prepare and document Incident Action Plans.
- Conduct long-range and/or contingency planning.
- Develop plans for demobilization.
- Maintain incident documentation.
- Track resources assigned to the incident.

One of the most important functions of the Planning Section is to look beyond the current operational period to anticipate potential problems or events.

Logistics Section

The Incident Commander determines if and when a Logistics Section and Chief are needed. If no Logistics Section is established, the Incident Commander will perform all logistical functions.

The size of the incident, complexity of support needs and the incident length will determine whether a separate Logistics Section is established. The Logistic Section Chief is responsible to provide resources and services required to support incident response activities, develop portions of the Incident Action Plan and forward to the Planning Section, and contract for the purchase and delivery of all goods and services needed. It is up to the Logistics Section Chief to activate any needed additional staffing to complete these tasks.

Finance/Administration Section

The Incident Commander will determine if there is a need for a Finance/Administration Section and Chief. If no Finance/Administration Section is established, the Incident Commander will perform the finance functions.

The Finance/Administration Section Chief is responsible for monitoring incident related costs and administering any necessary procurement contracts.

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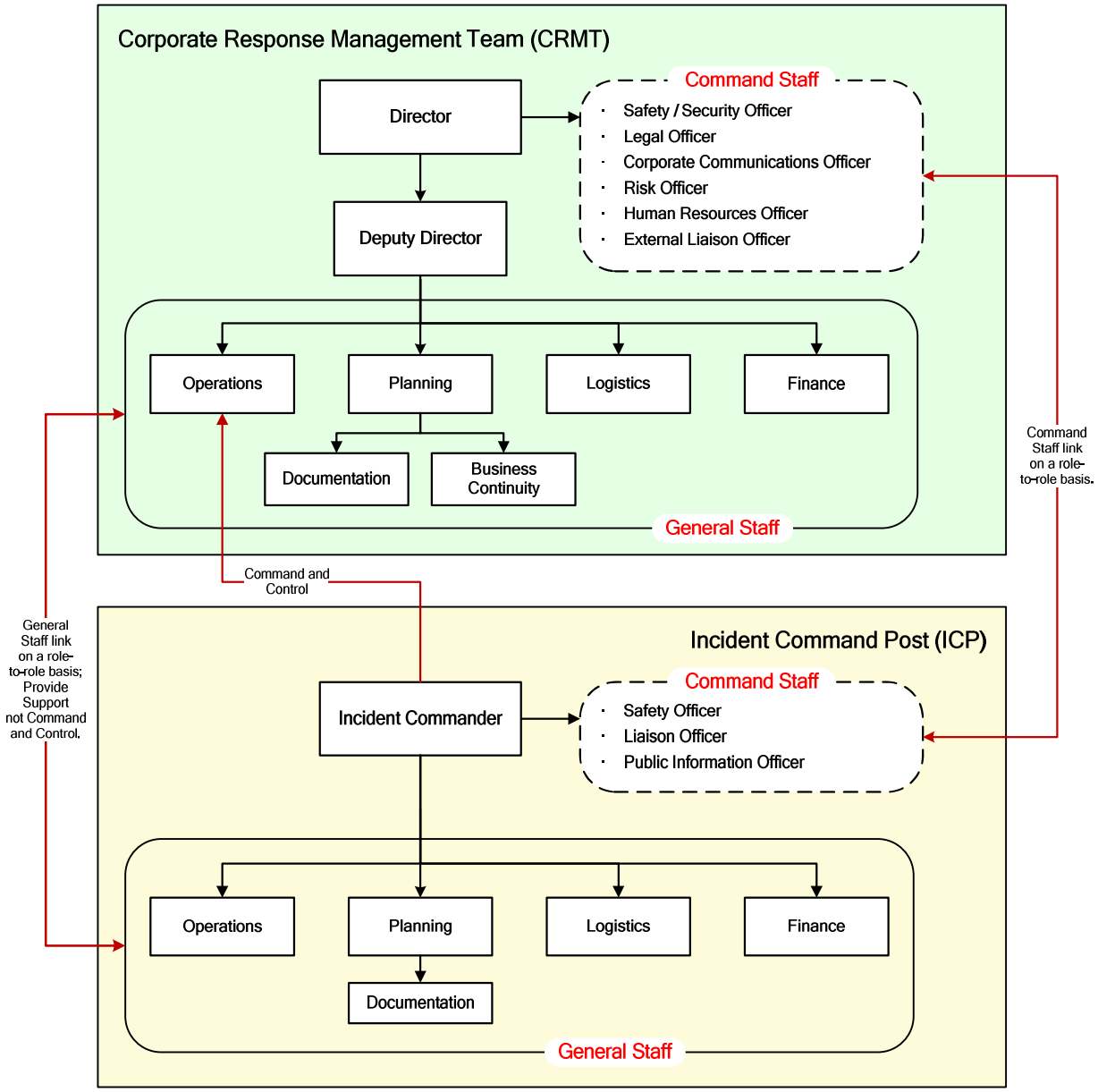
2.4.3 *ICP Integration*



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2.4.4 *Response Facilities*

Response facilities are set up at locations that meet the needs of the incident. Each facility has a unique purpose and not all facilities are set up for every incident.

Incident Command Post (ICP)

The Incident Commander establishes the Incident Command Post (ICP) in a safe location that is best suited to manage the size and scope of the particular emergency.

Note: The term Company Regional Emergency Operations Centre (CREOC) is a term that means the same thing as Incident Command Post. This is the location of the Incident Commander and may include government staff. **Husky uses the term Incident Command Post or ICP throughout this document**.

On Site Command Post

The On Site Command post is established by the On Site Supervisor. It is the Command Centre established in the immediate vicinity of the incident where strategies for on-site workers' safety, control and containment operations are managed. Because this command centre may be exposed to dangerous conditions due to proximity to the hazard, it may need to be relocated to an alternate location. All personnel accessing the site need to check in and out at the On Site Command Post.

Staging Area

A Staging Area is a temporary location set up near an incident where personnel and equipment are kept while awaiting tactical assignments. Staging Areas should be set up within five minutes travel time to the area of expected need. Once set up, all Staging Areas should have a Staging Area Manager, who reports to the Incident Commander or the Operations Section Chief, if appointed. The Staging Area can be relocated if necessary.

Reception Centre

The Reception Centre is the location where the company addresses the needs of evacuated public. It is here where the company receives evacuees, helps arrange for accommodation, exchanges contact information, distributes expense-claim forms, provides information updates and addresses issues identified by evacuees. The Reception Centre should be located at an easily accessible location (e.g. community hall or other public facility) a safe distance from the incident site, outside the hazard area.

Corporate Emergency Response Centre (CERC)

The Corporate Emergency Response Centre (CERC) is a pre-designated facility established by the Calgary-based Corporate Director to support the Incident Commander and manage longer term issues. Partial or full activation is dependent on the incident.

Municipal Emergency Operations Centre (MEOC)

A municipal emergency operations centre is a place of central response coordination a distance away from the Incident Command Post (ICP). A municipality or rural municipality may decide to open their MEOC at a Level 2 incident, but more commonly at a Level 3.

In response to a petroleum sector incident, a municipality would likely open their MEOC if a substantial number of their residents were being evacuated, regardless of whether their assistance is required. The MEOC exists to support the incident site.

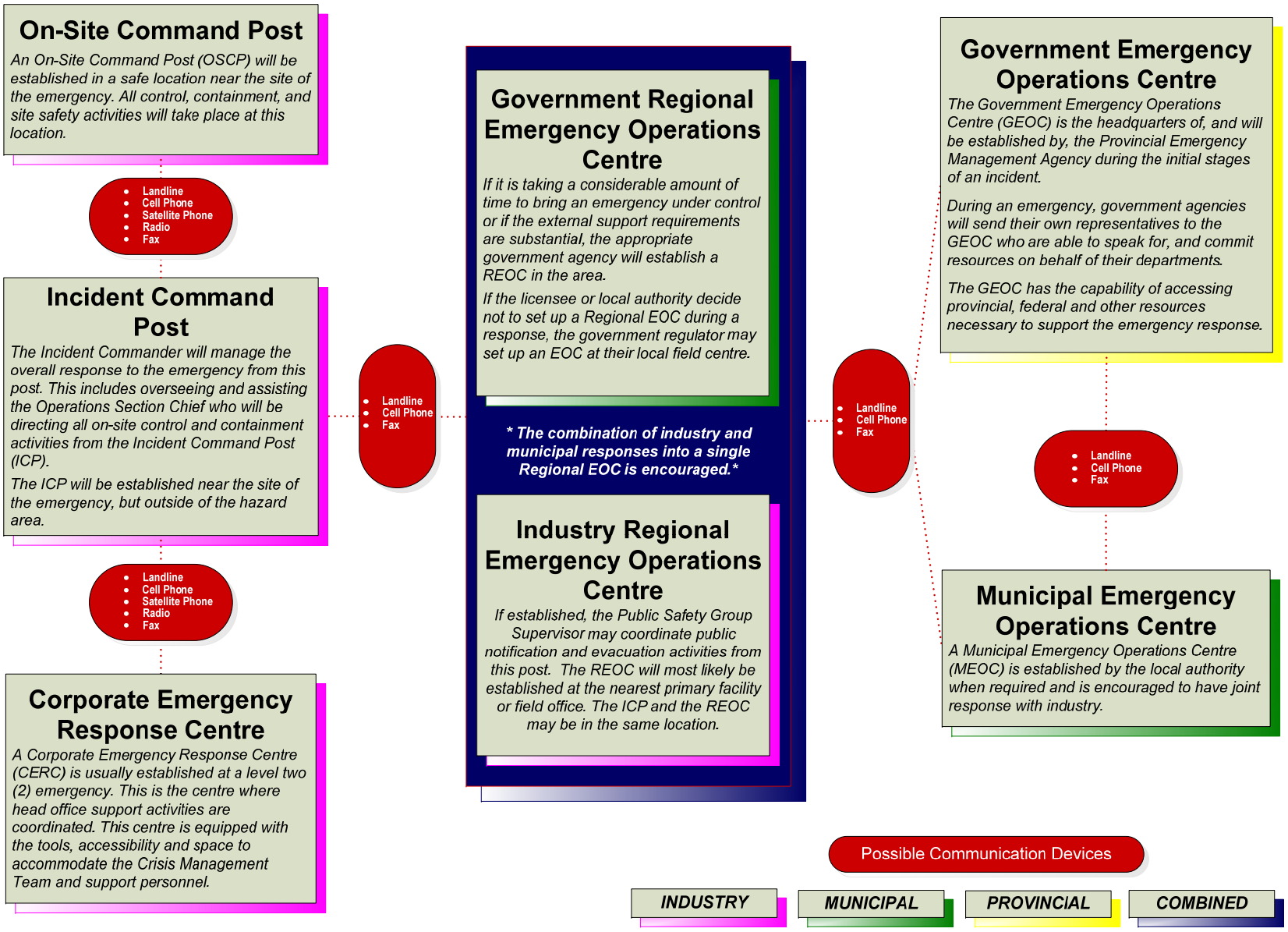
This usually takes the form of joint communication with their emergency services on-scene, whether at a municipal or joint industry municipal command post. The petroleum company experiencing an incident may be requested to provide or wish to send a liaison to the MEOC. In turn, the petroleum company may request a representative of the impacted municipality to send a representative(s) to the ICP.

Regional Emergency Operations Centre (REOC)

A regional emergency operations centre is a joint local, provincial and government emergency centre designed to coordinate inter-agency activities and to support the response. It may be opened for a Level 2 or a Level 3 Incident.

Staffing of the REOC is expected to include personnel representing:

- Husky
- Lead Agency
- Affected Municipality
- Regional Health Authority
- Representatives of other provincial government departments


On-Site Command Post
An On-Site Command Post (OSCP) will be established in a safe location near the site of the emergency. All control, containment, and site safety activities will take place at this location.
Landline
Cell Phone
Satellite Phone
Radio
Fax
Incident Command Post
The Incident Commander will manage the overall response to the emergency from this post. This includes overseeing and assisting the Operations Section Chief who will be directing all on-site control and containment activities from the Incident Command Post (ICP).
The ICP will be established near the site of the emergency, but outside of the hazard area.
Landline
Cell Phone
Satellite Phone
Radio
Fax
Corporate Emergency Response Centre
A Corporate Emergency Response Centre (CERC) is usually established at a level two (2) emergency. This is the centre where head office support activities are coordinated. This centre is equipped with the tools, accessibility and space to accommodate the Crisis Management Team and support personnel.
Landline
Cell Phone
Fax
Government Regional Emergency Operations Centre
If it is taking a considerable amount of time to bring an emergency under control or if the external support requirements are substantial, the appropriate government agency will establish a REOC in the area.
If the licensee or local authority decide not to set up a Regional EOC during a response, the government regulator may set up an EOC at their local field centre.
* The combination of industry and municipal responses into a single Regional EOC is encouraged.*
Industry Regional Emergency Operations Centre
If established, the Public Safety Group Supervisor may coordinate public notification and evacuation activities from this post. The REOC will most likely be established at the nearest primary facility or field office. The ICP and the REOC may be in the same location.
Landline
Cell Phone
Fax
Government Emergency Operations Centre
The Government Emergency Operations Centre (GEOC) is the headquarters of, and will be established by, the Provincial Emergency Management Agency during the initial stages of an incident.
During an emergency, government agencies will send their own representatives to the GEOC who are able to speak for, and commit resources on behalf of their departments.
The GEOC has the capability of accessing provincial, federal and other resources necessary to support the emergency response.
Landline
Cell Phone
Fax
Municipal Emergency Operations Centre
A Municipal Emergency Operations Centre (MEOC) is established by the local authority when required and is encouraged to have joint response with industry.
Possible Communication Devices
INDUSTRY
MUNICIPAL
PROVINCIAL
COMBINED

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2.4.5 *Record Keeping*

Husky has a process for the following record keeping activities:

- Husky is required to retain all of the following records **for a period of three years; CEPA E2 requires records (training etc.) to be kept for a period of five years.**

Incident Records

Unless they contain specific routing information, all completed forms are to be forwarded to the Documentation Unit Leader in the Planning Section. The documentation gathered during and following an incident response provides the information needed for post-incident assessment, historical, and analytical purposes (see Section 1.5 Forms, ICS Form 201: Incident Briefing) which may be used during an incident).

If solicitor-client privilege has not yet been established with the legal department, this should be discussed. Ideally, incident documentation should be marked “confidential.” External agency representatives should be aware that caution needs to be exercised in what written information they leave the incident with, as it may later form part of a publicly accessible file.

Upon conclusion of response, all incident related documents are provided to the Incident Commander or Corporate Director as directed. The Documentation Unit Leader will compile and secure incident records and any response debriefing documentation as required.

ERP Maintenance Records

Husky uses a transmittal process to confirm distribution of updates and third party service providers track work to keep the ERP current, including attempts to contact or obtain the cooperation of any required persons, and regularly communicates with Husky about any outstanding issues yet to be resolved.

Training, Meetings, and Exercise Records

The Husky Learning Management System (LMS) tracks and helps Husky management individual training and competency requirements.

Exercise reports are developed and loaded into HuskySafe within 60 days of an exercise that includes:

- Type of exercise held
- Objectives and scope
- Persons involved
- Outcome (i.e., whether objectives were achieved)
- Lessons learned (i.e. participant feedback comments / critique)
- Action plan, including timelines (with Action items assigned and loaded into HuskySafe)

All Pre-sour and/or Critical Sour Meetings, such as meeting sign-in sheets, invitations, and minutes must be captured and retained for possible review by the OGC.

2.4.6 *Training*

Husky Oil is committed to ensure Husky personnel involved in an emergency response fully understand their roles and the roles of others with whom they may interact during an incident. To meet this commitment and to ensure personnel respond effectively, training activities will include:

Orientation

- Provide employees and contractor management with an orientation to Husky's Emergency Response Plan and its applicable elements.
- Discuss and clarify bridging between contractors' emergency response procedures and this Husky ERP.
- Utilize summary wall charts outlining key responsibilities and lines of communication for quick reference purposes.
- Devote a portion of scheduled safety and/or staff meetings to the discussion of emergency response issues on an on-going basis.

Specialized Emergency Response Training

- Make available (through the Husky Training Coordinator) all required training.
- Ensure employees and contractor personnel comply with Husky's safety training requirements (e.g. First Aid/CPR, WHMIS, Transportation of Dangerous Goods, firefighting, etc.).

Emergency Drills

- Employees and contractors should conduct drills on an on-going basis to ensure readiness, including, but not restricted to:
  - fire fighting
  - spill response
  - first aid
  - confined space entry
  - man down

External Orientation

- As appropriate, brief and familiarize all external groups or agencies having a role in this Emergency Response Plan with the overall plan and their specific responsibilities under the plan.

Plan Exercises

A regular program of exercises will be planned and performed to enhance the readiness of both personnel and equipment. Exercises will be scheduled and planned by local management.

The table below indicates recommended exercise frequency. Husky Oil management may prefer to conduct more frequent exercises.

Exercise Type	Frequency
Table Top	Either a Table Top or Communication exercise once per year
Communication	Either a Communication or Table Top exercise once per year
Full Scale Exercise	A Full Scale Exercise every 3 years

Table Top Exercise

A table top exercise is informal and free of time constraints when compared to a Full Scale exercise. The emphasis is on learning, discussion and group problem solving. It will include a facilitated discussion of the emergency scenario with prompting questions. Exercises will normally be held over a four-hour period at an appropriate location.

Exercise complexity, scope and duration are based on pre-defined exercise objectives and include exercise ground rules and pre- and post-exercise debriefing sessions.

Communication / Functional Exercise

Communication / functional exercises are designed to validate communication and the management of the response effort from the Incident Command Post. This includes the flow of communications and real time tracking of:

- Notifications and updates
- Objectives
- Decisions and team organization
- Public protection communications and actions.

Participants are limited to Husky personnel and occasionally one or more government agency representatives. Events, agencies, stakeholders, public and media are all simulated. No external calls are made.

Exercise complexity, scope and duration are based on pre-defined exercise objectives and include exercise ground rules and pre- and post-exercise debriefing sessions.

Major (Full Scale) Exercise

A major exercise will be conducted once every three years, as a minimum. A full scale exercise will fully activate this Emergency Response Plan and will prompt involvement of:

- Husky Corporate Response Management Team
- Applicable government agencies, with simulation of non-participating agencies
- Applicable Local Authorities, with simulation of non-participating local authorities
- Public, stakeholders and media may be simulated

Exercise complexity, scope and duration are based on pre-defined exercise objectives and include exercise ground rules and pre and post exercise debriefing sessions.

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2.5 Definitions and References

2.5.1 Definitions 1
2.5.2 Toxiticity Tables 10
2.5.3 Responder Safety Control Zones 12
2.5.4 Acronyms 15

The following section 2.5 contains the following redactions:

- 2.5.3: This section contains security sensitive information, the disclosure of which would create a real and substantial risk that its disclosure will impair the security of pipelines, buildings, structures or systems. It is protected from publication under Clause 1(a)(ii) of NEB Order AO-001-MO-006-2016.

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2.5.1 *Definitions*

Active Fire Protection
A means of extinguishing or controlling a fire either manually (firefighting) or automatically (sprinkler systems, gaseous clean agent or foam systems).

Adjacent to
Within 25 meters.

Agency Representative
Individual assigned to an incident from a government agency.

Air Monitoring
Measurement of atmospheric concentrations of a hazardous substance such as H_2S, SO_2 or LEL.

Alert
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
Temperature at which a material may ignite without a flame ignition source.

CANUTEC
A federal emergency service based in Ottawa. They are an immediate reference source for information on chemical spills. They advise on methods to safely neutralize, decontaminate, approach or handle dangerous substances.

Closure Order
An order issued when the OGC believes that, because hazardous conditions exists, 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.

Cold Zone
The Control Zone verified by the On Site Supervisor to be free of hazards with prevailing conditions.

Control Zones
A designation of areas or zones during a hazardous materials release or threatened release. Control Zones differ based on their safety and the degree of hazard. The three Control Zones for hazardous materials response are Hot Zone, Warm Zone, and Cold Zone.

Corporate Emergency Response Centre (CERC)
The response facility where the Corporate Response Management Team gathers to manage the corporate impacts of the emergency and lend support to the field responders.

Dangerous Substances
Substances as described in the Transportation of Dangerous Goods Regulations Schedule XII (e.g. Phenol) that are in excess of the minimum quantities described therein.

Decontamination
The process of reducing or preventing the spread of hazardous material contamination from persons or equipment.

Defensive Firefighting
The mode of manual fire control in which the only fire suppression activities taken are limited to those required to keep a fire from extending from one area to another.

Demobilization
The process of significantly discharging or reducing resources previously committed to an incident response. A demobilization plan is usually created for use during the last stages of an incident.

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

Emergency Awareness Zone (EAZ)
The area twice the radius of the Emergency Planning Zone (EPZ).

Emergency Planning Zone (EPZ)
A geographical area surrounding a well, pipeline, or facility containing hazardous product that requires specific emergency response planning by the licensee.

Emergency Response Centre (ERC)
An operations centre established in a suitable location to manage the larger aspects of an emergency. In a high-impact emergency, there may be a number of ERCs established to support the response. These may include the OGC Field Centre incident command post, regional and corporate ERCs (regional, headquarters), a municipal ERC, a joint off-site regional ERC and the provincial government GOC.

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.

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

Exposure
The area which may, if not protected and managed by means of cooling using water, foam and/or other suppression agents as well as fire-spread, could be exposed to fire or explosion. Usually an adjacent/abutting fixed and/or mobile property or structure that may be affected by conduction, convection, or radiant heat.

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 substances or wastes.

First Responders
The first personnel to respond to an incident – normally operators, but could be anyone at the facility. Also includes industrial or municipal fire personnel. First responders require appropriate emergency response training to ensure that their response is suitable and performed safely.

Flash Point
Minimum temperature at which a liquid gives off sufficient vapour to form an ignitable mixture (within the flammable range) with air at the surface of the liquid.

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.

Government Operations Centre (GOC)
An operations centre that provides an all-hazards integrated federal emergency response to events with the capacity to accommodate representatives from each government department. It consists of two centres, the Consequence Management Operations Centre (COMOC) and the Crisis Management Operations Centre. The GOC was formerly known as the Emergency Management Alberta Operations Centre and before that as COMOC.

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

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

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, as determined using the Reid method (see ASTM D 323).

Hot Zone
The Control Zone immediately surrounding the physical location of an incident with a boundary extending far enough from the incident to protect response members positioned outside the Hot Zone from exposure to flames, dense smoke, extreme temperatures, chemical, toxic and/or other hazards.

Hydrogen Sulphide (H_2S)
A naturally occurring gas found in a variety of geological formations and also formed by the natural decomposition of organic matter in the absence of oxygen. H_2S is colourless, has a molecular weight that is heavier than air, and is extremely toxic. In small concentrations, it has a rotten egg smell and causes eye and throat irritations. Depending on the particular gaseous mixture, gas properties, and ambient conditions, a sour gas release may be

- heavier than air (dense), so it will tend to drop towards the ground with time,
- lighter than air (buoyant), so it will tend to rise with time, or
- about the same weight as air (neutrally buoyant), so it will tend to neither rise nor drop but with time disperse.

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. Hyper-susceptibles include those persons with impaired respiratory function, heart disease, liver disease, neurological disorders, eye disorders, severe anemia, and suppressed immunological function.

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 as defined by Onshore Pipeline Regulations, 1999 (OPR-99).
"incident" means an occurrence that results in
(a) the death of or serious injury to a person;
(b) a significant adverse effect on the environment;
(c) an unintended fire or explosion;
(d) an unintended or uncontained release of LVP hydrocarbons in excess of 1.5 m3;
(e) an unintended or uncontrolled release of gas or HVP hydrocarbons;
(f) 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. (incident)

Incident Action Plan
An organized course of action that addresses all phases of incident control within a specified time frame.

Incident Command Post (ICP)
An Incident Command Post is established in the vicinity of the incident to provide direct response to the emergency. The Incident Commander coordinates response operations from this centre.

Incident Command System (ICS)
An organized system of roles, responsibilities and standard operating and communication procedures used to manage and direct emergency response operations.

Incipient Firefighting
Firefighting performed inside or outside of an enclosed structure or building when the fire has not progressed beyond incipient stage.

Incipient Stage
Refers to the severity of a fire where the progression is in the early stage and has not developed beyond that which can be extinguished using portable fire extinguishers or hand lines flowing up to 473 L/min (125 gpm). A fire is considered to be beyond the incipient stage when the use of thermal protective clothing or self-contained breathing apparatus is required or an industrial fire brigade member is required to crawl on the ground or floor to stay below smoke and heat.

Lead Agency
The government support organization which acts as the lead government agency during an industry emergency response

Level 1 Emergency
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 2 Emergency
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 need to 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 3 Emergency
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.

Liquefied Petroleum Gas (LPG)
A mixture of heavier gaseous hydrocarbons, principally propane, propylene, butane and butylene.

Local Authority means**:**

- for a municipality;
- for an electoral area in a regional district, the board of the regional district if the regional district has been granted the powers of the municipality under the *Emergency Program Act*; or
- for a national park, the park superintendent or the park superintendent's delegate if an agreement has been entered into with the government of Canada under section 4(2)(e) in which it is agreed that the park superintendent is a local authority for the purposes of the *Emergency Program Act*.

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.

Major (Full-Scale) Exercise
As described in *CAN/CSA-Z731-03*, an exercise involving emergency response agencies and the licensee that entails the deployment of all resources required to test the licensee's ERP. It is intended to provide a realistic simulation of an emergency response.

Mobile Air Quality Monitoring
Use of sophisticated portable equipment capable of tracking substances such as H_2S or SO_2 at very low (parts per billion) atmospheric concentrations.

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
The emergency plan of the Local Authority.

Municipality
See Local Authority.

Mutual Aid Understanding
An understanding between two or more public and/or private parties, such as oil and gas companies, service companies, and local authorities, that defines each party's commitment to provide aid and support during an incident.

National Fire Protection Association (NFPA)
Established in 1896, the NFPA is a US based organization with international membership charged with creating and maintaining minimum standards and requirements for fire prevention and suppression activities, training, and equipment, as well as other life-safety codes and standards.

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 requested by the Lead Agency or directly by Husky to restrict airspace over a specified area.

Offensive Firefighting
The mode of manual firefighting control in which manual fire suppression activities are concentrated on reducing the size of fire to accomplish extinguishment.

On Site Command Post (OSCP)
A response facility established in the immediate vicinity of the incident to provide immediate and direct response to the emergency and initially staffed by Husky personnel.

Passive Fire Protection (PFP)
PFP attempts to contain fires or slow the spread, through use of fire-resistant walls, floors, and doors. PFP systems need to comply with the associated listing and approval use and compliance in order to provide the effectiveness expected by building codes.

Personal Protective Equipment (PPE)
Any combination of personal protective equipment created to ensure the health and safety of responders.

Preparedness
Obligation to identify adequate capabilities and resources, train for safe response to incidents, and conduct regular reviews of the emergency response plan.

Prevention
Includes the evaluation of risks, probability of worst cases, facility design, maintenance programs, incident investigation and training to ensure a facility operates as intended.

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.

Public
The group of people who may be or are impacted by an emergency (e.g., employees, contractors, neighbours, emergency response organizations, regulatory agencies, the media, appointed or elected officials, visitors, customers, etc. as appropriate).

Public Protection Measures
The use of evacuation, shelter-in-place, ignition, and isolation procedures to mitigate the impact of a hazardous release on members of the public.

Publicly Used Facility
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 and the OGC may designate as a public facility.

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.

Recovery
Assessment of damages followed by restoration of infrastructure, human and environmental conditions to a safe and acceptable condition for all stakeholders.

Regional Emergency Operations Centre (REOC)
An operations centre established in a suitable location off-site near the emergency to manage the larger scale aspects of the emergency response and staffed jointly by government and industry personnel.

Residence
A dwelling that is occupied full time or part time.

Response Facility
Any Emergency Operations Centre, Command Post, Reception Centre, Staging Area or other facility that is used to support the emergency response activities.

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

Sour Gas
Natural gas, including solution gas, containing hydrogen sulphide (H_2S).

Sour Multiphase Pipeline
A pipeline that transmits a multiphase product that contains more than 10 moles of H_2S per kilomole of natural gas in the gas phase.

Sour Multiphase Product
Any liquid that contains H_2S in the gas phase.

Sour Pipeline
A gas pipeline that transmits gas containing more than 10 moles of H_2S gas per kilomole of natural gas.

Sour Production Facility
Facility that processes gas and/or liquid that contains sour gas.

Sour Well
Any oil or gas well expected to encounter sour gas-bearing formations during drilling or any oil or gas well capable of producing sour gas.

Special Needs
Those persons for whom early response actions need to 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.

Staging Area
A location where incident personnel and equipment are assigned and maintain available status. Staging can also serve as the check-in/check-out point.

Sulphur Dioxide (SO_2)
A colourless, water-soluble, suffocating gas formed by burning sulphur in air; also used in the manufacture of sulphuric acid. SO_2 has a pungent smell similar to a burning match. SO_2 is extremely toxic at higher concentrations. The molecular weight of SO_2 is heavier than air; however, typical releases are related to combustion, which makes the gaseous mixture lighter than air (buoyant).

Surface Development
Occupied permanent or part-time dwellings, publicly used facilities including campgrounds, places of business and any other surface development where the public may gather on a regular basis.

Tabletop Exercise
As described in *CAN/CSA-Z731-03*, 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.

Uncontrolled Flow
A release of product that cannot be shut off at the licensee's discretion.

Unified Command
A method for Husky, government and mutual aid resources to take part in a unified decision making process. Unified Command Participants recognize the lines of responsibility and authority but function together to achieve cooperative incident mitigation.

Upstream Petroleum Industry
Constitutes all facilities, equipment, substances and operations used in the exploration, recovery, processing and transporting of petroleum within OGC jurisdiction. Generally, this includes oil and gas operations upstream of a refinery and the storage and transportation of unrefined products by pipeline between oil and gas production facilities or other end points.

Urban Centre
A city, town, village, summer village or hamlet with not less than 50 separate buildings, each of which must be an occupied dwelling; any First Nation reserve; other incorporated centres; any similar development the OGC may designate as an urban centre.

Urban Density Development
Any incorporated urban centre, unincorporated rural subdivision or group of subdivisions with not less than 50 separate buildings, each of which must be an occupied dwelling; any other similar development the OGC may designate as an urban centre.

Warm Zone
The Control Zone immediately surrounding and outside the boundary of the established Hot Zone of an incident.

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 manmade water bodies include, but are not limited to, a canal, drainage ditch, reservoir, dugout or other manmade surface feature.

2.5.2 *Toxiticity Tables*

Characteristics and Health Effects of Hydrogen Sulphide (H_2S)

The impact of H_2S on people varies depending on personal health, concentration and length of exposure. The common characteristics of H_2S are as follows:

- Found in decaying organic matter, natural oil and gas, silos and sewers
- Found as a gas at temperatures above -60ºC
- Colourless
- Flammable – burns to form SO_2
- Odour of rotten eggs at low concentrations – kills all sense of smell at higher concentrations
- Will tend to disperse more slowly in sheltered, calm or low lying areas.
- Extremely toxic
- At lower concentrations (20 – 50 ppm) irritates mucous membranes (eyes, throat, lungs), causes headache, dizziness, nausea, may cause pulmonary edema (fluid in the lungs) upon prolonged exposure
- High concentrations (500 – 1000 ppm) causes paralysis of the respiratory centre in the brain – breathing stops, suffocation occurs
- This gas is dangerous because it kills the sense of smell very quickly and one is not aware of the level of concentration that is presents

Concentration (ppm)	General Health Effects of H_2S
0.01-0.3	Odour threshold
1-5	Moderate to strong offensive odour may create nausea, tearing of the eyes, headaches or loss of sleep upon prolonged exposure – effects are moderate
10	Ceiling Limit (BC WCB)
20-50	Slight eye and lung irritation – may cause eye damage after several days of exposure' may cause digestive upset and loss of appetite
100	Eye and lung irritation
150	Kills sense of smell; severe eye and lung irritation
500	Serious damage to eyes within 30 minutes; severe lung irritation; unconsciousness and death within 4 to 8 hours
1000	Breathing stops within one or two breaths

Source: Section 11 – OGC Emergency Planning and Requirements for Sour Wells; Appendix 1

Adapted from:

Canada Safety Council Data Sheet "Hydrogen Sulphide,'" No. B-3.

Alberta Provincial Board of Health "Guidelines for Action Regarding Hydrogen Sulphide."

National Research Council of Canada, "Hydrogen Sulfide in the Atmospheric Environment: Scientific Criteria for Addressing its Effects on Environmental Quality," publication #18467

Characteristics and Health Effects of Sulphur Dioxide (SO_2)

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

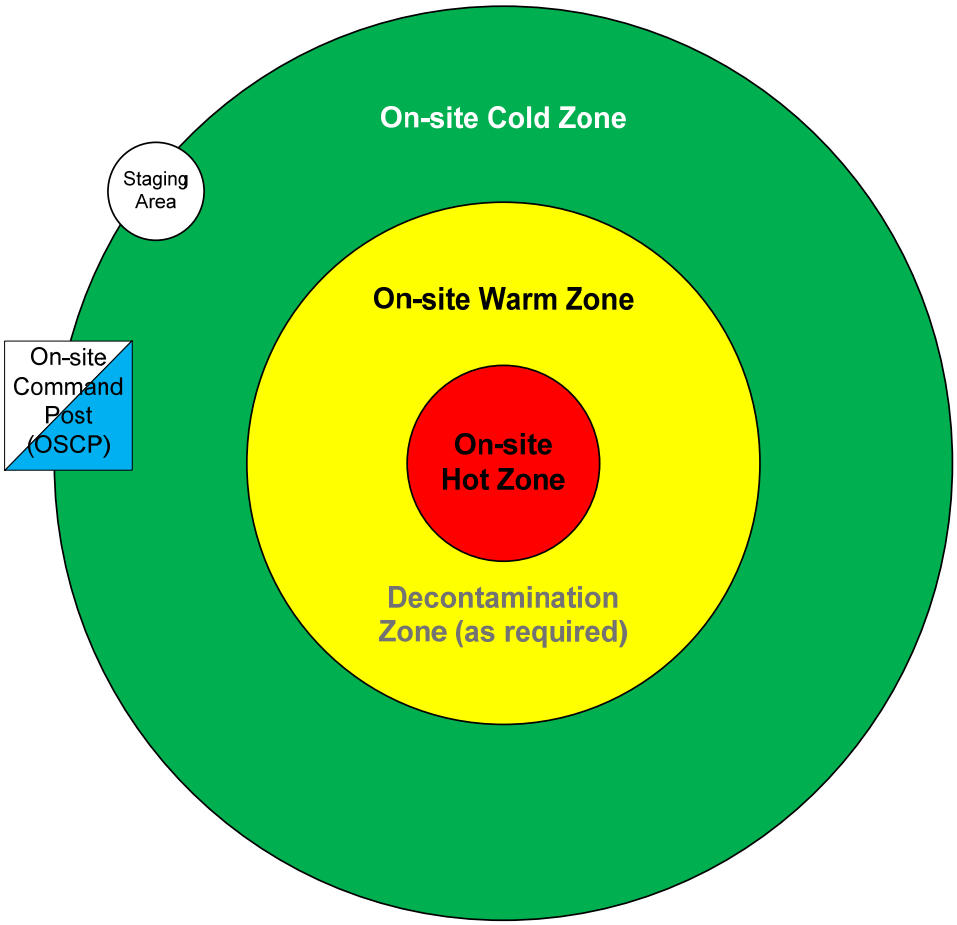
Concentration (ppm)	General Health Effects of Sulphur Dioxide (SO_2)
0.13	24 Hour evacuation level (MWLAP Level B criteria)
0.34	One hour average
2	8 hour Occupational Exposure Limit (BC WCB)
3-5	Odour threshold
5	15 minute Occupational Exposure Limit (BC WCB)
8-12	Throat irritation, coughing, constriction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

Adapted from Canada Safety Council Data Sheet "Sulphur Dioxide," No. B-4

2.5.3 *Responder Safety Control Zones*

Responder Safety Control Zones are established areas that have specific functions in controlling the incident and ensuring worker safety. The incident may be separated into at least two (Cold and Hot Zone) and possibly three (Warm Zone) areas depending on the nature and severity of the incident and as deemed by the On Site Supervisor. It is impossible to determine the Responder Safety Control Zones before an incident occurs, as Responder Safety Control Zones are specific to the incident and its location.

The following diagram illustrates the three Responder Safety Control Zones.



Note: The Warm Zone is only set up during a hazardous materials or dangerous goods incident where personnel and equipment decontamination and Hot Zone support takes place.

Hot Zone

The Control Zone immediately surrounding the physical location of an incident with a boundary extending far enough from the incident to protect response members positioned outside the Hot Zone from exposure to flames, dense smoke, extreme temperatures, chemical, toxic and/or other hazards. The Hot Zone has the highest life safety hazard and therefore extreme caution, planning and protection needs to be taken prior to entry.

The size and shape of the Hot Zone will vary depending on the type of incident, materials involved, magnitude of the hazard, wind direction, and terrain. Typically, the Hot Zone will be extended on the downwind side.

When determining the size of the Hot Zone, consider the following:

- Location of access routes, power lines, pipelines, fire and explosive hazards and/other hazards
- Areas where vapours are likely to accumulate (downwind, low-lying areas, confined spaces, etc.)
- Site stability (steep slopes, overhanging banks, unstable soil, thin ice, flooding, etc.)
- Weather conditions
- Toxicity and/or evacuation data for product involved (refer to SDS)

Note: The On Site Command Post is always set up outside of the Hot Zone. Only personnel with appropriate training, required personal protective equipment and an understanding of the specific response and control procedures will be allowed into the Hot Zone.

An area is considered a Hot Zone if any of the following conditions exists:

[redacted]

Due to the high risk to life, any personnel going into the Hot Zone needs to be closely monitored and tracked.

- If there is a loss of contact (visual, tactical or audible communications) with a worker in the Hot Zone within a specified period of time, a rescue team will need to be sent in to search for and rescue the missing worker(s). **This operation may also put the rescuers at risk**.
- It is critical that on site response personnel are supervised and accounted for as they enter and leave the Hot Zone.
- Upon exit of the Hot Zone, workers should be medically monitored.

Warm Zone

The Control Zone immediately surrounding and outside the boundary of the established Hot Zone of an incident. The outer boundary of the Warm Zone extends far enough from the outer boundary of the Hot Zone to protect personnel positioned outside the Warm Zone from the adverse effects of the incident.

Decontamination Zone (Decontamination Corridor)

The area located within the Warm Zone during a hazardous materials or dangerous goods incident where removal or neutralization of harmful or contaminating chemicals takes place.

Note: Only personnel with appropriate training required personal protective equipment and an understanding of the specific response and control procedures will be allowed entry into the Warm Zone.

Cold Zone (Incident Support Zone)

The Control Zone verified by the On Site Supervisor to be free of hazards with prevailing conditions. This safe area is where the Incident Command Post and Staging Areas are located. Respiratory protective equipment is not required in the Cold Zone.

Note: The safe area needs to be continually assessed and workers aware of indicators of changing conditions such as wind-streamers, flags, smoke or other wind direction devices.

2.5.4 *Acronyms*

Acronym	Meaning
AMU	Air Monitoring Unit
BCSA	BC Safety Authority
BCSA-BPV	BC Safety Authority Boilers and Pressure Vessels
BCSA-E	BC Safety Authority Electrical
BLEVE	Boiling Liquid Expanding Vapour Explosion
CANUTEC	Canadian Transport Emergency Centre
CAPP	Canadian Association of Petroleum Producers
CEPA	Canadian Environmental Protection Act
CER	Canadian Energy Regulator (formerly the National Energy Board)
CERC	Corporate Emergency Response Centre
CNSC	Canadian Nuclear Safety Commission
CRMT	Corporate Response Management Team
CSA	Canadian Standards Association
DFO	Fisheries and Oceans Canada
EAZ	Emergency Awareness Zone
ECAN	Environment Canada
EDGE	Environmental & Dangerous Goods Emergencies
EMBC	Emergency Management British Columbia
EPZ	Emergency Planning Zone
ERAC	Emergency Response Assistance Canada
ERC	Emergency Response Centre
ERG	Emergency Response Group
ERP	Emergency Response Plan
ESDV	Emergency Shut-Down Valve
ETA	Estimated Time of Arrival
GOC	Government Operations Centre
HPZ	Hazard Planning Zone
HVAC	Heating Ventilation Air Conditioning
HVP	High Vapour Pressure
H_2S	Hydrogen Sulphide
IAP	Incident Action Plan
ICS	Incident Command System
IIZ	Initial Isolation Zone
LA	Local Authority
LBV	Line Block Valve
LPG	Liquefied Petroleum Gas

Acronym	Meaning
MD	Municipal District
MEP	Municipal Emergency Program
MOE	Ministry of Environment
SDS	Safety Data Sheet
MTI	Ministry of Transportation and Infrastructure
NGL	Natural Gas Liquids
NOTAM	Notice to Airmen
OGC	British Columbia Oil and Gas Commission
OHS, OH&S	Occupational Health and Safety
OSCAR	Oil Spill Containment and Recovery
OSCP	On-Site Command Post
PAZ	Protective Action Zone
PPB	Parts Per Billion
PPE	Personal Protective Equipment
PPM	Parts Per Million
PREOC	Provincial Regional Emergency Coordinator Centre
RCMP	Royal Canadian Mounted Police
REOC	Regional Emergency Operations Centre
RHA	Regional Health Authority
SABA	Supplied Air Breathing Apparatus
SCBA	Self-Contained Breathing Apparatus
SO_2	Sulphur Dioxide
STARS	Shock Trauma Air Rescue Society
TDG	Transportation of Dangerous Goods
TSB	Transportation Safety Board
WCB	Worker's Compensation Board
WCSS	Western Canadian Spill Service
WHMIS	Workplace Hazardous Materials Information System
WLAP	Water, Air and Climate (Branch) BC Air Quality
WSBC	WorkSafeBC

The following section 3.1 contains the following redactions:

- 3.1.1: This section contains security sensitive information, the disclosure of which would create a real and substantial risk that its disclosure will impair the security of pipelines, buildings, structures or systems, as well as information about an identifiable individual, including his or her name and phone number. It is protected from publication under Clause 1(a)(i) and (ii) of CER Order AO-001-MO-006-2016.
- 3.1.2: This section contains security sensitive information, the disclosure of which would create a real and substantial risk that its disclosure will impair the security of pipelines, buildings, structures or systems. It is protected from publication under Clause 1(a)(ii) of CER Order AO-001-MO-006-2016.
- 3.1.3: This section contains security sensitive information, the disclosure of which would create a real and substantial risk that its disclosure will impair the security of pipelines, buildings, structures or systems, as well as information about an identifiable individual, including his or her name and phone number. It is protected from publication under Clause 1(a)(i) and (ii) of CER Order AO-001-MO-006-2016.

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3.0 DIRECTORY

3.1 Response Team

3.1.1 Husky Emergency Telephone Numbers 1
3.1.2 Operations Personnel 2
3.1.3 Corporate Contacts 3
3.1.4 Key Initial Response Personnel 4

3.1.1 Husky Emergency Telephone Numbers

24 Hour On-Call Deputy Response Director: [redacted]

To be called only in the event of a critical incident, or a Level 2 or 3 Emergency has been declared; anything less is discretionary based.

Rainbow Lake Gas Plant 24 Hour Emergency: 780-956-8090

Location	Telephone Number
Rainbow Lake Control Room (Non-Emergency)	[redacted]
Rainbow Lake Alberta Office	[redacted]

3.1.2 Operations Personnel

Contact Name	Title	Contact Numbers
	General Manager *(Rainbow Lake Operations)*	
	Superintendent, Rainbow Lake Plant	
	Manager, Site Support & Assurance *(WCP)*	
	Superintendent, Field Operations *(Rainbow Lake)*	
	Superintendent, Field Operations *(West / Bivouac)*	
	Superintendent, Maintenance *(Rainbow Lake)*	
	Manager, Engineering *(Rainbow Lake)*	
	Staff Environmental Technologist *(Environmental Operations)*	

3.1.3 Corporate Contacts

Husky Oil	
Husky Oil 707 – 8 Avenue SW Calgary, AB T2P 3G7	Office Telephone: 403-298-6111

Husky 24 Hour ERP Group: 403-801-8592

Contact Name	Title	Contact Numbers
	VP, Resource Plays *(Rainbow & Legacy Assets)*	
	Sr. Manager, Corporate Emergency Management & Business Continuity	
	Emergency Management & Business Continuity Advisor	

Corporate Emergency Response Centre	
Location	Husky Oil 707 – 8 Avenue SW Calgary, AB T2P 3G7

3.1.4 Key Initial Response Personnel

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

INCIDENT COMMAND ROLE	HUSKY OIL PERSONNEL
Incident Commander	• General Manager • Area Superintendent • Area Foreman • Or someone delegated by either of the above
Safety Officer	• Safety Advisor • Senior Operator
Liaison Officer	• Safety Advisor • Senior Operator
Operations Section Chief	• Area Foreman • Senior Operator
Logistics Section Chief	• Area Foreman • Senior Operator
On-Site Supervisor	• Senior Operator • Area Foreman • Most senior operator on location
Site Safety	• Safety Advisor • Senior Operator
Public Protection Supervisor	• Senior Operator • Area Foreman

The above ICS roles could be filled by any of the Husky personnel available on location depending on availability at time of incident. As some organizational positions may potentially take on multiple roles depending on type of event and availability, Husky ensures that all positions are trained to respond in a variety of potential ICS roles.

3.2 Emergency Services

3.2.1 Emergency Services.....1

The following section 3.2 contains the following redactions:

- 3.2.1: This section contains security sensitive information, the disclosure of which would create a real and substantial risk that its disclosure will impair the security of pipelines, buildings, structures or systems, as well as information about an identifiable individual, including his or her name and phone number. It is protected from publication under Clause 1(a)(i) and (ii) of CER Order AO-001-MO-006-2016.

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3.2.1 Emergency Services

Organization	Location	Telephone Numbers
Ambulance		24 Hr: **911**
	High Level	[redacted]
	STARS Air Ambulance	24 Hr: 888-888-4567*
	Provincial Dispatch (Incl. STARS)	24 Hr: 800-661-3822
** Dispatch will ask caller what kind of Ambulance is required – air or ground?*		
Communication		
	National Network Operations Centre (TELUS)	24 Hr: 888-530-7755
Fire Departments		24 Hr: **911**
	Rainbow Lake (Volunteer)	[redacted]
	High Level	[redacted]
Hospitals		
	High Level – Northwest Health Centre	24 Hr: 780-841-3200
	Rainbow Lake Health Centre	Admin: 780-956-3646
	(Health Link)	24 Hr: 811
Medical Contacts	[redacted]	
RCMP		24 Hr: **911**
	Chateh	[redacted]
	Northern Rockies / Ft. Nelson	[redacted]
British Colombia Drug and Poison Information Center		
	BC Wide	24 Hr 800-567-8911
Alberta Poison and Drug Information Service		
	Alberta Wide	24 Hr: 800-332-1414

The following section 3.3 contains the following redactions:

- 3.3.1: This section contains security sensitive information, the disclosure of which would create a real and substantial risk that its disclosure will impair the security of pipelines, buildings, structures or systems, as well as information about an identifiable individual, including his or her name and phone number. It is protected from publication under Clause 1(a)(i) and (ii) of CER Order AO-001-MO-006-2016.
- 3.3.2: This section contains security sensitive information, the disclosure of which would create a real and substantial risk that its disclosure will impair the security of pipelines, buildings, structures or systems, as well as information about an identifiable individual, including his or her name and phone number. It is protected from publication under Clause 1(a)(i) and (ii) of CER Order AO-001-MO-006-2016.

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3.3 Government Agencies

3.3.1 Lead Agency Contacts 1
3.3.2 Supporting Agency Contacts 2
3.3.3 Government Consultation Summary and Roles.....3

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3.3.1 Lead Agency Contacts

Organization	Contact / Location	Telephone Numbers
BC Oil and Gas Commission		
	Incident Reporting	24 Hr: 800-663-3456
	24 Hour Office Line	24 Hr: 250-794-5200
Emergency Management BC		
	Northeast Region	24 Hr: 800-663-3456
	[redacted]	
Canada Energy Regulator (CER)		
	Transportation Safety Board - Pipeline Incident Line	24 Hr: 819-997-7887
		Fax: 403-292-5503
	Incident Line - Outside of Pipeline Emergencies	24 Hr: 403-299-2773
		Email: pipelinenotifications@tsb.gc.ca
		Website: https://apps.cer-rec.gc.ca/ers
Northern Health Authority		
	Health Emergency Management BC On-Call	24 Hr: 855-554-3622
	Non-Emergency:	[redacted]
	[redacted] North Director HEMBC	[redacted]
Northern Rockies Regional Municipality		
	Fort Nelson Fire Dept. Emergency Line	[redacted]
	[redacted], Emergency Coordinator	[redacted]
		[redacted]

3.3.2 Supporting Agency Contacts

Organization	Contact / Location	Telephone Numbers
Technical Safety BC		
	Emergency Line	24 Hr: 866-566-7233
Ministry of Environment – Peace Region		
	Spill Reporting Line	24 Hr: 800-663-3456
	Report a Poacher (BC Wide)	24 Hr: 877-952-7277
	[redacted] (Fort St. John),	[redacted]
	Emergency Response Officer	[redacted]
Ministry of Forests, Lands and Natural Resource Operations		
	Fire Reporting Line	24 Hr: 800-663-5555
	Peace Forest District	[redacted]
	[redacted] Resource Manager	[redacted]
Ministry of Transportation and Infrastructure		
	North Peace District - Fort St. John	Admin: 250-787-3237
	Acting District Manager	[redacted]
	Road Maintenance North Peace Area – Fort St. John	
	Dawson Maintenance	24 Hr: 800-842-4122
Workers Compensation Board (WorkSafe BC) – Northern BC		
	After Hours Reporting Line	24 Hr: 866-922-4357
		24 Hr: 888-621-7233
	[redacted] Support Services Coordinator (Fort St. John)	[redacted]

GOVERNMENT CONSULTATION SUMMARY

Rainbow Lake BC 2020

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
HEALTH AUTHORITY	Northern Health Authority – Fort St. John Health Unit	✓			N/A	N/A	N/A	N/A	
LOCAL AUTHORITY	Northern Rockies Regional Municipality	✓			Yes, where possible	Require assistance from the licensee with coordinating evacuation outside of the Emergency Planning Zone	Fort Nelson Fire Hall 5319 – 50 Avenue Fort Nelson, BC	Northern Rockies Rec Centre 5500 Alaska Hwy Fort Nelson, BC	
GOVERNMENT	Emergency Management BC	✓			No	N/A	BC Provincial Program 3235 Westwood Drive	N/A	

Suite 210, 7260 12 Street SE Calgary, Alberta T2H 2S5
Phone: 403-212-2332 Toll Free: 1-888-216-2332 Fax: 403-313-9180
Email: erp@h2safety.ca Web: www.h2safety.ca

BRITISH COLUMBIA

EMERGENCY MANAGEMENT BC

EMERGENCY RESPONSE ROLES & RESPONSIBILITIES

Before An Emergency

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

During an Emergency

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

After an Emergency

- As requested by OGC.

Suite 210, 7260 12 Street SE Calgary, Alberta T2H 2S5
Phone: 403-212-2332 Toll Free: 1-888-216-2332 Fax: 403-313-9180
Email: erp@h2safety.ca Web: www.h2safety.ca

LOCAL AUTHORITY – NORTHERN ROCKIES REGIONAL MUNICIPALITY

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

Before the Event

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

Upon the Notification of and during an Event

- ❑ Respond to and assess the emergency incident only in the Northern Rockies Regional Municipality fire protection area for fires.
- ❑ Response to rescue & hazard incidents anywhere within the municipality, where feasible.
- ❑ Establish contact with the industrial operator in order to:
    - ❑ Obtain additional hazard information.
    - ❑ Determine where roadblocks should be or are established.
    - ❑ Determine the direction of approach to the incident.
    - ❑ Determine if there are any injuries.
    - ❑ Find out what response and public protection actions have been taken by the upstream operation.
    - ❑ The location of the On-site Command Post (OSCP) and any Emergency Operations Centres (EOCs).
- ❑ Activate the MEP, when required.
- ❑ Manage the Local Authority's emergency response.
- ❑ Activate the Municipal EOC (MEOC), as required.
- ❑ If necessary, declare a State of Local Emergency.
- ❑ Establish a public information service, including the use of the news media to inform and instruct the public of the emergency and of any protective actions to be taken.
- ❑ Inform EMBC and the public when the emergency is over.

After 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.

Suite 210, 7260 12 Street SE Calgary, Alberta T2H 2S5
Phone: 403-212-2332 Toll Free: 1-888-216-2332 Fax: 403-313-9180
Email: erp@h2safety.ca Web: www.h2safety.ca

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

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

Before the Event

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

During the Event

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

After the Event

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

Emergency Response
Roles & Responsibilities

Health Emergency Management BC, North (HEMBC)

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

Roles and responsibilities:

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

Northern Health Authority (NH)

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

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

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

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

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

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

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

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

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

Appendix I

Contact information:

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

- **For non-urgent requests or emergency exercise planning/information,** contact HEMBC North Director Jim Fitzpatrick, at:
    - Office: 250-565-5584
    - HEMBC@northernhealth.ca

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

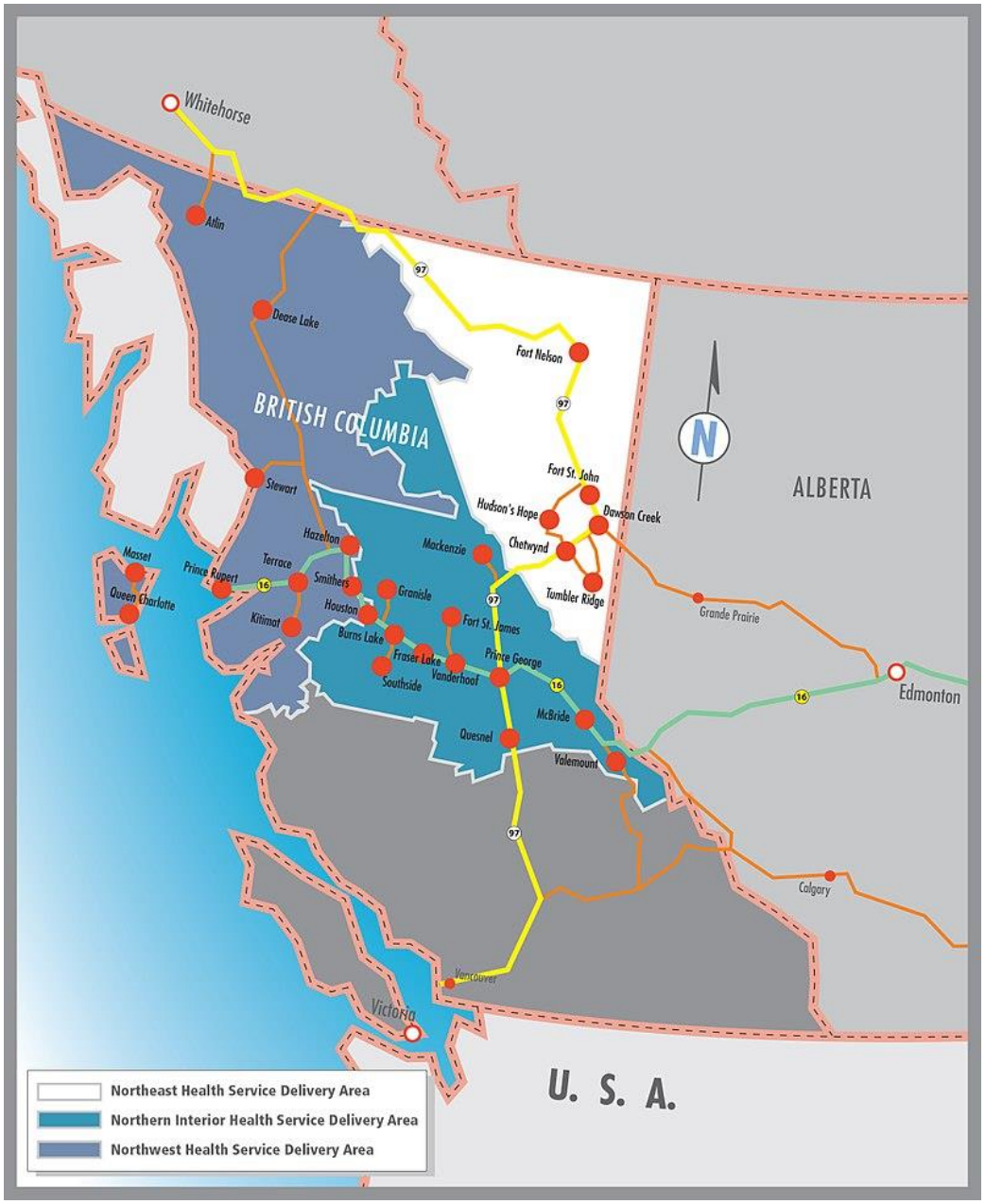
- **Please make your site and project ERPs available to Northern Health in the event of an emergency to:** HEMBC@northernhealth.ca

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

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

Appendix II

Northern Health Geography



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

The following section 3.4 contains the following redactions:

- 3.4.1: This section contains information about Husky's contractors and suppliers, the disclosure of which would reasonably be expected to prejudice Husky's competitive position. It is protected from publication under Clause 1(a)(iii) of CER Order AO-001-MO-006-2016.
- 3.4.2: This section contains security sensitive information about an identifiable individual, including his or her name and phone number. It is protected from publication under Clause 1(a)(i) of CER Order AO-001-MO-006-2016.

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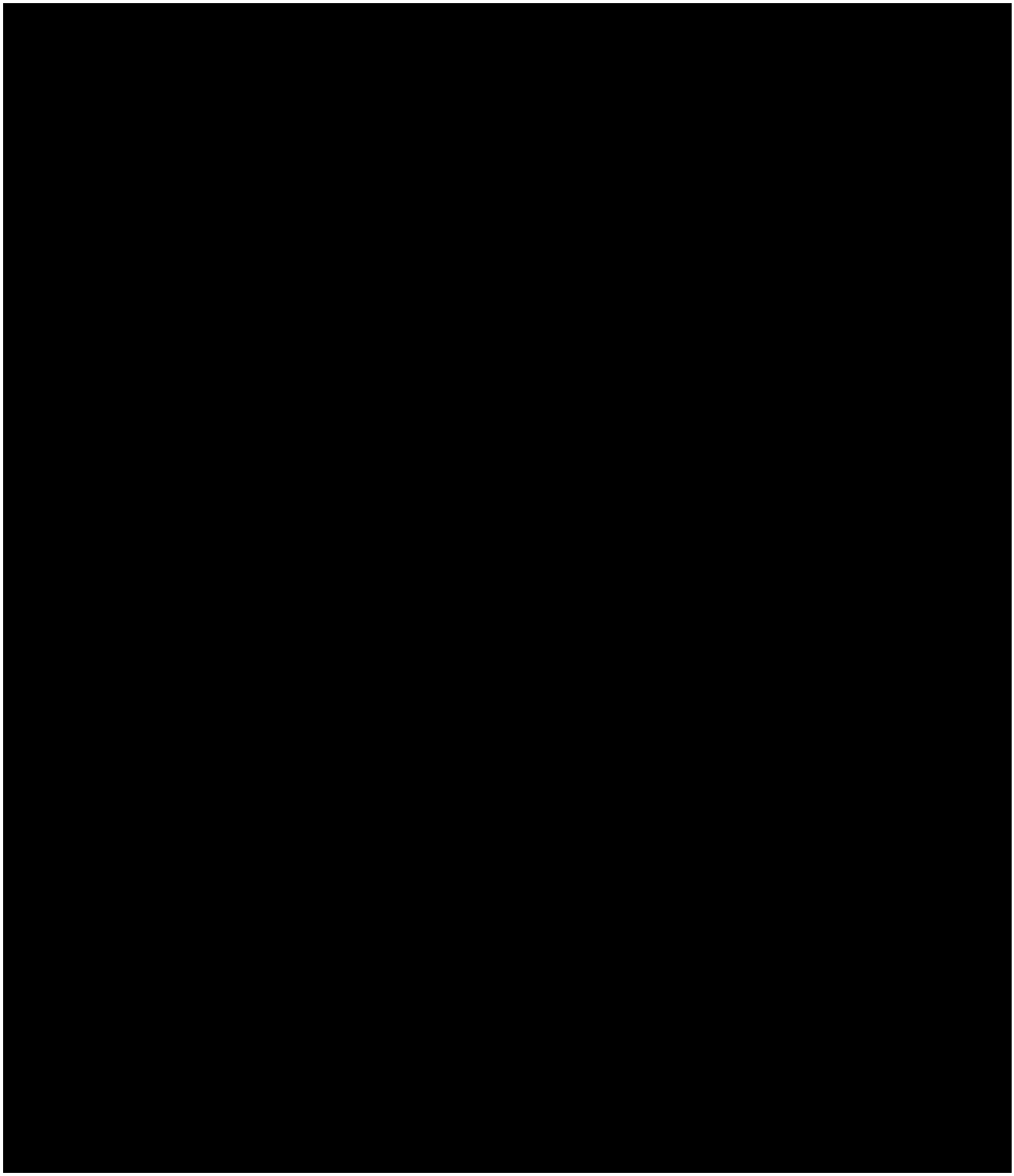
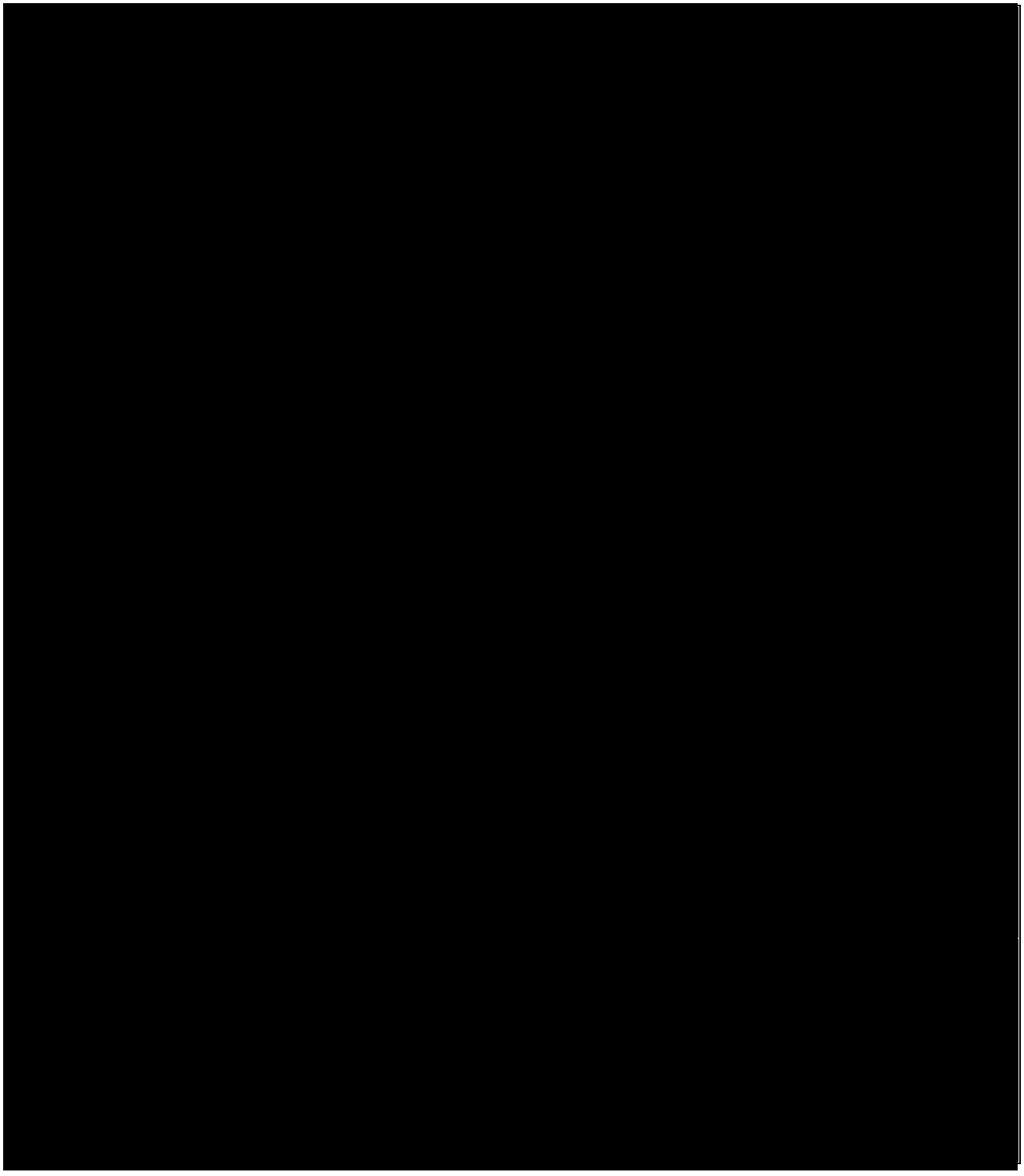
3.4 Support Services

3.4.1 Emergency Equipment and Services....1
3.4.2 Western Canadian Spill Service (WCSS) 4

3.4.1 Emergency Equipment and Services



Emergency Equipment and Services, ***continued***



Emergency Equipment and Services, ***continued***

3.4.2 Western Canadian Spill Service (WCSS)

ZONE 6 – COOP AREA A

WCSS EMERGENCY 24 HRS: 866-541-8888

All site sections fall partly within the Zone 6 - Coop A boundary

CHAIRMAN [redacted] – Husky Energy
[redacted]

ALTERNATE CHAIRMAN [redacted] - Plains Midstream Canada ULC
[redacted]

ADMINISTRATOR [redacted] – Western Canadian Spill Services Ltd.
[redacted]

COOP CUSTODIAN [redacted] – Husky Energy
[redacted]

Equipment Location
Husky Oil Operations Yard / Rainbow Lake SE 10-109-08 W6M

Equipment Summary
20' Sea-can (Haul with winch tractor/trailer)
Drum Skimmer (c/w power pack)

Directions
Contact Custodian to arrange pick-up

[redacted] - Muzzy's Contracting
[redacted]

Equipment Location
1072 Aspen Dr. Zama City, AB

Equipment Summary
Skid Units (2) must be used together, (Bed truck)

Directions
Call Bruce Muzichuk 780-926-9797

ZONE 6 – COOP AREA C

WCSS EMERGENCY 24 HRS: 866-541-8888

All site sections fall partly within the Zone 6 - Coop C boundary

CHAIRMAN
[redacted] Husky Energy
[redacted]

ALTERNATE CHAIRMAN
[redacted] Plains Midstream Canada ULC
[redacted]

ADMINISTRATOR
[redacted] Western Canadian Spill Services Ltd.
[redacted]

COOP CUSTODIAN
[redacted] **Clean Harbors Production Services**
[redacted]

Equipment Location
6715 - 85th Avenue, Fort St. John, BC V1J 4J3

Equipment Summary
52' OSCAR Trailer (semi-truck)
40' Boom Cache Sea Can (winch tractor/trailer)
20' Wildlife Sea Can (winch tractor/trailer)
Single Engine Barge (1-ton truck w/ 2-5/16" ball hitch & electric brakes)
Work Boat (1/2-ton truck w/ 2" ball hitch)
Drum Skimmer w/ Power Pak (1/2-ton truck)
400' Shallow Water Boom (1/2-ton truck)

Equipment Location
4901 - 46 Avenue, Fort Nelson, BC V0C 1R0

Equipment Summary
20' ISRU Sea Can (winch tractor/trailer)
Work Boats (2) (1/2-ton truck w/ 2" ball hitch)

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3.5 Plan Distribution and Maintenance

3.5.1 Distribution List 1
3.5.2 Amendment Protocol.....5

The following section 3.5 contains the following redactions:

- 3.5.1: This section contains security sensitive information about an identifiable individual, including his or her name and phone number. It is protected from publication under Clause 1(a)(i) of CER Order AO-001-MO-006-2016.
- 3.5.2: This section contains security sensitive information, the disclosure of which would create a real and substantial risk that its disclosure will impair the security of pipelines, buildings, structures or systems, as well as information about an identifiable individual, including his or her name and phone number. It is protected from publication under Clause 1(a)(i) and (ii) of CER Order AO-001-MO-006-2016.

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EMERGENCY RESPONSE PLAN

Plan Distribution and Maintenance

Copy #	Organization	Confidential	First Name	Last Name	Email Address
Head Office					
	Corporate Emergency Response Dept.				
	Corporate Emergency Response Centre				
	Corporate Emergency Response Centre - Backup				
					Head Office ERP Total: 3

Copy #	Organization	Confidential	First Name	Last Name	Email Address
Field					
	General Manager		[redacted]		
	Area Superintendent				
	Manager, Site Support & Assurance, WCP, Safety				
	Area Superintendent/Downhole Coordinator				
	Maintenance Superintendent				
	Engineering Manager				
	Environmental Coordinator				
	Rainbow Lake Reception				
	Rainbow Lake EOC				
	Rainbow Lake Plant Control Room				
	EOC Spare				
					Field ERP Total: 11

Copy #	Organization	Confidential	First Name	Last Name	Email Address
Government Agency					
	OGC – Operations, Fort St John				
	Canada Energy Regulator (CER)				
	Canada Energy Regulator (CER)				
	Emergency Management BC				
	Northern Rockies Regional Municipality				
	H_2Safety Services Inc. - Working Copy				

Government ERP Total: 6

TOTAL DISTRIBUTION: 20

H=Head Office F=Field G=Government NP=New Plan AD=Annual Distribution M=Mini E=Electronic ERP (CD)

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3.5.2 *Amendment Protocol*

The Safety Advisor has been designated as the Plan Maintenance Coordinator for this ERP. The Plan Maintenance Coordinator, with support of Corporate Emergency Response staff will be responsible for maintenance and distribution of the Rainbow Lake BC Emergency Response Plan on an on-going basis.

Copies of the plans will be reviewed by the Plan Maintenance Coordinator on an annual basis or more frequently as required.

All contact information is subject to a continuous review. Any changes made will be sent out on an annual basis.

The Plan Maintenance Coordinator shall be responsible for record maintenance pertaining to the Emergency Response Plan as indicated in CSA Z246.2-14 Section 4.8.

All plan holders are requested to use the following “Plan Change / Update Form”, found on the following page, to facilitate any required changes / updates to the Plan. This form should be forwarded (mail / fax / e-mail) to the attention of the individual identified at the bottom of the form.

Husky

Return copy to:

Husky Administration Office

[redacted]

[redacted]

Manager, Safety

[redacted]

HUSKY OIL
RAINBOW LAKE BC EMERGENCY RESPONSE PLAN
PLAN CHANGE / UPDATE FORM

Please use this form to submit any updates, changes or corrections that you wish to have made to the Emergency Response Plan.

Submitted By: _____

Name (please print): _____

Position: _____

Date: _____

Please enter your changes here. If possible, include the page number(s) and exact text / graphic you would like to have changed. _____

4.0 SITE SPECIFIC

4.1 General Area Information

4.1.1 Summary 1
Overview Map ..... Insert
4.1.2 Roadblock Kits 3
4.1.3 Ignition Kits 3
4.1.4 Radio Frequencies 4
4.1.5 Hazard Assessment 5
4.1.6 Response Facility Locations 10
4.1.7 Equipment and Supplies at Emergency Operations Centre 11
4.1.8 Wildfire Smoke Exposure ..... Insert

The following section 4.1 contains the following redactions:

- 4.1.1: This section contains security sensitive information, the disclosure of which would create a real and substantial risk that its disclosure will impair the security of pipelines, buildings, structures or systems, as well as information about an identifiable individual, including his or her name and phone number. It is protected from publication under Clause 1(a)(i) and (ii) of CER Order AO-001-MO-006-2016.
- 4.1.2: This section contains security sensitive information, the disclosure of which would create a real and substantial risk that its disclosure will impair the security of pipelines, buildings, structures or systems. It is protected from publication under Clause 1(a)(ii) of CER Order AO-001-MO-006-2016.
- 4.1.4: This section contains security sensitive information, the disclosure of which would create a real and substantial risk that its disclosure will impair the security of pipelines, buildings, structures or systems. It is protected from publication under Clause 1(a)(ii) of CER Order AO-001-MO-006-2016.
- 4.1.6: This section contains security sensitive information, the disclosure of which would create a real and substantial risk that its disclosure will impair the security of pipelines, buildings, structures or systems. It is protected from publication under Clause 1(a)(ii) of CER Order AO-001-MO-006-2016.

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4.1.1 Summary

The Husky Oil Operations Ltd. Northeast BC Emergency Response Plan contains 1 site specific section:

Area Foreman	Husky Site	LSD	License #
[redacted]	Bivouac Field (AB/BC SAT)	[redacted]	

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4.1.2 Roadblock Kits

Roadblock kits can be found at the following locations:

Facility	Location
Rainbow Lake BC Satellite	[redacted]
Bivouac Field (AB/BC SAT)	[redacted]

Standard equipment within a roadblock kit include:

Quantity	Equipment
1	High Visibility Vest
1	Stop Sign with reflective tape
1	Air Monitoring device (H_2S, CO, O_2 & LEL)
1	Copy of Roadblock Roles and Responsibilities
1	Copy of the Map(s)
3	Copies of roadblock forms
2	Pens and/or pencils
1	Radio (where applicable)
1	Flashlight, extra batteries
1	Reflector
1	Yellow flashing light
1	Caution Tape
1	Decal for kit

4.1.3 Ignition Kits

Drilling and Completions personnel have ignition kits on-site and Rainbow Lake operators have flare pens.

4.1.4 Radio Frequencies

Channel	TX Frequency	RX Frequency	Tone	Description	Usage Information
For use by Field Operations and Maintenance Personnel					
CH-1	[redacted]	[redacted]	94.8	CH-1	Emergency
CH-2			CSQ	CH-2	Field operations
CH-3			CSQ	Phone	Chatter
CH-4			CSQ	T/T	Chatter
CH-5			151.4	Bivouac	Repeater
CH-6			DPL731	Biv Main Rd	Road usage
CH-7			DPL731	Biv Trib Rd	Road usage
CH-8			DPL731	Ekw Trib Rd	Road usage
CH-9			CSQ	Encana 5	Road usage
CH-10			CSQ	Logging	Road usage
CH-11			CSQ	LADD 1	
CH-12			CSQ	LADD 2	
CH-13			CSQ	LADD 3	
CH-14			CSQ	LADD 4	
Non			CSQ	Page	
User			RX Only 186.2	Data TX Glentel	
Channels			RX Only 173.8	Data TX Glentel	
For use by Plant Operations Staff including Maintenance Personnel					
CH-1	[redacted]				Rainbow Plant RPTR 1
CH-2			141.3		Rainbow Plant RPTR 2
CH-3			141.3		Rainbow Plant T/T 1
CH-4			141.3		Rainbow Plant T/T 2

4.1.5 Hazard Assessment

Detection of a problem in the pipeline, well or facility may come via:

1) Activation of the ESD valves, an alarm in the Plant Control Room and subsequent notification of the field personnel
2) Routine inspection of the pipeline right of way
3) Notification from outside of the company (member of the public, ERCB, etc.)
4) Operating personnel during their daily rounds
5) SCADA Alarms
6) Telephone call to the 24 hour Emergency Number

This hazard assessment has been designed to address multiple hazards. Categories include:

- Explosion / Fire
- Toxic Gas Release (H_2S, SO_2)
- Sweet Gas release
- Hydrocarbon / Chemical / Saltwater Spill

Each site specific section (White Tab) identifies the hazards applicable to that area.

Each plan holder should conduct regular hazard assessments for their area, identifying any risks to People, the Environment and Property.

Emergency Planning Zone (EPZ) calculations and resulting EPZs are detailed in each of the field specific sections. The initial response to an incident would encompass the entire EPZ associated with that section of pipeline or an individual well. After the Incident Commander has determined the exact location of the problem and mobile air monitoring has commenced, the size of the Emergency Hazard Area can be determined. The EPZ shall be used as the Emergency Hazard Area (EHA) for the purposes of shelter and evacuation.

NOTE: *Specific terrain, wind conditions and other factors may influence the size of the EPZ and should be considered during an emergency.*

Preamble

The objective of the hazard assessment process is to identify, assess and quantify the consequential emergency events which may result from specific Husky Energy oil and gas activities.

Under the guise of best practice in the field of emergency management and with consideration of CSA Z246.2-14 Emergency preparedness and response for petroleum and natural gas industry systems, this hazard assessment process will permit Husky Energy to deliver an effective and timely response protocol for each identified consequential emergency event. It will permit Husky to effectively define and implement emergency response protocol in order to protect the public, the environment and assets.

Furthermore, the establishment of a hazard assessment protocol will permit Husky Energy to identify future mitigation measures which could address the potential reduction and minimization of any identified oil and gas activity hazard.

The hazard assessment process utilized by Husky Energy is applied directly against the most realistic adverse emergency events which can occur from the organization's oil and gas activities. These events are recognized from an industry perspective, as an unexpected or unplanned entry of any oil and gas related substances into the environment. This is referred to as a loss of process or storage containment (LOPSC) incident and can be classified as the following four events.

1. Hazardous Materials Spill
2. Hazardous Materials Vapour Release
3. Fire
4. Explosion

Protocol

The following represents the methodology of Husky Energy's public safety hazard assessment process:

Public Safety Hazard Assessment Overview
Identification
⬇
Analysis
⬇
Interpretation
⬇
Public Safety Interface Identification
⬇
Apply Appropriate Public Safety Measure or Protocol

Application

Identification

Identify all relevant oil and gas substances currently under process/ storage containment within a defined area.

Analysis

Apply all identified substances against their ability to spill, release to atmosphere, ignite, or explode should containment be lost or breached i.e. if an identified substance were to lose process/storage containment, would it result in a spill incident? Would it result in a hazmat vapour release incident? Would it result in a fire incident? Would it result in an explosion incident?

Note: There are situations when multiple incidents involving a LOPSC event could occur. For example, a gasoline storage tank losing containment could result in an immediate spill incident. The resulting vapour or liquid from the same spill, if introduced to an ignition source, could mean a fire or explosion event also being experienced.

Interpretation

Identify the realistic worst-case scenario resulting from an LOPSC incident which could directly or indirectly impact public safety.

With substances involving an assigned Emergency Planning Zone (EPZ), i.e. H2S, the realistic-worst case scenario would be reflected in the actual technical calculation of the substance being released

Note: Direct or indirect public safety impacts involve any and all instances where a population could be threatened by:

1. Proximity to an explosion
2. Proximity to a fire
3. Proximity to a hazardous release
4. Proximity to a hazardous spill

Public Safety Interface Identification

Identify locations where a threat to public safety may occur. Considerations must be given to residences, highways, business/ industry, trapper claims, first nation traditional lands, water crossings, campgrounds, schools, public facilities, recreation areas, etc.

Apply Appropriate Public Safety Measure or Protocol

For each identified public safety concern, identify the appropriate emergency response protocol to ensure the immediate delivery of the appropriate public protection measure(s).

The following public protection measures and considerations are detailed within our Emergency Response Plan:

1. Emergency communications to affected public
   Note: When this mechanism is selected for an incident, it is required to:
   (a) provide how the area will be communicated with in an emergency incident
   (b) ability to confirm communication is made to affected area, and
   (c) provide recommendations for how an area can move to safety quickly
2. Roadblock/ Rover Teams
3. Shelter-in-Place/ Evacuation protocols
4. Air-Monitoring
5. Other[1]

****Please Note - Detailed public protection procedures are located within section 2.2 of this Emergency Response Plan.***

Future Mitigation Classification

Classify any and all natural events which could cause an identified process or storage containment to result in a LOPSC incident (i.e. forest fire, extreme cold, earthquake, flood)

Classify any and all technological events which could cause an identified process or storage containment to result in a LOPSC incident (i.e. power failure, mechanical failure, pipeline corrosion)

Classify any and all human-induced events which could cause an identified process or storage containment to result in a LOPSC incident (i.e. sabotage, equipment strike)

[1] Other may refer to an external response organization such as a third party or a municipal first response agency, such as police or fire, who can offer assistance to the adverse event

4.1.6 Response Facility Locations

Emergency Operations Centre (EOC)

Emergency Operations Centre	
Location	[redacted]
Address	
Facility Telephone	
EOC Telephone	
Facility Fax	

Alternate Emergency Operations Centre (Alternate EOC)

Alternate Emergency Operations Centre	
Location	[redacted]
Address	
Facility Telephone	
EOC Telephone	
Facility Fax	

4.1.7 Equipment and Supplies at Emergency Operations Centre

Listed below is a recommended equipment list for the Emergency Operations Centre and does not represent what is at the Rainbow Lake EOC.

Quantity	Equipment
1	Gas / diesel power generator backup power supply
3	Battery charger for cellular telephones
1	Landline phone system with multiline capability
4	Handheld flashlights with spare battery supply, preferably rechargeable
1	Polycom system, suitable for hands-free conferencing
1	Combination fax / scanner / computer printer with backup supplies (ink cartridges)
2	Dedicated computers connected to the network with internet capability
1	TV with computer connectivity and capable of receiving TV transmissions (i.e. weather, news)
1	Portable radio capable of receiving AM-FM transmissions and weather channels (with battery back-up and spare batteries)
1	LCD projector and screen
1 set	Assorted maps including a dry-mounted map of the general area
1 case	Drinking water
1	Coffee machine with supplies
	Assorted office supplies

• Computer paper • Message pads • Clipboards • Large manila envelops • Wall mounted digital clock (with battery backup) • Pens and pencils • Manual pencil sharpener • Pushpins • Flipchart easel with paper supply	• Whiteboard(s) • Minimum 2 sets, dry erase markers and erasers • Writing pads • File folders • Post-it notes • Emergency Response Plan(s)
Other Recommended Items:	
•	•
•	•
•	•

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4.1.8 Wildfire Smoke Exposure

Considerations for Limiting Exposure during Emergencies:

Purpose

This document provides background information and guidance on assessing smoke conditions and associated health risks during a wildfire where personnel may be affected from short term-exposure. It is to be used by Husky Oil (Husky) personnel, and for the purpose of maintaining Husky's commitment to the protection of employees, contractors and the general public[1]

Scope

Information and guidelines contained within this document are for use by Husky employees and contractors (Husky personnel) during any wildfire situation where people are at risk of exposure to wildfire smoke. Note: guidelines presented within this document are not intended to supersede recommendations and/or direction provided by a government health authority.

Where related to Husky operations, the definition of wildfire smoke will include:

- Any form of smoke caused by the burning of vegetation, whether natural or man-made.
- Smoke caused by the burning of non-vegetative fuels, where the ignition of such fuels was directly caused by vegetative fuels.

1.0 Background

Husky operations in Northern BC and Alberta are located within densely forested areas, and are therefore at an increased risk of being affected by wildfire. Husky recognizes the risks not only to our operations but more importantly to the public, and our employees and contractors that work and live in these areas. This document provides valuable information and guidelines for those responding to, or preparing for a wildfire emergency. Recommended guidelines will enable responders to categorize the air quality, determine potential health risks, and to communicate recommended actions to ensure the health and safety of our workers and the public.

Wildfires can include the burning of both **vegetation** and **made-materials**; they are caused by accidents, lightning strikes and intentional human activities such as brush and waste burning. Regardless of the cause, all wildfires contain harmful chemicals, gases and particulate matter that may endanger human life.

Air quality refers to the state of air around us. The effect of air quality on our health is determined by the length of time exposed, how much air is breathed, personal health, and the concentration of **harmful gases** and **particulates** (pollutants) in the air.

[1] Derived from Husky: Safety & Environment Policy 1.04

Health Effects of Wildfire Smoke

Particulate matter exposure is the principle public health threat from short-term smoke exposure. The health effects of smoke from wildfires can range from eye, nose or throat irritation to serious problems such as reduced lung function, bronchitis, exacerbation of asthma and even a risk of death. People at increased risk of adverse health effects include: people with existing respiratory or cardiovascular conditions; infants and young children; pregnant women and the elderly; diabetics; and people such as responders and firefighters who breathe deeply and/or rapidly.
Depending on the fuel being burned and the specifics of the fire situation, health effects may be produced by gases such as carbon monoxide, and by various hydrocarbons and chemicals such as formaldehyde and acrolein. The short and long term health effects from wildfire smoke may increase as a result of repetitive and elevated or prolonged exposures.

2.0 Response

2.1 Assessing Risk - Smoke Conditions

It is important that a **Husky representative** be assigned to monitor the levels of smoke particulate, and to determine occupational exposure limits for any situation where people may be exposed to wildfire smoke. This is an important consideration as the information will be used to assess the health risks to both the public and frontline responders, thus aiding those charged with evacuation and shelter in place responsibilities. Note, evacuation should only be considered if it is **necessary** and **safe to do so**.

For operational areas that do not have a continuous means of monitoring air quality, a **visibility index** may be used as a quick and alternative way to **estimate levels of smoke particulate**. Using landmarks at known distances, an experienced observer can provide a reasonable estimate of particle concentration. **Note:** Smoke conditions can vary quickly within short distances.

When **visually estimating** smoke particulate concentrations, it is important to face away from the sun, and determine the limit of your visibility range by looking for **landmarks at known distances**. The visibility range is the point at which even high-contrast objects totally disappear (ex: a dark building viewed against the sky at noon). Once visibility has been determined in kilometres, use **Table 1** to estimate the **"Air Quality Category"**. The Air Quality Category (health risk) is then used in conjunction with **Table 2** to determine appropriate response actions. Table 2 provides suggested health messaging and potential actions that are based on the estimated Air Quality Category. **Note:** The visibility index is not effective at night or when humidity is high.

Table 1 - Estimating Particulate Matter Concentrations from Visibility Assessment

Air Quality Category	Equivalent approx. PM2.5 1- 3-hour average in µg/m3	Visibility in Km
Good	0-40	15 kms and up
Moderate / Unhealthy for Sensitive Groups	41-175	5-14 kms
Unhealthy	176-300	2.5-4 kms
Very Unhealthy	301-500	1.5-2 kms
Hazardous	Over 500	Less than 1 km

2.2 Recommendations and Actions

The following table categorizes air quality based on the level of particulate matter and makes recommendations on potential health messages and health team actions for each category.

Table 2 - Recommended Messages and Actions by Air Quality Category during Wildfires

Air Quality Category	Health Messages At-Risk (Sensitive*) Populations**	Health Messages General Population**	Actions for Health Team**
Good *Visibility: 15 kms and up* 1-3 hour average PM2.5 0-40 µg/m3	**Continue with normal** outdoor work and leisure activities.	**Ideal** air quality for outdoor work and leisure activities.	Be aware of the **forecast** (current, daily, tomorrow). Ensure that a Husky representative is assigned the responsibility for assessing wildfire smoke related health risks. **Maintain frequent communications with health authority.** Perform a hazard and risk assessment.
Moderate/ Unhealthy for Sensitive* Groups *Visibility: 5-14 kms* 1-3 hour average PM2.5 41-175 µg/m3	**Reduce** or reschedule prolonged strenuous work activities, and limit outdoor working times. Consider options for **assisting and/or advising** At-Risk or sensitive members of the public. **Consult** with local health authority and review health risks; document details and if it is safe to do so, follow recommendations and instructions.	**Be aware** of the health effects and symptoms of exposure to wildfire smoke. Consider evacuation or withdraw times when determining the health risk to frontline responders.	**Advise** workers of the health effects and related symptoms from exposure to wildfire smoke, and provide them with information on how to reduce exposure. If the smoke event is projected to be prolonged, identify and evaluate possible cleaner indoor (shelter in place) and outdoor air shelter sites. **Review** shelter in place, and evacuation plans and guidelines, and ensure that evacuation response resources are on **standby**. **Maintain frequent communications with health authority.** Perform a hazard and risk assessment.

Table 2 continued on next page

Air Quality Category	Health Messages At-Risk (Sensitive*) Populations**	Health Messages General Population**	Actions for Health Team**
Unhealthy *Visibility: 2.5-4 kms* 1-3 hour average PM2.5 176-300 µg/m3	**Avoid** prolonged and strenuous work activities, and stay indoors if possible. Consider shelter in place and evacuation options. Consider additional resource requirements where a response effort is likely to continue.	**Reduce** or reschedule prolonged strenuous activities outdoors, especially if you experience symptoms. Consider moving all but essential personnel to a cleaner air location.	Consider altering or canceling current and future work activities. Review shelter in place, and evacuation plans and guidelines, and ensure that evacuation response resources are on standby. **Maintain frequent communications with health authority.** Perform a hazard and risk assessment.
Very Unhealthy *Visibility: 1.5 -2 kms* 1-3 hour average PM2.5 301-500 µg/m3	**Avoid** all strenuous activities and stay indoors if possible. If required, initiate shelter in place and evacuation options.	**Avoid** prolonged strenuous activities and stay indoors if possible. If required, move all but essential personnel to a cleaner air environment	Consider having At-Risk populations go to cleaner air shelters within the facilities or camps. Consider assigning additional resources to monitor and assess **weather conditions.** **Evaluate level of preparedness** for shelter in place, and determine if shelter in place is possible. Consider mobilizing shelter in place and evacuation resources to staging area. **Maintain frequent communications with health authority.** Perform a hazard and risk assessment.
Hazardous *Visibility: < 1 km* 1-3 hour average PM2.5 >500 µg/m3	**Avoid** all strenuous activities and stay indoors. If required, initiate shelter in place and evacuation options. Consider evacuation options for all response personnel.	**Avoid** prolonged strenuous activities and stay indoors if possible. If required, **move** all but essential personnel to a cleaner air environment.	If smoke event is projected to be prolonged, consider evacuation of At-Risk populations. Consider assigning additional resources to monitor and assess **weather conditions.** **Maintain frequent communications with health authority.** Perform a hazard and risk assessment.

*****Sensitive: People with existing respiratory and cardiovascular conditions, infants and young children, the elderly, pregnant women and possibly other groups (diabetics, smokers and people participating in sports or **strenuous work outdoors**).
****** Higher advisory levels automatically incorporate all of the guidance/ recommended actions offered at lower levels of concern.

3.0 Preparedness

To ensure an appropriate level of preparedness, the following recommendations must be considered:

- Identify smoke monitor candidates prior to starting operations, and ensure that adequate training is provided
- Ensure that Table 1 and Table 2 are communicated and made available to monitoring personnel
- Identify and record visibility landmarks before they are needed
- When referring to Table 2, consider messages and actions for both the quality of air actually determined and the quality of air that could exist under worse or differing conditions

The following section contains the following redactions:

- Bivouac Site Section: This section contains security sensitive information, the disclosure of which would create a real and substantial risk that its disclosure will impair the security of pipelines, buildings, structures or systems, as well as information about an identifiable individual, including his or her name and phone number. It is protected from publication under Clause 1(a)(i) and (ii) of NEB Order AO-001-MO-006-2016.

A) GENERAL AREA INFORMATION

A1) OPERATIONS OVERVIEW

Husky Oil Operations Ltd. Is the owner and operator of sweet gas and condensate producing wells and associated facilities in the Bivouac field. Production from the Bivouac field wells flows through a gathering system of 3", 4", 6", 8" and 10" steel lines and one Fiber spare line. All lines flow to the British Columbia satellite at surface location [redacted] for compression and sent through two 6" inter-provincial pipelines to the Alberta/British Columbia Satellite [redacted] for final compression and refrigeration process. The inter-provincial pipeline is regulated by the Canada Energy Regulator (CER). Further information and specifications for this Pipeline can be obtained from the Pipelines Operations Maintenance Manual (POMM).

From the gas plant, [redacted], sales gas is directed to TCPL Timber wolf Meter Station. Meter code:[redacted] and surface LSD: [redacted]. The liquids production continues to the [redacted] facility and then on to the Husky Rainbow lake Gas Plant at [redacted].

The produced water is trucked out from both Bivouac sites.

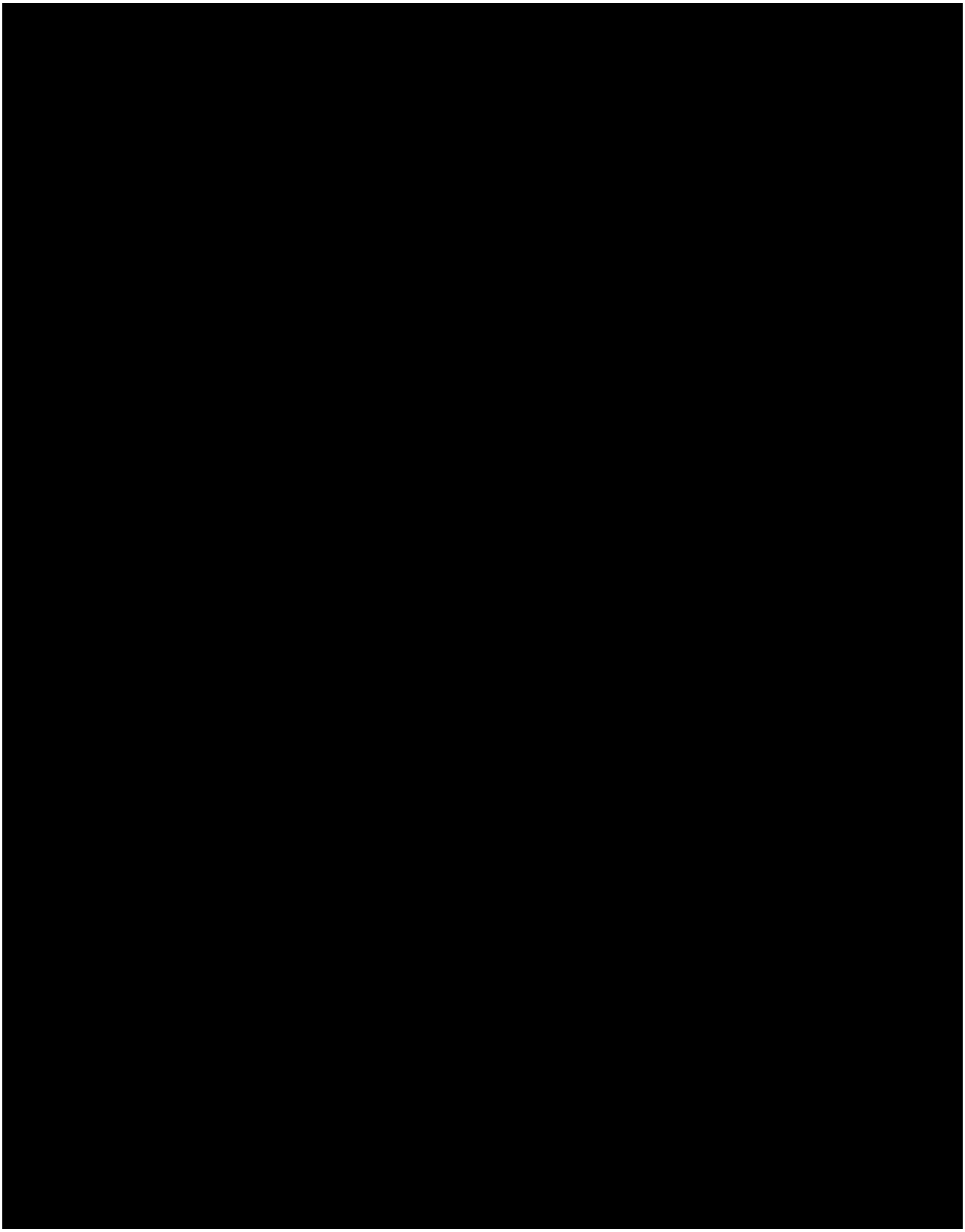
A2) LOCATION (Primary Facility)

AB-Sat [redacted]	*UTM Zone 11 NAD83*			
	Easting	[redacted]	**Northing**	[redacted]
	Longitude		**Latitude**	
Access Considerations	• Accessible all year round on a high grade road to AB-Sat and BC-Sat. • 15 to 30 minute flight by helicopter from Rainbow Lake, Alberta depending on weather conditions. • There is only one exit from the BC-Sat, located to the east.			

A3) ASSOCIATED FACILITIES

BC-Sat [redacted]	*UTM Zone 12 NAD83*			
	Easting	[redacted]	**Northing**	[redacted]
	Longitude		**Latitude**	

A4) DIRECTIONS (For dispatch of Emergency Support)



A5) SAFETY EQUIPMENT (On-Site)

FIRE	• All field vehicles are equipped with 20/30 lb dry chemical fire extinguishers
FIRST AID	• All field vehicles and offices are equipped with first aid kits
SCBA	• All field vehicles are equipped with SCBA
PERSONAL MONITORS	• All operators are equipped with 4-Head personal monitors
FRESH WATER	• Water is brought in by truck or helicopter • Hay River, Little Hay River and Timber Wolf Creek

A6) ON-SITE STORAGE

TYPE	CAPACITY	CONTAINS	UN #
Tank	400 bbl	Produced Water	1267
Tank	400 bbl	Secondary Production H_2O Tank	1267
Tank	1000 gal	Demulsifier	N/A
Tank	1000 gal	Methanol	1230
Tank	10 m^3	Methanol	1230
Tank	9 m^3	Bulk Cortron	N/A
Tank	4 m^3	Bulk Cortron	N/A

A7) FACILITY PLOT PLAN

There is no plot plan for this section of the Emergency Response Plan.

B) SITE HAZARDS, CONSIDERATIONS and EPZ CALCULATIONS

B1) SITE SPECIFIC HAZARDS

Site specific hazards associated with the wells, pipelines and facilities in this area primarily relate to a potential sour gas release.

Through the Site Specific Hazard ERP Identification Process, the following hazards for the area have been identified. The second column identifies where the applicable hazard is addressed in the ERP.

Identified ERP hazards in the Rainbow Lake operating area include:

Identified Hazards	ERP Section(s)	Comments
Confined Space Rescue	1.4.3	
Fire / Explosion	1.4.4	
Medical Emergency	1.4.2	
Bomb Threat / Terrorism	1.4.29	
Missing Personnel	1.4.20	*Plus local work alone policy*
Motor Vehicle Accident	1.4.5	
Natural Disasters	1.4.24	*Flooding, Hail. Blizzard, Heavy Rain, Tornado etc.*
Next-of-Kin Notification	1.4.27	*With support from CRMT*
Wildlife Encounter	1.4.18	*Not likely, however the guideline is already part of Husky's core ERP.*
Loss of Well Control	1.4.9	*E&PS have their own site-specific plans for higher risk / regulated work. HOG Well Servicing has their own Well Control Contingency Plan*
Extreme Cold	1.4.19	
Chemical Hazards	1.4.11	*And our Safety Data Sheets (SDS) for specific chemicals*
LPG Release	1.4.11.2	
Sour Gas Release	1.4.11.4 and Section 2.2	*Plus applicable site section details*
H_2S Exposure	1.4.14	*And section 2.2.4*
SO_2 Exposure	1.4.15	*And section 2.2.4*
Transportation of dangerous Goods (TDG)	1.4.6	*And our Safety Data Sheets (SDS) for specific products*
Pipeline strike or failure	1.4.7	
Theft / Security hazards	1.4.29	*With support from Corporate Response Management Team (CRMT)*
Public concern (real or perceived risk)	1.4.1	
Petroleum Spills	1.4.8	*Plus the WCSS Oil Spill Plan*
Spills into water bodies	1.4.8	*Part of Section 1.4.8 Petroleum Spills* *I.e., Spills into a Watercourse & Watercourse Containment Options (table) Also – there is info about Spills into Water bodies and spills on ice. Plus the WCSS Oil Spill Plan*

Identified Hazards	ERP Section(s)	Comments
Downed Electrical lines	1.4.7	*1.4.4 Fire / Explosions re: Class C Electrical Fires, followed by the section on Fire Involving Electrical Systems. Husky EM/ BC to will consider adding specific guideline in the next update of the Core ERP. Until then staff will follow Safety Training and ERP First on the Scene Seven steps. Additional guidance provided here; http://www.worksafebc.com/en/resources/health-safety/hazard-alerts/safety-for-first-responders-around-fallen-power-lines?lang=en*
Hydrate Awareness	1.4.7	*Response covered in other sections of the ERP – such as section 1.4.7, section 1.4.2 and 1.4.4 however Husky EM/ BC to will consider adding specific guideline in the next update of the Core ERP. There are separate Hydrate Safety / Awareness courses available. This article will assist with awareness http://journalofcommerce.com/OHS/News/2013/3/Worker-dies-and-another-injured-in-separate-incidents-JOC054667W/*
Rotating Equipment Impacts	1.4.3	*Response covered in other sections of the ERP – such as section 1.4.11.1 section 1.4.7 and 1.4.11.4*
Burner Flashback	1.4.2 1.4.4	*Husky EM/ BC to will consider adding specific guideline in the next update of the Core ERP.*
Grass Fires	1.4.4	*General guidelines included in section 1.4.4 Fire / Explosions regarding small & large grass fires*

Other potential hazards include:

- Winter drilling program (possibility for up to 200 additional personnel in the area)
- Remote location is difficult for external resources to access

For the purposes of this hazard assessment the Bivouac operating area has been evaluated based on two factors:

1) Hazards arising from the operations of sweet gas pipelines
2) Hazards arising from the onsite storage of hazardous materials

Assessment 1 – Pipeline Associated Hazards

Identification

The Bivouac gathering systems contain primarily sweet gas and condensate wells and pipelines. The H2S content is licensed up to 3 percent however actual operating conditions, as gathered through gas sampling and analysis, shows the systems to contain mainly sweet product (100 ppm or less).

Associated H_2S Hazards	
Could LOC of substance cause spill?	Yes
Could LOC of substance cause hazardous vapour release?	Yes
Could LOC of substance cause explosion?	Yes
Could LOC of substance cause fire?	Yes

Interpretation

The realistic worse-case scenario for an LOPSC event along the Bivouac pipeline routes would be a rupture/break of the pipeline resulting in an explosion and/or fire. The Emergency Planning Zone (EPZ) for the Bivouac pipeline system ranges in length from 0.1 km to 2.68 km.

Public Safety Interface Identification

There are no surface developments located within the Bivouac EPZ; however, there are other public safety interfaces and geographical vulnerabilities as related to a pipeline release resulting in explosion and/or fire. These include the following,

Type	Number Identified
Petroleum Operations	None
Trapper cabins and trap lines	Numerous trapper lines – no cabins
Public Camps	None
Protected Areas	2
Roadways	Numerous
Small rivers & creeks	Numerous

**Husky has considered all surface developments and geographically vulnerable features in its hazard assessment and has developed appropriate response strategies to ensure the public can be communicated with and that proper protection measures can be undertaken. Different strategies will be utilized depending on the location of the hazardous event and those who may be affected.*

Apply Appropriate Public Safety Measure or Protocol

For Trapper Lines that are located or traverse through the pipeline EPZ

Initiate Emergency Communications

- Husky will determine a pipeline loss of containment has occurred through either internal processes (i.e. pipeline monitoring and/or operation checks) or through a public call to the 24 Hour Emergency Response Line. Depending on the incident this could lead to ERP activation. Local trappers would be identified by their associated trapper line number located on the map. Trapper contact information is located in section C6 of the Bivouac site section.

Roadblock/Rover Teams

- Husky will immediately activate Rover/Roadblock teams to ensure access to the hazard zone is limited and that no public may enter. This may involve denying access to trap lines entering the hazardous zone.

Air-Monitoring

- Husky will immediately contact and establish air-monitoring units at the incident site to maintain a constant analysis of air quality and report any and all findings.

Other[1]

- Husky will call upon first responders, support services, government agencies (OGC & EMBC) as required to assist in the situation.

- Husky may activate its corporate spill response plan and engage its external environmental remediation providers

Additional Emergency Response procedures for LOPCS events are located within Section 1.4 of this Emergency Response Plan.

[1] Other may refer to an external response organization such as a third party or a municipal first response agency, such as police or fire, who can offer assistance to the adverse event

For roads that enter or traverse through the EPZ

Initiate Emergency Communications

- Husky will determine a pipeline loss of containment has occurred through either internal processes (i.e. pipeline monitoring or operation checks) or through a public call to the 24 Hour Emergency Response Line. Depending on the incident this could lead to ERP activation. If the release could impact any roadways entering or traversing through the EPZ Husky would contact applicable petroleum operations, trappers & public camps to inform them of the situation and advise them not to travel on the road systems within the EPZ.

Roadblock/Rover Teams

- Husky will immediately activate Rover/Roadblock teams to ensure access to the hazard zone is limited and that no public may enter.

Air-Monitoring

- Husky will immediately contact and establish air-monitoring units at the incident site to maintain a constant analysis of air quality and report any and all findings.

Other[2]

- Husky will call upon first responders, support services, government agencies (OGC & EMBC) as required to assist in the situation.

- Husky may activate its corporate spill response plan and engage its external environmental remediation providers

Additional Emergency Response procedures for LOPCS events are located within Section 1.4 of this Emergency Response Plan.

[2] Other may refer to an external response organization such as a third party or a municipal first response agency, such as police or fire, who can offer assistance to the adverse event

For pipeline river crossings and protected areas

Initiate Emergency Communications

- Husky will determine a pipeline loss of containment has occurred through either internal processes (i.e. pipeline monitoring or operation checks) or through a public call to the 24 Hour Emergency Response Line. Depending on the incident this could lead to ERP activation.

Roadblock/Rover Teams

- Husky will immediately activate Rover/Roadblock teams to ensure access to the hazard zone is limited and that no public may enter.

Air-Monitoring

- Husky will immediately contact and establish air-monitoring units at the incident site to maintain a constant analysis of air quality and report any and all findings.

Other[3]

- Husky will call upon first responders, support services, government agencies (OGC & EMBC) as required to assist in the situation.

- Husky may activate its corporate spill response plan and engage its external environmental remediation providers

Additional Emergency Response procedures for LOPCS events are located within Section 1.4 of this Emergency Response Plan.

[3] Other may refer to an external response organization such as a third party or a municipal first response agency, such as police or fire, who can offer assistance to the adverse event

HYDROLOGY

Hydrology potentially impacted from a pipeline or well release that intersects a pipeline or is within 100 m of a pipeline or well.

- Bivouac Creek
- Fire Creek
- Hay River
- Little Buffalo River
- Little Hay River
- Timberwolf Creek
- There are numerous bodies of water identified within the emergency planning zone.

Refer to the site section map to view the location(s).

Please see WCSS manuals (Zone 6 Coop Area C) for response procedures.

B2) WELL RELEASE RATE CALCULATIONS

The following pages contain detailed well release rate and EPZ calculations. For wells that have minimal sour gas or sour oil content resulting in a small EPZ, Husky assigns a (minimum) EPZ of 50 meters for oil and 100 m for gas. The following tables show the actual EPZ calculation and the assigned.

In some cases, a (*) may appear beside the assigned EPZ, this is just to further denote that the EPZ is assigned.

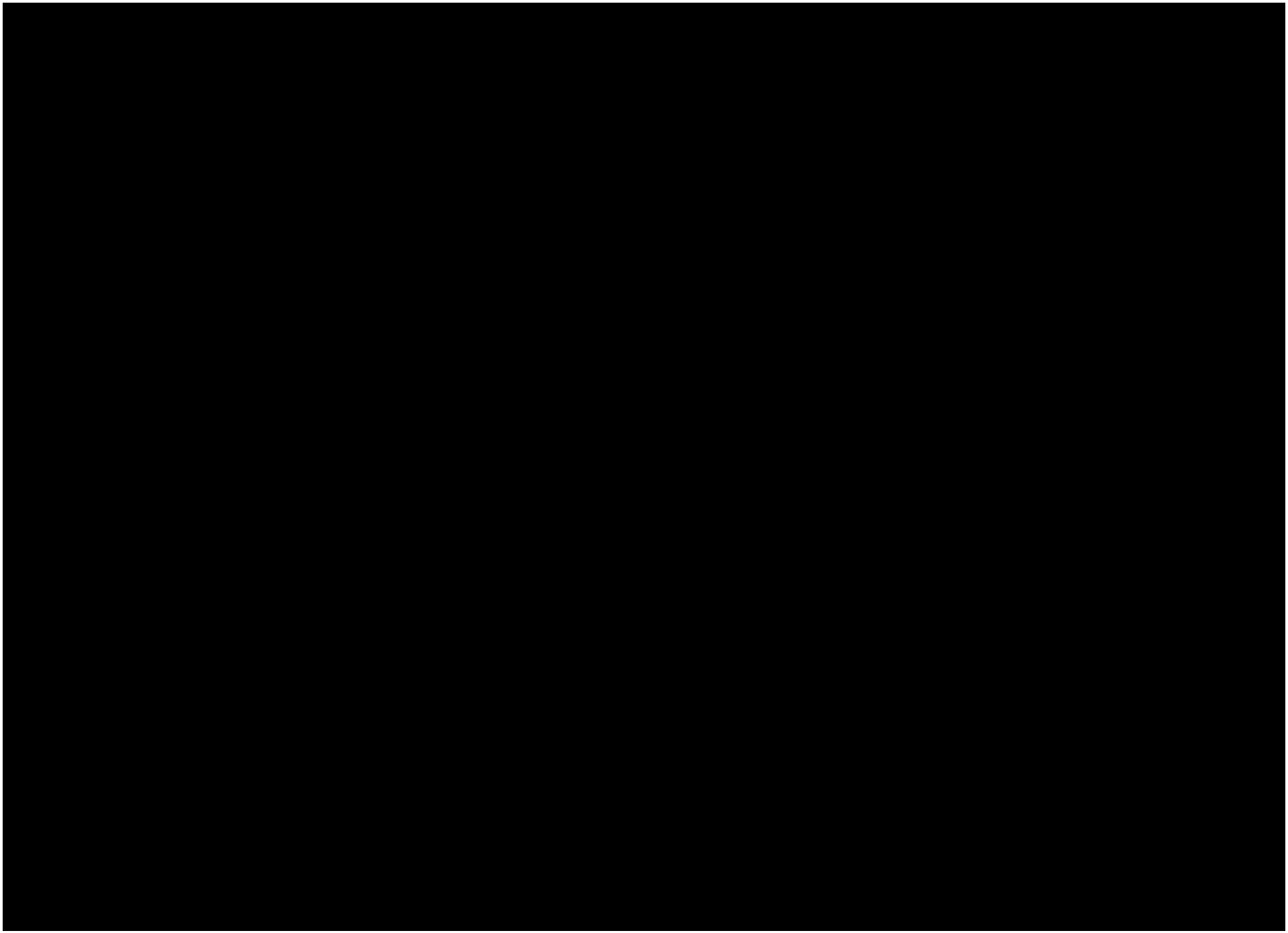
A shaded line in the table indicates that the well has been suspended..

B3) PIPELINE RELEASE RATE CALCULATIONS

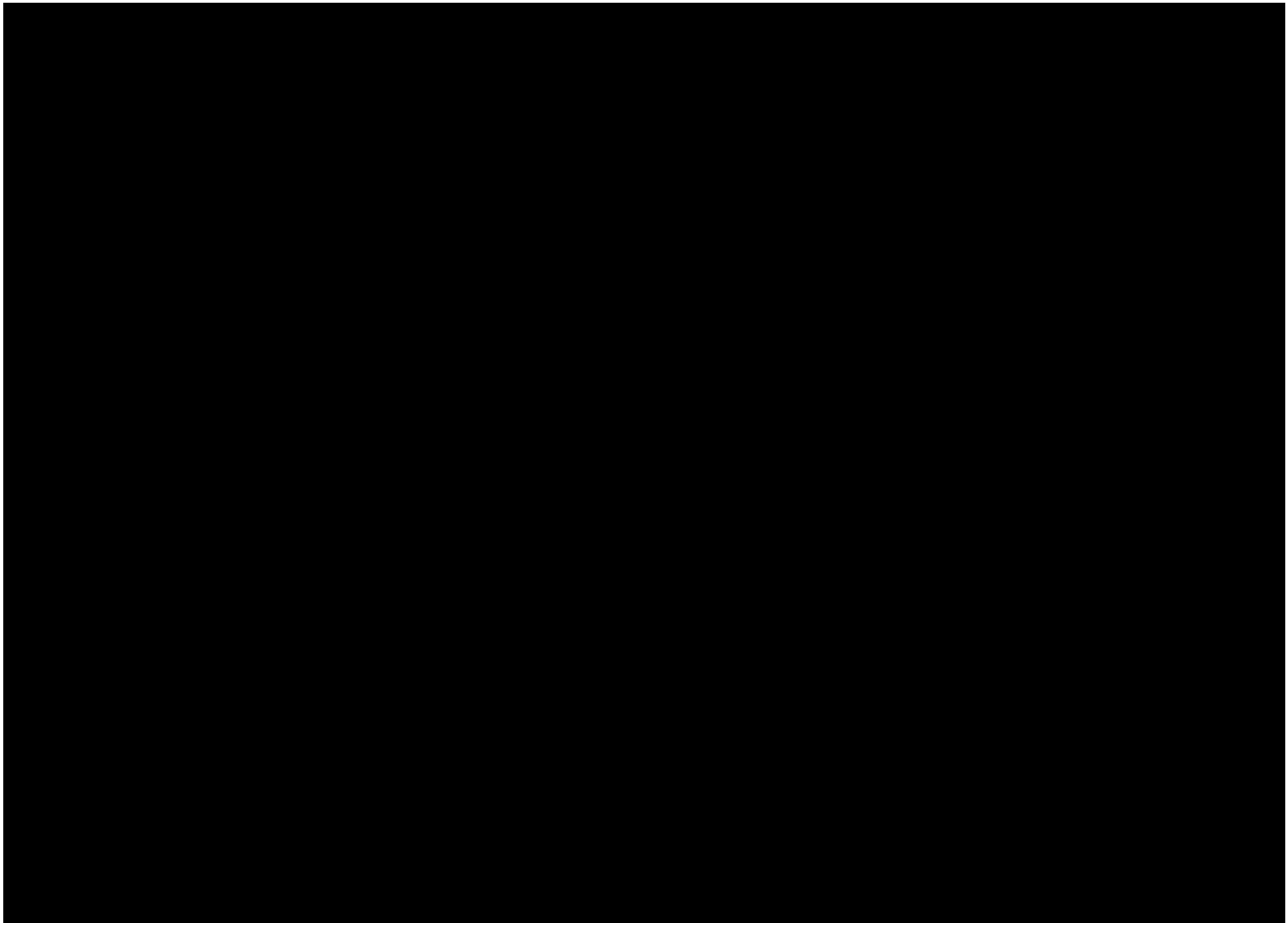
The following pages contain detailed pipeline release rate and EPZ calculations. The following tables show the actual EPZ calculation and the assigned.

In some cases, a (*) may appear beside the assigned EPZ, this is just to further denote that the EPZ is assigned.

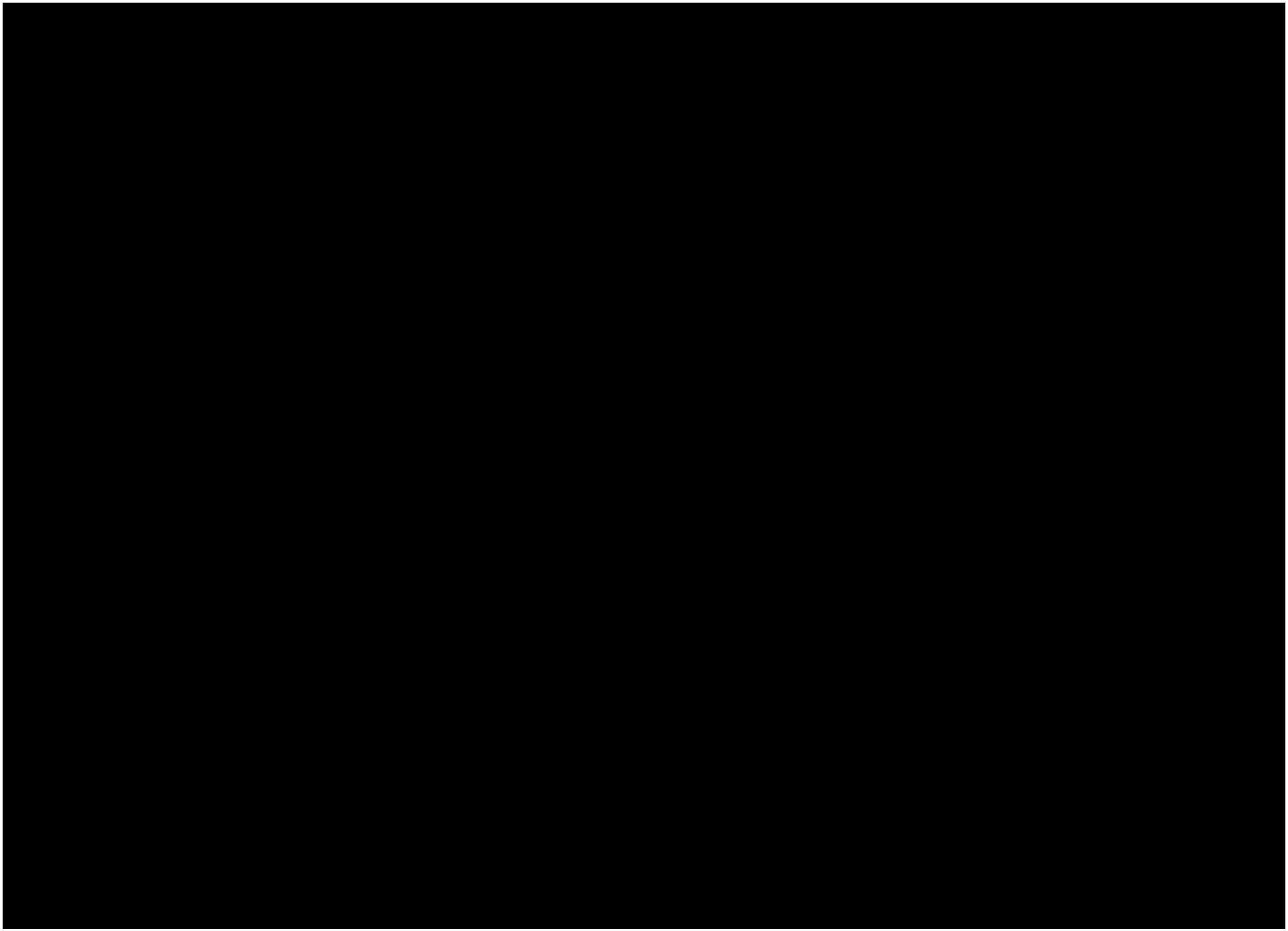
A shaded line in the table indicates that the pipeline has been discontinued.



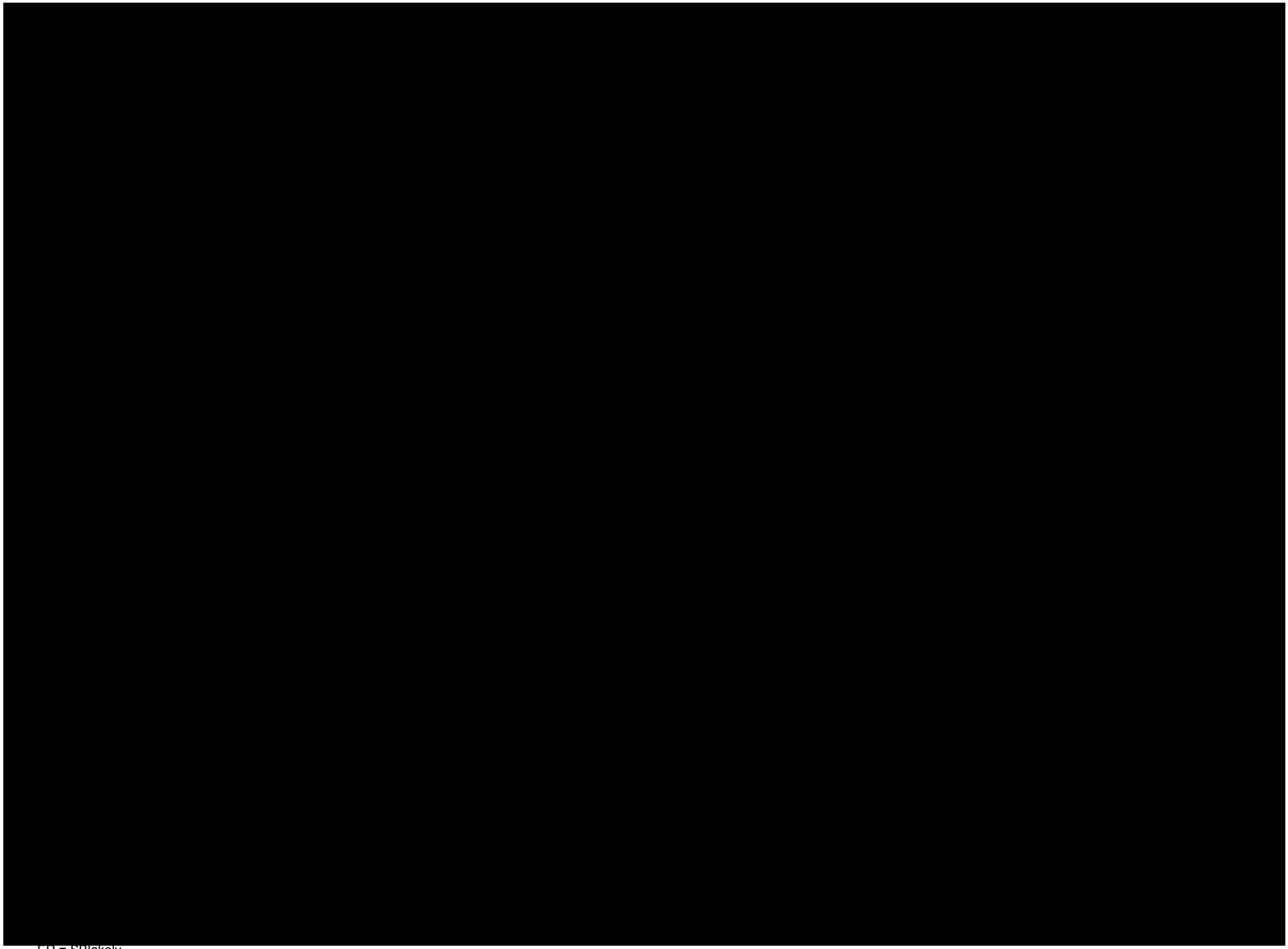
ER = SBlakely
BU = Rainbow BC
*Assigned EPZ



ER = SBlakely
BU = Rainbow BC
*Assigned EPZ



ER = SBlakely
BU = Rainbow BC
*Assigned EPZ



ER = SBlakely
BU = Rainbow BC
*Assigned EPZ

ER = SBlakely
BU = Rainbow BC
*Assigned EPZ

C) AREA SENSITIVITIES

C1) RECEPTION CENTRES

C2) SURFACE DEVELOPMENTS

No resident information has been gathered for this section of the Emergency Response Plan, due to this site section not being required / regulated by the OGC.

C3) PUBLIC FACILITIES / RECREATION AREAS

A) PUBLIC FACILITIES

There are no public facilities intersecting or within the emergency planning zone.

B) RECREATION AREAS

There are no Provincial Recreation Areas (PRAs) intersecting or within this section of the ERP.

C4) URBAN CENTRES

Urban Centre	Proximity to EPZ	Population
Town of Rainbow Lake	35 km	± 795

C5) HIGHWAYS

There are no highways intersecting or within the emergency planning zone.

C6) HUNTING

A) TRAPPERS

ID	Contact Name	Phone #
[redacted]		

B) GUIDES / OUTFITTERS

There are no guides/outfitters intersecting or within the emergency planning zone.

C7) GRAZING

There are no grazing leases intersecting or within the emergency planning zone.

C8) INDUSTRIAL USERS

A) OIL AND GAS

Operator	Location	24 Hr Phone #	Tied In* *(Y, S, --)
[redacted]			

**Y = Yes, there is a tie-in, S = Sales Line tie-in, -- = no tie-in*

B) FORESTRY MANAGEMENT AGREEMENT / UNITS (FMA / FMU)

There are no FMA/FMUs intersecting or within the emergency planning zone.

D) OTHER INFORMATION

D1) MOBILE AIR MONITORING

Mobile air monitoring would come from Fort St. John or Grande Prairie with an expected response time of 9-10 hours. Temporary air monitoring will be established locally until resourced monitoring has been mobilized.

Due to response time, dispatch Mobile Air Monitoring at a Level 1 Emergency.

D2) NOTIFICATION

Husky's Bivouac Compressor Station is equipped with an alarm system to alert operators to an upset or hazardous condition on a twenty-four (24) hour basis via Supervisory Control & Data Acquisition (SCADA). Operators live in the area and attend the wells and facilities on a daily basis.

D3) LOCAL AUTHORITY

Northern Rockies Regional Municipality

Husky has enough staff to handle the contact/evacuation of residents in the EPZ. The Local Authority may be contacted by Husky to assist with activities outside of the EPZ. The Local Authority may provide assistance if their resources are not occupied with another emergency at the time.

D4) COMMUNICATION

There are four forms of communication which may be used:

i. Land Telephone
ii. Cellular Telephone
iii. Two-way Radio with Husky designated channels
iv. Blackline Loner System - Field Operations staff

D5) MUTUAL AID

Husky strives to create mutual aid agreements with all parties whose assistance may be required in an emergency. For more details on Husky's mutual aid agreements please contact the Area Superintendent.

RAINBOW LAKE AB/BC
CER PIPELINES

EMERGENCY CONTACT INFORMATION

For Emergencies involving inter-provincial pipelines, the Canadian 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 of Canada (TSB) (For pipeline emergencies)	24 Hr Incident Line	819-997-7887
	Facsimile	819-997-2239
	Email	PipelineNotifications@tsb.gc.ca
Canada Energy Regulator (CER) (For all other emergencies related to a CER-regulated company's operations, facility or activity)	24 Hour Line	403-299-2773
	Fax	403-292-5503
Call the TSB 24 Hr Incident Line when an incident meets the Immediately Reportable Events (see page 2 for criteria) for all Canadian Energy Regulator (CER) regulated pipelines and facilities. Both the phone notification and the input of information into the CER's Online Event Reporting System (OERS): https://apps.cer-rec.gc.ca/ers/home/index are required to occur as soon as possible and no later than three hours of the incident being discovered. For all other events (non-immediate) companies are only required to input the information via the OERS.		
SECONDARY CALLS Contact as needed AFTER contacting the TSB and CER.		
Alberta Energy Regulator (AER)	24 Hr	800-222-6514
BC Oil & Gas Commission (OGC)	24 Hr	800-663-3456
Hazardous occurrences (under Part XVI of the Canada Oil and Gas Occupational Safety and Health Regulations) and incidents requiring medical evacuations are to be reported to the CER immediately. Canada National Energy Board Office national de l'énergie		

CER DEFINITION OF AN EMERGENCY

CAN /CSA Z246.2-14 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 m^3;
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 m^3 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 m^3;
- 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 Canada Energy Regulator Onshore Pipeline Regulations (OPR), Canada Energy Regulator Processing Plant Regulations (PPR), and Canada Oil and Gas Drilling and Production Regulations (DPR)/Oil and Gas Drilling Regulations;
- Unauthorized activities under the CER Act and Pipeline Damage Prevention Regulations - Authorizations (DPR-A);
- Pipeline damage and consent suspensions under the Pipeline Damage Prevention Regulations - Obligations of Pipeline Companies (DPR-O);
- Emergency burning or flaring under the PPR;
- Hazard identification under the PPR;
- Suspension of operations under the PPR;

MULTIPLE INCIDENT TYPES, continued

- 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 NEB/CER supporting documentation in this emergency response plan.

SUPPORTING INFORMATION	FOUND IN
CER Distribution	Section 3.5: Distribution List Page 3.
Company 24/7 Emergency Number	Area Specific Information: Binder Cover.
Area Map of CER Regulated Facilities	Area Specific Information: Last page of this section.
TSB Roles & Responsibilities	Section 2: External Agencies: Federal Roles Chart.
CER Roles & Responsibilities	Section 2: External Agencies: Federal Roles Chart.
Safety data sheets (SDS)	Area Specific Information
Health and Safety Plan	Please refer to the company's Health & Safety Plan located at the corporate head office.

ER = SBlakely BU = Rainbow Lk
*Assigned EPZ