Canadian Natural

CANADIAN NATURAL RESOURCES LIMITED

CORPORATE (CORE)

EMERGENCY RESPONSE PLAN

Toll Free 24-Hour Emergency

1-888-878-3700

Refresh Period		1 Year	
Role		**Signature**	
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2025-0	1 April 2025	Annual Update	

Canadian Natural

CORPORATE (CORE) EMERGENCY RESPONSE PLAN

DISTRIBUTION DISCLAIMER

To meet requirements of provincial and federal oil and gas regulations, this Corporate ERP is submitted to applicable regulatory agencies in hard copy and / or electronic version.

Local municipalities and health regions / authorities are provided electronic copies as required.

All Canadian Natural personnel and responders have access to this ERP via:

- hard copy binders – Calgary offices and at minimum, district field offices and main field facilities
- electronic copies – intranet, flash drives (contractors, consultants)

April 1, 2023

NOTE: Effective immediately, the titles "British Columbia Energy Regulator" and "BCER" shall replace all instances of "British Columbia Oil and Gas Commission" and "BCOGC" in this manual.

Public at large may access the non-confidential version of the Corporate ERP on Canadian Natural's website:

https://www.cnrl.com/sustainability/workplace-process-safety/emergency-management

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Electronic copies are uncontrolled once downloaded. Due to confidential information contained herein, please direct external requests for this document to the non-confidential version on Canadian Natural's website.

AMENDMENT RECORD

DATE (MMM, YYYY)	REV #	REVISION DETAILS	ANNUAL UPDATE (Y / N)	DATE INSERTED INTO ERP (DD, MMM, YYYY)	PRINT NAME & SIGNATURE
Apr 1, 2025	2025-0	• Updated / revised pages and or sections: o Section 1.8 Corporate Statements o Section 6 Emergency Contacts o Hazard Response Procedure 5 – Hazardous Product Release / Spill Control • **NOTE:** Amended pages show *"Version 2025-0"* and *"Updated: 1-Apr-2025"* in footers. All other pages not revised retain the previous revision number and date in footer, as per previous amendment history.	Y		
Apr 1, 2024	2024-0	• Updated / revised pages and or sections: o Section 6 Emergency Contacts o Form 5 o Guideline 9 o Hazard Response Procedure 10 – Security Threats **NOTE:** Amended pages show *"Version 2024-0"* and *"Updated: 1-Apr-2024"* in footers. All other pages not revised retain the previous revision number and date in footer, as per previous amendment history.	Y		
Apr 1, 2023	2023-0	• Updated / revised pages and or sections: o Distribution Disclaimer – amended Canadian Natural company website and British Columbia Oil and Gas Commission reference change(s) o Updated Corporate Statements o Section 6 Emergency Contacts o Guideline 2 Key Government Agency Notification Requirements by Incident Type – amended OH&S notation **NOTE:** Amended pages show *"Version 2023-0"* and *"Updated: 1-Apr-2023"* in footers. All other pages not revised maintain a previous revision number and date in footer.	Y		
Apr 1, 2022	2022-0	• Updated / revised pages and or sections: o Amended sections show Version 2022-0 and Updated: 1-Apr-2022 in footer. Those sections not revised maintain the 2021-0 revision number and 1-Apr-2021 date in footer. • Updated Section 6 Emergency Contact Lists • Section 8 Drilling, Completions & Well Servicing o Revised ignition equipment requirements	Y		
Apr 1, 2021	2021-0	• Reformatted to align with company document standards • Revised general email address from **REDACTED** - CER Order AO-001-MO-006-2016 s. 1.a.i. - personal information • Updated government agency names and acronyms • **Section 2.2** – added wildfire fighting equipment • **Section 3.0** – reformatted EPZ Isolation procedures/ updated Temporary Road Closure procedures • **Section 5.0** – updated Emergency Notifications Details wallchart; streamlined responder checklists • **Section 6.0** – updated internal and external contacts; added Manitoba Producers Oil Spill Corporation information • **Section 8.0** - separated Notifications of Affected Parties by province; added reference to BCOGC Form M2, clarified requirement to provide Drilling Status Updates • **Forms** – modified Time Action Log, Roadblock Control Log, Debriefing Report • **Guidelines** – added Guideline 9 and updated Guideline 10 • **Hazard Response Procedures** - expanded Fire/Explosion Hazard	Y		

DATE (MMM, YYYY)	REV #	REVISION DETAILS	ANNUAL UPDATE (Y / N)	DATE INSERTED INTO ERP (DD, MMM, YYYY)	PRINT NAME & SIGNATURE
		Response Procedure with wildfire and wildfire smoke response guidelines			
Oct 6, 2020	2019-2	• Modify cover page and Amendment Record with addition of Painted Pony Energy Ltd for BCOGC submission only • No other changes	N		
Apr 1, 2020	2019-1	• Modify cover page and Amendment Record • No other changes	Y		
Apr 30, 2019	2019-1	• Replace Incident Command Flowchart with Ver 3-0	N		
Apr 1, 2019	2019-0	• Minor corrections • Management of Change clarifications • Clarification of program evaluation, continuous improvement, hazard identification and consequence analysis processes • Addition of company spill response trailer / wildlife kit locations • Clarification of critical well requirements • Update Roles & Responsibilities • Update of Emergency Contacts section • Management Review clarifications • Re-inclusion of Drilling, Completions Well Servicing section • *Guideline 8: NEB Event Reporting Guidelines* clarification • Delete *Guideline 10: CommAlert Standard Operating Procedures (SOP)* • Update Hazard Response Procedures as per revisions in SMS Section 22 • Update Definitions and Acronyms • Other updates and modifications as necessary for revised federal and provincial regulatory emergency response requirements	Y		

MANAGEMENT OF CHANGE PROTOCOL

Canadian Natural is committed to the continuous improvement of its documentation. The Emergency Management Team is responsible for the maintenance and distribution of the Corporate Emergency Response Plan (ERP) and Site-Specific ERPs on an on-going basis. Canadian Natural's Senior Management has overall accountability and authority for these documents.

Canadian Natural's ERPs are subject to annual reviews and updates at minimum by Emergency Management Team and more often if major changes are required. All contact information is subject to a continuous review and any changes made will be distributed on an annual basis or more frequently if required.

Notification of errors will be reviewed immediately and addressed according to significance. Any suggestions for improvements will be considered for the next update by the Emergency Management Team. The notification of error and / or suggestion for improvement should include a) the ERP name, b) section(s) and page number(s) affected and c) the rationale (for suggestions for improvement). This information should be directed to:

Canadian Natural Resources Limited
2100, 855 – 2 Street SW, Calgary, Alberta T2P 4J8
Email: **REDACTED** - CER Order AO-001-MO-006-2016 s. 1.a.i.- personal information

See Section 7 Manual Maintenance for further information on Canadian Natural's ERP Management of Change process

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FORMS

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1.0 INTRODUCTION

1.0 INTRODUCTION

1.1 FOREWORD

Canadian Natural operates and maintains facilities (wells, pipelines and processing facilities) with the utmost of safety in mind. As a result, the possibility of an emergency occurring is extremely remote. Nevertheless, Canadian Natural has an Emergency Management Program in place to ensure the safe and coordinated response to incidents that may unexpectedly occur.

One component of Canadian Natural's Emergency Management Program is the development and maintenance of emergency response plans (ERPs) Canadian Natural's ERPs consist of this manual, the Corporate (Core) ERP and additional supplemental site specific emergency response plans (ERPs that provide detailed information specific to the areas applicable to each plan. Company responders use both in conjunction, where applicable when responding to incidents.

Canadian Natural's ERPs meet regulatory requirements in each jurisdiction where the company operates, including the:

- (BC) British Columbia Oil and Gas Commission (BCOGC)
- (AB) Alberta Energy Regulator (AER)
- (SK) Saskatchewan Ministry of Energy and Resources (MER)
- (MB) Emergency Measures Organization (EMO)
- (NWT) Office of the Regulator of Oil and Gas Operations (OROGO)
- (Federal) Environment and Climate Change Canada (ECCC)
- (Federal) Canada Energy Regulator (CER)
- (Federal) National Standards of Canada

1.2 PURPOSE

The purpose of this ERP is to direct and coordinate the responses of Canadian Natural personnel in their actions to protect:

- public and worker safety
- the environment
- company property

1.3 SCOPE

This manual is a comprehensive guide to ensure an effective and coordinated company response to all types of hazardous situations. Examples of emergencies that may require implementation of this plan are:

- uncontrolled hydrocarbon release from wells, pipelines or facilities
- H2S release
- fire or explosion
- serious injury or fatality
- natural disaster / environmental emergency
- security breach / threat
- other unplanned event that has the potential to cause harm to public, environment or property

1.4 EMERGENCY MANAGEMENT PROGRAM

1.4.1 GOALS AND OBJECTIVES

Canadian Natural's Emergency Management Program has four specific goals, each one with supporting activities, which are:

1. Prevention

- Ensure process safety through the use of a variety of engineering design and integrity programs, along with adherence to regulations, codes of practice and industry best practices.
- Focus on safe, reliable and proactive operations through the integrated use of our comprehensive management systems, including, but not limited to, our Safety Management System (SMS), Process Safety Management (PSM), Pipeline Water Crossing Management, Pressure Equipment Integrity Management Systems (PEIMS), and Environmental Management System (EMS).

2. Preparedness

- Prepare, maintain and regularly review ERPs as required by government regulations
- Engage and regularly consult with all stakeholders that are in proximity to those operations associated with Site-Specific ERPs, including members of the public, local governments, local first responders, and health authorities
- Ensure liaison with, and continuous education of key stakeholders who are in proximity to our operations, including attendance / participation in ERP exercises
- Work with stakeholders to identify emergency response procedures for large municipalities, urban centers and high-consequence areas
- Participate in stakeholder synergy groups and work together to create shared value and mutual benefit
- Provide mandatory annual emergency response training sessions for all key personnel
- Practice company emergency response procedures through annual tabletop exercises and field deployment exercises
- Provide mandatory company safety orientations for all employees and contractors working at field operations
- Provide easily accessible spill response supplies and equipment for immediate initial response until other resources can be mobilized to the site (i.e. boats, booms, absorbent materials, wildlife deterrents)
- Provide firefighting equipment such as fire extinguishers, air breathing trailers and apparatus
- Ensure emergency equipment and trained personnel are available and ready for use at major operations

3. Response

- Observe mandatory ERP activation requirements as set out by company policy to ensure prompt response times
- Use ERPs as guides to protect public and workers, the environment and Canadian Natural property
- Use our "10 Step for Emergency Response" process to ensure that all the necessary and appropriate actions are taken to swiftly resolve emergency situations, protect the public and workers and mitigate damage to the environment and property
- Use our Incident Command System and other emergency response tools to provide a common hierarchy and an integrated organizational structure for effective and efficient incident management
- Provide proper notifications to all affected stakeholders to ensure effective liaison if required
- Work in partnership with other stakeholders to ensure the safety of large municipalities and high-consequence areas

4. Recovery

- Investigate incidents and submit findings to regulatory agencies
- Implement remediation, if necessary, as soon as possible
- Share learnings within the company and with industry, as appropriate

1.4.2 INCIDENT COMMAND SYSTEM

Canadian Natural uses an Incident Command System (ICS) based on the standards set forth by ICS Canada. ICS provides commonality for emergency response for industry, governments, local authorities, and first responders.

Canadian Natural's ICS addresses all key elements of any incident command system, such as organizational collaboration, flexible and manageable organization, integrated communications, consolidated incident action planning, unity of command and designated incident facilities. Additional elements such as reporting hierarchy, span of control and accountability are part of the Incident Command System Flowchart as included in the Roles and Responsibilities section of this manual.

Canadian Natural's ICS can be applied to all emergency events regardless of nature, size or complexity due to the incorporation of these fundamental elements:

- **Primary Management Functions** – Canadian Natural integrates the Command, Operations, Planning, Logistics, and Finance / Administration functions in its ICS. Each function has clearly defined roles with set duties as fully described in Section 5.0 Roles and Responsibilities
- **Personnel Accountability** – Canadian Natural's Senior Management Committee has overall accountability and authority for its Incident Management System. Other principles of personnel accountability are adhered to by the use of forms, charts, other emergency response tools and by the documentation captured during and after the emergency. All notes and other documentation are collected by the Safety Officer post-incident and organized, analyzed, assessed and finally shared for learning purposes.
- **Modular Organization** –Canadian Natural's ICS can be applied to all types of incident thus it is flexible and can expand and contract as required. Depending on the nature and parameters of the emergency, not all ICS roles are activated (i.e.: Telephone Callers, Rovers) while branches / divisions / units may be established if the emergency requires more specialized resources (spill response, well blow out).

- **Establishment and Transfer of Command** – The command function of Canadian Natural's ICS in addition to supervision of on-site activities is clearly established at the beginning of incident response. When command is transferred, a briefing for the incoming Incident Commander and notification to all personnel that a change in command has taken place is required.
- **Single or Unified Command** – Given the span of Canadian Natural operations, most emergency situations will be managed using the Single Command method where the Incident Commander has complete responsibility for the application of ICS; however, there may be rare instances where the Unified Command method is required. This would include one or more other agencies or organizations that have responsibility and / or jurisdiction sharing incident management / response.
- **Unity and Chain of Command** – Canadian Natural's Incident Command System Flowchart and Section 5.0 of this manual clearly show the chain of command and identify roles and reporting structure.
- **Management by Objectives and Action Planning** – Canadian Natural's incident management protocols involve establishing incident objectives, developing strategies based on these objectives, developing and issuing assignments, plans, procedures and protocols, establishing specific tasks for various activities and directing the efforts to accomplish them. This information is captured using the Incident Action Plan form. Documenting activities and results to measure performance, facilitate corrective actions and share learnings is another critical step that is required and fully supported by the use of the Time / Action Logs, scribes and note takers.
- **Manageable Span of Control** – An effective span of control (maximum three to seven people reporting to one) for any Supervisor is adhered to and can be found in Canadian Natural's Incident Command System Flowchart.
- **Common Terminology** – Canadian Natural has modified several of the roles and other components of its Incident Management System to match those of ICS Canada. This allows Canadian Natural to work with support organizations in a variety of functions and situations. The terminology covers organizational functions (i.e. role titles), resource descriptions (Staging Area) and incident facilities (Incident Command Post).
- **Communication and Information Management; Integrated Communications** – Section 4.0 Communications Plans of this manual contains Canadian Natural's integrated communications protocols that will ensure common situation awareness and interaction by stakeholders affected by the emergency. A critical tool of Canadian Natural's communications plan is the Emergency Notification Details wall chart that is available at facilities that may be assigned as an ICP. This chart gives the Incident Commander and other personnel in the ICP a clear and concise guide for the notifications and communications required during the course of the emergency.
- **Comprehensive Resource Management** – Canadian Natural maintains an accurate and up-to-date record of resource utilization during an emergency with the use of several tools including but not limited to the Security Check In / Out form, Incident Command System Flowchart, the Emergency Notification Details wall chart, Staging Area Log and Demobilization Log.
- **Predesignated Facilities** – Typically these facilities include but are not limited to Incident Command Posts and Staging Areas. Canadian Natural may utilize the facilities as outlined in the next section.

1.4.3 EMERGENCY MANAGEMENT CENTRES AND OTHER AREAS

Upon activation of the ERP, Canadian Natural may establish the following Emergency Management Centres / other areas, the locations of which are specific to each incident with the exception of the EOC:

- **On-Scene Command Post (OCP):** The OCP is an Emergency Operations Centre to be located at or near the incident where the On-Scene Supervisor will manage the site emergency activities.
- **Incident Command Post (ICP):** The ICP is an Operations Centre typically established at Canadian Natural's closest district or field office to provide a strategically located support centre to the OCP for managing activities at the incident site. The ICP provides a centre for logistical, technical and supervisory support for on-scene personnel. The ICP may also be used for the dissemination of information to the public, Media, government and other stakeholders in the area during the initial hours of the incident. If a response to an incident becomes prolonged, it may be used for regular dissemination of information to government agencies with regard to logistics and incident status.

  In situations where supervisory and technical specialists are located in Calgary, typically for drilling, completions or servicing emergencies, the ICP may be established in the Calgary office.
- **Regional Support Centre (RSC):** If the ICP is to be located in the Calgary office, a RSC may be established at the closest Canadian Natural district or field office to support logistics, communications and public protection activities. It may be used for regular dissemination of information to local government agencies in regard to response management activities and incident status**.**
- **Emergency Operations Centre (EOC):** An Emergency Operations Centre is a control centre established at Canadian Natural's corporate office in Calgary by the Operations Manager / Corporate Support Team, primarily for Level 2 or 3 Emergencies. The EOC provides centralized managerial support and direction to ICP personnel.
- **Reception Centre:** Canadian Natural will establish a Reception Centre in the event that evacuation of the public is required. A representative will be present at the centre to receive residents, record appropriate contact information, liaise with the Logistics Section Chief to organize supplies and / or services and address any concerns that arise. The representative will also assist with temporary accommodation arrangements for evacuees if necessary.
- **Communications Centre:** Canadian Natural may establish a local Communications Centre dependent upon the severity and / or longevity of the incident. Corporate representatives and spokespeople will be present at the centre to provide Media statements / releases, situation updates and to answer questions from stakeholders.
- **Staging Area:** A suitable location (access, size, proximity) set up near an incident where resources can await a tactical assignment and be properly demobilized after task completion. It can also serve as the check-in / check-out point. A Staging Area Manager coordinates and manages the Staging Area.
- **Muster Area:** A safe location set up at an incident where on-site personnel can meet for a head count and be assigned responsibilities.

GOVERNMENT EMERGENCY OPERATIONS CENTRES (GEOC):

Several GEOCs may be established to manage the larger aspects of an emergency. In a high-impact emergency, there may be a number of Government EOCs established to support the response. These may include local field centre Incident Command Posts, Regional EOCs (REOC), Municipal EOCs (MEOC) and / or provincial government EOCs (POC).

- **Municipal Emergency Operations Centre (MEOC):** A Centre where municipal officials manage and support emergency operations within their jurisdiction.

- **Provincial Operations Centre (POC):** A Centre that serves as a central point for the collection, evaluation and dissemination of information concerning a single incident or multiple incidents on a provincial level. The POC is responsible for coordinating the initial response and maintaining support for a response to a natural or human-induced disaster. Also known as Provincial Emergency Operations Centre (PEOC) or Provincial Regional Emergency Operations Centre (PREOC).
- **Regional Emergency Operations Centre (REOC):** A Centre that may be established in a suitable location to manage the larger aspects of the emergency. It may be manned jointly by government and industry staff.

1.5 PROGRAM INTEGRATION

Emergency Management at Canadian Natural is integrated with other programs to effectively prevent and mitigate a release of a substance from our assets. An interconnected collaboration with other corporate management initiatives such as the Safety Management System (SMS), Asset Integrity, security and environmental protection programs, ensures that the company is properly prepared for the safe and coordinated response to potential incidents.

Within the scope of these programs exists a myriad of other contingency plans and critical response information that Canadian Natural personnel may utilize during an emergency. This information may be included in either the Corporate ERP or Site-Specific ERPs, on Canadian Natural's internal information website or may exist as separate manuals, documents or training tools and may be used in conjunction with this ERP.

References to these documents are included in Site-Specific ERPs as applicable. References may also be located in the Hazard Assessment tables of each procedure in the Hazard Response Procedures section. These plans or documents may include and are not limited to:

- Safety Management System (SMS) core practices, procedures, guidelines
- Safety Data Sheets (SDS)
- Western Canadian Spill Services (WCSS) Oil Spill Contingency manuals
- Environmental Emergency (E2) plans
- Provincial spill / release reporting requirements
- Spill Response Vendor List
- Spill Volume Estimating Tool
- Wildlife Handling and Care procedures
- Site-Specific Fire Preparedness and Prevention Plans
- Industrial Wildfire Control Plans (IWCP)
- First Responders' Guide
- Hazard assessment, identification and risk management procedures
- Traffic isolation procedure
- Communications procedure
- Ignition procedures
- Air Strip Emergency Response Plan
- Notice to Airmen (NOTAM)
- Site-Specific Drilling / Completions ERPs
- Pipeline Operations & Maintenance Integrity Manual
- Pipeline Integrity Management System, Pressure Equipment Integrity Management System and Tank Integrity Management System
- Security Management System

These plans and documents, excluding external articles such as spill / release reporting requirements, NOTAM, etc., are subject to Canadian Natural's commitment to continuous improvement and therefore reviewed periodically by the responsible corporate unit.

1.6 PROGRAM EVALUATION & CONTINUOUS IMPROVEMENT

Canadian Natural is committed to the periodical evaluation and continuous improvement of all company programs and performance, including the Emergency Management Program. Processes in place to achieve this include:

- Performance measurement by Management using performance objectives and target status reports
- Internal and external auditing
- Feedback gathering from stakeholders, exercises and / or real event debriefings

Any deficiencies, gaps and limitations identified during these processes will determine corrective actions, including but not limited to the revision or update of company emergency response plans.

1.7 HAZARD IDENTIFICATION & CONSEQUENCE ANALYSIS

Canadian Natural maintains a Corporate Risk Matrix that incorporates potential consequences and occurrence likelihood to determine risk levels. This matrix is utilized by all facets of the company to analyze and manage a broad range of risks inherent to the industry.

From an emergency management perspective, hazard identification and consequence analysis is achieved by the use of the *Hazard Identification & Response Process* as well as individual *All Hazards Identification Tables* incorporated into site specific emergency response plans. These tables are completed with feedback from Canadian Natural's operations.

Canadian Natural's Emergency Management Team maintains a comprehensive inventory of identified hazardous areas based on regulatory requirements and best practices. This inventory is subject to continuous improvement on a consistent basis.

Emergency Planning Zones (EPZ) are predetermined areas surrounding company assets that require specific emergency response planning. EPZs are calculated using applicable federal and / or provincial regulations and serve to identify the hazards and potential consequences within the zones. They are included in Site Specific Emergency Response Plans (ERPs) when required by applicable regulations.

1.8 CORPORATE STATEMENTS

The Emergency Management Program is guided by and is under the umbrella of the following Canadian Natural corporate policies:

- Corporate Statement on Health and Safety
- Corporate Statement on Environmental Management
- Corporate Statement on Asset Integrity Management
- Corporate Mission Statement

Copies of these statements follow.

Corporate Statement on Health & Safety

Canadian Natural Resources Limited (Canadian Natural) is committed to conducting its operations in a manner that will protect the health, safety and welfare of their employees, contractors and the public. By integrating health and safety into all aspects of Canadian Natural operations with the goal of “No Harm to People – No Safety Incidents” in the workplace, Canadian Natural will:

- Provide the right resources to execute the requirements of the Safety Management System in line with our Health and Safety Statement;
- Comply with government regulations, industry guidelines, best management practices and company policies and procedures in the planning, design and operation of Canadian Natural wells, facilities and equipment;
- Provide strong leadership to the identification, assessment and management of health and safety risks at all levels of the organization and promote a participative culture;
- Proactively identify significant changes affecting health and safety systems, respond appropriately to issues and concerns and provide a mechanism for feedback;
- Provide appropriate training and equipment to Canadian Natural employees, enhancing their ability to recognize hazards and minimize risk during company operations;
- Require contractors working for Canadian Natural to be adequately supervised, trained and competent in the duties they perform;
- Ensure employees are not subject to, or participate in, harassment or violence;
- Ensure that effective emergency response measures are in place and provide prompt and effective response to any emergency situation; and
- Investigate health and safety incidents and near misses effectively to prevent recurrence, and ensure lessons learned, including those from the experiences of others, are effectively communicated and implemented across all parts of the organization.

Managers and supervisors are responsible for identifying safety needs, communicating safety hazards, investigating hazardous conditions and accidents, providing training, and ensuring equipment is properly maintained. They are responsible to respond to safety concerns raised by employees, contractors and the public.

Employees share the responsibility to work in a manner that will safeguard themselves with equal concern for co-workers, contractors and the public. They are responsible to identify and mitigate hazards, refuse and report work that is unsafe.

Canadian Natural’s Management is committed to achieving Safety Excellence through continuous improvement. Annual safety performance objectives and targets are tracked and corporate status reports will be presented regularly to the Management and Board of Directors.

REDACTED - CER Order AO-001-MO-006-2016 s. 1.a.i. - personal information

Reviewed annually by June 16th

Corporate Statement on Environmental Management

Environmental stewardship is a fundamental value of Canadian Natural Resources Limited (Canadian Natural). The Company recognizes that every employee and contractor has a vital role to play in identifying, minimizing and mitigating environmental impacts from our operations to improve environmental performance. Canadian Natural's commitment to responsible environmental management will be incorporated into business activities through the following guiding principles:

- Ensure all employees and others engaged on Canadian Natural's behalf are aware of the commitment to improve environmental performance of Canadian Natural's operations;
- Provide strong leadership and promote a participative culture to proactively identify, assess and manage environmental risks and associated impacts;
- Strive to reduce the impacts of our activities through adaptive management while considering social and economic factors;
- Reduce the environmental footprint of our activities by continually improving energy efficiency, managing greenhouse gases, air emissions, water use and other resources; reduce and recycle waste materials and preserve and restore natural biodiversity through closure planning and reclamation;
- Identify significant changes affecting environmental management systems, listen to and respond appropriately to stakeholder issues and concerns and provide a mechanism for feedback;
- Ensure that effective emergency response measures are in place and provide prompt, effective and efficient response to any emergency situation;
- Investigate environmental incidents effectively to prevent recurrence, and communicate and implement lessons learned across all parts of the organization, including those from the experiences of others;
- Engage and communicate with the public regarding Canadian Natural activities;
- Manage tailings and mine waste structures, including water retention structures, safely and responsibly from design to closure; and
- Ensure that Canadian Natural operations comply with government regulations, industry guidelines and company policies and procedures concerning environmental management.

Canadian Natural's Management is responsible for developing specific operational procedures and standards that are consistent with this policy and are accountable for the maintenance, regular review and interpretation of this policy. Canadian Natural expects its suppliers, partners and business associates to have compatible environmental procedures and values.

Canadian Natural's Management is committed to achieving continual improvement in environmental performance through annual environmental objectives, targets, monitoring and measurement. Performance is reviewed and corporate status reports are presented regularly to Management and the Board of Directors.

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Reviewed annually by June 16th

Corporate Statement on Asset Integrity

Canadian Natural Resources Limited (Canadian Natural) is committed to high levels of asset integrity to ensure safe, reliable, efficient and effective operations. We conduct our operations in a manner that will evaluate and mitigate impacts to the integrity of our assets.

Canadian Natural's commitment to asset integrity management will be incorporated into business activities through the following guiding principles:

- Comply with all relevant legislation and regulatory requirements relating to asset integrity, and where laws and regulations are absent, apply all appropriate Company standards;
- Ensure risk-based technical evaluations are completed and that appropriate procedures for mitigation are in place where potential impacts to asset integrity are identified;
- Provide strong leadership to the identification, assessment and management of asset integrity risks at all levels of the organization and promote a participative culture;
- Ensure there is a program in place to monitor, audit and review our performance and seek continuous improvement by having clear objectives and targets;
- Proactively identify significant changes affecting asset integrity systems, respond appropriately to issues and concerns and provide a mechanism for feedback;
- Provide ongoing training and development opportunities for employees and contractors where their work can impact asset integrity management programs;
- Ensure that effective emergency response measures are in place and provide prompt and effective response to any emergency situation;
- Ensure individuals performing critical tasks that impact asset integrity are competent to do so and that procedures are developed and followed;
- Ensure continuous improvement by effectively investigating incidents so that appropriate action can be taken to prevent them from recurring. Ensure that any learnings, including those from the experiences of others, are effectively communicated to all parts of the organization; and
- Ensure that our Asset Integrity Management System, including this policy, is maintained, followed and remains effective through regular review.

Canadian Natural's Management is committed to achieving continual improvement in asset integrity performance through annual objectives and targets. Performance is tracked and corporate status reports will be presented regularly to Management and the Board of Directors.

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Reviewed annually by June 16th

Canadian Natural

Corporate Mission Statement

"To develop people to work together to create value for the Company's shareholders by doing it right with fun and integrity."

2 EMERGENCY RESPONSE ACTIONS

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2.1 INCIDENT DETECTION

Early detection can be crucial in minimizing the severity of an incident. Canadian Natural has a number of systems that can provide incident detection and / or reduce impacts of emergency situations including but not limited to:

- **Emergency Shut Down** – Emergency Shut Down (ESD) valves isolate facilities or sections of pipeline to minimize releases. Inlet and sales ESD valves isolate the facilities from the field. In an emergency situation, plant ESD valves depressure the facilities. Some producing wells are equipped with ESD valves that can be actuated by pressure and low flow, causing wells to shut in. ESD activation includes on-site and remote alarm activation.
- **Flare Systems** – Some facilities have flare systems that can incinerate toxic gases in an emergency situation.
- **24-Hour Emergency Phone Number** – A 24-hour emergency number is posted at all facilities and pipeline crossings. Any operator, landowner or citizen can call to notify Canadian Natural of an emergency situation. On-call Canadian Natural personnel will take appropriate actions to manage the emergency.
- **Supervisory Control and Data Acquisition (SCADA) System** – Electronic monitoring equipment on wells throughout the gathering system will transmit signals to a central control panel. SCADA systems trigger alarm and call-out systems.
- **Alarm and Call-Out** – Monitoring equipment throughout facilities will trigger an alarm to an answering service that will use a call-out system to notify operators.
- **Aerial Surveillance** – Pipelines may be surveyed on a regular basis to detect leaks.
- **Landowner Complaints** – Landowners with concerns, or who have identified potential problems, can call the facility directly or the 24-hour emergency number.
- **Operator Inspections** – Operators regularly inspect pipelines, wells and facilities and will report any abnormality they detect.
- **24-Hour Manned Stations** – Some Canadian Natural facilities are monitored 24-hours a day.
- **Gas Detection Equipment** – Continuous H_2S monitoring equipment is strategically located at all sour facilities. Monitors are calibrated at regular intervals and are designed to activate a call-out to operational personnel if H_2S levels are detected at the facility. If H_2S levels reach a predetermined level, the system is designed to activate the Emergency Shut Down (ESD) and shut down the facility.

  Continuous combustible gas (Lower Explosive Limit - LEL) detectors are located strategically throughout oil and gas facilities. Monitors are calibrated at regular intervals and are also tied into a call-out. They will activate an ESD and shut down the facility.

  Canadian Natural personnel are equipped with personal H_2S / LEL monitors for early detection.
- **Fire Detection Equipment** – An ultraviolet fire detection system, “Fire Eyes,” may be installed throughout facilities.
- **Leak Detection System** - Continuous monitoring systems can be installed on pipeline systems, including but not limited to water injection, oil emulsion and ESD risers. These systems can be based on different methodologies such as pipeline or differential pressure, pressure rate of change (ROC), flow rate imbalance, ROW monitoring, etc.

2.2 SAFETY EQUIPMENT AND RESOURCES

2.2.1 PERSONNEL AND FACILITY

All Canadian Natural field personnel are required to carry and maintain the following safety equipment and resources:

- communication devices (two way radios, cell phones, etc.)
- flashlight
- personal protective equipment
- personal monitor (i.e. H2S, LEL)
- Canadian Natural's visor kit (Emergency Response Guide, Emergency Time Action Logs, etc.)
- first aid kit
- tow straps
- fire extinguisher (minimum 80-B:C rated for those attending unstaffed, remote facilities)
- fire fighting equipment as set forth by provincial guidelines (e.g. shovels, axes, etc.)
- Hazard Assessment and Work Site Observation (WSO) forms

Additional equipment including radio systems or SCBA may also be required depending on the operational location while GPS systems are mandatory for operational vehicles. Roadblock and ignition kits, larger firefighting equipment, SABA, first aid stations / rooms and burn kits may be available at main facilities.

Emergency response equipment may also be available through mutual aid understandings.

Specific equipment information is available in Site-Specific ERPs where available.

2.2.2 SPILL RESPONSE RESOURCES

Comprehensive internal spill response trailers have been strategically placed at key locations to replace and / or supplement WCSS equipment caches.

Company and / or WCSS equipment and spill contingency plans will guide initial emergency response actions while long term spill containment and recovery activities will be performed by established spill response consultants / providers contracted and directed by Canadian Natural.

For spill response, consult with area Environmental Field Coordinator and refer to applicable WCSS Spill Contingency manual. A detailed list of trailer locations and contents as well as a list of spill response consultants / providers can be found on CiNQ:

Environmental Conventional-Thermal page:
Spill Response Vendor List and *Internal Incident Response Resources*.

A list of spill response providers is also found in Contract Services section of Site Specific ERPs.

Smaller caches of absorbent materials are maintained at facilities while operations personnel generally ensure absorbents are at hand in their vehicles.

For full spill response procedures, guidelines and methods, see applicable WCSS Spill Contingency manual (recommended) or Procedure 5: Hazardous Product Release / Spill Control (SMS 22.05) on CiNQ or in purple tabbed Hazard Response Procedures section in this manual.

2.2.3 WILDLIFE RESPONSE EQUIPMENT

Portable wildlife response kits are available via Environmental Field Coordinators and / or at district offices.

2.2.4 WILDFIRE PREPAREDNESS PLANNING & EQUIPMENT REQUIREMENTS

Provincial legislation requires the development of preparedness planning for oil and gas operations working in or around crownland and provincial forests during the wildfire season. This season is a defined period of time specific to each province. Additional information is available on respective provincial wildfire websites, including but not limited to wildfire maps and current wildfire conditions / activity.

2.2.4.1 Alberta

Wildfire preparedness planning includes annually updating the provincial Industrial Wildfire Control Plans (IWCP) database with emergency information for manned Canadian Natural facilities located within one kilometer of crownland or provincial forests. In addition to the IWCP information, general firefighting equipment requirements [2] for Canadian Natural are:

- A person travelling by means of a vehicle through a forest protection area during the fire season should carry a serviceable shovel, an axe and a receptacle of at least 5 litres liquid capacity.
- A person carrying on or being in charge of a timber, forest, mining, drilling or other industrial or commercial operation in or within 1 kilometre of any public land shall keep at the site available for immediate use an adequate water supply for firefighting purposes plus at least the equipment listed in Table “A” in good working condition, according to the number of men employed at the site.
- Where heavy equipment such as bulldozers or water tankers are immediately available for firefighting use at the site of operations, the Minister may, in his discretion, permit the operator to have less than the minimum equipment provided for by Table “A”.

Within the wildfire season, minimum equipment requirements for facilities in locations as described above are based on the number of employees on site, as outlined in the table below however, these requirements may be exceeded by field operations.

Table A: Minimum Firefighting Equipment Requirements (AB)

Required Equipment for Fire Control	Persons employed at site of operations									
	1	2	3	4	5	6-10	11-20	21-30	31-40	41+
Shovels	1	1	2	2	3	5	10	15	20	As provided in accordance with section 11 (3) of the Regulation
Backpack with pump	1	1	1	2	3	5	10	15	20	
Axe or pulaski	1	1	1	1	2	5	10	15	20	
Fire pump	0	0	0	0	0	0	0	1	1	
Fire hose (metres)	0	0	0	0	0	0	0	450	450	
Power saw	0	0	0	0	0	0	0	1	1	

[2] *Forest and Prairie Protection (MInisterial) Regulation 65_2017*

2.2.4.2 British Columbia

Provincial wildfire equipment requirements are defined by high risk activity identified by the *BC Wildfire Regulation*. Most oil and gas activities are generally not considered high risk therefore the minimum expected wildfire fighting equipment requirements[1] for Canadian Natural facilities are outlined below. Note these requirements may be exceeded by field operations.

> *If there is a risk of a fire starting or spreading on an area that is (a) forest land or grass land, or (b) within 300 m of forest land or grass land, a person who carries out an industrial activity at a site in that area must ensure that firefighting hand tools are available at that site in a combination and type to properly equip each person who works at the site with a minimum of one firefighting hand tool (shovels, axes, pulaskis, hand tank pumps and fire extinguishers).*

High Risk Activities

To determine if your area carries out high risk activities and the applicable restrictions on these activities as defined by regulation, see the link below:

https://www2.gov.bc.ca/gov/content/safety/wildfire-status/prevention/for-industry-commercial-operators/high-risk-activities

[1] *Adapted from BC Wildfire Regulation June 2020*

2.2.4.3 Manitoba

Currently, there are no firefighting equipment requirements for the province of Manitoba. Canadian Natural ensures standard personnel firefighting equipment is established as necessary.

2.2.4.4 Saskatchewan

The following table outlines the minimum firefighting equipment **recommendations**[3] for industrial and commercial operations however, these requirements may be exceeded by field operations.

Minimum Firefighting Equipment Requirements (SK)

Crew Size	Portable Water Containers	Fire Shovels	Axe or Pulaskis	Chainsaw	Fire Pumps*
1 – 5	2	2	1		
6 – 10	4	4	2		
11 – 20	6	10	4	1	1
21 – 30	8	14	5	1	1
31 – 40	12	18	7	1	1
41 +	Sufficient equipment in a combination and type to properly equip each person with a minimum of one fire-fighting tool			1	1

* Where a pump is required, this shall include having an adequate water source capable of supplying a minimum of 500 gallons to any location of the work site. The camp should have enough hose to cover the whole work site (from water source to the far edge of camp) or have a mobile 500-gallon water tank with enough hose to cover your site.

[3] Gov't of Saskatchewan *86721-Wildfire Prevention and Prepardness for Industrial and Commercial Operations*

2.3 INCIDENT SECURITY

Incident security is required at all stages of emergency response for various purposes. Canadian Natural will address site, Command Posts and residential security through the actions of several personnel working together in their designated emergency response roles. These actions are summarized as follows:

- Alert all personnel in the immediate vicinity of the incident
- Account for all persons and dispatch non-essential personnel from the incident site
- Ensure that the incident scene remains undisturbed except to recover injured persons or to protect the public, environment or property
- Designate personnel to restrict access (roadblock) to the incident site and use additional security if required (i.e. fencing, security guards, lights, security cameras, etc.)
- Establish Security Check In / Out forms at the ICP and OCP
- Establish a Staging Area with Staging Area Manager
- Establish roadblocks to protect the public and provide security for evacuated residences. Assistance and / or resources from local authorities may be required.
- Work with local authorities to provide security for public properties in the event of a mandatory evacuation ordered by a declaration of a local state of emergency and
- Maintain roadblock security at the Stand Down stage until evacuees upon their return or local authorities indicate they can be removed.

2.4 INITIAL ACTIONS

2.4.1 RECEIVING PUBLIC COMPLAINTS

Public complaints are to be recorded on *Form 8: Public Complaint Form* for documentation purposes; the electronic fillable version can be found on CiNQ – Canadian Natural Emergency Response Planning – Canadian Natural Emergency Response Forms page.

Canadian Natural can be notified of a potential emergency situation through various methods, including public complaints. Public near company sites are encouraged to call the 24-hour emergency number 1-888-878-3700 if they encounter out-of-the-ordinary conditions. These conditions may include but are not limited to operational impacts (i.e. noise, flaring, spills), odours (i.e. H_2S, SO_2), physical impacts (lease management, property damage, public hazards), or health issues.

While all public complaints are taken seriously and will be addressed accordingly, odour complaints are investigated and acted on immediately.

2.4.2 INTERNAL NOTIFICATIONS AND COMMUNICATIONS

The following chart identifies:

- different sources of emergency notifications
- initial actions
- internal notifications and communications

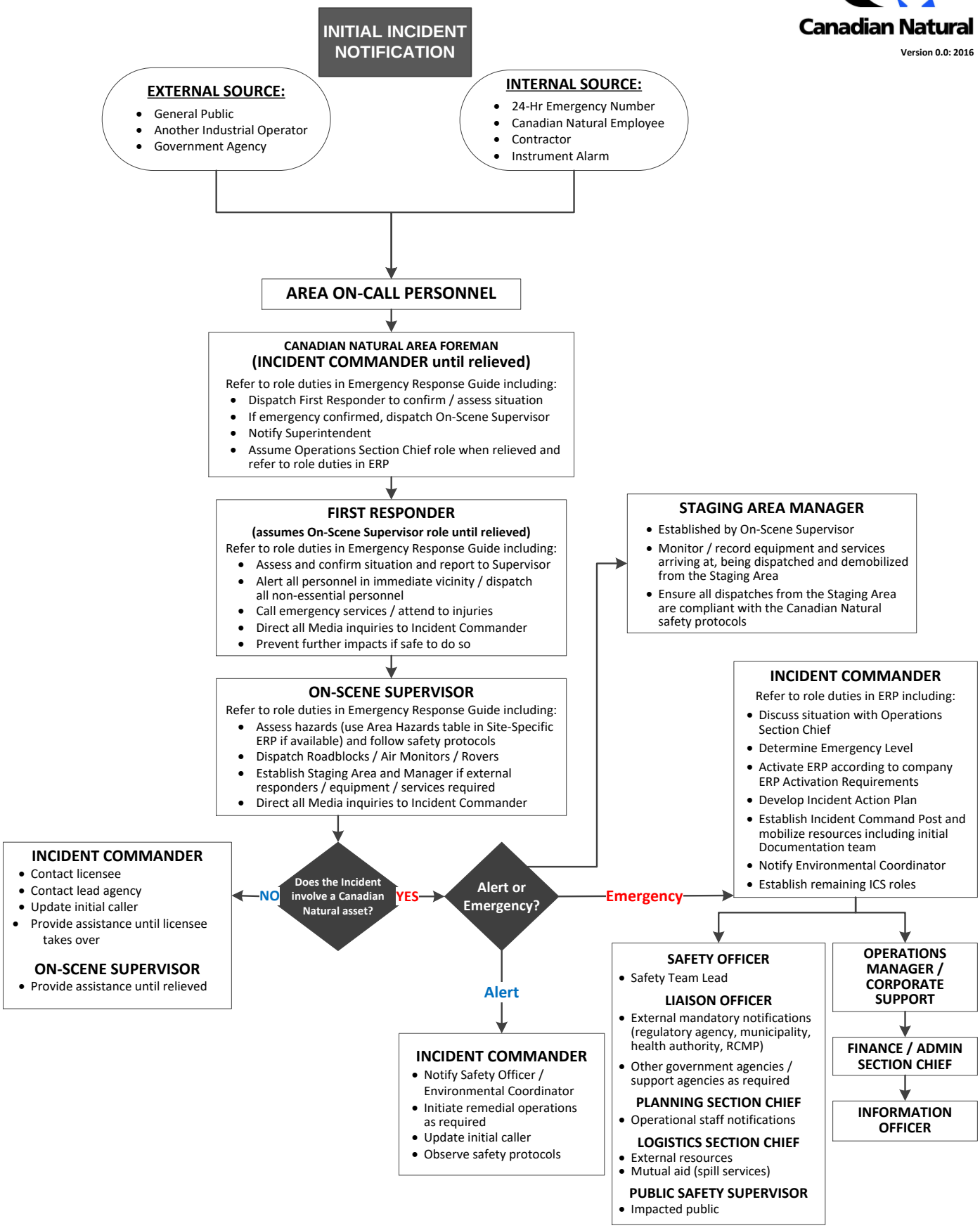
Determining and establishing communications between Command Posts and personnel in the field will depend upon the remoteness and in some instances, the nature of the incident. Site-Specific ERPs contain information about additional local communications resources that may be available. Communication equipment may include:

- landlines, cellular phones, satellite phones
- radios,
- faxes

2.4.3 INTERNAL NOTIFICATIONS FLOWCHART

Canadian Natural

Version 0.0: 2016



2.5 RESPONSE ACTIONS

2.5.1 10 STEPS FOR EMERGENCY RESPONSE

Canadian Natural uses an internally developed response process known as the 10 Steps for Emergency Response to provide general direction for all emergencies regardless of nature, size or complexity. The 10 Steps ensure all critical response actions are considered and implemented if required, from Initial Contact to Stand Down. While a detailed summary of the 10 Steps has not been included in this manual, it is an important component of Canadian Natural's emergency response training tools as it describes key mechanisms of each step and indicates which roles are involved in each step.

This process can also be found on the Canadian Natural Incident Command System Flowchart as well as in the Emergency Response Guide booklet.

CANADIAN NATURAL'S "10 STEPS" FOR EMERGENCY RESPONSE

1. Initial Contact Regarding Problem
2. Assess the Situation
3. Classify the Emergency Level
4. Activate the Emergency Response Plan
5. Define the Emergency Planning Zone
6. Decide on Public Protection Measures
7. Make External (Government) Notifications
8. Activate Personnel & Equipment
9. Respond & Control the Emergency
10. Stand Down

Although the 10 Steps are listed in the most logical sequence, Canadian Natural personnel are trained to determine the priority actions relevant to each step. The sequence / priorities will continually be re-evaluated during the course of the incident.

In addition to the 10 Steps, all personnel must follow Canadian Natural's *Guideline 1: ERP Activation Requirements* located in the Forms and Guidelines section.

2.5.2 EMERGENCY CLASSIFICATIONS / LEVELS / POSSIBLE RESPONSES

Emergency level classification is a critical step in emergency response and is required by all regulatory authorities. Canadian Natural utilizes classification matrixes developed by provincial regulatory agencies. All incidents are classified as either an Alert or an Emergency Level (Level 1, 2 or 3). Incidents that can be handled on-site through normal operating procedures are typically defined as Alerts, while those with a more complex resolution are usually defined as emergencies with associated Levels.

Each matrix considers the risk, control, containment and impact to public safety and the environment to determine Emergency Levels. Neither Saskatchewan nor Manitoba currently have a classification matrix, therefore the Alberta Energy Regulator's matrix will be applied to incidents occurring at Canadian Natural operations in these provinces.

Regulatory notification by Canadian Natural responders will be conducted as follows:

- Locate the applicable Level Classification table based on regulatory authority in the Forms and Guidelines section:
  - Alberta / Saskatchewan / Manitoba – see **Guideline 3**
  - British Columbia – see **Guideline 5**

…/continued

- Emergency levels will be declared based on the criteria found in the applicable table
- The Incident Commander, in consultation with the Operations Section Chief and the On-Scene Supervisor, is responsible for determining the level of emergency
- The Incident Commander must ensure consultations have taken place with the provincial regulatory authority and / or federal authority to discuss the emergency prior to declaring the level
- When a situation improves, a decision will be made by the Incident Commander, in consultation with the provincial and / or federal regulatory authority to downgrade the level of the emergency
- The Incident Commander will ensure the level change is communicated to all responders and stakeholders
- The Incident Commander will call a Stand Down in consultation with provincial / federal regulatory authorities when the situation has been resolved and no further safety considerations exist. Downgrading and Stand Down guidelines and Post-Incident Actions will be observed (see Sections 2.6 and 2.7 respectively).

Following each matrix is a table indicating possible response actions based on level classification. These matrixes and associated response action tables can be found in the Forms and Guidelines section.

2.6 DOWNGRADING AND STAND DOWN

2.6.1 DOWNGRADING THE LEVEL OF EMERGENCY

When a situation improves:

- a decision will be made by the Incident Commander, in consultation with the provincial or federal authority to reduce or call down the level of emergency
- the Incident Commander will ensure the level change is communicated to all company responders, key local stakeholders and affected public.

2.6.2 STAND DOWN GUIDELINES

When the emergency has been resolved and Stand Down status has been sanctioned by the regulatory or federal agency, Canadian Natural will ensure that:

- all evacuated areas are safe to re-enter; Air Monitors / Rovers will monitor for gas
- roadblock security is maintained until evacuees return or local authorities indicate they can be removed
- all Canadian Natural personnel in response roles and on-site personnel are notified of Stand Down
- all previously impacted key stakeholders including first responders, local authorities, other government agencies are notified of Stand Down
- impacted public members are notified of Stand Down and may be provided with an updated status; via an automated notification system, Telephone Callers, Rovers and / or Reception Centre Representative
- other impacted public stakeholders are notified where applicable, including Indigenous communities, landowners, industrial operators, etc. Impacted public members will be provided with transportation for return if required
- expense claims are collected and submitted to the Finance / Admin Section Chief for timely processing
- company contact information is provided for additional questions or concerns
- times of all Stand Down notifications are captured on *Form 21: Public Notification Log* initially utilized during the incident

2.7 POST-INCIDENT ACTIONS

Following Stand Down, the Incident Commander and Operations Manager will be responsible for internal communications between the ICP and EOC while the Liaison Officer will contact government agencies.

2.7.1 PUBLIC COMMUNICATIONS

After Stand Down procedures have been followed for evacuated and / or sheltered public, post-incident communications or meetings may be required to resolve incident and / or resettlement questions or concerns. Critical Incident Stress Debriefings (CISD) may be organized where required. The Incident Commander and Public Safety Supervisor will ensure all required follow-up communications are scheduled in a timely fashion.

Depending on the severity of the incident, a Media Statement or Release may be prepared and delivered by corporate communication staff as per corporate Media protocols.

2.7.2 DEBRIEFING

All incident response personnel and other members of the Corporate Support Team as applicable (i.e. Stakeholder Relations, Safety, Environment / Regulatory, Human Resources, Legal, etc.) must attend post-incident debriefings to:

- Review outcomes
- Review lessons learned
- Develop action plans resulting from the debriefing that captures follow-up actions, deadlines and who the responsible person(s) is for each action
- Review the accuracy and effectiveness of the ERPs
- Review the need for CISD with Human Resources for response personnel and affected public

Debriefings may be held in the field or at Corporate Headquarters. All debriefings must be documented on *Form 24: Debriefing Report* and submitted to the Safety Officer.

2.7.3 DOCUMENTATION COLLECTION

The Safety Officer will collect Time / Action Logs, completed forms and any other relevant documentation in the field. The Documentation Lead will be responsible for collecting documentation at the Incident Command Post and / or Emergency Operations Centre for forwarding to the Safety Officer.

All incident documentation may be used for corporate post-incident investigations, assessments and reports as outlined in the Incident Investigation & Reporting section. Reports will be submitted to the applicable regulatory agency when required.

Refer to Section 7.2 Incident Documentation for company document retention and disposition policies.

2.7.4 RETURN TO WORK

- Ensure SMS procedures are followed as necessary, including but not limited to TC-OVR-PRO-SAF-000266 Procedure 21.18 Facility / Wellsite Pre-Start Inspection, Commission and Startup
- Ensure all affected personnel are fit to resume regular duties
- Ensure all evacuated areas are safe to re-enter
- Ensure all buildings are ventilated and monitored for gas pockets before re-entry, if applicable
- Ensure any used equipment and resources are replaced and / or in good working order

…/continued

2.7.5 INCIDENT INVESTIGATION & REPORTING

- All incidents will be investigated and a report of findings will be prepared by Canadian Natural's Safety Team using all relevant incident documentation and following SMS protocols. Other corporate teams will assist in preparing the report as required.
- Formal reports will be provided to applicable government agencies and in accordance with each agency's jurisdictional requirements
- Learnings such as preventative measures, procedures and / or policy changes will be shared throughout the company as required.
- Significant learnings may be shared with industry

3.0 PUBLIC PROTECTION MEASURES

3.0 PUBLIC PROTECTION MEASURES

Canadian Natural will initiate public protection measures in the EPZ for any incident involving a release of sour gas or HVP product if there is potential for the release to impact members of the public. This could also include SO_2 if sour gas is ignited. The type of public protection measure used will depend on the severity of the incident and / or on the monitored results in unevacuated areas.

Public protection measures for hazardous product spills are located in *Procedure 5: Hazardous Product Release / Spill Control* in the Hazard Response Procedures section.

Any or all of the following public protection measures may be implemented:

- roadblocks
- evacuation
- shelter-in-place
- air monitoring
- ignition

3.1 EMERGENCY PLANNING ZONE (EPZ)

An EPZ is a priority area surrounding a well, pipeline or facility where immediate response actions are required in the event of an emergency. An EPZ helps to identify those members of the public at risk in the event of an emergency.

During any emergency, it is important to identify an EPZ as it will show:

- where to set up roadblocks
- which residents to shelter-in-place or evacuate
- the safest evacuation route
- where to place air monitoring personnel

The general public within or immediately adjacent to the EPZ will be notified and advised to evacuate or shelter-in-place if a harmful release of H_2S or HVP product occurs, or if a dangerous situation develops that may affect their safety (i.e. SO_2 from the ignition of H_2S). Where applicable, rovers and aerial surveillance will be used to locate transient activity inside and / or outside the EPZ.

EPZs are determined using calculation methods set out by regulatory authorities and are reviewed on an annual basis. A combination of EPZs may encompass the entire facility and gathering system; however during an emergency, only the EPZ surrounding the incident site will be activated.

3.1.1 IDENTIFYING EMERGENCY PLANNING ZONES (EPZ)

During an emergency, the Incident Commander, in consultation with the Public Safety Supervisor, the Operations Section Chief and the On-Scene Supervisor will determine the appropriate EPZ based on the following:

- **Production operations** – the calculated EPZ radius located in the Site-Specific ERP will be used; if there is no calculated EPZ, 100 m will be used and adjusted according to monitored readings
- **LPG storage vessels (that meet or exceed CEPA threshold volumes)** – the assigned 1600 m EPZ radius from the E2 ERP will be used and adjusted according to monitored readings, unless Site Specific ERP indicates otherwise.
- **HVP product releases** – the calculated EPZ radius in the Site-Specific ERP will be used.

The EPZ may need to be adjusted based on the following considerations:

- current weather conditions
- topography, such as elevation changes
- any other factors that pose a risk

3.2 ISOLATION OF THE EPZ

3.2.1 EPZ ISOLATION CRITERIA

- The Incident Commander, in consultation with the On-Scene Supervisor and the Operations Section Chief, will determine the severity of the situation, and may adjust the size of the EPZ using emergency-specific information, including air monitoring data.
- Isolation of the EPZ is mandatory at a Level 2 Emergency. At an Alert or Level 1, access to the incident site should be controlled and the appropriate ERP should be activated, if applicable (refer to Canadian Natural's ERP Activation Requirements in the Forms and Guidelines section).

3.2.2 EPZ ISOLATION PROCEDURES

3.2.2.1 INCIDENT SITE

- The On-Scene Supervisor will initially designate the necessary personnel to secure all entrances into the incident site and only allow access to authorized personnel. All personnel who are allowed entry will be briefed on the existing conditions and must be equipped with the appropriate Personal Protective Equipment (PPE).

3.2.2.2 TEMPORARY EMERGENCY ROAD CLOSURES – ALBERTA

- Designated personnel will follow the Roadblock role checklist in the Emergency Response Guide or this manual to provide initial EPZ isolation.
- Determine roadblock locations and dispatch roadblock personnel as soon as possible. Ensure personnel safety at all times and suitability of roadblock locations.
- **For any road closure, including provincial highways, immediately contact RCMP to assist and / or coordinate**
- **The following agencies must also be notified of closures as soon as possible, by road type:**

ROAD TYPE	CONTACT	TELEPHONE	
Provincial highways (1, 2 or 3 digit numbers)	RCMP	24-Hour	9-1-1
Municipal roads	Municipality or city / town / village	As applicable	
Roads held under license (e.g. petroleum development roads, forestry roads)	Alberta Energy Regulator	24-Hour	1-800-222-6514
Roads through or adjacent to Crown Land	Alberta Environment and Parks	24-Hour	1-800-222-6514

- **Company Roadblock personnel are not legally authorized to fully block traffic -** only RCMP / local emergency services / public works can prevent access
  - vehicle occupants are to be informed of hazards ahead / advised not to proceed
  - vehicular and occupant information will be collected from those choosing to proceed and disseminated to all response personnel as needed to ensure public safety

- The Liaison Officer (or designate) will coordinate with RCMP / other jurisdictional agencies for the entirety of the road closure, including at Stand Down when removing roadblocks
- For longer term road closures, the SMS 6.88 Traffic Control procedure should be used to ensure safe and proper control measures.

3.2.2.3 TEMPORARY EMERGENCY ROAD CLOSURES – BRITISH COLUMBIA

- Designated personnel will follow the Roadblock role checklist in the Emergency Response Guide or this manual to provide initial EPZ isolation
- Immediately determine roadblock locations and dispatch roadblock personnel (no Closure Orders required for emergencies). Ensure personnel safety at all times and suitability of roadblock locations.
- **After dispatch, immediately notify the following by road type (RCMP always being first):**

ROAD TYPE	CONTACT (IN LIST ORDER)	
Provincial Highway / Roads *(highways with 1, 2, 3 digits or local names)*	**1. RCMP / Local Police** – advise of situation / request presence	For all contact numbers: see **Section 6.3.2 British Columbia, "Road Closures"**
	2. Traffic Management Centre BC **–** advise of situation / pending roadblocks	
	3. Highway Maintenance Contractor – advise of situation / roadblock locations	
Petroleum Development Roads Forestry Roads	**1. RCMP / local police** – advise of situation / roadblock locations; request presence	
	2. Notify of closures as needed: - **for PDRs,** notify OGC directly *(not via EMBC notification)* - **for forestry roads**, notify Ministry of FLNRORD Resource District office *(Forestry, Lands, Natural Resources Operations & Rural Development)*	

- **Company Roadblock personnel are not legally authorized to fully block traffic -** only RCMP / local emergency services can prevent access.
  - vehicle occupants are to be informed of hazards ahead / advised not to proceed
  - vehicular and occupant information will be collected from those choosing to proceed and disseminated to all response personnel as needed to ensure public safety
- The Liaison Officer (or designate) will coordinate with RCMP / other jurisdictional agencies for the entirety of the road closure, including at Stand Down when removing roadblocks
- For longer term road closures, the SMS 6.88 Traffic Control procedure should be used to ensure safe and proper control measures.

3.2.2.4 OTHER CLOSURES:

TEMPORARY CLOSURE OF / RESTRICT ACCESS TO	POSSIBLE ACTIONS REQUIRED	CONTACT:	
Airspace	Notice to Airmen (NOTAM)	- via provincial oil & gas regulator **OR** - NAV Canada	For all contact numbers, see **Section 6 Government Contacts** *(excluding local municipalities, rail companies and Canadian Natural)* • provincial contacts are listed first, then federal
Designated area	Fire Hazard (FH) Order	Provincial forestry authority	
Designated area	Local State of Emergency	Local municipality	
Navigable water courses	Closure Order Air monitoring*****	- Local municipality - RCMP / local police ***** Canadian Natural *(in coordination with local authorities / provincial Search & Rescue if required)*	
Pipeline Right-of-way	Isolation via aerial surveillance, traffic control / roadblocks, rovers	Canadian Natural	
Railways	Railway Closure	- Transport Canada - Rail Company	

3.3 PUBLIC PROTECTION MEASURES FOR H_2S RELEASES

Evacuation is the primary public protection measure during a release of sour gas if the public can be safely removed from the area. Evacuation begins with public nearest to the release site and downwind of the release so that the public is not exposed to H_2S. The remaining residents within the EPZ will be contacted and advised to shelter in place pending further instructions. A shift in wind direction requires immediate re-evaluation of the situation and additional evacuation and / or sheltering may be required. It may also require immediate ignition of the well if ignition criteria are met.

Canadian Natural will continuously assess and act on the need to expand the evacuation area based on the monitored levels of H_2S as outlined in the Evacuation Criteria & Procedures section of this manual, and as dictated by the specifics of the incident itself. In the absence of monitored readings, residents will be advised to shelter in place.

Note that Canadian Natural can only advise residents to evacuate; however the local authority or health authority has to declare a state of local emergency before mandatory evacuation can occur.

3.4 PUBLIC PROTECTION MEASURES FOR HVP PRODUCT RELEASES

Sheltering is the primary public protection measure for an HVP product release. Evacuation of the public should only proceed when it is safe to do so and after an assessment of:

- the size and expected duration of the release,
- egress routes,
- current and expected meteorological conditions, and
- the potential for unexpected ignition.

For HVP product releases, there are defined regions adjacent to and downwind of a release where plume concentrations may fall within the upper explosive limit and LEL and where the public may be directly exposed to the flame if the plume ignited. Inadvertent actions within this region may lead to ignition; thus sheltering is recommended until the position of the plume can be assessed and evacuation can take place safely.

Evacuation is recommended for incidents in which the HVP product plume is visible and egress can occur in any direction away from the plume.

3.5 AIR QUALITY MONITORING CRITERIA & PROCEDURES

3.5.1 MONITORING CRITERIA

Air quality monitoring is required to track and record the levels of H_2S, SO_2 and LEL during a hazardous gas release and following ignition of a release. Air quality monitoring is used to:

- determine roadblock locations
- track plumes
- determine whether evacuation and / or shelter-in-place criteria have been met, including beyond EPZ
- determine concentrations in areas being evacuated to ensure that evacuation is safe
- determine if ignition criteria are met
- assist in determining when the emergency can be downgraded

The type and number of air monitors required is determined by the Operations Section Chief and Public Safety Supervisor, in consultation with the Incident Commander, and will be dispatched by the Logistics Section Chief. Air monitoring requirements are based on Site-Specific information, including:

- access and egress points
- area topography
- population density and proximity to urban centres
- local conditions

Air monitoring readings for emergency situations will initially be taken and recorded by Canadian Natural response personnel; however mobile air monitoring units will be required as per Section 3.5.3 Dispatching Requirements for Mobile Air Quality Monitoring for on-going situations.

3.5.2 MONITORING GUIDELINES

- Initial air monitoring using personal monitoring equipment will take place within and beyond the EPZ. Readings will be recorded on *Form 12: Air Quality Monitoring Record.*
- A stationary air quality monitoring trailer may be necessary at the nearest urban centre for the duration of an emergency.
- All air monitoring readings will be reported to the On-Scene Supervisor.
- Monitoring of H_2S or SO_2 will occur downwind, with priority being directed to the nearest unevacuated residence or areas where people may be present.
- Monitoring of an HVP release will occur downwind or upwind, depending on how the plume is tracking, with priority being directed to the nearest unevacuated residence or areas where people may be present.
- Monitored H_2S, SO_2, HVP product and LEL readings will be made available on a regular basis throughout the duration of the emergency to the appropriate regulatory agency, applicable agencies (i.e. Environment, Agriculture, Forestry, etc.), local authorities, health authorities and at the request of the public.

3.5.3 DISPATCH REQUIREMENTS FOR MOBILE AIR QUALITY MONITORING

A mobile air quality monitoring unit is (AMU) that which can measure in parts per billion.

Mobile air quality monitoring units **must check in at the Staging Area** for orientation and deployment. Communications between unit technicians and On-Scene Supervisor will be via radio or cell phones.

The following Table 3.5.3 provides criteria and guidelines for deployment of mobile air quality monitoring for different release situations.

Table 3.5.3 Dispatch Requirements for Mobile Air Monitoring

EMERGENCY	URBAN CENTRE IN EPZ	LEVEL 1	LEVEL 2	LEVEL 3
Sour Well or **Special / Critical Sour Well**	**NO**	Mobilize to site, if: - well control measures are deteriorating and release is likely **or** - estimated response time is greater than estimated time for gas to surface [(1)] **or** - units are located a significant distance away Begin monitoring **downwind** of incident **at nearest unevacuated residence or public area** **OR** place on standby, if: - estimated response time is less than estimated time for gas to surface [(1)] **or** - units are in proximity	Mobilize immediately to site; commence monitoring **downwind** of incident **at nearest unevacuated residence or public area.** Mobilize additional units if multiple urban density developments / large urban centres are or may be impacted. *If a unit has not arrived on-site by time gas reaches surface, ignition criteria may be met.*	Mobilize immediately to site; commence air monitoring **downwind** of incident **at nearest unevacuated residence or public area.** Mobilize additional units if multiple urban density developments / large urban centres are or may be impacted. *If a unit has not arrived on-site by time gas reaches surface, ignition criteria may be met.*
Critical Sour Well	**YES** *applicable if portion of urban centre is in EPZ	**Minimum of two (2)** mobile air quality monitors required: one to monitor boundary of urban density development / urban centre, the other to track plume. - **Ensure** one unit **is in area** prior to drilling / completion / servicing / testing in potentially critically sour zones - **Ensure other unit mobilized** if well control measures deteriorating and release is likely - Prior to entering sour zone, determine where monitoring equipment is located and what travel time is to well site - Request additional monitoring unit(s) if required. - Refer to Site Specific drilling plan if applicable	Deploy unit(s) in area to boundary of urban density / centre downwind of well site; commence monitoring. Ensure mobilized monitoring units check in at Staging Area and deploy as required.	Deploy unit(s) in area to boundary of urban density / centre downwind of well site; commence monitoring. Ensure mobilized monitoring unit check in at Staging Area and deploy as required.
HVP Product Release	N/A	Mobilize to site, if units are located a significant distance from incident. Commence monitoring **downwind or upwind depending on plume is tracking** at nearest unevacuated residence or public areas **OR** place on standby if units are in proximity	Mobilize immediately to site; commence monitoring **downwind or upwind depending on plume is tracking** at nearest unevacuated residence or public areas Mobilize additional units if multiple urban density developments / large urban centres are or may be impacted	Mobilize immediately to site; commence monitoring **downwind or upwind depending on plume is tracking** at nearest unevacuated residence or public areas Mobilize additional units if multiple urban density developments / large urban centres are or may be impacted

[(1)] The estimated time for gas to surface should be based on the time to circulate bottoms up.

3.6 EVACUATION CRITERIA & PROCEDURES

Canadian Natural will advise residents to evacuate if the need arises; however the local authority or health authority has to declare a local state of emergency before mandatory evacuation can occur. When safe to do so, evacuation of the EPZ will take place before a release of sour gas or HVP product has the potential to affect people off-site or as soon as possible to avoid any exposure to the hazard. Canadian Natural will establish a Reception Centre if evacuation of the general public is required or for voluntary evacuations if members of the public have been notified of an incident and wish to leave.

Evacuation of members of the public within the EPZ is based on the following monitored levels of H_2S and / or SO_2. Canadian Natural will continuously assess and act on the need to expand the evacuation area, based on the specifics of the incident, including harmful levels of hazardous substances as per the following provincial evacuation guideline tables.

3.6.1 EVACUATION CRITERIA BY REGULATOR

EVACUATION REQUIREMENTS (ALBERTA / SASKATCHEWAN / MANITOBA) [1]

H_2S CONCENTRATIONS IN UNEVACUATED AREAS	REQUIREMENT
1 ppm - 10 ppm (3-minute average)	Individuals who requested notification so that they can voluntarily evacuate before any exposure to H_2S must be notified.
Above 10 ppm (3-minute average)*	Local conditions must be assessed and all persons must be advised to evacuate or shelter.

* If monitored levels over the 3-minute interval are declining (i.e. three readings show a decline from 15 ppm to 10 ppm to 8 ppm over 3 minutes), evacuation may not be necessary even though the average of the 3 minute interval would be 11 ppm. Licensees should use proper judgement in determining if evacuation is required.

SO_2 CONCENTRATIONS IN UNEVACUATED AREAS	REQUIREMENT
5 ppm (15-minute average) 1 ppm (3-hour average) 0.3 ppm (24-hour average)	Immediate evacuation of the area must take place.

[1] *Alberta Energy Regulator – Directive 71 (February, 2017): Appendix 6; Evacuation Guidelines*

EVACUATION GUIDELINES FOR H_2S AND SO_2 (BRITISH COLUMBIA) [2]

H_2S	SO_2	REQUIREMENT
Parts per million (ppm) in Unevacuated Areas *		
1 - 10 ppm	1 – 5 ppm	Individuals who requested notification so that they can voluntarily evacuate before any exposure to H_2S or SO_2 must be notified
10 ppm and above	5 ppm and above	Local conditions must be assess and all persons must be advised to evacuate and / or shelter

** Unevacuated areas include those beyond the EPZ*

[2] *Adapted from BC Oil & Gas Commission - Core ERP Content Checklist Guidance Document (ver 2.0 December, 2017)*

3.6.2 NOTIFICATION AND EVACUATION WITHIN THE EPZ

Evacuation of the public within the EPZ will be initiated no later than a Level 2 Emergency. If public is in jeopardy and **it is safe to do so**, the evacuation procedures will be initiated immediately. The local municipality and RCMP may be consulted to provide support and / or assistance with the evacuation.

For an emergency that involves only a few residents, Canadian Natural will designate Telephone Callers to relay messages of notification, shelter-in-place or evacuation. If an emergency occurs that involves too many residents for Canadian Natural personnel to contact in a timely manner, an automated calling system will be activated. If the automated calling system is unavailable and / or Telephone Callers are unsuccessful, Rovers will be dispatched and / or aerial surveillance may be utilized to search for transient activity. Local RCMP and / or the local municipality may assist. If evacuation of an urban centre is required, the local municipal authority may manage the evacuation process.

EPZ occupants will be notified as follows:

- **Level 1:** Those residents who are sensitive due to a special need must be contacted and given an opportunity to evacuate if they choose to do so.
- **Level 2:** All residents within the EPZ must be sheltered-in-place or evacuated, beginning with those in the immediate area and those downwind of the incident.
- **Level 3:** All residents within the EPZ must be sheltered-in-place or evacuated, beginning with those in the immediate area and those downwind of the incident.

EPZ occupants will be evacuated in the following order:

- Individuals located in close proximity to the incident site and immediately downwind
- Individuals who have requested early notification or require evacuation assistance
- Individuals who cannot be contacted by telephone

The Operations Section Chief and Public Safety Supervisor, in consultation with the Incident Commander may adjust the EPZ based on changing conditions.

3.6.3 NOTIFICATION AND EVACUATION OUTSIDE THE EPZ

The evacuation of the public outside of the EPZ may be required if the incident cannot be controlled or if H_2S or SO_2 concentrations exceed the allowable limits at or beyond the EPZ boundary.

The local authority will coordinate evacuations outside the EPZ with Canadian Natural in accordance with the Municipal Emergency Plan (MEP) framework. They may assist with notification and evacuation outside of the EPZ by authorizing evacuation alerts and / or orders or by declaring a local state of emergency to enforce mandatory evacuation. The local health authority also has a role in evacuation in accordance with provincial regulations.

3.6.4 RECEPTION CENTRES

Reception Centres are prearranged during the Site-Specific ERP public involvement program. If the public is impacted, the Public Safety Supervisor will ensure that a Reception Centre located outside the EPZ is activated and contact has been made. The Public Safety Supervisor will also activate the Reception Centre Representative role.

The Reception Centre Representative(s) will proceed to the Reception Centre and follow the role's guidelines to meet and register evacuees.

All evacuees will be asked to check in at the Reception Centre. After they have registered at the Reception Centre, they may proceed to a location of their choice. The Reception Centre Representative will record contact information and where the resident will be staying so that further information regarding the emergency can be relayed in a timely manner.

It is the responsibility of the Reception Centre Representative(s) to ensure evacuees' needs are addressed and to maintain regular communication with the Public Safety Supervisor.

3.6.5 EVACUATION SECURITY

In the event of an evacuation, Canadian Natural will request local authorities to establish and maintain official roadblocks in order to provide security for evacuated properties. Canadian Natural will advise local authorities of Stand Down and that evacuees may safely return. It will be the decision of local authorities to remove the roadblocks.

3.6.6 RETURN OF EVACUEES

Once the emergency is over, the decision to permit the return of evacuees to the area will be made by the Incident Commander in consultation with the Operations Section Chief, Public Safety Supervisor and regulatory and local authorities.

As per Section 2.6 Downgrading and Stand Down guidelines, Canadian Natural Rovers / Air Monitors will monitor for gas in evacuated areas to ensure it is safe for evacuees to re-enter. Evacuees will be notified of Stand Down by the Reception Centre Representative, Telephone Callers and / or automatic notification system.

After evacuees have returned, communications or meetings may be required to resolve incident and / or resettlement questions or concerns. Critical Incident Stress Debriefings (CISD) may be organized where required.

3.7 SHELTER-IN-PLACE CRITERIA & PROCEDURES

When safe to do so, evacuation should take place before a release of sour gas or HVP product has the potential to impact people in proximity to the release or as soon as possible to avoid any exposure to the hazard. If evacuation is not possible, then sheltering in place can be used to protect members of the public under certain conditions

Depending on the volume, size, duration or meteorological conditions, sheltering in place may not be a viable public protection measure for those members of the public immediately adjacent to the location of the incident during an H_2S release. In such a situation, the public safety aspects of sheltering in place will be continuously re-evaluated during the incident and assisted evacuation may be necessary to protect public safety

3.7.1 SHELTER-IN-PLACE CRITERIA

Shelter-In-Place must be considered the primary protective measure in any of the following circumstances:

- there is insufficient time or warning to safely evacuate the public that may be at risk
- residents are waiting for evacuation assistance
- the release will be of limited size and / or duration
- the location of a release has not been identified
- the public would be at higher risk if evacuated

By staying indoors, residents will be protected from any contaminated air outside until the problem is resolved.

3.7.2 SHELTER-IN-PLACE PROCEDURES

Emergency Response Planning: Shelter-In-Place Instructions, May 24, 2006 (CAPP)

If Shelter-In-Place is used for protection in an emergency, the following instructions should be given:

- Immediately gather everyone indoors and stay there
- Close and lock all windows and outside doors
- Extinguish indoor wood burning fires
  - If possible, close flue dampers
- Turn off appliances or equipment that either blows out or uses indoor air or sucks in outside air such as:
  - Bathroom / kitchen exhaust fans, built-in vacuum systems, clothes dryers, gas fireplaces, gas stoves
  - Heating ventilation / 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 the 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 Canadian Natural emergency response personnel
  - Call the emergency numbers you have been provided if:
    - you are experiencing symptoms or smelling odours *(so that we can address your concerns and adjust our response priorities)*
    - you have contacted fire, police or ambulance *(so that we can coordinate our response)*
- Stay tuned to local radio and / or television for possible information updates
- Even if you see people outside**, DO NOT** leave until told to do so

- If you are unable to follow these instructions, please notify Canadian Natural emergency response personnel
- After the hazardous substance has passed through the area, you will receive an “all clear” message from Canadian Natural personnel. You may also receive, if required, instructions to:
  - Ventilate your building by opening all windows and doors; turning on fans and turning up thermostats. During this time, the air outside may be fresher and you may choose to leave your building while ventilating.
  - Once the building is completely ventilated, return all equipment to normal settings and operation.

3.8 IGNITION CRITERIA & PROCEDURES

3.8.1 CRITERIA

Following an incident, the hazards associated with a release may be controlled or minimized by deliberately igniting the release. Canadian Natural will take immediate steps to prepare for ignition at the earliest signs of a release or well control problem to ensure there will be no delay. **The decision-making authority to ignite is assigned to the Canadian Natural On-Scene Supervisor** in consultation with the Incident Commander, Senior Management and the provincial or federal regulatory authority, if time permits.

Ignition does not negate the need for continuing with evacuation.

Ignition must take place when any of the following conditions has been met and as soon as all personnel working at the site can be cleared to a safe distance:

- Although required, evacuation of the EPZ has not yet taken place.
- Monitoring results indicate H2S concentrations in excess of 10 ppm over a 3-minute average (AB, SK, MB) or 15 ppm over 15 minutes (BC) in unevacuated parts of the EPZ. If monitored levels are declining, then the situation needs to be continuously assessed for ignition.
- Monitored H2S concentrations exceed 1 ppm (1-hour average) in urban centres.
- Monitoring is not taking place due to weather or other unforeseen circumstances.
- The release cannot be brought under control in the short-term (the ignition decision will be made in consultation with the provincial or federal regulator).

Once any of the above criteria have been met for either a sour gas or HVP product release, ignition must occur within 15 minutes of the decision to ignite.

3.8.2 SOUR GAS RELEASES

During a release of H_2S, the following should be assessed prior to ignition:

- Risk of exposure / injury to the public or response workers
- Proximity to residences, public facilities, towns or urban centers
- Status of evacuations
- Fire hazard after ignition in relation to adjacent forested or cropland areas
- Safety of ignition team (hazard area identification, protective gear)

3.8.3 HVP PRODUCT RELEASES FROM A PIPELINE OR CAVERN STORAGE FACILITY

Ignition of an HVP product release to the atmosphere should only occur after the position of the plume has been defined by visual or monitoring means and it is safe to ignite. Until such time that a decision has been made to ignite a release, steps should be taken to minimize any chance of unplanned ignition in the area.

Before igniting a release, the following should be considered:

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

3.8.4 IGNITION TEAM

An Ignition Team shall be assembled and will be comprised of three (3) individuals, one Ignition Lead and a two-person Backup team. The On-Scene Supervisor will be a part of the Backup team. Individual responsibilities are as follows:

- **Ignition Lead** – This individual will ignite the plume
- **Backup team** – The remaining two personnel (including the On-Scene Supervisor) will:
  a) remain in visual contact with the Ignition Lead
  b) maintain communications with the Operations Section Chief / ICP
  c) remain available for emergency rescue of the Ignition Lead

At minimum, the Ignition Lead will be trained to properly and safely perform ignition activity.

The Ignition Team will be equipped as outlined below.

3.8.5 IGNITION EQUIPMENT

At minimum, the following will be assembled:

- flare gun and shells (recommended 30 shells in case of multiple attempts or re-ignition)
- Self-Contained Breathing Apparatus (SCBA)
- explosive / LEL meter
- lanyards and harness
- fire retardant clothing, including gloves
- eye and ear protection
- two air horns (one for Ignition Lead and one for Backup team)

3.8.6 IGNITION PROCEDURES

- ❑ Consider notifying and having the local fire department and medical services available
- ❑ Evacuate all people not directly involved in the actual ignition
- ❑ Form Ignition Team and assemble ignition equipment (Sections 3.8.4 and 3.8.5)
- ❑ Prior to ignition, the On-Scene Supervisor will:
  - evaluate the terrain for a protected ignition position. When igniting a vapor or large gas cloud, workers must remain as far back as possible and sheltered, if possible, due to potential explosive forces and heat produced;
  - determine a maximum firing range for the flare equipment;
  - establish escape route;
  - conduct a briefing to review ignition procedures with the Ignition Team members
- ❑ Ignition Team will don SCBA, fire retardant clothing and eye and ear protection. Do not carry flares in pockets. The attachment of safety lines will be at the discretion of the On-Scene Supervisor.
- ❑ Ignition Team will approach the release from the upwind side. Using an LEL monitor, the team will check that an explosive mixture does not exist in the immediate area and position themselves accordingly.
- ❑ ***If there is a wind,*** the Ignition Lead will approach from the upwind side until within firing range, remaining aware of wind direction and adjusting location accordingly. The Backup team will remain in the initial safe location, in visual contact of the Ignition Lead at all times.
- ❑ ***If there is no wind,*** the Ignition Lead will approach the release from the most accessible direction.
- ❑ If LEL is detected in area of attempted ignition, the Ignition Lead will retreat outside the explosive mixture zone and repeat
- ❑ If at any time the Backup team signals to abort the process with three short air horn blasts, the Ignition Lead will terminate and retreat to the Backup team location.
- ❑ Ignition Lead will sound the air horn with one long blast, signalling readiness to light the plume and will wait 30 seconds after the air horn to fire the flare gun
- ❑ Ignition Lead will now make the initial ignition attempt. Firing of the flare gun should be done from a prone position or from behind a protective object, if possible. Avoid looking toward the release while the flare is in flight.
- ❑ If attempt fails, the Ignition Lead will adjust position if required, staying outside the explosive mixture zone and repeat attempt. If ignition is not achieved, continue to launch flares into the plume until ignition is achieved.
- ❑ Once ignition is achieved, the Ignition Lead will retreat to a safe position.
- ❑ The Backup team will maintain communications with the Operations Section Chief about the status of the ignition operations.

3.8.7 POST-IGNITION PROCEDURES

- ❑ If possible, Ignition Team will remain on stand-by at the ignition site to re-ignite the release, if required
  - **Ignition (burning of H_2S) will produce sulphur dioxide (SO_2). Monitor the area thoroughly for these gases prior to and after removing breathing apparatus.**
- ❑ The Backup team will contact the Operations Section Chief to confirm ignition
- ❑ Confirm that air quality monitoring of the EPZ for SO_2 is taking place at unevacuated areas
- ❑ Evacuation of the EPZ will continue
- ❑ For ignition of sour gas releases, the EPZ will be expanded to any areas where SO_2 readings exceed criteria for notification and evacuation beyond the EPZ

4.0 COMMUNICATIONS PLANS

4.0 COMMUNICATIONS PLANS

4.1 GOVERNMENT COMMUNICATION

4.1.1 GOVERNMENT CONSULTATION PROGRAM

Local government consultations occur during Site-Specific ERP development. Details on the consultation process can be found in Section 5.23 Government Roles and Responsibilities.

4.1.2 INITIAL GOVERNMENT NOTIFICATIONS

In the event of a confirmed Canadian Natural emergency, the Liaison Officer or designate will make the following mandatory notifications in a timely fashion and provide initial information as required. Future communications and updates will be agreed upon at that time.

- applicable provincial authority (AER / EMBC / MER / EMO / OROGO)
- federal authority, if applicable (CER / TSB)
- local municipal authority
- local police or RCMP
- health authority / region / district

For an incident where the Canada Energy Regulator (CER) is the lead regulatory agency, Canadian Natural may make courtesy calls to the applicable provincial regulators. Additional government agencies may require initial notification / reports depending on the nature of the incident.

All government notifications including updates, will be documented on the Emergency Notification Details wall chart located in every ICP and will include at minimum: the name of the agency, the name of the agency representative, the time of notification, the name of the Canadian Natural personnel who made the notification and the Emergency Level. Each agency will initially require critical incident information as per their reporting requirements thus the Liaison Officer / designate must gather as much information and data as is available prior to contact. Refer to the Forms and Guidelines section for *Form 5: AER First Call Communication* or *Form 6: OGC Form C – Emergency Incident Form.*

Guideline 2: Key Government Agency Notification Requirements found in the Forms and Guidelines section provides the notification requirements for government agencies based on incident type.

Corporate Media statements or releases will be provided to the lead regulatory agency prior to release.

4.1.3 ON-GOING GOVERNMENT NOTIFICATIONS

Canadian Natural will maintain communication throughout the duration of the emergency by providing updates at regular intervals to all affected stakeholders. The Liaison Officer / designate will maintain communication among all Command Posts / representatives via landlines, cellphones or faxes.

4.2 FIELD COMMUNICATION

In the event where local First Responders (i.e. firefighters, EMS, RCMP) or other support agencies such as spill response or emergency equipment / vehicles are required on-site, communications with local First Responders / support agencies will be established, directed and documented by the Staging Area Manager, On-Scene Supervisor or other designated personnel. Tools to manage field communications between on-site internal and external personnel can include:

- cell phones
- landlines
- two-way radios
- satellite radio systems
- electronic communications (emails, text / SMS messages)
- Command Post liaisons

Safety orientations of local First Responders or other support agencies conducted by the Staging Area Manager or other designated representative are mandatory pursuant to Canadian Natural's safety policies. These orientations will be held at the Staging Area prior to any deployment on site. Communication systems including any operating frequencies / tactical channels will be reviewed during the safety orientation and the on-site Hazard Assessment.

If time is of the essence and the presence of local First Responders is required on site immediately, the On-Scene Supervisor will ensure it is safe for them to proceed and Canadian Natural representatives will accompany them at all times.

4.3 PUBLIC COMMUNICATION

4.3.1 PUBLIC INVOLVEMENT PROGRAM

Public involvement in emergency preparedness takes place at various stages of ERP development. All public including First Nations, residents and publicly used facilities within and immediately adjacent to the EPZ are identified, contacted and provided with a public information package. Any concerns noted during the involvement program regarding potential impacts that an emergency situation may have on the surrounding community will be addressed at that time. Residents are advised that they are able to contact Canadian Natural at any time should they have any questions or concerns.

Resident information is essential for effective communication during an emergency. During the consultation process, a questionnaire is completed to ensure that accurate, up-to-date resident information is available. All information obtained from residents is confidential and would only be used in case of an emergency. This information is collected annually and identifies those residents who may require early notification and / or evacuation.

When appropriate, public meetings and targeted information sessions are conducted to ensure those who reside within large urban centres or urban density developments within the EPZ are aware of company operations and emergency management processes.

Local authorities and other organizations and agencies identified as impacted by an EPZ are also contacted annually at minimum and provided with forms intended to collect / verify emergency contact information and roles / responsibilities. These forms are combined with reciprocal information packages intended to educate external agencies about company emergency information, protocols and procedures such as scene arrival protocols, chemical hazards and liaison guidelines. A signed confirmation of receipt and understanding is requested for each form for documentation purposes.

4.3.2 PUBLIC INFORMATION PACKAGES

Information packages are distributed to all residents, businesses, and public facilities in the EPZ during public consultations and provided to other specific external agencies after annual updates or initial creation of the ERP. The package describes the facilities covered by the ERP, identifies local potential hazards, and explains appropriate public protection measures and the procedures that would be implemented if an emergency occurs. The package also includes a map of the local area and Canadian Natural emergency contact telephone numbers. The following hazardous product information is also included in public information packages, adapted as required as per applicable province (documented health effects differ slightly for each province).

4.3.3 HAZARDOUS PRODUCT INFORMATION

This Corporate ERP contains product information for H_2S and SO_2 as follows. Information for other hazardous products is available via Canadian Natural's Safety Data Sheet (SDS) web application. Site specific Environmental Emergency (E2) ERPs also contain hazardous product information pertaining to particular substances stored on site.

4.3.3.1 HYDROGEN SULPHIDE (H_2S)

H_2S is a colourless, extremely toxic gas with a distinct 'rotten egg' odor at lower concentrations. H_2S is found naturally in oil and gas formations and can also be formed from the decomposition of organic matter in the absence of oxygen. It is also extremely flammable, forming sulphur dioxide (SO_2) when burned. H_2S tends to disperse more slowly in sheltered, calm or low laying areas.

Concentration (ppm) [1]	Potential Health Effects [2]
1	Noticeable odor. Mild temporary symptoms of nausea, headache, irritability. Asthma may worsen.
10 - 20	Obvious offensive odour. Eye irritation, headaches, nausea, and vomiting. Symptoms of asthma, bronchitis or other chronic respiratory disease may worsen.
50	Irritation of eyes and breathing passages. Possible headaches, nausea, vomiting and diarrhea in odor-sensitive individuals.
100	Sense of smell deteriorates. Eye and breathing passage irritation within one hour including swelling of eyelids and blurred vision. Respiratory issues worsen. Possible headaches, nausea, vomiting and diarrhea.
250	Increased loss of sense of smell. Eye and breathing passage irritation within minutes. Permanent damage to eyes with more exposure. Respiratory issues worsen. Headaches, nausea, vomiting and vertigo.
500	No sense of smell. Severe eye and breathing passages irritation, permanent injury within 30 minutes. Headache, anxiety, dizziness, coordination loss, slurred speech within in one hour. Loss of consciousness, sudden collapse or death with more exposure.
750	No sense of smell. Obvious anxiety, confusion, headache, slurred speech, dizziness, stumbling, loss of coordination and other signs of motor dysfunction. Loss of consciousness or sudden collapse; death with a few minutes of exposure.
1000 or greater	Immediate "knock-down" and loss of consciousness. Death within minutes. Immediate medical attention needed if victim is to survive.

(1) 1 ppm (parts per million) = 1 part gas in one million parts air

(2) Summarized from Alberta Health *Acute Exposure Health Effects of Hydrogen Sulphide and Sulphur Dioxide* Jun 2012. For full details, see https://www.albertahealthservices.ca/assets/wf/eph/wf-eh-alberta-health-acute-exposure-health-effects-of-hydrogen-sulphide-and-sulphur-dioxide.pdf

4.3.3.2 SULPHUR DIOXIDE (SO_2)

SO_2 is a colourless, water-soluble, suffocating gas formed by burning sulphur in air and is also used to manufacture sulphuric acid. The gas has a strong smell similar to burning match.

Concentration (ppm) [3]	Potential Health Effects [4]
0.1	Irritation in sensitive asthmatics; will cease when exposure ceases
0.3 – 1	Possible detection by taste or smell
0.75	Transient changes in lung function in healthy non-asthmatics. Asthmatics may experience an increase in severity of symptoms.
1 – 2	Changes in lung function in healthy non-asthmatics. Symptoms in asthmatics would likely increase in severity.
3	Easily detected odour
6 - 12	May cause nasal and throat irritation
10	Upper respiratory irritation, some nosebleeds
20	Definitely irritation to the eyes; chronic respiratory symptoms develop; respiratory protection is necessary.
50 – 100	Maximum tolerable exposures for 30 – 60 minutes
>100	Immediate danger to life

(3) 1 ppm (parts per million) = 1 part gas in one million parts air

(4) Summarized from Alberta Health *Acute Exposure Health Effects of Hydrogen Sulphide and Sulphur Dioxide* Jun 2012. For full details, see https://www.albertahealthservices.ca/assets/wf/eph/wf-eh-alberta-health-acute-exposure-health-effects-of-hydrogen-sulphide-and-sulphur-dioxide.pdf

4.3.4 PUBLIC NOTIFICATION AND CONSULTATION REQUIREMENTS

ALBERTA

SITUATION	NOTIFICATION AND CONSULTATION REQUIREMENTS
Modifications to an existing facility	• **Notification** of and **consultation** with members of the public and local authority within the EPZ are required if modifications to existing facilities will result in a change to the size of the EPZ or facility procedures
Prior to entering the first sour zone and prior to nonconsecutive completion operations on a sour well	• **Notification** of members of the public within the EPZ is required at least 24 hours prior to entering the first sour zone for all sour well drilling operations and prior to non-consecutive completion operations* on a sour well in order to provide sufficient time for members of the public who wish to leave prior to commencement of operations ** Completion operations that take place more than four weeks after the drilling rig has been removed.*
Wellhead-off workovers	• **Notification** of members of the public who have indicated during the public involvement program that they wish to leave prior to commencement of operations.
Delayed completion operations	• **Notification** of and **consultation** with members of the public within the EPZ are required prior to completion operations that were not carried out within six months after conclusion of drilling operations.
Transfer of ownership	• **Notification** of **members** of the public and the local authority within the EPZ is required after finalization of a sales agreement but before the transfer of wells, pipelines and facilities requiring an ERP.
Public awareness program	• **Consultation** is required every two **years** with members of the public within an EPZ. See Sections 4.3.1 Public Involvement Program and 4.3.2 Public Information Packages.
Cancellation of ERP	• **Notification** of residents within the EPZ and the local authority if the ERP has been cancelled.
End of drilling and / or completion operations	• **Notification** of those holding copies of the ERP, residents listed in the ERP, and the AER of the end of drilling and / or completion operations and the status of the plan.

BRITISH COLUMBIA

SITUATION	NOTIFICATION AND CONSULTATION REQUIREMENTS
At the commencement and conclusion of drilling and initial completion operations	The Drilling / Completions Supervisor shall ensure: • That BCOGC will be informed of the status of on-site operations • Identified public within the EPZ shall be contacted and informed, via personal visitation or telephone, of the status of the on-site operations. Contact does not include voice messages on answering machines or informing minor/underage occupants of residence. • For emergency notification procedures refer to Section 4.3.6 Methods of Initial Public Notification.
24 hours before entry of a sour zone	

4.3.5 AT INCIDENT ONSET

If a sour gas or HVP product release has the potential to impact beyond the lease, facility boundary or pipeline right-of-way, Canadian Natural will notify:

- public in the response zones that have been identified as being within the EPZ
- the director of emergency management (or equivalent) of the responsible party of an urban centre that is within the EPZ
- individuals within the EPZ that have requested early notification and wish to voluntarily evacuate and
- the local authority and health authority

For production facilities that meet Site-Specific ERP regulatory requirements, Canadian Natural has identified individuals and groups within an EPZ requiring notification during an incident. This list is included in Site-Specific ERPs and includes residences (permanent or occasional), schools / school divisions, public facilities, other industrial operators, trappers / guides, forestry management areas, grazing leases and First Nations. Residents or groups considered sensitive or having special needs are identified and documented as requiring early notification and / or evacuation assistance. These residents are notified at a Level 1 Emergency so they may decide whether to voluntarily evacuate or indicate if assistance is needed (i.e. residents without transportation, large groups requiring transportation or those who may require special considerations).

Notification to all others within the EPZ will begin no later than a Level 2 Emergency. The general public outside the EPZ will be notified by local authorities, if the situation warrants, based on air monitoring.

The Public Safety Supervisor will ensure that initial notifications are made to impacted public. The Information Officer assisted by corporate communications staff if required, will ensure additional information is made available to impacted public as soon as possible at the onset of the incident. Information that will be disseminated to impacted public at different stages of an incident is outlined further in this section.

4.3.6 METHODS OF INITIAL PUBLIC NOTIFICATION

In the event of an emergency situation requiring notification, shelter-in-place or evacuation, Canadian Natural's Public Safety Supervisor will direct the contact, by telephone, of all occupants in the EPZ including First Nations, who have provided confidential emergency contact information collected during the course of the public involvement program.

This confidential information is found in the Public Notifications section of the Site-Specific ERPs and is distributed only to those area personnel who would fill four key Canadian Natural responder roles – Incident Commander, Operations Section Chief, Public Safety Supervisor and On-Scene Supervisor.

An automated public notification system is used by Canadian Natural for those Site-Specific ERPs having high population concentration that may be impacted simultaneously. Canadian Natural provides only the emergency contact information required to contact multiple telephone numbers concurrently thereby ensuring timely public notifications. Procedures to use this system are found in the Public Notifications section of Site-Specific ERPs. If this system is not available, designated Telephone Callers will be used to make public notifications using predetermined scripts as found in the Forms and Guidelines section of this manual.

If no contact has been made via the automated notification system or Telephone Callers, Canadian Natural Rovers will be dispatched to evacuate those dwellings or areas. A completed *Form 22: Resident Evacuation Notice* identifying the time and date of the evacuation attempt will be posted at each dwelling checked. Rovers and / or aerial surveillance (helicopters or fixed wing aircraft) will be utilized to sweep recreational areas and / or to look for transient activity such as trappers, guides, hunters, hikers, etc.

If an incident has the potential to impact the public in large communities or those located outside of the EPZ, Canadian Natural will work with local municipalities / urban centres / local police / RCMP to ensure public safety. In these situations, assistance may be available from these agencies in the form of emergency equipment, road closures, house-to-house checks, use of the Emergency Public Announcement system and / or a Declaration of a State of Local Emergency.

4.3.7 DURING AN INCIDENT

Corporate communications staff will prepare all Media statements, releases and updates as per communications plan protocols as well as direct the Information Officer at the field level.

During the course of an emergency situation, public information may be posted on Canadian Natural's website (www.cnrl.com), including updates and / or public statements. Additionally, depending on the significance of the incident, an information hotline may be set up and posted on Canadian Natural's website to respond to direct public inquiries. Corporate social media protocols will be observed and depending on the significance and / or longevity of an incident, a Communications Centre may be established at a suitable locale. If larger areas are impacted, Canadian Natural will coordinate with local authorities to access the provincial Emergency Public Notification System as per the applicable Municipal Emergency Plan (MEP) to provide emergency communications.

Communications, as provided by the Information Officer, with impacted public members who have been directed to evacuate to a Reception Centre or to shelter-in-place will be the responsibility of the Reception Centre Representative (evacuated persons) and / or automated notification system (sheltered persons). If the automated notification system is unavailable, Telephone Callers and / or Rovers will be utilized.

4.3.8 POST-INCIDENT

Post-incident public communication will be comprised of the information as noted in the a) Downgrading and Stand Down and b) Post-Incident Actions sections of this manual.

4.3.9 INFORMATION DISSEMINATED TO PUBLIC

Evacuated or Sheltered Public – at Onset

- Type and status of incident
- Location and proximity of incident to people in the vicinity
- Public protection measures to be followed and associated instructions (evacuation, sheltering, etc.), and any other emergency response measures to consider
- Actions being taken to respond to the situation, including anticipated time period
- Contacts for additional information

Information Disseminated to Public continued

Evacuated or Sheltered Public – During

- Type and status of incident
- Location and proximity of incident to residents
- Public protection measures taken and any applicable instructions / information i.e. sheltering/evacuation instructions, location of Reception Centre
- Actions being taken to respond to the situation including anticipated time period
- Contacts for additional information
- Description of the products involved and their short-term and long-term effects
- Effects the incident may have on people in the vicinity
- Areas impacted by the incident
- Actions the affected public should take if they experience adverse effects

General Public - During

- Type and status of incident
- Location of the incident
- Areas impacted by the incident
- Description of the products involved
- Contacts for additional information
- Actions being taken to respond to the situation, including anticipated time period

Evacuated or Sheltered Public – Post-incident

- Status of recovery
- Financial reimbursement information
- Contact for additional information

4.3.10 NOTIFICATION OF NEXT OF KIN

For any situation involving the hospitalization, serious injury or fatality of any individual on Canadian Natural property, the notification of next-of-kin will be strictly conducted as per Canadian Natural's Human Resources protocols.

In these circumstances, the Incident Commander will immediately consult with the Operations Manager. Company personnel are **prohibited from releasing names or information** regarding injured individuals, missing persons or casualties in all types of communications including social media, telephone, radio and direct exchanges.

The Media Statement will be used for any external inquiries as per Section 4.4.

4.4 MEDIA COMMUNICATION

Media requests received by Calgary headquarters will be handled as per Corporate Reception protocols.

Public statements / Media releases will be generated by corporate communications staff, approved by Canadian Natural management and released in a timely manner as significant developments occur. Media releases will be coordinated with the appropriate government regulatory agency (AER, EMBC, MER, EMO or CER / TSB) prior to release to ensure consistency and accuracy of information. For significant events, a corporate spokesperson will be designated by the Operations Manager / Corporate Support Team and / or the Senior Management Committee.

The Information Officer (with guidance from the corporate communications staff if required) will compile and release information to the general public in as timely a manner as possible during an incident as outlined in the Information Officer role further in this manual.

Public statements may be distributed directly to Media outlets, posted on Canadian Natural's website (www.cnrl.com), provided to a locally established Communications Centre for distribution and / or any other effective means as determined by the severity and / or longevity of the incident. Social media protocols will be observed as per the corporate Social Media Policy.

Pre-scripted statements ensure timely information releases for the general public; Canadian Natural may develop incident specific public and / or Media statements as needed based on the following:

- First Communication (where there are little to no details available for release): the incident standby / holding statement that acknowledges there is a situation being managed and affirms corporate priorities of personnel, the community and the environment
- Second Communication: an incident statement that initially answers what, when and where and if available, who has been impacted and indicates that regulatory agencies have been notified
- Third Communication: the follow-up communication that provides as detailed as possible information including what, where, when, why and how and indicates that an investigation as to the cause is underway.
- Fatality statement

4.4.1 ON-SITE MEDIA COMMUNICATION

Depending on the nature of the incident, Media may contact Canadian Natural representatives in person at the incident site. The following guidelines **MUST** be followed by all Canadian Natural personnel experiencing any on-site Media contact.

- Do not deny or confirm information or facts
- Do not speculate on the cause or damages resulting from the emergency
- Under no circumstances will the name of an accident victim be released before the next-of-kin are notified or permission has been received from Canadian Natural's Senior Management and the RCMP
- News Media will not be allowed on-site until clearance has been granted by Canadian Natural's Senior Management, government regulatory authority and / or the RCMP
- Any reporters allowed on-site must be accompanied at all times and for their own safety, denied access to dangerous areas

…/continued

- If approached by Media representatives, provide the following statement:

  "I am sorry but I am not able to respond to your questions because I am not our company's spokesperson. A statement will be released as soon as the facts have been determined. In the meantime, please email your inquiry to ir@cnrl.com and a spokesperson will respond to you in a timely manner."

- Direct persistent Media to the Information Officer **OR** collect Media information (reporter's name and contact information, type of Media represented, type of information requested and deadline) and forward as soon as possible to Information Officer. Note that during initial stages of an incident, the Incident Commander may act as the Information Officer until such time that the role is re-designated as required.
- It is the responsibility of the Information Officer to manage all Media inquiries at the site and ensure they are directed to Investor Relations at ir@cnrl.com for timely responses.

4.5 EXTERNAL EMERGENCY NOTIFICATIONS DETAILS

Upon ERP activation, details of any external notifications made during the course of the incident will be documented using the Emergency Notifications Details wallchart as illustrated in Section 5 Wallcharts. This internally developed tool is generally used in Canadian Natural Incident and On-Scene Command Posts as well as the Calgary Emergency Operations Centre (EOC).

The wallchart provides:

- a visual guide for Command Post / EOC teams
- a straightforward way to update others attending Command Post(s) of on-going status of external communications
- additional supporting incident documentation

5.0 ROLES & RESPONSIBILITIES

5.1 INCIDENT COMMAND SYSTEM FLOWCHART

The Incident Command System Flowchart indicates the reporting structure and communication flow of responder roles during an emergency. Canadian Natural employees and representatives are responsible for implementing the Flowchart when required and must be aware of their roles and duties as outlined in this responder should go to the yellow tab for their specific role and complete the duties by utilizing the checklist. This will ensure that all necessary steps are considered and taken if required, and that all government emergency notifications are made and regulatory requirements are met. The sequence of tasks for each role may vary depending on the situation.

The most senior on-site Canadian Natural representative will assume the role of On-Scene Supervisor and will activate the ERP.

5.2 EMERGENCY NOTIFICATIONS DETAILS WALLCHART

As outlined in Section 4 Communications Plans, following is the Emergency Notifications Details wallchart. This internally developed tool is generally used in Canadian Natural Incident and On-Scene Command Posts as well as the Calgary Emergency Operations Centre (EOC).

The wallchart provides:

- a visual guide for Command Post / EOC teams
- a straightforward way to update others attending Command Post(s) of the on-going status of external communications
- additional supporting incident documentation

INCIDENT COMMAND POST NAME (Field Area):

For the Time Period (dates): *(dd/mm/yyyy) to (dd/mm/yyyy)*

Legal Location:

EPZ Size: | **Emergency Level:**

Wind Direction / Weather:

Type of Incident:

INCIDENT COMMAND SYSTEM FLOWCHART

Canadian Natural

INCIDENT COMMANDER
Name: _____
Phone: _____

DEPUTY INCIDENT COMMANDER
Name: _____
Phone: _____

SAFETY OFFICER
Name: _____
Phone: _____

INFORMATION OFFICER
Name: _____
Phone: _____

LIAISON OFFICER
Name: _____
Phone: _____

FIRST RESPONDERS
Name: _____
Phone: _____
Location: _____

OPERATIONS SECTION CHIEF
Name: _____
Phone: _____

ON-SCENE SUPERVISOR
Name: _____
Phone: _____
Location: _____

DEPUTY ON-SCENE SUPERVISOR
Name: _____
Phone: _____

PUBLIC SAFETY SUPERVISOR
(see Notifications Chart - Public)
Name: _____
Phone: _____

STAGING AREA MANAGER
Name: _____
Phone: _____
Location: _____

RECEPTION CENTRE REPRESENTATIVE
Name: _____
Phone: _____
Location: _____

ROADBLOCK/ MONITORING LEAD (1)
Name: _____
Phone: _____
Location: _____

ROADBLOCK/ MONITORING 2
Name: _____
Phone: _____
Location: _____

ROADBLOCK/ MONITORING 3
Name: _____
Phone: _____
Location: _____

ROADBLOCK/ MONITORING 4
Name: _____
Phone: _____
Location: _____

ROVERS LEAD (1)
Name: _____
Phone: _____
Location: _____

ROVER 2
Name: _____
Phone: _____
Location: _____

ROVER 3
Name: _____
Phone: _____
Location: _____

ROVER 4
Name: _____
Phone: _____
Location: _____

TELEPHONE CALLER LEAD (1)
Name: _____
Phone: _____

TELEPHONE CALLER 2
Name: _____
Phone: _____

TELEPHONE CALLER 3
Name: _____
Phone: _____

TELEPHONE CALLER 4
Name: _____
Phone: _____

PLANNING SECTION CHIEF
Name: _____
Phone: _____

DOCUMENTATION
Lead Name: _____
Name: _____
Name: _____
Name: _____

TECHNICAL SPECIALISTS
Lead Name: _____
Name: _____
Name: _____
Name: _____

ENVIRONMENTAL COORDINATOR
Name: _____

FIELD INTEGRITY TECH
Name: _____

FIELD PRODUCTION ENGINEER
Name: _____

PIPELINE ENGINEER
Name: _____

LOGISTICS SECTION CHIEF
(see Notifications Chart – External)
Name: _____
Phone: _____

AIR QUALITY MONITORING TRAILERS

COMMUNICATIONS

EMERGENCY EQUIPMENT

WELL BLOW OUT CONTROL

INDUSTRIAL FIREFIGHTERS

FOOD / TRANSPORTATION / ACCOMMODATIONS / SECURITY

FINANCE/ADMIN SECTION CHIEF
Name: _____
Phone: _____

AFES / COST TRACKING

EXPENSE CLAIMS

TIME RECORDS

CORPORATE RESPONSE MANAGEMENT TEAM

SENIOR MANAGEMENT COMMITTEE

OPERATIONS MANAGER / CORPORATE SUPPORT
Name: _____
Phone: _____

SAFETY
Name: _____
Phone: _____

STAKEHOLDER RELATIONS
Name: _____
Phone: _____

ENVIRONMENT / REGULATORY
Name: _____
Phone: _____

LEGAL
Name: _____
Phone: _____

SECURITY
Name: _____
Phone: _____

HUMAN RESOURCES
Name: _____
Phone: _____

OTHER
Name: _____
Phone: _____

Emergency Operations Centre (EOC)

Revision: 3.0
Revision Date: April 30, 2019
R:\Safety\Emergency Response Plans\Training - Exercises - Assessments\Posters\ERP Incident Command Flowchart\CNRL ERP ICS Flowchart – Apr2019

Canadian Natural

EMERGENCY NOTIFICATION DETAILS

Rev 3.0 – Aug2020

For time period (dates):	(DD / MM / YYYY) TO (DD / MM / YYYY)	ICP Location:		Incident Commander	

LIAISON OFFICER

MANDATORY NOTIFICATIONS
FOR LEVEL 1, 2 AND 3 EMERGENCIES

Agency		Time	Call Made By: (Name)	Agency Contact Name:	Case ID # (where applicable)	Notified of Level # & EPZ
• AER (AB) • EMBC / OGC (BC) • MER (SK) • EMO (MB) • ORODD (N.WT) • TSB / CER (Federal)	Initial Call	(24 hr clock)				
	Updates	(24 hr clock)				
		(24 hr clock)				
		(24 hr clock)				
	Stand Down	(24 hr clock)				
• Municipality • Urban Centre	Initial Call	(24 hr clock)				
	Updates	(24 hr clock)				
		(24 hr clock)				
		(24 hr clock)				
	Stand Down	(24 hr clock)				
Health Authority / Region / District	Initial Call	(24 hr clock)				
	Updates	(24 hr clock)				
		(24 hr clock)				
		(24 hr clock)				
	Stand Down	(24 hr clock)				
RCMP / Local Police	Initial Call	(24 hr clock)				
	Updates	(24 hr clock)				
		(24 hr clock)				
		(24 hr clock)				
	Stand Down	(24 hr clock)				

VARIABLE NOTIFICATIONS
(as needed)

Agency		Time	Call Made By: (Name)	Agency Contact Name:	Case ID # (where applicable)	Notified of Level # & EPZ
Occupational Health & Safety / WorkSafe BC	Initial Call	(24 hr clock)				
	Updates	(24 hr clock)				
	Stand Down	(24 hr clock)				
Ministry of Environment (SK / MB / NWT)	Initial Call	(24 hr clock)				
	Updates	(24 hr clock)				
	Stand Down	(24 hr clock)				
Ministry of Transportation	Initial Call	(24 hr clock)				
	Updates	(24 hr clock)				
	Stand Down	(24 hr clock)				
Other	Initial Call	(24 hr clock)				
	Updates	(24 hr clock)				
	Stand Down	(24 hr clock)				
Other	Initial Call	(24 hr clock)				
	Updates	(24 hr clock)				
	Stand Down	(24 hr clock)				

Last Revised: Aug 2020

LOGISTICS SECTION CHIEF

EXTERNAL RESOURCES (as needed)

*STAGING AREA & MANAGER REQUIRED	Company Called	Contact Person	Phone No.	Time Called	Location Dispatched From:	ETA to Staging Area
Emergency Services (9-1-1 or other) - ambulance - firefighting				(24 hr clock)		
WCSS / other Spill Co-operative				(24 hr clock)		
Spill Response Company				(24 hr clock)		
Air Quality Monitoring Trailer(s)				(24 hr clock)		
Helicopter(s)				(24 hr clock)		
Security - fencing - lighting with generators - security monitoring - etc.				(24 hr clock)		
Communications (i.e. radios)				(24 hr clock)		
Ignition Specialists				(24 hr clock)		
Industrial Fire Fighters				(24 hr clock)		
Well Blow-Out Control				(24 hr clock)		
Water / Food - on site - at OCP - at ICP - Reception Centre				(24 hr clock)		
Transportation - buses				(24 hr clock)		
Accommodations - on-site camp - for evacuated residents				(24 hr clock)		
Emergency Equipment / Services - dozers - backhoes - vac trucks - tank trucks - water trucks - cranes - portable toilets - etc.				(24 hr clock)		
				(24 hr clock)		
				(24 hr clock)		
				(24 hr clock)		
				(24 hr clock)		
				(24 hr clock)		
				(24 hr clock)		

PUBLIC SAFETY SUPERVISOR

PUBLIC NOTIFICATIONS (as needed)

Group		Time	Call Made By: (Person's Name)	Contact Person
Initial Incident Caller	Initial Call Back	(24 hr clock)		
	Stand Down	(24 hr clock)		
Residents	Initial Call-out	(24 hr clock)		
	Stand Down	(24 hr clock)		
First Nations	Initial Calls	(24 hr clock)		
	Stand Down	(24 hr clock)		
Schools / School District	Initial Calls	(24 hr clock)		
	Stand Down	(24 hr clock)		
Business/ Organizations	Initial Calls	(24 hr clock)		
	Stand Down	(24 hr clock)		
Other Industrial Operators	Initial Calls	(24 hr clock)		
	Stand Down	(24 hr clock)		
Trappers / Guide Outfitters	Initial Calls	(24 hr clock)		
	Stand Down	(24 hr clock)		
Grazing Lease/ Reserves	Initial Calls	(24 hr clock)		
	Stand Down	(24 hr clock)		
Forest Management Areas	Initial Calls	(24 hr clock)		
	Stand Down	(24 hr clock)		
Service Crews	Initial Calls	(24 hr clock)		
	Stand Down	(24 hr clock)		
Recreational Users	Initial Calls	(24 hr clock)		
	Stand Down	(24 hr clock)		

5.3 FIRST RESPONDER

WHO:	First Canadian Natural person on scene ***SUGGESTED:*** *operators, well site personnel*
ROLE:	• Assess and control emergency incidents • Assume On-Scene Supervisor role until senior CNRL person arrives
REPORTS TO:	Direct Supervisor
LOCATION:	On-Scene

FORMS & GUIDELINES
- **Form 1** – Time / Action Log (Visor Kit)

OTHER TOOLS
- Emergency Response Guide (Visor Kit)
- First Responders Guide (Visor Kit)
- Field Form Booklet (Visor Kit)

❑ **DO NOT RUSH IN, PROTECT YOURSELF FIRST:**
- move to safe area and don personal protective equipment (PPE)
- monitor for H_2S and LEL
- **ASSESS THE SITUATION and recognize potential hazard(s)**

❑ Document everything you see, hear and do on *Form 1: Time / Action Log*

❑ **If safe to do so,** attend to injured persons; call 9-1-1 if required (i.e. police / fire / ambulance)

❑ Contact immediate Supervisor – advise of all site conditions, i.e. injuries, water impact, operational situation, monitor readings, wind direction, personnel on-site, what you see, smell, hear, etc.

❑ Wait for back up personnel / more equipment

❑ Secure incident site by restricting access to facility (i.e. lock lease road gate / roadblocks and / or use additional security). If security measures (i.e.: fencing, security guards, lights, security cameras, etc.) are required, advise Supervisor.

❑ Take control of site / situation – **YOU** are the On-Scene Supervisor. Complete On-Scene Supervisor tasks until a more senior person arrives.

❑ **Do not disturb incident scene except to recover injured persons or to protect public, environment or property.** Alert all personnel in immediate vicinity of incident. Account for all persons and dispatch non-essential personnel from the site.

❑ **If safe to do so**, take action to prevent more injuries, environmental damage, loss of equipment, (i.e. eliminate ignition sources, activate ESDs, etc.).

LVP / HVP SPILL ACTIONS:
- *low vapour pressure (LVP) liquids* - contain spill. Use trenches, bell holes, straw bales, booms, blocking culvert openings, or any absorbent / adsorbent materials on-site
- *high vapour pressure (HVP) liquids* - **DO NOT TRY TO CONTAIN HVP LIQUIDS.** Dissipate liquid and isolate area

❑ Direct Media inquiries to your supervisor

❑ Brief senior person arriving on-site (who will take over On-Scene Supervisor role) of any operational changes

❑ Submit Time / Action Logs to Safety Officer on request or post-incident, attend debriefing meeting

5.4 ON-SCENE SUPERVISOR

WHO:	Most senior Canadian Natural person on-site ***SUGGESTED:*** *Assistant Foreman, Lead Operator, Rig Manager*
ROLE:	• Establish On-Scene Command Post (OCP) • Direct immediate on-site emergency activities
REPORTS TO:	Operations Section Chief
LOCATION:	On Scene Command Post

FORMS & GUIDELINES
- **Form 1** – Time/Action Log (Visor Kit)
- **Form 10** – Security Check In/Out (Field Form Booklet)
- AB **or** BC Incident Classification Matrix (Emergency Response Guide)

OTHER TOOLS
- Emergency Response Guide
- Corporate and Site-Specific ERP (if applicable)
- Spill Co-op manual

- ❑ **GATHER ALL FORMS, GUIDELINES AND TOOLS**
- ❑ Document everything you do on *Form 1 - Time / Action Log*. **IF POSSIBLE, assign a Scribe and / or Deputy On-Scene Supervisor.**
- ❑ Obtain briefing from First Responder. Ensure injuries, all safety procedures, site security including necessary equipment have been addressed. Relieve First Responder of On-Scene Supervisor's duties.
- ❑ Establish On-Scene Command Post (OCP) – consider access to sanitation, food and security; post copies of *Form 10: Security Check In / Out* if needed.
- ❑ Discuss with Operations Section Chief and Incident Commander:
  - OCP location, situation details,
  - Emergency Level (use Incident Matrix) and EPZ size
  - additional resources, equipment, services (for site security and to respond to / control incident)
  - suitable Staging Area *(proximity to incident, accessibility, larger area for equipment)*
  - back up, roadblocks, mobile air monitoring units, roving, ignition & ignition sources, spill containment
- ❑ Relay EPZ size / Emergency Level to all field ops; ensure "Four Pillars" are in place prior to operations
- ❑ Assign and dispatch Roadblockers and Rovers (as directed by Operations Section Chief):
  - assign Leads if more than 7 people are reporting to you
  - ensure Roadblockers and Rovers monitor for H_2S and LEL, if applicable
  - set schedule for Roadblockers / Rovers to report in (e.g. every 10 minutes or a change in readings)
- ❑ Activate Staging Area and Staging Area Manager if equipment / services dispatched:
  - inform Staging Area Manager of incoming equipment / services ETAs
  - consider access to sanitation, food and security
- ❑ If a Mobile Air Monitoring unit (AMU) is dispatched, liaise with AMU technician; establish report intervals
- ❑ Discuss ignition with Operations Section Chief. If public is at risk, you may need to decide to ignite:
  - If igniting, review ignition criteria, procedures and equipment (kits) with team members *(see Emergency Response Guide)*
  - If ignition takes place, ensure Post Ignition Procedures are followed (e.g. SO_2 monitoring)
- ❑ Update Operations Section Chief (e.g. changes in wind direction, weather, operational situation)
- ❑ Direct all Media inquiries to Operations Section Chief
- ❑ Ensure responders receive adequate rest periods / support if prolonged situation
- ❑ Advise Operations Section Chief once situation improves (for Level downgrade). Relay any Level Change or Stand Down to all on-site responders and Staging Area Manager.
- ❑ At Stand Down, follow Stand Down, Return to Work and Post-Incident Actions guidelines
- ❑ Submit Time / Action Logs, forms to Safety Officer on request or post-incident; attend debriefing meeting

5.5 DEPUTY ON-SCENE SUPERVISOR

WHO:	Most senior Canadian Natural person on-site ***SUGGESTED:*** *Assistant Foreman, Lead Operator, Rig Manager*
ROLE:	• Back up to On-Scene Supervisor
REPORTS TO:	Operations Section Chief
LOCATION:	On Scene Command Post

FORMS & GUIDELINES

- **Form 1** – Time/Action Log (Visor Kit)
- **Form 10** – Security Check In/Out (Field Form Booklet)
- AB **or** BC Incident Classification Matrix (Emergency Response Guide)

OTHER TOOLS

- Emergency Response Guide
- Corporate and Site-Specific ERP (if applicable)
- Spill Co-op manual

- ❑ **GATHER ALL FORMS, GUIDELINES AND TOOLS**
- ❑ Document everything you do on *Form 1 - Time / Action Log*
- ❑ Back fill duties / responsibilities that cannot be completed by the On-Scene Supervisor
- ❑ Assist the On-Scene Supervisor as required
- ❑ Submit Time / Action Logs and completed forms to the Safety Officer upon request or post-incident
- ❑ Attend a debriefing meeting

5.6 OPERATIONS SECTION CHIEF

WHO:	***RECOMMENDED:*** *Area Foreman, Drilling / Completions Superintendent*
ROLE:	• Coordinate response within hazard area • Provide support to On-Scene Supervisor
REPORTS TO:	Incident Commander
LOCATION:	Incident Command Post (ICP)

FORMS & GUIDELINES
- **Form 1** – Time/Action Log (Visor Kit)
- **Form A** – ICS Form 201 Incident Briefing
- AB **or** BC Incident Classification Matrix (Emergency Response Guide)

OTHER TOOLS
- Emergency Response Guide
- Corporate and Site-Specific ERP (if applicable)
- Spill Co-op manual

❑ **GATHER ALL FORMS, GUIDELINES AND TOOLS**

❑ **ASSIGN A SCRIBE or DOCUMENT** everything on Form 1: Time / Action Log

❑ Discuss current situation with On-Scene Supervisor:
- ensure emergency site is secured / SMS Four Pillars in place
- additional sources of manpower: service rigs, other industrial operators / mutual aid, etc.
- **(GET BIG FAST)**

❑ Make **initial** call to Regulator; inform:
- of situation only – still investigating – Liaison Officer will be in touch when incident verified

❑ Notify Incident Commander

❑ With Incident Commander / On-Scene Supervisor, determine:
- Emergency Level (use applicable Classification Matrix)
- EPZ size (use Site-Specific ERP **OR** 100 m and adjust as needed if no Site-Specific)

❑ Begin filling in *Form A – ICS Form 201 Incident Briefing:*
- ensure everyone knows On-Scene and Incident Command Post locations
- develop communication plans – incoming service providers, public statements (roadblocks, on site), media requests, secondary communications equipment needs

❑ Decide on initial roadblock / air monitoring (personal monitors) locations and public statement(s) for Roadblockers to relay to public

❑ Use area map or Site-Specific ERP – add wind direction, roadblock locations, Staging Area location, other as needed.

❑ Send map photo to On-Scene Supervisor; advise to dispatch Roadblockers and Rovers (if required)

❑ **Delegate** RCMP notification of road closures and request roadblock assistance

❑ Discuss need for mobile air monitoring units (AMU) –
- Level 1: call AMU, put on stand-by. If located at a significant distance away, mobilize immediately
- Level 2 and 3: AMU must be dispatched immediately
- **see Section 3.5.3 Dispatch Requirements for Mobile Air Monitoring**

❑ Provide information as needed to Planning Section Chief to complete *Form 2: Incident Action Plan*

…/continued

OPERATIONS SECTION CHIEF DUTIES – Continued

- ❑ Discuss location of potentially impacted public with Incident Commander:
  - on area map or Site-Specific ERP map, draw EPZ around incident site
  - activate Public Safety Supervisor role if public (residences, trappers, etc.) impacted
- ❑ Brief Public Safety Supervisor on situation and with Incident Commander, determine public protection methods. Consider the following:
  - Level 1: mandatory notification of "sensitive" individuals *(evacuation is at their discretion)*
  - Levels 2 and 3: mandatory shelter-in-place or evacuation of public inside EPZ
  - Consider shelter-in-place if:
    - insufficient time or warning to safely evacuate
    - residents are waiting for evacuation assistance
    - release will be of limited size and/or duration
    - location of release has not been identified
    - public would be at higher risk if evacuated
- ❑ Notify On-Scene Supervisor if more Rovers are required
- ❑ Discuss shut down of ignition sources (LEL situations) or need to ignite plume (public safety) with Incident Commander / On-Scene Supervisor
- ❑ Adjust EPZ based on environmental and site factors such as:
  - monitored readings
  - weather conditions (wind speed / direction)
  - topography (low-lying areas)
- ❑ If situation is prolonged, ensure On-Scene Supervisor has enough manpower to provide back-up support
- ❑ Relay communication updates for impacted public to Public Safety Supervisor
- ❑ Direct all Media inquiries to the Incident Commander / Information Officer
- ❑ Notify Incident Commander when advised that situation has improved / downgrading Emergency Level is possible. Notify On-Scene Supervisor if level officially downgraded.
- ❑ At Stand Down:
  - Notify On-Scene Supervisor
  - **If any resident evacuations,** advise On-Scene Supervisor to dispatch Rovers / Air Monitors to ensure evacuated areas are safe for evacuee re-entry
  - Instruct On-Scene Supervisor to:
    - remove roadblocks *(once RCMP / local municipality confirmed evacuees are safe to return / roadblocks can be removed)*
    - follow Return to Work guidelines *(in Post-Incident Actions. Emergency Response Guide)*
  - Advise Public Safety Supervisor to make "All Clear" notifications
- ❑ Submit Time / Action Logs and completed forms to Documentation Lead or Safety Officer on request or post-incident
- ❑ Attend a debriefing meeting

5.7 INCIDENT COMMANDER

WHO:	***RECOMMENDED: Operations Superintendent, Drilling Manager, Foreman***
ROLE:	• Overall supervisor of site response • Provide overall support/direction/decision-making for all response activities • Ensure all response activities comply with company and gov't policies
REPORTS TO:	Operations Mgr / Corporate Support Team
LOCATION:	Incident Command Post (ICP)

FORMS & GUIDELINES
- **Form 1** – Time/Action Log (Corp ERP)
- **Form 3** – Status (Timeout) Report (Corp ERP)
- **Form 10** – Security Check In/Out (Corp ERP)
- AB **OR** BC Incident Classification Matrix
- **Form 24** – Debriefing Report (Corp ERP)

OTHER TOOLS
- Corporate ERP
- Site-Specific ERP if applicable
- Spill Co-op manual

- ❑ **GATHER ALL FORMS, GUIDELINES AND TOOLS**
- ❑ **ASSIGN A SCRIBE or DOCUMENT** everything on *Form 1: Time / Action Log*
- ❑ Discuss current situation with Operations Section Chief
- ❑ Together with Operations Section Chief / On-Scene Supervisor determine:
  - Emergency Level (use applicable Classification Matrix) – with Regulator
  - EPZ size (use Site-Specific ERP **OR** 100 m and adjust as needed if no Site-Specific)
- ❑ Activate ERP – establish ICP with Operations Section Chief, relay location to On-Scene Supervisor
- ❑ Discuss Form A (Incident Briefing) with Operations Section Chief – objectives / immediate actions:
  - Observe **PEAR priorities** – people (workers, public), environment, assets, reputation
  - Isolate incident and protect public – dispatch Roadblocks with public statement
  - Consider public impact
  - Control incident / prevent escalation – dispatch operators
- ❑ Contact Area Safety & Compliance Coordinator and Environmental Field Coordinator
- ❑ Notify Operations Manager / Corporate Support Team, especially if injuries / fatality
- ❑ Post copies of *Form 10: Security Check In / Out* in ICP – all ICP attendees to log in / out
- ❑ **GET BIG FAST:**
  - recruit a Deputy Incident Commander if possible
  - assemble **several** note takers if possible to:
    - document information on wall charts - ICS Flowchart, Emergency Notification Details
    - document actions for other key ICP roles e.g. Operations Section Chief
- ❑ **ACTIVATE AND ASSIGN ROLES –** consider skill set / knowledge is suitable
  - **Incident Commander responsible for all roles not assigned**
- ❑ Direct Liaison Officer to:
  - immediately notify RCMP / local municipality to request roadblock assistance (in an evacuation, this will also ensure security of evacuated properties)
  - make all Mandatory Notifications and other agencies as needed
  - notify other agencies, etc., as needed for closure of roads, airspace, navigable water courses, cleared pipeline rights-of-way or railways

INCIDENT COMMANDER DUTIES – Continued

- ❑ Direct Logistics Section Chief to dispatch (to Staging Area) as needed:
  - mobile air monitoring units
  - internal spill trailers / WCSS / oil spill cooperative
  - back up communications equipment
  - other resources, equipment, services
- ❑ Direct Planning Section Chief to complete Form 2 (Incident Action Plan), assist / discuss as needed
  - communication plans**:**
    - contacts for incoming services / vendors (helicopters, mobile air monitoring, spill response, etc.)
    - Notice to Airmen (NOTAM) via Regulator
    - public statements (roadblocks, on site, reception centre)
    - media requests
- ❑ Direct Information Officer to:
  - Notify local and Corporate office reception
  - forward Media requests to ir@cnrl.com
  - notify Public Affairs Advisor – media statements must be reviewed with Regulator before release
- ❑ Update Operations Manager / Corporate Support Team of action plan
- ❑ **Status Briefings –** use *Form 3: Status (Timeout) Report* as guide
  - establish a regular schedule, have Deputy or note taker be timekeeper
  - include On-Scene Supervisor – check with each individual for update / issues
  - review wallcharts for gaps – ensure information is updated
  - discuss EPZ adjustment based on environmental / site factors
  - discuss ignition criteria
- ❑ If ignition criteria met, notify Operations Manager to discuss with Senior Management
- ❑ Ensure regular stakeholder updates are done
- ❑ Relay public communication updates from Information Officer to Public Safety Supervisor
- ❑ If required, delegate Liaison Officer to go to gov't Emergency Operations Centre
- ❑ If prolonged situation, consider ICP manpower for back-up support
- ❑ If shifts and / or a transfer of command required:
  - hold transfer of command briefing with incoming Incident Commander
  - for shift transfer, ensure second set of wallcharts are labelled (i.e. Shift #2) and posted
  - notify all Command Posts / Operations Centres that change in command is taking place
- ❑ When advised of improved situation:
  - assess for downgrading Emergency Level or Stand Down
  - decision to downgrade / stand down must be made in consultation with Regulator
- ❑ Ensure all company responders are notified of downgrade / Stand Down

…/continued

INCIDENT COMMANDER DUTIES – Continued

- ❑ At Stand Down:
  - direct Liaison Officer to advise all previously contacted of status change
  - direct Operations Section Chief to ensure impacted public stakeholders are notified of status change
  - have Logistics Section Chief turn around any non-essential services / equipment in transit
  - discuss need for impacted public follow-up meetings / Critical Incident Stress Debriefings (CISD)
  - consider need for Critical Incident Stress Debriefings (CISD) for company responders
  - Direct Operations Section Chief to follow Return to Work guidelines – Sec 2.7.4 Corporate ERP
  - submit completed Time / Action Logs, forms and reports to Documentation Lead or Safety Officer
- ❑ Schedule and facilitate debriefing meeting(s):
  - include all on-site and ICP responders
  - document using *Form 24: Debriefing Report* and submit to Safety Officer
  - Attend other debriefings as required

5.8 DEPUTY INCIDENT COMMANDER

WHO:	***SUGGESTED: Other Operations Superintendent, Operations Manager***
ROLE:	• Back up to the Incident Commander
REPORTS TO:	Incident Commander
LOCATION:	Incident Command Post (ICP)

FORMS & GUIDELINES
(All in Corporate ERP)

- **Form 1** – Time/Action Log
- **Form 3** – Status (Timeout) Report
- **Form 10** – Security Check In/Out
- AB **or** BC Incident Classification Matrix
- **Form 24** – Debriefing Report

OTHER TOOLS

- Corporate ERP
- Site-Specific ERP if applicable
- Spill Co-op manual

- ❑ **GATHER ALL FORMS, GUIDELINES AND TOOLS**
- ❑ Document everything you do on *Form 1 - Time / Action Log*
- ❑ Back fill duties / responsibilities that cannot be completed by Incident Commander or in absence of Incident Commander
- ❑ Submit Time / Action Logs and completed forms to Documentation Lead or Safety Officer upon request or post-incident
- ❑ Attend a debriefing meeting

5.9 LOGISTICS SECTION CHIEF

WHO:	***SUGGESTED: Environment. Field Coordinators, Field Integrity Tech, Area Engineer, available operational personnel***
ROLE:	• contact and dispatch resources AS required
REPORTS TO:	Incident Commander
LOCATION:	Incident Command Post (ICP)

FORMS & GUIDELINES
(All in Corporate ERP)
- **Form 1** – Time/Action Log
- **Form 4** – Resource Request & Status

OTHER TOOLS
- Site-Specific ERP if applicable

- ❑ **GATHER ALL FORMS, GUIDELINES AND TOOLS**
- ❑ Document everything you do on *Form 1: Time / Action Log*
- ❑ Use *Form 4: Resource Request & Status* to capture requests for services / equipment / personnel
- ❑ Obtain briefing from Incident Commander:
  - size of EPZ, Emergency Level
  - locations of / contacts for Staging Area, helicopter landing pad, On-Scene Command Post, Reception Centre
  - confirm where various supplies / resources are to be sent i.e.:
    - response equipment / resources – Staging Area
    - supplies - On-Scene Command Post, Reception Centre
- ❑ If initial spill response required:
  - consult Incident Commander / Planning Section Chief for list of company spill trailers and / or
  - contact WCSS or other Spill Coop as directed by Incident Commander
- ❑ Organize additional resources (i.e.: personnel, mobile air monitoring units, heavy equipment, helicopters / aircraft for aerial surveillance, security measures - fencing, lights, guards, etc.) as directed
- ❑ Consider organizing resources for Staging Area and Reception Centre i.e. food, sanitation, security
- ❑ Provide clear directions to service providers / vendors:
  - where they are to check in (i.e.: Staging Area, OCP, Reception Centre)
  - who they should check in with (i.e.: On-Scene Supervisor, Staging Area Manager, Reception Centre Representative)
  - obtain ETAs
- ❑ Organize buses if required to evacuate a large number of public; contact municipal authority for assistance if needed
- ❑ Advise Incident Commander or at status briefings of ETAs
- ❑ At Stand Down, notify any service providers not yet arrived and advise to turn back
- ❑ Submit Time / Action Logs and completed forms to Documentation Lead or Safety Officer upon request or post-incident
- ❑ Attend a debriefing meeting

5.10 SAFETY OFFICER

WHO:	***SUGGESTED: Area Safety and Compliance Coordinator or safety service provider***
ROLE:	• Provide support to ensure site safety • Monitoring activities at site to ensure adherence to safe work practices
REPORTS TO:	Incident Commander
LOCATION:	On-Site / Incident Command Post

FORMS & GUIDELINES
(All in Corporate ERP)

- **Form 1** – Time/Action Log
- **Form 24** – Debriefing Report

OTHER TOOLS

- Emergency Response Guide
- Site-Specific ERP if applicable

❑ **GATHER ALL FORMS, GUIDELINES AND TOOLS**

❑ Document everything you do on *Form 1: Time / Action Log*

❑ Notify supervisor

❑ Notify applicable regulatory agencies if any worker injuries / fatalities

❑ If requested by Incident Commander, go to site to monitor / advise for adherence to safe work practices and Four Pillars of Safety

❑ If not directed to site, go to Incident Command Post (ICP) and provide support to Operations Section Chief / Incident Commander for site safety issues

❑ Collect all completed forms, reports, notes, wall charts and any other incident-related documents from emergency responders, Command Posts and Documentation Lead after incident is over

❑ Attend a debriefing meeting(s) as applicable. Ensure all debriefing meetings are documented using *Form 24: Debriefing Report*.

❑ Assist with post-incident investigations and reporting

❑ Ensure all incident-related documentation is organized, catalogued and stored at field district office

❑ Forward incident-related documentation to the Emergency Management Team

5.11 LIAISON OFFICER

WHO:	***SUGGESTED: Environment Field Coordinator, other supervisory operations personnel***
ROLE:	• Communicate with government agencies
REPORTS TO:	Incident Commander
LOCATION:	On-Site / Incident Command Post

FORMS & GUIDELINES
(All in Corporate ERP)

- **Form 1** – Time/Action Log
- **Form 5** – AER First Call Communication **OR**
- **Form 6 –** OGC Emergency Incident Form
- **Guideline 2** – Key Gov't Agency Notification Requirements
- **Guideline 8** – CER Event Reporting Guidelines
- **Guideline 9** – E2 Environmental Emergencies Notifications
- **Guideline 10** – TDG / LPG Emergency Responsibilities

OTHER TOOLS:

- Site-Specific ERP if applicable

- ❑ **GATHER FORMS, GUIDELINES AND TOOLS,** document everything on *Form 1 - Time / Action Log*
- ❑ **RECOMMENDED - recruit / ask for help to make calls (Regulator will require time)**
- ❑ Brief with Incident Commander including:
  - size of EPZ, Emergency Level, Incident Action Plan
  - any initial calls to any government agencies already made
- ❑ If instructed by Incident Commander, make initial "heads up" call to Regulator
- ❑ Prior to making Mandatory Notifications:
  - complete *Form 5: AER First Call Communication* **OR** *Form 6: OGC Emergency Incident Form*
  - review *Guideline 2: Key Government Agency Notification Requirements*
  - review notifications required to close public roads, airspace, water courses and other closures (see Section 3.2 Isolation of EPZs)
- ❑ When directed by Incident Commander, make **all** Mandatory Notifications:
  - local police or RCMP – notify of roadblock locations, **request assistance**
  - local municipal authority emergency management – notify of roadblock locations, **request assistance**
  - Regulator (using Form 5 or 6) – confirm Level, notify of road closures
  - Health Authority / Region / District
- ❑ Make all other notifications as per Guideline 2 as required. See *Guideline 8: CER Event Reporting Guidelines*, *Guideline 9: E2 Environmental Emergencies Notifications* and *Guideline 10: TDG / LPG Emergency Responsibilities* where applicable.
- ❑ If potential danger to public beyond EPZ, contact municipal authority ASAP for assistance
- ❑ Ensure regular status updates are done, Emergency Notification Details wall chart is updated
- ❑ Advise Incident Commander or at status briefings of government communications
- ❑ Go to government Operations Centre if requested to do so by Incident Commander
- ❑ At Stand Down, contact all Mandatory Notifications and relay status. Also confirm with:
  - local municipality personnel, RCMP / local authorities that roadblocks can be removed
  - local municipality that evacuees are safe to return to their properties if applicable
- ❑ Submit Time / Action Logs, completed forms to Documentation Lead or Safety Officer when required
- ❑ Attend a debriefing meeting

5.12 PLANNING SECTION CHIEF

WHO:	***SUGGESTED: Environment. Field Coordinator, Field Integrity Tech, Area Engineer, available operational personnel***
ROLE:	• To provide knowledge and expertise in order to control / mitigate the emergency
REPORTS TO:	Incident Commander
LOCATION:	Incident Command Post

FORMS & GUIDELINES
(All in Corporate ERP)
- **Form 1** – Time/Action Log
- **Form 2** – Incident Action Plan

OTHER TOOLS
- Site-Specific ERP if applicable

❑ **GATHER ALL FORMS, GUIDELINES AND TOOLS**

❑ Document everything you do on *Form 1 - Time / Action Log*

❑ Participate in status briefing meetings as required

❑ Assemble a Documentation unit (scribes) with a Lead to provide note taking
- If unit already established, consider additional resources as back up

❑ Prepare *Form 2: Incident Action Plan* and other reports – complete forms as directed by Incident Commander
- ensure communication plans are captured**:**
  - contacts for incoming services / vendors (helicopters, mobile air monitoring, spill response, etc.)
  - Notice to Airmen (NOTAM) via Regulator
  - public statements (roadblocks, on site, reception centre)
  - media requests

❑ Assemble technical specialists and / or operational and technical information as needed

❑ Prepare displays and summaries, maps and projections as required

❑ Assist in demobilization if required – releasing resources from incident in an orderly, safe and cost effective manner

❑ Update *Form 2: Incident Action Plan* as situations change (e.g. objectives are achieved, level downgraded)

❑ At Stand Down:
- Assist Documentation Lead in collecting and organizing all documentation in ICP including Time Action Logs, Security Check In / Out, wall charts, completed forms, etc.
- Submit all documentation to Safety Officer upon request or post-incident

❑ Attend a debriefing meeting

5.13 PUBLIC SAFETY SUPERVISOR

WHO:	***SUGGESTED: Land personnel***
ROLE:	• Coordinate all public safety protection activities including: - designating Reception Centre - designating Reception Centre Rep - determining Rover assignments - notifying public
REPORTS TO:	Operations Section Chief
LOCATION:	Incident Command Post

FORMS & GUIDELINES
(All in Corporate ERP)

- **Form 1** – Time/Action Log
- **Form 15** – Level 1 Notification / Evacuation Script
- **Form 16 –** Levels 2 and 3 Evacuation Script
- **Form 17** – Shelter-in-Place Script
- **Form 18 –** All Clear Scripts
- **Form 20 –** Expense Claim
- **Form 21** – Public Notification Log

OTHER TOOLS

- Site-Specific ERP if applicable

❑ **GATHER ALL FORMS, GUIDELINES AND TOOLS**

❑ **Recruit a note taker** to document everything you do on *Form 1: Emergency Time / Action Log*

❑ **Request or recruit an assistant**

❑ Brief with Operations Section Chief:

- EPZ size, Emergency Level
- location of potentially impacted public (use Site-Specific ERP map, if available or area map) including:
  - public (residences, businesses, recreational areas, etc.) – buses required?
  - railroads
  - other industrial operators (pipelines, wells or facilities)
  - forestry management areas / grazing leases / trappers / guide outfitters
- Special Considerations notifications (see Section 4 in Site Specific ERP if applicable)
- potential landowner impacts if release in water body
- public messages as per Section 4.3.9 Information Disseminated to Public (regulatory requirements)
- Reception Centre location(s)
- public protection measures / public notification according to Level criteria:
  - Level 1: mandatory notification of individuals in EPZ deemed “sensitive,” voluntary evacuation
  - Levels 2 and 3: mandatory shelter-in-place or evacuation of public inside EPZ
- Consider municipal authority assistance if emergency impacts more residents than Canadian Natural personnel can handle and / or for public located beyond EPZ / in urban centres:
  - public notifications (provincial alert system)
  - set up / administration of Reception Centres
  - arrangement of temporary accommodations for evacuees

❑ **Before contacting public**, activate Reception Centre – contact and obtain permission to direct public to the centre (to parking lot if necessary)

❑ Activate / dispatch Reception Center Representative (preferably another Landman); ensure they have:

- public message(s)
- all forms required for the role

PUBLIC SAFETY SUPERVISOR DUTIES – Continued

- ❑ Compile list of impacted public from Site-Specific ERP. Use ERP map to determine safest evacuation routes (upwind / away from incident). Public will be contacted in this order**:**
  - individuals adjacent to incident site and immediately downwind
  - "sensitive" individuals (red on map)
  - remainder of residents in EPZ / Special Considerations (e.g. highway maintenance, loggers)
- ❑ Assemble Telephone Callers, if required – complete appropriate script(s):
  - *Form 15: Level 1 Notification / Evacuation Script*
  - *Form 16: Levels 2 and 3 Evacuation Script*
  - *Form 17: Shelter-in-Place Script*
- ❑ Brief Telephone Callers and provide safe evacuation routes, a completed script(s) and resident lists. Ensure *Form 21: Public Notification Log* is being used.
- ❑ Consider assigning a Telephone Caller Lead if there are more than six Telephone Callers
- ❑ **If heavily populated area impacted (greater than 20)**, use automated notification system:
  - review Section 4 Public Notifications in Site-Specific ERP for instructions.
  - Telephone Callers may be required regardless if system is used
- ❑ Advise Operations Section Chief of notification results:
  - persons who shelter / evacuate and those who refuse
  - Rovers needed for:
    - persons needing evacuation assistance
    - persons who could not be contacted
    - areas where transient users may be in potential danger
  - if buses are required to evacuate large groups of people
- ❑ Maintain communications with Reception Centre Representative(s) – request resources if required
- ❑ Obtain public information update messages from Operations Section Chief / Information Officer:
  - Communicate messages to Telephone Callers and Reception Centre Representative to relay
- ❑ At Stand Down:
  - confirm with Operations Section Chief that evacuees are safe to return / roadblocks removed
  - relay All Clear message to all impacted public – if required, use automated notification system.
  - Direct Telephone Callers to relay *Form 18: All Clear Scripts* to persons not reached by automated notification system
  - Advise Reception Centre Representative to provide All Clear Script to evacuees who checked in
  - Ensure all Public Notification Log forms are completed
- ❑ Forward Expense Claims, Reception Centre invoices to Finance / Admin Section Chief
- ❑ Submit Time / Action Logs, completed forms to Documentation Lead / Safety Officer on request or post-incident
- ❑ Attend a debriefing meeting

5.14 RECEPTION CENTRE REPRESENTATIVE

WHO:	***SUGGESTED: Land personnel***
ROLE:	• To manage the Reception Centre and to address any public concerns or needs
REPORTS TO:	Public Safety Supervisor
LOCATION:	Reception Centre

FORMS & GUIDELINES
(all in Corporate ERP)

- **Form 1** – Time/Action Log
- **Form 18 –** All Clear Scripts
- **Form 19** – Reception Centre Registration
- **Form 20 –** Expense Claim

OTHER TOOLS

- Emergency Response Guide
- Site-Specific ERP if applicable

- ❑ **GATHER TOOLS AND MULTIPLE COPIES OF ALL FORMS**
- ❑ Document everything you do on *Form 1: Time / Action Log*
- ❑ Obtain briefing from Public Safety Supervisor:
  - general information about incident / what information was already provided
  - how many people have been notified
  - Reception Centre location and contacts
  - **information message(s) to be provided to public – do not disclose unauthorized information**
- ❑ Proceed to and activate Reception Centre – check in with Centre custodian / review their protocols
- ❑ Set up Check In area (in parking lot if required) – use *Form 19: Reception Centre Registration* to record information for each evacuee checking in and / or leaving Reception Centre
- ❑ Follow Media Communication guidelines if required (see *Emergency Response Guide*)
- ❑ Distribute *Form 20: Expense Claim* to evacuees leaving Reception Centre
- ❑ Maintain regular communications with Public Safety Supervisor
- ❑ Relay information updates to checked in evacuees as directed by Public Safety Supervisor
- ❑ Advise Public Safety Supervisor if additional resources are required (i.e. food, accommodations, etc.)
- ❑ At Stand Down:
  - use *Form 18: All Clear Scripts* to inform evacuees of all clear status
  - advise Public Safety Supervisor if transportation is required by evacuees to return to their properties
  - Complete Reception Centre Registration form(s) as evacuees return to their properties
  - Release Centre – return keys / obtain invoices if applicable. Advise Public Safety Supervisor.
- ❑ Submit evacuee Expense Claims and Reception Centre invoices to Public Safety Supervisor
- ❑ Submit completed Time / Action Logs and forms to Safety Officer on request or post-incident
- ❑ Attend a debriefing meeting

5.15 INFORMATION OFFICER

WHO:	***SUGGESTED: Stakeholder Relations personnel***
ROLE:	• Coordinate Stakeholder / Media communications
REPORTS TO:	Incident Commander
LOCATION:	Incident Command Post

FORMS & GUIDELINES
- **Form 1** – Time/Action Log

OTHER TOOLS
- Emergency Response Guide
  or
- Site-Specific ERP if applicable

- ❑ **Document everything you do on *Form 1: Time / Action Log***
- ❑ Obtain a status briefing from Incident Commander
- ❑ Notify field office reception and Calgary Corporate Reception, direct them to use standard procedure (direct all Media inquiries to Investor Relations, etc.)
- ❑ Forward Media requests to Investor Relations (ir@cnrl.com) at as soon as possible (Media will have reporting deadlines). Document any Media involvement that has already taken place.
- ❑ If local Media is required to broadcast public safety messages (TV, radio, provincial emergency broadcasts), coordinate with local municipal authority's Emergency Management staff
- ❑ Establish reporting schedule with Incident Commander
- ❑ Contact corporate Public Affairs Advisor and advise of:
  - stakeholder notifications (regulatory, local key stakeholders, immediately impacted public, etc.)
  - incident facts
  - Media involvement to date
- ❑ Work with Public Affairs Advisor to:
  - proactively designate Media spokesperson
  - separate verified "known facts' from unverified information or hearsay (i.e. social media often contains unverified, potentially false information)
  - identify all stakeholders likely to have an interest / develop a communication plan following company protocol that includes initial statements, updates and update schedules, incident resolution statements and timelines. The plan should include at minimum, the following groups where applicable:
    - Shareholders / investment community
    - Government
    - Regulators (submission / review of communication plan may be required)
    - Landowners
    - Sheltered / evacuated public
    - Environmental organizations
    - General public / Media
  - issue public or Media statements (Regulator to be consulted first to provide consistency and accuracy of information) – see the following guidelines

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INFORMATION OFFICER DUTIES – Continued

- ❑ Ensure Public Affairs Advisor is aware of these guidelines to be used when developing public information statements. **These statements must be confirmed by Regulator prior to disseminating to public:**

Evacuated or Sheltered Public – at Onset

- Type and status of incident
- Location and proximity of incident to people in the vicinity
- Public protection measures to be followed and associated instructions (evacuation, sheltering, etc.), and any other emergency response measures to consider
- Actions being taken to respond to the situation, including anticipated time period
- Contacts for additional information

Evacuated or Sheltered Public – During

- Type and status of incident
- Location and proximity of incident to residents
- Public protection measures taken and any applicable instructions / information i.e. sheltering/evacuation instructions, location of Reception Centre
- Actions being taken to respond to the situation including anticipated time period
- Contacts for additional information
- Description of the products involved and their short-term and long-term effects
- Effects the incident may have on people in the vicinity
- Areas impacted by the incident
- Actions the affected public should take if they experience adverse effects

General Public – During

- Type and status of incident
- Location of the incident
- Areas impacted by the incident
- Description of the products involved
- Contacts for additional information
- Actions being taken to respond to the situation, including anticipated time period

Evacuated or Sheltered Public – Post-incident

- Status of recovery
- Financial reimbursement information
- Contact for additional information

- ❑ Be prepared to, or assign a designate to go to any government Operations Centre if required
- ❑ With Public Affairs Advisor, determine need to establish a local Communications Centre if incident generates significant Media / stakeholder interest. If so, coordinate with Incident Commander / Logistics Section Chief / Corporate Support Team to organize centre set up, spokespeople, etc.
- ❑ Inform Public Affairs Advisor that prior to release, incident resolution statements are to be:
  - coordinated with Regulator / local municipal authorities
  - communicated to company reception (field and Corporate)
- ❑ Submit Time / Action Logs and completed forms to Documentation Lead or Safety Officer upon request or post-incident
- ❑ Attend a debriefing meeting

5.16 STAGING AREA MANAGER

WHO:	***SUGGESTED: Assistant Foreman, Lead Operator, Senior Operator, Consultant***
ROLE:	• Oversee and control movement of equipment, services and personnel to and from Staging Area
REPORTS TO:	On-Scene Supervisor
LOCATION:	Staging Area

FORMS & GUIDELINES
(all in red Field Forms Booklet)

- **Form 1** – Time/Action Log
- **Form 13** – Staging Area Log
- **Form 14** – Demobilization Checkout

OTHER TOOLS:

- Canadian Natural ERP Visor Kit
- Emergency Response Guide **OR**
- Site-Specific ERP if applicable

❑ **GATHER ALL FORMS (FIELD FORMS BOOKLET) AND TOOLS**

❑ Document everything you do on *Form 1: Time / Action Log*

❑ At Staging Area, establish check in and traffic control protocols and a layout, including areas for identification / traffic control

❑ Notify On-Scene Supervisor of any support needs – sanitation, food, security, etc.

❑ Using *Form 13: Staging Area Log*, record information for arriving response equipment / services

❑ Review with contract services prior to deployment:

- Four Pillars of Safety
- Canadian Natural's Media Communications (see *Emergency Response Guide*) protocols

❑ Using *Form 13: Staging Area Log,* record information for resources being deployed

❑ Advise On-Scene Supervisor of arrivals, deployments and demobilizations

❑ Monitor and record response equipment / services demobilizations using *Form 14: Demobilization Checkout*

❑ Submit Time / Action Logs and completed forms to Safety Officer upon request or post-incident

❑ Attend a debriefing meeting

5.17 ROADBLOCK PERSONNEL

WHO:	***SUGGESTED: Operators, well site personnel or service providers***
ROLE:	• Restrict access into hazard area • Monitor for hazardous gases using handheld gas detectors
REPORTS TO:	Roadblock Lead **or** On-Scene Supervisor
LOCATION:	Roadblock location(s) as directed

FORMS & GUIDELINES
(in red Field Forms Booklet)

- **Form 1** – Time/Action Log
- **Form 11** – Roadblock Control Log
- **Form 12** – Air Quality Monitoring Record

OTHER TOOLS

- Roadblock Kit
- Emergency Response Guide
- Canadian Natural ERP Visor Kit

- ❑ **GATHER ALL FORMS (FIELD FORMS BOOKLET) AND TOOLS**
- ❑ Document **everything you do** on *Form 1: Time / Action Log*
- ❑ Discuss with On-Scene Supervisor:
  - EPZ size, Emergency Level
  - Public statement to advise public – incident details, hazards
  - Media communications / inquiries
  - Possible detour routes
- ❑ Obtain the following equipment:
  - Roadblock kit, if available
  - Appropriate personal protective equipment (PPE), handheld gas detectors
  - Communications equipment (radio / cell phone)
- ❑ If roadblock kit unavailable, use other methods (company vehicle, etc.). Report arrival to Roadblock Lead or On-Scene Supervisor.
- ❑ **Be visible to traffic – protect yourself at all times**
- ❑ Ensure location can accommodate large vehicle turns – relocate roadblock if necessary and report to On-Scene Supervisor
- ❑ Use public messages and / or follow Media guidelines (see *Emergency Response Guide*) as needed. Direct Media inquiries as discussed with On-Scene Supervisor
- ❑ Only those vehicles authorized by On-Scene Supervisor should be allowed to proceed through
- ❑ **You cannot legally prevent vehicles from going through.** If a person is adamant about entering area, advise of hazards, collect information listed below, allow them to proceed and immediately report to On-Scene Supervisor.
- ❑ Use *Form 11: Roadblock Control Log* to record all vehicles that proceed through roadblock. If form is not available, record:
  - date, roadblock location
  - vehicle type, color and model, license number and province
  - company name (if applicable), driver's name and contact number
  - number of passengers
  - purpose for entering EPZ
  - time entering / exiting EPZ (use 24-hour clock i.e.: 8 pm = 20:00)

ROADBLOCK PERSONNEL – Continued

- ❑ Monitor for H_2S and LEL at roadblocks. Record monitored information on *Form 12: Air Quality Monitoring Record*. If form not available, record:
  - date and time (use 24-hour clock i.e.: 8 pm = 20:00)
  - monitored readings
  - where reading was taken
  - weather conditions
  - temperature and wind direction
- ❑ Report monitored readings to On-Scene Supervisor as per reporting schedule
- ❑ Remove roadblock upon instruction from On-Scene Supervisor
- ❑ Replace any used items and return roadblock kit
- ❑ Submit Time / Action Logs and completed forms to the Safety Officer upon request or post-incident
- ❑ Attend a debriefing meeting

5.18 AIR MONITORS

WHO:	***SUGGESTED: Operators, well site personnel or service providers***
ROLE:	• Monitor hazardous gases using handheld detectors • Track plumes
REPORTS TO:	Air Monitor Lead **or** On-Scene Supervisor
LOCATION:	Roadblock or other location(s) as directed

FORMS & GUIDELINES
(in red Field Forms Booklet)
- **Form 1** – Time/Action Log
- **Form 12** – Air Quality Monitoring Record

OTHER TOOLS
- Emergency Response Guide
- Canadian Natural ERP Visor Kit

- ❑ **GATHER ALL FORMS (FIELD FORMS BOOKLET) AND TOOLS**
- ❑ Document everything you do on *Form 1: Time / Action Log*
- ❑ Discuss with On-Scene Supervisor:
  - EPZ size, Emergency Level
  - Public statement to advise public – incident details, hazards
  - Media communications / inquiries
  - Recording and reporting schedules
- ❑ Obtain the following:
  - Breathing apparatus / appropriate personal protective equipment (PPE)
  - Handheld gas detector
  - Communication equipment (radio or cell phone)
  - ERP map showing EPZ, if available
- ❑ Mobilize to assigned location and monitor for H_2S and LEL
- ❑ Record readings on *Form 12: Air Quality Monitoring Record* at regular intervals. If unavailable, record:
  - date, time
  - monitored readings
  - location where readings were taken
  - weather conditions
  - temperature
  - wind direction
- ❑ Report arrival / readings to On-Scene Supervisor as discussed or immediately at condition changes:
  - H_2S is detected in unevacuated areas
  - Any new information develops (i.e.: plume changes direction)
- ❑ Continue monitoring until instructed otherwise
- ❑ Return monitoring equipment. Ensure batteries are recharged / equipment is ready for next use.
- ❑ Submit Time / Action Logs and completed forms to Safety Officer upon request or post-incident
- ❑ Attend a debriefing meeting

5.19 ROVERS

WHO:	***SUGGESTED: Operators, well site personnel***
ROLE:	• Locate, notify, give shelter-in-place instructions or evacuate impacted public • Ensure evacuated areas are safe to re-enter on Stand Down
REPORTS TO:	Rover Lead **or** On-Scene Supervisor
LOCATION:	Location(s) as directed

FORMS & GUIDELINES
(in red Field Forms Booklet)

- **Form 1** – Time/Action Log
- **Form 12** – Air Quality Monitoring Record
- **Form 22** – Resident Evacuation Notice
- **Form 23** – Rover Log

OTHER TOOLS

- Emergency Response Guide
- Canadian Natural ERP Visor Kit

❑ **GATHER ALL FORMS AND TOOLS**

❑ Document everything you do on *Form 1: Time / Action Log*

❑ **Obtain the following:**

- breathing apparatus / appropriate personal protective equipment (PPE)
- handheld monitor that detects LEL and H_2S
- communications equipment (radio / cell phone)
- strong tape for posting *Form 22: Resident Evacuation Notices* on residence doors
- permanent marker / pen / flashlight

❑ **Discuss with On-Scene Supervisor:**

- EPZ size, Emergency Level
- Public Safety Supervisor name / contact
- area(s) to be roved
- Reception Centre location
- public statement – incident details, hazards, shelter / evacuation, etc
- Media communications / inquiries
- reporting schedule e.g. after each location, etc.

❑ Mobilize as directed:

- determine safe route in / out of EPZ
- take and document air monitoring readings using *Form 12: Air Quality Monitoring Record*. If form not available, record:
  - date, time, monitored reading
  - where reading was taken
  - weather conditions

❑ Notify any area public to evacuate to Reception Center – provide directions for safe route out of area

❑ Immediately report to On-Scene Supervisor if there are individuals requiring assistance

❑ Check all barns, shops, sheds, public facilities, etc., for public / transient activity

❑ Continue to take / document air monitoring readings at each location

❑ Record all meetings on *Form 23: Rover Log*

❑ Notify On-Scene Supervisor of any high H_2S or LEL monitoring readings

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ROVERS' DUTIES - Continued

- ❑ Complete and post *Form 22: Resident Evacuation Notice* on doors of all residences you are dispatched to. If notice is not available, leave a message taped to door indicating:
  - Canadian Natural
  - Public Safety Supervisor name / contact
  - date and time
  - that the area has been evacuated
  - the need to proceed to Reception Centre (name and location)
  - clear driving directions to safely exit area
- ❑ If directed by On-Scene Supervisor, monitor for gas to ensure evacuated areas are safe to re-enter
- ❑ At Stand Down, return all equipment. Ensure batteries are recharged / equipment is ready for next use
- ❑ Submit Time / Action Logs and completed forms to Safety Officer upon request or post-incident
- ❑ Attend a debriefing meeting

5.20 TELEPHONE CALLERS

WHO:	***SUGGESTED: Operators, office personnel***
ROLE:	• Notify impacted public • Give shelter-in-place / evacuation / All Clear instructions
REPORTS TO:	Telephone Caller Lead **or** Public Safety Supervisor
LOCATION:	Incident Command Post

FORMS & GUIDELINES
(all in Corporate ERP)

- **Form 1** – Time/Action Log
- **Form 15** – Level 1 Notification / Evacuation Script
- **Form 16** – Levels 2 and 3 Evacuation Script
- **Form 17** – Shelter-in-Place Script
- **Form 18** – All Clear Script
- **Form 21** – Public Notification Log

OTHER TOOLS

- Site-Specific ERP

❑ **GATHER ALL FORMS AND TOOLS**

❑ Document everything you do on *Form 1: Time / Action Log*

❑ Discuss with / obtain from Public Safety Supervisor:
- incident briefing
- **public information – what can and cannot be disclosed**
- script(s) to be used – fill in as needed (Form 15 or 16 or 17)
- list of persons to be called and call order if required
- Reception Center location and safest evacuation route

❑ Commence early notification / shelter-in-place / evacuation calls

❑ Record information on *Form 21: Public Notification Log* for each call made

❑ Immediately advise Public Safety Supervisor after contacting public who:
- require assistance
- cannot be contacted
- refuse to shelter-in-place / evacuate

❑ After completing call list, advise Public Safety Supervisor of:
- who will shelter-in-place or evacuate
- who will proceed to Reception Center if evacuating

❑ if and when directed, communicate authorized public information updates to previously contacted sheltered / evacuated public

❑ At Stand Down, when directed by Public Safety Supervisor, relay *Form 18: All Clear Script* to all previously contacted public

❑ Submit Time / Action Logs and completed forms to Documentation Lead or Safety Officer upon request or post-incident

❑ Attend a debriefing meeting

5.21 FINANCE / ADMINISTRATION SECTION CHIEF

WHO:	***SUGGESTED: Senior Field Accounting / Administrative Staff***
ROLE:	• Provide incident cost tracking / processing
REPORTS TO:	Incident Commander
LOCATION:	Incident Command Post

FORMS & GUIDELINES

- **Form 1** – Time/Action Log

OTHER TOOLS

- Corporate ERP

- ❑ Document everything you do on *Form 1: Time / Action Log*
- ❑ Obtain briefing from Incident Commander including what response equipment / services have been utilized to date
- ❑ Request AFEs from Operations Manager / Corporate Support Team as needed
- ❑ Set up cost tracking processes – ensure financial records are maintained throughout incident
- ❑ Collect service provider and / or consultant time tickets and copies of Demobilization forms
- ❑ Process public expense claims in a timely manner
- ❑ Process workers' compensation claims related to response or direct to applicable resource in Corporate Support Team
- ❑ Provide additional support as directed
- ❑ Liaise with applicable resource in Corporate Support Team for assistance if required
- ❑ Submit Time / Action Logs and completed forms (excluding documents sent for processing) to Documentation Lead or Safety Officer upon request or post-incident
- ❑ Attend a debriefing meeting

5.22 OPERATIONS MANAGER / CORPORATE SUPPORT TEAM

WHO:	***SUGGESTED: Safety (VP / Director / Manager), Conventional / Drilling Manager, Operations / Drilling VP / other support as required***
ROLE:	• Supports North American operations • Provide guidance / support to Incident Commander • Liaise between ICP and Corporate Support Team
REPORTS TO:	Senior Management Committee
LOCATION:	Emergency Operations Centre (Calgary)

FORMS & GUIDELINES

- **Form 1** – Time/Action Log

OTHER TOOLS

- Corporate ERP
- Site-Specific ERP

❑ **GATHER FORMS AND ACCESS TOOLS**

❑ Document everything you do on *Form 1: Time / Action Log*

❑ **FOR SIGNIFICANT EVENTS:**

- Establish Emergency Operations Centre (EOC) – Bankers Hall East (BHE) Room 26002
- If BHE Room 26002 unavailable, utilize mobile Canadian Natural Emergency Response cabinet and take over nearest meeting room
  - inform Incident Commander of EOC location; provide contact number
  - consider using video feeds to Incident Command Post
  - consider recruiting scribes – note taking and wall charts
  - inform Safety & Compliance Manager and Emergency Management Manager

❑ Provide input and advice on critical decisions regarding emergency

❑ If required, notify, assemble and brief Senior Management Committee (SMC)

❑ Immediately advise SMC of critical situations (i.e. ignition criteria met, fatality)

❑ Immediately inform Incident Commander if SMC determines that ignition must be made

❑ Ensure Corporate Reception / corporate communication staff (Public Affairs Advisor) have been notified

❑ Assist in drafting statements to be issued to Media and other stakeholders if required

❑ If necessary, expand Support Team to include representatives / leads / Managers from:

- Stakeholder Relations
- Environment / Regulatory
- Security
- Legal
- Human Resources
- Insurance
- Finance
- other technical experts as required

…/continued

OPERATIONS MANAGER / CORPORATE SUPPORT TEAM DUTIES – Continued

- ❑ At Emergency Level downgrade / Stand Down:
  - Notify Corporate Support Team, Corporate Reception and Senior Management Committee
  - Assist corporate communication staff with drafting post-incident stakeholder communications as per Section 4.0 Communications Plans
- ❑ Submit Time / Action Logs and completed forms to Safety or Emergency Management upon request or post-incident
- ❑ Ensure company incident / accident investigations are conducted
- ❑ Schedule (if required) and attend debriefing meetings

5.23 SENIOR MANAGEMENT COMMITTEE

WHO:	**Senior Management Committee**	**FORMS & GUIDELINES** • **Form 1** – Time/Action Log
ROLE:	• Supports North American operations • Provide support and direction to Operations Manager / Corporate Support Team	**OTHER TOOLS**
REPORTS TO:	Board of Directors	
LOCATION:	Emergency Operations Centre (Calgary)	

- ❑ Document everything you do on *Form 1: Time / Action Log*
- ❑ If required, proceed to Emergency Operations Centre (EOC) in designated Bankers Hall East Emergency Response Room (BHE 26002)
- ❑ If required, work with corporate communications staff / Public Affairs Advisor to review and approve internal and external communications
- ❑ Provide direction and support to Operations Manager / Corporate Support Team as needed
- ❑ Ensure availability for response to critical situations (e.g. ignition criteria met, fatality, notification of next-of-kin as per Section 4.3.10, etc.)
- ❑ Notify Board of Directors if necessary
- ❑ Submit Time / Action Logs and completed forms to Safety or Emergency Management upon request or post-incident
- ❑ Attend a debriefing meeting if necessary

5.24 GOVERNMENT ROLES AND RESPONSIBILITIES

This section is for informational purposes only and is not intended to supersede or replace applicable provincial or federal legislation. It contains a general overview of government roles and responsibilities from all three levels of government – municipal, provincial and federal – that may require notification based on the nature of the incident. Site-Specific ERPs include a more precise outline of external roles and responsibilities as well as references to any emergency response support / mutual aid understandings that are applicable to each individual gathering system.

The roles and responsibilities outlined in this section are updated periodically. Information collected annually from applicable local authorities relevant to the incident will be obtained when updating Site-Specific ERPs. This process is accomplished through the use of consultation forms that:

- Collect contact information for emergency notification and updating purposes
- Inform government / agency / emergency responder of company practices and procedures
- Make available relevant information consistent with that which is specified in the ERP to the government / agency / emergency responder
- Clarify roles, responsibilities and capabilities of both parties, including support and / or additional aid from agency
- Inform the government / agency / emergency responder of the potential hazards of company facilities
- Inform government / agency / emergency responder of company risk controls / mitigation activities
- Collect the authorization signature of the relevant agency representative

These understandings / consultation forms are filed separately with the Emergency Management group and are not included in this plan.

5.24.1 MUNICIPAL AGENCIES

A) LOCAL AUTHORITY (MUNICIPALITY / URBAN CENTRE)

NOTE: This is a general overview of the common roles and responsibilities of local municipalities and may vary with each authority. Site-Specific ERPs may include a more precise outline of external roles and responsibilities as well as references to any emergency response support / mutual aid understandings that are applicable to each individual gathering system.

- Initiates and manages local municipal disaster services response
- Dispatches representative(s) to Emergency Operations Centre, when established and as required
- If required, activates their municipal emergency operations centre and coordinates municipal activities at this centre
- Upon request, may assist with setting up and administration of Reception Centre.
- Assists with arrangements of temporary accommodations for residents who have been evacuated
- Assist with establishing, set up and maintenance of roadblocks as resources and staff training permit
- Ensures that if available, local emergency services and resources are available to the level that they are trained
- Assists with off-site fire protection
- Activates Emergency Public Warning System (EPWS) to alert public to life threatening hazards as required according to criteria set out by AEMA
- Supports operator in dealing with the emergency situation
- Initiate public protection methods as required

…/continued

- If necessary, declares a local state of emergency to provide local authorities with special powers (mandatory evacuation, use of or entry into private property, conscription, demolition of private property structures for safety reasons, etc), and
- Establish a public information service, including use of news media to inform and instruct the public of the emergency as required
- Assist as required with post incident damage assessment

B) HEALTH AUTHORITIES:

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
- 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 (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 will activate its emergency response management plan(s).

Roles & Responsibilities - PREPAREDNESS (PRE-EVENT):

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

Roles & Responsibilities - RESPONSE:

- Activate internal health emergency management plans related to ongoing provision of services (listed above);
- Provide acute care and emergency services at existing Northern Health hospitals/health centres;
- Work with BC Emergency Health Services (Ambulance) and the BC Patient Transfer Network to transport patients to the appropriate levels of care;
- Apply and enforce the Public Health Act, and associated regulations;

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- 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 9-1-1 or the local contact number if 9-1-1 is not available in your area.

ALBERTA HEALTH SERVICES (AHS) – ENVIRONMENTAL PUBLIC HEALTH (EPH)

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

EPH will endeavor to:

- Participate with the Licensee in the development of their Emergency Response Plans as it relates to the EPH Program's role and responsibility.
- Provide the AHS Zone Single-Point-of-Contact (SPOC) emergency phone number to enable the Licensee to notify and alert the Zone of an emergency. From the initial notification or alert, AHS emergency response will fan out to and coordinate with other AHS programs and facilities as necessary. The 9-1-1 EMS services remain independent of the Zone SPOC notification / alert process.
- Participate with stakeholders in preparedness training and exercises associated with a Licensee's simulated activation of an Emergency Response Plan in which EPH has a role and responsibility.
- Participate in public information sessions during the Licensee's Emergency Response Plan development process when appropriate and as resources allow.
- Provide guidance to stakeholders and local municipal authorities in identifying sites suitable for establishing and operating an evacuation Centre and/or reception Centre, including operational requirements.
- In consultation with the Zone Medical Officer of Health (MOH) provide guidance to stakeholders on substances that may affect public health, including Alberta Health Acute Exposure health effects for hydrogen sulphide and sulphur dioxide.
- Conduct assessments, inspections and give regulatory direction, when appropriate, to ensure the requirements of provincial legislation and EPH program areas of responsibilities for public health protection and disease prevention are maintained.
- Notify the Zone Medical Officer of Health of any incident affecting or potentially affecting other AHS programs or facilities. The Zone MOH will notify and coordinate emergency response in other program areas and facilities as necessary.
- Establish EPH emergency management operations, when appropriate, to support regional response efforts and liaise with the Government Emergency Operations Centre, Municipal Emergency Operations Centre and / or industry Emergency Operations Centre, if needed.

…/continued

- Assist the Zone Medical Officer of Health, local municipal authority, and Public Information / Communication Officers in the development, issuance, and rescinding of public health, public evacuation and shelter-in-place advisories.
- Provide guidance to stakeholders on matters relating to evacuation of the public and / or public facilities and the re-occupancy of those evacuated areas or facilities.
- Record and respond to health complaints or concerns from the public during and following an incident.
- Participate in stakeholder debriefings as necessary

SASKATCHEWAN HEALTH REGIONS

In a Level 1 Low Impact Event

- Will receive notification starting at this Level and may respond to inquiries from the public and media if notified

In a Level 2 Moderate Impact Event or Level 3 High Impact Event

- Will ensure that local hospitals are alerted when there is potential for an impact from a release
- Will provide appropriate representation at the off-site Regional Emergency Operations Centre or Incident Command Post when it is established or when requested
- Will provide health related information about toxic chemicals to the Emergency Operations Centre, the Public Information Officer, the Media and the general public as required
- Will provide guidance on the development of public health advisories, public evacuation and sheltering
- Will monitor the health effects resulting from the event and ensure appropriate data is collected and maintained
- Will investigate health effects complaints

C) RCMP

- May assist with initial area isolation, evacuation and / or assistance with closure of roads
- Provide security, traffic and crowd control
- May assist in search and rescue activities
- Maintain law and order

5.24.2 PROVINCIAL AGENCIES

A) PROVINCIAL OIL AND GAS REGULATORS

British Columbia: BC Oil & Gas Commission (BCOGC)
Alberta: Alberta Energy Regulator (AER)
Saskatchewan: Ministry of Energy and Resources (MER)
Manitoba: Emergency Measures Organization (EMO)
Northwest Territories: The Office of the Regulator of Oil and Gas Operations (OROGO) (for non-Federal lands)

BCOGC:

- Oversees the operator's response to an incident
- Notified by EMBC of incidents within OGC's jurisdiction (on lease)
- Establishes communication with the operator
- Confirms incident level with operator
- Confirms downgrade of incident level
- Issues road closure order upon request from the operator
- Requests NOTAM order from NAV Canada upon request from the operator
- May send an OGC representative to the operator's On-Site Command Post and / or Evacuation Centre
- May establish a government EOC at the OGC office
- Confirms ignition decision with operator if time permits
- Confirms Media releases to be sent out by operators

AER / MER / EMO / OROGO

- Oversees operator's response; establishes communication with the operator during emergencies
- Confirms the Emergency Level in consultation with operator; also confirms decision to downgrade an emergency and to stand down
- Alerts the provincial Emergency Management Organization that may initiate fan-out calling
- Issues road closure order upon request of operator. **NOTE:** in Alberta, this is the responsibility of the local authority (municipality or urban centre)
- As required, may issue a Fire Hazard (FH) Order to restrict access to a designated area (AB)
- May request a closure of airspace (NOTAM) from NAV Canada upon request of operator
- As required, dispatches area office staff to the On-Scene Command Post (OCP) and / or Incident Command Post (ICP) and / or Reception Centre
- May establish a Government EOC (GEOC) at the regional office (AB)
- May establish a Provincial Operations Centre (POC)
- Confirms ignition decision with licensee if time permits
- Confirms and may assist with Media communications

B) EMERGENCY MANAGEMENT ORGANIZATIONS

British Columbia: Emergency Management BC (EMBC)
Alberta: Alberta Emergency Management Agency (AEMA)
Saskatchewan: Saskatchewan Public Safety Agency (SPSA)
Manitoba: Manitoba Emergency Measures Organization (EMO)
Northwest Territories: Municipal and Community Affairs (MACA), Public Safety

- Implements the government telephone fan-out to alert all affected departments and agencies that may include:
  - local authorities whose geographic area is or may be affected
  - RCMP detachment nearest the scene or the local police
  - environmental agencies
  - land and forest agencies
  - fish and wildlife agencies
  - health authorities
- Activates the Provincial Emergency Coordination Centre (PECC) if required (BC)
- Activates the Provincial Operations Centre (POC)
- May provide liaison to the government's emergency centre
- Can provide advice and assistance to Municipal / Regional District or County
- May advise or assist the licensee and local first responders with:
- Emergency response management, including the declaration of a provincial state of emergency
- Coordination of an evacuation
- Notification of NAV Canada for the arrangement of closure of airspace and the issuance of a Notice-To-Airmen (NOTAM) to restrict air traffic within the immediate area surrounding the incident site

C) MINISTRIES OF ENVIRONMENT

British Columbia: Environment & Climate Change Strategy
Alberta: Environment and Parks
Saskatchewan: Environment
Manitoba: Environment and Biodiversity
Northwest Territories: Environment and Natural Resources

- Provides representation to the licensee's On-Scene Command Post and government emergency centre to provide advice regarding environmental impacts
- Determines areas at risk and ensures adequate equipment is available and appropriate data is collected
- Notifies Environment Canada

D) LANDS AND FORESTS

British Columbia: Wildfire Management
Alberta: Wildfire Management Branch
Saskatchewan: Wildfire Operations
Manitoba: Wildfire Program
Northwest Territories: Fire Operations

- Provides forest fire suppression response within provincial forests, provincial parks, recreation sites and vacant Crown lands
- Provides advice on forest fire conditions / behaviour and recommends appropriate course of action
- May provide specialized firefighting and safety equipment
- Assists in location of transients and search and rescue operations
- Provides advice and input into the impacts of an ignition decision

E) AGRICULTURE

British Columbia: Agriculture, Food and Fisheries
Alberta: Agriculture and Forestry
Saskatchewan: Agriculture
Manitoba: Agriculture and Resource Development
Northwest Territories: Agriculture Sector

- Provides advice to farmers on the protection of crops and livestock
- Acts as the liaison between agriculture community and provincial government
- May provide support in the coordination of the emergency relocation and care of poultry and livestock during an emergency
- May assist agricultural producers with the following in the event of an emergency:
- Ensures the safety of all responders during times of crisis
- Minimizes loss (human, livestock, and infrastructure) to agricultural sectors form major emergencies and disasters
- Assists agricultural sectors in continuing daily operations during emergencies
- Reduces the economic consequences of emergencies and disasters affecting agriculture within the province
- May provide summary of agriculture and livestock impacts during Post Incident Assessment process if applicable
- May conduct agriculture and livestock impact assessments
- May implement response activities as required

F) FISH AND WILDLIFE

British Columbia: Conservation Officer Service
Alberta: Fisheries / Wildlife Management Services
Saskatchewan: Ministry of Environment
Manitoba: Fish and Wildlife
Northwest Territories: Environment and Natural Resources

- May assist in evacuation and location of transients in rural areas

G) TRANSPORTATION

British Columbia: Transportation & Infrastructure
Alberta: Transportation
Saskatchewan: Highways and Infrastructure
Manitoba: Infrastructure
Northwest Territories: Infrastructure

- May assist in highway closures by providing equipment and manpower

H) OCCUPATIONAL HEALTH AND SAFETY / WORKPLACE HEALTH AND SAFETY / COMPENSATION BOARDS

British Columbia: WorkSafeBC
Alberta: Workers' Compensation Board - Alberta
Saskatchewan: Saskatchewan Workers' Compensation Board
Manitoba: Workers' Compensation Board of Manitoba
Northwest Territories: Workers' Safety & Compensation Commission

- Monitors the health and safety aspects of applicable occupations within the hazard area to ensure that necessary precautions are taken to protect the worker's safety

5.24.3 FEDERAL AGENCIES

A) Canada Energy Regulator (CER)

The Canada Energy Regulator's (CER) 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 at an CER regulated energy facility, CER staff may attend the site to oversee the 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 an adequate and appropriate clean-up and remediation of any environmental effects caused by the incident.

The CER is the lead regulatory agency in emergency situations that occur on CER-regulated facilities or operations and the Transportation Safety Board of Canada (TSB – see information in the following section) has the option to choose to be the lead investigator for determining the cause and contributing factors leading to an incident / emergency. The CER, in cooperation with the TSB, investigates reported incidents to determine factors leading to an incident, whether any trends are evident and what action is necessary to prevent similar occurrences in the future.

As lead regulatory agency, the CER:

- monitors, observes, and assesses the overall effectiveness of a company's emergency response and holds the company accountable for responding appropriately
- confirms that a company is following its emergency procedures manual commitments, plans, and procedures and CER regulations, and identifies non-compliances and potential additional threats
- participates in single or unified command and other roles within the ICS framework (or similar framework if the ICS is not used)
- investigates the event, either together with the Transportation Safety Board, under the Canada Labour Code, or under the CER Act or COGOA (whichever is applicable)
- coordinates post-emergency follow-up meetings with the company to further ensure compliance and to share knowledge obtained during the emergency
- inspects and examines the integrity of the pipeline or facility and verifies that repairs are completed appropriately
- oversees cleanup and approves the restart of the pipeline
- coordinates Indigenous and stakeholderFootnote4 feedback both during and after the emergency phase
- requires appropriate remediation of contaminated areas
- takes enforcement actions as required

Notification of an Emergency Situation (Federal)

The CER and TSB have a single-window reporting approach; however the severity of the incident / event determines how and when it is reported. The Forms and Guidelines section of this manual contains federal incident reporting instructions as per *Guideline 8: CER Event Reporting Guidelines*.

B) Transportation Safety Board of Canada (TSB)

The TSB's 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 investigations and on the findings in relation thereto

The TSB's mandate is distinct from those of other organizations such as Transport Canada (TC), the Canada Energy Regulator (CER), the Royal Canadian Mounted Police (RCMP), the Canadian Coast Guard (CCG), and the Department of National Defense (DND), all of whom play a role in the transportation field. As an independent federal agency, the TSB is not associated with any of these organizations, although it works in cooperation with them when conducting investigations and making safety recommendations.

When the TSB investigates an accident, no other federal department (except the DND and RCMP) may investigate for the purpose of making findings as to the causes and contributing factors of the accident. Transport Canada and the CER may investigate for any other purpose, such as regulatory infractions. In these instances, the TSB is the lead investigator for determining the cause and contributing factors leading to an incident / emergency.

Notification of an Emergency Situation (Federal)

The TSB and CER have a single-window reporting approach; however the severity of the incident / event determines how and when it is reported. The Forms and Guidelines section of this manual contains federal incident reporting instructions as per *Guideline 8: CER Event Reporting Guidelines*.

C) Emergency Response Assistance Canada (ERAC)

BEFORE THE INCIDENT	DURING THE INCIDENT	AFTER THE INCIDENT
ERAC is a not-for-profit cooperative organization built by industry for industry providing safe, timely, effective, sustainable, cost effective flammable liquids and gasses emergency preparedness and response assistance to all Plan Participants and Stakeholders of ERAC • ERAC will act on behalf of the Plan Participants to develop, submit, update and respond o the requirements of the Plan Participant ERAP submitted to and approved by Transport Canada • ERAC provides a network of experience, trained Technical Advisors (TAs), Remedial Measures Advisors (RMAs) and Response Teams who responds 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 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 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) • Response is also provided to emergencies involving Butadiene – 1, 3 (stabilized) (UN1010) In addition, ERAC responds 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 and 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 activates 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

SOURCE: www.erac.org

D) Environment and Climate Change Canada (ECCC)

BEFORE THE INCIDENT	DURING THE INCIDENT	AFTER THE INCIDENT
ECCC's Environmental Emergencies Program (EEP) implements and promotes the compliance of the Environmental Emergency Regulations under *CEPA 1999* to protect the environment and human health from accidental releases of hazardous substances from fixed industrial facilities. The EEP's National Environmental Emergencies Centre (NEEC): • Provides science-based expert advice 24/7 • Provides expert advice on environmental assessments as well as technical advice to industry to improve their emergency plans • Implements a pollution incident notification system to notify authorities when a spill of hazardous substances occurs in contravention of the *Fisheries Act* or *CEPA 1999*	• EEP collaborates with federal, provincial, territorial and international environmental protection agencies to enable rapid sharing of information • Informs actions that reduce the consequences of environmental emergencies • The NEEC may chair a Science Table when requested to bring together relevant experts in the field of environmental protection during significant environmental emergency response efforts • Provide advice on the characteristics of substances and how they might affect human health and environment; weather forecasting and spill dispersion modeling to identify where these substances are likely move in the environment and sampling and laboratory analytical support • Assign inspectors where appropriate; assist with plume monitoring	• THE NEEC Can conduct post-emergency assessments • Provide specialized advice in shoreline clean-up assessment techniques (SCAT) • Provide endpoint advice on ecosystem recovery objectives

E) Fisheries & Oceans Canada (DFO)

BEFORE THE INCIDENT	DURING THE INCIDENT	AFTER THE INCIDENT
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 (DFO) • Work together with provincial environment protection agencies and may be initially notified by Environment Canada • 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 programs' partners, including Transport Canada and Environment Canada, to ensure a consistent coordinated approach to marine pollution incident response • Aids in search and rescue operations	• Work closely with Environment Canada, the Canadian Coast Guard and other provincial environmental agencies

F) First Nations & Inuit Health (FNIH)

BEFORE THE INCIDENT	DURING THE INCIDENT	AFTER THE INCIDENT
• Deliver public health and emergency management for on-reserve First Nations and Inuit communities • Maintain a 24-hour emergency telephone service • Receive Emergency Response Plans	• Monitor the health effects of the incident on the First Nations people of the area	• Ensure appropriate data is collected to monitor the health effects of the incident • Recommend further investigation or research after the event is warranted

SOURCES: agency websites as applicable

G) Indigenous Services Canada (ISC) - formerly AANDC:

Under the umbrella of Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) – formerly INAC

BEFORE THE INCIDENT	DURING THE INCIDENT	AFTER THE INCIDENT
• Ensure that First Nation communities have emergency management services comparable to those of Canadians in similar situations • Work to establish an all-hazards approach for responding to emergencies that impact First Nation communities • Responsible for developing, exercising, implementing and maintaining regional emergency management plans • Responsible for negotiating agreements with their respective provincial government for the delivery of management services • Each region is responsible for working with First Nations communities and emergency management organizations to evaluate the threat and risks associated with emergencies and take steps to mitigate potential emergencies • Regions and HQ are responsible for activities arising from the preparedness phase of emergency planning, including on-going training, exercising and supporting the development and maintenance of First Nations Emergency Management Plans • Responsible for conducting national or regional exercises, including table top exercises • The Minister of Public Safety Canada is responsible for developing, exercising, implementing and maintaining ISC's National Emergency Management Plan	• The ISC HQ Emergency Management (EM) Operations Centre liaises with the Government of Canada (GOC) in an effort to ensure an integrated GPC response to emergencies in First Nations communities • If an emergency becomes significant, Operations can activate ISC's National Emergency Operations Centre which provides an enhanced scalable response including 24/7 services • The ISC HQ EM Operations Centre is responsible for coordinating and monitoring emergency management activities impacting First Nations communities from a national perspective • Operations staff are responsible for monitoring, validating, and providing situation awareness products such as notifications, summaries, fire and flood reports to senior management, the Government Operations Centre, law enforcement, and other agencies on emergencies impacting First Nations communities • Regional emergency management coordinators are responsible for coordinating and liaising with First Nations and local emergency management organization • ISC HQ and regions must work closely together to ensure timely flow of information • Regional are responsible for reporting any emergencies to ISC's Operations Centre located within EIMD HQ • EIMD is responsible for ensuring senior management is kept informed of any emergencies threatening First Nations communities through the preparation of various briefing reports, notifications and summaries as the event develops • EIMD is committed to search and recovery based on compassionate grounds. When a search and rescue operation is terminated and the individual(s) have not been located, the department may fund the extension of search and recovery activities • Regions should identify and communicate with non-government organizations located within their area of responsibility to determine what they can offer First Nations during emergencies • Mitigation of the effects of emergences on First Nations reserves for which the department has legal responsibility, including arrangements for community evacuation and temporary shelter and provision of territorial support • Coordination of federal assistance and response to emergencies in response to requests from territorial government authorities, for all cases in which the mandate does not clearly fall to another federal Minister • Provide an assurance to the province that ISC will provide funding to cover costs related to emergency assistance in First Nations communities • Response activities included emergency public communication, search and rescue, emergency medical assistance and evacuation	• Once an incident is terminated, key staff and stakeholders are to be regrouped as soon as possible to conduct a formal debrief to identify areas for improvement and to identify key lessons learned • A lessons learned and after action report should be completed no later than 30 calendar days after the conclusion of the emergency. It is to be shared nationally and on a constructive basis to enhance the department's emergency management capabilities. • Mitigate the effects of an emergency on First Nations people in the area • Work with the Chief and Council to assess the situation, determine the most effective way to repair damage and ensure delivery of programs and services to the community • ISC will compile statistical data pertaining to which First Nations communities that are impacted by emergencies, the causes and severity of the emergency as well as other trends that will assist with preparation initiatives in future years • Recovery activities include the return of evacuees, trauma counselling, reconstruction, economic impact studies and financial assistance for eligible costs • Returning a community to a state of normalcy is a priority

SOURCE: Energy Resources Industry Emergency Support Plan,

H) Transport Canada CANUTEC

BEFORE THE INCIDENT	DURING THE INCIDENT	AFTER THE INCIDENT

Federal regulations require that CANUTEC be contacted in the event of an incident or accident involving dangerous goods and infectious substances:
• 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 2 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 good
	  • 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 of 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

SOURCE: https://tc.canada.ca/en/dangerous-goods/canutec/services

6. EMERGENCY CONTACT LISTS

6.1 CALGARY CONTACTS

REDACTED - CER Order AO-001-MO-006-2016 s. 1.a.i. - personal information

6.1 CALGARY CONTACTS – Continued

REDACTED - CER Order AO-001-MO-006-2016 s. 1.a.i. - personal information

6.2 FIELD CONTACTS

REDACTED - CER Order AO-001-MO-006-2016 s. 1.a.i. - personal information

6.2 FIELD CONTACTS – Continued

REDACTED - CER Order AO-001-MO-006-2016 s. 1.a.i. - personal information

** Denotes area Safety & Compliance Coordinator (SCC)*

6.2 FIELD CONTACTS – Continued

REDACTED - CER Order AO-001-MO-006-2016 s. 1.a.i. - personal information

HORIZON SITE EMERGENCY #	ALBIAN SITE EMERGENCY #
780 828 3000	780 713 3700

6.3 GOVERNMENT / OTHER EXTERNAL AGENCY CONTACTS

6.3.1 ALBERTA

Alberta Environment and Protected Areas * notify when blocking roads through or adjacent to Crown Land **Alberta Energy Regulator (AER)** * notify when blocking petroleum development / forestry roads	Energy and Environmental Response Line – 24-Hr Toll Free	1 800 222 6514

Alberta Boilers Safety Association (ABSA)	Report an Incident (online reporting) *https://www.absa.ca/unsafe-condition-accident-fire-reporting/report-an-incident/*	
Alberta Emergency Management Agency (AEMA)	24 Hour Provincial Emergency Coordination Centre (PECC)	1 866 618-2362
Alberta Environment and Protected Areas	Report a Wildfire	403 310-3473
	Report a Poacher	1 800 642-3800
Alberta Health Services (AHS)	**24 Hour Emergency Notification Industry Only** Email	**REDACTED** - CER Order AO-001-MO-006-2016 s. 1.a.i. - personal information
Alberta Transportation and Economic Corridors	Reporting via Alberta EDGE 24 / 7 (Environmental and Dangerous Goods Emergencies)	1 800 272-9600
Highway Road Closures Support 1. call 9-1-1 / RCMP ***(for roadblocks)*** 2. call nearest Alberta Transportation District Office ***(for notification only)*** ***Road& Weather Conditions:*** 511.alberta.ca	Athabasca & Fort McMurray Districts	780 675-2624
	Calgary District Office	403 297-6311
	Edson District Office	780 723-8250
	Grande Prairie District Office	780 538-5310
	Hanna District Office	403 854-5550
	Lethbridge District Office	403 381-5426
	Peace River District Office	780 624-6280
	Red Deer District Office	403 340-5166
	Stony Plain District Office	780 963-5711
	Vermilion District Office	780 853-8178
Local Municipalities	**Emergency Management / Disaster Services** Refer to applicable Site-Specific ERP Manual or call AEMA for assistance	
Occupational Health and Safety (applicable BU/Group Safety Lead)		1 866 415 8690
RCMP / Fire / EMS – All Areas		**9-1-1**

Transportation of Dangerous Goods (TDG) – Initial Incident Reporting

- ***TDG Incident Reporting*** – contact a) 9-1-1 and b) Alberta EDGE 1-800-272-9600
- ***CNRL LPG Incident Reporting (Propane & Butane)*** – contact a) 9-1-1 and b) ERAC 1 800 265-0212
  ** provide Canadian Natural ERAP Number: ERP 2-0010-140*
- ***CANUTEC (all instances)***
  ** provides dangerous goods interaction guidance and technical information to responders. DOES NOT offer emergency response services*
  1 888 226-8832 (toll free)
  613 996-6666 (call collect)
  Cell *666

Workers' Compensation Board	Toll-free in Alberta	1 866 922-9221

6.3.2 BRITISH COLUMBIA

Emergency Management and Climate Readiness (EMCC) / British Columbia Energy Regulator (BCER)	Emergency Coordination Centre	1 800 663-3456

BC Ambulance Service	Emergency	9-1-1
	Areas where 9-1-1 is not available	1 800 461-9911
	Cellphone / SAT Phone / Outside BC	250 374-5937
British Columbia Boiler Safety Association	Report an Incident or Hazard https://portal.technicalsafetybc.ca/report-incident/incident-reporting-form	1 866 566-7233
Local Municipalities	**Emergency Management / Disaster Services** Refer to the Site-Specific ERP or call EMBC for assistance	
Ministry of Environment and Climate Change Strategy	Spills or Environmental Emergencies	1 800 663-3456
	Report All Poachers and Polluters (RAPP)	1 877 952-7277

Ministry of Forests

Mackenzie Natural Resource District (DMK) - Mackenzie, BC	250 997-2200
Peace Natural Resource District (DPC) – Dawson Creek, BC	250 784-1200
Prince George Natural Resource District (DPG) – Prince George, BC	250 614-7400

Ministry of Public Safety & Solicitor General	BC Wildfire Service: Wildfire Reporting	1 800 663-5555 Cell: *5555
Northern Health / Health Emergency Management BC (HEMBC)		**REDACTED** - CER Order AO-001-MO-006-2016 s. 1.a.i. - personal information
RCMP / Fire / EMS		**9-1-1**

Road Closures (no Closure Orders required for emergencies)

Provincial Highway / Road Closures (highways with 1, 2, 3 digits or local names)

1. **RCMP / Local Police** – advise of situation / request presence — 9-1-1
2. **Transportation Management Centre BC** (24-hour, province wide) — 1 866 707-7862
3. **Highway Maintenance Contractor:**
   - Service Area 21 – South Peace (Dawson Creek – Pouce Coupe) — 1 800 663-7623
     Argo Road Maintenance (South Peace) Inc.
   - Service Area 22 - North Peace, Fort St. John - *Dawson Road Maintenance Ltd.* — 1 800 842-4122

Non-Provincial Road Closures (petroleum, forestry)

1. **RCMP / local police** – advise of situation / roadblock locations; request presence
2. **Contact the following as needed**:
   - for petroleum development roads, notify BCER of closure(s)
   - for forestry roads, notify Ministry of Forests Resource District office of closure(s)

Transportation of Dangerous Goods (TDG) – Initial Incident Reporting

- ***TDG Incident Reporting*** – contact a) 9-1-1 and b) EMCC
- ***CNRL LPG Incident Reporting (Propane & Butane)*** – contact a) 9-1-1 and b) ERAC 1 800 265-0212
  ** provide Canadian Natural ERAP Number: ERP 2-0010-140*
- ***CANUTEC (all instances)*** — 1 888 226-8832 (toll free); 613 996-6666 (call collect); Cell *666
  ** provides dangerous goods interaction guidance and technical information to responders. DOES NOT offer emergency response services*

WorkSafe BC (applicable BU/Group Safety Lead) — 1 888 621-7233

6.3.3 SASKATCHEWAN

Ministry of Energy and Resources (MER)	**Emergency Support Line**	**1 844 764-3637**
	ER Service Desk	1 855 219-9373

Technical Safety Authority of Saskatchewan *Boilers & Pressure Vessels*	**Report an Incident (online reporting)** https://tsaskforms.ca/forms/view/686	
Local Municipalities	**Emergency Management / Disaster Services** Refer to Site-Specific ERP or call provincial emergency management agency Saskatchewan Public Safety Agency (SPSA) below	
Ministry of Environment	**Spill Control Centre – 24 Hours**	**1 800 667-7525**
	Report a Wildfire	1 800 667-9660
	Turn In Poachers and Polluters (TIPPS)	1 800 667-7561
Ministry of Highways	Roadblock Assistance	9-1-1
	Highway Hotline – Road Conditions	1 888 335-7623
Ministry of Labour Relations and Workplace Safety	Occupational Health and Safety Division *(applicable BU/Group Safety Lead)*	1 800 567-7233 x1 (for reporting)
RCMP / Fire / EMS		**9-1-1**
Saskatchewan Health Authority *(Ministry of Health - Health Emergency Management Unit)*		**REDACTED** - CER Order AO-001-MO-006-2016 s. 1.a.i. - personal information
Saskatchewan Public Safety Agency (SPSA) – *via local authority contact only*		
Saskatchewan Workers' Compensation Board *(applicable BU/Group Safety Lead)*		1 800 667-7590

Transportation of Dangerous Goods (TDG) – Initial Incident Reporting

- ***TDG Incident Reporting*** – contact a) 9-1-1 and b) Spill Control Centre
- ***CNRL LPG Incident Reporting (Propane & Butane)*** – contact a) 9-1-1 and b) ERAC 1 800 265-0212
  ** provide Canadian Natural ERAP Number: ERP 2-0010-140*
- ***CANUTEC (all instances)***
  ** provides dangerous goods interaction guidance and technical information to responders. DOES NOT offer emergency response services*
  1 888 226-8832 (toll free)
  613 996-6666 (call collect)
  Cell *666

6.3.4 MANITOBA

Emergency Response / Environmental Accidents – 24-Hour	**1 855 944-4888**
Regulatory Services / Oil and Gas Unit **Resource Development Division** *Primary Contact: Senior Inspector* *Secondary Contact: Chief Petroleum Engineer*	Winnipeg Main Office Toll Free 1 800 223-5215 Winnipeg Main Office 204 945-1119 Virden Office 204-748-4260 Email petroleum@gov.mb.ca

Boiler and Pressure Vessel	**Incidents & Unsafe Conditions Reporting:** **Emergency Assistance: 9-1-1** **Email:** bpvintake@gov.mb.ca, *Subject Line: "Incident/Hazard Report"*
Emergency Measures Organization (EMO) – report an emergency	1 888 267-8298
Environment and Climate	
Turn-In-Poachers (TIP) / Forest Fire Situation – 24-Hour, Toll-free	1 800 782-0076
Health	
Public Health, Environmental Health Branch	204 788-6735
Local Regional Municipalities	Refer to the Site-Specific Supplemental ERP, or call the Emergency Management Organization (EMO) for assistance.
RCMP / Fire Dept. / EMS	**9-1-1**

Regional Health Authorities

Interlake – Eastern Regional Health Authority (Selkirk)	204 785-4700 or toll free 1 855 785-8500
Northern Health Authority (Flin Flon)	204 687-1300
Prairie Mountain Health (Souris)	204 483-5000 or toll free 1 888 682-2253
Southern Health–Santé Sud (Southport)	204 428-2720
Winnipeg Regional Health Authority (Winnipeg)	204 926-7000

Transportation and Infrastructure

Capital Region - Steinbach Regional Office	204 346-6266
Western Region - Brandon Regional Office	204 726-6800
Northern Region - Dauphin Regional Office	204 622-2061
Highway Information	5-1-1

Transportation of Dangerous Goods (TDG) – Initial Incident Reporting

- ***TDG Incident Reporting*** – contact a) 9-1-1 and b) Environmental Accidents 1 855 944-4888
- ***CNRL LPG Emergency Reporting (Propane & Butane)*** – contact a) 9-1-1 and b) ERAC 1 800 265-0212
  ** provide Canadian Natural ERAP Number: ERP 2-0010-140*
- ***CANUTEC (all instances)***
  ** provides dangerous goods interaction guidance and technical information to responders. DOES NOT offer emergency response services*
  1 888 226-8832 (toll free)
  613 996-6666 (call collect)
  Cell *666

Workers Compensation Board of Manitoba	1 855 954-4321
Workplace Safety and Health (applicable BU/Group Safety Lead)	1 855 957-7233

6.3.5 NORTHWEST TERRITORIES

The Office of the Regulator of Oil and Gas Operations (OROGO) Incident Response Line	**1 867 445-8551**
NWT Spill Line	**1 867 920-8130**

Municipal and Community Affairs (MACA) – *contact by local authority only*	
Dehcho Regional Office	867 695-7220
Inuvik Regional Office	867 678-8045
North Slave Regional Office	867 767-9167
Sahtu Regional Office	867 587-7100
South Slave Regional Office	867 872-6525
Environment and Climate Change	
NT-NU 24-Hour Spill Report Line	**867 920-8130**
Report a Wildfire	1 877 698-3473
Wildfire Public Information – wildfire conditions/danger	867 445-5484
Wildlife Emergency – wildlife danger to public	867 695-7433 (Dehcho region)
Wildlife Sighting / Observation	867 695-7450 (Dehcho region)
Wildlife Violations / Vehicle Collisions	1-866-762-2437
Transportation and Infrastructure	
Regional Offices	
Dehcho Regional Office, Fort Simpson – *phones out of service*	INF_communications@gov.nt.ca
Beaufort Delta Regional Office, Inuvik	867 777-7146
North Slave Regional Office, Yellowknife	867 767-9049
Sahtu Regional Office, Norman Wells	867 587-7251
South Slave Regional Office, Hay River	867 875-8032
Local Municipalities	Refer to the Site-Specific Supplemental ERP or see GNWT Municipal and Community Affairs' Communities website https://www.maca.gov.nt.ca/en/communitylist
Northwest Territories Health and Social Services Authority (NTHSSA)	
Environmental Health Officers	867 767-9066 ext 49262
RCMP / Emergency Services **limited cell phone coverage in areas across NWT*	**9-1-1**
For those with Satellite Phones	1 867 920-0911

Transportation of Dangerous Goods (TDG) – Initial Incident Reporting

- ***TDG Incident Reporting*** – contact a) 9-1-1 and b) NT-NU 24 Hour Spill Report Line 1 867 920-8130
- ***CNRL LPG Incident Reporting (Propane & Butane)*** – contact a) 9-1-1 and b) ERAC 1 800 265-0212
  ** provide Canadian Natural ERAP Number: ERP 2-0010-140*
- ***CANUTEC (all instances)***
  ** provides dangerous goods interaction guidance and technical information to responders. DOES NOT offer emergency response services*

  1 888 226-8832 (toll free)
  613 996-6666 (call collect)
  Cell *666

Workers' Safety & Compensation Commission (applicable BU/Group Safety Lead)	**1 800 661-0792**

6.3.7 FEDERAL

Canada Energy Regulator (CER) / Transportation Safety Board (TSB)
- Recommended: see **Guideline 8: CER's Event Reporting Guidelines**

a) CALL: TSB Reporting Hotline (for Immediately Reportable Events*, pipeline emergencies)	819 997-7887 (collect calls accepted)
b) REPORT: via CER Online Event Reporting System (OERS)	https://apps.cer-rec.gc.ca/ERS

* "Immediately Reportable Event" – notification required as soon as possible within three hours of incident discovery

* **Not** Immediately Reportable Event – no call required; report required as soon as possible within 24 hours after incident discovery

Canadian Nuclear Safety Commission	1 844 879-0805 (toll free)
24-Hour Duty Officer – emergency line	1 613 995-0479

Environment and Climate Change Canada

Notification of Environment and Climate Change Canada will be through respective provincial or territorial government:

British Columbia Ministry of Environment and Climate Change	1 800 663-3456
Alberta Ministry of Environment and Parks	1 800 222-6514
Saskatchewan Ministry of Environment	1 800 667-7525
Manitoba Department of Environment and Climate	1 855 944-4888
Northwest Territories Department of Environment and Natural Resources	1 867 920-8130

Fisheries & Ocean Canada

Report damage to fish habitat – contact Fish and Fish Habitat Protection Program by province

Alberta, Manitoba, Saskatchewan, Northwest Territories	1 855 852-8320
British Columbia	1 866 465-4336

Health Canada

For emergencies impacting First Nations and Indigenous communities:

Environmental Public Health Services, First Nations & Inuit Health Branch
- *Environmental Health Officer (EHO) by regional office*

BC Regional Office	1 866 913-0033 (main office, First Nations HA) 1 844 666-0711 (after hours, Environmental Health Team)
AB Regional Office	780 218-9929 (Medical Officers of Health 24 Hr) 780 719-8782 (Environmental Health Officer)
SK Regional Office	**REDACTED** - CER Order AO-001-MO-006-2016 s. 1.a.i. - personal information (Regional Manager, EPH)
MB Regional Office	204 983-4199 1 800 567-9604

Indigenous Services Canada (ISC)	1 800 567-9604
Aboriginal Affairs and Northern Development Canada	

NAV Canada – Flight Information Centres (FIC)	1 866 992-7433
For filing NOTAMs. *Calls to this number are routed to FIC that serves area from where call originates*	

Transport Canada (TC)

TC General Inquiries	1 866 995-9737

Transportation of Dangerous Goods (TDG) Initial Emergency Reporting – *see applicable provincial contacts section*

6.4 CONTRACT SERVICES

Following are lists of companies that provide specific services in Canadian Natural operations areas. Note that these lists are neither an all-inclusive nor a "preferred vendors" list, with the exception of the helicopter charters. **Responders are expected to refer to the Site-Specific ERP (if available) or local field operations for nearest / appropriate service providers.**

SECTION **PAGE**

A. ACCOMMODATIONS - HOTELS / MOTELS

Refer to the Site-Specific ERP (if available) or local field operations for closest options. The local municipal authority may also provide recommendations or suggestions.

B. AIR QUALITY MONITORING UNITS (MOBILE)

Location	Agency / Company	Phone
Province-Wide, BC	Emergency Management and Climate Change / British Columbia Energy Regulator *(contact if no contract services are available)*	1 800 663-3456
Province-Wide, SK	Saskatchewan Air Monitoring Lab (SAML) *(contact if no contract services are available)*	1 800 567-4224
BC, AB, SK	Firemaster Oilfield Services Inc.	1 877 342-3473
BC, AB, SK	HSE Integrated Ltd.	1 888 346-8260
BC, AB, SK	Trojan Safety Services	FSJ 250 785-9557 GP 780 567-3440 Sylvan Lake 403 309-3025

C. CHARTER AIR CARRIERS (FIXED WING)

Contact Corporate Travel

D. CHARTER HELICOPTERS

(as per Corporate Travel's approved list – 12/30/2024)

Location	Company	Phone
Cold Lake	Star Helicopters	780 639-2770
Edmonton	Canadian Helicopters Limited	780 429-6900
	Delta Helicopters	780 458-3564
Edmonton / Villeneuve	Synergy Aviation Ltd	587 343-0823
Fort McMurray	Canadian Helicopters Limited	780 743-4888
	Delta Helicopters	780 881-2559
	Heli Source Ltd	780 792-8776
Fort Nelson	Bailey Helicopters Ltd	250 774-3555
Fort St. John	Bailey Helicopters Ltd	250 785-2518
	Canadian Helicopters Limited	250 787-0431
	Heli Source Ltd	250 321-1714
	Yellowhead Helicopters Ltd	250 785-2331
Grande Prairie	Canadian Helicopters Limited	780 532-2047
High Level	Delta Helicopters	780 926-3848
Lac La Biche	Delta Helicopters	780 623-3490
Manning	Valley B Aviation	780 836-4309
Norman Wells (NWT)	Canadian Helicopters Limited	867 587-2136
Prince George / PG Base	Yellowhead Helicopters Ltd	250 963-9884
Rainbow Lake	Delta Helicopters	780 956-3988
Red Deer	Heli Source Ltd	403 886-8601
Slave Lake	Delta Helicopters	780 805-8800
Whitecourt	Heli Source Ltd	780 779-0378

E. COMMUNICATIONS RENTAL EQUIPMENT

Location	Company	Phone
BC, AB	Safety Boss Services	1 800 882-4967
BC, AB	United Safety Ltd.	1 800 432-1809
BC, AB, SK	Firemaster Oilfield Services Inc.	1 877 342-3473
BC, AB, SK	HSE Integrated Ltd.	1 888 346-8260
BC, AB, SK	Trojan Safety Services	FSJ 250 785-9557 GP 780 567-3440 Sylvan Lake 403 309-3025

F. DRONE / UAV OPERATORS

Service Area	Company		Contact
AB	Drone Alberta		780 394-2113
AB	Active Drone Solutions		587-205-0502
BC, AB	SmartDrones		780 782-6593
BC, AB, NWT	Northern Drone Services Canada		780-512-7688
BC, AB, SK, MB	UAV Imaging Inc.		587 532-9000
Canada wide	Albatross Enterprises Inc.		780 289-7732
Western Canada	Blue Link Drone Solutions		403 350-1766
North & Western Canada	Roy Northern Land and Environmental	Fairview FSJ (Land) FSJ (Enviro) Terrace Grande Prairie Calgary	780 835-2682 250 261-6644 250 262-9792 250 635-6973 780 835-7016 403 233-8285
Fort McMurray, AB	Phoenix Heli-Flight		780 799-0141
AB & BC	Nortech Advanced NDT Ltd	Dawson Creek Fairview Fort St. John Fort Nelson	780 380-9888
		Grande Prairie	780 832-8252
Fort St. John, BC	Hummingbird Drones		250 857-5411
Fort St. John, BC	Infinity Drones Inc		250 787-5110
Grande Prairie, Whitecourt	First Alert Locating Ltd		1 866 538-9936
SE Sask, SW Manitoba	Absolute Locating Ltd		306 483-2194
SK, AB, MB	Libitron Aerial		306 519-2737
Western Canada	Maverick Inspection Ltd.		780 7-1606

G. IGNITION SERVICES (VAPOR PLUME)

** Contact Service Provider to obtain accurate Staging Area ETA **

Company	Resource Location	Phone	
FireFly Critical Well Safety Equipment	**Equipment Location:** Red Deer only **Equipment:** fully automated ignition systems (stationary, trailer mounted and flarepit) **Services: NO IGNITION SERVICES.** Set up / demobilization on drilling sites, equipment operating training	24-Hour	403-342-1050
Firemaster Oilfield Services Inc.	**Equipment Location:** - Blackfalds (for central/south AB) - Grande Prairie (for central/north AB & BC) **Equipment:** H2S safety trailers equipped w/ignition safety flares & hand held flare pistol *no remotely activated equipment **Services:** ignition services - trailers dispatched with ignition certified Senior Hands	24-Hour	1-877-342-3473
Safety Boss Services	**Equipment Location:** - Edmonton, Fort St. John **Equipment:** safety flares & handheld pistols loaded onto H2S safety trailers as req'd *no remotely activated equipment **Services:** ignition services - trailers dispatched with ignition certified personnel	24-Hour	1-800-882-4967
Trojan Safety Services	**Equipment Location:** 90% in Grande Prairie **Equipment:** H2S safety trailers equipped w/ignition safety flares & hand held flare pistol *no remotely activated equipment **Services:** ignition services - trailers dispatched with ignition certified Safety Supervisors	24-Hour FSJ 24-Hour GP Sylvan Lake	250-785-9557 780-567-3440 403 309-3025
United Safety Ltd.	**Equipment Location:** - Fort McMurray, Fort Saskatchewan, Fort St. John, Grande Prairie, Lloydminster **Equipment:** H2S safety trailers equipped w/ignition safety flares & hand held flare pistol *no remotely activated equipment **Services:** ignition services - trailers dispatched with ignition certified Safety Supervisors	24-Hour	1-800-432-1809

H. SAFETY SERVICES

Location	Company	Phone
BC, AB	Safety Boss Services	1 800 882-4967
BC, AB	United Safety Ltd.	1 800 432-1809
BC, AB, SK	Firemaster Oilfield Services Inc.	1 877 342-3473
BC, AB, SK	HSE Integrated Ltd.	1 888 346-8260
BC, AB, SK	Trojan Safety Services	FSJ 250 785-9557 GP 780 567-3440 Sylvan Lake 403 309-3025

I. SPILL RESPONSE SERVICES (INLAND)

Location	Company		Phone
North America	Clean Harbors		1 800 645-8265
AB, SK	Gen7 Environmental Solutions		780-542-3676
MB, SK	Good Lands Environmental Inc.	Main	204 634-2245
		After Hrs	306 482-8151
AB, SK	North Shore Environmental Consultants		1 855 700-6732
BC, AB, SK, MB	QM Environmental		1 877 378-7745
BC, AB, SK, MB	Montrose Environmental		403 236-0606
BC, AB	Roy Northern Land and Environmental	Fairview	780 835-2682
		FSJ (Land)	250 261-6644
		FSJ (Enviro)	250 262-9792
		Grande Prairie	780 835-7016
		Terrace	250 635-6973
Nationwide	Rapid Response Industrial Group		1 844 774-4911
Nationwide	SWAT Consulting Inc		1 866-610-7928

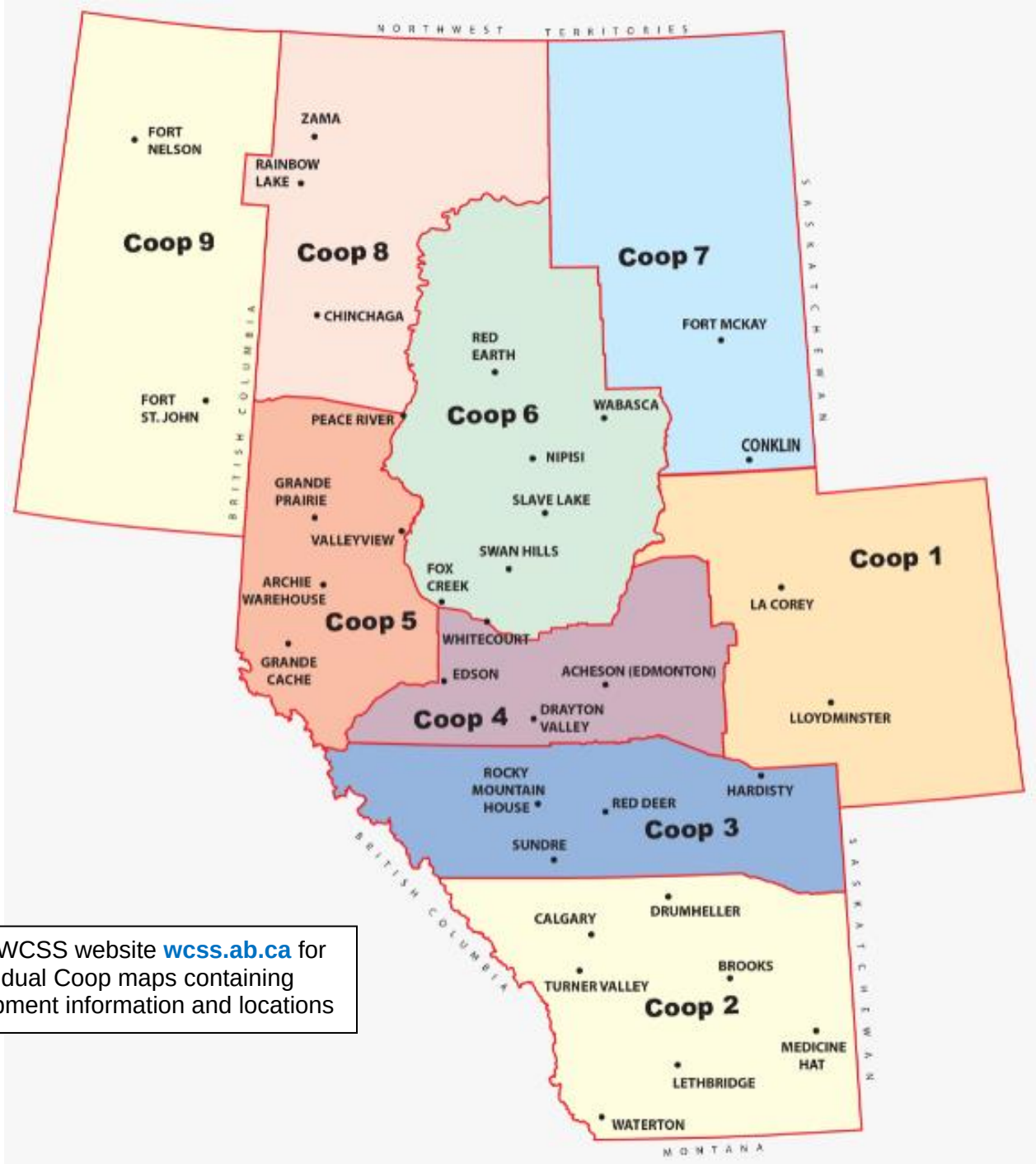
J. WELL BLOW OUT CONTROL

Location	Company	Phone
BC, AB, SK	Firemaster Oilfield Services Inc.	1 877 342-3473
BC, AB, SK	HSE Integrated Ltd.	1 888 346-8260
BC, AB	Safety Boss Services	1 800 882-4967

6.5 OIL SPILL SERVICES CONTACTS

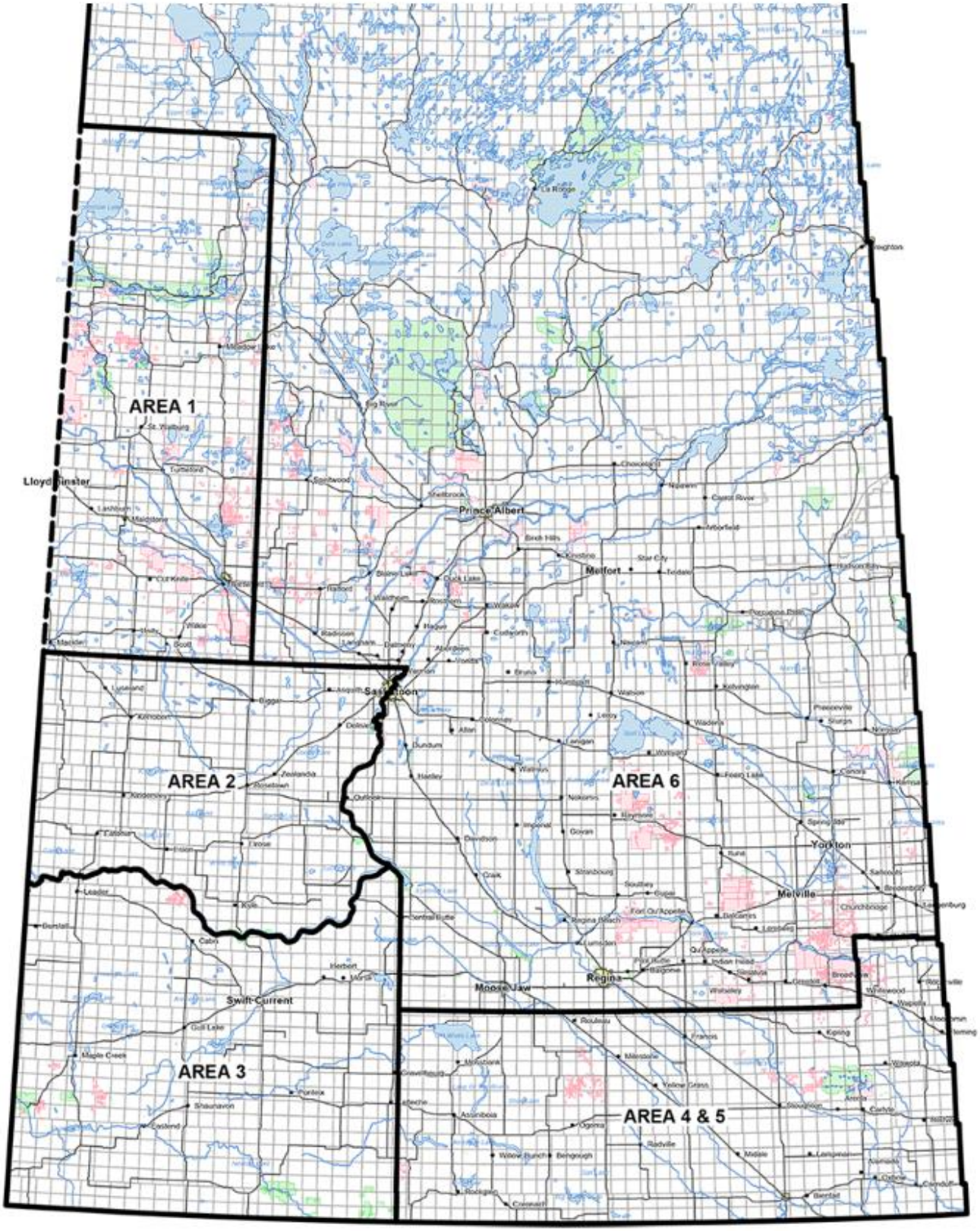
SEE CiNQ – Corporate > Environment-Conventional and Thermal for a list of Canadian Natural's spill response equipment locations and contacts. In the event of a spill emergency, refer to the proper WCSS Oil Spill Contingency Manual.

K. WESTERN CANADIAN SPILL SERVICES (WCSS) 1 866 541-8888



See WCSS website **wcss.ab.ca** for individual Coop maps containing equipment information and locations

L. SASKATCHEWAN EMERGENCY SPILL RESPONSE



SASKATCHEWAN EMERGENCY SPILL RESPONSE CONTINUED

Area	Spill Co-op	Contact	Trailer Location	Equipment Summary & Transport Requirements
1	WCSS Coop 1	**WCSS 24-Hour 1 866 541-8888** **REGIONAL CUSTODIAN:** Bry-Tan Trucking Ltd. ***24-Hour:*** 780-875-9250 ***Alternate Contact:*** Cell: 780-205-1471 Mike Savoy *Website:* https://www.wcss.ab.ca/maps-2/coop-1.shtml	5502 – 63 Avenue Lloydminster, AB	a) 52’ OSCAR trailer (semi truck) b) 2 – Workboats (1/2 ton truck w/ 2” ball hitch) c) 20’ Winter OSCAR (1 ton truck with 2-5/16” ball hitch) d) Drum Skimmer with Power Pak (1/2 ton truck) e) 40’ Lake Boom Sea Can (winch tractor/trailer) f) 40’ Heavy Oil Sea-Can 9’6” h (winch tractor & low-boy trailer) g) Heavy Oil Skimmer w/Power Pack (located in Heavy Oil Sea Can)
		COOP CUSTODIAN: 780-573-7110 Marcus Tobin	Cenovus parking lot, junction of Hwy 55 & 41 (4006 Hwy 55) La Corey, AB	a) 20’ ISRU Sea Can (winch truck & trailer) b) 16’ Wildlife Trailer (1/2 ton truck w/ 2” ball hitch)

SASKATCHEWAN EMERGENCY SPILL RESPONSE CONTINUED

Area	Spill Co-op	Contact	Trailer Location	Equipment Summary & Transport Requirements
2	Area II Environmental Spill Response Unit	***24-Hour Line:*** 306 460-5102 **Admin Phone:** 306 460-8340 *Email:* area2environmental@sasktel.net *Website:* http://areatwospill.com/	R360 Environmental Solutions Canada Inc. 16-16-030-23W3 11 km north of Kindersley on Hwy 21 * check in and out at office on arrival * passcode for locks is "SPILL"	a) **Trailer Unit – White:** anchors/drive pins, containment booms/accessories, consumable recovery items, clothing/safety PPE, electrical/lighting, equipment, hoses/accessories, fittings, toolbox, other miscellaneous items, spill contingency manual, trailer registration. **NOTE:** ***1)*** *premium fuel req'd for water pump, not provided in trailer* ***2)*** *12v car battery & propane tank req'd for scare cannon* ***3)*** *air compressor req'd to power skimmer* b) **Trailer Unit – Black:** Gelco, boom sets & booms, strip bottles, Sphagsorb, PPE (waders/shoulder length disposal gloves), garbage bags, oil absorbent pads, roll pad, booms, waste containers, silage plastic, T-post, hitch lock, trailer registration. **NOTE:** ***1)*** *premium fuel req'd for generator* c) Spill Trailer Transportation: • Cullen Contracting 306-460-9154 • When trailer use complete, call 24-Hour Line and request trailer pick up and return
3	Southwest Saskatchewan Area 3 Environmental Response Unit	***24-Hour Emergency:*** 1-844-561-8444 *Email:* area2environmental@sasktel.net *Website:* http://www.area3eru.com	*Plains Dollard Truck Terminal* *08-02-008-20 W3M* PMC Control Centre *(Plains personnel will meet you at 8-2 site)* *Steering Committee Custodian:* Plains Midstream Canada	a) **Tandem Axle Trailer Unit:** Containment boom/accessories, equipment including gas motor and 2 skimmers, hoses/accessories, miscellaneous, trailer registration b) **Tri-Axle Trailer Unit:** anchors/drive pins, zodiac boat, containment boom/ accessories, consumable recovery items, clothing/safety PPE, electrical/lighting, equipment, hoses/accessories, fittings, miscellaneous items, signs, trailer registration, etc. **NOTE:** ***1)*** *premium fuel req'd for water pump, not provided in trailer* ***2)*** *propane tank req'd for scare cannon* ***3)*** *air compressor req'd to power skimmer* c) **Other Equipment Available:** 1) Regina / Moose Jaw O.S.C.A.R. 2) WCSS Lloydminster O.S.C.A.R. **NOTE:** ***highway tractor required to transport trailer*** 3) Swift Current & District Environmental Protection Unit • **See Control Point maps / full equipment list on website**

SASKATCHEWAN EMERGENCY SPILL RESPONSE CONTINUED

Area	Spill Co-op	Contact	Trailer Location	Equipment Summary & Transport Requirements
4 & 5	Oil Spill Contingency Group: *Weyburn (Area 4)* *Estevan (Area 5)*	***Phone:*** 306 634-6277 *Equipment Custodian:* 360 421-0981 – Peter McFadden *Website:* http://saskoilspill.com/	207 – 20th Ave SE Evanston Park Weyburn, SK	a) Trailer 1 – First response equipment in 32' trailer b) Trailer 2 – Extra booms in 24' trailers, skimmer and river spill recovery equipment c) Trailer 3 – Spare oil spill equipment Trailers are equipped with pintle hitches; receivers for hitches stored inside **QUALIFIED TOW TRUCK CONTRACTORS**: ***Top Notch Towing***, Weyburn 306 861-1346 – will tow to location ***Integrity Maintenance***, Carlyle 306 453-0077 ***Lost Child Towing***, Weyburn 306 861-0585 or 842-0555 ***Jerry Mainil,*** Weyburn 306 842-5412 – will tow to location **NOTE:** trailers are greater than 10,000 lb (actual weight approx. 13,000 lb) therefore drivers must possess minimum of Class 1G license, as per SGI requirements and vehicles must be rated accordingly. See contractor above with qualified drivers / vehicles. Any other contractors with qualified drivers/vehicles may be used to mobilize and de-mobilize trailer.
6	Area 6 Emergency Response Co-operative: *Moose Jaw – Regina*	***Emergency Dispatch:*** 306 791-5058 *Website:* http://area6sask.ca/call-out-chart/	N/A	**MANDATE:** A response system of mutual aid among the members for initial response to an unknown or known member's pipeline emergency, until the member company is in a position with its own resources to control the emergency. **CALL-OUT PROCEDURE:** If you need to notify pipeline member companies of Area 6 that there is a pipeline emergency that requires their assistance, a Call-Out procedure is in place for Emergency Services to activate with only one call. This procedure will activate all member company's internal procedures for response to a suspected pipeline leak

M. MANITOBA PRODUCERS OIL SPILL CORPORATION

<table>
<tr><th>Area / Location</th><th>Contact</th><th>Trailer Location</th><th>Equipment Summary</th></tr>
<tr><td rowspan="3">Province Wide</td><td>DISPATCH:
Miles Alexander: 306-897-7114
Dean White: 204-851-0536
Derek Hodges: 204-851-5563
Custodian:
Stephanie Burnett
mposcsecretary@gmail.com
Website:
https://www.mposc.org/</td><td rowspan="2">Kingston Midstream Yard
160 Frontage Road East
Virden, MB</td><td rowspan="3">Trailer #1 Boat Trailer – all equipment for work on / around water
• 16 ft x 8 ft tandem trailer with 2” ball

Trailer #2 Equipment Trailer – hand tools / equipment for spill clean-up
• 24 ft x 8 ft bumper hitch trailer with 2 5/16” ball

Trailer #3 Skimmer & Booms – equipment for oil containment / recovery
• 24 ft x 8 ft bumper hitch trailer with 2 5/16” ball

MPOSC Garage – Storage – overflow items required for spill response
• e.g. absorbent booms, pads, used river boom, T posts, snow fence, etc.

• It is the user’s responsibility to haul the trailers (to location and back) as well as to provide adequate personnel to use equipment
• This equipment is for initial spill response. If cleanup will take more than a few days, bring in other equipment and return MPOSC trailers in case another member needs them.
• Trailers are to be returned in same condition they were taken, including
○ replacing any equipment used (e.g. absorbent booms)
○ ensuring equipment and trailer is clean and organized</td></tr>
<tr><td>CALL OUT PROCESS:
1) Contact anyone on Dispatch list
2) Dispatch will advise it available and if so, provide lock code for trailers
3) Contact a company below to haul trailers to location</td></tr>
<tr><td colspan="2">Local Services / MPOSC Members
Service Companies:
• Northrok Construction (Virden, MB): Justin Tindall 204-441-7298
• Go Hard Oilfield Services (Virden MB): Brodie Plasier 204-748-6980
Environmental Firms:
• Goodlands Environmental (Pierson, MB): Cindy 306-482-8151
• Matrix Solutions Inc. (Virden, MB): Greg 204-720-4994</td></tr>
</table>

7.0 PLAN PRINCIPLES AND MANUAL MAINTENANCE

7.0 PLAN PRINCIPLES AND MANUAL MAINTENANCE

7.1 TRAINING AND EXERCISES

Canadian Natural maintains a rigorous emergency response training / exercise program for employees and contractors that is mandatory for all levels of the company, from field operations to senior management. Training methods consist of lectures, coaching, discussions, simulations and role playing as well as in-house computer based training through Canadian Natural's learning management system (LMS). All personnel emergency response training is captured and documented within LMS for audit purposes.

7.1.1 EMERGENCY RESPONSE TRAINING

Emergency response training at Canadian Natural includes many elements as identified in this manual such as but not limited to:

- ICS 100 / 200 / 300 as applicable
- Canadian Natural's Incident Command System
- Emergency response roles and responsibilities
- Emergency response tools including Canadian Natural's "10 Steps for Emergency Response," First Responder's Guide, Emergency Response Guide, Incident Command Flowchart, Emergency Notification Details chart, Time / Action Logs and many more
- Where to find forms, scripts and specific guidelines
- Where to find stakeholder contact information

This training, or portions thereof, may be incorporated into monthly field safety meetings or held on an as-needed basis; however, Canadian Natural's safety protocols require, at minimum, dedicating a full annual safety meeting to mandatory emergency response training.

7.1.2 ADDITIONAL TRAINING

Additional external training for Canadian Natural personnel may consist of the following; while LMS documents external training, the training itself is organized, maintained, and provided by the agency.

- WCSS Cooperative annual training (includes HAZMAT awareness, product control and containment methods and equipment, reporting requirements, product recovery and disposal and environmental impacts). WCSS Awareness Training is also available.
- Ignition certification / training
- Canadian Natural's safety training requirements (i.e. First Aid / CPR, H_2S Alive, WHMIS, TDG, firefighting, etc.)

7.1.3 ERP EXERCISES

A key method of internal training is the use of ERP exercises to provide invaluable 'hands-on' experience and to also validate other training methods. Canadian Natural validates its ERPs by conducting discussion based / functional table top or major exercises.

A table top exercise is an informal meeting of field personnel who review roles, procedures and support services. These exercises may be fully discussion based or may employ a functional format. The functional format uses more interactive methods which provide an improved level of engagement for exercise participants. Table top exercises provide procedural orientation, test the effectiveness and accuracy of the plan and help to identify any changes that may be required. At minimum, table top exercises for all areas are conducted annually unless in the year a major exercise is required.

Major exercises are held once every three years. A major exercise is intended to provide a realistic simulation of an emergency and involves all internal and external resources required to test the plan.

For BC assets, additional exercises are required:

- Within three (3) months of the first day of new oil and gas operations
- Within three (3) months of a change in operations staff if there is a change in at least 1/3 of operational staff since the last tabletop or major exercise who have not previously participated in an exercise under Canadian Natural's Emergency Management Program

For all exercises, public and media involvement is simulated, however, external calls can be / are made to local stakeholders and support services on a test basis. Exercises are designed using scenarios of varying complexity and nature but are developed to be as realistic as possible to the specific operational field and in some instances, applicable jurisdictional agency. Case in point, **CEPA E2** table top exercise scenarios successively targets site products from each applicable hazard category specified by regulation each year while major exercise scenarios target the worst case scenario.

Canadian Natural notifies the following regulatory authorities of major exercises and invites representatives to participate or observe and :

- Alberta Energy Regulator (AER)
- British Columbia Oil and Gas Commission (BCOGC)
- Saskatchewan Ministry of Energy and Resources (MER)
- Emergency Measures Organization – Government of Manitoba (EMO)
- Environment and Climate Change Canada (ECCC)
- Canada Energy Regulator (CER)

7.1.4 EXTERNAL CONTINUING EDUCATION

Canadian Natural is committed to maintaining ongoing communication with local disaster services and health authorities, other organizations and agencies, as well as the public living near its pipelines. The information shared includes pipeline location, potential hazards, potential emergency situations involving a pipeline, and safety procedures in case of an emergency.

Public Information Packages provide information to the public on what to do should an emergency occur and who to contact. When appropriate, public meetings and targeted information sessions are conducted to ensure stakeholders are aware of company operations and emergency management policies.

Government Agency Consultation Forms provide safety procedures and information to local authorities impacted by our ERPs. These forms also include such information as scene arrival protocols, chemical hazards and liaison guidelines, and they also serve to collect emergency contact information. All documents are provided every year to the communities and more frequently if required during changes in operations, such as new facilities or an acquisition.

Canadian Natural's Safety Management System (SMS) mandates the use of Hazard Assessments and safety orientations for all persons attending Canadian Natural sites, including those responding as a result of an emergency.

7.2 RECORD KEEPING

Canadian Natural's Records Management Program is responsible for the creation, storage, use, preservation and disposal of records in order to:

- Document the activities and transactions of Canadian Natural;
- Enhance accountability;
- Meet business, fiscal and legal requirements and
- Support access to information

The program includes procedures for records classification, document imaging, retention schedules, disposition of records and ensures hard copy documentation is identified, recorded and classified for off-site archival storage. Corporate Backup Media Rotation and Retention Policy IS-POL-0051 describes corporate policy as it relates to electronic data backup copies made of data stored on centralized and off-site corporate storage devices.

The Classification and Retention Schedule identifies records by Record types and each record type has a defined period of time the records must be maintained. The disposition (destruction) of records follows a formalized process that requires, at minimum Department and Legal VP authorization.

7.2.1 INCIDENT DOCUMENTATION

All personnel assigned a response role are required to document their actions on an Emergency Time / Action Log for the duration of their participation and complete forms as required by their role. Additionally, note takers can be tasked to document actions / decisions of management roles, record the general proceedings in Command Posts / Operations Centres and record post-incident actions, debriefings and other meetings as required. Policies defining the collection of incident documentation are outlined in Section 2.7.3 Document Collection.

All notes, flowcharts, wall charts and forms used or completed during and after emergency response actions taken by Canadian Natural personnel are considered confidential Company property. External agency representatives at Canadian Natural's Command Posts should be made aware that any written information may later form part of a publicly accessible file.

Incident documentation may include but not limited to, official reports, forms and general information. Governed by the Records Management Program, all incident documentation is retained permanently as set forth in the Corporate Records' Classification and Retention Schedule.

7.2.2 ERP EXERCISE RECORDS

All conventional and thermal ERP exercises are conducted, documented and evaluated on a regular basis, the schedule of which is determined by regulatory requirements. Exercise documentation can consist of various forms including but not limited to Time Action Logs, wall charts and additional ICP / field operations forms. Exercise Evaluation Reports are used to effectively evaluate responder knowledge, skills and response actions, as well as document any learnings.

Exercise documentation will be retained by the Emergency Management Team for a period of no less than seven years. Exercise records may be reviewed on a random basis by the provincial or federal authority for audit and / or assessment purposes. Disposition of exercise records will be reviewed as required.

7.2.3 AUDITS AND REVIEWS

Canadian Natural's emergency response plans (ERPs) and emergency planning zone (EPZ) calculations where applicable are periodically audited by the Emergency Management Team. Additionally, the conventional / thermal Emergency Management Program as a whole is periodically reviewed by Senior Management to ensure its suitability, adequacy and effectiveness.

These audits and reviews, together with external audits administered by regulatory agencies and / or reviews by independent sources, ensure that the program:

- is fully implemented and compliant with legislation
- meets Canadian Natural policy, objectives and standards
- is adequate for its intended purpose
- adheres to Canadian Natural's continuous improvement principles

All internal and external audit / review results are retained for a period of no less than seven years. Electronic copies are held by the Emergency Management Team in Calgary. Disposition of audit / review results will be reviewed as required.

7.3 MANUAL MAINTENANCE

It is expected that all operations personnel working for Canadian Natural know and understand the contents of the Corporate ERP, as well as the Site-Specific plans associated to their areas. All Canadian Natural personnel are responsible for actively contributing to the development and maintenance of effective plans.

Canadian Natural is committed to the continuous improvement of its documents therefore, the Canadian Natural's Corporate Emergency Response Plan (ERP) and Site-Specific ERPs are reviewed and updated on an annual basis with changes made to ensure that the information remains accurate. Updates could be triggered by any of the following:

- changes to current emergency information
- new mapping information
- new resident information
- changes to response staff information or response capabilities
- facility additions such as well or pipeline tie-ins that do not require submission of a supplement

7.3.1 MANAGEMENT OF CHANGE

Changes will trigger a 'Version-Revision" number change as found in the Corporate ERP and Site Specific ERPs. Annual updates are indicated by a 'revision' number of zero to the right of the dash or period. For the Corporate ERP, significant amendments will generate a consecutive revision number and the revision date in the footer of each modified section(s). Amendments are documented in the Amendment Record found in each manual.

Errors or recommendations for changes to ERP information should be forwarded to the Emergency Management Lead in the Calgary office as per the Management of Change Protocol found behind the Table of Contents.

7.3.1.1 DISTRIBUTION

At minimum, updated ERPs or portions thereof are distributed to each manual recipient annually, or as required. Recipients are responsible for ensuring that their manuals are current.

All Canadian Natural personnel and responders have access to this ERP via electronic copies e.g. intranet, flash drives (contractors, consultants).

Public at large may access the non-confidential version of the Corporate ERP on Canadian Natural's website: https://www.cnrl.com/corporate-responsibility/health-and-safety/emergency-management.

8.0 DRILLING, COMPLETIONS AND WELL SERVICING

8.0 DRILLING, COMPLETIONS AND WELL SERVICING

8.1 SECTION APPLICATION

This section will be used if there is no Drilling / Completions Site Specific ERP required by regulation. It outlines the safety preparations, emergency actions and procedures that will be implemented if an incident occurs during these well operations. All information in the previous sections of this Corporate ERP is applicable to well site incidents. This section is in compliance with legislation and regulations as set out by:

- Alberta Energy Regulator (AER)
- British Columbia Oil & Gas Commission (BCOGC)
- WorkSafe BC
- Saskatchewan Ministry of Energy and Resources (MER)
- Manitoba Emergency Measures Organization (EMO)
- Other provincial and federal guidelines and regulations as applicable

8.2 NOTIFICATION OF AFFECTED PARTIES

8.2.1 ALBERTA, SASKATCHEWAN, MANITOBA

The Drilling / Completions Supervisor shall ensure that identified public (area residents, landowners, occupants and business owners within or immediately adjacent to the EPZ) shall be contacted and informed of the status of on-site operations, via personal visitation or telephone, at the beginning and completion of on-site operations as per **Table 8.2.1** Notification and Consultation Requirements below. Area Surface Landman may be required to provide contact lists and other notification procedures.

NOTE: leaving a voice message on a telephone answering machine or informing a minor / underage occupant of the residence **DOES NOT** fulfill this obligation.

Table 8.2.1 – Regulator Notification / Public Consultation Requirements

SITUATION	NOTIFICATION AND CONSULTATION REQUIREMENTS
Prior to entering the first sour zone and prior to nonconsecutive completion operations on a sour well	• **Notification** of members of the public within the EPZ is required at least 24 hours prior to entering the first sour zone for all sour well drilling operations and prior to nonconsecutive completion operations* on a sour well in order to provide sufficient time for members of the public who wish to leave prior to commencement of operations. ** Completion operations that take place more than four weeks after the drilling rig has been removed.*
Wellhead-off workovers	• **Notification** of members of the public who have indicated during the public involvement program that they wish to leave prior to commencement of operations.
Delayed completion operations	• **Notification** of and **consultation** with members of the public within the EPZ are required prior to completion operations that were not carried out within six months after conclusion of drilling operations.
Cancellation of ERP	• The licensee is required to notify residents within the EPZ and the local authority if the ERP has been cancelled.
End of drilling and/or completion operations	• The licensee is expected to ensure that those holding copies of the ERP, residents listed in the ERP, and the Regulator are notified at the end of drilling and/or completion operations and advised of the status of the plan.

8.2.2 BRITISH COLUMBIA

The Drilling / Completions Supervisor shall ensure that identified public within the EPZ shall be contacted and informed of the status of on-site operations, via personal visitation or telephone, at the beginning and completion of on-site operations as per **Table 8.2.2** below. Area Surface Landman may be required to provide contact lists and other notification procedures.

NOTE: leaving a voice message on a telephone answering machine or informing a minor / underage occupant of the residence **DOES NOT** fulfill this obligation.

Table 8.2.2 – Public Notification and Consultation Requirements

SITUATION	NOTIFICATION AND CONSULTATION REQUIREMENTS
Prior to entering first sour zone and prior to nonconsecutive completion operations on a sour well	• **Notification** of members of public within EPZ is required at least 24 hours prior to entering the sour zone for all sour well drilling operations and prior to nonconsecutive completion operations* on a sour well in order to provide sufficient time for members of public who wish to leave prior to commencement of operations ** Completion operations that take place more than four weeks after the drilling rig has been removed.*
At the beginning and conclusion of other operations, i.e. workovers, flaring, fracking, etc.	• **Notification** of members of the public within the EPZ is required for on-site operations. 'On site operations' are not limited to drilling and initial completions; activities such as workovers, flaring, fracking, etc., are considered "on-site operations."
Wellhead-off workovers	• **Notification** of members of the public who have indicated during any public involvement program that they wish to leave prior to commencement of operations.
Delayed completion operations	• **Notification** of and **consultation** with members of the public within the EPZ are required prior to completion operations that were not carried out within six months after conclusion of drilling operations.
Cancellation of ERP	• The licensee is required to notify residents within the EPZ and the local authority if the ERP has been cancelled.
End of drilling and/or completion operations	• The licensee is expected to ensure that those holding copies of the ERP, residents listed in the ERP, and the OGC are notified at the end of wellsite operations and advised of the status of the plan.

8.3 SAFETY PREPARATIONS FOR WELL OPERATIONS

8.3.1 ALBERTA

The following precautionary safety measures shall be completed two (2) to four (4) days prior to penetrating / drilling into, or perforating, the potential H_2S bearing formation(s). The Drilling / Completions Supervisor shall ensure the following:

- Area production personnel and the Area Safety and Compliance Coordinator will be made aware of the upcoming operations.
- **An "presour" meeting will be conducted and documented, no less than 96 hours (4 days) before conducting operations in the first sour zone(s).** This meeting will:
  - include all on-site Company and contract personnel who have roles / responsibilities in the plan
  - review roles and responsibilities and assess on-site personnel capabilities required to implement the ERP if required.
  - ensure Canadian Natural's Four Pillars of Safety are in place, including conducting the Hazard Assessment and completing / posting a Transportation of an Injured Worker plan
  - ensure access to all emergency response tools, including but not limited to the Corporate and Site-Specific ERPs, Emergency Response Guides, field ERP forms, flowcharts and other wall charts
  - **NOTE:** additional meeting may be needed for those not present at the initial meeting
- **The applicable AER Field Centre must be notified 24 hour in advance of a presour meeting**
- **The applicable AER Field Centre will be informed of the status of on-site operations, a minimum of 24 hours prior to conducting operations in the sour zones**.
- Safety personnel and equipment required for ERP implementation will be mobilized to the wellsite; refer to **Section 8.6 – Safety / Emergency Equipment**.
- The availability of a mobile air monitoring unit including where it is located and what the estimated travel time is to the wellsite will be confirmed. If there is a limited availability, a mobile air monitoring unit shall be placed on dedicated standby. **See Section 8.10.4.1 Dispatch Requirements for Mobile Air Monitoring for dispatch requirements by Emergency Level.**
- Designated roadblock locations shall be identified and communications between each and the well site (On-Scene Command Post [OCP]) will be confirmed / tested. The wellsite will be isolated by establishing a secure barrier as per Canadian Natural protocols a rope or chain gate at the wellsite entrance to only allow entry of authorized personnel.
- For sour wells designated as "Non-Critical or Non-Special" – One (1) Drilling / Completions Supervisor and one (1) contract H_2S safety hand will typically be on site, however, additional personnel may be utilized at the Company's discretion.

While the potential H_2S bearing formation(s) is open to, or capable of flowing / producing to, the wellbore the following precautionary safety measures shall be conducted:

- Daily surveys of the EPZ and surrounding area will be conducted to establish a record of any activity related to transients, recreational use and / or operations.
- H_2S / Man Down and BOP / well control drills will be conducted to familiarize on-site personnel with specific equipment they may be required to use and to train them to carry out the correct responses to emergency conditions. All drills and safety meetings will be documented in the tour book.

8.3.2 BRITISH COLUMBIA

In preparation for implementation of the ERP, the following precautionary safety measures **shall be completed a minimum of 24 hours** prior to penetrating / drilling into, or perforating, the potential H_2S bearing formation(s). The Drilling / Completions Supervisor shall establish a site safety plan by ensuring:

- that area production personnel and the Area Safety and Compliance Coordinator are made aware of upcoming operations
- that a wellsite ERP review meeting will be scheduled:
  - **48 hours prior to this meeting, the OGC will be notified** by emailing *Form M2 – OGC Notification of a Drilling / Initial Completions ERP Review Meeting* to OGC (emp@bcogc.ca)
  - will include all on-site Company / contract personnel who have roles / responsibilities in the plan
  - will review roles and responsibilities and assess on-site personnel capabilities required to implement the ERP if required
  - will ensure Canadian Natural's Four Pillars of Safety are in place, including conducting the On-Site Hazard Assessment and completing / posting a Transportation of an Injured Worker plan
  - will ensure access to all emergency response tools, including but not limited to Corporate and Site-Specific ERPs, Emergency Response Guides, field ERP forms, flowcharts and other wall charts
- That safety personnel and equipment required for ERP implementation will be mobilized to the wellsite; refer to **Section 8.6 – Safety / Emergency Equipment**
- That the availability of a mobile air monitoring unit including where it is located and what the estimated travel time is to the wellsite will be confirmed. If there is a limited availability, a mobile air monitoring unit shall be placed on dedicated standby. **See Section 8.10.4.1 Dispatch Requirements for Mobile Air Monitoring for dispatch requirements by Emergency Level.**
- That designated roadblock locations shall be identified and communications between each and the well site (On-Scene Command Post [OCP]) will be confirmed / tested. The wellsite will be isolated by establishing a secure barrier as per Canadian Natural protocols at the wellsite entrance to only allow entry of authorized personnel.
- That for sour wells designated as "Non-Critical or Non-Special," one (1) Drilling / Completions Supervisor and one (1) contract H_2S safety hand will typically be on site, however, additional personnel may be utilized at the Company's discretion
- That the OGC will be informed at the beginning and conclusion of on-site operations

To meet 'notification of affected parties' regulations, the Drilling / Completions Supervisor will also ensure:

- That the OGC will be provided with Drilling Status Updates submitted via OGC's eSubmission portal within one business day of the change in drilling status. Drilling statuses of a well include spud, drilling suspended, drilling resumed and rig release.

While the potential H_2S bearing formation(s) is open to, or capable of flowing / producing to the wellbore, the Drilling / Completions Supervisor will ensure following precautionary safety measures are conducted:

- Daily surveys of the EPZ if available (use minimum 100 m if no calculated EPZ) and surrounding area will be conducted to establish a record of any activity related to transients, recreational use and / or operations.
- H_2S / Man Down and BOP / well control drills will be conducted to familiarize on-site personnel with specific equipment they may be required to use and to train them to carry out the correct responses to emergency conditions. All drills and safety meetings will be documented in the tour book.

8.4 CRITICAL / SPECIAL SOUR WELLS – IGNITION EQUIPMENT REQUIREMENTS

8.4.1 ALBERTA

The Drilling/Completions Supervisor must ensure **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).

All critical sour wells must have a dual ignition system on site during all drilling operations in the critical zone(s) and during all completion, well testing, or workover operations when the wellhead is off. The primary ignition system should be installed such that remote activation can be achieved from a safe location through a triggering device. The secondary system may be a manual system, such as a flare gun.

Ignition Teams should be certified in vapor plume ignition and properly equipped to ignite the well as above, within 15 minute of decision to ignite. Certification should be obtained from accredited training association.

8.4.2 BRITISH COLUMBIA

For special sour wells, the Drilling/Completions Supervisor must:

- ensure that a **dual ignition system is on site** during
  (i) drilling or completion operations, or
  (ii) workover operations being carried out at any time when the wellhead is not in place;
- ensure that a person certified in vapour plume ignition issued by a training association is available and equipped to ignite the well as per the above within 15 minute of decision to ignite.
- ensure that a person *authorized* to ignite flammable liquids or ignitable vapours released from the well is on site.

As per regulation, a sour well is special if either of the following applies:

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

8.5 SAFETY / EMERGENCY EQUIPMENT

8.5.1 PERSONNEL

- ❑ **Sour Well:** A minimum of one (1) contract H_2S safety hand to be on-site whenever sour well operations are being conducted. One (1) contract H_2S safety hand may be used for 24 hour drilling operations if sour risk is deemed to be low.
- ❑ **Critical / Special Sour Well:** 24 hour contract H_2S safety hand coverage must be provided when special sour zone is open.

8.5.2 H_2S MONITORING EQUIPMENT

- ❑ (2) Personal H_2S Monitors
- ❑ (1) Continuous electronic H_2S monitor comes with:
  - 4 - Ambient sensor heads
  - 1 - Low alarm (flashing light)
  - 1 - High alarm (audible siren)

8.5.3 IGNITION EQUIPMENT

For sour wells:

- ❑ (1) Manual Ignition Kit comes with:
  - 1 - Flare gun with 30 flares (recommended for multiple attempts / re-ignition)
  - 2 - Self-Contained Breathing Apparatus (SCBA)
  - 2 - Fire retardant suit, including gloves
  - 2 - Eye and ear protection
  - 2 - Safety harness with line
  - 2 - Personal H_2S monitor
  - 1 - Explosion meter (L.E.L.)
  - 2 - Air Horns (one for Ignition Lead and one for Backup team)

For Critical or Special Sour Wells:

- ❑ (1) Manual Ignition Kit
- ❑ (1) Automatic Ignition System (Firefly or equivalent)

8.5.4 WELL SITE ACCESS TRAILER

A well site access trailer will be on site to provide:

- ❑ Well site access control
- ❑ Safe briefing area
- ❑ Safety equipment storage
- ❑ First aid equipment and storage

8.5.5 H_2S SAFETY TRAILER

- ❑ (9) 300 cubic foot cylinders of compressed breathing air
- ❑ (2) 150 ft., 3/8" airlines (OH&S approved)
- ❑ (6) 100 ft ¼" airlines (OH&S approved)
- ❑ (3) Airline manifolds (6 outlets each)
- ❑ (8) SCBA (Self Contained Breathing Apparatus)
- ❑ (8) SABA (Supplied Air Breathing Apparatus)
- ❑ (1) Folding stretcher
- ❑ (1) Alberta No. 3 First Aid Kit
- ❑ (2) Windsocks
- ❑ (1) Handheld H_2S detector c/w detection tubes
- ❑ (8) Spare 45 cubic foot spare breathing cylinders for SCBAs
- ❑ (2) Spare 300 cubic foot cylinders of compressed breathing air
- ❑ (1) 20 lb ABC low temp fire extinguisher
- ❑ (2) Wind flags or orange streamer ribbon (2 rolls)
- ❑ (1) Fire blanket with water resistant vinyl cover

8.5.6 LEASE WARNING SIGN PACKAGE

- ❑ (2) Briefing Area signs
- ❑ (1) Report to Supervisor sign
- ❑ (1) H_2S Warning sign

8.6 COMMUNICATIONS EQUIPMENT

NOTE: The frequencies of the portable radio equipment are not available; a contract safety company or a third party supplier should be contacted to supply this equipment. If the ERP is implemented, response personnel will be provided with the radio frequencies and / or compatible equipment.

8.6.1 WELL SITE

- ❑ (4) Portable radios (intrinsically safe)

8.6.2 EMERGENCY PLANNING ZONE

- ❑ (5) Portable radios with long range capabilities in addition to Roadblock Kit Radios, distributed as follows:
  - On-Scene Supervisor
  - Reception Centre Representative
  - Mobile Air Monitoring Technician
  - Spare

8.6.3 EPZ EVACUATION VEHICLES

- ❑ (1) Vehicle for each contract H_2S safety hand or other as assigned to evacuate EPZ occupants if required

8.7 ROADBLOCK EQUIPMENT

- **Sour Well** – roadblock radios will be onsite when the sour zone is open and the remaining roadblock equipment will be placed on standby at contract safety company base or Canadian Natural location, whichever is closest.
- **Critical / Special Sour Well** – Roadblock Kits will be mobilized to the wellsite prior to entry into the special sour zone:

  (3) Roadblock Kit(s) containing the following:

  1 - SCBA (Self-Contained Breathing Apparatus)
  1 - Road barricades, with flashing light
  1 - Stop / Slow paddle
  1 - High visibility vest
  1 - Flashlight
  1 - Map of the area and checklist
  1 - H_2S monitor / detector
  1 - VHF Long Range Radio

8.8 NOTIFICATION OF WELL OPERATION STATUS

After each phase of wellsite operations the Company will notify the applicable provincial regulatory agency of the status of the on-site operations that operations have concluded, the well is secure and there is no longer a potential for a sour gas release.

8.9 RESPONDING TO DRILLING, COMPLETIONS AND WELL SERVICING EMERGENCIES

In the event of an emergency, follow the 10 Steps for Emergency Response.

8.9.1 DETERMINE EMERGENCY PLANNING ZONES (EPZs)

An EPZ is a priority area surrounding a well site where immediate response actions are required in the event of an emergency. During an emergency, the Incident Commander will determine the EPZ by using the calculated EPZ radius from the Site Specific ERP; **if there is no Site Specific ERP or calculated EPZ, a minimum of 100 m will be used and adjusted as required**.

8.9.2 ESTABLISH EMERGENCY RESPONSE TEAMS

Two emergency response teams comprised of representatives, consultants, contractors and / or company personnel will be formed to respond to emergency drilling / completions / servicing situations as outlined below in Table 8.9.2 Canadian Natural Response Teams. **Use the Incident Command System Flowchart to document names and contact numbers.** If an incident occurs during wellsite operations, all personnel shall follow company emergency response protocols according to assigned role(s).

In the event of a drilling, completions or well servicing emergency, the following response role assignments are recommended until Production Operations has been notified to assist with emergency response. Refer to Section 5.0 Roles and Responsibilities in this manual for roles and responsibilities, as well as all forms required for each role.

Table 8.9.2 Canadian Natural Response Teams

TEAM 1: **On-Scene Command Post Team**	**Emergency Response Role (recommended)** *in conjunction with Production Operations*
• Drilling / Completions Supervisor	On-Scene Supervisor
• Rig Manager / Testing Supervisor	As assigned
• On-Duty Contract H_2S Safety Hand	
• Off-Duty Contract H_2S Safety Hand	
• Off-Duty Personnel	

TEAM 2: **Incident Command Post / EOC Team**	**Emergency Response Role (recommended)** *in conjunction with Production Operations*
• VP, Drilling Completions	Operations Manager / Corporate Support Team
• Drilling / Completions Manager	Incident Commander
• Drilling / Completions Superintendent	Incident Commander / Operations Section Chief
• Drilling / Completions Personnel	As assigned
• Office Personnel	As assigned
• Senior Management	Senior Management

NOTE: The Incident Commander shall ensure the applicable regulatory body (OGC / AER / MER / EMO) is informed of all Level 1 incidents including "abnormal problems or situations" that could lead to a well control problem, and discuss the level of response and actions. See **Section 8.9.5 Classify Incidents before regulatory notification.**

8.9.3 ESTABLISH EMERGENCY MANAGEMENT CENTRES AND OTHER AREAS

Upon activation of the ERP, the applicable responder (e.g. Incident Commander, On-Scene Supervisor, Staging Area Manager) should establish the following Emergency Management Centres / other areas, the locations of which are specific to each incident with the exception of the EOC. Use the Incident Command System Flowchart to document these locations.

- On-Scene Command Post (OCP) / Operations Location
- Safe Location(s) / Muster Area
- Incident Command Post (ICP) / Emergency Operations Centre (EOC)
- Staging Area

8.9.4 PUBLIC PROTECTION MEASURES

For drilling, completions and well servicing activities that have neither a Site Specific ERP nor a calculated EPZ, a minimum emergency planning zone (EPZ) of 100 m will be used in the event of an emergency. This EPZ will be adjusted accordingly based on air quality monitoring.

See **Section 3.0 Public Protection Measures of this manual**:

NOTE: Drilling, completions and well servicing activities have different requirements for dispatching air quality monitoring units therefore this has been included as **follows.**

8.9.4.1 DISPATCH MOBILE AIR QUALITY MONITORING UNITS (AMU)

A mobile air quality monitoring unit is that which can measure in parts per billion.

AMUs **must check in at the Staging Area** for orientation and deployment. Communications between unit technicians and On-Scene Supervisor will be via radio or cell phones.

The following **Table 8.9.4.1** provides criteria and guidelines for deployment of AMUs for different drilling, completions and well servicing release situations:

Table 8.9.4.1 Dispatch Requirements for Mobile Air Monitoring

EMERGENCY	Urban Centre in EPZ	LEVEL 1	LEVEL 2	LEVEL 3
Sour Well or **Critical Sour Well**	**NO**	Mobilize to site, if: - well control measures are deteriorating and release is likely **or** - estimated response time is greater than estimated time for gas to surface [(1)] **or** - units are located a significant distance away Begin monitoring **downwind** of incident **at nearest unevacuated residence or public area** **OR** place on standby, if: - estimated response time is less than estimated time for gas to surface [(1)] **or** - units are in proximity	Mobilize immediately to site; commence monitoring **downwind** of incident **at nearest unevacuated residence or public area.** Mobilize additional units if multiple urban density developments / large urban centres are or may be impacted. *If a unit has not arrived on-site by time gas reaches surface, ignition criteria may be met.*	Mobilize immediately to site; commence air monitoring **downwind** of incident **at nearest unevacuated residence or public area.** Mobilize additional units if multiple urban density developments / large urban centres are or may be impacted. *If a unit has not arrived on-site by time gas reaches surface, ignition criteria may be met.*
Critical Sour Well	**YES** ***can be** *portion of urban centre*	**Minimum of two (2)** mobile air quality monitors required **on site:** one to monitor boundary of urban density development / urban centre, the other to track plume. - **Ensure** one unit **is in area** prior to drilling / completion / servicing / testing in potentially critically sour zones - **Ensure other unit mobilized** if well control measures deteriorating and release is likely - Prior to entering sour zone, determine where monitoring equipment is located and what travel time is to well site - Request additional monitoring unit(s) if required. - Refer to Site Specific drilling plan if applicable	Deploy unit(s) in area to boundary of urban density / centre downwind of well site; commence monitoring. Ensure mobilized monitoring units check in at Staging Area and deploy as required.	Deploy unit(s) in area to boundary of urban density / centre downwind of well site; commence monitoring. Ensure mobilized monitoring unit check in at Staging Area and deploy as required.

(1) The estimated time for gas to surface should be based on the time to circulate bottoms up.

8.9.5 CLASSIFY INCIDENTS

All incidents are classified as either an Alert or an Emergency Level 1, 2 or 3, based on applicable regulatory agency's level classification matrix found in the Forms and Guidelines section.

Incidents that can be handled on-site through normal operating procedures are typically defined as an Alert, while incidents with low to high risk requiring a more difficult or complex resolution are assigned an Emergency Level.

As per Corporate protocol, Level 1 events / incidents (as noted below) require full activation of Canadian Natural's ERP, as well as use of the Incident Command System Flowchart and Emergency Notification Details chart:

- a release into a body of water
- impact to the public
- Media involvement
- Alberta Energy Regulator's (AER) request to release a Media Statement

All events / incidents that can be classified as a Level 2 or greater also require a full activation of Canadian Natural's ERP, as well as use of the Incident Command System Flowchart and Emergency Notification Details chart.

Canadian Natural responders will follow their roles and responsibilities checklist as assigned for regulatory notification.

8.10 DOWNGRADING AND STAND DOWN – SEE SECTION 2.6

8.11 POST-INCIDENT ACTIONS – SEE SECTION 2.7

FORMS

If additional Incident Command System (ICS) forms are required by government regulators and the equivalents are not found below, reference ICS Canada's Forms here:
https://icscanada.ca/resources/ics-forms/

If requested, forms referenced by BCER may be found here:
https://icscanada.ca/resources/ics-forms/
http://myem.jibc.ca/

Canadian Natural

FORM A: ICS FORM 201 INCIDENT BRIEFING

Incident Command Post Name:		**Incident Location (LSD):**	
Time of Event *(24 hour clock)*:	**Time Zone:**	**Date of Event:** *(DD/MM/YYYY*	
Level of Emergency:	❑ **Alert** ❑ **Level 1**	❑ **Level 2** ❑ **Level 3**	❑ **Critical Incident** ❑ **Potential Injury Serious / Fatality**
Incident Commander Name & Phone Number:	**EOC Location / Ph. Number:**	**STARS / 9-1-1 Notified:** ❑ **Yes** ❑ **No**	
On-Site Supervisor Name & Phone Number:	**On-Scene Command Post Location:**		

INCIDENT SUMMARY

Provide a brief and factual description of what has occurred, do not speculate or discuss potential causation.

People: *List any internal / external persons impacted by the current situation.*

Nearest Surface Development: Town, Province **Nearest Urban Centre:** Town, Province

Environment: *Describe any current or imminent environmental impacts.*

Off Site Impact (Off Lease): ☐ **Yes** ☐ **No** **Closest Water Body:**

Water Body Impact: ☐ **Yes** ☐ **No**

Assets: *Provide details regarding potential damage to Canadian Natural or third party assets and whether the facility / office is still operating, shut in or at reduced capacity.*

Reputation / Regulatory: *Is there potential for reputational impact to Canadian Natural?*

Prepared by: *(name & position)*	**Date Prepared:**	**Time Prepared:** *(24 hour clock)*

Initial Objectives	Assigned to Corporate	Assigned to Field
1.	☐	☐
2.	☐	☐
3.	☐	☐
4.	☐	☐

Immediate Actions
1.
2.
3.
4.

Map Sketch

Utilizing the space below, draw an overview of the emergency location. Consider specific site hazards including water bodies, landmarks and nearby residents. Alternatively, you may include a marked up survey, plot plan or ERP map (or facsimile thereof).

Canadian Natural ICS Organizational Structure
Refer to Incident Command System Flowchart in EOC. Take clear digital photo(s) of completed flowchart, print and attach to this form.
Emergency Notifications and External Resources Requested
Refer to Emergency Notification Details chart in EOC. Take clear digital photo(s) of completed chart, print and attach to this form.

Submit completed forms to Documentation Lead or Safety Officer upon request or post incident.

Canadian Natural

FORM 1: TIME / ACTION LOG

Page: _____

RECORD all events, actions, names, times and other details. N**umber multiple pages and *use 24-hour clock (i.e.: 8:pm = 20:00).** Submit to safety Officer / Documentation Lead upon request or post incident.

EPZ SIZE: _____ EMERGENCY LEVEL: _____

ICS Form 214 equivalent

Name:	**Date:** *(DD/MM/YYYY*
Field Area Name:	**Location:** (LSD / NTS if known)

Role (checkmark as needed):

❑ First Responder	❑ Staging Area Manager	❑ Telephone Caller
❑ On Scene Supervisor	❑ Logistics Section Chief	❑ Air Monitor
❑ Deputy On-Scene Supervisor	❑ Liaison Officer	❑ Rover
❑ Operations Section Chief	❑ Planning Section Chief	❑ Information Officer
❑ Incident Commander	❑ Public Safety Supervisor	❑ Finance / Admin Section Chief
❑ Deputy Incident Commander	❑ Roadblock Personnel	❑ Ops Manager / Corp Support Team
❑ Safety Officer	❑ Reception Centre Representative	❑ Senior Management Committee

Time*	Details (action taken, info given, info received, calls made / received etc.)

Revised: Feb 2021

Canadian Natural

FORM 1: TIME / ACTION LOG

Page: _____

RECORD all events, actions, names, times and other details. N**umber multiple pages and *use 24-hour clock (i.e.: 8:pm = 20:00).** Submit to safety Officer / Documentation Lead upon request or post incident.

EPZ SIZE: **EMERGENCY LEVEL:** **ICS Form 214 equivalent**

Name:	**Date:** *(DD/MM/YYYY*
Field Area Name:	**Location:** (LSD / NTS if known)

Role (checkmark as needed):

❑ First Responder	❑ Staging Area Manager	❑ Telephone Caller
❑ On Scene Supervisor	❑ Logistics Section Chief	❑ Air Monitor
❑ Deputy On-Scene Supervisor	❑ Liaison Officer	❑ Rover
❑ Operations Section Chief	❑ Planning Section Chief	❑ Information Officer
❑ Incident Commander	❑ Public Safety Supervisor	❑ Finance / Admin Section Chief
❑ Deputy Incident Commander	❑ Roadblock Personnel	❑ Ops Manager / Corp Support Team
❑ Safety Officer	❑ Reception Centre Representative	❑ Senior Management Committee

Time*	Details (action taken, info given, info received, calls made / received etc.)

Revised: Feb 2021

Canadian Natural

FORM 1: TIME / ACTION LOG

Page: _____

RECORD all events, actions, names, times and other details. N**umber multiple pages and *use 24-hour clock (i.e.: 8:pm = 20:00).** Submit to safety Officer / Documentation Lead upon request or post incident.

EPZ SIZE: _____ EMERGENCY LEVEL: _____

ICS Form 214 equivalent

Name:	**Date:** *(DD/MM/YYYY*
Field Area Name:	**Location:** (LSD / NTS if known)

Role (checkmark as needed):

❑ First Responder	❑ Staging Area Manager	❑ Telephone Caller
❑ On Scene Supervisor	❑ Logistics Section Chief	❑ Air Monitor
❑ Deputy On-Scene Supervisor	❑ Liaison Officer	❑ Rover
❑ Operations Section Chief	❑ Planning Section Chief	❑ Information Officer
❑ Incident Commander	❑ Public Safety Supervisor	❑ Finance / Admin Section Chief
❑ Deputy Incident Commander	❑ Roadblock Personnel	❑ Ops Manager / Corp Support Team
❑ Safety Officer	❑ Reception Centre Representative	❑ Senior Management Committee

Time*	Details (action taken, info given, info received, calls made / received etc.)

Revised: Feb 2021

Canadian Natural

FORM 1: TIME / ACTION LOG

Page: _____

RECORD all events, actions, names, times and other details. N**umber multiple pages and *use 24-hour clock (i.e.: 8:pm = 20:00).** Submit to safety Officer / Documentation Lead upon request or post incident.

EPZ SIZE: _____ EMERGENCY LEVEL: _____

ICS Form 214 equivalent

Name:	**Date:** *(DD/MM/YYYY*
Field Area Name:	**Location:** (LSD / NTS if known)

Role (checkmark as needed):

❑ First Responder	❑ Staging Area Manager	❑ Telephone Caller
❑ On Scene Supervisor	❑ Logistics Section Chief	❑ Air Monitor
❑ Deputy On-Scene Supervisor	❑ Liaison Officer	❑ Rover
❑ Operations Section Chief	❑ Planning Section Chief	❑ Information Officer
❑ Incident Commander	❑ Public Safety Supervisor	❑ Finance / Admin Section Chief
❑ Deputy Incident Commander	❑ Roadblock Personnel	❑ Ops Manager / Corp Support Team
❑ Safety Officer	❑ Reception Centre Representative	❑ Senior Management Committee

Time*	Details (action taken, info given, info received, calls made / received etc.)

Revised: Feb 2021

Canadian Natural

FORM 2: INCIDENT ACTION PLAN (IAP)

EPZ SIZE: _____

EMERGENCY LEVEL: _____

ICS Forms 202, 203, 205 equivalent

***Use 24-hour clock (i.e.: 8:pm = 20:00)**

Incident Command Post Name:		**IAP #:**	

Date Prepared:	*(DD/MM/YYYY*	**Time* Prepared:**		**Incident Start Date & Time*:**	
				Incident End Date & Time*:	

Prepared by Incident Command Team:	**Incident Commander**	**Operations Section Chief**	**On Scene Supervisor**

OBJECTIVES/ PRIORITIES: What high-level activities are necessary to complete during this operational period?

1. Activate ERP, OCP and EOC

Related Tasks	Responsible

2. Build situational awareness

Related Tasks	Responsible

3. Secure site and obtain operational control

Related Tasks	Responsible

Canadian Natural

FORM 2: INCIDENT ACTION PLAN (IAP)

ICS Forms 202, 203, 205 equivalent

Incident Command Post Name:		**IAP #:**	

Date Prepared:		**Time* Prepared:**		**Incident Start Date & Time*:**	
				Incident End Date & Time*:	

Prepared by Incident Command Team:	**Incident Commander**	**Operations Section Chief**	**On Scene Supervisor**

4. Prepare public protection measures and communications plan

Related Tasks	Responsible

5. Shortfall Contingencies

Related Tasks	Responsible

Submit completed forms to Documentation Lead or Safety Officer upon request or post incident.

Canadian Natural

FORM 3: STATUS (TIMEOUT) REPORT

ICS Form 209 equivalent

***Use 24-hour clock (i.e.: 8:pm = 20:00)**

Incident Name:				**Timeout #:**	
Date:	*(DD/MM/YYYY*	**Time*:**	**ICP or EOC Reporting:** Incident Command Post or Emergency Operations Centre	**ICP**	**EOC** (Calgary)
Prepared by:		**Role:**		**Contact #:**	

CURRENT SITUATION:

✓ **REVIEW CURRENT WEATHER CONDITIONS AND FUTURE WEATHER FORECAST**

✓ **REVIEW EMERGENCY NOTIFICATIONS DETAILS CHART FOR GAPS**

✓ **INDIVIDUAL BRIEFING** (where applicable) – ask for current status and if any assistance needed:

❑ Liaison Officer	❑ Operations Section Chief	❑ Public Safety Supervisor
❑ Information Officer	❑ Planning Section Chief	❑ Finance / Admin Section Chief
❑ Safety Officer	❑ Logistics Section Chief	❑ Documentation Lead

The potential is: *(check all that apply)*	☐	**Controllable / Isolated**	☐	**Serious / Escalating**	☐	**Casualties**	☐	**Long Term**	☐	**Recovery**

Outstanding Issues / Challenges: What issues within the current operational period still need to be resolved?

Anticipated Priorities / Activities: What will the priorities be during the next operational period? Are there residents / public areas impacted? Are there any media requests?

Other Comments / Issues: Are there any public information (public / media), safety (ignition) or other issues that need to be reviewed?

QUESTIONS?	**HAVE I MISSED ANYTHING?**	**"TIMEOUT OVER"**	**NEXT TIMEOUT:**	

Submit completed forms to Documentation Lead or Safety Officer upon request or post incident.

Canadian Natural

FORM 4: RESOURCE REQUEST & STATUS

For Logistics Section Chief use; submit completed forms to Documentation Lead or Safety Officer upon request or post-incident. ***Use 24-hour clock (i.e.: 8:pm = 20:00)**

ICS Forms 204 & 211 equivalent

Incident Command Post Location:	
Prepared By (Name):	
Date: *(DD/MM/YYYY*	**Page _____ of _____**

Who Requested Resource?	Resource Required	# of Units	Vendor Name & Phone Number	Location Resource to be Sent (OCP, ICP, EOC, Staging Area, Reception Centre, etc.)*	Time* Ordered	ETA to Location

***OCP = On Scene Command Post ICP = Incident Command Post EOC = Emergency Operations Centre (Calgary)**

FORM 5: FIRST CALL COMMUNICATION SUMMARY (AB / SK / MB)

To be used by Liaison Officer (or designate) to collect critical incident information prior to initial notification call to Regulator. **NOTE: not all fields may be applicable to all Regulators**

COMMUNICATION INFORMATION							
Regulator		Contact Name		Phone		Case #	
Regulator Email for Release Report							
CNRL Liaison Officer		Phone		Email			
CNRL Incident Commander		Phone					
CNRL ICP Location		Phone					

GENERAL INCIDENT INFORMATION								
Incident Legal Location:	_____-_____-_____-_____W___M							
Initial Emergency Level:	☐ Alert ☐ 1 ☐ 2 ☐ 3	Regulator Confirmed	☐ Yes ☐ No – other level:					
Serious event?	☐ Yes ☐ No	If yes, what kind?	☐ Blowout	☐ Explosion	☐ Fire	☐ Fracking	☐ Casing failure	☐ Other control loss*:
Other control loss (brief description):								
Land type (jurisdiction)	☐ Freehold ☐ First Nations ☐ Métis ☐ CFB ☐ Crown – Disposition #:							
Other agencies notified	☐ 9-1-1 ☐ RCMP / Local Police	☐ Local Municipality						
☐ Health Authority								
☐ Other (list) *see Emergency Notification Details wallchart*								

RELEASE DETAILS											
Facility Name				Legal Location		Facility Type					
Well Lic #		Status		Legal Location		Well Type					
Pipeline Lic #		Line #		Status		From Location		To Location		Type	

VOLUMES			
Substance* *(for emulsion, break down oil & water if possible)*	**Released** (m^3/ 10^3 m^3)	**Recovered** (m^3/ 10^3 m^3)	**Disposal / storage location**

Description of how the release volume was determined and verified (including calculations e.g. spill length x width x depth):

Area affected (length x width): m^2

How was the area affected determined? (aerial survey, perimeter walk, range finder, samples taken, etc.):

Who delineated the spill area (environmental technologist, operator, etc.) and what process was used?

Cause of release (suspected or actual):

☐ **REMINDER –** if possible, provide immediate submission of photos of entire spill site to Regulator

☐ **REMINDER –** update regulator immediately if release volumes or area changes from what was originally reported

IMPACT

Release off lease? ☐ Yes ☐ No (pipeline right-of-way is off lease)

If yes, was the landowner notified? ☐ Yes ☐ No | Name of landowner / agency:

Release within disposition boundary? ☐ Yes ☐ No

Outside disposition - was leaseholder notified? ☐ Yes ☐ No | Name of leaseholder:

☐ **Reminder** – If outside disposition, a Temporary Field Authorization (TFA) may be required depending on Regulator (Alberta)

Actual incident H2S concentration (if applicable): % / ppm / mol/kmol (circle one)

Nearest town: | Distance and direction to town:

Environment affected: ☐ Air ☐ Land ☐ Water

Distance of release to the nearest water body, watercourse, or waterway:

How was this distance determined?

Wildlife / waterfowl / livestock affected: ☐ None ☐ Habitat affected ☐ Animals injured / killed

Notes / description:

Confirm how the release has been or will be **contained**:

Confirm how the release has been or will be **cleaned up**:

☐ **REMINDER –** attach photos of cleanup with release report to Regulator

Evacuees (#): | People injured (#): | Fatalities (#):

Were members of the public affected? ☐ Yes ☐ No

If yes, indicate if they were: ☐ notified ☐ instructed to shelter in place ☐ advised to evacuate

Notes / description:

Media interest? ☐ None ☐ Local ☐ Regional ☐ National

Damage to public property? ☐ Minor / no damage ☐ Substantial (e.g. oil covered) ☐ Extensive (e.g. destroyed)

PIPELINE SPECIFIC

Pipeline Hit? ☐ Yes ☐ No	Line #:	Test failure? ☐ Yes ☐ No
Normal operating pressure: kPa		Maximum operating pressure: kPa

Is the pipeline shut in, depressured, and isolated? ☐ Yes ☐ No

If yes, date & time:

What is the total volume of liquid in the pipeline?

Are there isolation valves? ☐ Yes ☐ No *If yes, have they been activated?* ☐ Yes ☐ No

Are there other pipelines that tie into the failed line? ☐ Yes ☐ No *If yes, have they been shut in / isolated?* ☐ Yes ☐ No

☐ **Reminder** – contact Regulator before excavating pipeline

☐ **Reminder** – advise and obtain Regulator permission before returning pipeline to service

RIGHT-OF-WAY (ROW)

Date that pipeline ROW and well were last checked:

How was the ROW surveillance conducted (from the air, by quad, on foot, using infrared, etc.)?

☐ **Reminder** - submit daily production volumes for the well / pipeline to Regulator **within 24 hours**

INVESTIGATION INFORMATION

What operations are currently taking place (containment, sampling, line locating, retaining contractors / consultants, pipeline excavation, repair, site access, EM survey, etc.)?

FORM 6: OGC FORM C - EMERGENCY INCIDENT FORM [2]

This in an internal OGC document provided to Industry for reference purposes only. It outlines the information that will be requested by OGC emergency management staff following any Level 1, 2 or 3 incident, as defined in *Guideline 9: Incident Classification Matrix.* **The emergency must be reported to the Commission within 1 hour of the incident.**

To be used by Liaison Officer to collect critical incident information prior to initial notification call to OGC.

BC Oil & Gas COMMISSION	**FORM C** **EMERGENCY INCIDENT FORM** BCOGC 6534 Airport Road Fort St. John BC V1J 4M6 Phone: (250) 794-5200 emp@bogc.ca

MISCELLANEOUS INFORMATION				
DGIR#:	Ledger Number:	Kermit Number:		
Incident Date (YYY-MM-DD):		Incident Time (24 hour clock):	☐ PST	☐ MST
Received Date (YYYY-MM-DD):		Received Time (24 hour clock):	☐ PST	☐ MST

INFORMATION OF PERSON REPORTING INCIDENT TO OGC	
Permit holder Name:	Reported by (name):
Phone Number:	Alternate Number:
Email:	Fax Number:

INCIDENT DETAILS

[2] *Adopted from BCOGC website https://www.bcogc.ca/industry-zone/documentation/Emergency-Response-and-Safety*

LEVEL OF EMERGENCY		
Risk Score: (attach risk matrix) ☐ Level 1 ☐ Level 2 ☐ Level 3		
☐ Informed company they must contact the OGC to downgrade or stand down the level.		
SITE TYPE (Select one only)		
☐ Well (Active)	☐ Well (Abandoned/Suspended)	☐ Remote Sump
☐ Well (Drilling & Completions): Rig Name:		
☐ Battery/Plant/Facility	☐ Tank Farm/Storage	☐ Pipeline
☐ Riser (Pipeline)		
☐ Road or Road Structure: Name:	Location on road:	
☐ Other –Specify:		

INCIDENT TYPE (check all that apply)		
☐ Spill (releases and discharges)	☐ Fire/Explosion	☐ Drilling Kick
☐ Worker Injury	☐ Security (theft, threat, sabotage, terrorism)	☐ Induced Seismicity
☐ Well Bore Communication	☐ Pipeline Boring	☐ Vehicle
☐ Equipment/Structural Damage		
☐ Other –Specify		

ACTIVITY (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 (check all that apply)(If none, leave blank)		
☐ Worker Safety (fatality, injuries)	☐ Property (government, public, private)	☐ Economic (loss of and/or damage to equipment or infrastructure, loss of production, work stoppage)
☐ Other –Specify:		

AREA INFORMATION	
Land Type: ☐ Private Land ☐ Crown Land	Field Name:
Area Type: ☐ Forest ☐ Muskeg ☐ Farmland ☐ Residential ☐ Other	
Access: ☐ ATV ☐ Helicopter ☐ Four-wheel drive ☐ Two-wheel drive ☐ Unknown	
Name of the road the asset is located on:	
Km where the incident occurred:	
Distance to nearest resident/public facility:	
Nearest City/Town/Open Camp:	

CAUSE (check all that apply)		
☐ Third Party	☐ Manufacturing Defect	☐ Corrosion (internal, external)
☐ Employee (negligence, 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
Describe the cause and **remedial actions** in more detail:

WEATHER				
Weather Conditions:	☐ Clear	☐ Cloudy	☐ Other	
Wind Direction : From: N NE NW E SE S SW W				
Wind Strength:	☐ Calm	☐ Moderate	☐ Strong	☐ Gusty
Temperature: ^{o}C				
Comments:				

PUBLIC INJURIES / MEDICAL EMERGENCIES		
☐ First Aid	☐ Hospitalization	☐ Fatality
Other:		

NOTIFICATION		
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 Forest
☐ National Energy Board	☐ Other Specify:	
Permit Holder Instructed to call:		

MATERIAL INFORMATION

Is the spill off lease? ☐ Yes ☐ No

Spill Material Type: ☐ Corrosive Acid ☐ Emulsion (oil, gas, water)

☐ Fresh Water ☐ Liquid Hydrogen (crude, oil, diesel, fuel) ☐ Methanol

☐ Non-Toxic Gases (nitrogen, carbon dioxide, inert gases) ☐ Non-Toxic Liquids ☐ Salt Water

☐ Sour Natural Gas ☐ Sour Liquid (H_2S) ☐ Sweet Natural Gas ☐ Toxic Gas ☐ Toxic Liquid

☐ Other

GAS

Does material contain any H_2S? ☐ Yes ☐ No ☐ Unknown ☐ N/A

If yes, how much? ppm

Gas rate: 10^3m^3d or mmcfd	Gas volume: 10^3m^3 or mmscf
Can you hear/smell gas? ☐ Yes ☐ No	Propane/NGLs/LPSs? ☐ Yes ☐ No

LIQUID

Does material contain any H_2S (oil, water, condensate)?	☐ Yes	☐ No	☐ Unknown	☐ N/A

If yes, how much? ppm

Liquid rate: $m^{3/}d$ or BPD	Gas volume: m^3 or bbls or litres

Other (Describe):

Has spill been cleaned up?	☐ Yes	☐ No	☐ N/A

Date of clean up/proposed clean up: (mmm, dd, yyyy)

Estimated cost of clean up: $

SAFETY ISSUES

Hazard Response Zone ("EPZ") Size:_____km

Are responders in danger? ☐ Unknown ☐ No ☐ Yes

Are public in danger? ☐ Unknown ☐ No ☐ Yes

First Nations Band affected: ☐ No ☐ Yes ☐ Name of Band:

Public safety actions taken:

☐ Evacuation ☐ Sheltering **(Instruct Permit holder to contact Local Authority)**

☐ Roadblocks ☐ Do you need or do you have a Closure Order? **(Instruct Permit holder to contact MOT up to mile 82 on Alaska Highway or Public Works from 82 north on Alaska Highway for any public roads, and the OGC for Petroleum Development Resource roads, or Ministry of Forestry for forestry roads)**

☐ Do you need or do you have a NOTAM?

☐ Have you conducted a Transient Survey?

☐ Any Media Releases must be done in conjunction with OGC

☐ Have you or do you need to dispatch Mobile Air Quality Monitoring **(Instruct Permit holder to contact Health Authority if public are involved)**

☐ Have you or will you need to Ignite?

☐ Have you notified all tenure holders? Non-resident landowners / Trappers / Guide-Outfitters / Range Allotments / Grazing Lease

ASSETS			
GEOPHYSICAL PROGRAM (A UTM location is required)			
Geophysical #:	Program name:		
Client Name:			
UTM (NAD 83): m easting m northing (Place on the program that incident happened REQUIRED)			
SITE (on lease equipment, wells, or facilities) Fill information in for asset with incident			
Location of asset: NTS _____-_____-_____ / _____-_____-_____ or DLS _____, SEC _____, TWP _____, RGE _____ W6M			
OGC Site #:	Site Detail (on lease equipment):		
WELL			
Well Authorization #:		Status of well:	
Depth / Perforation:	m KB	Wellbore Fluid Density:	kg/m^3
Pit Gain	m	Kill Fluid Density	kg/m^3
*SIDPP / SITP	kPa	*SICP	kPa
*RSPP	kPa	Equipment:	
Operating Pressure:	kPa	Shut in Pressure:	kPa
**SIDPP - Shut in Drill Pipe Pressure/SITP – Shut in Tubing Pressure/SICP – Shut in Casing Pressure/RSPP – Reduced Speed Pump Pressure*			
FACILITIES			
OGC Facility Code # :		Equipment on Site :	
Design Capacity:		Actual Throughput:	
Operating Pressure:		Operating Temperature:	
PROJECT (PIPELINES) (A UTM location is required)			
Project Location: NTS From _____-_____-_____ / _____-_____-_____ NTS To _____-_____-_____ / _____-_____-_____ or DLS From _____, SEC _____, TWP _____, RGE _____ W6M DLS To _____, SEC _____, TWP _____, RGE _____ W6M UTM (NAD 83): m easting m northing (Place on Pipeline where incident happened REQUIRED)			
Project #		Pipeline Segment #	
Product:		Line Length between valves:	km
ID mm		OD mm	
Operating Pressure kPa		Maximum Operating Pressure	kPa
ESD or Block Valve Closure?	☐ Yes	☐ No	☐ Unknown

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 of asset: NTS _____-_____-_____ /_____-_____-_____ or DLS _____, SEC _____, TWP _____, RGE _____ W6M	
UTM (NAD 83): m easting m northing REQUIRED	
GPS: Latitude: Longitude:	

FORM 7: OGC FORM A – MINOR INCIDENT NOTIFICATION FORM

BC Oil & Gas COMMISSION

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):		

Updated: 08-September-2017
Effective: 01-October-2017

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	

Updated: 08-September-2017
Effective: 01-October-2017

FORM 8: PUBLIC COMPLAINT FORM

USE THIS FORM TO RECORD ANY PUBLIC CONCERN OR COMPLAINT. Submit to the Safety Officer or Documentation Lead upon request or post incident.

***Use 24-hour clock (i.e.: 8:pm = 20:00)**

INFORMATION FROM CALLER	
DATE:	*(DD/MM/YYYY*
TIME*:	
TIME* OF INCIDENT:	
CALLER'S NAME:	
CALLER'S PRESENT LOCATION:	
CLOSEST TOWN:	
Nature of the incident:	

Type of emergency (if known)	☐ Gas Release	☐ Oil Spill	☐ Fire/ Explosion	☐ Vehicle Accident	☐ Injury	☐ Other
Is there a detectable odour?	☐ Rotten Eggs	☐ Crude Oil	☐ Other:			

Is there a visible vapour cloud?	☐ Yes	☐ No
Are there any injuries / health symptoms / fatalities?	☐ Yes	☐ No
Has the individual informed anyone else or do they intend to inform anyone else (i.e. AER / EMBC / MER / EMO / CER, emergency services, neighbours)?	☐ Yes	☐ No

EMPLOYEE INFORMATION	
EMPLOYEE NAME:	**PHONE NO.:**
ACTIONS TAKEN:	

Distribution:

- Area Superintendent
- Area Landman
- Emergency Response Department, Calgary

FORM 9: THREATENING CALL (EXPLOSIVE DEVICE)

IF YOU RECEIVE AN EXPLOSIVE DEVICE THREAT:

- Listen carefully, both to the message the caller is giving and to voice characteristics (see below)
- Be calm and courteous and do not interrupt – try to draw the caller into conversation or into talking as long as possible; if possible have someone call police while you are on the line
- Get as much information as possible
- **Immediately relay information to 9-1-1 and your Supervisor**

QUESTIONS TO ASK*:*

What time will explosion happen?	
What does the device look like?	
What kind of bomb is it?	
Where are you calling from?	
Why was the explosive placed?	
What is your name?	

EXACT WORDING OF THREAT:

Duration of Call:	

IDENTIFYING CHARACTERISTICS OF THE CALLER:

Sex:	
Estimated Age:	
Accent:	
Voice: (loud, soft, etc.)	
Speech: (fast, slow, slurred, etc.)	
Diction: (good, nasal, lisp, stutter, etc.)	
Manner: (calm, rude, emotional, etc.)	
Background noises: (traffic, loud noises, other voices, etc.)	
Voice was familiar?	
Was caller familiar with company facilities or employees? Explain.	

THREAT RECIPIENT:

Name:	Phone No.
Date	Time:

Distribution: ☐ RCMP ☐ Area Superintendent ☐ Area Landman
☐ Corporate Security ☐ Emergency Management

FORM 10: SECURITY CHECK IN / OUT

To be posted at Command Post entry for duration of incident

Submit completed forms to Documentation Lead or Safety Officer upon request or post incident.

CHECK IN LOCATION: ☐ **On-Site Command Post** ☐ **Incident Command Post** ☐ **Other** ____________________

DATE	NAME	COMPANY / AGENCY	*Use 24-hour clock (i.e.: 8:pm = 20:00)	
			TIME IN	TIME OUT
(DD/MM/YYYY				
(DD/MM/YYYY				
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FORM 11: ROADBLOCK CONTROL LOG

EPZ Size (m): **Emergency Level:**

Canadian Natural

Public Statement: *(check with Supervisor)*	

☐ Only **authorized** vehicles can proceed (e.g dispatched services) ☐ **For others**, provide Public Statement – advise not to proceed ☐ Do not prevent if driver wishes to go through (only RCMP / emergency services / public works can stop public)	☐ **Fill in the form for each authorized vehicle AND those wishing to go through** ☐ Immediately report this info to Roadblock Lead or On Scene Supervisor ☐ Submit completed form to Safety Officer upon request / post incident

Prepared By:	**Set-up Date:** *(DD/MM/YYYY)*	**Take-down Date:** *(DD/MM/YYYY)*
Roadblock Location:	**Set-up Time*:**	**Take-down Time*:**

Vehicle Type & License No. / Province	Company	Driver Name	Driver Contact #	Number of Passengers	Purpose for Entering	Time* Entering EPZ	Time* Exiting EPZ

FORM 12: AIR QUALITY MONITORING RECORD

RECORD each reading below. Submit completed Air Quality Monitoring Records to the Safety Officer upon request or post incident. ***Use 24-hour clock (i.e.: 8:pm = 20:00)**

Prepared By:	**Set-up Date:** *(DD/MM/YYYY)*	**Take-down Date:** *(DD/MM/YYYY)*
Roadblock Location:	**Set-up Time*:**	**Take-down Time*:**

Time*	**Temp. / Weather Condition**	**Wind Direction**	**Monitored Readings**				**Location of Reading**	**Comments**
			H_2S (ppm)	**CO**	**O_2**	**LEL**		

Canadian Natural

FORM 13: STAGING AREA LOG

ICS Forms 211 & 218 equivalent

Record all pertinent information, checkmark Canadian Natural's Four Pillars when confirmed and assign a Demobilization Number (to be used to cross reference with *Form14: Demobilization Checkout Form*). Submit completed Staging Area Logs to Safety Officer upon request or post incident.

***use 24-hour clock (i.e.: 8:pm = 20:00)**

			Name:	Phone:
Date:	*(DD/MM/YYYY)*	**Staging Area Manager:**		
Staging Area Location:		**On-Scene Supervisor:**		
Emergency Name:		**Deputy On-Scene Supervisor:**		
Emergency Legal Location		**Operations Section Chief:**		
Emergency Description		**Logistics Section Chief:**		

COMPANY NAME & TYPE OF SERVICE	EMPLOYEE NAME (list all that apply)	RADIO / CELL #	DATE & TIME* CHECKED IN	FOUR PILLARS				TIME* MOBILIZED TO SITE	DATE & TIME* DEMOBILIZED (Checkout)	Demobilization Number
				Orientated? ✓	Hazard Assessment? ✓	Service Provider HA/ JSA? ✓	Transp. of Injured Worker & Evac Plan ✓			

Canadian Natural

FORM 14: DEMOBILIZATION CHECKOUT

ICS Form 221 equivalent

Record information for EACH individual demobilization including the Demobilization Number assigned in *Form 13: Staging Area Log*. Submit all completed forms to the Safety Officer upon request or post incident. ***Use 24-hour clock (i.e.: 8:pm = 20:00)**

Demobilization # ***(from Staging Area Log)***		**Company Name**	

Staging Area Location		**Employee Name(s)** ***(include all that apply)***	
Emergency "Name"			
Emergency Legal Location			
Emergency Description ***(including Level)***			
Date & Time* of Demobilization ***(return from incident site)***	*(DD/MM/YYYY)*	**Date & Time* of Actual Release From Event**	*(DD/MM/YYYY)*

You and your resources have been released subject to Sign-Off by the applicable Canadian Natural representative below (checkmark appropriate box and fill in name):			**Time Ticket Signed Off?** ***(Yes / No)***
Incident Commander / Deputy	☐		
Operations Section Chief	☐		
On-Scene Supervisor / Deputy	☐		
Logistics Section Chief	☐		
Planning Section Chief	☐		
Staging Area Manager	☐		

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COMMENTS ***(if required)***			
Prepared by		**Date & Time*:**	

FORM 15: LEVEL 1 – NOTIFICATION / EVACUATION SCRIPT

Canadian Natural

RECORD all pertinent information on *Form 21: Public Notification Log*

"My name is** (your name) **and I am calling on behalf of Canadian Natural Resources to inform you that we are experiencing an operational incident at our nearby facility located at _____. You are in no immediate danger; however we are calling as a precautionary measure to inform you of the situation. Evacuation is not mandatory at this time, but a Reception Centre has been set up at _____ for your convenience. You may evacuate to this Centre if you choose."

Do you wish to leave your residence / area at this time? (If **YES,** go to 1 - if **NO** go to 2)

1. ☐ **YES** (Resident wishes to evacuate)

- ***How many people are at your residence who will evacuate?*** _____
- ***Do you require transportation?***

  ☐ **YES**
  - Advise resident to stay indoors and wait for a vehicle to be dispatched to take them to the Reception Centre
  - Notify Public Safety Supervisor to dispatch personnel
  - Skip remaining steps

  ☐ **NO**

- ***Do you wish to go to the Reception Centre?***

  ☐ **YES**
  - Advise resident of a safe route out of the hazard area to the Reception Centre
  - Advise resident that there will be a Canadian Natural representative at the Centre who will answer questions and arrange for temporary accommodation, if necessary

  ☐ **NO**
  - Ask them to tell you where they are going and what telephone number they can be contacted at to inform them when it is safe to return to their home:

    Where_____ **Contact No.**_____

2. ☐ **NO (Resident does not wish to evacuate)**

- Instruct resident to stand by for further contact
- Give sheltering instructions as per the ***Form 17: Shelter-In-Place Script***
- Advise them we will call if the situation changes or when it is resolved
- Ask resident to advise you if they change their mind and decide to evacuate
- Give resident your contact number_____

Thank you very much for your cooperation. For urgent questions, please contact our Public Safety Supervisor** (give name) _____ **at** (give phone number) _____. **Please understand that our local personnel are working to rectify the situation at this time and may not be able to immediately answer or return calls for additional information.

FORM 16: LEVELS 2 AND 3 – EVACUATION SCRIPT

Canadian Natural

RECORD all pertinent information on *Form 21: Public Notification Log*

"My name is (your name) and I am calling on behalf of Canadian Natural Resources to inform you that we have encountered operational difficulties at our nearby facility located at _____. You are in no immediate danger; however as a safety precaution we are requesting that all persons evacuate the area. A Reception Centre has been set up at _____ and you may evacuate to this Centre for the duration of the situation if you choose."

1. **How many people are at your residence who will evacuate**?

   _____

2. **Can you account for all members at your residence?**

   ☐ **YES**

   ☐ **NO**

   - Ask for members that may need to be located.
   - Assure resident that someone will be sent to notify people who are away from the residence.
   - Notify Public Safety Supervisor to dispatch personnel.

3. **Do you require transportation?**

   ☐ **YES** For how many?_____

   - Advise resident to stay indoors and wait for a vehicle to be dispatched to take them to the Reception Centre.
   - Notify Public Safety Supervisor to dispatch personnel
   - Skip Step 4.

   ☐ **NO**

4. **Do you wish to go to the Reception Centre?**

   ☐ **YES**

   - Advise resident of a safe route out of the hazard area to the Reception Centre.
   - Advise resident they will be met by a Canadian Natural representative who will answer questions and arrange for temporary accommodation, if necessary.

   ☐ **NO**

   - Ask them to tell you where they are going and what telephone number they can be contacted at to inform them when it is safe to return to their home.

   Where_____ **Contact No.**_____

If the resident refuses to evacuate, give sheltering instructions as per ***Form 17: Shelter-In-Place Script*** and inform the Public Safety Supervisor.

Thank you very much for your cooperation. For urgent questions, please contact our Public Safety Supervisor (name) _____ at (phone number) _____. Please understand that our local personnel are working to rectify the situation at this time and may not be able to immediately answer or return calls for additional information.

FORM 17: SHELTER-IN-PLACE SCRIPT

RECORD all pertinent information on *Form 21: Public Notification Log*

My name is (your name) and I am calling on behalf of Canadian Natural to inform you that we are experiencing an operational incident at our nearby facility located at _____. We are currently responding to the incident, but 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 this person(s)

  _____
- **Then tell the resident:** We will be sending someone to find this person(s) as soon as possible***.***

☐ ***Do you have children in school at this time?*** **(Yes / No)** _____

- **If YES, ask the resident:** Which children are in which schools?

  _____
- **Then tell the resident:** The school(s) will be contacted and instructed to keep the children at school or to return the bus back to the school.

☐ ***Do you have the "Shelter-In-Place" instructions previously given to you?*** **(Yes / No)**

_____

- **If NO, ask the resident to** Please take the following actions immediately:
  1. Gather everyone indoors and stay there
  2. Close and keep closed all windows and outside doors
  3. Turn your furnace down to its minimum setting and turn off air conditioners
  4. Turn off other fans, appliances or equipment that either uses indoor air, blows out indoor air or sucks in outside air, for instance – bathroom or kitchen exhaust fans, built in vacuum systems, clothes dryers, gas fireplaces and gas stoves
  5. Please limit using your phone so that we can contact you again with updates and further instructions.
- **If YES, ask the resident to** Please follow the "Shelter-In-Place" instructions.

☐ ***If you are experiencing symptoms or smelling odours, call Canadian Natural's emergency number***

☐ ***Stay tuned to local radio and / or television station for possible information updates***

☐ ***Even if you see people outside, DO NOT leave until told it is safe to do so***

Please remain sheltered **until we contact you with an "All Clear" message**. By staying indoors you will be protected from any contaminated air outside until we have resolved the problem.

Thank you very much for your cooperation. For urgent questions, contact our Public Safety Supervisor (name) _____ at (phone number) _____. Please understand that our local personnel are working to rectify the situation at this time and may not be able to immediately answer or return calls for additional information.

Equivalent to Emergency Response Planning Guide: Shelter-In-Place Instructions, CAPP, May 24, 2006

FORM 18: ALL CLEAR SCRIPTS

RECORD all pertinent information on *Form 21: Public Notification Log*

EVACUATION ALL CLEAR

My name is (your name) and I am calling on behalf of Canadian Natural to inform you that the operational issues at our nearby facility located at _____ have been resolved. It is now safe for you to return to your (residence / business).

Once you have returned to your (residence / business), please do the following:

- ventilate your building by opening all windows and outside doors
- turn on fans, furnaces and furnace circulating fans
- once completely ventilated, return all heating ventilating and other equipment to normal

Please keep any itemized receipts of expenses that you may have incurred as a result of this evacuation. A Canadian Natural representative will contact you as soon as possible to discuss the status of recovery, reimbursement if applicable and if you require any further assistance.

If you have any questions or concerns in the meantime, please contact our area Landman: _____ at _____.

Thank you.

SHELTER-IN-PLACE ALL CLEAR

My name is (your name) and I am calling on behalf of Canadian Natural to inform you that the operational issues at our nearby facility located at _____ have been resolved. It is now safe for you to return to normal activities.

Please remember to:

- turn on fans, furnaces and furnace circulating fans
- return all heating ventilating and other equipment to normal

Please keep any itemized receipts of expenses that you may have incurred as a result of this evacuation. A Canadian Natural representative will contact you as soon as possible to discuss the status of recovery, reimbursement if applicable and if you require any further assistance.

If you have any questions or concerns in the meantime, please contact our area Landman: _____ at _____.

Thank you.

Canadian Natural

FORM 19: RECEPTION CENTRE REGISTRATION

RECORD the appropriate information for **EACH** person entering or leaving the Reception Centre. Submit completed forms to the Safety Officer upon request or post incident. ***Use 24-hour clock (i.e.: 8:pm = 20:00)**

Prepared By:	**Date:** *(DD/MM/YYYY)*	**Page #:**

Name ***(List all names in party)***	**Check-In Date & Time***	**Check-Out Date & Time***	**Cell / Location Telephone Number** (where they can be reached)	**Concerns**

Canadian Natural

FORM 20: EXPENSE CLAIM

Canadian Natural will reimburse expenses that are incurred as a direct result of an evacuation that is required by an emergency involving our operations. Please complete this Expense Claim form, attach corresponding receipts and return this claim to the nearest Canadian Natural office. Please contact _____ with Canadian Natural at _____ if you have any questions or concerns.

EVACUEE INFORMATION	
Name:	**Date claim submitted:** *(DD/MM/YYYY)*
Address:	
Address: *(while evacuated)*	
Legal Location: *(residence / business / other)*	
Phone Number: *(residence / business / other)*	**Phone Number:** *(while evacuated)*

EXPENSES **(***please attach receipts***)**	
Expenses incurred: From _____ *(DDMM/YYYY)* To _____ *(DD/MM/YYYY)*	
Accommodations (*if not pre-arranged*)	$
Meals (*if not pre-arranged*)	$
Transportation *(___ km @ $ ___ / km)*	$
Other reasonable expenses (*please list*)	$
	$
	$
	$
	$
	$
	$
	$
TOTAL	**$**

FOR CANADIAN NATURAL RESOURCES USE ONLY	
Incident Name / Location:	
Received By:	**Position:**
Phone Number:	**Date Received:** *(DD/MM/YYYY)*

Canadian Natural

FORM 21: PUBLIC NOTIFICATION LOG

RECORD ALL ATTEMPTS to contact residences, businesses, etc. and fill in information as required. Inform Public Safety Supervisor or Telephone Caller Lead of unsuccessful contact attempts so that Rovers may be dispatched. Submit completed forms to the Safety Officer or Documentation Lead upon request or post incident. ***Use 24-hour clock (i.e.: 8:pm = 20:00)**

Prepared By:	**Date:** *(DD/MM/YYYY)*

Contact		**Phone Number**	**Contact Attempt**		**Transport Required?**	**Evacuated to Centre?**	**Evacuated to Other Location**	**Shelter-In-Place**	**Concerns / Details**	**Stand Down / All Clear Contact Time***
ERP Map Label	**Resident / Business Name**	**(Home or Cell)**	**Time***	**Contacted Y / N**	**Y / N**	**Y / N**	**Where / Phone #**	**Y / N**		

CANADIAN NATURAL RESOURCES LIMITED

24-HOUR EMERGENCY NUMBER: 1-888-878-3700

FORM 22: RESIDENT EVACUATION NOTICE

Date: *(DD/MM/YYYY)* _____ **Time:** _____

Dear Occupant,

This residence has been evacuated due to an emergency situation involving Canadian Natural operations in your area.

As a safety precaution, we request that you proceed in a north / east / south / west *(circle the appropriate, safe direction)* direction to the Reception Centre noted below and check in with Canadian Natural personnel located there.

_____

After reporting in at the Centre, you may depart to another location or we will make arrangements for your accommodation, if necessary.

Thank you for your cooperation.

Canadian Natural

FORM 23: ROVER LOG

RECORD ALL ATTEMPTS to contact residences, businesses, etc. and fill in information as required. Submit completed forms to Safety Officer upon request or post incident.

Area:	**Incident Command Post Location:**	
Reception Centre Location:		
Prepared By (Name):	**Date:** *(DD/MM/YYYY)*	**Page _____ of _____**

RESIDENT / PUBLIC FACILITY NAME	**LOCATION**		**PHONE** (and alternate number)	**TIME CONTACTED** (time of contact **using 24 hour clock** under all applicable types of contact)				
	ERP Map Label	**Legal Location**		**Requires Help**	**Evacuated**	**Sheltered in Place**	**To Check In at Recep Centre**	**Evac Notice Posted**

FORM 24: DEBRIEFING REPORT

DISTRIBUTION: ☐ Emergency Management REDACTED - CER Order AO-001-MO-006-2016 s. 1.a.i. - personal information
☐ Area Safety & Compliance Coordinator ☐ Area Foreman ☐ Action Item Assignees

DATE OF DEBRIEF: *(dd/mm/yyyy)*		**TIME:** *(24-hr clock)*	
DEBRIEFING LOCATION:			
INCIDENT NAME:			
INCIDENT LOCATION:			
INCIDENT DETAILS: *(copy info from Incident Command System Flowchart top left table – time period, EPZ size, Emergency Level, wind/weather conditions, incident type)*			

All company incident response personnel and other members of the Corporate Support Team as applicable (i.e. Safety, Environment / Regulatory, Stakeholder Relations, Human Resources, etc.) **must** attend a scheduled debriefing. Debriefings may be held in the field or at Corporate Headquarters.

ATTENDEES:
(attach additional sheets if required)

Name	Title	Organization	Area	Response Role (if applicable)

DEBRIEFING OBJECTIVES

- Review Outcomes
- Review Lessons Learned
- Develop Action Plans that capture follow-up actions, assignees for each action, deadlines and completion dates
- Review the accuracy and effectiveness of the ERPs
- Review the need for Critical Incident Stress Debriefings (CISD) with Human Resources for response personnel and affected public

OUTCOMES

1. Evaluate the general knowledge of Emergency Response Procedures:	Comments:
Internal or external source of initial notification?	
Was the emergency situation assessed safely and effectively?	
Was the Emergency Level determined using a matrix?	
Were ERP Activation Requirements reviewed?	
Which public protection measures were used (roadblocks, shelter, etc.)	
Were internal notifications made quickly?	
Were external notifications made quickly?	
Were enough personnel and equipment available?	
Were there enough personnel to respond to / control the emergency?	
Were Stand Down procedures followed?	
Were Post-Incident procedures followed?	

2. What Emergency Response Tools were used:	COMMENTS:
FORMS:	
Form A: Incident Briefing	
Form 1: Emergency Time / Action Log	
Form 2: Incident Action Plan	
Form 3: Status (Timeout) Report	
Form 4: Resource Request & Status	
Forms 5, 6: AER / OGC "First Call"	
Form 7: OGC Form A – Minor Notification Form	
Form 8: Public Complaint Form	
Form 9: Threatening Call (Explosive Device)	
Form 10: Security Check In / Out	
Form 11: Roadblock Control Log	
Form 12: Air Quality Monitoring Record	
Form 13: Staging Area Log	
Form 14: Demobilization Checkout	
Forms 15, 16, 17, 18: Notification / Evacuation / Shelter / All Clear Scripts	
Form 19: Reception Centre Registration	
Form 20: Expense Claim	
Form 21: Public Notification Log	
Form 22: Resident Evacuation Notice	
Form 23: Rover Log	
Other ICS forms (if requested by Regulator):	
OTHER:	
ERP manuals – Corporate / Site-Specific	
Emergency Response Guide (flipguide)	
ERP map (if available)	
Incident Command System Flowchart	
Emergency Notifications Details chart	
Field Forms Booklet	
Roadblock Kit	
WCSS or other Spill Co-op manual	
Other (list):	

3. Evaluate availability of resources (internal and external) and equipment	COMMENTS
Were enough note-takers utilized?	
Were external resources activated (e.g. WCSS, ERAC, air monitoring trailers, helicopter, well servicing equipment, well blow out, industrial firefighters, etc.)	
Were local authorities (municipality / RCMP / other First Responders) required to assist?	
Could local authorities have been requested to assist with extra equipment / personnel (e.g. roadblocks)?	
Were roadblock kits strategically placed?	
Was Critical Incident Stress Debriefing (CISD) for response personnel / public required?	

4. Evaluate Communications Plans	COMMENTS
Were communications with impacted stakeholders effective?	
Was the automated notification system used?	
Was there adequate communication between internal roles?	
Were there communication problems?	
Were communications between internal and external resources clear and concise?	
Was media involved and were corporate communications staff (i.e.: spokesperson, advisor, etc.) utilized?	

5. Evaluate Emergency Response Plan	COMMENTS
Were the most current versions of the Corporate / Site-Specific ERPs used?	
Were there any errors / omissions with the Corporate or Site-Specific ERP(s)?	

LESSONS LEARNED

What Went Well:

Areas of Improvement:

ACTION PLAN			
ACTION REQUIRED	**Person Responsible**	**Due Date**	**Completion Date**
BC ONLY: OGC *Form D – Permit Holder Post Incident Report* must be submitted by the permit holder **within 60 days** following a level 1, 2, or 3 emergency, any pipeline incident, or upon request from the Commission			

GUIDELINES

GUIDELINE 1: CANADIAN NATURAL ERP ACTIVATION REQUIREMENTS

As per Canadian Natural Senior Management
August 2014

- Level 1 events / incidents, as noted below, require full activation of Canadian Natural's Emergency Response Plan (ERP), as well as use of the Incident Command System Flowchart and Emergency Notification Details chart:
    - Release into a body of water
    - Impact to the public
    - Media involvement
    - Regulators request to release a Media Statement
- All events / incidents that can be classified as a Level 2 or greater, as defined by both the Alberta and British Columbia Incident Classification Matrixes, require a full activation of Canadian Natural's ERPs, as well as use of the Incident Command System Flowchart and Emergency Notification Details chart.

GUIDELINE 2: KEY GOVERNMENT AGENCY NOTIFICATION REQUIREMENTS BY INCIDENT TYPE

LEGEND:

- ✓ **Compulsory contact**
- ✹ Request that the regulatory agency (i.e. AER) notify these agencies and services as required
- ★ Refer to the applicable provincial Release Reporting Requirements

INCIDENT TYPE	AGENCY OR RESOURCE																		
	FIRST RESPONDERS		Designated MANDATORY NOTIFICATIONS					SUPPORTING AGENCIES & OTHER GOVERNMENT CONTACTS											
	Ambulance	Local Fire Department	RCMP ❶	Regulatory Agency ❷	Local Authority ❸	Health Authority	Canada Energy Regulator	Occupational Health & Safety ❹	Emergency Management Agency ❺	Provincial Health and Wellness	Provincial Boilers Safety Authority	Provincial Safety Services – Electrical Branch	Ministry of Transportation	Workers' Compensation Board	Oil Spill Cooperative (WCSS or other) ❻	Environment & Climate Change Canada	ERAC	Department of Fisheries and Oceans
Sour Gas / HVP Release (Uncontrolled)		1	✓	✓	✓	✓	2	3	✹	✹			4	5		6		
Sweet Combustible Gas Release		1	✓	✓	✓	✓	2	3	✹				4	5				
Spill / Transportation Incident (Unrefined Products) ★		1	✓	✓	✓	✓		3	✹				4	5	✓	6		8
Spill / Rail or Trucking Incident (Refined Products) ★		1	✓	✓	✓	✓		3	✹				4	5	✓	6	7	8
Serious Injury or Death (Including Vehicle Accidents)	✓		✓					✓						✓				
Fire / Explosion / B.L.E.V.E.	✓	✓	✓	✓	✓	✓	2	3	✹				4	5			7	
Pressure Vessel or Piping Incident			✓	✓	✓	✓	2	3			✓			5				
Electrical Incident			✓	✓	✓	✓		3				✓		5				
Motor Vehicle Accident (No Injuries)			✓															
Security Incident			✓	✓	✓													
On-Site Incident Involving E2 Regulated Substance		1	✓	✓	✓	✓										6		

1. Contact local fire department if there is potential for secondary fires resulting from ignition of spilled liquids or escaping gases
2. Contact Canada Energy Regulator (following incident reporting Instructions in Guideline 8)
3. **APPLICABLE BU/GROUP SAFETY LEAD** - Contact Occupational Health and Safety when: an injury or accident results in death; an injury results in a worker being admitted to a hospital; there is an unplanned or uncontrolled explosion, fire or flood that causes a serious injury or that has potential to cause a serious injury; there is a collapse or upset of a crane derrick or hoist or; there is a collapse or failure of any component of a building or structure necessary for its structural integrity.
4. Contact RCMP and provincial Ministry of Transportation if emergency affects a 1, 2, or 3 digit highway (e.g. Hwy 2, Hwy 47, Hwy 837). See Section 3.2.2 for Temporary Road Closures guidelines for AB and BC.
5. Contact provincial Workers' Compensation Board if there is any accident that disables or is likely to disable a worker beyond the day of the accident
6. To notify Environment & Climate Change (ECCC) Canada, call applicable provincial environmental authority's 24 hour number for the region in which the event occurred (they will contact ECCC). Contact numbers are found in Section 6.3.7 Federal Government Contacts. The provincial authority must be notified of incidents involving regulated substances at E2 registered facilities (see Guideline 9 for E2 notification requirements and procedures) and / or incidents involving spills on First Nations lands, in National Parks, into river or lake systems containing fish, or onto railway right-of-ways.
7. Emergency Response Assistance Canada (ERAC) will respond on the behalf of members to dangerous goods incidents involving flammable gases by road or rail and incidents involving flammable liquids by rail only. See Guideline 10 for all stakeholder responsibilities
8. Contact the Department of Fisheries and Oceans Canada to report an oil spill that occurs in or around fresh and marine waters.

❶ In the event of a fatality, request that the RCMP contact the Medical Examiner

❷ In Alberta, the AER is designated as the lead agency (single window approach) to implement the government Emergency Response Support Plan. In BC, EMBC serves the same purpose.

❸ Local Authorities include cities, towns, villages, counties, municipal districts, improvement districts, special areas, rural municipalities, Métis settlements and First Nations Reserves

❹ Workplace Health & Safety – see #3 above for further details

❺ The Emergency Management field representative may provide assistance in contacting some or all of the local authorities

❻ Oil Spill Cooperatives in Alberta are operated by Western Canadian Spill Services (WCSS); Saskatchewan cooperatives consist of six (6) different groups; Manitoba has the Manitoba Producers Oil Spill Corporation (MPOSC). See Oil spill Services Contacts section for more details

GUIDELINE 3: ASSESSMENT MATRIX FOR CLASSIFYING INCIDENTS (ALBERTA / SASKATCHEWAN / MANITOBA)

TABLE 1: CONSEQUENCE OF INCIDENT

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

TABLE 2: LIKELIHOOD OF INCIDENT ESCALATING*

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

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

Sum the Rank from both of these columns to obtain the "Risk Level." The corresponding "Assessment Result" is the Level for the incident.

TABLE 3: INCIDENT CLASSIFICATION

Risk Level		Assessment Result
Very low	2 – 3	Alert
Low	4 – 5	**Level 1 Emergency**
Medium	6	**Level 2 Emergency**
High	7 – 8	**Level 3 Emergency**

AER D71: Appendix 4 – Assessment Matrix for Classifying Incidents Feb 2, 2017

GUIDELINE 4: ALBERTA ENERGY REGULATOR (AER) POSSIBLE RESPONSES FOR SPECIFIC INCIDENTS

RESPONSES	Incident Classification			
	Alert	**Level 1 Emergency**	**Level 2 Emergency**	**Level 3 Emergency**
Communications				
Internal	Discretionary, depending on licensee policy	Notification of off-site management	Notification of off-site management	Notification of off-site management
External public	Courtesy, at licensee discretion	Mandatory for individuals who have requested notification within the EPZ	Planned and instructive in accordance with the specific ERP	Planned and instructive in accordance with the specific ERP
Media	Reactive, as required	Reactive, as required	Proactive-media management to local or regional interest	Proactive-media management to national interest
Government	Reactive, as required. Notify AER, MER or EMO if public or Media is contacted	Call AER, MER or EMO's 24-Hour Response Line. Call local authority and HA if public or media is contacted	Call AER, MER or EMO's 24-Hour Response Line, local authority and HA.	Call AER, MER or EMO's 24-Hour Response Line, local authority and HA
Actions				
Internal	On-site, as required by licensee	On-site, as required by licensee. Initial response undertaken in accordance with the Site-Specific or corporate-level ERP.	Predetermined public safety actions are underway. Corporate management team alerted and may be appropriately engaged to support on-scene responders	Full implementation of emergency management system
External	On-site, as required by licensee	On-site, as required by licensee	Potential for multi-agency (operator, municipal, provincial, or federal) response	Immediate multi-agency (operator, municipal, provincial, or federal) response
Resources				
Internal	Immediate and local. No additional personnel required	Establish what resources would be required	Limited supplemental resources or personnel required	Significant incremental resources required
External	None	Begin to establish resources that may be required	Possible assistance from government agencies and external support services, as required	Assistance from government agencies and external support services, as required

GUIDELINE 5: INCIDENT CLASSIFICATION MATRIX (BC)

Instructions: Start at the top and continue down until you check off the most applicable box(es) in both Table 1 and Table 2. Use the rankings in Table 3's formula to determine the Risk Scoring and associated Assessment Result. *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)

Updated: 08-Sept-2017
Effective: 08-Sept-2017

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, Schedule “Reporting Levels for Certain Substances” for determining reportable spillage amounts of other substances:

OTHER REPORTABLE INCIDENTS

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

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

Updated: 08-Sept-2017
Effective: 08-Sept-2017

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.**

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GUIDELINE 6: RESPONSE ACTIONS BY LEVEL CLASSIFICATION (BC)

	Notification Only	Level 1	Level 2	Level 3
Action Plan	• Permit holder must notify the Commission online within 24 hours using the *Form A: Minor Incident Notification Form* **(see Form 7 in Forms and Guidelines section).** In addition to Form A, spills and leaks must also be reported to EMBC.	• **Immediate notification as per "Notification Only" column** • Make remaining mandatory notifications (local municipality, RCMP / local police, health authority) • Contact other appropriate government agencies based on nature of incident • Alert all well site / facility personnel. Evaluate problem and initiate appropriate remedial action • **FOR LAND BASED SPILLS DURING DAYTIME OPERATIONS:** Spill responses must be initiated within six (6) hours from time spill is discovered. • **FOR SPILLS ON WEEKENDS / DURING NIGHT:** Spill responses must be initiated within twelve (12) hours from time of discovery • Unnecessary personnel to leave site • Notify company representative(s) • Alert mobile monitoring equipment and be ready for call-out or mobilize monitoring equipment if location is remote • In some cases, where there are large number of residents, notify or evacuate residents in accordance with Site-Specific plan • Prepare for evacuation in case of escalation of situation.	• Ensure all Level 1 actions are taking place • Initiate evacuation / sheltering of the Emergency Planning Zone (EPZ) • Set up roadblock(s) to isolate the EPZ • Discuss issuance of a closure order with the EMBC's head office in Fort St. John • Send out monitoring crew; initiate mobile air monitoring • Send company representative to Reception Centre • Inform senior company personnel • Establish communications links to Off-Site Control Centre • Assemble ignition crew and ready ignition equipment in case of escalation of the situation	• Ensure all Level 1 and Level 2 actions are taking place • Mobile air monitoring equipment in place • Ignite release if any of the ignition criteria are met • Expand EPZ as required

GUIDELINE 7: CANADA ENERGY REGULATOR (CER) GUIDELINES

SUMMARY

For incidents involving a Canada Energy Regulator (CER) regulated asset, once the emergency level has been determined and if the incident is deemed an "Immediately Reportable Event", it must be reported on the Transportation Safety Board's (TSB) Incident Line and on the CER's Online Event Reporting System (OERS). See the following *Guideline 8: CER Event Reporting Guidelines*.

The CER and TSB have a single window approach for event reporting. However, in some areas, the TSB reporting requirements are somewhat different than the CER requirements. For additional details on the TSB reporting requirements, companies must refer to the Transportation Safety Board Regulations and the TSB website (http://www.tsb.gc.ca/eng/incidents-occurrence/pipeline/index.asp).

Note that information required by the TSB as per their regulations is separately identified in the Online Event Reporting System (OERS). **It is the responsibility of the company to ensure the information required by the TSB is entered into OERS in accordance with their 30 day timeline**. OERS will automatically forward this information to the TSB within the timeline.

If OERS is unavailable, report events to the TSB Reporting Hotline at 819-997-7887 (collect calls accepted).

A user manual for CER's Online Event Reporting System (OERS) is found here:
https://orcadocs.readthedocs.io/en/latest/

USING THE PRECAUTIONARY APPROACH

It is the Board's expectation that each company take a precautionary approach to the reporting of events. This means that even if there is some doubt as to whether an event should be reported, the company is to report the event. In other words, companies should adopt a "when in doubt, report" approach.

The OERS now contains a field where the company must indicate that it is reporting an incident on a precautionary basis. In these cases, the CER will determine whether the incident is reportable based on information provided by the company. In cases where an event was reported using the precautionary approach and subsequent information indicates that it was not reportable, the CER records will reflect this and the event will not be included on the company's compliance record and will not be posted on the CER Interactive Incident Map.

TYPES OF EVENTS TO BE REPORTED USING OERS

- incidents under the *Canada Energy Regulator Onshore Pipeline Regulations* (OPR)
- 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)

GUIDELINE 8: CER EVENT REPORTING GUIDELINES

Only portions of the *Canada Energy Regulator Event Reporting Guidelines* that pertain to Canadian Natural's CER-regulated facilities (pipelines) have been included in this guideline. The full guidelines can be found here:

https://www.cer-rec.gc.ca/en/about/acts-regulations/cer-act-regulations-guidance-notes-related-documents/canada-energy-regulator-event-reporting-guidelines/index.html#s1_0

EMERGENCY LEVEL CLASSIFICATION

For an emergency involving a Canada Energy Regulator (CER) regulated asset, **emergency levels will be established based on the applicable provincial authority's Incident Classification Matrix**.

DEFINING & REPORTING IMMEDIATELY REPORTABLE EVENTS

If event meets any of these definitions, it is an "Immediately Reportable Event":

- An **Incident that Harms People or 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.
- 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).

If event is an Immediately Reportable Event, report as soon as possible, no later than three (3) hours of event discovery:

1) notify TSB Reporting Hotline at (819) 997-7887

2) input incident details into OERS at: https://apps.cer-rec.gc.ca/ers

For all other events that are not Immediately Reportable Events (do not meet any of the above definitions):

- immediate call to TSB Reporting Hotline **is not required**
- report event as soon as possible and **no later than twenty-four (24) hours after event is discovered**

REPORTING 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.

INFORMATION REQUIREMENTS FOR OERS

Notification / Preliminary Incident Report (PIR)

For initial notifications for all incidents and PIRs (for incidents under the OPR and PPR), companies must provide the following information via OERS:

- company contact information;
- date and time of occurrence and/or discovery;
- how the incident was discovered (e.g., routine patrol, landowner/public reported);
- type of incident being reported (e.g. death, release of substance, fire/explosion);
- type of substance released and initial release volume estimate, if applicable;
- qualitative details of incident type (e.g., broken bone if serious injury, exposure of a pipeline in a water body if operation beyond design limits, etc.);
- nearest populated center;
- GPS coordinates of the event in decimal degrees;
- facility name / pipeline name;
- narrative that includes a description of the events leading up to the occurrence or discovery and any immediate actions taken to protect the safety of the public, the company's employees, and/or the environment (e.g., evacuation, containment of product);
- initial narrative information on the component that failed, if applicable; and
- affected lands (e.g., restricted to company owned land, right-of-way, private land, crown land).

OTHER REPORTING GUIDELINES

A courtesy notification will also be made to the applicable provincial regulatory authority.

When the situation improves, a decision will be made by the Incident Commander, in consultation with local disaster service authorities and notification to the CER / provincial regulatory authority to reduce or call down the level of emergency. The Incident Commander will ensure the level change or stand down is communicated to all responders and stakeholders.

GUIDELINE 9: E2 ENVIRONMENTAL EMERGENCIES NOTIFICATIONS

Canadian Environmental Protection Act (CEPA)

An "environmental emergency" as defined by the E2 Regulations is:

(a) an uncontrolled, unplanned or accidental release, or release in contravention of regulations or interim orders made under this Part, of a substance into the environment; or

(b) the reasonable likelihood of such a release into the environment.

CEPA also defines this by stating that reporting obligations apply only to environmental emergencies that:

(c) have or may have an immediate or long-term harmful effect on the environment;

(d) constitute or may constitute a danger to the environment on which human life depends; or

(e) constitute or may constitute a danger in Canada to human life or health.

Reporting environmental emergencies is only required when the criteria listed above are met – the responsible person must use their professional judgement to determine whether or not a release from their facility meets the reporting criteria.

ACTIONS & REPORTING

If an environmental emergency occurs involving regulated substances covered by the Environmental Emergency (E2) Regulations on company sites, Canadian Natural will ensure the following as part of our response to the incident:

1. **Take all reasonable measures** to protect environment and public safety, including:
   - report to local emergency services (9-1-1)
   - notify any member of the public who may be adversely affected
   - prevent, mitigate or recover from any negative effects
   - activating site specific ERP where applicable or if no site specific ERP, reference Hazard Response Procedure 4 (purple tabbed section of this manual)

2. The **Field Environment Coordinator / Liaison Officer will make a verbal notification** as soon as it becomes apparent that the incident is imminent, or as soon as possible after the incident has occurred through respective provincial number:

Alberta Ministry of Environment and Parks	1 800 222-6514
British Columbia Provincial Emergency Program	1 800 663-3456
Manitoba Department of Conservation and Climate	1 855 944-4888
Saskatchewan Ministry of Environment	1 800 667-7525

3. **The Field Environment Coordinator and Emergency Management BU will make a written report** as soon as possible after the emergency has occurred and the responsible person can a) describe measures taken and b) identify any further measures required to prevent a reoccurrence.
   - Log into the Gov't of Canada's ECC's Single Window Information Manager system (SWIM) and submit Schedule 8 **OR**
   - **If facility is not registered in SWIM,** go to the Gov't of Canada's website and fill in the online form*

     https://pollution-waste.canada.ca/spill-reporting/P01

     ** will require Latitude (between 41.68138 and 83.11138) and Longitude (between -141.00194 and -52.61944)*

GUIDELINE 10: TDG / LPG EMERGENCY RESPONSIBILITIES

ERAC 24-HOUR EMERGENCY #: **1-800-265-0212**
CANADIAN NATURAL'S ERAP #: **REDACTED** - CER Order AO-001-MO-006-2016 s. 1.a.i. - personal information
(UN 1075 – butane, propane)

CARRIER / TRANSPORT COMPANY	EMERGENCY RESPONSE ASSISTANCE CANADA (ERAC)	CANADIAN NATURAL (Plan Participant)
❑ **Where possible, take immediate reasonable emergency measures** – reduce / eliminate danger to public life and health / safety of property, environment including: ○ Make emergency report to local authorities (9-1-1 **and** relevant provincial emergency authority e.g. spill / release emergency) ❑ **Make ERAP incident report** – call Emergency Response Assistance Plan (ERAP) phone number ❑ Complete / submit written 30-Day Follow-up Report to Director General of TDG Directorate *- within 30 days of a Release or Anticipated Release Report - Road, Rail or Marine, or Dangerous Goods Accident or Incident Report – Air* **Anyone can call ERAP under any circumstances**	❑ Receive and record ERAP incident report; evaluate and assess incident ❑ Provide technical advice to first responders ❑ Contact Plan Participant once ERAP incident report is made ❑ Make implementation report to CANUTECH by phone once tier level approved by Plan Participant ❑ During incident, provide: • technical advice • site safety • containment • confinement • flaring and purging • transfer • fire suppression support ❑ Update Plan Participant by phone / email of site activities ❑ When incident is over: • debrief with incident stakeholders • write summary report for Plan Participant • conduct after action review	❑ Ensure ERAP Reference Number and ERAC emergency telephone number listed on all required shipping documents ❑ Keep primary and emergency contacts up-to-date with ERAC ❑ Handle all Government Authority inquiries and / or relations specific to ERAP **<u>Incident Related:</u>** ❑ In consultation with ERAC, approve ERAP implementation to appropriate tier level **(Tier 1 or 2)** ❑ Provide safety data sheets (SDS) at time of ERAP implementation ❑ Conduct media related tasks ❑ Handle all Government Authority inquiries and / or relations specific to incident ❑ Coordinate with ERAC regarding respective communications with all external stakeholders

Tier 1	(a) provide technical or emergency response advice as soon as possible after ERAC request for advice; (b) remotely monitor the response to the release or anticipated release
Tier 2	(a) provide technical or emergency response advice as soon as possible after ERAC request for advice; (b) monitor the response to the release or anticipated release; (c) send ERAP emergency response resources to the location of the release or anticipated release

** as derived from ERAC Readiness and Review (copyright 2020) & Transport Canada, <u>Guide for persons who have an emergency response assistance plan</u>*

HAZARD RESPONSE PROCEDURES

The following procedures are also found in the Section 22 of the Safety Management System (SMS) and include the SMS procedure number (e.g. 22.01) to cross-reference each procedure with that section. Instances of "Incident Command Management Team" refer to the Incident Commander, Operations Section Chief and the On-Scene Supervisor.

PROCEDURES:

The following section "Standard SMS Safety Guidelines" is standard for all SMS procedures and should be used in conjunction with the above emergency response procedures.

STANDARD SMS SAFETY GUIDELINES:

Workers must be aware of, and follow, applicable Canadian Natural policies, Codes of Practice, guidelines, and any other health, safety and welfare requirements when conducting work on a Canadian Natural worksite.

Workers must be aware of specific hazards and appropriate controls at each work place - refer to Site-Specific procedures whenever possible. All workers are expected to use their knowledge, training and experience to carefully assess their work to ensure their own safety.

Workers must be competent to perform procedures. This means that a competent worker has signed that the worker has demonstrated competency. (Safety Orientation and Competency Training)

The following are requirements that workers must follow at all times when conducting work at Canadian Natural facilities:

- At a minimum, all workers on Canadian Natural worksites are required to wear Personal Protective Equipment (PPE):
  - Approved head protection
  - CSA approved footwear
  - Flame Resistant Clothing (FRC) within 25m of a potential hydrocarbon source
  - Safety glasses with side shields
  - Goggles are required when handling chemicals or hazardous products
  - Appropriate gloves for the task

  - High visibility outerwear when working around mobile equipment
  - Personal monitor capable of detecting airborne hazards in the work area (e.g. H_2S, CO, LEL, O_2 etc.)
  - Other PPE (such as: respirators, hearing protection, face shields) for specific tasks and conditions as identified by work procedures, Job Hazard Assessments (JHA), Hazard Assessment, Safe Work Permit, Field Level Hazard Assessments, Safety Data Sheets (SDS), and signs
- In sour areas:
  - Workers must be certified in "H_2S Alive" and must follow the requirements of that training at all times when conducting work.
  - Workers must be fit tested for the specific face piece of the respiratory protection they will be using.
  - When a task involves opening or breaking the integrity of any equipment, piping, or meter run, in a "sour" system, supplied air respiratory protection must be used until continuous atmospheric monitoring indicates that the breathing atmosphere is safe.
  - Workers must evacuate any areas whenever gas detection indicates the atmosphere contains H_2S above 9 ppm and don supplied air respiratory protection (SCBA or SABA) if required to re-enter the work area.
  - When workers must enter an area or conduct work in atmospheres above 100 ppm H_2S, another worker must be available as stand by, also equipped with supplied air respiratory protection and able to affect a rescue if required.

H_2S RISK ASSESSMENT

Field / Facility known H_2S Concentration		Measured H_2S Concentration	Controls
Up to 100 ppm (IDLH, NIOSH)	**or**	Greater than 9 ppm	• H_2S Monitor • SCBA / SABA • Single worker permitted • Follow "Working Alone" Procedure CNRL-OVR-PRO-SAF-000020
Greater than 100 ppm	**or**	Greater than 100 ppm	• H_2S Monitor • SCBA / SABA • Back-up worker required

- Workers must not remain in any area when flammable vapors are detected at or above 20% (10% in Manitoba) of the Lower Explosive Limit (LEL) in the atmosphere.
- Workers must not carry electronic devices (i.e. music/video players, cell phones or similar devices, cameras) into a hazardous area (as classified by the electrical code - a place where concentrations of flammable gases occur) unless the electronic device is turned off, clearly labeled as approved for operation in hazardous areas or required for work in situations that are well controlled with a Hot Work Hazard Assessment.
- When working alone, workers must follow the Canadian Natural practice for the area.
- Workers are expected to dress appropriately for the weather conditions and work they expect to do.
- Every worker must be comfortable in his knowledge and ability to safely complete the work. If you are not sure about any aspect of the work, stop and ask your supervisor before proceeding.

PROCEDURE 1: RESPONDER SAFETY (SMS 22.01)

RISK RANKING: HIGH (CRITICAL)

HAZARD ASSESSMENT:

HAZARD	POTENTIAL EFFECT	CONTROL
Responding to an alarm / emergency / unknown situation	Worker exposure / injury	• Ensure effective communication is available at all times, do not proceed without radio / phone service. • Always notify the area supervisor when responding to a potential emergency. • Use First Responder's Guide, Emergency Response Guide, Guide to Safety & Compliance, Corporate ERP, personal protective equipment. • When responding to a complaint, refer to, and follow SMS Procedure 6.72 Complaint Response Hydrocarbon Release.
Wildlife	Wildlife attack / personal injury	Workers must be trained in wildlife awareness and maintain situational awareness in remote or isolated areas.
Public / Landowners / Residents	Confrontation / threats	• Notify authorities if required • Refer to CNRL-OVR-POL-HR-000018 *Workplace Harassment and Violence Prevent Policy / Plan*

PROCEDURE

1. When responding to an alarm / emergency situation, do not immediately enter the site.
2. Stop to assess the situation / risks / hazards from a safe distance before proceeding.
3. Refer to the First Responder's Guide brochure in the Canadian Natural visor kit; use other contents as needed
4. Ensure that your personal gas detection equipment is turned on and functioning properly.
5. If other individuals are at risk, provide assistance only if it can be done safely.
6. Report to the area supervisor.
7. If you are not completely familiar with the worksite, ensure you understand equipment and potential hazards before entering. Never put yourself at undue risk.
8. Refer to the First Responders section in the Emergency Response Guide and / or Corporate Emergency Response Plan and follow the responsibilities checklist.
9. Keep other response personnel out of the hazard area until the hazards are identified and assessed. It is the responsibility of Canadian Natural personnel to ensure site security and perform a thorough hazard assessment.
    - **Canadian Natural's "4 Pillars of Safety" must be in place**

PROCEDURE 2: HYDROGEN SULPHIDE (H_2S) RELEASE (SMS 22.02)

RISK RANKING: **HIGH (CRITICAL)**

HAZARD ASSESSMENT:

HAZARD	POTENTIAL EFFECT	CONTROL
Flammable vapors / LEL	Vapors may ignite, if released. Explosion may also impact public and environment.	• Personal monitor to be used to detect LEL. Workers must evacuate at or above 20% (10% in Manitoba) LEL. • Emergency Response Plans (ERPs) with public / environment protection measures including ignition procedures will be used to protect impacted public
H_2S Release	Exposure above OEL may cause serious personal injury. H_2S releases may also impact public.	• Workers will use personal monitors to detect H_2S. • ERPs with public protection measures including ignition procedures will be used to protect impacted public

NOTE: Instances of "Incident Command Management Team" refer to the Incident Commander, Operations Section Chief and the On-Scene Supervisor.

PROCEDURE

H_2S Hazard - Public / Environment Protection Measures

To respond to an emergency involving an H_2S release, these guidelines will be followed:

1. Contact your immediate supervisor, Area Safety and Compliance Coordinator and Environmental Coordinator.
2. Activate ERP if incident meets Canadian Natural's ERP Activation Requirements.
3. Identify incident location on ERP map, as applicable.
4. Identify calculated EPZ. If there is no calculated EPZ, use Canadian Natural's minimum EPZ of 100 m and adjust according to monitored readings.
5. Draw identified EPZ around incident location on ERP map.
6. Determine emergency level using applicable provincial regulatory incident classification matrix.
7. Review and consider risk mitigation / measures in Area Hazard Identification table found in Site-Specific ERPs.
8. Establish Incident Command Post (ICP).
9. Isolate hazard area using roadblocks and ensure air monitoring begins.
10. Determine an Incident Action Plan for operational control and relevant regulatory reporting requirements. Consider need for Western Canadian Spill Services / other applicable Spill Cooperative involvement.
11. Request stand by or dispatch of Air Quality Monitoring Unit(s) if a Level 2 emergency has been declared or if a lengthy arrival time exists at a Level 1 emergency.

12. Determine appropriate public protection measures:
    - Review ignition criteria and procedures – if required ensure ignition kit(s) and trained personnel are available.
    - Establish Reception Centre(s) if required and dispatch Canadian Natural personnel to center.
    - Begin Mandatory Notifications (regulatory authority, municipal authority, RCMP, health services) and other Variable Notifications as per Canadian Natural's Emergency Notification Details wall chart.
    - Begin notification of public in EPZ as per Public Notification protocol using Canadian Natural's Emergency Notification Details wall chart. Notification of public will begin with those in close proximity to incident location and downwind of location then those located within remainder of EPZ.
    - Dispatch Rovers to locate, notify, give shelter-in-place instructions or evacuate where required.
    - Consider / dispatch aerial surveillance to sweep recreational areas and / or look for transient public.
13. If necessary, Canadian Natural's Incident Command Management Team will consult with local authorities to notify general public outside the EPZ.
14. Field all Media inquiries and coordinate Media responses with Information Officer.
15. Make decision to stand down emergency when situation has been resolved, in consultation with regulatory authority and local and municipal disaster services authorities. This decision will also include a discussion to permit return of persons to the area.
16. At stand down, follow Stand Down Guidelines including but not limited to notifying all persons previously contacted that shelter-in-place has been lifted, or in an evacuation situation, that the emergency condition no longer exists and that they may return.
17. Provide transportation and assistance where required along with instructions on how to claim for expenses incurred due to the emergency. Advise affected public that personnel are available to answer any questions that they may have post-incident.
18. Follow Post-Incident Actions including but not limited to additional public communications, debriefing and collection of documentation.

PROCEDURE 3: HIGH VAPOR PRESSURE (HVP) PIPELINE RELEASE (SMS 22.03)

RISK RANKING: **HIGH (CRITICAL)**

HAZARD ASSESSMENT:

HAZARD	POTENTIAL EFFECT	CONTROL
Flammable vapors / LEL	Released vapors may ignite with impact to workers, the public and the environment.	• Personal monitor to be used to detect LEL. Workers must evacuate at or above 20% (10% in Manitoba) LEL. • Emergency Response Plans (ERPs) with public / environment protection measures including ignition procedures will be used to protect impacted public.
H_2S	Exposure above OEL may cause serious personal injury to workers, the public and the environment.	• Workers will use personal monitors to detect H2S. • Emergency Response Plans (ERPs) with public / environment protection measures including ignition procedures will be used to protect impacted public.

NOTE: Instances of "Incident Command Management Team" refer to the Incident Commander, Operations Section Chief and the On-Scene Supervisor.

An HVP pipeline (for the purposes of emergency response) is a pipeline system carrying hydrocarbons or hydrocarbon mixtures in the liquid or quasi-liquid state with a vapour pressure greater than 110 kPa absolute at 38°C.

The primary hazard associated with HVP products is direct exposure to flame. The largest hazard area for emergency response planning is based on a flash fire. Always use extreme caution when dealing with HVP pipelines.

In some cases, gas releases may be ignited to prevent unburned gas from creating an explosion hazard or create a toxic exposure to workers and the public.

PROCEDURE

HVP Pipeline Release Public / Environment Protection Measures

When responding to emergencies involving HVP pipelines, these guidelines will be followed:

1. Contact your immediate supervisor, Area Safety and Compliance Coordinator and Environmental Coordinator.
2. Activate ERP if the incident meets Canadian Natural's ERP Activation Requirements.
3. Identify the incident location on the ERP map, as applicable.
4. Identify the calculated EPZ. If there is no calculated EPZ available, use Canadian Natural's minimum EPZ of 100 m and adjust according to monitored readings.
5. Draw the identified EPZ around the incident location on the ERP map.
6. Determine the emergency level using the applicable provincial regulatory incident classification matrix.
7. Review and consider risk mitigation / measures in the Area Hazard Identification table found in Site-Specific ERPs.
8. Establish Incident Command Post (ICP).

9. Isolate the hazard area using roadblocks and ensure air monitoring begins.
10. Determine an Incident Action Plan for operational control and relevant regulatory reporting requirements. Consider the need for Western Canadian Spill Services or other applicable Spill Cooperative involvement
11. Request the stand by or dispatch of Air Quality Monitoring Unit(s) if a Level 2 emergency has been declared or if a lengthy arrival time exists at a Level 1 emergency.
12. Determine appropriate public protection measures:
    - Review ignition criteria and procedures – if required ensure ignition kit(s) and trained personnel are available.
    - Establish Reception Centre(s) if required and dispatch Canadian Natural personnel to the center.
    - Begin Mandatory Notifications (regulatory authority, municipal authority, RCMP, health services) and other Variable Notifications as per Canadian Natural's Emergency Notification Details wall chart.
    - Begin notification of public in the EPZ as per Public Notification protocol using Canadian Natural's Emergency Notification Details wall chart. Notification of public will begin with those in close proximity to the incident location and downwind of the location then those located within the remainder of EPZ.
    - Dispatch Rovers to locate, notify, give shelter-in-place instructions or evacuate where required.
    - Consider / dispatch aerial surveillance to sweep recreational areas and / or look for transient public.
13. If necessary, Canadian Natural's Incident Command Management Team will consult with local authorities to notify the general public outside the EPZ.
14. Field all Media inquiries and coordinate Media responses with Information Officer.
15. Make the decision to stand down the emergency when the situation has been resolved, in consultation with the regulatory authority and local and municipal disaster services authorities. This decision will also include a discussion to permit the return of persons to the area.
16. At stand down, follow Stand Down Guidelines, including but not limited to notifying all persons previously contacted that the shelter-in-place has been lifted, or in an evacuation situation, that the emergency condition no longer exists and that they may return.
17. Provide transportation and assistance where required along with instructions on how to claim for expenses incurred due to the emergency. Advise affected public that personnel are available to answer any questions that they may have post-incident.
18. Follow Post-Incident Action guidelines including but not limited to additional public communications, debriefing and collection of documentation.

PROCEDURE 4: CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) ENVIRONMENTAL EMERGENCY (E2) (SMS 22.04)

RISK RANKING: **HIGH (CRITICAL)**

HAZARD ASSESSMENT:

HAZARD	POTENTIAL EFFECT	CONTROL
H_2S	Exposure above OEL may cause serious personal injury to workers, the public and the environment.	• Workers will use personal monitors to detect H_2S. • Emergency Response Plans (ERPs) with public / environment protection measures including ignition procedures will be used to protect impacted public.
Flammable vapors/LEL	Vapors may ignite, if released. Explosion may also impact public and environment.	• Personal monitor to be used to detect LEL. Workers must evacuate at / above 20% (10% in Manitoba) LEL. • ERPs with public / environment protection measures including ignition procedures will be used to protect impacted public.
Static Charge	Ignition / Fire / Explosion	Ensure containers are bonded / grounded.
Worker exposure to chemical	Skin or eye contact; ingestion or inhalation.	• Thoroughly review applicable SDS and ensure all appropriate PPE is used. • Ensure other required precautions, such as eye wash, are in place.
Overpressure	Equipment damage, product release, worker injury	• Pump discharge piping must be protected from over pressure by an appropriate pressure relief device. • Ensure pump discharge valve(s) are open, and the injection line is not restricted.

NOTE: Instances of "Incident Command Management Team" refer to the Incident Commander, Operations Section Chief and the On-Scene Supervisor.

Federal legislation requires development of preparedness and response capabilities for substances regulated by CEPA stored on our sites. An inventory of CEPA regulated storage sites is updated annually for submission to Environment Canada.

E2 ERPs are prepared for each site to provide Site-Specific emergency response guidance to be used by Canadian Natural personnel.

PROCEDURE:

CEPA – E2 Public / Environment Protection Measures

In an E2 emergency, these guidelines will be followed:

1. Contact your immediate supervisor, Area Safety and Compliance Coordinator and Environmental Coordinator.
2. Activate ERP if the incident meets Canadian Natural's ERP Activation Requirements and identify the incident location on the ERP map

3. Using the Canadian Natural defined E2 EPZ of 1600 m unless Site Specific ERP indicates otherwise.
4. Determine the emergency level using the applicable provincial regulatory incident classification matrix.
5. Review and consider risk mitigation / measures in the Area Hazard Identification table found in Site-Specific ERPs.
6. Establish Incident Command Post (ICP).
7. Isolate the hazard area using roadblocks and ensure air monitoring begins.
8. Determine an Incident Action Plan for operational control and relevant regulatory reporting requirements.
9. Request the stand by or dispatch of Air Quality Monitoring Unit(s) if a Level 2 emergency has been declared or if a lengthy arrival time exists at a Level 1 emergency.
10. Determine appropriate public protection measures:
    - Review ignition criteria and procedures – if required ensure ignition kit(s) and trained personnel are available.
    - Establish Reception Centre(s) if required and dispatch Canadian Natural personnel to the center.
    - Begin Mandatory Notifications (regulatory authority, municipal authority, RCMP, health services) and other Variable Notifications as per Canadian Natural's Emergency Notification Details wall chart.
    - Begin notification of public in the EPZ as per Public Notification protocol using Canadian Natural's Emergency Notification Details wall chart. Notification of public will begin with those in close proximity to the incident location and downwind of the location then those located within the remainder of EPZ.
    - Dispatch Rovers to locate, notify, give shelter-in-place instructions or evacuate where required.
    - Consider / dispatch aerial surveillance to sweep recreational areas and / or look for transient public.
11. If necessary, Canadian Natural's Incident Command Management Team will consult with local authorities to notify the general public outside the EPZ.
12. Field all Media inquiries and coordinate Media responses with Information Officer.
13. Make the decision to stand down the emergency when the situation has been resolved, in consultation with the regulatory authority and local and municipal disaster services authorities. This decision will also include a discussion to permit the return of persons to the area.
14. At stand down, follow Stand Down Guidelines, including but not limited to notifying all persons previously contacted that the shelter-in-place has been lifted, or in an evacuation situation, that the emergency condition no longer exists and that they may return.
15. Provide transportation and assistance where required along with instructions on how to claim for expenses incurred due to the emergency. Advise affected public that personnel are available to answer any questions that they may have post-incident.
16. Follow Post-Incident Action guidelines including but not limited to additional public communications, debriefing and collection of documentation.

PROCEDURE 5: HAZARDOUS PRODUCT RELEASE / SPILL CONTROL (SMS 22.05)

RISK RANKING: **HIGH (CRITICAL)**

HAZARD ASSESSMENT:

HAZARD	POTENTIAL EFFECT	CONTROL
Spill	Toxic contamination of environment resulting in potential health risks to workers and public.	• Identify spill product and refer to correct SDS using SDS online inventory database if necessary. • Obtain spill containment equipment specific to stored chemicals on-site and potential spill volumes. • Ensure emergency first aid equipment is available if applicable (e.g. eyewash station, emergency shower). • Obtain applicable WCSS Oil Spill Contingency Manual or access electronically via intranet or WCSS website. • Consult with Environmental Coordinator. • Refer to **CiNQ**: Environmental Conventional-Thermal for: 1) applicable provincial spill reporting procedures 2) *"Spill Volume Estimating Tool"* 3) *"Internal Incident Response Resources"* 4) *"Spill Response Vendor List"* 5) *"Wildlife Handling and Care"* • Refer to detailed spill contingency plan procedures further in this section, specific to type of spill (i.e. water, land, ice, muskeg, etc.) • ERAC will assist with LPG releases. See Guideline 10 in Forms and Guidelines section of Corporate ERP. • Follow ERP public / environment protection measures including ignition procedures.
Gas release / Flammable vapors / LEL	Released vapors may ignite with impact to workers, public and environment.	• Personal monitor to be used to detect LEL. Workers must evacuate at or above 20% (10% in Manitoba) LEL. • Use Emergency Response Plans with public / environment protection measures to protect public. • Reference specific SDS on site for product data, health effects, treatment, etc.
H_2S	Exposure above OEL may cause serious personal injury to workers, public and environment.	• Use personal monitors to detect H_2S • Use Emergency Response Plans with public / environment protection measures to protect public.
Ignition Source	Explosion / Fire	• Conduct Canadian Natural Hazard Assessment for hot work if within 25 meters of potential hydrocarbon source.
Water Hazards	Worker injury – slips, drowning.	• Personal flotation devices to be used when working in water hazards.
Wildlife	Wildlife attack / personal injury	• Workers must be trained in wildlife awareness and maintain situational awareness in remote or isolated areas.

SECTION PAGE

NOTE: Instances of "Incident Command Management Team" refer to the Incident Commander, Operations Section Chief and the On-Scene Supervisor.

HAZARDOUS RELEASE / SPILL RESPONSE – GENERAL PROCEDURE

When an incident involves an accidental release or spill of a hazardous product, these guidelines will be followed. Response measures may be tailored to match requirements dictated by the incident size and complexity:

1. Contact your immediate supervisor, Area Safety and Compliance Coordinator and Environmental Coordinator.
2. Obtain most current Safety Data Sheet (SDS) using the SDS online inventory database if necessary and complete a Hazard Assessment.
3. Activate ERP if the incident meets Canadian Natural's ERP Activation Requirements
4. Identify the incident location on the ERP map, if applicable.
5. Identify the calculated EPZ. If there is no calculated EPZ, use Canadian Natural's minimum EPZ of 100 m and adjust according to monitored readings.
6. Draw the identified EPZ around the incident location on the map.
7. Review and consider risk mitigation / measures in the Area Hazard Identification table found in Site-Specific ERPs.
8. Determine the emergency level using the applicable provincial regulatory incident classification matrix.
9. Establish Incident Command Post (ICP).
10. If a release has affected or could potentially affect a water course, notify Western Canadian Spill Services (WCSS) or other applicable Spill Co-operative and initiate the applicable area Oil Spill Contingency Manual as a supplement to the Corporate ERP. This manual should be available at the nearest Canadian Natural field / district office or a generic manual is available on the WCSS website www.wcss.ab.ca. If not readily available, refer to the applicable initial spill control procedures and guidelines in C) Spill Contingency Plan in this section, based on the type of spill (water, land, ice, muskeg, etc.).

    NOTE: WCSS does not provide human resources for spill response however other neighboring industrial operators or other WCSS members may be of assistance.
11. Deploy emergency spill response equipment and personnel to begin initial spill containment measures. A list of Canadian Natural's *Internal Incident Response Resources* is available on the intranet (CiNQ) on the Environment – Conventional and Thermal page.
12. Consider the need for long term spill containment and recovery. Request the dispatch of spill response specialists if required. The *Spill Response Vendor List* document on CiNQ also contains a list of these service companies.
13. Establish an appropriate Staging Area with a Staging Area Manager.

    NOTE: Staging Area personnel will be required to implement Canadian Natural's SMS policies in addition to managing the area.
14. Establish a Decontamination Centre / Area where response personnel can remove soiled clothing, wash up, return / clean equipment and change into street clothes (as outlined in Section 4.3 Establishing Decontamination Areas in the WCSS Oil Spill Contingency Manual)
15. Isolate the hazard area using roadblocks and ensure air monitoring begins.
16. Develop an Incident Action Plan for operational control and relevant regulatory reporting requirements. In a spill situation, it is recommended that the Environmental Coordinator be designated as the Planning Section Chief to address regulatory requirements and proper spill reporting procedures.
17. Request the stand by or dispatch of Air Quality Monitoring Unit(s) if a Level 2 emergency has been declared or if a lengthy arrival time exists at a Level 1 emergency.

18. Determine appropriate public protection measures.
    - Review ignition criteria and procedures if required – if required ensure ignition kit(s) and trained personnel are available.
    - Establish Reception Centre(s) if required and dispatch Canadian Natural personnel to the center.
    - Begin Mandatory Notifications (regulatory authority, municipal authority, RCMP, health services) and other Variable Notifications as per Canadian Natural's Emergency Notification Details wall chart.
    - Begin notification of public in the EPZ as per Public Notification protocol using Canadian Natural's Emergency Notification Details wall chart. Notification of public will begin with those in close proximity to the incident location and downwind of the location then those located within the remainder of EPZ.
    - Dispatch Rovers to locate, notify, give shelter-in-place instructions or evacuate where required.
    - Consider / dispatch aerial surveillance to sweep recreational areas and / or look for transient public.
19. If necessary, Canadian Natural's Incident Command Management Team will consult with local authorities to notify the general public outside the EPZ.
20. Field all Media inquiries and coordinate Media responses with Information Officer.
21. Make the decision to stand down the emergency when the situation has been resolved, in consultation with the regulatory authority and local and municipal disaster services authorities. This decision will also include a discussion to permit the return of persons to the area.
22. At stand down, follow Stand Down Guidelines, including but not limited to notifying all persons previously contacted that the shelter-in-place has been lifted, or in an evacuation situation, that the emergency condition no longer exists and that they may return.
23. Provide transportation and assistance where required along with instructions on how to claim for expenses incurred due to the emergency. Advise affected public that personnel are available to answer any questions that they may have post-incident.
24. Follow Post-Incident Action guidelines including but not limited to additional public communications, debriefing and collection of documentation.

TYPES OF SPILLS

Bulk Transportation Based Spills

Canadian Natural is a member in good standing with Emergency Response Assistance Canada (ERAC) as required by Transport Canada and therefore has access to all mutual aid and support available to member companies including but not limited to:

- a corporately designated, Transport Canada approved Emergency Response Assistance Plan (ERAP)
- emergency response personnel
- equipment
- emergency call centre response number manned 24/7/365
- logistics support

For a complete listing of ERAC membership benefits, please refer to ERAC's website at www.erac.org.

Refer to the *Guideline 10: TDG / LPG Emergency Responsibilities* in the Forms and Guidelines section of this manual for clarification of the responsibilities of ERAC and Canadian Natural in the event of a Canadian Natural LPG spill.

Land / Water Based Spills

On-Site Chemicals and Fuels

In addition to produced resources such as crude oil, natural gas and liquid petroleum products, commercial chemicals and fuels can also be found on site at such locations as facilities and well pads. Stored in a variety of labeled containers including barrels, cylinders and overhead tanks, these containers range in volume as small as a liter or less to large amounts (1,000 liters to 5,000 liters) and may also include bulk storage and pressurized bullets (vessels). Common products may include, but are not limited to:

- aerosols (paint, cleaners)
- lube oils
- glycols
- inhibitors
- demulsifiers
- solvents
- methanol
- propane

The presence of these products create an added potential for a spill, explosion, fire and / or toxic environment.

Worksites are required to maintain a list of all chemicals on premise and under WHIMIS regulation, ensure they are properly labeled and stored and that SDSs are easily accessible (i.e. online inventory) in the event of a spill. Response measures listed in this procedure are applicable to all sizes of spills, including small isolated chemical spills and therefore should be tailored to incident size and complexity.

Off-Site Spills

In the event of a spill, Canadian Natural has an extensive in-house inventory of spill response supplies and equipment strategically located at key locations for accessibility. These spill response arrangements support immediate, initial response to spills until additional resources can be mobilized to the site, if needed. Spill response kits contain materials and equipment — absorbent materials, safety supplies, hand tools, wildlife deterrents and boats — further enhanced by the resources available through the Western Canadian Spill Services (WCSS) and other Spill Cooperatives.

Canadian Natural is an active member of Western Canadian Spill Services (WCSS) and other area oil spill cooperatives and therefore has access to all manuals, equipment, training and exercises available to member companies.

WCSS does not provide human resources to actively participate in or provide containment / recovery efforts; however, cooperative members may be available to assist Canadian Natural with initial spill control but in these instances, the company responsible for the spill assumes liability. Cooperative volunteers on behalf of WCSS may be involved in 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

In the event of a significant spill, the applicable WCSS Oil Spill Contingency Manual will be used as a supplement to Canadian Natural's Corporate and Site-Specific ERPs and in conjunction with other corporate management systems, to properly manage the incident and mitigate the impact until resolution has been achieved. The WCSS Oil Spill Contingency Manual outlines contact lists and details regarding equipment access. The plan also provides an expanded organizational chart incorporating additional roles specific to a spill incident as well as detailed procedures for conducting spill containment and recovery operations under a variety of conditions (i.e. on land, on water, under ice, etc.).

The WCSS Oil Spill Contingency Manuals use a modified version of the Incident Command System (ICS) that closely aligns with Canadian Natural's Incident Command System. For more detailed information, refer to the applicable local Oil Spill Contingency Manual. For more information regarding oil spill cooperatives, go to the WCSS web page at http://wcss.ab.ca

SPILL CONTINGENCY PLAN

Purpose

The purpose of this plan is to provide a safe response strategy should a fuel or hazardous waste spill occur during Canadian Natural Resources Limited's (Canadian Natural's) operations. This strategy protects the public, minimizes environmental impacts and effects, and sets out procedures for the containment and cleanup operations should a spill occur.

Canadian Natural's Emergency Management System, including the 10 Steps for Emergency Response, will manage and provide direction for emergency response overall. Spill contingency plans guide initial emergency response actions while long term spill containment and recovery activities will be performed by established spill response consultants / providers contracted and directed by Canadian Natural.

The following pages contain Canadian Natural's Spill Contingency Plan consisting of:

- initial emergency spill response procedures
- initial spill containment and control guidelines
- initial spill containment methods

Initial Emergency Spill Response

When a spill occurs, the priority is to protect lives, minimize adverse environmental impacts, and losses to property. Canadian Natural employees who first discover a spill will follow these and any other applicable Safety Management System (SMS) guidelines:

- **Protect yourself first. Do not take unnecessary risks.**
- Notify immediate supervisor
- Determine the potential hazards of the spilled product and refer to product Safety Data Sheet (SDS) if necessary
- Don personal protective equipment required for the identified spilled product
- Monitor for toxic gases (i.e. H_2S) and LEL
- Assess potential hazards to responders, residents and public:
  - Determine the area residents directly impacted (evacuation, notification)
  - Identify risk of public inadvertently entering the area of concern at the site
  - Evaluate the site for access to livestock and wildlife
  - Identify sensitive environmental areas (i.e. proximity to surface water, ground water, crops, special areas)
  - Determine the effect on land use dispositions in the area (i.e. pipelines, utilities) and
  - Determine the approval requirements that are necessary to access the spill site.
- Protect the safety and lives of anyone in the spill area
- Determine the source of the spill. Locate the likely source of the cause of flow. Stop the flow or release if safe to do so.
- Isolate or remove any potential ignition sources, where safe and possible
- Assess the likely size, extent and condition of the spill
- Assess the area for sloping and banking;
- Update immediate supervisor with information who will report incident to appropriate regulatory bodies using applicable spill reporting procedures, as required;

- Control access to area until assistance and a more senior Canadian Natural representative arrives;
- Contain the spill as per safe work practices; if the spill is not contained, initiate containment measures such as dykes, bell holes and trenches to limit the impact
- If an emergency situation exists, implement Canadian Natural's Emergency Response Plan and refer to the First Responder role in the *Emergency Response Guide*.

The following should be taken into consideration by the On-Scene Supervisor and reported to the Operations Section Chief:

- Are there any nearby public (workers, traffic, residents) who would need to be evacuated or re-directed from the spill area?
- Is there a fire or explosion hazard? What is the ignition source?
- Are there H_2S or other toxins present? If so, are air monitoring trailers required? Are concentrations safe or is additional PPE required?
- Is the spill into a watercourse, watershed or a waterbody?
- What lands or waterbodies may be affected (farms, livestock, brush, drinking water, water wells, etc.)?
- Are there any areas deemed hazardous? If so, secure the areas.
- Will the spilled product come in contact with other hazardous materials and become reactive?
- 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?
- How long has the spill been taking place?
- Is the spill contained or migrating? Which direction? How far can it go?
- If the spill is not contained, how is it going to be contained? Determine and prioritize the containment points and methods to be used.
- How will the spill site, the source of the spill and recovery points be accessed?
- What equipment is required? Is the oil spill equipment (oil spill co-op) required? Do we have any emergency spill response trailer units nearby? Check with Environmental Coordinator.
- Where is the Staging Area to be established?
- Are Decontamination Centres for response personnel required?
- Should the spill site be cordoned off to prevent wildlife / livestock from entering?
- Has it been reported to the regulator?
- How will the spill be cleaned up?
- Are specialized services required to clean up the spill?
- Will a Media response be required?

Initial Spill Containment and Control

When possible, refer to an applicable WCSS Oil Spill Contingency Manual for detailed checklists and procedural guidelines. If a manual is unavailable, initiate containment of the product spilled:

- Assess speed and direction of spill and cause of movement (water, wind and slope)
- Determine best location for containing spill, avoiding any water bodies
- Have a contingency plan ready in case spill worsens beyond control or if the weather or topography impedes containment
- Prioritize and set up containment points
- Where possible, prevent a spill from entering a watercourse

- Use safest and simplest method to get the job done within resource and safety capabilities:
  - Isolate and depressurize (ESDs, manual block valves, manual valve isolation)
  - Plug and patch (i.e. fix faulty valve or hole in drum)
  - Absorb or adsorb (i.e. apply adsorbent pads to oil spill)
  - Transfer (i.e. remove product to waste truck or new container)
  - Containerize (i.e. put leaking drum into over-pack drum)
  - Reposition (i.e. upright or roll and chock leaking container)
  - Others (i.e. hot-tap, vent and burn, flare)
- 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, trenches, or berms would be most effective
- Use practical containment tools and equipment including shovels, dump trucks, sand bags, plastic bags, heavy earth moving equipment, salvage covers, adsorbents, booms, hose, 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

Spill Assessment Guidelines

After the initial hazard assessment and development of an Incident Action Plan, detailed information on the location and effects of the spill should be gathered. The applicable spill assessment by type of spill will be conducted by Canadian Natural's Environmental team.

Initial Spill Containment Methods

Canadian Natural's Spill Contingency Plan in conjunction with the applicable WCSS Oil Spill Contingency Manual will be used to determine the most viable initial spill response procedures and guidelines. Long-term spill containment activities will be performed by established spill response consultants / providers contracted and directed by Canadian Natural.

Spills on Land

Spills on land include spills on rock, gravel, soil and/or vegetation. It is important to note that soil is a natural sorbent, thus spills on soil are generally less serious than spills on water as contaminated soil can be more easily recovered. Generally spills on land occur during the late spring, summer or fall when snow cover is at a minimum. It is important that all measures be undertaken to avoid spills reaching open water bodies. See Section 4.4 Land – Containment & Recovery of the *WCSS Oil Spill Contingency Manual* for detailed procedures.

Dykes

Dykes can be created using soil surrounding a spill on land. Dykes are constructed around the perimeter or down slope of the spilled fuel. A dyke needs to be built up to a size that will ensure containment of the maximum quantity of fuel that may reach it. A plastic tarp can be placed on and at the base of the dyke such that fuel can pool up and subsequently be removed with sorbent materials or by pump into barrels or bags. If the spill is migrating very slowly a dyke may not be necessary and sorbents can be used to soak up fuels before they migrate away from the source of the spill.

Trenches

Trenches can be dug out to contain spills as long as the top layer of soil is thawed. Shovels, pick axes or a loader can be used depending on the size of trench required. It is recommended that the trench be dug to the bedrock or permafrost, which will then provide a containment layer for the spilled fuel. Fuel can then be recovered using a pump or sorbent materials.

Spills on Water

Spills on water such as rivers, streams or lakes are the most serious types of spills as they can negatively impact water quality and aquatic life. All measures need to be undertaken to contain spills on open water. See Section 4.5 Watercourses – Containment & Recovery of the *WCSS Oil Spill Contingency Manual* for detailed procedures.

Booms

Booms are commonly used to recover fuel floating on the surface of lakes or slow-moving streams. They are released from the shore of a water body to create a circle around the spill. If the spill is away from the shoreline a boat will need to be used to reach the spill, then the boom can be set out. More than one boom may be used at once. Booms may also be used in streams and should be set out at an angle to the current. Booms are designed to float and have sorbent materials built into them to absorb fuels at the edge of the boom. Fuel contained within the circle of the boom will need to be recovered using sorbent materials or pumps and placed into barrels or bags for disposal.

Weirs

Weirs can be used to contain spills in streams and to prevent further migration downstream. Plywood or other materials found onsite can be placed into and across the width of the stream, such that water can still flow under the weir. Spilled fuel will float on the water surface and be contained at the foot of the weir. It can then be removed using sorbents, booms, or pumps and placed into barrels or plastic bags.

Barriers

In some situations barriers made of netting or fence material can be installed across a stream, and sorbent materials placed at the base to absorb spilled fuel. Sorbents will need to be replaced as soon as they are saturated. Water will be allowed to flow through. This is very similar to the weir option.

Note that in some cases, it may be appropriate to burn fuel or to let volatile fuels such as gasoline evaporate after containment on the water surface; however, burning is not considered an ‘initial’ spill containment method due to the regulatory notification and authorizations required prior to conducting burns. It should only be considered if other approaches are not feasible and will be performed by experienced personnel / specialists.

Spills on Ice

Spills on ice are generally the easiest spills to contain due to the predominantly impermeable nature of the ice. For small spills, sorbent materials are used to soak up spilled fuel. Remaining contaminated ice / slush can be scraped and shovelled into a plastic bag or barrel; however, all possible attempts should be made to prevent spills from entering ice covered waters as no easy method exists for containment and recovery of spills if they seep under ice. See Section 4.6 Ice-Covered Watercourses – Containment & Recovery of the *WCSS Oil Spill Contingency Manual* for detailed procedures.

Dykes

Dykes can be used to contain fuel spills on ice. By collecting surrounding snow, compacting and mounding it to form a dyke down slope of the spill, a barrier is created thus helping to contain the spill. If the quantity of spill is fairly large, a plastic tarp can be placed over the dyke such that the spill pools at the base of the dyke. The collected fuel can then be pumped into barrels or collected with sorbent materials.

Trenches

For significant spills on ice, trenches can be cut into the ice surrounding and / or down slope of the spill such that fuel is allowed to pool in the trench. It can then be removed via pump into barrels, collected with sorbent materials, or mixed with snow and shovelled into barrels or bags.

Burning

Burning is not considered an 'initial' spill containment method due to the regulatory notification and authorizations required prior to conducting burns. It should only be considered if other approaches are not feasible and will be performed by experienced personnel / specialists.

Spills on Snow

Snow is a natural sorbent, thus as with spills on soil, spilled fuel can be more easily recovered. Generally, small spills on snow can be easily cleaned up by raking and shovelling the contaminated snow into plastic bags or empty barrels, and storing these at an approved location.

Dykes

Dykes can be used to contain fuel spills on snow. By compacting snow down slope from the spill and mounding it to form a dyke, a barrier or berm is created thus helping to contain the spill. If the quantity of spill is fairly large, a plastic tarp can be placed over the dyke such that the spill pools at the base of the dyke. The collected fuel / snow mixture can then be shovelled into barrels or bags, or collected with sorbent materials.

Spills into Wetlands or Muskeg

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. Due to 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 specialists before conducting initial spill 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.

Containment operations for wetlands 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.

Spill Control Points

Control points are pre-identified locations on watercourses that allow for the staging and deployment of oil spill containment and recovery equipment in response to oil spills that have occurred upstream of the control point. Control point selection is critical to an effective oil spill response and part of Canadian Natural's risk assessment and development of Site-Specific Emergency Response Plan (ERP) information.

Each WCSS oil spill cooperative conducts control point evaluation for the whole geographic co-op area. Canadian Natural periodically reviews the identified WCSS control points downstream from operations that may impact waterbodies to ensure that they are assessed for potential spill response activities.

WCSS spill control points are currently identified on Canadian Natural's Site-Specific ERP maps; however, the Environment team in conjunction with field operations may establish additional control points for any facility, based on conditions at the time of the spill and using the following criteria:

An ideal control point should have:

- quick access to the watercourse 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 locations(s) for boats assisting in containment and recovery operations
- selection of control points with public access is preferred

Landowner approval and necessary permits for emergency access are obtained in advance by Canadian Natural personnel for control points located on private property.

Control points established for a specific facility will be available as a supplemental document to the Site-Specific ERP and new viable points will be shared with WCSS for inclusion into their manuals. Supplemental control point documents are reviewed and updated periodically to ensure suitability and that the information for each control point listing is accurate and complete, (i.e. site description, site diagram, access description, landowner / occupant phone number, site suitability and any other information related to the site).

Recovery of Product / Clean-Up of Spill

Once containment has been achieved, initial recovery and clean-up operations will begin immediately as per Canadian Natural's environmental procedures and WCSS / other Spill Cooperatives' protocols. Recover as much product and saturated debris as possible and keep environmental disturbance to a minimum. Long-term recovery and clean-up activities will be performed by established spill response consultants / providers contracted and directed by Canadian Natural.

Disposal and Remedial Operations

The proper disposal of contaminated materials and site remediation options are outside of the scope of this ERP. Site restoration will be determined by consultation among Canadian Natural's Environment team, environmental protection agency personnel and any external environmental consultants that are contracted by the company.

PROCEDURE 6: FIRE / EXPLOSION (SMS 22.06)

RISK RANKING: **HIGH (CRITICAL)**

HAZARD ASSESSMENT:

HAZARD	POTENTIAL EFFECT	CONTROL
Flammable vapors / LEL	Vapors may ignite, if released. Explosion may also impact public and environment.	• Personal monitor to be used to detect LEL. Workers must evacuate at or above 20% (10% in Manitoba) LEL. • Emergency Response Plans (ERPs) with public / environment protection measures including ignition procedures will be used to protect impacted public.
H_2S Release	• Exposure above OEL may cause serious personal injury. • H_2S releases may also impact public. • Ignition of gasses with H_2S will produce Sulphur Dioxide.	• Workers will use personal monitors to detect H_2S. • Emergency Response Plans (ERPs) with public protection measures including ignition procedures will be used to protect impacted public.
Toxic Substances	Exposure above OEL to toxins and smoke may cause serious personal injury.	• Stay upwind. Use personal monitor to detect CO_2. • Use respiratory protection appropriate to the hazard.
Hot Surfaces	Burns / injury to worker	Use appropriate Personal Protective Equipment.

For a fire, explosion, or wildfire, Canadian Natural personnel will activate any site-specific fire preparedness and prevention plans that should include consideration of evacuation routes and transportation issues (i.e. camp evacuation).

GENERAL RESPONSE ACTIONS

In an emergency involving a fire or explosion, these important general guidelines must be followed in conjunction with other applicable SMS procedures and Site-Specific ERPs to ensure the safety of the public, employees and environment. When encountering different types of fire, the appropriate firefighting services will always be contacted.

Control / Containment

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

Notifications:

- Internal – notify your supervisor
- External – follow notification procedures as per ERP protocols

SPECIFIC RESPONSE ACTIONS BASED ON TYPE OF FIRE HAZARD:

Process Fires:

If safe to do so:

- restrict or deny access to area
- shut down and depressurize any related or additional process equipment
- do not attempt to extinguish a process fire if you are not properly trained

Sulphur Fires:

**** Only trained personnel or industrial firefighting services should attempt to control a sulphur fire.***

- Prevent human contact or inhalation (fire may produce irritating and / or toxic gases)
- Evacuate area, except for essential personnel. Essential personnel must have access to SCBA.
- Isolate area with a 1600 m radius
- Set up mobile air monitoring downwind of fire and smoke plume; monitor for SO_2 and other toxic conditions

Electrical System Fires:

- Shut off electricity to equipment
- Do not use water, foam or other conductive agents to put out fire
- Use extinguishing agent rated for electrical fire (i.e. carbon dioxide (CO_2), FM-200 and dry chemical powder extinguishers such as Purple-K Powder (PKP).

Natural Gas Liquid (NGL) Fires

- Do not use a solid stream of water *(will cause fuel to scatter and spread)*
- Use dry chemical and Halon extinguishing agents, although smothering with CO_2 or foam (for liquids) is also effective

Boiling Liquid Expanding Vapour Explosion (BLEVE)

- **If safe to do so,** attempt to extinguish any fires before they come in contact with any storage bullets
- Call applicable service provider (i.e. FireMaster, etc.) to obtain assistance with fire suppression. Ensure all responders are made aware of the hazards.
- Evacuate all personnel and isolate area to a 1600 m radius
- Evaluate tank from a safe distance away. Choose an upwind position to side of tank if possible
- Flowing water can be used to cool tanks in order to prevent or delay a BLEVE; however, this requires a significant amount of water and should not be attempted unless an unlimited water supply can be located and tank can be approached safely
- Leave area immediately if you hear a hissing sound from venting safety devices or see discoloration of the tank

Grass Fires / Wildfire / Wildfire Smoke (Hazardous Air Quality)

Canadian Natural First Responders encountering a grass fire / wildfire will adhere to the area's site-specific fire preparedness and prevention plan or these guidelines, SMS procedures (i.e. ESD procedures, personal protective equipment, hazard assessment) and the First Responder's Guide.

Grass Fires

- For small grass fires, extinguish using a shovel or ABC type fire extinguisher
- If it enters coulees, along rivers, or into large areas of trees or forests, contact the local fire department and /or local forestry office for assistance

Wildfire

- For larger fires, do not attempt to extinguish
- Contact local fire department if fire is threatening a community and / or contact provincial emergency wildfire number for fires in forested areas. Ask for:
  - potential impact to area operations
  - likelihood of containment
- Evaluate whether to activate Emergency Response Plan
- Account for / notify on-site personnel and other individuals (contractors, visitors, service providers, etc.)
- Determine if an evacuation of the area is required
- If safe to do so, isolate / shut in affected facilities
- Consider using respiratory PPE (N95 or P100 is recommended) to filter smoke particulate material (PM)
- If sheltering, identify a temporary safe area(s) for personnel and equipment. Consider if there is:
  - potential to be cut off by the wildfire – identify primary and secondary access routes
  - adequate space for personnel to shelter and for equipment / vehicle storage
  - gravel, cement or mineral soil with low combustibles on site
  - potential smoke drift that could compromise the safe area
  - access to a water source or consider developing water storage, if practical

Monitoring Wildfire

- Continue monitoring wildfire by maintaining regular contact with local fire department and / or the local forestry office
- Consider establishing trigger points to determine when to shut down facilities (leave in a safe state) and / or when to evacuate the area. Trigger points may include:
  - identify an operational safe distance from the fire *(consider fire conditions from fire department / forestry office, current weather, time to evacuate, transportation, evacuation routes, etc.)*
  - identify unsafe smoke environments limits (*see following* ***$PM_{2.5}$ Index & Visibility Response Actions*** *table*)

Wildfire Smoke Hazard Response Actions

Smoke from a wildfire is a mixture of gases and particles referred to as particulate matter ($PM_{2.5}$). It can cause significant health effects and dangerous air quality / environmental conditions.

If a smoky environment is present, determine the recommended response actions based on hazardous levels of smoke **using either of these methods**:

PREFERRED METHOD IF POSSIBLE:

- Obtain current $PM_{2.5}$ concentrations from the applicable provincial airshed website:
  - BC: https://www2.gov.bc.ca/gov/content/environment/air-land-water/air/air-quality/current-air-quality-data
  - AB: https://www.albertaairshedscouncil.ca/
  - SK: http://www.environment.gov.sk.ca/air/
  - MB: https://www.gov.mb.ca/sd/environment_and_biodiversity/air_quality/air-quality-monitoring/index.html

Apply the concentration to the table *$PM_{2.5}$ Index & Visibility Response Actions* (use the first column) on the following page.

NOTE: The *$PM_{2.5}$ Index & Visibility Response Actions* table:

- only applies to the particulate matter (PM) levels **in dry air conditions** and is not accurate during high humidity conditions

ALTERNATE METHOD:

- Assess smoke visibility distances by following these steps and apply to the same table (second column):
  - face away from the sun
  - look for landmarks at known distances
  - determine a visibility range – limit where high contrast objects disappear (buildings, mountains)
  - estimate visibility range in kilometers

Apply the estimated visibility distance to the table *$PM_{2.5}$ Index & Visibility Response Actions* (use the second column) on the following page.

NOTE: The *$PM_{2.5}$ Index & Visibility Response Actions* table:

- may be unreliable at times when specific landmarks at known distances are unavailable or when visibility is poor e.g., at dawn or dusk and at night

TABLE: $PM_{2.5}$ Index & Visibility Response Actions [1]

$PM_{2.5}$ (1-3 hr avg)	**Estimated Visibility Distance** (km)	**Category**	**Recommended Actions**
0 - 40	15+	• Good	• Be aware of weather forecast and area wind patterns • Continue with usual outdoor work activities
41 - 175	5 - 14	• Moderate • Unhealthy for sensitive groups	• See above • Sensitive groups – consider reducing prolonged strenuous activates / time spent outdoors • Distribute information regarding worker exposure avoidance and effects
176 - 300	2.5 - 4	• Unhealthy	• See above • Sensitive workers – stay indoors if possible • General workforce – reduce prolonged strenuous outdoor activities / consider cancelling non-essential outdoor work • Consider distribution and use of respirators and masks
301 - 500	1.5 - 2	• Very unhealthy	• See above • Essential outdoor work only, with appropriate PPE • Cancel non-essential outdoor work / stay indoors • Prolonged smoke event – consider evacuation of sensitive workers • Take precautions against wildfire threat
>500	<1	• Hazardous	• See above • Essential outdoor activities only

** The concentration of an air pollutant (e.g. particulates less than 2.5 microns in diameter — $PM_{2.5}$) is given in micrograms (one-millionth of a gram) per cubic meter air or µg/m^3*

[1] Based on CAPP's *Emergency Preparedness Guide for Hazards Associated with Wildfires* (April 2015)

Evacuation Considerations

- Determine essential and non-essential personnel
- Use knowledge of area and information from local fire / forestry to plan for an evacuation. Consider:
  - primary / secondary evacuation routes *(can be blocked by fire, debris or vehicles, locked gates)*
  - smoke affecting visibility *(may prevent helicopter landings, increase volume / slow traffic on evacuation routes)*
  - coordination with other operators in area *(avoid delays / congestion)*
  - availability and modes of transportation for all workers *(those in remote areas, with limited or difficult access, limited communications)*
  - potential reception centre(s)

Recovery

- Inspect all facilities and systems prior to resuming operations
- Ensure worker safety prior to physical inspections / re-entry. Potential hazards may include::
  - flare ups *(caused by deep burning of ground fires and hot ash pits)*
  - reduced visibility and poor air quality *(caused airborne dust and ash)*
  - blocked access routes *(can be caused by fallen trees / snag trees)*

PROCEDURE 7: ROAD / HIGHWAY / RAILWAY CLOSURES (SMS 22.07)

RISK RANKING: **HIGH (CRITICAL)**

HAZARD ASSESSMENT:

HAZARD	POTENTIAL EFFECT	CONTROL
Flammable vapors / LEL	Vapors may ignite, if released.	• Personal monitor to be used to detect LEL. Workers must evacuate at or above 20% (10% in Manitoba) LEL. • Emergency Response Plans (ERPs) with public / environment protection measures including roadblocks will be used to protect impacted public
H_2S	Exposure above OEL may cause serious personal injury.	• Personal monitor to be used to detect H_2S • Emergency Response Plans (ERPs) with public / environment protection measures including roadblocks will be used to protect impacted public
Spill	Potential public injury and environment impact	• Use First Responder's Guide • Contain fluid spread • Use roadblock kits and emergency contact information if necessary
Vehicle Accident	Worker / public injury	• Wear reflective clothing at all times • Use hazard indicators (i.e. reflective triangles, vehicle hazard lights, etc.) • Use roadblock kits and emergency contact information if necessary

NOTE: Instances of "Incident Command Management Team" refer to the Incident Commander, Operations Section Chief and the On-Scene Supervisor.

PROCEDURE:

Roadblock Set Up (Roadblock Personnel)

In the event of an emergency situation involving Canadian Natural facilities and the Emergency Response Plan (ERP) has been activated:

- Incident Command Management Team will immediately assign Canadian Natural personnel to establish and man roadblocks until the arrival of proper authorities (RCMP, local police, local public works, provincial Transportation).
  - Roadblock personnel will follow the "4 Pillars of Safety" and their role in the Emergency Response Guide. For incidents that impact roads for longer periods, SMS Procedure 6.88 Traffic Control should be used to ensure safe and proper control measures.
  - Canadian Natural personnel will immediately notify RCMP / local police (9-1-1) / municipal public works / provincial Transportation (provincial highways) to assist**. Only these agencies have the authority to fully close a road in an emergency.**
  - Canadian Natural personnel will notify as soon as possible other provincial agencies based on the type of road being closed (see Temporary Road Closures in Section 3)

Temporary Railway Closures

- For temporary closure of railways, contact the rail company's emergency line. If available, site-specific ERPs contain rail company contact information and instructions.

Motor Vehicle Accidents (First Responders)

If Canadian Natural personnel are the first to arrive at the scene of a motor vehicle accident, they will provide assistance **if it is safe to do so**. The general guidelines are:

1. Secure the scene.
2. Assess the situation and identify any hazards.
3. Respond:
   a) call 9-1-1
   b) conduct internal notification (if required)
   c) address any injuries (follow First Aid training to protect yourself)

If the incident does not involve dangerous goods and does not involve air or rail, follow the above guidelines then:

4. Record and report if a Canadian Natural vehicle is involved:
   - Driver's name, address, phone number and license number
   - Vehicle license plate number, make, model, year and color
   - Vehicle insurance policy company name and policy number
   - Name of injured and nature of injury
   - Witnesses' name, address and phone numbers
   - Time and location of accident
   - Actions taken
   - Weather conditions
   - Individuals and organizations notified
5. Make a statement to the RCMP / local police. Note that the RCMP / local police must be notified when an injury or fatality has occurred and / or vehicle damages exceed $2,000.
6. Document chronologically all actions, decisions, contacts and requests on Time / Action Logs located in all company vehicle visor kits.
7. Assist and provide information to police as required for third party vehicle accidents.

In case of a vehicle fire:

- Call 9-1-1
- Use a fire extinguisher **if safe to do so**

If the accident involves dangerous goods and the transported goods meet regulatory reporting requirements:

- Refer to First Responder's Guide for initial actions involving a hazardous situation **if it is safe to do so**
- Contact ERAC if not already contacted by transport carrier **1-800-265-0212**

FACILITY ISOLATION DUE TO ROAD / HIGHWAY CLOSURES

Canadian Natural personnel will observe and comply with official road closures at all times and will follow corporate safety guidelines in the event of closures that isolate a facility.

If personnel are isolated at a facility:

- Consider shelter-in-place at facility until closure is lifted
- Consider weather conditions
- Notify supervisor and discuss action plans
- Working Alone plans must be maintained
- Consider other modes of transportation – helicopter, All Terrain / Utility Vehicles (ATV / UTV), snowmobiles, etc.
- If the facility is in direct danger of the emergency; consider a complete shutdown, isolation and evacuation of the facility.

If personnel are unable to reach a facility due to road closure:

- Do not attempt access if danger is imminent (severe weather, flooding, etc.)
- Consider other modes of transportation – helicopter, All Terrain / Utility Vehicles (ATV / UTV), snowmobiles, etc.
- Notify supervisor and discuss action plans
- Working Alone plans must be maintained
- Consider remote shutdown

PROCEDURE 8: COMMUNICATION FAILURE / POWER OUTAGE (SMS 22.08)

RISK RANKING: LOW

HAZARD ASSESSMENT:

HAZARD	POTENTIAL EFFECT	CONTROL
Facility monitoring non-functional	Workers may not be aware of hazardous conditions	• Operator to attend site to monitor as required • Start back-up power, if available
Workers with no communication	Workers are unable to request assistance if required	• Initiate alternate communication method • (i.e. satellite phones, two-way radios, GPS, etc.)

NOTE: Instances of "Incident Command Management Team" refer to the Incident Commander, Operations Section Chief and the On-Scene Supervisor.

PROCEDURE

Communications Failure

If communication systems fail during an emergency, Canadian Natural Incident Command Management Team will consider and use alternate methods such as:

- check-ins (Working Alone)
- landlines
- cellphones
- two-way radios
- satellite radios
- GPS unit in each company vehicle

Potential sources of rental communications equipment and Canadian Natural radio frequencies can be found in the Communications Equipment section in Site-Specific ERPs.

Power Outage

Where applicable, emergency lighting or stand-by power must be provided to ensure adequate lighting is available for workers in emergency or power loss situations.

PROCEDURE 9: SEVERE WEATHER / NATURAL DISASTERS (SMS 22.09)

RISK RANKING: MODERATE

HAZARD ASSESSMENT:

HAZARD	POTENTIAL EFFECT	CONTROL
Flammable vapors / LEL	Vapors may ignite, if released.	Personal monitor to be used to detect LEL. Workers must evacuate at or above 20% (10% in Manitoba) LEL.
H_2S	Exposure above OEL may cause serious personal injury.	Personal monitor to be used to detect H_2S
• Severe weather (tornadoes, high winds, hail, lightening, blizzards) • Natural disasters (earthquakes / seismic, floods, landslides, etc.)	Low visibility, projectiles, electrical / lightening shock, fire, slippery / unstable ground, cold / hypothermia, other medical conditions	• Be aware of weather advisories • Follow working alone procedures • Arrange alternate transportation • Use appropriate Personal Protective Equipment • Consider shut down / isolation • Seek shelter

PROCEDURES

Follow this guide or the First Responder's Guide and SMS procedures as applicable during severe weather and / or a natural disaster. As with any type of emergency, **conduct activities only if time allows and it is safe to do so**.

Assess and consider the hazard conditions. General guidelines for threatening, imminent and occurring weather hazards follow.

If the hazard is threatening (weather watch / warning, etc.):

1. Continue with operations and be prepared to stop non-essential operations.
2. Alert others prepare for a potential escalation.
3. Monitor communication systems for radio or company advisories for weather watches *(conditions are right for storm or tornado to develop)* or warnings *(thunderstorm or tornado has been spotted)*.
4. Site Supervisor to consider:
   - compiling a list of all individuals on site – personnel, visitors, contractors, vendors, etc.
   - who are essential and non-essential personnel
   - is Shelter-In-Place required and the potential length of time to Shelter-In-Place
   - Shelter-in-Place locations
   - if any part or all of the site needs to be evacuated
   - if ground transportation to and from site will be impacted
   - the possible impact of the situation on site utilities
   - extent of possible damage to site infrastructure
   - expected impact on operations

If the hazard is imminent:

1. Alert others to the impending hazard and to stop non-essential operations.
2. **If safe to do so,** check for site hazards and reduce potential as much as possible. Secure the area and tie down / secure objects that could be moved and cause additional damage.
3. Site Supervisor must assess the situation and, if necessary, initiate shelter in safe building(s) or evacuate:
   - find a small, interior rooms on the lowest floor possible. It's critical to stay low.
   - try to find rooms with reinforced walls made of concrete, brick, or block. Try to find rooms with no windows and a solid roof above.
   - get away from exterior walls, windows, and doors.
   - stay in the center of the room. Stay away from corners, in which debris collects.
   - avoid rooms like lunch rooms, etc., with large, flat roofs overhead
   - use sign in / work schedules to account for all employees, contractors, visitors, vendors, etc. on site. If all individuals cannot be accounted for, initiate a full worksite sweep **when safe to do so.**
4. Site Supervisor must determine if work can be carried on during extended severe weather situations. Stop high risk or non-routine work except emergency repairs.

If the hazard is occurring:

1. All non-essential operations personnel will stop work and turn off all sources of ignition
2. Site Supervisor will:
   - assess the situation and instruct individuals to Shelter-in-Place or evacuate
   - use sign in / work schedules to account for all employees, contractors, visitors, vendors, etc. on site. If all individuals cannot be accounted for, initiate a full worksite sweep **when safe to do so.**
   - determine if work can be carried on during **extended** severe weather situations. Stop high risk or non-routine work except emergency repairs.
   - notify management

Severe Lightning Storm

1. If you are outside, seek shelter in a building or depressed area
2. Get out of open vehicles, track vehicles and tractors.
3. If you're caught in the open, crouch down with your feet close together and your head down
4. Do not lie flat – minimizing contact with ground to reduce risk of being electrocuted by a ground charge
5. Keep away from telephone and power lines, fences, trees and hilltops
6. If you are in a vehicle, stop the vehicle and stay in it
7. Don't stop near trees or power lines

Tornado

Signs to watch for:

- large hail
- frequent lightning
- a dark, greenish looking sky
- wind may die down and become very still under a threatening sky
- a tornado warning has been issued for your area

1. If you are outside, get to a building or shelter, if possible
2. If shelter is not available, lie down in a ditch / low lying area – always stay alert for potential flooding
3. Never try to out drive a tornado If you are in a vehicle – tornadoes can change direction very quickly and move at speeds of up to 200 KPH
4. Get out of vehicle – take shelter in a sturdy building / low lying area – always be alert to potential flooding
5. Stay low to survive – most deaths and injuries are caused by flying debris
6. Use your arms to protect your face and neck

Flood / Landslide

Overland flooding and / or landslides can create risk for facility damage and environmental impacts. There is little that can be done to prevent these natural disasters but actions can be taken to mitigate the impact. Monitor and assess the situation to determine if and when shut down / isolation is required.

AFTER A DISASTER

1. Perform damage / hazard assessment(s); observe "4 Pillars of Safety"
2. Assess site and declare an emergency if required
3. Activate ERP and make appropriate notifications if required
4. Account for all personnel and others on site (contractors, service providers, etc.). Use intrinsically safe equipment (flashlights, radios) to survey for damage / look for victims.
5. Monitor media broadcasts for emergency information updates. Use telephones for emergency calls only.
6. Inspect utilities – follow the First Responder's Guide (i.e. Fire / Explosion, Collapse of Structures or Equipment, Spills, etc.) or previous applicable sections in this document.
7. Use personal monitors for hazardous conditions
8. Check for electrical systems and sewage / water line damage and for leaking pipelines
9. Record and report findings and activities to the Supervisor
10. Ensure regulatory reporting requirements have been met
11. Initiate clean up activities **when safe to do so**
12. **Follow Post-Incident Actions where necessary**

PROCEDURE 10: SECURITY THREATS (SMS 22.10)

RISK RANKING: **HIGH (CRITICAL)**

HAZARD ASSESSMENT:

HAZARD	POTENTIAL EFFECT	CONTROL
Active Assailant	Worker injury, property damage	See Procedures below
Bomb Threat / Suspicious Packages	Worker injury, property damage	- *First Responders Guide* - See Procedures below
Cyber-Attacks	Worker injury, property damage	See Procedures below
Generalized Criminal Activity	Worker injury, property damage	See Procedures below
Social Protests	Worker injury, property damage	See Procedures below
Workplace Harassment and Violence	Worker injury, property damage	CNRL-OVR-POL-HR-000018 *Workplace Harassment and Violence Prevention Policy / Plan*

INTRODUCTION

Security-related threats include intent to cause harm and may include but are not limited to threats or acts of harassment, violence, trespassing, theft, break-ins, vandalism, and terrorism. Canadian Natural is committed to the safety and security of its personnel, visitors and property and has protocols in place to ensure this remains a priority.

Video Surveillance

Video surveillance equipment is utilized at company facilities, including but not limited to field, office and camp locations. Surveillance footage may be used to monitor for unlawful activity, substantiate security report findings and for legal purposes as required and is the property of Canadian Natural.

Facility Searches

Canadian Natural's Search policy and related procedures are in place to protect the safety of employees, contractors, and visitors as well as to protect Company and personal assets or property. Search activities are used to deter and support workplace safety and security.

Any search activity will transpire in accordance with the policy and procedures as established by Canadian Natural.

Initial Notification of a Security Event

Consider the following for any security event notification received:

1. Assess if there is imminent harm or danger present
2. If harm is occurring or imminent, call 911 and report to the authorities
3. When safe to do so, contact your immediate Supervisor
4. The Supervisor should immediately contact the Area Manager and activate the ERP

PROCEDURES

Active Assailant

An active assailant situation may arise when an individual(s) is / are actively engaged in killing or attempting to kill people in a confined and populated area. Active assailant situations evolve quickly and there is no way to anticipate their course. For this reason, it is important that all Canadian Natural employees and contractors are prepared to act quickly to protect themselves.

There are three potential courses of action to respond to an active assailant as outlined below:

- **Evacuate (Run)**
- **Shelter in Place (Hide)**
- **Fight (Defend)**

Evacuate (Run)

If there is an accessible escape path, attempt to evacuate the premises following these recommendations:

- Have an escape route and plan in mind
- Evacuate regardless of whether others agree to follow
- Leave belongings behind
- Help others escape, if possible
- Prevent individuals from entering an area where the active assailant may be
- Keep hands visible
- Follow the instructions of any police officers
- Do not attempt to move wounded people
- Call 9-1-1 when safe

Shelter In Place (Hide)

If evacuation is not possible, shelter in place, or hide in a location less likely to be discovered. The hiding place should:

- be inconspicuous
- be out of the active assailant's view
- provide physical protection if shots are fired in your direction (e.g., locating into a bathroom and locking the door, staying as low to the floor as possible and remaining quiet and motionless)
- not trap you or restrict your options for movement

To prevent an active assailant from entering the hiding place:

- lock the door
- blockade the door with heavy furniture

Fight (Defend)

If it is not possible to evacuate or hide, then consider defending yourself, with these recommendations:

- Remain calm
- Dial 911, if possible, to alert police to the active assailant's location
- If you cannot speak, leave the line open and allow the 911 dispatcher to listen
- Attempt to disrupt and / or incapacitate the assailant by:
  - acting as aggressively as possible against him / her
  - throwing items and improvising weapons
  - yelling
  - committing to defensive physical actions

Law Enforcement Response

When the police arrive to respond to the emergency, the first responding officers will be focused on stopping the active assailant and creating a safe environment for medical assistance to be brought in to aid the injured.

- When the police arrive at your location:
  - remain calm, and follow officers' instructions
  - keep your hands visible at all times
  - avoid making quick movements toward officers such as attempting to hold on to them for safety

Bomb Threats / Suspicious Packages

Bomb Threats

Historical evidence demonstrates that the vast majority of bomb threats are hoaxes designed to interrupt business and can be initiated by individuals such as disgruntled former employees; business rivals or environmental activists. Regardless of intent or validity, all cases will be treated seriously and responded to as if the threat is real as per Canadian Natural's Bomb Threat procedures.

The person receiving the initial threat should:

- **remain calm and notify a colleague to contact a Supervisor immediately**. The Supervisor should immediately contact the Area Manager and activate the ERP.
- **after the call / notification, document all information in writing.** Use *Form 9: Threatening Call (Explosive Device)* found in the Forms and Guidelines section or on CiNQ.

Once notified, the District Superintendent will immediately:

- Activate the Corporate ERP and establish an off-site Incident Command Post / Emergency Operations Centre if required
- Contact 9-1-1

Suspicious Packages

If you are suspicious of and unable to verify the contents of an unusual / unexpected item (e.g. box, bag, envelope) with the addressee or sender:

- Do not touch, move or open the item
- Isolate the item and evacuate the immediate area

If you suspect a harmful chemical / biological substance in an item / package already on Canadian Natural property:

- Evacuate the area up to 200 meters
- Leave room doors open and unlocked for fire / police response
- Isolate the area where the item is

Cyber-Attacks

Cyber-attacks on computer, SCADA or process control systems can disrupt or damage availability, confidentiality or the integrity of business assets. If a cyber-attack is happening or suspected to be happening, **contact Information Services (IS) department and Corporate Security.**

The IS department will follow protocol and may implement its Disaster Recovery Plan. Note only the Vice-President of IS and Corporate Services, or the Manager, IS Operations in the event the Vice-President is unavailable, can declare a disaster situation and initiate the Disaster Recovery Procedures.

Generalized Criminal Activity (Trespassing, Vandalism, Theft, Break-ins, Altercations)

General crimes directed at people or property can include but is not limited to trespassing, vandalism, theft, break-ins, localized incidents of altercations or threats of violence (e.g. by landowner or service provider, during public consultations, instances of road rage or hunter confrontation, etc.).

Personal safety and the safety of those nearby is of primary concern.

General Actions:

- Take action to protect yourself
- Contact 9-1-1 and make an official report
- Report to an immediate Supervisor

Social Protest

Protests or demonstrations take different forms, ranging from action by one person acting alone to a demonstration attended by thousands of people. In some instances, Canadian Natural may have advance notice of a public protest, but other instances the protests might be unannounced or spontaneous.

In the event of protest activity on or near Canadian Natural property, safety of all present is the primary goal.

General Guidelines:

- Avoid confrontation. Do not take any actions – this may aggravate the situation / provoke protesters
- Document everything
- Report to an immediate Supervisor

Workplace Harassment and Violence

Canadian Natural is committed to a healthy, productive work environment, where the dignity and safety of each Individual is respected and protected. CNRL-OVR-POL-HR-000018 *Workplace Harassment and Violence Prevention Policy / Plan* outlines clear controls and actions to respond to harassment and violence in the workplace.

Harassment or violence in the workplace WILL NOT be tolerated within Canadian Natural. Verified incidents of harassment or violence in the workplace are subject to corrective action, including disciplinary actions up to and including termination.

DEFINITIONS & ACRONYMS

Adjacent to
Within 25 meters.

Air Monitoring
Measurement of atmospheric concentrations of a hazardous substance such as H_2S or SO_2 using portable detectors measuring in parts per million.

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

Demobilization
The orderly, safe and efficient return of an incident resource to its original location and status.

Corporate (Core) Emergency Response Plan
A guide for Canadian Natural personnel to direct and coordinate their responses in the event of an incident. It includes but is not limited to broader information such as company response procedures, Incident Command System, forms and guidelines, response roles and responsibilities and general contact information.

Emergency
An unplanned occurrence that causes or creates the potential for situations such as fatalities, serious injuries, danger to the public, significant environmental impacts or major loss or damage to Canadian Natural property.

Emergency Management
The management of emergencies concerning all-hazards, including all activities and risk management measures related to prevention and mitigation, preparedness, response and recovery.

Emergency Operations Centre (EOC)
A centre established to support the Incident Commander and staff at the Incident Command Post that may be located at the nearest district office or Calgary headquarters.

Emergency Planning Zone (EPZ)
A geographical area that surrounds a well, pipeline or facility containing hazardous product that requires specific emergency response planning and is calculated using industry recognized dispersion modelling methods. Also known as “Hazard Planning Zone” or “HPZ” in BC plans.

Emergency Response Plan (ERP)
A comprehensive plan used 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
An organized, phased and supervised withdrawal of members of the public from dangerous or potentially dangerous areas to a safe location.

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.

Fire Hazard Order (FH Order)
An order issued during an emergency to restrict public access to a specified area.

First Responders
The first individuals to respond to an incident. This is normally Canadian Natural personnel but can also include industrial or municipal fire and / or medical personnel. First responders require appropriate emergency response training to ensure that their response is suitable and performed safely.

Functional Exercise
A simulated discussion based format option for table-top exercises that includes an interactive component to provide an improved level of engagement for exercise participants. See also Table Top Exercises.

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

Hazard
An incident, natural or manmade, that warrants action to protect public and worker health and safety, environment, property and minimize disruptions of government, social, or economic activities.

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

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 (kPa) absolute at 38^{o}C, as determined using the Reid method (see ASTM D 323).

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 colorless, 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.

Incident
An unexpected occurrence or event that may impact people, property and / or the environment.

Incident Action Plan (IAP)
An organized course of action that addresses all phases of incident control within a specified timeframe.

Incident Command Post (ICP)
The field location where the primary functions are performed and the Incident Commander is located.

Incident Command System (ICS)
An organized system of roles, responsibilities and standard operating and communication procedures used to manage and direct emergency response operations.

Incident Command Team
An internal group primarily consisting of the Incident Commander, Operations Section Chief and On-Scene Supervisor.

Lead Agency
The government support organization that acts as the lead government agency during an industry emergency response.

Level 1 Emergency
An emergency where there is no danger outside company property, where there is no threat to the public and where there is minimal environmental impact. The situation can be handled entirely by company personnel. There will be immediate control of the hazard and there is little or no media interest.

Level 2 Emergency
An emergency where there is no immediate danger outside company property or the right-of-way but there is the potential for the emergency to extend beyond company 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 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 flammable mixture of heavier gaseous hydrocarbons, principally propane, propylene, butane and butylene. Also referred to as propane or butane; used as fuel in heating appliances, cooking equipment and vehicles.

Local Authority
A local authority is considered to be:

- the council of a city, town, village or municipal district;
- in the case on an Improvement District or Special Area, the Minister of Municipal Affairs
- the settlement council of a Métis settlement; or
- the band council of a First Nations reserve

Lower Explosive Limit (LEL)
The lowest concentration of gas or vapour (percent by volume in air) that explodes if an ignition source is present at ambient temperatures.

Major Exercise
An exercise activity involving actual deployment of resources in a coordinated response, as if a real emergency had occurred. The major exercise includes the mobilization of units, personnel and equipment. Participants will assess plans / procedures and evaluate coordinated responses under crisis conditions. Regulator(s) and other external stakeholders are invited to attend and participate. May also be referred to as a "full scale" exercise.

Mitigation
Sustained actions taken to eliminate or reduce risks and impacts posed by hazards well before an emergency or disaster occurs; mitigation activities may be included as part of prevention.

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 communication capability.

Municipal Emergency Plan (MEP)
The emergency plan of the Local Authority

Municipality
See Local Authority

Muster Area
A pre-arranged safe location where on-site personnel are required to meet and be accounted for at the advent of an emergency. Non-critical personnel would be required to leave while others may be assigned responsibilities.

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.

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 to restrict airspace over a specified area.

On-Scene Command Post (OCP)
A response facility generally established near the incident to provide immediate and direct response to the emergency and staffed by Canadian Natural personnel. The primary location of the On-Scene Supervisor.

Provincial Operations Centre (POC):
A centre that serves as a central point for the collection, evaluation and dissemination of information concerning a single incident or multiple incidents in a province. The POC is responsible for coordinating the initial response and maintaining support for a response to a natural or human-induced disaster.

Public
The group of people who are or may be impacted by an emergency (i.e. employees, contractors, neighbours, emergency response organizations, regulatory agencies, the media, appointed or elected officials, visitors, customers, etc. as appropriate). Also includes **Public Facility**.

Public Facility
A publicly used place where the presence of people can be anticipated. Examples include places of business, campgrounds, churches, schools, recreational facilities and other locations created for use by the public.

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.

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

Regional Emergency Operations Centre (REOC)
An operations centre established in a suitable location 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.

Shelter-In-Place
The act of remaining indoors for short-term protection from exposure to toxic gas releases

Site-Specific Emergency Response Plan (ERP)
ERPs prepared for oil and gas operations that contain information specific to the area and work in conjunction with the Corporate ERP as required by regulation.

Sour Gas
Natural gas, including solution gas, containing hydrogen sulphide (H_2S)

Sour Pipeline
Any pipeline that conveys gas and / or liquid that contains sour gas

Sour Production Facility
Any 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 a telephone, 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 residence or businesses where contact has not been made.

Staging Area
A suitable location (access, size, proximity) set up near an incident where resources can await a tactical assignment and be properly demobilized after task completion; also serves as a check-in / check-out point.

Stakeholder
An individual, group, or organization that has a role in the management of an emergency or is directly impacted by that emergency.

Sulphur Dioxide (SO_2)
A colourless, water-soluble, suffocating gas formed by burning sulphur in air; also used in the manufacture of sulphuric acid. SO_2 has a pungent smell similar to a burning match. SO_2 is extremely toxic at higher concentrations. The molecular weight of SO_2 is heavier than air; however, typical releases are related to combustion, which makes the gaseous mixture lighter than air (buoyant).

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

Table Top Exercise
An informal group discussion based exercise centered on a scenario. Its purposes are to test existing plans, policies and procedures, allow participants to work through a problem in an less stressful setting, identify strengths and shortfalls, enhance understanding of new concepts and seek to change existing attitudes and perspectives. The table top can be either purely discussion based or may include some actions normally expected during a major exercise. If interactive actions are used, this exercise may be referred to as a 'functional' table top.

Uncontrolled Flow
A release of product that cannot be shut off at the licensee's discretion.

Upstream Petroleum Industry
All facilities, equipment, substances and operations used in the exploration, recovery, processing and transporting of petroleum within a Lead Agency's 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 and 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; other incorporated centres.

Water Body
A natural or manmade 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, canals, drainage ditches, reservoirs, dugouts or other manmade surface features.

ACRONYMS

ACRONYM	MEANING
AEMA	Alberta Emergency Management Agency
AER	Alberta Energy Regulator
AHS	Alberta Health Services
BCOGC	British Columbia Oil and Gas Commission
BLEVE	Boiling Liquid Expanding Vapour Explosion
CANUTEC	Canadian Transport Emergency Centre
CAPP	Canadian Association of Petroleum Producers
CCC	Calgary Command Centre
CEPA	Canadian Environmental Protection Act
CER	Canada Energy Regulator
CO	Carbon monoxide
CSA	Canadian Standards Association
E2	Environmental Emergency (CEPA)
ECCC	Environment and Climate Change Canada
EMBC	Emergency Management British Columbia
EMO	Emergency Measures Organization (Manitoba)
EOC	Emergency Operations Centre
EPZ	Emergency Planning Zone
ERAC	Emergency Response Assistance Canada
ERP	Emergency Response Plan
ESD	Emergency Shut Down
FH Order	Fire Hazard Order
GEOC	Government Emergency Operations Centre
HA	Health Authority
HEMBC	Health Emergency Management BC
H_2S	Hydrogen Sulphide
HVAC	Heating Ventilation Air Conditioning
HVP	High Vapour Pressure
IAP	Incident Action Plan
ICP	Incident Command Post
ICS	Incident Command System
LEL	Lower Explosive Level
LPG	Liquid Petroleum Gas
MD	Municipal District

ACRONYM	MEANING
MEP	Municipal Emergency Plan
MER	Ministry of Energy and Resources (SK)
MPOSC	Manitoba Producers Oil Spill Corporation
NGL	Natural Gas Liquids
NOTAM	Notice to Airmen
OCP	On-Scene Command Post
OEL	Over Exposure Limit
OERS	Online Event Reporting System (CER)
OHS	Occupational Health and Safety
OROGO	Office of the Regulator of Oil and Gas Operations (Northwest Territories)
OSCAR	Oil Spill Containment and Recovery
$PM_{2.5}$	Particulate Matter (wildfire smoke)
POC	Provincial Operations Centre
PPB	Parts Per Billion
PPE	Personal Protective Equipment
PPM	Parts Per Million
RCMP	Royal Canadian Mounted Police
REOC	Regional Emergency Operations Centre
RSC	Regional Support Centre
SABA	Supplied Air Breathing Apparatus
SCADA	Supervisory Control and Data Acquisition (system)
SCBA	Self-Contained Breathing Apparatus
SDS	Safety Data Sheet
SHA	Saskatchewan Health Authority
SMS	Safety Management System
SO_2	Sulphur Dioxide
STARS	Shock Trauma Air Rescue Service
SWIM	Single Window Information Manager (ECCC)
TDG	Transportation of Dangerous Goods
TSB	Transportation Safety Board
WCSS	Western Canadian Spill Services
WHMIS	Workplace Hazardous Materials Information Sheet