

DISCLAIMER

This Emergency Response Plan has been designed to provide a series of guidelines for responding to emergency situations. This plan identifies, defines and provides specific actions for emergencies that could occur at an Oil and Gas facility. This plan provides a logical and responsible approach to addressing and resolving those emergencies.

Verification of the information contained in this plan is the sole responsibility of the client. DataSafe does not accept any liability arising from the implementation or use of this plan.

This plan is copyrighted by:

DataSafe Recovery Services Ltd.
520, 703 – 6th Avenue S.W.,
Calgary, Alberta T2P 0T9
Phone: (403) 269-9128
FAX: (403) 269-9140

Unauthorized reproduction is strictly prohibited.
Version 05-0112

EMERGENCY RESPONSE POLICY**CORPORATE INFORMATION and QUICK REFERENCE MATERIAL**

- Introduction (How to Use This Plan)
- Distribution List
- Levels of Emergency
- Response Team
- Response Centres

RESPONSE SECTIONS

- Incident Commander Response
- On-Scene Commander (Site Response)
- Gas Release
- Fire / Explosion
- Spills
- Injury / Fatality
- Ignition Procedures

SITE INFORMATION

If this is a Site Specific ERP manual then a tab will identify each of the following sections. If this is a Master document, these sections will be combined behind a tab identifying the property.

- Site Overview
- Contact Information
- Local Authorities Involvement
- Evacuation Centres
- Emergency Equipment
- Asset Attributes

REFERENCE MATERIAL

- Demobilize and Debriefing
- Forms
- Evacuation Procedures
- Government Roles & Responsibilities
- Communication Guidelines
- H₂S/SO₂ Effects & Sensitivities
- Resident Information
- Maps

HOW THE PLAN WORKS

Key Personnel

This plan focuses activities and responsibilities through the **Incident Commander** and the **On-Scene Commander** at the Site. These two key individuals must be in regular communication to organize and coordinate the response and recovery. They are responsible to delegate tasks to ensure each of the STEPS assigned to them is completed.

Key Company contacts that are to assume the Incident Commander role can be found in the site **Contact Information** section of this plan.

The role of the Incident Commander is to implement the company's emergency response and ensure the actions of all members of the response team are executed in an effective manner. The steps for **Incident Commander** have been separated to reduce confusion and provide specific direction that applies primarily to them. The role is to provide support and direction to the site response team.

The **On-Scene Commander** actions section contains a series of STEPS to enable the responder to assess the situation, organize a response team and implement the mandatory actions associated with a given situation.

Levels of Emergency

All situations need to be categorized as to the level of severity of the emergency. Classification establishes the potential impact on the public and defines a series of mandatory actions associated with the classification. There are three incident classification levels used to define an emergency:

- LEVEL 1 Potential Emergency** – No immediate danger to public or environment as no H₂S has been released. Hazard is confined to the lease or company property. Creates little or no media interest. There is low potential for emergency to escalate. Can be managed by company personnel. No immediate threat to personnel.
- LEVEL 2 Emergency** – Potential risk to public, personnel and environment, as the emergency could extend beyond company property. Control of the hazard is still possible. Creates local or regional media interest. May require involvement of external emergency services, federal, provincial, or local agencies.
- LEVEL 3 Major Emergency** – Immediate danger to the public, personnel and environment, as the emergency extends beyond company property. Control of the situation has been lost. Creates provincial or national media interest. There is total loss of control of the hazard. Extensive involvement by external emergency services federal and/or provincial agencies is required.

A detailed definition along with the examples and mandatory actions of each level is contained in the **Levels of Emergency** section of this manual.

Action Steps

The action steps of the Incident Commander and On-Scene Commander describe the mandatory actions associated with the type and level of the emergency. An emergency situation can escalate to the maximum level of severity or the situation may start at that level. Action steps are written for each level and assume the incident is beginning at that level. In a situation which has escalated from one level to a higher level of severity; the common actions will have already been initiated. These action steps are to be viewed as an affirmation of the activity rather than the first occurrence of the action.

The action steps are structured to be a call to action, defining the task to be achieved. Each step provides an explanation of the action along with associated criteria. Some actions such as “Isolate the Emergency Planning Zone (EPZ)” are too complex to list all of the activities and criteria associated with achieving the primary objective. Reference sections such as Evacuation Procedures provide the responder with detailed actions and criteria to meet the objective. Reference sections and support documents are identified in each action step.

Communication Plan

During an emergency the company will communicate in a proactive manner to ensure information and instruction is provided in an effective and timely fashion. The section in the ERP called Communication Guidelines, in addition to the specific tasks and responsibilities contained in the Action Steps, provides detailed requirements for communication with internal and external response personnel, local authority, police or RCMP, government agencies, affected public and the media.

Response Team

The company must organize and deploy a Response Team to manage their response to an emergency. The various roles and responsibilities of all members of the Response Team have been defined and are listed in the Response Team Section.

The section defines the location, equipment required, and detailed duties and actions of each member of the team. This information must be provided to Response Team members for direction and expectations related to their role.

Response Centres

An effective response requires that several locations be established during an event. Responders use these locations as operation centres to perform specific tasks related to the ERP. Information on the activities and associated personnel related to each Response Centre is contained in the Response Centre section. The centres are identified as:

1. On-Site Command Post
2. Corporate Regional Emergency Operations Centre
3. Off-Site Regional Emergency Operations Centre
4. Mustering Centre
5. Evacuation Centre
6. Municipal Emergency Operations Centre
7. Corporate Emergency Operations Centre

Emergency Zones

There are zones of influence that are used for both the preplanning efforts of the ERP and the dynamics of the response to an emergency situation. The following is a definition of the zones:

1. **Emergency Planning Zone (EPZ)**
Preplanning reference to define the minimum area of response associated to a potential risk. H₂S gas release is a predetermined risk. Using industry standard calculations a radius around a well, pipeline or facility defines the area where the public may be at highest risk. Information is gathered and the specific actions of the plan are geared to managing this area.
2. **Emergency Awareness Zone (EAZ)**
Defined as an area two times the radius of the EPZ. This zone determines the area where the company must gather basic location level information that is included in the ERP. Should the emergency expand beyond the EPZ the company then has knowledge of the potential implications and can formulate an appropriate action.

WHERE TO START

If you are the Incident Commander: Go to **Incident Commander** response - Step 1
As a delegated On-Scene Commander: Go to **On-Scene Commander** response - Step 1

GENERAL STRUCTURE AND CONTENTS

ERP Distribution List:

Provides a list of the locations and / or holder of copies of the Site Specific Plans.

Levels of Emergency and Summary of Corresponding Actions:

This provides a quick reference pullout to help categorize the severity of an emergency. The corresponding actions are at a summary level, details of actions are defined in the Response Sections.

Response Team:

Contains information regarding the roles, assignments and responsibilities of the Response Team and provides criteria to evaluate personnel needs based on site requirements and assessment of the emergency.

Incident Commander Response:

This section guides the Incident Commander through a series of action steps to:

1. Contain and stabilize an emergency situation – protection of people and property.
2. Provide direction to the Site Response Team.
3. Evaluate impacts caused by the situation.

On-Scene Commander Response:

First Response Steps to an emergency situation and categorization of the event into one of the following situations.

Gas Release
Fire / Explosion
Spills
Injury / Fatality

These sections guide the Site Response Team through a series of action steps to:

1. Contain and stabilize an emergency situation – protection of people and property.
2. Implement emergency assessment, notification and evacuation procedures.
3. Evaluate impacts caused by the situation.
4. Implement a recovery process.

Site Overview:

The Site Overview provides facility details that include information and issues related to the location, surrounding area and the public.

Contact Information:

Contains contact information for emergency and support services, operating personnel and government agencies specific to this field location.

Response Centres:

Contains contact and location information regarding the pre-defined Evacuation Centre(s), the pre-determined location for the On-Site Command Post, the mustering locations for on site personnel, the location of the Corporate Emergency Operations Centre and the Off-site Regional Emergency Operations Centre. Corporate personnel requirements for these locations are included.

Resident Information:

If an EPZ has been defined for this plan this section will contain information related to any residences within the EPZ

Emergency Equipment:

Details the emergency equipment kept at the production facility and in vehicles used for operations at this location.

Ignition Procedures:

General decision criteria and procedures for ignition of released gases from the facility.

Asset Attributes:

Asset lists including wells, associated pipelines and facilities. For sour plans, calculated potential H₂S release based on information related to the wells, gathering system, facility equipment and the sour production zone(s). All pipeline calculations are made using the licensed MOP values for the pipeline.

Demobilize and Debriefing:

Provides a summary of activities and expectations subsequent to the emergency that will assist in the continuous improvement efforts of the company.

Forms:

Contains a set of statutory and information forms required for response and recovery.

Evacuation Procedures:

Detailed information to assist the Response Team to prepare for and execute an evacuation of the Emergency Planning Zone and beyond.

Government Roles & Responsibilities:

This section is a summary of the roles and responsibilities of British Columbia Government agencies and departments in the event of an emergency.

Communication Guidelines:

Support information related to the company's objective to provide informative and instructive communications during an emergency response.

H₂S/SO₂ Effects & Sensitivities:

Provides information explaining the effects of exposure to Hydrogen Sulfide and Sulfur Dioxide at various levels of concentration.

Maps:

A repository for reference maps of the area.

ERP DISTRIBUTION LIST for BC CORPORATE MASTER

BC CORPORATE (Non-Confidential)

BC Corporate Master

Doc #	Location / Recipient	Description	Address	Phone
14715	B.C. Oil & Gas Commission		200, 10003 - 110 Ave., Fort St.John BC V1J 6M7	(250) 794-5200
14716	DataSafe Recovery Services Ltd.		520, 703 - 6th Avenue SW, Calgary AB T2P 0T9	(403) 269-9128
14714	Shular, Reece		Suite 900, 520 - 3rd Ave SW, Calgary AB T2P0R3	(403) 218-2063
14718	Vero Office Copy			() -

LEVELS OF EMERGENCY (BC)

Emergency Response Plan

Incidents are to be categorized as a Level 1, 2 or 3 emergency to define the severity, risks to the public and associated actions of the company. The On-Scene Commander will make the assessment of emergency Level and will affirm this decision with the Incident Commander. The following defines each Level, and summarizes the response actions.

Details of actions are contained in the site response sections.

LEVEL 1 **No immediate danger to public or environment as no H₂S has been released. Hazard is confined to the lease or company property. Creates little or no media interest. There is low potential for emergency to escalate. Can be managed by company personnel. No immediate threat to personnel.**

LEVEL 1 Response Summary:

- Alert all well site / facility personnel. Evaluate problem and initiate appropriate remedial action.
- Unnecessary personnel should leave the site
- Notify company representative(s) (Incident Commander)
- Deploy unit(s) to area of release and commence mobile air quality monitoring
- Advise the Provincial Emergency Program (PEP) who will notify the BCOGC
- Report to WorkSafeBC
- In some cases, in densely populated areas, notify or evacuate residents
- Prepare for evacuation in case of escalation of the situation

LEVEL 1 downwind mobile air quality monitoring requirements:

- Deploy unit(s) to area of release and commence mobile air quality monitoring.

**LEVELS OF EMERGENCY
(BC)**

Emergency Response Plan

LEVEL 2 **Potential risk to public, personnel and environment, as the emergency could extend beyond company property. Control of hazard is still possible. Creates local or regional media interest. May require involvement of external emergency services, federal, provincial, or local agencies.**

LEVEL 2 Response Summary:

If escalating from a level 1, some actions listed below will be a continuation of those started at level 1. If starting at this level, actions are to be initiated as stated.

- Ensure all level 1 actions are taking place
- Alert all well site / facility personnel. Evaluate problem and initiate appropriate remedial action
- Unnecessary personnel should leave the site
- Notify company representative(s) (Incident Commander)
- Send out monitoring crew; initiate mobile monitoring
- Advise the Provincial Emergency Program (PEP) to notify the BCOGC and other government agencies
- Report to WorkSafeBC
- Discuss issuance of a closure order with the BCOGC
- Initiate evacuation of emergency planning zone (EPZ)
- Set up road blocks to isolate the EPZ
- Send company representative to reception centre
- Inform senior company personnel
- Establish communications links to off-site control centre
- Assemble ignition crew and ready equipment in case of escalation of the situation

LEVEL 2 downwind mobile air quality monitoring requirements:

- continue mobile air quality monitoring if escalating from level 1
- dispatch unit(s) to area of release and commence monitoring
- request additional monitoring unit(s) if needed

**LEVELS OF EMERGENCY
(BC)**

Emergency Response Plan

LEVEL 3 **Immediate danger to the public, personnel and environment, as the emergency extends beyond company property. Control of the situation has been lost. Creates provincial or national media interest. There is total loss of control of the hazard. Extensive involvement by external emergency services federal and/or provincial agencies is required.**

LEVEL 3 Response Summary:

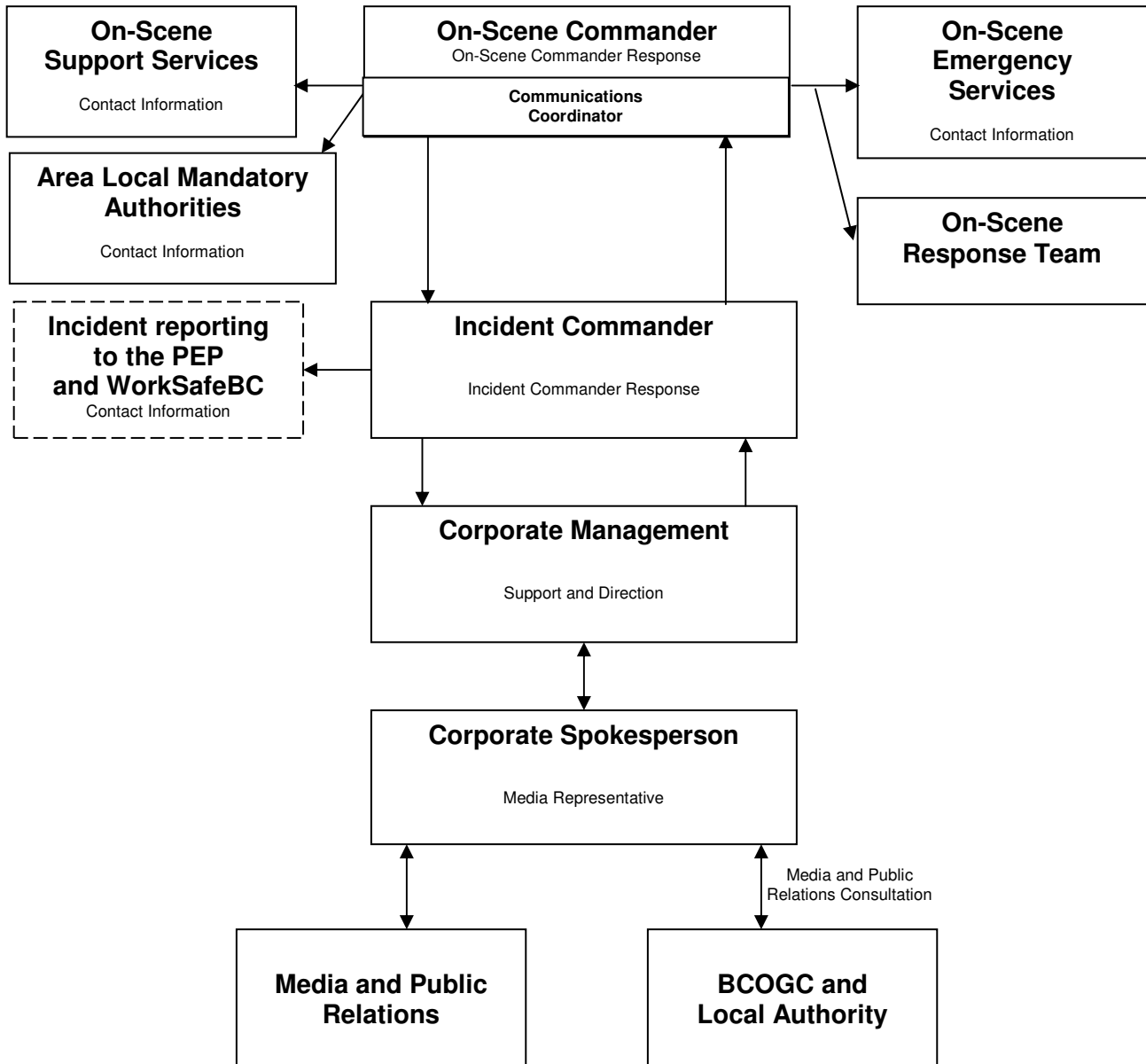
If escalating from a level 2, some actions listed below will be a continuation of those started at level 2. If starting at this level, actions are to be initiated as stated.

- Ensure all level 1 and 2 actions are taking place
- Continue evacuation and/or sheltering
- Alert all well site / facility personnel. Evaluate problem and initiate appropriate remedial action
- Unnecessary personnel should leave the site
- Notify company representative(s) (Incident Commander)
- Send out monitoring crew; initiate mobile monitoring
- Advise the Provincial Emergency Program (PEP) to notify the BCOGC and other government agencies of the state of emergency
- Report to WorkSafeBC
- Initiate evacuation of emergency planning zone (EPZ)
- Set up road blocks to isolate the EPZ
- Send company representative to reception centre
- Inform senior company personnel
- Establish communications links to off-site control centre
- Ignite release if any of the ignition criteria are met
- Expand the EPZ as required

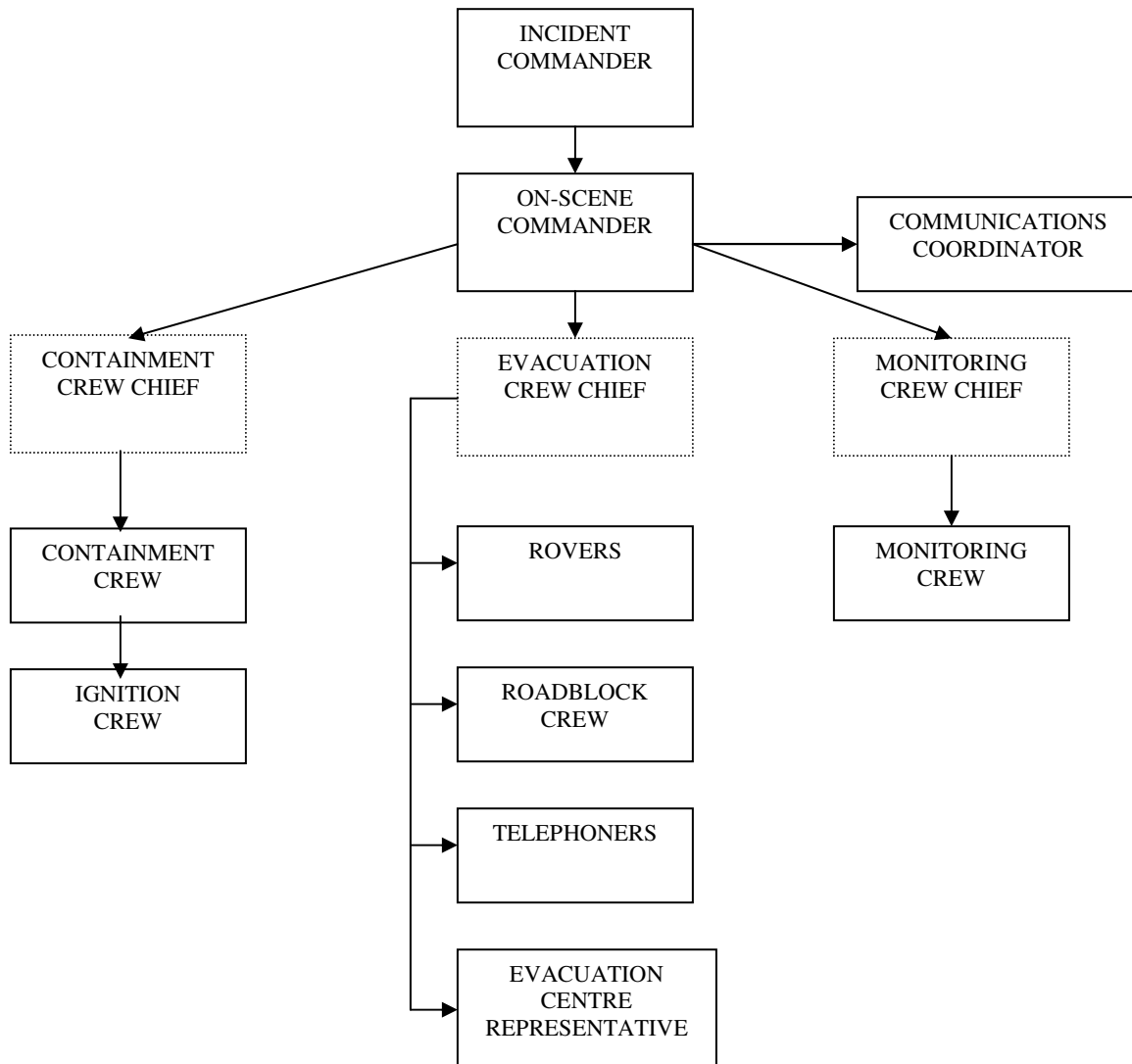
LEVEL 3 downwind mobile air quality monitoring requirements:

- continue mobile air quality monitoring if escalating from level 2
- dispatch unit(s) to area of release and commence monitoring
- request additional monitoring unit(s) if needed

General Roles and Responsibilities Chart



Response Team Flowchart



Refer to the following pages for a detailed description of the roles and responsibilities of each position.

Crew Chief positions are optional; if the scope of the incident is small the On-Scene Commander may have all positions report directly. If the magnitude of the incident requires a large response team, the On-Scene Commander should appoint Crew Chief positions as required to delegate responsibilities.

RESPONSE TEAM

Emergency Response Plan

RESPONSE TEAM EVALUATION

Make an evaluation of the number of responders required for the emergency based on:

- number of residences - (7/1 telephoners, 7/1 rovers and 1 rover for each residence with a sensitivity)
- number of roadblocks - (1/1)

RESPONSE TEAM ASSIGNMENTS

Role	Assignee
Incident Commander	Primary Incident Commander Responder
Telephoner (Evacuation Notification)	Incident Commander Staff
Alternate	On-site personnel
On-Scene Commander	On-Site Senior Company Representative
Alternate	On-Site Personnel
Containment / Ignition Crew	On-Site Personnel, Contract Service Company
Evacuation (Roadblock)	On-Site Personnel, Contract Service Company
Evacuation (Rovers)	On-Site Personnel
Monitoring	Rovers, Roadblock Personnel, On-Site Personnel
Evacuation Centre Representative	On-Site Personnel

Personnel designated as Response Team members are expected to record actions as required on prescribed **Forms** and will be required to submit all completed forms to the On-scene Commander or Communications Coordinator (*if delegated*) immediately once the emergency is declared over.

INCIDENT COMMANDER

Personnel: Incident Commander personnel
Location: Corporate Emergency Operations Centre or Off-Site Regional Emergency Operations Centre if activated
Equipment: telephone
Forms: First Response Form Page 3 of Incident Commander Response or Page 1 of Forms
Initial Information Form Page 5 of Forms
Incident Log Page 9 of Forms

Once the incident has been declared over, completed forms are to be forwarded to the On-Scene Commander or Communication Coordinator (if delegated).

Responsibilities:

- company activation of the Emergency Response Plan
- coordination and approval of emergency response activities
- coordinate corporate management team

Actions:

- liaison with B.C. Oil & Gas Commission
- reports to WorkSafeBC
- assign and coordinate activities of On-Scene Commander
- ensure overall company response to an emergency is effective and functional
- document actions/findings on prescribed forms

Communication:

- On-Scene Commander/Communications Coordinator, Corporate Management, BCOGC / PEP (Event Reporting), WorkSafeBC

Objectives / Roles Summary:

- make key decisions
- provide technical information required for the emergency
- establish communications with the OSCP and other Response Centres
- procure and approve the use of resources required for safety and mitigation
- monitor the effectiveness of the response
- liaise with governmental bodies and other organizations
- establish long-term mitigation objectives and plans
- gather information and keep records related to the emergency
- coordinate the timely provision of information to the public and affected employees
- downgrade and incident when appropriate control is achieved and with stakeholder consultation

RESOURCE COORDINATION (CORPORATE MANAGEMENT TEAM)

Personnel: Corporate management, (e.g. EH&S, Legal, Accounting, HR)
Location: Corporate Emergency Operations Centre or Off-Site Regional Emergency Operations Centre if activated

Equipment: telephone

Responsibilities:

- assist the Incident Commander as required
- advisory resources to the Incident Commander

Actions:

Finance:

- to ensure that processes are in place to manage and recover costs associated with emergency
- set up AFE for covering services and materials associated with emergency
- implement authority level changes if necessary for Incident Commander / Area Commander
- with Evacuation Coordinator, coordinate provision of funds for interim payments to area residents displaced by emergency
- coordinate initial reporting to corporate insurers

Legal:

- provide legal advice, guidance, and assistance to Corporate Emergency Executive Team
- provide advice on legal issues arising during response
- prepare legal response for any government orders issued during emergency
- identify steps to be taken to reduce exposure to legal risks
- assess contracted liabilities
- review and approve written communications with government departments, mass media, regulatory agencies, and mass media

EHS:

- provide advice on environmental protection strategies or occupational health and safety issues associated with specific emergencies
- review emergency response procedures followed and required environmental monitoring is in place
- identify potential human and animal health concerns associated with the emergency
- provide advice on response objectives and associated EH&S risks
- identify any significant divergence from agreed or written response plan or strategy, and probable response from lead agencies
- confirm that environmental or injury reporting complies with agency requirements

Engineering:

- retrieve technical information on the field operations, materials, equipment or other services for wells, pipelines and facilities
- provide technical support for Incident Commander

Logistics & Planning:

- manage the acquisition, and deployment of any equipment or materials, or services required by response personnel
- organize food, accommodation, working facilities, transportation, and sanitation for response personnel if the incident requires extended response
- identify potential strategic materials or services required in a potential emergency, identify potential sources and emergency contact numbers

Information Technologies:

- ensure ready access to computer equipment for the EOC and associated personnel
- provide technical support as required

RESPONSE TEAM

Emergency Response Plan

Surface Land:

- provide advice on surface land issues associated with specific emergencies
- confirm ownership of lands affected by emergency
- identify past relationships with landowner
- make arrangements for access to land for responding to emergency

Document Recorder:

- collection and filing of Incident logs, reports and media releases made over the course of the emergency
- provide guideline and reminders for other participants of documentation needs and formats
- distribute both the hard copy and electronic formats for documentation forms where applicable
- initiate documentation process at Emergency Operations Centre
- regularly review content with Incident Commander to ensure accuracy and completeness of records
- collect compile and store incident logs, reports, and media releases every 12 hours over the duration of the emergency
- arrange for copies of all documentation originals to be made and filed for future reference, electronic copies are to be stored on a secure directory
- make arrangements for photographs and copies of physical inspections obtained during the response activities
- prompt Area Administrators to collect, collate and store required documentation

Communication:

- On-Scene Commander/Communications Coordinator, Incident Commander

CORPORATE SPOKESPERSON

Personnel: Designated Corporate Spokesperson

Location: Corporate Emergency Operations Centre or Off-Site Regional Emergency Operations Centre if activated

Equipment: telephone

Responsibilities:

- establish and maintain open lines of communication with the B.C. Oil & Gas Commission and other government departments and provide reports and updates
- manage media relations and communications with employees

Actions:

- in consultation with the B.C. Oil & Gas Commission, coordinate all company news releases
- appoint & coordinate personnel presence at any of the emergency operations centres as required

Communication:

- Corporate Management, BCOGC and Local Authority, Media and Public Relations

ON-SCENE COMMANDER

Personnel: on-site personnel
Location: On-Site Command Post
Equipment: radio and telephone
Forms: First Response Form Page 7 of On-Scene Commander Response or Page 1 of Forms
Initial Information Form Page 5 of Forms
Incident Log Page 9 of Forms

Once the incident has been declared over, completed forms are to be forwarded to the On-Scene Commander or Communication Coordinator (if delegated).

Responsibilities:

- coordination and supervision of all on-site activities
- perform unassigned Crew Chief duties as required
- once emergency is declared over, gather completed forms from Response Team (this task will become the responsibility of the Communication Coordinator if assigned)

Actions:

- assign personnel to Response Team positions as required
- establish staging area and review communication strategies with Response Team
- liaison with Incident Commander
- contact and coordination of site emergency services
- document all on-site activities
- liaison with local municipal and government emergency services representatives
- document actions/findings on prescribed forms

Communication:

- Incident Commander, On-Scene Support Services, On-Scene Emergency Services, On-Scene Government Agencies, Local Authorities, Police (RCMP), Health Authorities, Area Response Team, Containment and if activated the Ignition Crew Chief, Evacuation Crew Chief, Monitoring Chief
- communication may be channeled through a Communications Coordinator if the severity or complexity of the event warrants

Objectives / Roles Summary:

- assess the situation
- develop and direct the implementation of strategies for achieving emergency response objective (e.g. evacuation, shelter in place, vapour cloud ignition)
- identify “hot zone” and declare when responders may enter it
- establish objectives and priorities
- determine needs and request additional resources from the CEOC
- manage emergency response resources
- ensure that the ERP is implemented
- monitor changing conditions and modify strategies accordingly
- ensure that planning meetings are scheduled as required
- ensure that people inside the hot zone are accounted for and initiate a search if required
- develop and approve the implementation of an action plan and site safety plan
- determine information needs and advise the CEOC of current strategies and status
- advise the CEOC when the field response is complete
- participate in debriefing

COMMUNICATION COORDINATOR

Personnel: on-site personnel

Location: Corporate Emergency Operations Centre or Off-Site Regional Emergency Operations Centre if activated

Equipment: radio and telephone

Responsibilities:

- communication with Incident Commander, government agencies and emergency services
- once emergency has been declared over, gather completed forms from Response Team

Actions:

- act on behalf of the On-Scene Commander to manage and coordinate communication activities as required

Communication:

- Incident Commander, On-Scene Commander, On-Scene Support Services, On-Scene Emergency Services, On-Scene Government Agencies, Local Authorities, Police (RCMP), Health Authorities, Area Response Team, Containment and if activated the Ignition Crew Chief, Evacuation Crew Chief, Monitoring Chief

CONTAINMENT AND IGNITION CREW

Note: Personnel entering the area affected by the emergency must use personal protective equipment. It is also imperative that functionality of communication links be verified.

Containment Crew Chief

Personnel: on-site personnel
Location: On-Site Command Post
Equipment:

- radio and telephone

Responsibilities:

- the organization and control of the Containment and Ignition Crew
- maintain continual communication (recommend maximum 15 minute intervals) with all members of Containment/Ignition Crew

Containment Actions:

- provide initial air monitoring
- based on the nature of the incident determine and execute actions to contain the hazard
- organize the Containment and assign specific tasks
- continue to liaise with other Crew Chiefs, On-Scene Commander and Incident Commander to understand the scope and requirements for containment resulting from the incident
- ensure activities and assignments of the Containment Team maintains appropriate response level to any changes related to the scope of the incident

Ignition Actions:

- assess risk of exposure or injury to the public or response workers
- assess proximity to residences, public facilities, towns, or urban centres
- assess status of evacuations
- assess fire hazard after ignition in relation to adjacent forested or cropland area
- assess safety of ignition team (hazard area identification, protective gear)

Ignition Criteria:

The release must be ignited as soon as all personnel working at the site have cleared to a safe distance under any of the following conditions:

1. There is uncontrolled flow to the atmosphere, effluent has reached the surface, no immediate chance of control and the flow, if not ignited, could lead to loss of life.
2. There is a release of sour gas and safety of residents cannot be assured because:
 - Evacuation of residents within the emergency response planning zone cannot be accomplished; or
 - Monitoring results indicate H₂S levels of 15 ppm for 15-minutes in unevacuated areas, or
 - Monitoring is not taking place due to some unforeseen circumstances, such as bad weather or communication breakdown.
3. For special sour wells, as determined by BCOGC, immediate ignition of a well may be required.
4. The release cannot be brought under control in the short term (ignition decision will be made in consultation with the BCOGC).

Ignition must occur within 15 minutes of the decision to ignite.

NOTE: The Incident Commander is responsible for the decision to ignite.

Communication:

- On-Scene Commander, Containment Crew, Ignition Crew

Containment and Ignition Team Personnel

Personnel:

- on-site personnel
- minimum of two persons
- two person backup team

Location: On-Site Command Post

Equipment:

- radio and telephone
- first aid kit
- SCBA and Respirator
- detection equipment
- PPE as required
- Ignition Equipment- Flare Gun

Responsibilities:

- perform operational containment actions
- ignition procedures as required

Actions:

- as directed by the On-Scene Commander ignite gas release
- go to the **Ignition Procedures** section

Communication:

- Containment Crew Chief

EVACUATION CREW

Note: Personnel entering the area affected by the emergency must use personal protective equipment. It is also imperative that functionality of communication links be verified.

Evacuation Crew Chief

Personnel: on-site personnel
Location: On-Site Command Post
Equipment: radio and telephone

Responsibilities:

- the organization and control of Evacuation Crew
- maintain continual communication (recommend maximum 15 minute intervals) with all members of Evacuation Crew

Actions:

- based on the location and nature of the incident; refer to the Area Map and determine the area and requirements for evacuation
- organize the Evacuation Team and assign specific tasks, ensure Telephoners have a clear understanding of which residents to call
- continue to liaise with other Crew Chiefs, On-Scene Commander and Incident Commander to understand the scope and requirements of the resulting from the incident
- ensure activities and assignments of the Evacuation Team maintain appropriate response level to any changes related to the scope of the incident

Communication:

- On-Scene Commander, Road Block Crew, Evacuation Centre Representative, Telephoners, Rovers

Evacuation Team Personnel

Road Block Crew

Personnel: on-site personnel and contracted service companies

Location: as assigned by Evacuation Crew Chief

Equipment:

- Cellular Phone, radio (if available), roadblock kit and hand held air monitor
- vehicle – will serve as primary barrier for roadblock

Forms: Evacuation Zone Access Control Form Page 21 of Forms

Plume Tracking and Monitoring Form Page 23 of Forms

Once the incident has been declared over, completed forms are to be forwarded to the On-Scene Commander or Communication Coordinator (if delegated).

Responsibilities:

- secure the Emergency Planning Zone
- access to is to be limited to Emergency Response Personnel only

Actions:

- block roads at edge of emergency hazard area
- secure evacuated area and record/document traffic entering/leaving the emergency planning zone
- have roadblock kits and communication equipment available
- setup individual roadblock locations as identified by the On-Scene Commander / Evacuation Crew Chief
- assemble required equipment and information: communications equipment (hand held two-way radios or cell phones), map, ERP Roadblock Personnel-checklist and safety equipment
- assemble maps of area surrounding potential emergency hazard area
- review potential roadblock locations and become familiar with routes, immediate area roads, and assignments (Map review)
- identify potential access / egress issues that may be encountered and determine appropriate response should roadblocks be required
- go to designated roadblock location and set up a roadblock, avoid setting it up on hills, blind curves, or other spots with limited visibility
- place vehicle at side of road with 4-way flashers “ON”, do not park near top of a hill or other location where visibility by motorists may be restricted
- set up barricades and warning signs so that they are clearly visible to approaching traffic, wear a high-visibility reflective vest if one is available
- stand well clear of your vehicle to provide an escape route and prevent being struck by vehicles
- use a flag or Stop Sign to stop traffic entering emergency hazard area, advise motorists of the problem and that further travel is not recommended
- keep a record of all vehicles entering and leaving hazard area, this will serve as a checkpoint for evacuees on their way out
- maintain communications with the On-Site Command Post, advise of unauthorized traffic or personnel in the isolated area to allow Area Commander to identify home security or personal safety issues
- let authorized traffic through and track whereabouts
- go to **Response Zones** for **Road Block Strategy**

Communication:

- Evacuation Crew Chief

Evacuation Team Personnel

Evacuation Centre Representative

Personnel: on-site personnel
Location: Evacuation Centre
Equipment: telephone
Forms: Evacuation Centre Record Page 15 of Forms
Evacuee Expense Form Page 17 of Forms
Evacuee Information Form Page 19 of Forms

Once the incident has been declared over, completed forms are to be forwarded to the On-Scene Commander or Communication Coordinator (if delegated).

Responsibilities:

- provide company support to evacuees

Actions:

- a company representative must be present at the Centre at all times
- check people into the centre - **Evacuation Centre Record - Forms** section
- organize food and/or shelter for the evacuees
 - provide an **Evacuee Expense Form - Forms** section
 - make arrangements to care for their livestock and pets
 - provide security for evacuated residences and businesses
- verify arrivals with the On-Site Command Post
- keep people well informed
- coordinate efforts to transfer children detained at school to reunite with family
- if people wish to leave and stay elsewhere:
 - record their destination and how the Company can contact them
 - distribute a phone number that people can contact the Company

Communication:

- Evacuation Crew Chief, Evacuated Residents

Evacuation Team Personnel

Telephoners

Personnel: Incident Commander Staff or on-site personnel

Where impacts are limited, notification may be assigned to On-Site personnel. Coordination between the On-Scene and Incident Commanders is required to determine which resources should be assigned the telephoners role.

Location: On-Site Command Post or Corporate Emergency Operations Centre

Equipment: telephone

Forms: Evacuee Information Form Page 19 of Forms

Once the incident has been declared over, completed forms are to be forwarded to the On-Scene Commander or Communication Coordinator (if delegated).

Responsibilities:

- telephone notification to area residents to evacuate

Actions:

- at the direction of the Evacuation Crew Chief, using the prepared evacuation message, contact assigned residents to evacuate
- prioritize contact list based on distance from incident and sensitivity of resident
- limit required calls to approximately seven (7) per telephoner
- log resident contact successes
- notify Evacuation Chief of all residents where contact was not achieved or where residents have requested assistance
- notify Evacuation Centre of expected arrivals
- document actions/findings on prescribed forms

Communication:

- Evacuation Crew Chief, Residents

Rovers

Personnel: on-site personnel
Location: as assigned by the Evacuation Chief

Equipment:

- radio and telephone
- hand held gas monitor
- personal/company identification
- personal protective equipment

Forms: Evacuee Information Form Page 19 of Forms

Once the incident has been declared over, completed forms are to be forwarded to the On-Scene Commander or Communication Coordinator (if delegated).

Responsibilities:

- provide support and assistance
- verify isolation of the Emergency Planning Zone

Actions:

- provide area security verification and resident evacuation support
- scout area and establish contact with residents inside emergency planning zone
- give residents advice on shelter or evacuation
- identify and obtain safety or communication equipment, and maps/other area listings that may be required
- identify all activities in area (public, business, transient), and determine potential assistance required
- begin monitoring with handheld equipment, downwind of release at nearest residency, from this location, continue to any additional downwind residences until outer boundary of Hazard area is determined, advise On-Scene commander of any readings as they are measured
- go to houses identified and personally visit each resident location within the area to notify residents to evacuate or shelter-in-place, leave a notice indicating household has been evacuated
- leave written notice and instructions on door of vacant residences
- inform the Evacuation Crew Chief of evacuations
- use notification messages as a guide in talking with area residents
- visit houses/buildings periodically during emergency to confirm evacuated houses remain unoccupied and to deter theft and vandalism
- assist evacuees in evacuations, as necessary
- document actions/findings on prescribed forms
- go to **Evacuation Procedures** for Evacuation information

Communication:

- Evacuation Crew Chief

MONITORING CREW

Note: Personnel entering the area affected by the emergency must use personal protective equipment. It is also imperative that functionality of communication links be verified.

Monitoring Chief

Personnel: on-site personnel
Location: On-Site Command Post
Equipment: radio and telephone
Responsibilities:

- the organization and control of Monitoring Crew
- maintain continual communication (recommend maximum 15 minute intervals) with all members of Monitoring Crew

Actions:

- liaison with external Monitoring Service and provincial environment
- contact contract air monitoring service
- determine location and assignments of Monitoring Crew and Mobile Air Monitoring units

Communication:

- On-Scene Commander, Monitoring Crew

Air Monitoring is required:

- in any area where an H₂S odour complaint has been received
- at the nearest downwind, non-evacuated residence from the incident site
- in any area where H₂S is suspected

Air Quality Monitoring REQUIREMENTS for a Production Facility

Note: Once contract mobile air monitoring arrives on scene, they will become the authority

LEVEL 1 Air Monitoring Requirements:

- deploy unit(s) to the area of release and commence mobile air quality monitoring

LEVEL 2 Air Monitoring Requirements:

- continue mobile air quality monitoring if escalating from level 1
- dispatch unit(s) to area of release and commence monitoring
- request additional monitoring unit(s) if needed

LEVEL 3 Air Monitoring Requirements:

- continue mobile air quality monitoring if escalating from level 2
- dispatch unit(s) to area of release and commence monitoring
- request additional monitoring unit(s) if needed

Monitoring Crew Personnel

Monitoring Crew

Personnel: on-site personnel, contract air monitoring service

Location: as assigned by Monitoring Crew Chief

Equipment:

- radio and telephone
- hand held gas monitor
- personal/company identification
- personal protective equipment
- Mobile Air Monitoring Units (When on Site)

Forms: Plume Tracking and Monitoring Form Page 23 of Forms

Once the incident has been declared over, completed forms are to be forwarded to the On-Scene Commander or Communication Coordinator (if delegated).

Responsibilities:

Perform air monitoring to ascertain H₂S or SO₂ concentrations which will assist in determining:

- plume direction and formation
- if ignition criteria are met
- whether evacuation and/or sheltering criteria have been met, particularly beyond the EPZ
- roadblock locations
- concentrations in areas being evacuated to ensure that evacuation is safe
- when the emergency can be downgraded

Actions:

- roadblock personnel, rovers and containment personnel will provide initial readings from hand held detectors to the acting On-Scene Commander or assigned Monitoring Crew Chief
- based on wind direction establish leading edge of plume
- move at right angles to the release to determine width of the plume
- log and report concentrations
- notify Monitoring Crew Chief if concentrations exceed limits outside the Emergency Planning Zone
- document actions/findings on prescribed forms

Communication:

- Monitoring Chief

An effective response requires that several locations be established during an event. Responders use these locations as operation centres to perform specific tasks related to the ERP. The centres are identified as:

1. On-Site Command Post (OSCP)
2. Corporate Regional Emergency Operations Centre (CREOC)
3. Off-Site Regional Emergency Operations Centre (REOC)
4. Mustering Centre
5. Evacuation Centre
6. Corporate Emergency Operations Centre (CEOC)

Note: The actual number of response management centres activated during an emergency response may vary depending on the incident and its impact, therefore not all of the above may be needed.

Equipment and Materials Recommendations

A response management centre should include:

- sufficient space (consider expansion)
- good communication facilities (consider interference)
- telephone system
 - expand to 16 lines- display boards (white board etc.)
 - 6 lines for Public and Media Inquiry Room
 - facsimile machines
- controlled access
- adequate parking
- auxiliary power supply
- adequate washrooms
- rest area

Supplies needed include:

- desks / tables / Chairs
- local area and regional maps
- filing cabinet(s)
- clock(s)
- computer(s) and printer
- telephone books
- emergency operations plans
- resource inventories

EMERGENCY OPERATION CENTRES - COMPANY CONTROL

On-Site Command Post (OSCP)

Location established by the On-Scene Commander. Established in the immediate vicinity of the incident. Working closely with the Incident Commander, Government Agencies and Local Authority; the On-Scene Commander directs on-site response activities to contain and control the emergency. Communications from the On-Site Command Post is to the Corporate Emergency Operations Centre and the Regional Emergency Operations Centre.

Personnel:

The On-Site Command Post may include participation as follows:

- Upstream operator - response team members
- Upstream operator contracted staff (when required)
- Provincial Government Agencies and Local Authority - representative(s)
- NEB, Transportation Safety Board (TSB) and Environment Canada representative(s)

Corporate Regional Emergency Operations Centre (CREOC)

Location established by the On-Scene Commander to manage the larger aspects of the response. Initially manned by the On-Scene Commander and site response team members. Primary focus is in support of the On-Site Command Post. This site may be suitable for establishing the Regional Emergency Operations Centre if activated.

Personnel:

The CREOC may include participation as follows:

- Upstream operator - response team members
- Upstream operator contracted staff (when required)
- Provincial Government Agencies and Local Authority - representative(s)
- NEB, Transportation Safety Board (TSB) and Environment Canada representative(s)

Corporate Emergency Operations Centre (CEOC)

The Corporate Emergency Operations Centre will normally be set up at corporate Head Office or the office location of the Incident Commander if different than Head Office.

Personnel:

The following personnel will use the Corporate Emergency Operations Centre:

- Incident Commander
- Telephoners
- Media Representative
- Corporate Management Team

Evacuation Centre

Centre established as a meeting point for area evacuees. This location is manned by a company representative (Evacuation Centre Representative) to serve as a liaison point for assisting evacuees. The Evacuation Centre must be established outside the EAZ. (Refer to the Public Protection section for Centre setup).

Long Term Evacuation

These are location options that are able to accommodate long term evacuees. If locations have been pre-determined they will be listed in the property specific information of the document under Long Term Evacuation on the **Evacuation Centres** form. If Long Term Evacuation locations have not been pre-determined they can be identified as the situation requires.

Mustering Location

A temporary gathering point for site workers at the location of an emergency.

All personnel must report to the mustering area when an alarm is raised to evacuate the site. The mustering area will normally be located at Primary On-Site Command Post. In the event that conditions prevent access to this location, proceed to the nearest safe, upwind location to the situation.

EMERGENCY OPERATION CENTRES - AUTHORITY CONTROL

Regional Emergency Operations Centre (REOC)

Location established by Government and Industry Staff. This location is generally the facility office of the property, equipped with local communications and office services. The REOC is typically activated at LEVEL 2 and is located in a suitable location off-site near the emergency to manage the larger scale aspects of the emergency response and public protection measures. The operator, local authority and required provincial government departments work collaboratively to support the On-Site Command Post activities and to address the issues that are too broad to be addressed by the On-Site Command Post. The REOC coordinates response activities within the region of the emergency. A Public and Media Inquiry Room will be established at the Regional Emergency Operations Centre.

Personnel:

The Regional Emergency Operations Centre may include participation as follows:

- Provincial Government Agencies and Local Authority - representative(s)
- Company staff and communication representative(s)
- NEB, Transportation Safety Board (TSB) and Environment Canada representative(s)

Step 1. FIRST CALL – ENSURE IMMEDIATE CONTAINMENT AND STABILIZATION ACTIONS HAVE BEEN INITIATED

Refer to site **Contact Information** section for the **Incident Commander Contact List**.

As the first person contacted you will act as **Incident Commander** and will activate the company's emergency response procedures and assume responsibility for the management of any emergency response. Further delegation of Incident Commander responsibilities will be conducted to meet corporate and/or staff resource considerations.

Call is from Field Personnel: Complete Step 1 with the caller on the phone.

Call is from another source: Complete as much of Step 1 as possible with the caller on the phone. **Contact Field Personnel to respond.**

References: ➤ Contact Information

Complete a First Response Form (Next Page).

- A. Get as much information about the situation as possible from the caller.**
- B. Confirm the safety of site personnel, whether immediate containment steps have been initiated emergency services are required.**
- C. Categorize the event according to LEVEL of severity and initiate appropriate Response Steps.**

LEVEL 1 No immediate danger to public or environment as no H₂S has been released. Hazard is confined to the lease or company property. Creates little or no media interest. There is low potential for emergency to escalate. Can be managed by company personnel. No immediate threat to personnel.

LEVEL 2 Potential risk to public, personnel and environment, as the emergency could extend beyond company property. Control of hazard is still possible. Creates local or regional media interest. May require involvement of external emergency services, federal, provincial, or local agencies.

LEVEL 3 Immediate danger to the public, personnel and environment, as the emergency extends beyond company property. Control of the situation has been lost. Creates provincial or national media interest. There is total loss of control of the hazard. Extensive involvement by external emergency services federal and/or provincial agencies is required.

D. Begin an Incident Log found in the Forms section.

SITE EMERGENCY – INCIDENT COMMANDER RESPONSE

Emergency Response

Emergency Response Plan

Intentionally blank page

FIRST RESPONSE FORM

Emergency Response Form

Emergency Response Plan

CALLER INFORMATION

NAME:	DATE/TIME:
PHONE:	LOCATION:

EMERGENCY EVALUATION

CATEGORY:	LEVEL 1	LEVEL 2	LEVEL 3
EMERGENCY DESCRIPTION:			
ON-SCENE COMMANDER:			PHONE:
INJURIES:			
EVACUATION / SHELTER NEEDED:	IMMEDIATE AREA ONLY	TOTAL	
EVACUATION CHIEF:	NAME:	PHONE:	
NOTIFICATION CHECKLIST	BCOGC/PEP POLICE FIRE AMBULANCE LOCAL AUTHORITY HEALTH AUTHORITY OTHER: _____		
ROADBLOCKS REQUIRED/ ESTABLISHED	ASSIGNMENTS:		

GENERAL INFORMATION

EQUIPMENT	SUBSTANCE	PROBLEM

CONTACTS MADE BY CALLER

CONTACT	PHONE	CONTACT	PHONE

INFORM THE CALLER OF ANY IMMEDIATE DANGER TO HIMSELF OR OTHERS
INSTRUCT THE CALLER IN IMMEDIATE PRECAUTIONS TO BE TAKEN
ASSURE THE CALLER THAT IMMEDIATE ACTION WILL BE TAKEN

FIRST RESPONSE FORM

Emergency Response Form

Emergency Response Plan

LOCATION INFORMATION

DESCRIPTION OF LAND:
PROXIMITY TO WATER:
PROXIMITY TO PUBLIC:
IMMEDIATE DANGER:

WEATHER CONDITIONS

WIND DIRECTION/SPEED:
ROAD CONDITIONS:
OTHER:

NOTES:

INCIDENT COMMANDER RESPONSE

Step 2. EVALUATE RESPONSE TEAM PERSONNEL

Determine your requirements for the Response Team Personnel. Refer to the **Response Team** section for roles and responsibilities of the Response Team. If additional personnel are needed to form the Response Team, the use of external resources may be required. See **Support Services** in the **Contact Information** section. The Local Authority may provide additional support, see the **Site Overview – Evacuation Summary** for information.

Personnel designated as Response Team members are expected to record actions as required on **Forms** and will be required to submit all completed forms to the On-scene Commander immediately once the emergency is declared over.

Assigned to: **Incident Commander**

References: ➤ Response Team
 ➤ Site Overview
 ➤ Contact Information

Step 3. ENSURE AN ON-SITE COMMAND POST HAS BEEN ESTABLISHED AND ASSIGN AN ON-SCENE COMMANDER

Determine who will staff the On-Site Command Post that is equipped for communication with the Incident Commander, Field Personnel and Emergency and Support Services. Notify all parties of the phone number and the location. Assign an On-scene Commander with the following responsibilities:

Designated On-Scene Commander is: _____ Phone: _____

- Contact is available at all times
- Coordinate and control all site activities
- Communication with Incident Commander, Emergency and Support Services
- Understand degree of complexity of incident and apply appropriate logic to situation
- Keep onsite personnel updated

Assign a Communication Coordinator for the On-Site Command Post if the situation warrants and personnel are available for this task.

If the severity of the situation warrants, consider establishing a Corporate Regional Emergency Operations Centre. This location may later be designated as the Off-site Regional Emergency Operations Centre under authority control.

Assigned to: **Incident Commander**

References: ➤ Response Team
 ➤ Contact Information
 ➤ Response Centres
 - On-Site Command Post Information
 - Corporate Regional Emergency Operations Centre Information
 - Regional Emergency Operations Centre Information
 ➤ Resident Information
 ➤ Emergency Equipment
 ➤ Maps

INCIDENT COMMANDER RESPONSE

Step 4. ESTABLISH THE CORPORATE EMERGENCY OPERATIONS CENTRE

Set up the Corporate Emergency Operations Centre that will be the location that the Incident Commander will use as a base of operations during the emergency. The corporate management team and telephone personnel will also use this centre if necessary. Ensure the telephone number and contact information of the Corporate Emergency Operations Centre are provided to the On-Site Command Post and the Off-Site Regional Emergency Operations Centre when they are operational.

Assigned to: **Incident Commander**

References: ➤ Response Centres
- Corporate Emergency Operations Centre Information

Step 5. CONFIRM EMERGENCY PLANNING ZONE ACTIONS

The company must manage the entire Emergency Planning Zone. The following Evacuation Procedures are the minimum response requirement for each level of emergency.

Level 1 notify sensitive residents, provide sheltering instruction, assess the potential need for voluntary evacuation

Level 2 notify all residents, begin evacuation or sheltering actions

Level 3 notify all residents, complete evacuation or sheltering actions

Assigned to: **Incident Commander/On-Scene Commander**

References: ➤ Level of Emergency
➤ Contact Information
➤ Response Centres
- Evacuation Centre Information
➤ Resident Information
➤ Emergency Equipment
➤ Maps

Step 6. CONTACT REQUIRED SUPPORT SERVICES

Ensure that contact with services needed to respond to the incident. Mobile air quality monitoring unit(s) must be deployed to the area of the release to commence monitoring.

Assigned to: **Incident Commander/On-scene Commander**

References: ➤ Contact Information
➤ Resident Information
➤ Emergency Equipment
➤ Maps

Downwind mobile air quality monitoring requirements:

Note: Once contract mobile air monitoring arrives on scene, they will become the air monitoring authority as defined by the Incident Commander or his designate.

INCIDENT COMMANDER RESPONSE

LEVEL 1 Air Monitoring Requirements:

- deploy units(s) to area of release and commence mobile air quality monitoring

LEVEL 2 Air Monitoring Requirements:

- continue mobile air quality monitoring if escalating from level 1
- dispatch unit(s) to area of release and commence monitoring
- request additional monitoring unit(s) if needed

LEVEL 3 Air Monitoring Requirements:

- continue mobile air quality monitoring if escalating from level 2
- dispatch unit(s) to area of release and commence monitoring
- request additional monitoring unit(s) if needed

Step 7. **AS SOON AS POSSIBLE - CONTACT AND REPORT TO THE PROVINCIAL EMERGENCY PROGRAM (PEP) AND WORKSAFEBBC**

Notify **PEP** (who will notify the BCOGC) of the incident; Prior to contact ensure the **Initial Information Form - Forms** section is completed. This information will assist the B.C. Oil & Gas Commission in responding more quickly to your call. Upon contact, the B.C. Oil & Gas Commission will confirm the level. The company **Media Representative**, with decision authority, is to be present at the Off-Site Regional Emergency Operations Centre if activated. All press releases will be coordinated through this facility. Update these agencies and complete appropriate forms based on nature of incident.

Incident Commander or On-Scene Commander must provide and continue to provide the B.C. Oil & Gas Commission with situation reports.

If the incident involves a pipeline that is regulated by the National Energy Board (NEB) then the incident must be reported to the National Energy Board, Pipeline Emergency Number immediately. Refer to the **Contact Information – Mandatory Contacts** section. The NEB will also require preliminary and detailed incident reports unless an inspection officer relieves us of this reporting requirement.

NEB reportable incidents are as follows:

- The death of or serious injury to a person
- A significant adverse effect on the environment
- An unintended fire or explosion
- An unintended or uncontained release of LVP hydrocarbons in excess of 1.5 m³
- An unintended or uncontrolled release of gas or HVP hydrocarbons
- The operation of a pipeline beyond its design limits as determined under CSA Z662 or CSA Z276 or any operating limits imposed by the NEB

In the event of a spill, contact and report to Environment Canada if the product affected comes under the volumes and guidelines as per Part 8 of the Environmental Protection Act, 1999 – Environmental Emergency Plans.

Canadian Environmental Protection Act 1999 – Verbal and Written Report Requirements

INCIDENT COMMANDER RESPONSE

For the purposes of section 9 of the Environmental Emergency Regulations:

A verbal notification is to be made by telephone as soon as possible in the circumstances to the authorities named in column 2 of Schedule 6 of the Environmental Emergency Regulations. The verbal report should include as much of the following information as is known at the time of the report.

- the reporting person's name and phone number where the reporter can be immediately contacted
- the name of the person who owns or has the charge, management or control of the substance immediately before the environmental emergency
- the date and time of the release
- the location of the release
- the name/UN number of the substance released
- the estimated quantity of the substance released
- the means of containment (from which substance was released) and description of its condition
- the number of deaths and injuries resulting from the environmental emergency
- the surrounding area/environment affected and potential impact of the release (mobility of release and weather or geographic conditions at the site)
- a brief description of the circumstances leading to the release
- the cause of the release (if known)
- details of the actions taken or further actions contemplated to contain, recover, clean up and dispose of the substance involved
- the names of agencies notified or on-scene
- other pertinent information

A written report should be made within 30 days to the relevant authorities named in column 3 of Schedule 6 of the Environmental Emergency Regulation. The following information should be included in the written report.

- the name and address of the person who owns or has the charge, management or control of the substance involved in the environmental emergency and the phone number, including area code, at which the person may be contacted
- the date, time and exact location of the release
- the name/UN number of the substance released
- the composition of the substance released showing, with respect to each substance involved, its concentration and total weight
- the estimated quantity of the substance released and the total quantity of substance in the means of containment before the release
- the duration of the release of the substance and its release rate
- the means of containment (from which the substance was released) and a description of its condition
- the number of deaths and injuries resulting from the environmental emergency
- the surrounding area/environment affected and potential impact of release (mobility of release, weather or geographic conditions at the site, long-term environmental impacts)
- a complete sequence of events before and after the environmental emergency, including the cause of the release if known
- the names of agencies notified or on-scene at the time of the release
- all measures taken pursuant to CEPA 1999 paragraph 201(1)(b) and (c) regarding protection of the environment and public safety and notification to any member of the public adversely affected by the environmental emergency
- all measures to be taken to prevent similar releases

INCIDENT COMMANDER RESPONSE

Assigned to: **Incident Commander**

- References:
- Incident Commander Response
 - First Response Form
 - Contact Information
 - Resident Information
 - Maps
 - Forms
 - Communications Guidelines

Step 8. EVALUATE OTHER MANDATORY CONTACTS

Based on the Level of the emergency, mandatory contacts must be made. We will commence proactive communications with stakeholders to ensure that information and instructions related to the situation are available when needed. Confirm with the On-Scene Commander that notification has been made using the following table:

Level	Contact
Level 1	B.C. Oil & Gas Commission through the Provincial Emergency Program (PEP) WorkSafeBC Residents within the EPZ with Sensitivities Local authority, local police or RCMP Health Authority
Level 2 And Level 3	B.C. Oil & Gas Commission through the Provincial Emergency Program (PEP) WorkSafeBC Residents within the EPZ Local authority, local police or RCMP Health Authority

*Note that WorkSafeBC is not part of the Provincial Emergency Program one call system and MUST be notified at any Level of Emergency that compromises worker safety and/or that involves a major release of a hazardous substance. Refer to the **Government Roles & Responsibilities** section for the regulatory excerpt.*

Assigned to: **Incident Commander**

- References:
- Incident Commander Response
 - First Response Form
 - Contact Information
 - Resident Information
 - Maps
 - Forms
 - Communications Guidelines
 - Government Roles & Responsibilities

INCIDENT COMMANDER RESPONSE

Step 9. STAFF/VENDOR AND MEDIA NOTIFICATION

Consult with the B.C. Oil & Gas Commission and issue a press release. Notify all affected personnel and vendors. Media releases must be provided when any significant development occurs. In addition the company will establish a schedule for regular updates to the media and other internal and external contacts. Media releases will be coordinated with BCOGC to ensure consistency and accuracy of information.

Assigned to: **Corporate Media Representative**

References: ➤ Communication Guidelines

SITE RESPONSE - PRODUCTION FACILITY

First Response

Emergency Response Plan

FIRST RESPONSE TO AN EMERGENCY

Assigned to: **On-Scene Personnel**

If called – capture critical information from caller: name, location, telephone number and description of situation, Use First Response Form (Page 5)

Move to location as quickly as possible. Once on-scene - ensure safety of personnel and public. Activate alarm. Evacuate site to mustering area. Unnecessary personnel should be accounted for and asked to leave the site immediately.

A. YOU ARE THE INTERIM ON-SCENE COMMANDER UNTIL OTHERWISE NOTIFIED BY THE INCIDENT COMMANDER

Responsible to:

- Be available for contact at all times
- Coordinate and control all site activities
- Communicate with Incident Commander, field personnel, emergency and support services
- Identify / assess the hazard. Understand the nature and level of complexity of incident and apply appropriate logic to situation
- Keep onsite personnel updated

B. CATEGORIZE THE EVENT ACCORDING TO LEVEL OF SEVERITY

- LEVEL 1** No immediate danger to public or environment as no H₂S has been released. Hazard is confined to the lease or company property. Creates little or no media interest. There is low potential for emergency to escalate. Can be managed by company personnel. No immediate threat to personnel.
- LEVEL 2** Potential risk to public, personnel and environment, as the emergency could extend beyond company property. Control of hazard is still possible. Creates local or regional media interest. May require involvement of external emergency services, federal, provincial, or local agencies.
- LEVEL 3** Immediate danger to the public, personnel and environment, as the emergency extends beyond company property. Control of the situation has been lost. Creates provincial or national media interest. There is total loss of control of the hazard. Extensive involvement by external emergency services federal and/or provincial agencies is required.

C. BEGIN AN INCIDENT LOG - FORMS

SITE RESPONSE - PRODUCTION FACILITY

First Response

Emergency Response Plan

D. NOTIFY INCIDENT COMMANDER OF THE SITUATION

Refer to Site **Contact Information** section, **Incident Commander Contact List**.

The Incident Commander will be the first individual contacted from the **Contact Information** and has the responsibility to provide overall coordination and direction. The Incident Commander will contact the Provincial Emergency Program and will require information from the **Initial Information Form** in the **Forms** section.

In the event that an Incident Commander is not readily available, designation of an On-Scene Commander is either the first person on-scene or local senior company representative. The On-Scene Commander will assume the Incident Commander's responsibilities until the Incident Commander has been contacted.

Assigned to: **On-Scene Commander/Operating Personnel**

References: ➤ Contact Information

E. ESTABLISH AN ON-SITE COMMAND POST

In conjunction with the Incident Commander establish an On-Site Command Post a safe distance from the emergency scene that is equipped for communication with Incident Commander, field personnel, emergency and support services. Notify all parties of this number and location. The Incident Commander will assign an On-Scene Commander to coordinate site activities.

The situation may require the implementation of a Corporate Regional Emergency Operations Centre in a suitable location off-site, near the emergency, to manage the larger scale aspects of the emergency response. All personnel will move to this location except those directly involved with containment.

An Off-site Regional Emergency Operations Centre may be established under authority control. The Corporate Regional Emergency Operations Centre will be considered a primary location for housing the Off-site Regional Emergency Operations Centre. Prepare the site with consideration for this possibility.

On-Scene Commander is: _____ Phone: _____

On-Scene Commander Responsibilities:

- Contact available at all times
- Coordinate and control all site activities
- Communication with Incident Commander, field personnel, emergency and support services
- Identify / assess the hazard. Understand the nature and level of complexity of incident and apply appropriate logic to situation
- Keep onsite personnel updated

SITE RESPONSE - PRODUCTION FACILITY

First Response

Emergency Response Plan

Assigned to: **On-scene Commander/Incident Commander**

References: ➤ Response Centres
- On-Site Command Post Information
- Corporate Regional Emergency Operations Centre Information
- Regional Emergency Operations Centre Information

F. VERIFY STATUS OF ONSITE PERSONNEL/CONTRACTORS

Account for all personnel, landowners and residents that may have access to the site.

Assigned to: **On-scene Commander**

References: ➤ Contact Information
➤ Resident Information
➤ Maps

G. GO TO THE FOLLOWING TABBED SECTION(S) THAT BEST DESCRIBES THE EMERGENCY SITUATION AND CONTINUE RESPONSE STEPS

Gas Release
Fire / Explosion
Spills
Injury / Fatality

SITE RESPONSE - PRODUCTION FACILITY

EVENT MANAGEMENT

When managing an emergency, the following should be considered for all types of emergencies.

Perimeters and Site Control

Access to the hazard area should be limited to essential services only. The isolation perimeters will vary on the type and location of the event. Refer to isolation steps (identified below) and the Evacuation Procedures section of this document for isolation strategies.

- Step 1 of Initial Response - all emergency types
- Step 3 of Level 1 Response - all emergency types
- Step 3 of Level 2 Response - all emergency types
- Step 4 of Level 2 Response - all emergency types
- Step 6 of Level 2 Response - all emergency types
- Step 3 of Level 3 Response - all emergency types
- Step 4 of Level 3 Response - all emergency types
- Step 6 of Level 3 Response - all emergency types

Tracking Responders

Communication with all responders must be maintained throughout the emergency. The On-Scene Commander will establish a staging area (usually his location), notify responders and review strategies for maintaining communication. Track the assignment and location of all responders. Refer to the Response Team section for communication strategies.

Monitoring

Monitoring is key to protecting the public and the environment. Refer to monitoring steps (identified below) for monitoring criteria and strategies.

- Step 3 of Level 1 Gas Release Response
- Step 3 of Level 2 Gas Release Response
- Step 3 of Level 3 Gas Release Response

Emergency Medical Care

Well being of personnel and public is of the utmost importance. Refer to the Injury/Fatality section for procedures to deal with an injury/fatality and Contact Information for local emergency services contacts.

Rescue Plan

In the event that personnel are unable to evacuate safely (i.e. vehicles are inaccessible from mustering location), contact should be made to the On-Scene Commander (if not at site) or the Incident Commander who will make arrangements for safe evacuation of personnel. In a man down situation, apply appropriate logic. All gas releases will be considered Hazardous until proven otherwise. Personnel entering the hazard area will wear personal protective equipment. Ensure SCBA is on site. Use Gas Detectors to determine areas that are unsafe without the use of breathing apparatus.

Decontamination

Provisions may be required for partial or full decontamination. Refer to Contact Information 'Decontamination Units' for a list of suppliers.

SITE RESPONSE - PRODUCTION FACILITY

First Response

Emergency Response Plan

Rest and Rehabilitation

Some incidents may not be brought under control in short duration. It may be necessary to make accommodation arrangements for responders so that they can rest and recuperate. Length of shifts will be approximated based on existing company policy (recommended maximum shift length is 8 hours). Adverse conditions such as inclement weather may require consideration and modification to recommended shift length. The Resource Coordinator (Response Teams Page 4) will be responsible for making arrangements for accommodation, food and refreshments.

Security

During and immediately following any incident security at the site and surrounding area may be required. Consider contacting local RCMP.

SITE RESPONSE - PRODUCTION FACILITY

First Response Form

Emergency Response Plan

CALLER INFORMATION

NAME:	DATE/TIME:
PHONE:	LOCATION:

EMERGENCY EVALUATION

CATEGORY:	LEVEL 1	LEVEL 2	LEVEL 3
EMERGENCY DESCRIPTION:			
ON-SCENE COMMANDER:			PHONE:
INJURIES:			
EVACUATION / SHELTER NEEDED:	IMMEDIATE AREA ONLY	TOTAL	
EVACUATION CHIEF:	NAME:	PHONE:	
NOTIFICATION CHECKLIST	BCOGC/PEP POLICE FIRE AMBULANCE LOCAL AUTHORITY HEALTH AUTHORITY OTHER: _____		
ROAD BLOCKS REQUIRED/ ESTABLISHED	ASSIGNMENTS:		

GENERAL INFORMATION

EQUIPMENT	SUBSTANCE	PROBLEM

CONTACTS MADE BY CALLER

CONTACT	PHONE	CONTACT	PHONE

**INFORM THE CALLER OF ANY IMMEDIATE DANGER TO HIMSELF OR OTHERS
INSTRUCT THE CALLER IN IMMEDIATE PRECAUTIONS TO BE TAKEN
ASSURE THE CALLER THAT IMMEDIATE ACTION WILL BE TAKEN**

SITE RESPONSE - PRODUCTION FACILITY

First Response Form

Emergency Response Plan

LOCATION INFORMATION

DESCRIPTION OF LAND:
PROXIMITY TO WATER:
PROXIMITY TO PUBLIC:
IMMEDIATE DANGER:

WEATHER CONDITIONS

WIND DIRECTION/SPEED:
ROAD CONDITIONS:
OTHER:

NOTES:

SITE RESPONSE - PRODUCTION FACILITY

GAS RELEASE

Note: **For the purpose of this plan we will consider all gas releases to be sour.** Immediate steps will be taken to prepare for ignition at the earliest signs of a gas release to ensure there will be no delay.

All gas releases will be considered Hazardous until proven otherwise. Personnel entering the hazard area will wear personal protective equipment. Ensure SCBA is on site. Use Gas Detectors to determine areas that are unsafe without the use of breathing apparatus. **A situation can start at LEVEL 1, 2 or 3.**

Step 1. INITIATE CONTAINMENT PROCEDURES THAT CAN BE SAFELY PERFORMED

If there is doubt the situation can be stabilized, shutdown of the operation should be considered.

Assigned to: **On-Scene Personnel**

Step 2. DETERMINE RESPONSE TEAM REQUIREMENTS

Review Response Team requirements, determine who should be contacted and assign duties. See **Response Team** section. Review **Evacuation Summary** in the **Site Overview** section for information.

Personnel designated as Response Team members are expected to record actions as required on **Forms** and will be required to submit all completed forms to the On-scene Commander immediately once the emergency is declared over.

Assigned to: **On-Scene Commander/Incident Commander**

References:

- Response Team
- Contact Information
- Emergency Equipment

If additional personnel are needed to form the Response Team, the use of external resources may be required. See **Support Services** section in **Contact Information**.

Continue with response actions in the following sections, based on the assessment of LEVEL of severity.

LEVEL 1 Response

LEVEL 2 Response

LEVEL 3 Response

SITE RESPONSE - PRODUCTION FACILITY

Gas Release Level 1

Emergency Response Plan

LEVEL 1 RESPONSE

- **No immediate danger to public or environment as no H₂S has been released**
- **Hazard is confined to the lease or company property**
- **Creates little or no media interest**
- **Low potential for emergency to escalate**
- **Managed by company personnel; no immediate threat to personnel**

Step 3. BEGIN AIR QUALITY MONITORING AND ISOLATE THE AREA

Air quality monitoring is required to track and record the presence and concentrations of H₂S and SO₂.

Personnel assigned as the Monitoring Crew, will monitor air quality initially focusing on the area of immediate priority, which is adjacent to and downwind of the release. Monitoring activities must be deployed to ensure continuous detection of the leading edge of the plume to define and react to the changing nature of the area affected by the emergency. Re-assessment of the level of emergency must be considered if the emergency expands beyond the lease boundaries or beyond the calculated EPZ.

Air quality monitoring must occur downwind and at right angles to the release, with priority being directed to the nearest unevacuated residence or areas where people may be present. Monitored H₂S and SO₂ information must be made available to the B.C. Oil & Gas Commission and the Ministry of Environment, as well as the public, on a regular basis throughout a sour gas emergency.

Air monitoring assists in determining if ignition criteria have been met and when the emergency can be downgraded.

Roadblock Crew will isolate company property and restrict traffic to essential services.

All Response Team personnel will use a portable monitoring device. Readings of 10 ppm H₂S will be used to determine changes to the perimeter of the area affected by the emergency. **Dispatch Mobile Air Monitoring service.** When mobile units are on site, confer with mobile unit operator as to best location to position unit, H₂S and SO₂ can be monitored to a level of 1 ppb.

Provide regular updates to the B.C. Oil & Gas Commission, British Columbia Environment and Local Authorities.

Assigned to: **On-Scene Commander/Monitoring Crew**

References:

- Response Team
- Contact Information
- Resident Information
- Emergency Equipment
- Maps
- Forms
 - Plume Tracking & Monitoring

Step 4. ALERT SENSITIVE RESIDENTS FOR VOLUNTARY EVACUATION

Personnel assigned as the Telephoners will notify residents within the EPZ with pre-determined sensitivities using a prepared evacuation message. Go to the **Evacuation Procedures** section for procedures, criteria and mandatory actions for all levels of evacuation.

Asking the resident to seek shelter by moving indoors, closing doors and windows, shutting off all air intake fans which exhaust outdoors, turning off furnace and hot water pilot lights, extinguishing fires in fireplaces and turning off any appliance that draws outside air, is an alternate means to evacuation. Residents should wait in an upstairs interior room and await further instructions. This is appropriate if the event will only last a few minutes or where personal safety may be compromised by evacuation.

Notify local authority emergency management and activate the Evacuation Centre.

If required expand Evacuation Area and notify residents and On-Scene Response Team.

Assigned to: **On-Scene Commander/Evacuation Crew**

- References:
- Response Team
 - Response Centres
 - Evacuation Centre Information
 - Resident Information
 - Maps
 - Forms
 - Evacuation Procedures
 - Communication Guidelines

Step 5. NOTIFY MANDATORY CONTACTS

Contact local authority emergency management, local police or RCMP and the health authority and inform them of the situation.

Assigned to: **On-scene Commander**

- References:
- Contact Information
 - Forms
 - Initial Information Form

Step 6. FOLLOW-UP WITH THE INCIDENT COMMANDER

Keep the Corporate Emergency Operations Centre informed of events, activities and further developments by reporting to the Incident Commander. Provide the status of containment efforts, public protection measures and results of air monitoring. Report on environmental impact and request environmental response if necessary.

Incident Commander or On-Scene Commander must provide and continue to provide the B.C. Oil & Gas Commission with situation reports.

Assigned to: **On-scene Commander**

References: ➤ Contact Information
 ➤ Completed Forms

Step 6. ASSESS THE SITUATION

If the situation poses no immediate risk to the public continue LEVEL 1 response actions as necessary.

If there is imminent risk to the public escalate to LEVEL 2 Response.

If there is definite risk to the public escalate to LEVEL 3 Response.

Provide a communication update to stakeholders and media release if required.

If containment has been achieved go to the **Demobilize and Debriefing** section.

LEVEL 2 RESPONSE

If escalating from a level 1, some steps listed below will be a continuation of those started at level 1. If starting at this level, actions are to be initiated as stated.

- **Potential risk to public, personnel and environment, as the emergency could extend beyond company property**
- **Control of hazard is still possible**
- **Creates local or regional media interest**
- **May require involvement of external emergency services, federal, provincial, or local agencies**

Step 3. BEGIN AIR QUALITY MONITORING

Air quality monitoring is required to track and record the presence and concentrations of H₂S and SO₂.

Personnel assigned as the Monitoring Crew, will monitor air quality initially focusing on the area of immediate priority, which is adjacent to and downwind of the release. Monitoring activities must be deployed to ensure continuous detection of the leading edge of the plume to define and react to the changing nature of the area affected by the emergency. Re-assessment of the level of emergency must be considered if the emergency expands beyond the lease boundaries or beyond the calculated EPZ.

Air quality monitoring must occur downwind and at right angles to the release, with priority being directed to the nearest unevacuated residence or areas where people may be present. Monitored H₂S and SO₂ information must be made available to the B.C. Oil & Gas Commission and the Ministry of Environment, as well as the public, on a regular basis throughout a sour gas emergency.

Air monitoring assists in determining if ignition criteria have been met and when the emergency can be downgraded.

All Response Team personnel will use a portable monitoring device. Readings of 10 ppm H₂S will be used to determine changes to the perimeter of the area affected by the emergency. **Dispatch Mobile Air Monitoring service.** When mobile units are on site, confer with mobile unit operator as to best location to position unit, H₂S and SO₂ can be monitored to a level of 1 ppb.

Provide regular updates to the B.C. Oil & Gas Commission, British Columbia Environment and Local Authorities.

Assigned to: **On-Scene Commander/Monitoring Crew**

- References:
- Response Team
 - Contact Information
 - Resident Information
 - Emergency Equipment
 - Maps
 - Forms
 - Plume Tracking & Monitoring

Step 4. ISOLATE THE EMERGENCY PLANNING ZONE (EPZ)

Determine the EPZ associated to the well, pipeline or facility affected by the incident (refer to the associated Release Tables). Establish a roadblock strategy based on isolating the determined EPZ with the use of maps of the area. Dispatch the Roadblock Crew to designated locations and secure the EPZ. RCMP or police services should not be expected to provide significant assistance.

Roadblocks on highways designated with one and two digits should be setup in consultation with provincial transportation department and RCMP. For highways designated with three digits, contact the Municipal Government or Regional District. Contact local authority emergency management and advise of situation.

It may be necessary to obtain a Closure Order, issued by the BC Oil & Gas Commission. The Municipal Government or Regional District may declare a Local State of Emergency. The regulating agency may also request that NAV Canada issue a Notice to Airmen (NOTAM) advising restrictions on the airspace above the Emergency Planning Zone.

Assigned to: **On-Scene Commander/Evacuation Crew**

- References:
- Response Teams
 - Site Overview
 - Contact Information
 - Resident Information
 - Emergency Equipment
 - Maps

Step 5. BEGIN EMERGENCY PLANNING ZONE EVACUATION OR SHELTERING ACTIONS

Personnel assigned as the Telephoners will telephone residents in the EPZ using a prepared evacuation message. Evacuation should begin with residents downwind and closest to the release.

Asking the resident to seek shelter by moving indoors, closing doors and windows, shutting off all air intake fans which exhaust outdoors, turning off furnace and hot water pilot lights, extinguishing fires in fireplaces and turning off any appliance that draws outside air, is an alternate means to evacuation. Residents should wait in an upstairs interior room and await further instructions. This is appropriate if the event will only last a few minutes or where personal safety may be compromised by evacuation. Go to the **Evacuation Procedures** section for detailed procedures, criteria and mandatory actions for evacuation and sheltering within the EPZ and beyond.

Notify local authority emergency management and activate the Evacuation Centre.

Assigned to: **On-Scene Commander/Evacuation Crew**

- References:
- Response Team
 - Response Centres
 - Evacuation Centre Information
 - Resident Information
 - Maps
 - Forms
 - Evacuation Procedures
 - Communication Guidelines

Step 6. EVACUATION VERIFICATION

Dispatch Rovers to visit residents not contacted by Telephoners, to verify evacuation of those contacted and begin area search for transients within the EPZ. Consider navigable waterways and potential for use of helicopter with loudspeaker in search efforts. Additional personnel may be required to support residents identified as requiring assistance.

Assigned to: **On Scene Commander/Rovers**

- References:
- Response Team
 - Evacuation Procedures

Step 7. ASSEMBLE IGNITION CREW

Personnel assigned as the Ignition Crew will make preparations to ignite the release if Ignition Criteria are met.

Assigned to: **On Scene Commander/Ignition Crew**

- References:
- Response Team
 - Emergency Equipment
 - Ignition Procedures

Step 8. NOTIFY MANDATORY CONTACTS

Contact local authority disaster services, local police or RCMP and health authority and inform them of the situation.

Assigned to: **On-scene Commander**

- References:
- Contact Information
 - Forms
 - Initial Information Form

Step 9. FOLLOW-UP WITH INCIDENT COMMANDER

Keep the Corporate Emergency Operations Centre informed of events, activities and further developments by reporting to the Incident Commander. Provide the status of containment efforts, evacuation activities and results of air monitoring. Report on environmental impact and request environmental response if necessary.

Incident Commander or On-Scene Commander must provide and continue to provide the B.C. Oil & Gas Commission with situation reports.

Assigned to: **On-scene Commander**

- References:
- Contact Information
 - Completed Forms

Step 10. ASSESS THE SITUATION

If conditions worsen upgrade the emergency to LEVEL 3 and perform required isolation and public safety activities.

When containment has been achieved, the situation improves and poses no risk to the public the Incident Commander, in consultation with the BCOGC and local and provincial disaster services authorities, can downgrade the emergency. Go to the **Demobilize and Debriefing** section.

All affected persons and the media must be kept informed of the status of the emergency.

LEVEL 3 RESPONSE

If escalating from a level 2, some steps listed below will be a continuation of those started at level 2. If starting at this level, actions are to be initiated as stated.

- **Immediate danger to the public, personnel and environment, as the emergency extends beyond company property**
- **There is total loss of control of the hazard**
- **Creates provincial or national media interest**
- **Extensive involvement by external emergency services federal and/or provincial agencies is required**

Step 3. BEGIN AIR QUALITY MONITORING

Air quality monitoring is required to track and record the presence and concentrations of H₂S and SO₂.

Personnel assigned as the Monitoring Crew, will monitor air quality initially focusing on the area of immediate priority, which is adjacent to and downwind of the release. Monitoring activities must be deployed to ensure continuous detection of the leading edge of the plume to define and react to the changing nature of the area affected by the emergency.

Air quality monitoring must occur downwind and at right angles to the release, with priority being directed to the nearest unevacuated residence or areas where people may be present. Monitored H₂S and SO₂ information must be made available to the B.C. Oil & Gas Commission and the Ministry of Environment, as well as the public, on a regular basis throughout a sour gas emergency.

Air monitoring assists in determining if ignition criteria have been met and when the emergency can be downgraded.

All Response Team personnel will use a portable monitoring device. Readings of 10 ppm H₂S will be used to determine changes to the perimeter of the area affected by the emergency. **Dispatch Mobile Air Monitoring service.** When mobile units are on site, confer with mobile unit operator as to best location to position unit, H₂S and SO₂ can be monitored to a level of 1 ppb.

Provide regular updates to the B.C. Oil & Gas Commission, British Columbia Environment and Local Authorities.

Assigned to: **On-Scene Commander/Monitoring Crew**

- References:
- Response Team
 - Contact Information
 - Resident Information
 - Emergency Equipment
 - Maps
 - Forms
 - Plume Tracking & Monitoring

Step 4. ISOLATE THE EMERGENCY PLANNING ZONE (EPZ)

Determine the EPZ associated to the well, pipeline or facility affected by the incident (refer to the associated Release Tables). Establish a roadblock strategy based on isolating the determined EPZ with the use of maps of the area. Dispatch the Roadblock Crew to designated locations and secure the EPZ. RCMP or police services should not be expected to provide significant assistance.

Roadblocks on highways designated with one and two digits should be setup in consultation with provincial transportation department and RCMP. For highways designated with three digits, contact the Municipal Government or Regional District. Contact local authority emergency management and advise of situation.

It may be necessary to obtain a Closure Order, issued by the BCOGC. The Municipal Government or Regional District may declare a Local State of Emergency. The regulating agency may also request that NAV Canada issue a Notice to Airmen (NOTAM) advising restrictions on the airspace above the Emergency Planning Zone.

Assigned to: **On-Scene Commander/Evacuation Crew**

- References:
- Response Teams
 - Site Overview
 - Contact Information
 - Resident Information
 - Emergency Equipment
 - Maps

Step 5. COMPLETE EMERGENCY PLANNING ZONE EVACUATION OR SHELTERING ACTIONS

Personnel assigned as the Telephoners will telephone residents in the EPZ using a prepared evacuation message. Evacuation should begin with residents downwind and closest to the release.

Asking the resident to seek shelter by moving indoors, closing doors and windows, shutting off all air intake fans which exhaust outdoors, turning off furnace and hot water pilot lights, extinguishing fires in fireplaces and turning off any appliance that draws outside air, is an alternate means to evacuation. Residents should wait in an upstairs interior room and await further instructions. This is appropriate if the event will only last a few minutes or where personal safety may be compromised by evacuation. Go to the **Evacuation Procedures** section for detailed procedures, criteria and mandatory actions for evacuation and sheltering within the EPZ and beyond.

Notify local authority emergency management and activate the Evacuation Centre.

Assigned to: **On-Scene Commander/Evacuation Crew**

- References:
- Response Team
 - Response Centres
 - Evacuation Centre Information
 - Resident Information
 - Maps
 - Forms
 - Evacuation Procedures
 - Communication Guidelines

Step 6. EVACUATION VERIFICATION

Dispatch Rovers to visit residents not contacted by Telephoners, to verify evacuation of those contacted and begin area search for transients within the EPZ. Consider navigable waterways and potential use of helicopter with loudspeaker in search efforts. Additional personnel may be required to support residents identified as requiring assistance.

Assigned to: **On Scene Commander/Rovers**

- References:
- Response Team
 - Evacuation Procedures

SITE RESPONSE - PRODUCTION FACILITY

Gas Release Level 3

Emergency Response Plan

Step 7. IGNITE SOUR GAS RELEASE

The release must be ignited as soon as all personnel working at the site have cleared to a safe distance under any of the following conditions:

1. There is uncontrolled flow to the atmosphere, effluent has reached the surface, no immediate chance of control and the flow, if not ignited, could lead to loss of life.
2. There is a release of sour gas and safety of residents cannot be assured because:
 - **Evacuation of residents within the emergency response planning zone cannot be accomplished; or**
 - **Monitoring results indicate H₂S levels of 15 ppm for 15-minutes in unevacuated areas, or**
 - **Monitoring is not taking place due to some unforeseen circumstances, such as bad weather or communication breakdown.**
3. For special sour wells, as determined by BCOGC, immediate ignition of a well may be required.

The Monitoring Crew and Air Monitoring service will begin monitoring for SO₂. Beyond the EPZ, public safety activities, isolation and evacuation must occur if sulphur dioxide reaches 5 ppm (15 minute average) or 0.34 ppm (1 hour average) or 0.13 ppm (24 hour average).

Assigned to: **On Scene Commander/Ignition Crew/Monitoring Crew**

References: ➤ Ignition Procedures

Step 8. NOTIFY MANDATORY CONTACTS

Contact local authority disaster services, local police or RCMP and health authority and inform them of the situation. Refer to the **Contact Information** section for telephone numbers.

Assigned to: **On-scene Commander**

References: ➤ Contact Information
➤ Forms
- Initial Information Form

Step 9. FOLLOW-UP WITH INCIDENT COMMANDER

Keep our Corporate Emergency Operations Centre informed of events, activities and further developments by reporting to the Incident Commander. Provide the status of containment efforts, evacuation activities and results of air monitoring. Report on environmental impact and request environmental response if necessary.

Incident Commander or On-Scene Commander must provide and continue to provide the B.C. Oil & Gas Commission with situation reports.

Assigned to: **On-scene Commander**

References: ➤ Contact Information
 ➤ Completed Forms

Step 10 ASSESS THE SITUATION

If conditions worsen continue LEVEL 3 isolation and public safety activities to coincide with the changing area affected by the emergency.

When containment has been achieved, the situation improves and poses no risk to the public the Incident Commander, in consultation with the BCOGC and local and provincial disaster services authorities, can downgrade the emergency. Go to the **Demobilize and Debriefing** section.

All affected persons and the media must be kept informed of the status of the emergency.

FIRE / EXPLOSION

Step 1. INITIATE CONTAINMENT PROCEDURES THAT CAN BE SAFELY PERFORMED

Note: Do not attempt to fight a fire unless you have been trained, personal protective equipment is available and the suppression equipment is appropriate for use. Contact the local fire department for assistance.

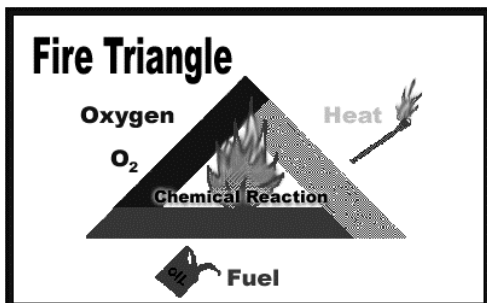
- **Class A fires** - are fires involving organic solids like paper, wood, etc.
- **Class B fires** - are fires involving flammable liquids.
- **Class C fires** - are fires involving flammable gasses.
- **Class D fires** - are fires involving metals.
- **Class F fires** - are fires involving cooking oils.

If there is doubt as to whether the situation can be stabilized, isolate the fire and allow it to burn out. Shutdown of the operation should also be considered. An explosion or extinguishing a fire may result in a **gas release**. Perform steps in that emergency category if required.

Essential service personnel entering the area affected by the emergency must be made aware of any toxic or hazardous materials that may be involved in the incident. Refer to onsite WHMIS and MSDS information.

If H₂S is known or suspected employ SCBA and gas detectors. If fire is involved take precautions and monitor for SO₂.

Fire Control



REMOVE THE FUEL - isolate the section of equipment, pump out, or depressurize, **or**
REMOVE THE OXYGEN - use steam, chemicals, foam, dry powder, CO₂, smother small fires, **or**
COOL THE TEMPERATURE OF THE FUEL - use water as a fog to cool equipment, tanks, and structures. The molecular chain reaction must be disrupted to extinguish a fire.

Fires in gas or NGL lines must be controlled by closing valves at the source and cooling with water until the fire burns out. **Do not extinguish if fuel is available and ignition is possible.** Vapors from liquefied gases are heavier than air and spread along the ground. Vapors may travel considerable distance to a source of ignition and flash back.

If cutting off the fuel is impractical, the fire may be extinguished with these precautions:

SITE RESPONSE - PRODUCTION FACILITY

Fire / Explosion – Initial Response

Emergency Response Plan

- Shut off power (440 volt or greater) to nearby equipment
- Shut off fuel to heaters near to or downwind of fire
- Dissipate static charges by holding metal structure for 10 seconds
- Take steps to eliminate any other re-ignition sources in surrounding area

Fire Involving Pressure Vessels and/or LPG Containers

A fire involving a vessel can result in a Boiling Liquid Expanding Vapor Explosion (BLEVE). It is the result of liquid within a container reaching extreme temperature and the resulting pressure causing the vessel to rupture. The potential for a BLEVE should be considered any time there is flame encroaching on the vapor space of a vessel. Do not assume that because the relief vents are operating a BLEVE will not occur. In a BLEVE sections can be thrown in all directions, there is no safe side or end to approach.

The most effective way to reduce the potential of a BLEVE is to cool the tank by applying large quantities of water. If safe application of large amounts of water for an extended time period is not possible consider evacuation of personnel.

Initial evacuation radius set at 800 metres in all directions if a tank or tank truck is involved in a fire.

- Move containing vessels from fire area if there is no risk
- Fight fire from maximum distance or use unmanned hose holders
- Do not direct water at source of leak or venting safety devices as icing may occur
- Withdraw immediately if rising sound from venting devices or any tank discoloration

Assigned to: **On-Scene Personnel**

SITE RESPONSE - PRODUCTION FACILITY

Step 2. DETERMINE RESPONSE TEAM REQUIREMENTS

Review Response Team requirements, determine who should be contacted and assign duties. See **Response Team** section. Review **Evacuation Summary** in the **Site Overview** section for information.

Personnel designated as Response Team members are expected to record actions as required on **Forms** and will be required to submit all completed forms to the On-scene Commander immediately once the emergency is declared over.

Assigned to: **On-Scene Commander/Incident Commander**

References: ➤ Response Team
 ➤ Contact Information
 ➤ Emergency Equipment

If additional personnel are needed to form the Response Team, the use of external resources may be required. See **Support Services** section in **Contact Information**.

Continue with response actions in the following sections, based on the assessment of LEVEL of severity.

LEVEL 1 Response

LEVEL 2 Response

LEVEL 3 Response

LEVEL 1 RESPONSE

- **No immediate danger to public or environment as no H₂S has been released**
- **Hazard is confined to the lease or company property**
- **Creates little or no media interest**
- **There is low potential for emergency to escalate**
- **Can be managed by company personnel; no immediate threat to personnel**

Ensure that adequate municipal and/or industrial fire suppression equipment and personnel are available to extinguish the fire or protect adjacent people and assets.

Step 3. MONITOR AND ISOLATE THE AREA

Air quality monitoring is required to track and record the presence and concentrations of poisonous gas or other harmful vapours – monitor situation as required.

Personnel assigned as the Monitoring Crew, will monitor air quality initially focusing on the area of immediate priority, which is adjacent to and downwind of the release. Monitoring activities must be deployed to ensure continuous detection of the leading edge of the plume to define and react to the changing nature of the area affected by the emergency. Re-assessment of the level of emergency must be considered if the emergency expands beyond the lease boundaries or beyond the calculated EPZ.

Air quality monitoring must occur downwind and at right angles to the release, with priority being directed to the nearest unevacuated residence or areas where people may be present. Monitored H₂S and SO₂ information must be made available to the B.C. Oil & Gas Commission and the Ministry of Environment, as well as the public, on a regular basis throughout a sour gas emergency.

Roadblock Crew will isolate the emergency and restrict traffic to essential services.

All Response Team personnel will use a portable monitoring device. Readings of 10 ppm H₂S will be used to determine perimeter changes to the area affected by the emergency. In a fire situation, SO₂ could be present. Evacuation and isolation of the area must occur if sulphur dioxide reaches specified levels.

Place air-monitoring service on standby if there is potential for sour gas release.

Assigned to: **On-Scene Commander/Monitoring Crew/Evacuation Crew**

- References:
- Site Overview
 - Contact Information
 - Resident Information
 - Emergency Equipment
 - Maps
 - Forms
 - Plume Tracking & Monitoring

Step 4. ALERT SENSITIVE RESIDENTS FOR VOLUNTARY EVACUATION

Personnel assigned as the Telephoners will notify residents within the EPZ with pre-determined sensitivities using a prepared evacuation message. Go to the **Evacuation Procedures** section for procedures, criteria and mandatory actions for all levels of evacuation.

Asking the resident to seek shelter by moving indoors, closing doors and windows, shutting off all air intake fans which exhaust outdoors, turning off furnace and hot water pilot lights, extinguishing fires in fireplaces and turning off any appliance that draws outside air, is an alternate means to evacuation. Residents should wait in an upstairs interior room and await further instructions. This is appropriate if the event will only last a few minutes or where personal safety may be compromised by evacuation.

Notify local authority emergency management and activate the Evacuation Centre.

Assigned to: **On-Scene Commander/Evacuation Crew**

- References:
- Response Team
 - Response Centres
 - Evacuation Centre Information
 - Resident Information
 - Maps
 - Forms
 - Evacuation Procedures
 - Communication Guidelines

Step 5. NOTIFY MANDATORY CONTACTS

Contact local authority emergency management, local police or RCMP and the health authority and inform them of the situation.

Assigned to: **On-scene Commander**

- References:
- Contact Information
 - Forms
 - Initial Information Form

Step 6. FOLLOW-UP WITH INCIDENT COMMANDER

Keep the Corporate Emergency Operations Centre informed of events, activities and further developments by reporting to the Incident Commander. Provide the status of containment efforts, public protection measures and results of air monitoring. Report on environmental impact and request environmental response if necessary.

Incident Commander or On-Scene Commander must provide and continue to provide the B.C. Oil & Gas Commission with situation reports.

Assigned to: **On-scene Commander**

References: ➤ Contact Information
 ➤ Completed Forms

Step 7. ASSESS THE SITUATION

If the situation poses no immediate risk to the public continue LEVEL 1 response actions as necessary.

If there is imminent risk to the public escalate to LEVEL 2 Response.

If there is definite risk to the public escalate to LEVEL 3 Response.

Provide a communication update to stakeholders and media release if required.

If containment has been achieved go to the **Demobilize and Debriefing** section.

LEVEL 2 RESPONSE

If escalating from a level 1, some steps listed below will be a continuation of those started at level 1. If starting at this level, actions are to be initiated as stated.

- **Potential risk to public, personnel and environment, as the emergency could extend beyond company property**
- **Control of hazard is still possible**
- **Creates local or regional media interest**
- **May require involvement of external emergency services, federal, provincial, or local agencies**

Ensure that adequate municipal and/or industrial fire suppression equipment and personnel are available to extinguish the fire or protect adjacent people and assets.

Step 3. BEGIN AIR QUALITY MONITORING

Air quality monitoring is required to track and record the presence and concentrations of poisonous gas or other harmful vapours – monitor situation as required.

Personnel assigned as the Monitoring Crew, will monitor air quality initially focusing on the area of immediate priority, which is adjacent to and downwind of the release. Monitoring activities must be deployed to ensure continuous detection of the leading edge of the plume to define and react to the changing nature of the area affected by the emergency. Re-assessment of the level of emergency must be considered if the emergency expands beyond the lease boundaries or beyond the calculated EPZ.

Air quality monitoring must occur downwind and at right angles to the release, with priority being directed to the nearest unevacuated residence or areas where people may be present. Monitored H₂S and SO₂ information must be made available to the B.C. Oil & Gas Commission and the Ministry of Environment, as well as the public, on a regular basis throughout a sour gas emergency.

All Response Team personnel will use a portable monitoring device. Readings of 10 ppm H₂S will be used to determine changes to the perimeter of the area affected by the emergency. In a fire situation, SO₂ could be present. **Move roadblocks if necessary. Dispatch Mobile Air Monitoring service.** When mobile units are on site, confer with mobile unit operator as to best location to position unit, H₂S and SO₂ can be monitored to a level of 1 part per billion (ppb).

If dealing with other hazardous gases or vapours, set up air monitoring using appropriate methods. All Response Team personnel will use a portable monitoring device.

Provide regular updates to the B.C. Oil & Gas Commission, British Columbia Environment and Local Authorities.

Assigned to: **On-Scene Commander/Monitoring Crew**

References:

- Response Team
- Contact Information
- Resident Information
- Maps
- Emergency Equipment
- Forms
 - Plume Tracking & Monitoring

Step 4. ISOLATE THE AREA AFFECTED BY THE EMERGENCY

Establish a roadblock strategy based on isolating the emergency with the use of maps of the area. Dispatch the Roadblock Crew during the evacuation and continually adjust roadblocks to the perimeter of the known evacuated area until the EPZ is secured. Ensure locations of roadblocks prevent evacuating residents from entering the secured area during egress. RCMP or police services should not be expected to provide significant assistance.

Roadblocks on highways designated with one and two digits should be setup in consultation with provincial transportation department and RCMP. For highways designated with three digits, contact the Municipal Government or Regional District. Contact local authority emergency management and advise of situation.

It may be necessary to obtain a Closure Order, issued by the BC Oil & Gas Commission. The Municipal Government or Regional District may declare a Local State of Emergency. The regulating agency may also request that NAV Canada issue a Notice to Airmen (NOTAM) advising restrictions on the airspace above the Emergency Planning Zone.

Assigned to: **On-Scene Commander/Evacuation Crew**

- References:
- Levels of Emergency
 - Response Team
 - Site Overview
 - Contact Information
 - Resident Information
 - Emergency Equipment
 - Maps

Step 5. BEGIN EMERGENCY PLANNING ZONE EVACUATION OR SHELTERING ACTIONS

Personnel assigned as the Telephoners will telephone residents in the EPZ using a prepared evacuation message. Evacuation should begin with residents downwind and closest to the release.

Asking the resident to seek shelter by moving indoors, closing doors and windows, shutting off all air intake fans which exhaust outdoors, turning off furnace and hot water pilot lights, extinguishing fires in fireplaces and turning off any appliance that draws outside air, is an alternate means to evacuation. Residents should wait in an upstairs interior room and await further instructions. This is appropriate if the event will only last a few minutes or where personal safety may be compromised by evacuation. Go to the **Evacuation Procedures** section for detailed procedures, criteria and mandatory actions for evacuation and sheltering within the EPZ and beyond.

Notify local authority emergency management and activate the Evacuation Centre.

Assigned to: **On-Scene Commander/Evacuation Crew**

- References:
- Response Team
 - Response Centres
 - Evacuation Centre Information
 - Resident Information
 - Maps
 - Forms
 - Evacuation Procedures
 - Communication Guidelines

Step 6. EVACUATION VERIFICATION

Dispatch Rovers to visit residents not contacted by Telephoners, to verify evacuation of those contacted and begin area search for transients within the EPZ. Consider navigable waterways and potential use of helicopter with loudspeaker in search efforts. Additional personnel may be required to support residents identified as requiring assistance.

Assigned to: **On Scene Commander/Rovers**

- References:
- Response Team
 - Evacuation Procedures

Step 7. NOTIFY MANDATORY CONTACTS

Contact local authority disaster services, local police or RCMP and health authority and inform them of the situation.

Assigned to: **On-scene Commander**

- References:
- Contact Information
 - Forms
 - Initial Information Form

Step 8. FOLLOW-UP WITH INCIDENT COMMANDER

Keep the Corporate Emergency Operations Centre informed of events, activities and further developments by reporting to the Incident Commander. Provide the status of containment efforts, public protection measures and results of air monitoring. Report on environmental impact and request environmental response if necessary.

Incident Commander or On-Scene Commander must provide and continue to provide the B.C. Oil & Gas Commission with situation reports.

Assigned to: **On-scene Commander**

References: ➤ Contact Information
 ➤ Completed Forms

Step 9. ASSESS THE SITUATION

If conditions worsen upgrade the emergency to LEVEL 3 and perform required isolation and public safety activities.

If conditions improve, control is gained and risk to the public is reduced, the Incident Commander, in consultation with the BCOGC and other stakeholders, will begin to collapse the isolated area. If started, ensure air monitoring continues within the reduced isolated area until the Incident Commander provides an all clear.

Provide a communication update to stakeholders and media release if required.

When containment has been achieved and all stakeholders agree that the situation poses no risk to the public the Incident Commander, in consultation with the BCOGC and other stakeholders, can downgrade the emergency. Go to the **Demobilize and Debriefing** section.

LEVEL 3 RESPONSE

If escalating from a level 2, some steps listed below will be a continuation of those started at level 2. If starting at this level, actions are to be initiated as stated.

- Immediate danger to the public, personnel and environment, as the emergency extends beyond company property
- There is total loss of control of the hazard
- Creates provincial or national media interest
- Extensive involvement by external emergency services federal and/or provincial agencies is required

Ensure that adequate municipal and/or industrial fire suppression equipment and personnel are available to extinguish the fire or protect adjacent people and assets.

Step 3. BEGIN AIR QUALITY MONITORING

Air quality monitoring is required to track and record the presence and concentrations of poisonous gas or other harmful exhaust vapours – monitor situation as required.

Personnel assigned as the Monitoring Crew, will monitor air quality initially focusing on the area of immediate priority, which is adjacent to and downwind of the release. Monitoring activities must be deployed to ensure continuous detection of the leading edge of the plume to define and react to the changing nature of the area affected by the emergency.

Air quality monitoring must occur downwind and at right angles to the release, with priority being directed to the nearest unevacuated residence or areas where people may be present. Monitored H₂S and SO₂ information must be made available to the B.C. Oil & Gas Commission and the Ministry of Environment, as well as the public, on a regular basis throughout a sour gas emergency.

All Response Team personnel will use personal portable monitoring devices. Readings of 10 ppm H₂S will be used to determine changes to the perimeter of the area affected by the emergency. In a fire situation, SO₂ could be present. **Move roadblocks if necessary. Dispatch Mobile Air Monitoring service.** When mobile units are on site, confer with mobile unit operator as to best location to position unit, H₂S and SO₂ can be monitored to a level of 1 part per billion (ppb).

If dealing with other hazardous gases or vapours, set up air monitoring using appropriate methods.

Provide regular updates to the B.C. Oil & Gas Commission, British Columbia Environment and Local Authorities.

Assigned to: **On-Scene Commander/Monitoring Crew**

- References:
- Response Team
 - Contact Information
 - Resident Information
 - Emergency Equipment
 - Maps
 - Forms
 - Plume Tracking & Monitoring

Step 4. ISOLATE THE AREA AFFECTED BY THE EMERGENCY

Establish a roadblock strategy based on isolating the emergency with the use of maps of the area. Dispatch the Roadblock Crew during the evacuation and continually adjust roadblocks to the perimeter of the known evacuated area until the EPZ is secured. Ensure locations of roadblocks prevent evacuating residents from entering the secured area during egress. RCMP or police services should not be expected to provide significant assistance.

Roadblocks on highways designated with one and two digits should be setup in consultation with provincial transportation department and RCMP. For highways designated with three digits, contact the Municipal Government or Regional District. Contact local authority emergency management and advise of situation.

It may be necessary to obtain a Closure Order, issued by the BC Oil & Gas Commission. The Municipal Government or Regional District may declare a Local State of Emergency. The regulating agency may also request that NAV Canada issue a Notice to Airmen (NOTAM) advising restrictions on the airspace above the Emergency Planning Zone.

Assigned to: **On-Scene Commander/Evacuation Crew**

- References:
- Response Teams
 - Site Overview
 - Contact Information
 - Resident Information
 - Emergency Equipment
 - Maps

Step 5. COMPLETE EMERGENCY PLANNING ZONE EVACUATION OR SHELTERING ACTIONS

Personnel assigned as the Telephoners will telephone residents in the EPZ using a prepared evacuation message. Evacuation should begin with residents downwind and closest to the release.

Asking the resident to seek shelter by moving indoors, closing doors and windows, shutting off all air intake fans which exhaust outdoors, turning off furnace and hot water pilot lights, extinguishing fires in fireplaces and turning off any appliance that draws outside air, is an alternate means to evacuation. Residents should wait in an upstairs interior room and await further instructions. This is appropriate if the event will only last a few minutes or where personal safety may be compromised by evacuation. Go to the **Evacuation Procedures** section for detailed procedures, criteria and mandatory actions for evacuation and sheltering within the EPZ and beyond.

Notify local authority emergency management and activate the Evacuation Centre.

Assigned to: **On-Scene Commander/Evacuation Crew**

- References:
- Response Team
 - Response Centres
 - Evacuation Centre Information
 - Resident Information
 - Maps
 - Forms
 - Evacuation Procedures
 - Communication Guidelines

Step 6. EVACUATION VERIFICATION

Dispatch Rovers to visit residents not contacted by Telephoners, to verify evacuation of those contacted and begin area search for transients within the EPZ. Consider navigable waterways and potential use of helicopter with loudspeaker in search efforts. Additional personnel may be required to support residents identified as requiring assistance.

Assigned to: **On Scene Commander/Rovers**

- References:
- Response Team
 - Evacuation Procedures

Step 7. NOTIFY MANDATORY CONTACTS

Contact local authority disaster services, local police or RCMP and health authority and inform them of the situation.

Assigned to: **On-scene Commander**

- References:
- Contact Information
 - Forms
 - Initial Information Form

Step 8. FOLLOW-UP WITH INCIDENT COMMANDER

Keep the Corporate Emergency Operations Centre informed of events, activities and further developments by reporting to the Incident Commander. Provide the status of containment efforts, public protection measures and results of air monitoring. Report on environmental impact and request environmental response if necessary.

Incident Commander or On-Scene Commander must provide and continue to provide the B.C. Oil & Gas Commission with situation reports.

Assigned to: **On-scene Commander**

References: ➤ Contact Information
 ➤ Completed Forms

Step 9 ASSESS THE SITUATION

If conditions worsen continue LEVEL 3 isolation and public safety activities to coincide with the changing area affected by the emergency.

If conditions improve, control is gained and risk to the public is reduced, the Incident Commander, in consultation with the BCOGC and other stakeholders, will begin to collapse the isolated area. If started, ensure air monitoring continues within the reduced isolated area until the Incident Commander provides an all clear.

Provide a communication update to stakeholders and media release if required.

When containment has been achieved and all stakeholders agree that the situation poses no risk to the public the Incident Commander, in consultation with the BCOGC and other stakeholders, can downgrade the emergency. Go to the **Demobilize and Debriefing** section.

SPILLS

Step 1. INITIATE CONTAINMENT PROCEDURES THAT CAN BE SAFELY PERFORMED

Shutdown site activities if necessary. Confirm substance, location, estimated volume and potential for additional release. Determine toxicity, harmful vapors and reactive properties. Review WHMIS MSDS information regarding Personal Protective Equipment and/or handling instructions for spilled material.

Using required safety equipment initiate measures to shut in spill source and contain.

In general:

- ELIMINATE all ignition sources
- Do not touch or walk through the spilled material
- Stop leak and/or prevent further spread if possible without risk
- Isolate area until gas has been dispersed
- Liquid spill will probably be indicated by visible cloud, isolate these areas
- Fog streams may be used to control vapor clouds, but water on liquid pool may accelerate vapor production

Protection of life, environmentally sensitive areas, watercourses and recreational areas must be the first priority.

Contact Area Oil Spill Cooperative or invoke our Spill Contingency Plan for this location.

Contact and report to Environment Canada if the product affected comes under the volumes and guidelines as per Part 8 of the Environmental Protection Act, 1999 – Environmental Emergency Plans.

Canadian Environmental Protection Act 1999 – Verbal and Written Report Requirements

For the purposes of section 9 of the Environmental Emergency Regulations:

A verbal notification is to be made by telephone as soon as possible in the circumstances to the authorities named in column 2 of Schedule 6 of the Environmental Emergency Regulations. The verbal report should include as much of the following information as is known at the time of the report.

- the reporting person's name and phone number where the reporter can be immediately contacted
- the name of the person who owns or has the charge, management or control of the substance immediately before the environmental emergency
- the date and time of the release
- the location of the release
- the name/UN number of the substance released
- the estimated quantity of the substance released
- the means of containment (from which the substance was released) and description of its condition
- the number of deaths and injuries resulting from the environmental emergency
- the surrounding area/environment affected and potential impact of the release (mobility of release and weather or geographic conditions at the site)
- a brief description of the circumstances leading to the release
- the cause of the release (if known)

SITE RESPONSE - PRODUCTION FACILITY

Spills – Initial Response

Emergency Response Plan

- details of the actions taken or further actions contemplated to contain, recover, clean up and dispose of the substance involved
- the names of agencies notified or on-scene
- other pertinent information

A written report should be made within 30 days to the relevant authorities named in column 3 of Schedule 6 of the Environmental Emergency Regulation. The following information should be included in the written report.

- the name and address of the person who owns or has the charge, management or control of the substance involved in the environmental emergency and the phone number, including area code, at which the person may be contacted
- the date, time and exact location of the release
- the name/UN number of the substance released
- the composition of the substance released showing, with respect to each substance involved, its concentration and total weight
- the estimated quantity of the substance released and the total quantity of substance in the means of containment before the release
- the duration of the release of the substance and its release rate
- the means of containment (from which the substance was released) and a description of its condition
- the number of deaths and injuries resulting from the environmental emergency
- the surrounding area/environment affected and potential impact of release (mobility of release, weather or geographic conditions at the site, long-term environmental impacts)
- a complete sequence of events before and after the environmental emergency, including the cause of the release if known
- the names of agencies notified or on-scene at the time of the release
- all measures taken pursuant to CEPA 1999 paragraph 201(1)(b) and (c) regarding protection of the environment and public safety and notification to any member of the public adversely affected by the environmental emergency
- all measures to be taken to prevent similar releases

Continue using this manual for requirements related to public protection communication and response management.

Assigned to: **On-Scene Personnel**

References:
➤ Contact Information
➤ Emergency Equipment

Step 2. DETERMINE RESPONSE TEAM REQUIREMENTS

Review Response Team requirements, determine who should be contacted and assign duties. See **Response Team** section. Review **Site Overview – Evacuation Summary** section for information.

Personnel designated as Response Team members are expected to record actions as required on **Forms** and will be required to submit all completed forms to the On-scene Commander immediately once the emergency is declared over.

Assigned to: **On-Scene Commander/Incident Commander**

- References:
- Response Team
 - Site Overview
 - Contact Information
 - Emergency Equipment

If additional personnel are needed to form the Response Team, the use of external resources may be required. See **Support Services** section in the **Contact Information**.

Continue with response actions in the following sections, based on the assessment of LEVEL of severity.

LEVEL 1 Response

LEVEL 2 Response

LEVEL 3 Response

LEVEL 1 RESPONSE

- **No immediate danger to public or environment as no H₂S has been released**
- **Hazard is confined to the lease or company property**
- **Creates little or no media interest**
- **There is low potential for emergency to escalate**
- **Can be managed by company personnel; no immediate threat to personnel**

Ensure adequate spill containment materials are available. Implement spill containment as applicable.

NOTE: A spill may contain poisonous gas or other harmful exhaust vapours – monitor situation as required

Step 3. MONITOR AND ISOLATE THE AREA AFFECTED BY THE EMERGENCY

Personnel assigned as the Monitoring Crew determine the area affected by the emergency. If the spill involves poisonous gas begin air monitoring if possible.

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

Invoke response measures from the Gas Release section of this document if air quality is the foremost factor in determining the area affected by the emergency.

Roadblock Crew will isolate the area affected by the emergency and restrict traffic to essential services.

Essential service personnel entering the area affected by the emergency must be made aware of toxic or hazardous materials that are involved in the incident. Refer to onsite WHMIS and MSDS information.

Assigned to: **On-Scene Commander/Monitoring Crew**

- References:
- Site Overview
 - Contact Information
 - Resident Information
 - Emergency Equipment
 - Maps
 - Forms
 - Plume Tracking & Monitoring

Step 4. ALERT SENSITIVE RESIDENTS FOR VOLUNTARY EVACUATION

Personnel assigned as the Telephoners will notify residents in proximity to the spill and any with potential sensitivities using a prepared evacuation statement. Go to the **Evacuation Procedures** section for procedures, criteria and mandatory actions for all levels of evacuation.

Asking the resident to seek shelter by moving indoors, closing doors and windows, shutting off all air intake fans which exhaust outdoors, turning off furnace and hot water pilot lights, extinguishing fires in fireplaces and turning off any appliance that draws outside air, is an alternate means to evacuation. Residents should wait in an upstairs interior room and await further instructions. This is appropriate if the event will only last a few minutes or where personal safety may be compromised by evacuation.

Notify local authority emergency management and activate the Evacuation Centre.

Assigned to: **On-Scene Commander/Evacuation Crew**

- References:
- Site Overview
 - Response Centres
 - Evacuation Centre Information
 - Resident Information
 - Maps
 - Forms
 - Evacuation Procedures
 - Communication Guidelines

Step 5. DETERMINE EXTENT OF ENVIRONMENTAL IMPACT

Determine if the environment has been affected by the situation and document for reporting purposes.

Assigned to: **On-scene Commander**

- References:
- Forms
 - Initial Information Form

Step 6. NOTIFY MANDATORY CONTACTS

Contact local authority emergency management, local police or RCMP and the health authority and inform them of the situation.

Assigned to: **On-scene Commander**

- References:
- Contact Information
 - Forms
 - Initial Information Form

Step 7. FOLLOW-UP WITH INCIDENT COMMANDER

Keep the Corporate Emergency Operations Centre informed of events, activities and further developments by reporting to the Incident Commander. Provide the status of containment efforts, Evacuation Procedures and results of air monitoring. Report on environmental impact and request environmental response if necessary.

Incident Commander or On-Scene Commander must provide and continue to provide the B.C. Oil & Gas Commission with situation reports.

Assigned to: **On-scene Commander**

References: ➤ Contact Information
 ➤ Completed Forms

Step 8 ASSESS THE SITUATION

If the situation poses no immediate risk to the public continue LEVEL 1 response actions as necessary.

If there is imminent risk to the public escalate to LEVEL 2 Response.

If there is definite risk to the public escalate to LEVEL 3 Response.

Provide a communication update to stakeholders and media release if required.

If containment has been achieved go to the **Demobilize and Debriefing** section.

LEVEL 2 RESPONSE

If escalating from a level 1, some steps listed below will be a continuation of those started at level 1. If starting at this level, actions are to be initiated as stated.

- **Potential risk to public, personnel and environment, as the emergency could extend beyond company property**
- **Control of hazard is still possible**
- **Creates local or regional media interest**
- **May require involvement of external emergency services, federal, provincial, or local agencies**

Ensure adequate spill containment materials are available. Implement spill containment as applicable.

NOTE: A spill may contain poisonous gas or other harmful exhaust vapours – monitor situation as required

Step 3. MONITOR THE AREA FOR HAZARD ASSESSMENT

Personnel assigned as the Monitoring Crew determine the area affected by the emergency. If the spill involves poisonous gas begin air monitoring if possible.

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

Invoke response measures from the Gas Release section of this document if air quality is the foremost factor in determining the area affected by the emergency.

Assigned to: **On-Scene Commander/Monitoring Crew**

- References:
- Site Overview
 - Contact Information
 - Resident Information
 - Emergency Equipment
 - Maps
 - Forms
 - Plume Tracking & Monitoring

Step 4. ISOLATE THE AREA AFFECTED BY THE EMERGENCY

Establish a roadblock strategy based on isolating the emergency with the use of maps of the area. Dispatch the Roadblock Crew during the evacuation and continually adjust roadblocks to the perimeter of the known evacuated area until the EPZ is secured. Ensure locations of roadblocks prevent evacuating residents from entering the secured area during egress. RCMP or police services should not be expected to provide significant assistance.

Essential service personnel entering the area affected by the emergency must be made aware of toxic or hazardous materials that are involved in the incident. Refer to onsite WHMIS and MSDS information.

Roadblocks on highways designated with one and two digits should be setup in consultation with provincial transportation department and RCMP. For highways designated with three digits, contact the Municipal Government or Regional District. Contact local authority emergency management and advise of situation.

It may be necessary to obtain a Closure Order, issued by the BC Oil & Gas Commission. The Municipal Government or Regional District may declare a Local State of Emergency. The regulating agency may also request that NAV Canada issue a Notice to Airmen (NOTAM) advising restrictions on the airspace above the Emergency Planning Zone.

Assigned to: **On-Scene Commander/Evacuation Crew**

- References:
- Levels of Emergency
 - Response Team
 - Site Overview
 - Contact Information
 - Resident Information
 - Emergency Equipment
 - Maps

Step 5. BEGIN EMERGENCY PLANNING ZONE EVACUATION OR SHELTERING ACTIONS

Personnel assigned as the Telephoners will telephone residents in the EPZ using a prepared evacuation message. Evacuation should begin with residents downwind and closest to the release.

Asking the resident to seek shelter by moving indoors, closing doors and windows, shutting off all air intake fans which exhaust outdoors, turning off furnace and hot water pilot lights, extinguishing fires in fireplaces and turning off any appliance that draws outside air, is an alternate means to evacuation. Residents should wait in an upstairs interior room and await further instructions. This is appropriate if the event will only last a few minutes or where personal safety may be compromised by evacuation. Go to the **Evacuation Procedures** section for detailed procedures, criteria and mandatory actions for evacuation and sheltering within the EPZ and beyond.

Notify local authority emergency management and activate the Evacuation Centre.

Assigned to: **On-Scene Commander/Evacuation Crew**

- References:
- Response Team
 - Response Centres
 - Evacuation Centre Information
 - Resident Information
 - Maps
 - Forms
 - Evacuation Procedures
 - Communication Guidelines

Step 6. EVACUATION VERIFICATION

Dispatch Rovers to visit residents not contacted by Telephoners, to verify evacuation of those contacted and begin area search for transients within the EPZ. Consider navigable waterways and potential use of helicopter with loudspeaker in search efforts. Additional personnel may be required to support residents identified as requiring assistance.

Assigned to: **On Scene Commander/Rovers**

- References:
- Response Team
 - Evacuation Procedures

Step 7. DETERMINE EXTENT OF ENVIRONMENTAL IMPACT

Determine if the environment has been affected by the situation and document findings for reporting purposes.

Assigned to: **On-scene Commander**

- References:
- Forms
 - Initial Information Form

Step 8. NOTIFY MANDATORY CONTACTS

Contact local authority disaster services, local police or RCMP and health authority and inform them of the situation.

Assigned to: **On-scene Commander**

References: ➤ Contact Information
 ➤ Forms
 - Initial Information Form

Step 9. FOLLOW-UP WITH INCIDENT COMMANDER

Keep the Corporate Emergency Operations Centre informed of events, activities and further developments by reporting to the Incident Commander. Provide the status of containment efforts, Evacuation Procedures and results of air monitoring. Report on environmental impact and request environmental response if necessary.

Incident Commander or On-Scene Commander must provide and continue to provide the B.C. Oil & Gas Commission with situation reports.

Assigned to: **On-scene Commander**

References: ➤ Contact Information
 ➤ Completed Forms

Step 10 ASSESS THE SITUATION

If conditions worsen upgrade the emergency to LEVEL 3 and perform required isolation and public safety activities.

If conditions improve, control is gained and risk to the public is reduced, the Incident Commander, in consultation with the BCOGC and other stakeholders, will begin to collapse the isolated area.

Provide a communication update to stakeholders and media release if required.

When containment has been achieved and all stakeholders agree that the situation poses no risk to the public the Incident Commander, in consultation with the BCOGC and other stakeholders, can downgrade the emergency. Go to the **Demobilize and Debriefing** section.

LEVEL 3 RESPONSE

If escalating from a level 2, some steps listed below will be a continuation of those started at level 2. If starting at this level, actions are to be initiated as stated.

- Immediate danger to the public, personnel and environment, as the emergency extends beyond company property
- There is total loss of control of the hazard
- Creates provincial or national media interest
- Extensive involvement by external emergency services federal and/or provincial agencies is required

Ensure adequate spill containment materials are available. Implement spill containment as applicable.

NOTE: A spill may contain poisonous gas or other harmful exhaust vapours – monitor situation as required

Step 3. MONITOR THE AREA FOR HAZARD ASSESSMENT

Personnel assigned as the Monitoring Crew determine the area affected by the emergency. If the spill involves poisonous gas begin air monitoring if possible.

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

Invoke response measures from the Gas Release section of this document if air quality is the foremost factor in determining the area affected by the emergency.

Assigned to: **On-Scene Commander/Monitoring Crew**

- References:
- Site Overview
 - Contact Information
 - Resident Information
 - Emergency Equipment
 - Maps
 - Forms
 - Plume Tracking & Monitoring

Step 4. ISOLATE THE AREA AFFECTED BY THE EMERGENCY

Establish a roadblock strategy based on isolating the emergency with the use of maps of the area. Dispatch the Roadblock Crew during the evacuation and continually adjust roadblocks to the perimeter of the known evacuated area until the EPZ is secured. Ensure locations of roadblocks prevent evacuating residents from entering the secured area during egress. RCMP or police services should not be expected to provide significant assistance.

Essential service personnel entering the area affected by the emergency must be made aware of toxic or hazardous materials that are involved in the incident. Refer to onsite WHMIS and MSDS information.

Roadblocks on highways designated with one and two digits should be setup in consultation with provincial transportation department and RCMP. For highways designated with three digits, contact the Municipal Government or Regional District. Contact local authority emergency management and advise of situation.

It may be necessary to obtain a Closure Order, issued by the BC Oil & Gas Commission. The Municipal Government or Regional District may declare a Local State of Emergency. The regulating agency may also request that NAV Canada issue a Notice to Airmen (NOTAM) advising restrictions on the airspace above the Emergency Planning Zone.

Assigned to: **On-Scene Commander/Evacuation Crew**

- References:
- Levels of Emergency
 - Response Team
 - Site Overview
 - Contact Information
 - Resident Information
 - Emergency Equipment
 - Maps

Step 5. COMPLETE EMERGENCY PLANNING ZONE EVACUATION OR SHELTERING ACTIONS

Personnel assigned as the Telephoners will telephone residents in the EPZ using a prepared evacuation message. Evacuation should begin with residents downwind and closest to the release.

Asking the resident to seek shelter by moving indoors, closing doors and windows, shutting off all air intake fans which exhaust outdoors, turning off furnace and hot water pilot lights, extinguishing fires in fireplaces and turning off any appliance that draws outside air, is an alternate means to evacuation. Residents should wait in an upstairs interior room and await further instructions. This is appropriate if the event will only last a few minutes or where personal safety may be compromised by evacuation. Go to the **Evacuation Procedures** section for detailed procedures, criteria and mandatory actions for evacuation and sheltering within the EPZ and beyond.

Notify local authority emergency management and activate the Evacuation Centre.

Assigned to: **On-Scene Commander/Evacuation Crew**

- References:
- Response Team
 - Contact Information
 - Response Centres
 - Evacuation Centre Information
 - Resident Information
 - Maps
 - Forms
 - Evacuation Procedures
 - Communication Guidelines

Step 6. EVACUATION VERIFICATION

Dispatch Rovers to visit residents not contacted by Telephoners, to verify evacuation of those contacted and begin area search for transients within the EPZ. Consider navigable waterways and potential use of helicopter with loudspeaker in search efforts. Additional personnel may be required to support residents identified as requiring assistance.

Assigned to: **On Scene Commander/Rovers**

- References:
- Response Team
 - Evacuation Procedures

Step 7. DETERMINE EXTENT OF ENVIRONMENTAL IMPACT

Determine if the environment has been affected by the situation and document findings for reporting purposes.

Assigned to: **On-scene Commander**

- References:
- Forms
 - Initial Information Form

Step 8. NOTIFY MANDATORY CONTACTS

Contact local authority disaster services, local police or RCMP and health authority and inform them of the situation.

Assigned to: **On-scene Commander**

References: ➤ Contact Information
 ➤ Forms
 - Initial Information Form

Step 9. FOLLOW-UP WITH INCIDENT COMMANDER

Keep the Corporate Emergency Operations Centre informed of events, activities and further developments by reporting to the Incident Commander. Provide the status of containment efforts, Evacuation Procedures and results of air monitoring. Report on environmental impact and request environmental response if necessary.

Incident Commander or On-Scene Commander must provide and continue to provide the B.C. Oil & Gas Commission with situation reports.

Assigned to: **On-scene Commander**

References: ➤ Contact Information
 ➤ Completed Forms

Step 10. ASSESS THE SITUATION

If conditions worsen continue LEVEL 3 isolation and public safety activities to coincide with the changing area affected by the emergency.

If conditions improve, control is gained and risk to the public is reduced, the Incident Commander, in consultation with the BCOGC and other stakeholders, will begin to collapse the isolated area.

Provide a communication update to stakeholders and media release if required.

When containment has been achieved and all stakeholders agree that the situation poses no risk to the public the Incident Commander, in consultation with the BCOGC and other stakeholders, can downgrade the emergency. Go to the **Demobilize and Debriefing** section.

INJURY / FATALITY

Step 1. INITIATE FIRST AID PROCEDURES THAT CAN BE SAFELY PERFORMED

Protect yourself and ensure that the area around the injured person is safe. If danger exists, move the injured person to a safe area to perform first aid. Ensure that you have not disturbed the area other than for necessary movement of the injured. Contact local authority disaster services, local police or RCMP and health authority and inform them of the situation.

Assigned to: **On-scene Commander**

References: ➤ Forms
- Accident/Incident Form

Step 2. CONTACT ADDITIONAL MEDICAL SERVICES

Contact Emergency Services (ambulance, fire dept.) to provide additional medical assistance and an ambulance service for transporting the injured to hospital. If fatalities are possible the RCMP or local police must also be contacted.

Assigned to: **On-scene Commander**

References: ➤ Contact Information
➤ Completed Forms

Step 3. MONITOR THE AREA FOR HAZARD ASSESSMENT

If hazards exist, poisonous gases, fires, spills, etc. refer to the response actions identified in the appropriate section of this manual.

Assigned to: **On-scene Commander**

References: ➤ Forms
- Plume Tracking and Air Monitoring Form

Step 4. ISOLATE THE AREA AFFECTED BY THE EMERGENCY

Install barriers or barrier tape to isolate the area in which the injury took place. This is done to protect the scene of the incident, protect others from entering a potentially hazardous area and in preparation for the investigation.

Assigned to: **On-scene Commander**

Step 5. NOTIFY MANDATORY CONTACTS

Based on reporting criteria, ensure all mandatory contacts have been notified as per the Reporting Section below. Ensure the necessary filing of reports to WorkSafeBC is completed within 72 hours and any internal company reports are complete.

Assigned to: **On-scene Commander**

- References:
- Forms
 - Accident/Incident Form
 - Government Role & Responsibilities

Step 6. FOLLOW UP WITH INCIDENT COMMANDER

Keep the Corporate Emergency Operations Centre informed of events, activities and further developments by reporting to the Incident Commander.

Incident Commander or On-Scene Commander must provide and continue to provide the B.C. Oil & Gas Commission with situation reports.

Assigned to: **On-scene Commander**

- References:
- Contact Information
 - Completed Forms

Step 7. COMMENCE INJURY INCIDENT INVESTIGATION

An investigation will be conducted as per our company internal incident investigation process.

Assigned to: **On-scene Commander**

Reporting (Refer to **Government Roles & Responsibilities** for more information)

Section 172 of the Workers Compensation Act (“Act”) states:

172 (1) An employer must immediately notify the Board of the occurrence of any accident that:

- a) resulted in serious injury to or death of a worker,
- b) involved a major structural failure or collapse of a building, bridge, tower, crane, hoist, temporary construction support system or excavation,
- c) involved the major release of a hazardous substance, or
- d) was an incident required by regulation to be reported.

If any injury or accident described above occurs at a worksite we will notify a Director of Inspection of the time, place and nature of the injury or accident as soon as possible. In addition to the above, if any other serious injury or any other accident that has the potential of causing serious injury to a person occurs at a work site then the company shall:

SITE RESPONSE - PRODUCTION FACILITY

Injury / Fatality

Emergency Response Plan

1. Carry out an investigation into the circumstances surrounding the serious injury or accident
2. Prepare a report outlining the circumstances of the serious injury or accident and the corrective action, if any, undertaken to prevent a recurrence of the serious injury or accident and
3. Ensure that a copy of the report is readily available for inspection by an officer

We will retain the report that is prepared above for a minimum of two (2) years after the serious injury or accident.

A report prepared under this section is not admissible as evidence for any purpose in a trial arising out of the serious injury or accident except in a prosecution for perjury or for giving contradictory evidence.

Except as otherwise directed by a WorkSafeBC prevention officer and/or investigations officer or a peace officer, a person shall not disturb the scene of a reported injury, accident or fatality except as is necessary to:

1. Attend to persons injured or killed
2. Preventing further injuries, and
3. Protecting property that is endangered as a result of the accident

Investigation of Accident

If an accident occurs at a company work site, an officer may attend at the scene of the accident and may make any inquiries that the officer considers necessary to determine the cause of the accident and the circumstances relating to the accident.

Every person present at an accident when it occurred, or who has information relating to the accident, shall on the request of an officer, provide to the officer any information respecting the accident that the officer requests.

An officer may, for the purposes of determining the cause of the accident, seize or take samples of any substance, material, product, tool, appliance or equipment that was present at, involved in or related to the accident.

If an officer seizes or takes samples as identified above, the officer shall:

1. Give to the person from whom those items were seized or taken a receipt for those items, and
2. On that person's request, return those items to that person when those items have served the purposes for which they were seized or taken

Any statement given under this section is not admissible in evidence for any purpose in a trial, public inquiry or other proceeding except to prove non-compliance or contravention of regulations.

A peace officer may assist an officer in carrying out the officer's duties in an investigation if the officer so requests.

SITE RESPONSE - PRODUCTION FACILITY

Injury / Fatality

Emergency Response Plan

Notification

Notification to the designated contact of the victim is made at the first available moment. It is imperative that notification is made as quickly as possible. Our manager will initiate notification, in person where possible, and with local police/RCMP. The family should know the company representative. If that is not the case an employee known by the family may also attend. In a fatality case, notification must await certification of death by a doctor. If the designated contact does not live in the area, arrangements will be made to contact as soon as possible through local police/RCMP with a company representative in attendance wherever possible.

If the injury/fatality involves contract personnel, the contractor's office must be contacted to ensure the designated contact of their employee is properly notified, and to ensure that we are subsequently advised so that the names of the accident victim(s) may be released.

A medical doctor is the only one who can make a pronouncement of death. Until a doctor does so, the victim is to be treated as injured.

The RCMP or local police and/or Medical Examiner will conduct an investigation, therefore do not move or rearrange any evidence or operate equipment involved in the accident unless it is absolutely essential to do so.

IGNITION CRITERIA

An uncontrolled release of sour gas must be ignited as soon as all personnel working at the site have cleared to a safe distance under any of the following conditions:

1. There is an uncontrolled flow, the effluent has reached the surface, there is no immediate chance of control and the flow, if not ignited, could lead to loss of life.
2. There is flowing sour gas to the surface and safety of residents cannot be assured because:
 - evacuation of residents within the emergency response planning zone CANNOT be accomplished; or
 - monitoring results indicate H2S levels of 15 ppm for 15 minutes in unevacuated areas; or
 - monitoring is not taking place due to some unforeseen circumstances, such as bad weather or communication breakdown.
 - monitored H2S concentrations exceed 1 ppm (1-hour average) in urban density developments
3. For special sour wells, as determined by BCOGC, immediate ignition of a well may be required.
4. The release cannot be brought under control in the short term (ignition decision will be made in consultation with the BCOGC).

Ignition must occur within 15 minutes of the decision to ignite.

AUTHORIZATION Authorization to ignite will be given after discussion with the company CORPORATE OPERATING OFFICER, the INCIDENT COMMANDER and LEAD GOVERNMENT AGENCY

When the situation allows no time for consultation, the decision must be made by the acting ON-SCENE COMMANDER; his decision will be fully supported.

DECISION **CONSIDERATIONS PRIOR TO DECISION TO IGNITE**

1. Could additional equipment damage prolong or complicate control efforts?
2. Could the subsequent effects of ignition significantly complicate control efforts, endanger personnel or cause additional environmental damage?

EXPLOSION A high pressure water fog line can be used to keep gas mixture below explosive limit.
FIRE PREVENTION

1. Approach gas from upwind.
2. Aim water stream through area where gas is lying.
3. Move stream slowly from side to side along the surface.

**IGNITION
PROCEDURE**

Note: Pre-plan an escape route.

1. Evacuate hazard area beyond explosive mixture areas.
2. Two persons will form an Ignition Team.
Equipment:
 - proximity suits
 - self contained breathing apparatus
 - H2S detector
 - combustible gas detector
 - flare pistol

Ignition System Procedure: Ignition Team will wear safety belts tethered to life lines.

3. Two persons with self contained breathing apparatus, H2S detectors, resuscitator, and intrinsically safe mobile radios will form a Backup Rescue Team.

BE AWARE THAT SIGNIFICANT H2S HAZARD TO PERSONNEL EXISTS BEFORE INITIAL READINGS ON A COMBUSTIBLE GAS DETECTOR

ENSURE NO LIQUID HYDROCARBONS IN THE VICINITY OF PERSONNEL

EXPLOSIVE LIMITS OF H2S GAS ARE 4.3% TO 46% VOLUME

NEVER MAKE AN IGNITION ATTEMPT IF YOU ARE IN PROXIMITY OF AN EXPLOSIVE MIXTURE ZONE

BEWARE OF CHANGES IN AIR MOVEMENT OR WIND

YOU MUST BE ABSOLUTELY SURE YOU ARE IN A SAFE AREA

SAFETY

Approach from upwind. If calm, approach from most accessible direction. Advance until within range of flare gun or remote ignition system and well outside explosive mixture zone. Use the protection of a large solid object (if possible) or use prone position. Aim at source of release if using flare and attempt ignition from this point. If unsuccessful advance a few steps and retry. Repeat until ignition is achieved.

IF IGNITION IS NOT SUCCESSFUL DO NOT ENTER EXPLOSIVE MIXTURE ZONE UNTIL IT IS CERTAIN THAT IGNITION SOURCES ARE EXTINGUISHED

Corporate Office Responsible for Field Operations

VERO ENERGY INC.

Office: Head Office

Office Address: Suite 900, 520 - 3rd Ave SW
Calgary, AB
T2P0R3

Phone Number: (403) 218-2063

Fax Number: (403) 218-2064

24 hr Emergency Phone: (403) 218-2063

Site Office for Field Operations

VERO ENERGY INC.

Office: Head Office

Office Address: Suite 900, 520 - 3rd Ave SW
Calgary, AB
T2P0R3

Phone Number: (403) 218-2063

Fax Number: (403) 218-2064

24 hr Emergency Phone: (403) 218-2063

Incident Commander

Seq Name	Title	Office Phone	Home Phone	Cell Phone	Other Phone	Other Ph Type
1 Shane Manchester	VP of Operations	(403) 218-2063	(403) 202-2688	(403) 669-8289	(403) 693-3163	Direct
2 Reece Shular	Production Manager	(403) 218-2063	(403) 457-6176	(403) 815-5749	(403) 693-3060	Direct Office
3 Greg Balderston	Operations Engineer	(403) 218-2063		(403) 993-8550	(403) 693-3174	Direct Office
4 Logan Haddad	Operations Engineer	(403) 218-2063		(403) 479-7467	(403) 693-3180	Direct Office Phone
5 Matt Acheson	Operations Engineer	(403) 218-2063		(403) 650-7364	(403) 693-3064	Direct Office
6 Dave Prost	Operations Engineer	(403) 218-2063	(403) 474-3038	(403) 988-9008	(403) 693-3077	Direct Office

Drilling & Completions

Seq Name	Title	Office Phone	Home Phone	Cell Phone	Other Phone	Other Ph Type
Greg Ruzicki	Drilling and Completions Manager	(403) 218-2063		(403) 850-7672		

Media Representative

Seq Name	Title	Office Phone	Home Phone	Cell Phone	Other Phone	Other Ph Type
Doug Bartole	President & CEO	(403) 218-2063	(403) 270-0726	(403) 803-3083	(403) 693-3161	Direct

Stakeholder

Seq Name	Title	Office Phone	Home Phone	Cell Phone	Other Phone	Other Ph Type
1 Elsa Bocale-Hobbs	Engineering Technician	(403) 218-2063				
2 Bob Bachynski	VP Land	(403) 218-2063	(403) 288-9020	(403) 701-2063	(403) 693-3169	Direct
3 Kevin Yakiwchuk	Vice President Exploration	(403) 218-2063	(403) 547-4706	(403) 852-7599	(403) 693-3162	Direct
4 Gerry Gilewicz	CFO	(403) 218-2063	(403) 217-1649	(403) 828-5030	(403) 693-3170	Direct
Bruce Riep	Senior Landman	(403) 218-2063		(403) 651-7468		
Doug Webb	Safety Coordinator	(403) 221-8077		(403) 589-9001	(403) 221-8072	

Local Authorities Contact Information

Area Authority: PEACE RIVER	Regional District	911 Avail	<input checked="" type="checkbox"/>
Area Office Phone: (250) 784-3200	Area Office Fax: (250) 784-3201		
Area Office Alternate Phone:			

	Name	Business Phone	Alternate Phone
Area Emergency Liaison Officers:	Trish Morgan	(250) 784-3200	(250) 219-3000
Alternate Contact:	On Call Manager	(250) 784-3200	(800) 670-7773 24 hr Emergency

Nearest Municipalities with Services

FORT ST. JOHN		Emergency Tel	Dispatch Location	Admin Tel
Office Phone: (250) 787-8150	Fire	- 911 -	FORT ST. JOHN	(250) 785-4333
Fax: (250) 787-8191	Police	- 911 -	FORT ST. JOHN	(250) 787-8140
	Ambulance	- 911 -	FORT ST. JOHN	(250) 785-5559
	Hospital	(250) 262-5200	FORT ST. JOHN	(250) 262-5200

Primary Emergency Services Responding Centre: First contact to emergency services will be to call 911. The nearest Urban Centre with all emergency services is Fort. St. John.

Other Municipalities in the Regional District of PEACE RIVER

ARRAS		Emergency Tel	Dispatch Location	Admin Tel
Office Phone:	Fire	(250) 843-7525	ARRAS	(250) 843-7525
Fax:	Police	(250) 782-5211	DAWSON CREEK	(250) 784-3700
	Ambulance	(250) 782-2211	DAWSON CREEK	(250) 782-9768
	Hospital	(250) 782-8501	DAWSON CREEK	(250) 782-8501

CHARLIE LAKE		Emergency Tel	Dispatch Location	Admin Tel
Office Phone:	Fire	- 911 -	CHARLIE LAKE	(250) 787-8076
Fax:	Police	- 911 -	FORT ST. JOHN	(250) 787-8100
	Ambulance	- 911 -	FORT ST. JOHN	(250) 785-5559
	Hospital	(250) 785-6611	FORT ST. JOHN	(250) 785-6611

CHETWYND		Emergency Tel	Dispatch Location	Admin Tel
Office Phone: (250) 401-4100	Fire	(250) 782-9898	CHETWYND	(250) 788-2424
Fax: (250) 401-4101	Police	- 911 -	CHETWYND	(250) 788-9221
	Ambulance	(800) 461-9911	CHETWYND	(250) 788-3323
	Hospital	(250) 788-2236	CHETWYND	(250) 788-2236

DAWSON CREEK		Emergency Tel	Dispatch Location	Admin Tel
Office Phone: (250) 784-3600	Fire	- 911 -	DAWSON CREEK	(250) 782-9898
Fax: (250) 784-3638	Police	- 911 -	DAWSON CREEK	(250) 784-3700
	Ambulance	- 911 -	DAWSON CREEK	(250) 782-9768
	Hospital	(250) 782-8501	DAWSON CREEK	(250) 782-8501

FLATROCK		Emergency Tel	Dispatch Location	Admin Tel
Office Phone:		Fire - 911 -	FORT ST. JOHN	(250) 785-4333
Fax:		Police (250) 785-8140	FORT ST. JOHN	(250) 787-8100
		Ambulance - 911 -	FORT ST. JOHN	(250) 785-2079
		Hospital (250) 785-6611	FORT ST. JOHN	(250) 785-6611
HUDSON'S HOPE		Emergency Tel	Dispatch Location	Admin Tel
Office Phone:	(250) 783-9901	Fire - 911 -	HUDSON'S HOPE	(250) 783-9901
Fax:	(250) 783-5741	Police - 911 -	HUDSON'S HOPE	(250) 783-5241
		Ambulance (800) 461-9911	HUDSON'S HOPE	(250) 783-5252
		Hospital (250) 262-5200	FORT ST. JOHN	(250) 262-5200
POUCE COUPE		Emergency Tel	Dispatch Location	Admin Tel
Office Phone:	(250) 786-5794	Fire - 911 -	POUCE COUPE	(250) 786-5794
Fax:	(250) 786-5257	Police - 911 -	DAWSON CREEK	(250) 784-3700
		Ambulance (800) 461-9911	DAWSON CREEK	(250) 782-2211
		Hospital (250) 782-8501	DAWSON CREEK	(250) 782-8501
TAYLOR		Emergency Tel	Dispatch Location	Admin Tel
Office Phone:	(250) 789-3392	Fire - 911 -	TAYLOR	(250) 789-3392
Fax:	(250) 789-3543	Police - 911 -	FORT ST. JOHN	(250) 787-8100
		Ambulance (800) 461-9911	FORT ST. JOHN	(250) 785-2079
		Hospital (250) 785-6611	FORT ST. JOHN	(250) 785-6611
TUMBLER RIDGE		Emergency Tel	Dispatch Location	Admin Tel
Office Phone:	(250) 242-4242	Fire - 911 -	TUMBLER RIDGE	(250) 242-3939
Fax:	(250) 242-3993	Police - 911 -	TUMBLER RIDGE	(250) 242-5252
		Ambulance (800) 461-9911	TUMBLER RIDGE	(250) 242-4176
		Hospital (250) 782-8501	DAWSON CREEK	(250) 782-8501

Mandatory Contacts Regional Government Offices

<u>Agency</u>	<u>Function</u>	<u>Area</u>	<u>Phone</u>	<u>Fax</u>

Government & Agency Contacts

<u>Agency</u>	<u>Function</u>	<u>Area</u>	<u>Phone</u>	<u>Fax</u>
B.C. Oil & Gas Commission	24 Hour Office	BC	(250) 794-5200	(250) 794-5385
BC Ministry of Environment	Environmental Emergencies (PEP)	BC	(800) 663-3456	(250) 787-3490
BC Ministry of Forests, Forest Services	Forest Fire Reporting	BC	(800) 663-5555	
Environment Canada	Emergency Reporting & Information	BC	(800) 663-3456	
Provincial Emergency Program (PEP)	(PEP) Oil & Gas Event Reporting (24 hr.)	BC	(800) 663-3456	
BC Ministry of Transportation and Infrastructure	Transportation	BC - Northern	(800) 461-9911	(250) 374-5937
Environment Canada	National Environmental Emergencies (24 hr.)	National	(819) 997-3742	
National Energy Board	Emergency Reporting (Transportation Safety Board - Occurrence Hot Line)	National	(819) 997-7887	(819) 953-7876
Nav Can	Air Traffic Control	National	(800) 876-4693	
Transport Canada	Dangerous Goods Emergency Reporting	National	(613) 996-6666	

Government Agencies and Emergency Support Services

<u>Agency</u>	<u>Function</u>	<u>Area</u>	<u>Phone</u>
Air Monitoring			
Mobile Air Monitoring Units	Pride H2S Safety and Medical	BC	(250) 785-6249
Mobile Air Monitoring Units	Trojan Safety Services	BC	(250) 785-9557
Mobile Air Monitoring Units	HSE Integrated Ltd.	National	(866) 347-3911
Mobile Air Monitoring Units	Inferno Safety Specialists	National	(877) 357-3130
Mobile Air Monitoring Units	SafetyBOSS	National	(800) 882-4967
Mobile Air Monitoring Units	United Safety	National	(800) 432-1809
Communications			
Communications Services & Equipment	Petron Communications Limited	BC- Fort St. John	(250) 785-3333
Communications Services & Equipment	Quasar Communications Ltd.	BC- Fort St. John	(250) 785-6685
Decontamination Units			
Decontamination Units	Firemaster	National	(877) 299-7233
Decontamination Units	HSE Integrated Ltd.	National	(866) 347-3911
Decontamination Units	SafetyBOSS	National	(800) 882-4967
Decontamination Units	Trojan Safety Services	National	(250) 785-9557
Emergency			
Emergency Services	Waste Management	BC	(800) 663-3456
Emergency Services	Poison Control	BC/Yukon	(800) 567-8911
Federal Government			
Public Safety Canada	Emergency Number	National	(613) 991-7000
Radio Active / Dangerous Good Spills	General Information	National	(613) 995-5894
Radio Active / Dangerous Good Spills	Reporting	National	(613) 995-0479
Heavy Equipment			
Heavy Equipment	Blatz's Excavating	BC	(250) 787-7400
Heavy Equipment	Digger Dave's Backhoe Service	BC	(250) 785-8007
Heavy Equipment	Ed's Backhoe Service	BC	(250) 785-2883
Heavy Equipment	Fusion Oilfield Services	BC	(250) 774-2812
Heavy Equipment	Pearson Excavating	BC	(250) 785-2376
Helicopters			
Helicopters	Bailey Helicopters	BC	(250) 785-2518
Helicopters	Canadian Helicopters	BC	(250) 787-0431
Helicopters	Guardian	BC	(250) 787-1224

	Helicopters	Highland Helicopters	BC	(250) 787-7912
	Helicopters	Qwest Helicopters	BC	(250) 787-5157
Misc				
	Miscellaneous	BC Safety Authority	BC	(800) 566-7233
	Miscellaneous	Call Before You Dig	BC	(800) 474-6886
	Miscellaneous	Electrical Safety Inspection	BC	(604) 660-6262
Petroleum Regulatory				
	National Energy Board	General Information	Regional	(403) 292-4800
Provincial Government				
	BC Ministry of Forests, Forest Services	Forest Service Fire Information Line	BC	(888) 336-7378
Safety				
	Safety Consulting Services	Pride H2S Safety and Medical	BC	(250) 785-6249
	Safety Consulting Services	Trojan Safety Services Ltd.	BC	(250) 785-9557
	Safety Consulting Services	HSE Integrated Ltd.	National	(866) 347-3911
Transportation				
	Railways - National	BC Rail Emergency Reporting	BC	(800) 449-8547
	Railways - National	CN Rail - Emergency Reporting	National	(800) 465-9239
	Railways - National	CP Rail - Emergency Reporting	National	(800) 716-9132
Utility				
	Telephone Service	Telus	BC	(800) 661-3162
Well Control Specialists				
	Blowout/Fire Service	Fire Power	National	(800) 463-3187
	Blowout/Fire Service	Firemaster	National	(877) 299-7233
	Blowout/Fire Service	HSE Integrated	National	(866) 347-3911
	Blowout/Fire Service	SafetyBOSS	National	(800) 882-4967

Spill Co-op				
				Area

DEMOBILIZE AND DEBRIEFING

DEMOBILIZATION

The Incident Commander is responsible to call down the emergency when control has been gained and public safety has been restored.

The decision to downgrade a Level 2 or Level 3 emergency is made in consultation with BCOGC and local authority disaster services personnel.

The company must provide coordination and assistance wherever necessary when the emergency is declared over. The type of activities could include:

- Assistance to evacuees returning to their residences
- Break down roadblocks and recall monitoring personnel
- Assess emergency equipment and determine servicing and replacement requirements
- Follow-up with all contacted parties to inform them of the “emergency over” status
- Gather all forms and documents prepared during or resulting from the emergency (all completed forms should be forwarded to the On-Scene Commander or Communication Coordinator *when assigned*)
- Company representative will provide a statement to the press

The company will provide fair and timely compensation to persons that have been impacted or suffered damage as a result of the emergency.

DEBRIEFING

Post-Incident Assessment

The company will perform a post incident assessment that is intended to analyze and evaluate the response actions taken related to the event. The purpose is to identify strengths and weaknesses in the emergency response plans. This will assist us in our continuous improvement effort.

All forms and documents prepared during or as a result of the incident will be used for the post incident assessment.

The following activities are required:

1. Post Incident Debriefing

Must be held for all LEVEL 2 and 3 emergencies within 30 days after the incident has been brought under control. All parties that were involved or affected (government, public, company) must be invited to participate.

The Post Incident Debriefing will concentrate on:

- The cause of the incident
- Whether adequate resources were available to respond to it
- Whether pre-defined procedures were appropriate for an effective and timely response
- Whether personnel were properly trained
- Whether equipment was adequate and effective

2. Post Incident Report

Must be prepared and submitted to the B.C. Oil & Gas Commission within 30 days of the incident and must include the following information:

- **Executive Summary**
 - Incident location, map of area
 - Occurrence date and time
 - Duration of incident
 - Contractors (if applicable)
 - Summary of events
 - Estimated cost of the incident and control
 - Type and volume of lost production

- **Recommendations**
 - Actions to improve existing operations
 - Actions to prevent future occurrences
 - Actions to inform affected public of outcomes and findings

- **Background to the incident**
 - Operator history in the area
 - Details of any previous nearby incidents
 - Summary and assessment of conditions and events immediately preceding the incident
 - Copy of the specific emergency response plan(s) if in effect or the corporate-level ERP, with comment on how well the plan(s) worked or where improvements could be made.

- **Description of the Incident**
 - Summary of the event
 - Details of internal and external notification
 - Response and control measures
 - Details of any monitoring programs (air, water, soils) including their results
 - Security and safety measures for the site and potentially affected area
 - Use of contractors
 - Communications program and media involvement, including an assessment of their effectiveness, what worked well, and where improvements can be made
 - Actual or suspected cause, the rationale used to determine the cause, and if applicable, the progression from a kick to a blow to a blowout.

- **Copy of drilling plan** (if applicable) including overview of geology and summary sheet of well data

- **Description of all potential impacts and steps taken during the incident to monitor and minimize the effects on:**
 - public
 - workers
 - environment
 - animals (domestic and wildlife)

DEMOBILIZE AND DEBRIEFING

- **A copy of or sufficient detail with respect to appropriate maintenance and operating programs related to the incident, e.g....**
 - SCADA systems
 - pipeline corrosion programs
 - ESD valve operating conditions and maintenance programs
 - tour reports
 - drilling recorder and mud volume information
 - blowout preventer test and inspection report
 - employee certifications
- **All 3rd party analysis of any pipeline or equipment failures (if applicable)**
- **Copy of personnel statements**
- **Conclusion with emphasis on:**
 - how the knowledge gained from this incident will be shared with other operators
 - timeline to implement actions, including measurement points that will be used to ensure actions are followed up, resulting in lasting improvement.

3. NEB Reporting (if required)

Preliminary and detailed incident reports must be provided to the National Energy Board for any incident meeting NEB reporting guidelines and subsequently reported to the Transportation Safety Board. These reports should be directed to:

Transportation Safety Board of Canada
Place du Centre, 4th Floor
200 Promenade du Portage
Hull, Quebec
K1A 1K8

However, after notification of an incident, an inspection officer may partially or completely relieve us from the requirement to submit a preliminary and detailed incident report.

The information contained in your report may be the subject of a request for information pursuant to the Freedom of Information and Protection of Privacy Act (FOIP). Please identify those portions of your report that you believe contain confidential information and explain, within the report, why you believe the information to be confidential.

FIRST RESPONSE FORM

Forms

Emergency Response Plan

CALLER INFORMATION

NAME:	DATE/TIME:
PHONE:	LOCATION:

EMERGENCY EVALUATION

CATEGORY:	LEVEL 1	LEVEL 2	LEVEL 3
EMERGENCY DESCRIPTION:			
ON-SCENE COMMANDER:	PHONE:		
INJURIES:			
EVACUATION NEEDED:	IMMEDIATE AREA ONLY		TOTAL
EVACUATION COORDINATOR:	NAME:		PHONE:
NOTIFICATION CHECKLIST	BCOGC/PEP POLICE FIRE AMBULANCE LOCAL AUTHORITY HEALTH AUTHORITY OTHER: _____		
ROADBLOCKS REQUIRED/ ESTABLISHED	ASSIGNMENTS:		

GENERAL INFORMATION

EQUIPMENT	SUBSTANCE	PROBLEM

CONTACTS MADE BY CALLER

CONTACT	PHONE	CONTACT	PHONE

INFORM THE CALLER OF ANY IMMEDIATE DANGER TO HIMSELF OR OTHERS
INSTRUCT THE CALLER IN IMMEDIATE PRECAUTIONS TO BE TAKEN
ASSURE THE CALLER THAT IMMEDIATE ACTION WILL BE TAKEN

FIRST RESPONSE FORM

Forms

Emergency Response Plan

LOCATION INFORMATION

DESCRIPTION OF LAND:
PROXIMITY TO WATER:
PROXIMITY TO PUBLIC:
IMMEDIATE DANGER:

WEATHER CONDITIONS

WIND DIRECTION/SPEED:
ROAD CONDITIONS:
OTHER:

NOTES:

ACCIDENT / INCIDENT REPORT

Forms

Emergency Response Plan

ACCIDENT/INCIDENT PARTICULARS

EXACT LOCATION:	
DATE AND TIME:	
REPORTED TO:	DATE AND TIME:

TYPE OF ACCIDENT/INCIDENT

LOST TIME	INJURY OR ILLNESS	PROPERTY DAMAGE
MEDICAL AID	PRODUCTION LOSS	OTHER

PERSONAL INJURY

NAME OF PERSON INJURED:	OCCUPATION:
DESCRIPTION OF INJURY:	

PROPERTY DAMAGE OR PRODUCTION LOSS

DESCRIPTION OF DAMAGE OR LOSS:
COST OR AMOUNT OF LOSS:
OBJECT/EQUIPMENT/SUBSTANCE INFLECTING DAMAGES:

DESCRIPTION

DESCRIBE CLEARLY HOW ACCIDENT/INCIDENT OCCURRED:
--

ACCIDENT / INCIDENT REPORT

Forms

Emergency Response Plan

ANALYSIS

WHAT ACTS, FAILURES OR CONDITIONS CONTRIBUTED MOST DIRECTLY TO THIS ACCIDENT/INCIDENT:

PREVENTION

WHAT ACTION(S) WILL BE TAKEN OR RECOMMENDED TO PREVENT RECURRENCE:

POST-INCIDENT REVIEW

PERSON RESPONSIBLE FOR FOLLOW-UP:

INVESTIGATED BY:

DATE AND TIME:

REVIEWED BY MANAGEMENT:

DATE AND TIME:

COMMENTS

MANAGEMENT COMMENTS:

ADDITIONAL COMMENTS:

INITIAL INFORMATION FORM

Forms

Emergency Response Plan

The following is information the B.C. Oil & Gas Commission will request when you call them. You must have the answers to all the questions listed. This form will either prompt you to fill in the information or it will instruct you as to the location within this document where the information can be gathered.

CONTACT AND LOCATION INFORMATION

Name of Caller: _____ Callers Direct Telephone: _____

Telephone: _____ Fax: _____

Location of Incident: _____ Legal Description: _____

Location Description: _____

On-Scene Commander: _____

Site Telephone Number: _____ Fax Number: _____

EMERGENCY INFORMATION:

Severity of Problem:	Level 1	Level 2	Level 3			
Type of Problem:	Sweet Gas Release	Sour Gas Release	Explosion	Fire	Liquid Spill	
	Vehicle Accident	Chemical Spill	Other:	_____		
Type of Operation:	Gas Plant	Pipeline	Well	Battery	Service Rig	Drilling Rig
	Other: _____					

Injuries/Fatalities: _____ (Specify)

Weather Conditions: Clear Cloudy Fog Rain Snow (See First Response Form)

WELL CONTROL MEASURES

What Control Measures has been executed? _____

Have devices on the Wellhead been activated? _____

Have any further well control measures been proposed? _____

Were any Well Control Experts called? _____

INITIAL INFORMATION FORM

Forms

Emergency Response Plan

Time of arrival of Experts _____ Where is the Meeting Place _____

EVACUATION AND ALERT refer to the Evacuation Procedures section

Present Size of EPZ _____ Has the EPZ been expanded _____

Why? _____

Have Evacuation Procedures been implemented? _____

Other Government Agencies contacted _____

Have Residents been notified _____ Method of Contact _____

Has any evacuation taken place _____ **Provide Names of Evacuees**

Evacuation Centre Location _____

Company Contact at Evacuation Centre _____ Phone Number: _____

AIR MONITORING

Has Air Monitoring been initiated? _____ Number of Monitors _____

Type and Location _____

Initial Results of Monitoring: **(Refer to Plume Tracking Form)**

Present Wind direction and Speed _____ Weather Conditions _____

IGNITION refer to the Ignition Criteria section

Ignition Criteria

Has Ignition been considered? _____ Who has Authority to Ignite? _____

INITIAL INFORMATION FORM

Forms

Emergency Response Plan

ENVIRONMENTAL CONCERNS

Liquid hydrocarbons associated with release? _____

Nearby bodies of water? _____

Municipal water intakes? _____ Are you receiving any well effluents on Surface _____

Are there any Containment Sites? _____ Location: _____

Specify Containment Procedures. _____

ON-SITE COMMAND POST

Has it been Established _____ Where? _____

On-Scene Commander _____ Telephone _____

Is Regional Emergency Operations Centre Established _____ Where? _____

Telephone _____ Contact _____

Name of Representative _____

Will Representative be prepared to issue a Press Release? _____

Has Media been notified _____ Who? _____

ANIMAL HEALTH COMPLAINT FORM

Forms

Emergency Response Plan

INITIAL CONTACT QUESTIONNAIRE

Name of person reporting incident:	Date:	Time:
Address:		
Name of livestock owner (if not the same as above):		
Address:		
Legal Land Location: LSD	SEC	TWP RGE W Telephone: (work) (home)
Nature of problem: <u>Animal Health</u> _____ Distressed _____ Death _____ Other		
Comments:		

QUESTIONS FOR LIVESTOCK OWNER:

Have you consulted your veterinarian: ___ Yes ___ No
Name of veterinarian:
Have you had an animal health examination and documentation of problem? ___ Yes ___ No
Details:
Have you made any submissions to an animal health or veterinary diagnostic laboratory? ___ Yes ___ No
Details:
Have you contacted any government agency or others for assistance or direction regarding this matter? ___ Yes ___ No
Details:
Do you know the possible source of the problem? ___ Yes ___ No
Comments:
Is the source of the problem related to an oil or gas related activity? ___ Yes ___ No
If NO, this matter will be referred to (name & dept.):

LIVESTOCK OWNER DECLARATION:

I agree to an integrated government response in investigating this situation. To allow this integrated government response to occur, I agree to allow veterinary health data collected on my animals to be shared between the participating government agencies involved in this investigation.	
_____	_____
(Date)	(Signature of livestock owner)

INVESTIGATOR QUESTIONS:

Have you or anyone else taken any samples? ___ Yes ___ No
Comments:
Possible source: ___ Oil & Gas Industry – Operator _____ _____ Other _____
Have you contacted the operator regarding this matter? ___ Yes ___ No
Describe the site: Is it a ___ well site? ___ pipeline? ___ battery? ___ plant site? ___ farmyard? ___
Is the total lease area ___ partially / ___ totally fenced? Have any photographs been taken? ___ Yes ___ No
Details:

ANIMAL HEALTH COMPLAINT FORM

Forms

Emergency Response Plan

Is there visual evidence of surface water migration off the site? ___ Yes ___ No
Does this lead to a dugout or other drinking water source for livestock? ___ Yes ___ No
What have the livestock been grazing on?
Water conditions? Feed conditions? Soil conditions?
Actions taken by operator / complainant to minimize impact

DIAGRAM OF AREA:

Signature: _____
Name (Print): _____
Telephone: _____

BOMB THREAT FORM

Forms

Emergency Response Plan

If a threat is received by telephone, the receiver of this call should:

REMAIN CALM AND LISTEN CAREFULLY

PLEASE COMPLETE THIS FORM AS COMPLETELY AS POSSIBLE

Time of call: _____ Date of call: _____

Exact wording of call: (ASK TO REPEAT IF NECESSARY) _____

Type of Threat: _____

Expected time of detonation: _____ Location of detonation: _____

DETERMINE IF YOU ARE ABLE (circle where applicable):

Voice: M F Unknown Familiar: Y N who? _____ Approx. Age: 10-15, 16-25, 26-45, 46-75

Is voice: Calm, Nervous, Young, Old, Middle-aged, Rough, Refined, Speech impediment

Accent of caller: _____ Is caller intoxicated? _____

Background Noises: traffic, music, machinery, bells, horns, aircraft, tape recorder, motors, boats/ships,
trains, crowded areas (malls, schools, etc.), other: _____

PARTICULARS REGARDING THE EVENT

What time will the bomb explode? _____ Where is it located? _____

What does it look like? _____ What kind of bomb? _____

Why are you doing this? _____ Where are you calling from? _____

What will cause it to explode? _____

Did you place the bomb? _____

What is your name or group taking responsibility for this? _____

CONTINUED ON OTHER SIDE

BOMB THREAT FORM

Forms

Emergency Response Plan

Did caller indicate knowledge of the facility: Y N If so how?: _____

Receiver of call: _____

Telephone # of call: _____ Ext. #: _____

Is this a listed or unlisted number? _____

Is this a night number? Y N If so whose #?: _____

NOTIFICATION

Notified immediate Supervisor: _____ Title: _____

Supervisor contacted building management. Time: _____

Comments: _____

Supervisor contacted police. Time: _____

Comments: _____

FOLLOW INSTRUCTIONS FROM BUILDING MANAGEMENT OR POLICE

EVACUEE EXPENSE FORM

Forms

Emergency Response Plan

NOTE: Evacuee must register at the Evacuation Centre in order to validate expense claims.

NAME:	DATE:
ADDRESS:	
RESIDENCE PHONE:	ALTERNATE:
LOCATION OF EVACUATED PREMISES:	
PERSONAL EXPENSES RESULTING FROM EVACUATION (Please attach receipts):	
Accommodation (if not provided)	\$ _____
Meals (if not provided)	\$ _____
Travel (____ km. x \$ ____/km.)	\$ _____
Other (please explain)	
_____	\$ _____
_____	\$ _____
_____	\$ _____
_____	\$ _____
TOTAL:	\$ _____
SIGNATURE:	
APPROVED BY:	SIGNATURE:

EVACUEE EXPENSE FORM

Forms

Emergency Response Plan

Notes:

EVACUEE INFORMATION FORM

Forms

Emergency Response Plan

Name:	Phone:
Residence Location:	Number of Occupants:
Time Called:	Time Checked in:
Remarks/Evacuation Route:	

Name:	Phone:
Residence Location:	Number of Occupants:
Time Called:	Time Checked in:
Remarks/Evacuation Route:	

Name:	Phone:
Residence Location:	Number of Occupants:
Time Called:	Time Checked in:
Remarks/Evacuation Route:	

Name:	Phone:
Residence Location:	Number of Occupants:
Time Called:	Time Checked in:
Remarks/Evacuation Route:	

Name:	Phone:
Residence Location:	Number of Occupants:
Time Called:	Time Checked in:
Remarks/Evacuation Route:	

EVACUEE INFORMATION FORM

Forms

Emergency Response Plan

Name:	Phone:
Residence Location:	Number of Occupants:
Time Called:	Time Checked in:
Remarks/Evacuation Route:	

Name:	Phone:
Residence Location:	Number of Occupants:
Time Called:	Time Checked in:
Remarks/Evacuation Route:	

Name:	Phone:
Residence Location:	Number of Occupants:
Time Called:	Time Checked in:
Remarks/Evacuation Route:	

Name:	Phone:
Residence Location:	Number of Occupants:
Time Called:	Time Checked in:
Remarks/Evacuation Route:	

Name:	Phone:
Residence Location:	Number of Occupants:
Time Called:	Time Checked in:
Remarks/Evacuation Route:	

PLUME TRACKING AND MONITORING

Forms

Emergency Response Plan

LOG SHEET

No.	Wind Speed	Wind Direction	Time	Location	H ₂ S Level	SO ₂ Level
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

PLUME TRACKING AND MONITORING

Forms

Emergency Response Plan

Notes:

SPILL REPORT

Forms

Emergency Response Plan

INITIAL REPORTING OF SPILL

Spill Detected By (Name and Phone #): _____
Date: _____ Time: _____ Area: _____
Spill Location Legal Description: LS ____ SC ____ TP ____ RG ____ W ____
Management Person Reported To: _____
Date: _____ Time: _____

PIPELINE INFORMATION

From: _____ To: _____
Outside Diameter: _____ Wall Thickness: _____
M.O.P.: _____ Material: _____
Material Type: _____ Material Grade: _____
Line Installation Date: _____ Number of Previous Leaks: _____
Protection (e.g. Cathodic...): _____
Type of Line:
 Flowline Transfer Inj/Disp Condensate Pipeline Fresh Water Produced Water

EQUIPMENT FAILURE INFORMATION

Production Storage Tank Pig Launcher/Receiver Flow Line Break
 Drilling/Servicing Storage Tank Flange Gasket Other (Please Specify) _____
 Block Valve _____

Cause: Corrosion Mechanical Failure Human Error Vandalism Test Failure

PRODUCT SPILLED/RECOVERED

<input type="checkbox"/> Crude Oil	Estimated Volume Spilled: _____ m ³	Recovered: _____ m ³
<input type="checkbox"/> Salt Water	Estimated Volume Spilled: _____ m ³	Recovered: _____ m ³
<input type="checkbox"/> Chemical	Estimated Volume Spilled: _____ m ³	Recovered: _____ m ³
<input type="checkbox"/> Oil Effluent	Estimated Volume Spilled: _____ m ³	Recovered: _____ m ³
<input type="checkbox"/> Fresh Water	Estimated Volume Spilled: _____ m ³	Recovered: _____ m ³

CONTAINMENT

Naturally Booms Dikes No Containment Other (Please Specify): _____

PROVINCIAL OIL & GAS AUTHORITY REPORTED TO

AEUB Office Location: _____ Date: _____
Person Reported To: _____
SIR Office Location: _____ Date: _____
Person Reported To: _____
MIEDM Office Location: _____ Date: _____
Person Reported To: _____
BCOGC Office Location: _____ Date: _____
Person Reported To: _____

AFFECTED LANDOWNERS/RESIDENTS

Name: _____	Date/Time: _____	Phone: _____
Name: _____	Date/Time: _____	Phone: _____
Name: _____	Date/Time: _____	Phone: _____
Name: _____	Date/Time: _____	Phone: _____
Name: _____	Date/Time: _____	Phone: _____

SPILL REPORT

Forms

Emergency Response Plan

SPILL AREA SKETCH

Directions to spill site area: _____

Surface Feature Affected (choose up to 3):
___ Cultivated ___ Uncultivated ___ Bush ___ Surface Water ___ Groundwater ___ Access ___ Other _____

Size of Area Affected (fill in one): _____ Square Meters _____ Hectares
Total Area Affected: _____ % on lease _____ % off lease
Soil Amendment: Type: _____ Amount: _____

NORTH

Comments (include reason for failure):

SPILL REPORT

Forms

Emergency Response Plan

REPAIRS AND RESTORATION

Oil & Gas Regulatory Authority Notified: ___ Yes ___ No Date: _____ Time: _____
Landowners/Residents Notified: ___ Yes ___ No Date: _____ Time: _____
Contaminated Material Disposed of: ___ Yes ___ No Date: _____ Time: _____
Environmental Consultant: _____

SITE DAMAGE SUMMARY

Damage incurred to environmentally sensitive areas such as lakes, streams, dugouts, etc. (include sketch and show details):

Describe other damages such as buildings, equipment, third party property, etc:

Describe any injury in connection with the event:

ACTION TAKEN

Remediation strategy and repair strategy. Include details on where material was taken (Facility Name, Landfill, etc.). Comment regarding the action taken to repair damage (e.g. Dug up and repaired 2 metres of line then backfilled.).

REMEDIAL WORK COMPLETION

Oil & Gas Regulatory Authority Office Notified: ___ Yes Date: _____
Landowner(s)/Resident(s) Notified: ___ Yes Date: _____
Sketch completed and attached to report: ___ Yes Date: _____

Cleanup Costs to Date: \$ _____ . _____
Estimated Project Remediation Cost: \$ _____ . _____

Report Prepared By: _____ Phone: _____ Date: _____

NEB DETAILED INCIDENT REPORT

Forms

Emergency Response Plan



National Energy Board
Office national de l'énergie

DETAILED INCIDENT REPORT

Type or print in black pen

Board Use Only

NEB Incident No. _____ Date Received _____ NEB Investigator _____
Investigator Comments _____

Secretary
National Energy Board
444 Seventh Avenue S.W.
Calgary, Alberta T2P 0X8 • Fax: (403) 292-5503

PART A – OPERATOR INFORMATION

Name of Company _____
Address of Company _____
Pipeline Name _____

PART B – TIME, WEATHER AND LOCATION OF INCIDENT

Date (month) _____ (day) _____ (year) _____
Hour (24 hour system & time zone) _____
Weather temperature: _____ °C precipitation: _____ windspeed & direction: _____
CSA Class Location 1 2 3 4
Location (provide specific location using a chainage description (MLV, kmP), land survey description or prominent landmarks)

PART C – ORIGIN OF SPILL/RELEASE

Facility Involved:
 Line Pipe Tank Farm Pump Station Compressor Station Regulator/Meter Station
 Gas Plant Other Related Facility (specify) _____
Equipment Involved:
 Pipe Valve Fitting Pressure relief device Compressor
 Pump Pressure vessel Tank Instrumentation
 Other (specify) _____

PART D – SPILLS AND RELEASES (Report LVP and HVP spills only if in excess of 1.5m³)

Gas LVP HVP Toxic Substance
Product/substance name _____
Volume spilled/release _____
Was there a fire? Yes No Was there an explosion? Yes No

NEB DETAILED INCIDENT REPORT

Forms

Emergency Response Plan

PART E – IMMEDIATE CAUSE FOR INCIDENTS ON OPERATING PIPELINES (Immediate Cause: means unsafe acts or unsafe conditions)

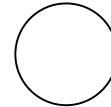
Failed pipe, Operator personnel error, Other (specify), Failed weld, External loading or natural forces, Corrosion, Equipment malfunction/failure

PART F – LINE PIPE DATA

Type of Failure, Nominal Diameter, Wall Thickness, Date of Manufacture, Weld Process, SMYS, Pipe Specification, Pipe Location, Maximum Operating Pressure, Pressure at time of incident, Latest Pressure Test Date, Maximum Test Pressure, Test Duration

PART G – CORROSION FAILURES

Corrosion Location: Internal/External, Circumferential Position Looking Downstream, Type of Corrosion, Type of Coating



PART H – FAILURES DUE TO EXTERNAL LOAD OR NTURAL FORCES

Damage by operator or its contractor, Damage by other parties, Earth movement, Lightning/Fire, Other (specify), Name of Contractor/Other Party, Address, Telephone, Name of Representative

PART I – EQUIPMENT MALFUNCTION/FAILURE

Equipment, Manufacturer, Model #, Year Equipment Installed, Year Equipment Manufactured

PART J – ESTIMATE OF TOTAL COST OF INCIDENT (Including repair, cleanup and restoration)

\$

PART K – REPAIR DESCRIPTION (Description of all repairs to the pipeline made necessary by the incident and date of return to service of the pipeline)

Multiple blank lines for describing repairs and return to service dates.

NEB DETAILED INCIDENT REPORT

Forms

Emergency Response Plan

PART O – WITNESS INFORMATION	
Name _____	Telephone () _____
_____	() _____
_____	() _____
_____	() _____
_____	() _____
PART P – BASIC CAUSES OF INCIDENT <i>(Identify all basic causes contributing to the incident. Basic cause – means the real or root causes of why the unsafe acts and unsafe conditions as described in the immediate cause occurred. Several basic causes may be assigned for one incident)</i>	
<input type="checkbox"/> Inadequate training <input type="checkbox"/> Inadequate work standards or procedures <input type="checkbox"/> Inadequate materials, tools or equipment <input type="checkbox"/> Inadequate design/maintenance <input type="checkbox"/> Non-compliance with work standards or procedures <input type="checkbox"/> Other (specify) _____	
Additional comments on selected basic cause: _____	

PART Q – CORRECTIVE ACTIONS TAKEN TO PREVENT SIMILAR INCIDENTS <i>(If no corrective action taken, state reasons why)</i>	

PART R – NAME OF PERSON CONDUCTING COMPANY INVESTIGATION	
Name _____	
Title _____	
Telephone () _____	Fax () _____
PART S – NAMES OF OTHER AGENCIES INVESTIGATING INCIDENT	
Agency _____	Agency _____
Telephone _____	Telephone _____
Contact Name _____	Contact Name _____
Agency _____	Agency _____
Telephone _____	Telephone _____
Contact Name _____	Contact Name _____
PART T – NAME AND TITLE OF COMPANY REPRESENTATIVE FILING REPORT	
Name _____	Signature _____
Title _____	
Telephone () _____	Fax () _____
Date (time) _____ (month) _____ (day) _____ (year) _____	

EVACUATION PROCEDURES

EVACUATION IS VOLUNTARY UNLESS A STATE OF EMERGENCY OR CLOSURE ORDER IS DECLARED BY THE GOVERNING AGENCY.

Resident locations within the EPZ including phone numbers and Evacuation Centre information are contained within the Site Specific Information Sections of this document. A map of the area showing residence locations is found in the Map section.

Factors considered prior to evacuation are : the level of emergency, the conditions of the Wellsite and if these conditions are likely to escalate to a more serious situation, the residents' sensitivities and /or medical conditions and, levels of H2S reaching the public outside the EPZ.

Notification of Sensitive Residents

Residents within the EPZ that have been identified as requiring early notification are identified on the Resident Summary, located in the Resident Information section. These residents must be notified at a level 1 emergency. They may decide whether to voluntarily evacuate. Notification of all other residents within the EPZ must begin at a Level 2 emergency.

Evacuation / Sheltering Summary

Evacuation is the primary public protection measure for long-term releases if the public can be safely removed from the area. The company must evacuate the public within the EPZ. Evacuation must be initiated no later than a level-2 emergency and should begin with those downwind or closest to the release site.

Or

Asking the resident to seek shelter by moving indoors to an upstairs interior room, closing doors and windows, shutting off all air intake fans which exhaust outdoors (e.g. clothes dryer, stove vents, vacu-flo system, air conditioner and bathroom fans), turning off furnace and hot water pilot lights, extinguishing fires in fireplaces and turning off any appliance that draws outside air is an alternate means to evacuation. This is appropriate if:

- There is not enough time or warning to safely evacuate the public that may be at risk
- Residents are waiting to be evacuated
- The duration of the release is short (e.g. due to a pipeline rupture)
- Location of release has not been identified
- The public would be at higher risk because of evacuation
- The buildings are considered to be within or near to toxic or explosive gas plumes
- Escape routes traverse the hazard

Sheltering should be of short duration, several minutes to half an hour.

EVACUATION PROCEDURES

Reference Materials

Emergency Response Plan

The operator should maximize the safety of the sheltered residents by following these precautions:

- Initiating ignition procedures if any ignition criteria are met
- Containing the release
- Initiating evacuation procedures if conditions are determined to be safe

Note: It is important to provide contact numbers to sheltered members of the public. They must be reassured that they have not been forgotten and that sheltering is the safest action at this time.

Evacuation Actions

1. Assign Evacuation Team responsibilities. Go to the **Response Team** section.
2. Determine if sheltering or evacuation is the best course of action.
3. Activate the Evacuation Centre, refer to **Evacuation Centres** for predefined locations. Dispatch the Evacuation Centre Representative to receive residents that have been evacuated. If it is necessary to use an Evacuation Centre other than the one predefined for this site, complete the **Evacuation Centre Information** form, page 9 of this section.
4. Prepare a standard evacuation or shelter message. Sample messages are located on pages 7 and 8 of this section.
5. Telephoners will contact residences and public centres within the Response Zones using the prepared evacuation statement. Priority should be given to those residences identified with sensitive individuals and those directly downwind.
6. Determine the best evacuation route for each resident
7. Insist that the evacuee leave immediately and must check in at the Evacuation Centre.
8. Record the following information for each evacuee on the **Evacuee Information Form** found in the **Forms** section:
 - Name
 - Telephone Number
 - Location of residence
 - Number of occupants
 - Time contacted
 - Time checked in
 - Evacuation Route
 - Remarks - which might include:
 - Are any children in School (see School Notification below)
9. Dispatch Rovers to visit residents not contacted by Telephoners and vacant residences and evacuate as necessary. Verify evacuation of those contacted and begin area search for transients within the EPZ. Additional personnel may be required to support residents identified as requiring assistance.
10. **Time may be critical** - evacuee questions will be answered at the Evacuation Centre.
11. Assign additional Rovers to assist any residents requesting assistance. Contact Local Authority or local police or RCMP for potential assistance.

EVACUATION PROCEDURES

School Notification

In a sheltering or evacuation situation Telephoners will notify schools to hold children of residents located in the Response Zones. The schools must also be instructed to advise all bus drivers to avoid entering the area.

Evacuation Centre Activities

Equipment List

NOTE: Quantities will be dependent upon the number of evacuees expected

- copy of ERP (or Emergency Contact List)
- evacuation forms (set of 3 located in FORMS Section)
- telephones (cell & land line), local telephone directory
- access to fax machine

Optional:

- tables and chairs
- basic amenities (coffee, tea, juices, etc.)
- cots, blankets
- first aid kit

1. Our representative must be present at the Centre at all times.
2. Check people into the centre - **Evacuation Centre Record - Forms** section
3. Organize food and/or shelter for the evacuees
 - provide an **Evacuee Expense Form - Forms** section
 - make arrangements to care for their livestock and pets
 - provide security for evacuated residences and businesses
4. Verify arrivals with the On-Site Command Post
5. Keep people well informed
6. Coordinate efforts to transfer children detained at school to reunite with family.
7. If people wish to leave and stay elsewhere:
 - record their destination and how the Company can contact them
 - distribute a phone number that people can contact the Company

Secure Access to Area

To protect public from entering the emergency panning zone, manned roadblocks must be set up and maintained on all access roads. The operator must also consider navigable water and/or railways or other types of transportation that may access the EPZ. Roadblocks should be set up and manned in conjunction with the RCMP and / or Ministry of Transportation. Communication must be available between all roadblock locations and command posts.

Entry to unsafe areas must be limited to essential personnel only. Operating personnel can request the assistance of the local authority to secure the hazard area. Use of available means; rope, barricades, roadblocks, security guards etc. to ensure only authorized access. Keep record of entries to evacuated area.

EVACUATION PROCEDURES

Evacuation Verification

We will dispatch Rovers to search the EPZ and leading edge of the plume any persons in the area such as transients, mobile residents and workers using the road system in this area. Consider navigable waterways and the use of helicopter equipped with loudspeaker in the verification effort. Anyone found within the evacuation zone will be directed to leave the zone immediately using the safest route.

Operating personnel from production facilities in the area could occasionally conduct business within the Emergency Planning Zone. Personnel at these production facilities are to be contacted and informed of the emergency situation.

Communication and Notification

Confirm communication links with roadblock, evacuation and air monitoring personnel and with appropriate command post(s). There will be continual telephone/ radio contact between the Response Team monitoring the release, the On-Scene Commander and employees responsible for evacuating the hazard area.

Operations personnel at gas plants in the vicinity will be notified immediately of an emergency. They may be called upon to aid in an emergency situation.

Activities such as public notification and evacuation in areas beyond the Emergency Planning Zone will be initiated by the B.C. Oil & Gas Commission and the Municipal Government or Regional District and executed in conjunction with us.

Long Term Evacuation

The duration of the incident may require that accommodation be provided for evacuees. In any situation having the potential to be sustained overnight a company representative should begin reserving adequate hotel/motel accommodation in the surrounding communities. Evacuation Centre personnel should determine if any evacuees have alternate accommodation.

If alternate accommodation is required:

1. Record how the company can continually contact each family unit
2. Provide a phone number that evacuees can use to contact the company
3. Continue arrangements for livestock and security of property and businesses
4. Provide **Evacuee Expense Form - Forms** section

Our representatives will continue to keep evacuees informed of the situation. When authorized by the B.C. Oil & Gas Commission the company will contact and assist, if necessary, evacuees to return to their residences.

EVACUATION PROCEDURES

BEYOND THE EMERGENCY PLANNING ZONE

The On-Scene Commander will coordinate evacuation activities with the local authority disaster services personnel. Refer to the **Site Overview – Evacuation Summary** for information for details on responsibilities.

Evacuation beyond the EPZ will be determined by plume tracking. The following Action Levels will assist in determining evacuation requirements.

Action Levels - H₂S

H ₂ S Concentrations	Requirement
1 – 9 ppm	Individuals must be informed of the concentrations and advised to leave. All other individuals should consider leaving the area and seek medical help if health symptoms develop.
10 ppm	Immediate evacuation of the area must take place or the release must be ignited.

Action Levels - SO₂

If the release is ignited, the operator must continue to monitor SO₂ levels.

SO ₂ Concentration	Requirement
1 ppm	Voluntary evacuation
2 ppm	Evacuation should begin
5 ppm	Mandatory evacuation of the area

In conjunction with the local authority, evacuation beyond the EPZ should begin with the residences downwind of and closest to the release. Use of broadcast media may be considered to notify residents beyond the EPZ of immediate evacuation.

EVACUATION PROCEDURES

Reference Materials

Emergency Response Plan

This page intentionally blank

EVACUATION PROCEDURES

NOTIFICATION – PROBLEM - SEEK SHELTER

Identify yourself as a representative of the company and use the following message.

I am calling to advise you of an operational problem we are having at our drilling site located (*state location of drilling site in relation to residence*). As a safety precaution please remain in-doors in an upstairs interior room with your doors and windows closed. Shut off all air intake fans that exhaust outdoors, turn off furnace and hot water pilot lights, extinguish fires in fireplaces and turn off any appliance that draws outside air.

How many people are at your residence now?

Are there small children, pregnant mothers, elderly, disabled or individuals with respiratory sensitivity or heart problem?

If the situation changes and requires you to leave, we will call you back and advise you what to do.

If the situation requires you to evacuate, will you need transportation?

I will call you back to give you an update. If you have any questions, please call me at (*telephone number*). We are asking that you minimize the use of your telephone during this time to ensure our ability to call you if the need arises.

EVACUATION PROCEDURES

NOTIFICATION - EVACUATION

Identify yourself as a representative of the company and use the following message.

I am calling to advise you of an operational problem we are having at our drilling site located (*state location of well site in relation to residence*) that requires you to leave your residence. You are in no immediate danger, but as a precaution we want you and others with you to proceed directly to (*designated location*) where we have established an evacuation centre.

How many people are presently at your home?

Do you have adequate transportation?

If yes:

Please travel (*direction*) of your location. That route will take you safely out of the hazard area.

If no:

Close all doors and windows and our driver will be there shortly to pick you up.

If records show school aged children at this residence, read the following:

We have contacted the schools and they will hold students at the school. You may pick them up or we can arrange to have them taken to the evacuation centre.

It is very important for us to know where you can be contacted both during and after the evacuation so please report in at the evacuation centre. Our representative at the centre will address any concerns you may have.

Please do not use your telephone as it may hinder our efforts to contact you. Thank you for your cooperation.

EVACUATION CENTRE INFORMATION

Reference Materials

Emergency Response Plan

LOCATION DETAILS

Evacuation Centre Location: _____

Directions:

General Instructions:

Number of people facility can accommodate: _____

CONTACTS

Contact Names:

Telephone:

**NOTIFICATIONS
(Check List)**

Police: _____

Emergency Mgmt: _____

Municipality: _____

Ambulance: _____

Fire Department: _____

Schools: _____

PEP: _____

O H & S: _____

Media: _____

Number of persons checked in: _____

EVACUATION CENTRE INFORMATION

Reference Materials

Emergency Response Plan

LONG TERM EVACUATION OPTIONS

If required, locations such as hotels have been identified in the **Response Centres** section under the heading Long Term Evacuation that may be used for extended evacuation of residents. Select a location and contact the centre and determine its ability to be used. Compensation for the use of the facility is to be provided by the company.

GOVERNMENT ROLES AND RESPONSIBILITIES

BRITISH COLUMBIA GOVERNMENT AGENCIES

1. Notification

Provincial government agencies and local authorities are involved in the implementation of the ERP. When criteria for a Level 1 emergency is met, the On-Scene Commander must immediately contact and inform the local police or RCMP and B.C Oil & Gas Commission (*through the Provincial Emergency Program*) of the emergency situation. Liaison with involved government agencies will be through the Oil & Gas Commission representative.

2. B.C. Oil & Gas Commission

- Oversees the operator's response to an incident
- Notified by PEP of incidents within OGC's jurisdiction
- Establishes communication with the operator
- Confirms incident level with operator
- Confirms downgrade of incident level
- Issues road closure order upon request from the operator
- Request 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 operator

3. Provincial Emergency Program (PEP)

In an Oil and Gas Related Event PEP will:

- Notify the BCOGC and the Ministry of Environment

In a Provincial Emergency PEP will:

- Implement the Government of B.C. Provincial Emergency Program telephone fan-out to alert all affected departments (including the BCOGC), municipalities and other orders of government and industry
- Alert the following local authorities whose jurisdictional boundary is affected by the incident
 - B.C. Ministry of Environment (Regional Office)
 - Fish & Wildlife Branch
 - Pollution Protection Branch
 - B.C. Ministry of Forests, Forest Service
 - B.C. Ministry of Transportation / Federal Public Works
 - Local Board of Health Unit
- Coordinate reception plans for evacuation of the public with the affected municipalities
- All other actions to protect B.C. public and property from the effects of sour gas

4. WorkSafeBC (WCB)

G-D10-172-1 WorkSafeBC notification of serious injuries (Issued February 12, 2008; Editorial Revision February 11, 2009)

Regulatory excerpt

Section 172 of the *Workers Compensation Act* ("Act") states:

172 (1) An employer must immediately notify the Board of the occurrence of any accident that

- (a) resulted in serious injury to or the death of a worker,
- (b) involved a major structural failure or collapse of a building, bridge, tower, crane, hoist, temporary construction support system or excavation,
- (c) involved the major release of a hazardous substance, or
- (d) was an incident required by regulation to be reported.

Purpose of guideline

The purpose of this guideline is to set out what WorkSafeBC considers to be a "serious injury," which an employer would be required to report to WorkSafeBC.

What employers must report

Section 172 provides that employers must immediately report

- Any incident that kills or seriously injures a worker
- A major leak or release of a dangerous substance
- A major structural failure or collapse of a structure, equipment, construction support system, or excavation
- Any blasting accident that results in injury, or unusual event involving explosives (required by regulation)
- A diving incident that causes death, injury, or decompression sickness requiring treatment (required by regulation)

Such incidents must also be investigated by the employer under s. 173

"Serious Injury"

Section 172 provides that employers must notify WorkSafeBC of an accident that resulted in the "serious injury" or death of a worker. The term "serious injury" is not defined in the *Act*.

A serious injury is any injury that can reasonably be expected at the time of the incident to endanger life or cause permanent injury. Serious injuries include both traumatic injuries that are life threatening or that result in a loss of consciousness, and incidents such as chemical exposures, heat stress, and cold stress which are likely to result in a life threatening condition or cause permanent injury or significant physical impairment.

Traumatic injuries that should be considered "serious injuries" include

- Major fractures or crush injuries, such as
- A fracture of the skull, spine, or pelvis

GOVERNMENT ROLES AND RESPONSIBILITIES

Reference Materials

Emergency Response Plan

- Multiple, open or compound fractures, or fractures to major bones such as the humerus, fibula or tibia, or radius or ulna
- Crushing injuries to the trunk, head or neck, or multiple crush injuries
- An amputation, at the time of the accident, of an arm or leg or amputation of a major part of a hand or foot
- Penetrating injuries to eye, head, neck, chest, abdomen, or groin
- An accident that caused significant respiratory compromise, or punctured lung
- Circulatory shock (i.e. internal hemorrhage) or injury to any internal organ
- Lacerations that cause severe hemorrhages
- All burns that meet the rapid transport criteria of the Occupational First Aid Training Manual, including
 - Third degree burns to more than 2% of the body surface
 - Third degree burns to the face, head, or neck
 - Burns of any degree with complications
- An asphyxiation or poisoning resulting in a partial or total loss of physical control (i.e. loss of consciousness of a worker in a confined space) or a respiratory rate of fewer than 10 breaths per minute or severe dyspnea (difficult or laboured breathing)
- Decompression illness, or lung over-pressurization during or after a dive or any incident of near drowning
- Traumatic injury which is likely to result in a loss of sight, hearing or touch

Injuries that require a critical intervention such as CPR, artificial ventilation or control of hemorrhaging or **treatment beyond First Aid, such as the intervention of Emergency Health Services personnel (e.g. transportation to further medical attention)**, a physician and subsequent surgery, or admittance to an intensive care unit should also be considered "serious injuries."

"Major Release of a Hazardous Substance"

Section 172 provides that employers must notify WorkSafeBC of any accident that involved the major release of a hazardous substance. The term "major release of a hazardous substance" is explained in Policy Item D10-172-1.

A major release does not only mean a considerable quantity, or the peculiar nature of the release, such as a gas or volatile liquid, but, more importantly, **the seriousness of the risk to the health of workers**. Factors that determine the seriousness of the risk include the degree of preparedness of the employer to respond to the release, the necessity of working in close proximity to the release, the atmospheric conditions at the time of the release and the nature of the substance.

"Immediately"

Employers are required to report serious injuries and fatalities to WorkSafeBC immediately. This reporting should occur as part of the employers' response at the time of the incident. In responding to the incident, employers should ensure any workplace conditions that present an immediate hazard to other workers are addressed, ensure first aid and medical treatment for the worker, and then notify WorkSafeBC of the incident.

The purpose of the reporting requirement in s. 172 is to ensure that a WorkSafeBC prevention officer and/or an investigations officer is able to respond to the incident, as soon as possible, in order to:

GOVERNMENT ROLES AND RESPONSIBILITIES

Reference Materials

Emergency Response Plan

- Attend at the scene to conduct an investigation of the incident and ensure the integrity of the scene
- Offer availability of counseling services, as appropriate
- Undertake an inspection of the workplace to help ensure that workers are protected before work is resumed
- Help ensure that any post-incident response or cleanup is performed in a safe manner
- Provide a referral to compensation services

The requirement to immediately report a serious injury or fatality is separate from the requirement to report injuries for claims purposes. **Filing a Form 7 will not satisfy the obligation to immediately report a serious injury or fatality.**

Failure to immediately notify WorkSafeBC of a serious injury or fatality will be considered a breach of section 172 of the *Act*, and may result in an administrative penalty.

5. B.C. Ministry of Environment

- A Ministry representative (Environmental Emergency Response Officer – EERO) will provide regulatory oversight and monitor the situation to ensure that the Responsible Party (RP) is taking the appropriate actions
- May provide a representative to the Off-Site Command Centre (OSCC) and the OGC Emergency Operations Centre (EOC) and/ or the Provincial Emergency Operations Centre (PREOC) on a 24-hour basis. In a larger scale incident, based on risk, additional ministry resources such as IMTs (Incident Management Teams) may be deployed to establish unified command and monitor, augment, or take over the response if the Responsible Party fails to take appropriate actions as deemed necessary by the EERP or Provincial Incident Commander
- May assist the RP to ensure that other required agencies and affected stakeholders are contacted
- Monitors all discharges to the land, atmosphere and all water bodies
- May provide assistance with hazardous waste management
- May conduct sampling for monitoring and enforcement purposes

6. B.C. Ministry of Forests, Forest Service

- Will assist with forest fires declared a provincial emergency

7. B.C. Ministry of Transportation

- Provide authorization and assistance for roadblocks on major provincial/federal roads

8. Local Board of Health Unit

Regional Health Authority - (Northern Health and Peace Country Health)

- Act as a consultant utilizing provided information on toxic chemicals to the Emergency Operations Center

GOVERNMENT ROLES AND RESPONSIBILITIES

Reference Materials

Emergency Response Plan

- Monitor health effects of the incident to ensure appropriate data is collected and investigate such health effects
- Provide advice to the government on the existing or potential health effects of the incident
- Establish and operate trauma teams for emergency health services
- Provide health advice and safety levels for any health care or special care facility and for the more vulnerable residents
- Monitor adverse effects/contamination of water systems
- Enforce and regulate Public Health Regulations

9. R.C.M.P.

- Assist with roadblocks, traffic control, evacuation and residence security

10. Local Municipal Government/Regional District/First Nation

(Refer to the Site Overview – Local Authority Involvement section of this document for specific Roles & Response capabilities of each affected authority)

- Implement the district/municipal emergency plan and use any or all of the resources available to the municipality to protect the health, safety and welfare of the public
- Provide authorization and assistance for roadblocks on district roads

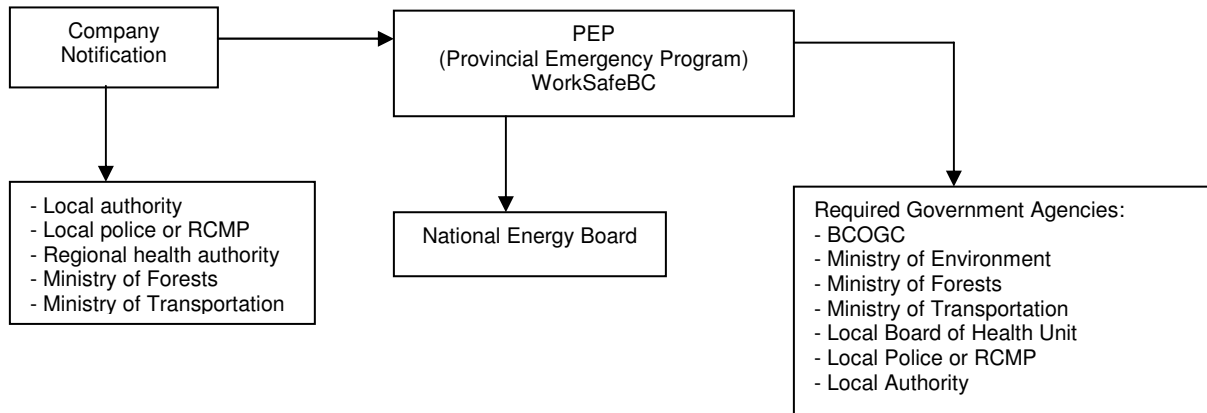
COMMUNICATION GUIDELINES

COMMUNICATION PLAN OVERVIEW

The Response Sections of our ERP establish procedures for contacting and maintaining communication with key company personnel, government agencies, support services, the public and the media.

The communication systems and equipment that will be needed in the response to an emergency is identified in the site safety equipment section.

The following flowchart provides a visual representation of the normal channels of communication that would be used during an emergency.



Government Communications

At any level of an emergency the BCOGC through PEP must be notified. At this time we will have determined the level of the emergency using the criteria identified in the ERP. The level will be confirmed during consultation with the BCOGC. Our representative must also contact any agencies and services required to assist with the response.

At any time the emergency is determined to be level 2 or 3 we will ensure appropriate government agencies and departments have been notified.

The BCOGC may release information relevant to the emergency at any time it perceives the need.

Public Notification

Members of the public, both within and beyond the EPZ, that are directly impacted by an emergency situation will be contacted as detailed in the ERP. The plan also includes communication and implementation procedures for public protection purposes such as evacuation and sheltering. Ongoing communication will be maintained with the affected public to ensure they are kept informed of the situation and the actions being taken.

COMMUNICATION GUIDELINES

Media Communications

The plan identifies our Media Representative as the company spokesperson that will interact with the BCOGC and other applicable government agencies. The company will use written releases, news conferences and any other effective means, to provide information to the media. All news releases will be coordinated with the BCOGC to ensure consistent and accurate information is available to the public. The frequency of information released to the media will be determined through proactive scheduling to the local, regional and national interest. Media releases will also be provided when any significant development occurs.

As soon as possible the public must be informed of:

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

Downgrade Notification

The decision to downgrade a level 2 or level 3 emergency is made in consultation with the BCOGC and provincial disaster service authorities. The Response Team and Media Representative will provide all affected persons and the media with information regarding the change in status of the emergency. Further information related to downgrading an emergency can be found in the **Demobilize and Debriefing** section.

H₂S / SO₂ EFFECTS AND SENSITIVITIES

HYDROGEN SULPHIDE

If residents are exposed to hydrogen sulphide, these are the actions they can take:

- If indoors, and the smell of hydrogen sulphide becomes offensive, close all doors and windows
- Monitor the radio or television for explanation information on contaminant levels and instructions.

If the level of hydrogen sulphide reaches 1.0 ppm or greater, this is a voluntary evacuation level for sensitive individuals (that is, those persons with pre-existing health problems), and would include the following sensitivities:

- Chronic respiratory disorders (bronchitis, emphysema, asthma)
- Acute respiratory infections
- Chronic cardiac failure
- Pregnancy
- Children (especially preschoolers)
- Hepatic disease (liver)
- Neurological problems
- Patients being treated with immunosuppressants
- Eye problems
- Anyone experiencing any adverse symptoms

While these levels are useful as a guide, anyone continuing to experience symptoms should consult a physician and leave the area.

When hydrogen sulphide readings reach the 10 ppm level, urgent evacuation will be advised.

Characteristics

- Found in decaying organic matter, natural oil and gas, silos, sewers
- Found as a gas at temperatures above -60°C
- Colourless
- Flammable – burns to form SO₂
- Odour of rotten eggs at low concentrations – kills all sense of smell at higher concentrations
- Extremely toxic
- At lower concentrations (20-50 ppm) irritates mucous membranes (eyes, throat, lungs), causes headaches, dizziness, nausea, may cause pulmonary edema (fluid in the lungs) upon prolonged exposure
- High concentrations (500-1000 ppm) causes paralysis of the respiratory centre in the brain, breathing stops, suffocation occurs
- This gas is dangerous because it kills the sense of smell very quickly and one is not aware of the level of concentration that is present

H₂S / SO₂ EFFECTS AND SENSITIVITIES

Reference Materials

Emergency Response Plan

General Health Effects

Concentration (ppm)	Effects
0.01-0.3	Odour threshold
1-5	Moderate to strong offensive odour may create nausea, tearing of the eyes, headaches or loss of sleep upon prolonged exposure – effects are moderate
10	Ceiling Limit (B.C. WCB)
20-50	Slight eye and lung irritation – may cause eye damage after several days of exposure, may cause digestive upset and loss of appetite
100	Eye and lung irritation
150	Kills sense of smell, severe eye and lung irritation
500	Serious damage to eyes within 30 minutes, severe lung irritation, unconsciousness and death within 4 to 8 hours
1000	Breathing stops within one or two breaths

SULPHUR DIOXIDE

Environmental monitoring equipment will measure sulphur dioxide levels as a result of the flaring of a sour gas release.

The major sub-groups of the population that appear likely to be most sensitive to the effects of sulphur dioxide include:

- Asthmatics
- Individuals not diagnosed as asthmatic but with allergic disorders
- Individuals with chronic obstructive pulmonary or cardiovascular disease
- The elderly
- Children, especially pre-schoolers

If residents are indoors and smell of sulphur becomes offensive, they should close all doors and windows and monitor the radio or television for an explanation or information on contaminant levels and instructions.

Those individuals who experience difficulties at any concentration level of SO₂ should voluntarily leave the area and consult with a physician

H₂S / SO₂ EFFECTS AND SENSITIVITIES

Reference Materials

Emergency Response Plan

Characteristics

This is a choking gas, unlike H₂S, and one wants to move to an area where the discomfort is not experienced.

- Formed by the combustion of H₂S or sulphur and is non-flammable
- Found as a gas at temperatures above -10⁰C
- Has the odour that occurs when a wooden match is extinguished
- Highly irritating – dissolves to form sulphuric acid
- At lower concentrations irritates the eyes, nose and throat, causes difficulty in breathing and shortness of breath
- Causes pulmonary edema at high concentrations – may be fatal
- Effect on heavy smokers are more severe

General Health Effects

Concentration (ppm)	Effects
0.13	24 hour evacuation level (MWLAP Level B criteria)
0.34	One hour average evacuation level (MWLAP Level B criteria)
2	Eight hour Occupational Exposure Limit (BC WCB)
3-5	Odour threshold
5	15 minute Occupational Exposure Limit (BC WCB)
8-12	Throat irritation, coughing, constriction in chest, tearing and smarting of the eyes
10-50	Exposure 5-15 minutes will cause increased irritation of the eyes, nose, throat, choking, coughing, and in some cases, wheezing as a sign of narrowing of the airways (which increases the resistance of the air-flow)
150	Short term endurance lost due to severe eye irritation and because of the effects on the membranes of the nose, throat and lungs
500	Highly dangerous after an exposure of 30-60 minutes
1000-2000	May be fatal with continued exposure

