		<b>Plan</b>
Department: Transportation H.S.S.E.		Next Review: 2027-Jan
Document Title: Milk River Emergency Response Plan		Revision Date: 2026-Jan
Document Number: MR-EM-ERP-0001	Doc. Status: Active	Rev: 1

**Milk River  
Emergency Response Plan**

**24 Hour Emergency Control Centre number: 1-800-727-7163**

**Manual #: \_\_\_\_\_**

**Issued to (location): \_\_\_\_\_**

**Issued to (person): \_\_\_\_\_**

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## Plan Distribution

This Plan is readily available to employees in electronic format – refer to the Reference Library under MyContent to access the most current version of this Plan, as well as any applicable supplemental plan(s).

Overall responsibility for plan distribution rests with the Facilities Infrastructure EM Representative. Relevant records relating to external Plan Distribution will be kept in MyContent.

Internal Distribution

### Section Redacted

External Distribution

### Section Redacted

## Revision Record

The TBU Emergency Management representative, in coordination with TBU Field Offices/Facilities, and Senior Leadership, shall be responsible for the maintenance of this Plan. It shall be reviewed and updated annually at minimum, or as needed, to reflect changes in government regulations and/or company procedures.

Revised plans will be distributed to noted plan holders who are responsible for destroying the outdated plans and advising the TBU Emergency Management representative once complete.

This Plan documents revision records for a period of five years, in accordance with applicable regulations and IPL's document retention policy.

Date	Version	Description of Revision
<b>Asset plans prior to December 31, 2025, are available in MyContent.</b>		
<b>January 1, 2026</b>	1	New ERP format release

### ERP Revision Request Form

If you find any errors in this Plan, or if you become aware of regulatory or industry procedural changes, please document the information and forward to the Facilities Infrastructure (NGL) Emergency Management representative for inclusion in the next update.

<b>Send to:</b>		<b>E-mail:</b>	
<b>PLAN REVISION IDENTIFICATION INFORMATION</b>			
<b>Plan Name:</b>			
<b>Version Number/Date:</b>		<b>Section Number:</b>	<b>Page Number:</b>
<b>Revision Requested By:</b>		<b>Organization:</b>	
<b>DESCRIPTION OF REVISION</b>			
<b>RATIONALE</b>			
<b>EMERGENCY MANAGEMENT REPRESENTATIVE USE ONLY</b>			
<b>Reviewed/Approved By:</b>		<b>Corrective Action No.:</b>	
<b>If not approved, provide explanation and date follow up communication to Requestor completed.:</b>			
<b>FILE REF</b>			

### Form 1 - ERP Revision Request Form

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## 1 ADMINISTRATION

### 1.1 Purpose

This plan is intended to act as a guide for operations staff on how to safely manage emergency situations through effective identification, assessment, response, notification, and documentation of events, in a flexible and effective manner. It will be used to promote worker and public safety, prevent, or minimize impact on the environment, reduce corporate loss, and provide notification to the proper authorities and Milk River Pipeline personnel.

### 1.2 Scope

This emergency response plan describes the organization, strategies and procedures required to address emergency situations affecting Milk River Pipeline Ltd. (Milk River Pipeline) employees, workers, operations, properties, customers, the public and the environment. It is intended to work in conjunction with Milk River Pipeline's Business Continuity and Emergency Management Planning and Response Standard to reduce the overall probability and magnitude of losses and impacts related to emergencies. This plan is not intended to replace current reporting or operating procedures for incidents of a non-emergency nature.

### 1.3 Plan Administration

This Emergency Response Plan (ERP) shall be reviewed and updated annually or sooner if needed, to reflect changes in government regulations and/or company procedures, update contact lists, and to continually improve emergency management capabilities. The most up-to-date copy of the ERP is found in MyContent in the reference library.

Proposed changes, revisions or modifications to the ERP should be submitted to the Business Continuity/Emergency Management Advisor or local Administrative Assistant, using the **ERP Revision Request Form (Form 1)** of this plan. Changes to the content of the plan, other than phone numbers and editorial corrections, must undergo the Milk River Pipeline Management of Change process.

The area's Administrative Assistant shall send revisions of the ERP to holders of numbered copies of the plans, as identified by a distribution list maintained for each plan. Any changes in plan holders or any lost or misplaced plans should be identified to the Administrative Assistant to allow the distribution list to be updated accordingly. The ERPs are distributed to Supervisors, Technicians, selected corporate staff and other personnel as appropriate. Copies are also distributed to the Emergency Coordination Centre (ECC), Control Room and other locations as required.

Holders of numbered copies of the ERPs are responsible for immediately updating the plan when revised pages are received.

The contents of the entire ERP shall be re-issued periodically, as determined by the Transportation Senior Emergency Response Advisor to ensure that all plans are complete and current.

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## **2 EMERGENCY ACTIVATION, NOTIFICATION AND COMMUNICATION PROCEDURES**

Any Milk River Pipeline employee may activate this plan if required. Activation of the plan can be achieved by calling the Milk River Pipeline Emergency number:

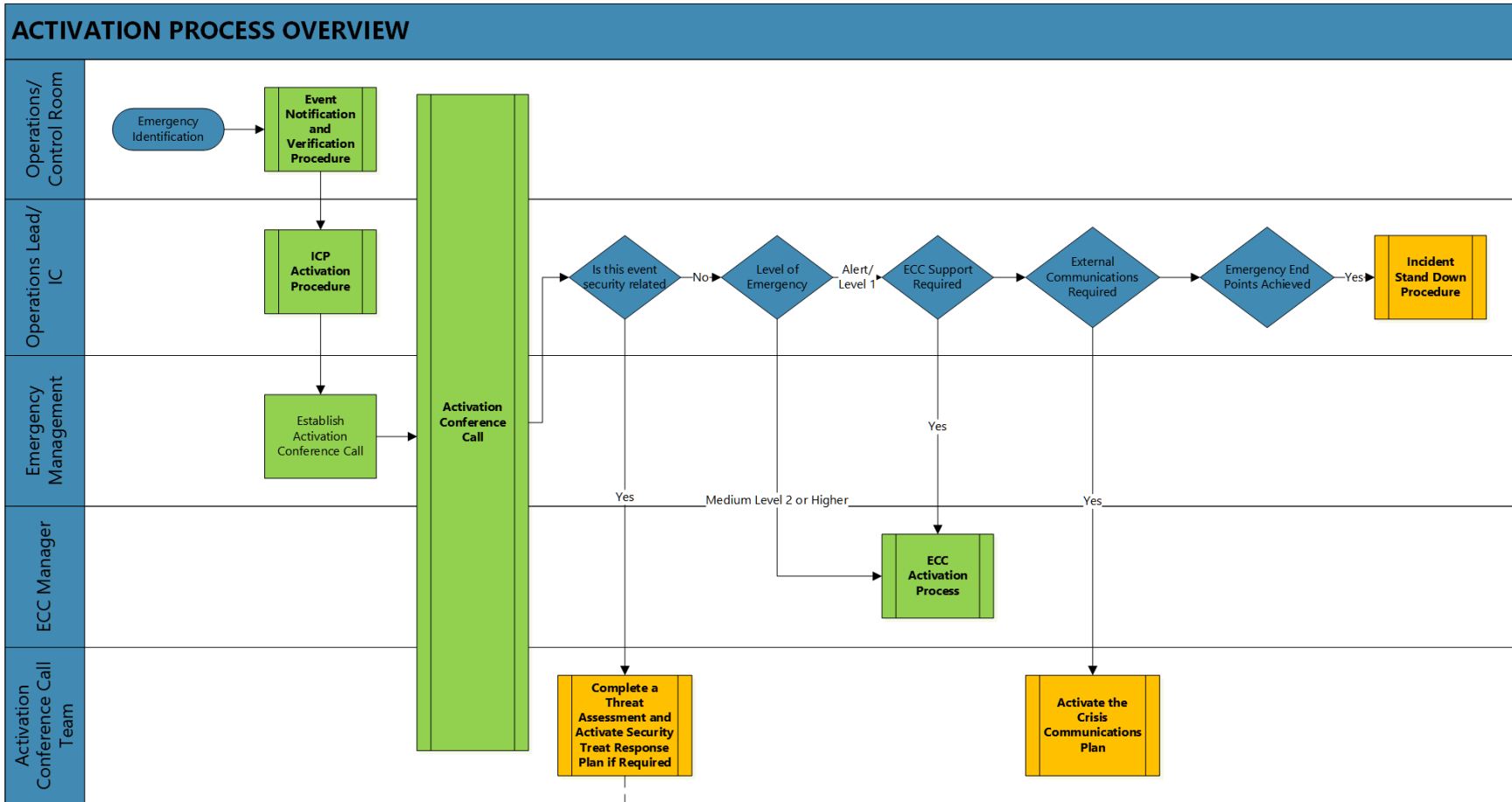
**1-800-727-7163**

If the first arriving Milk River Pipeline personnel determine that the incident is, or could potentially be, beyond their level of control, an Incident Command Post (ICP) is established.

The Corporate Emergency Coordination Centre (ECC) could be established to support field operations, assist with resources, to handle media inquiries, next-of-kin notifications, and to ensure Milk River Pipeline Strategic planning is carried out for incidents considered to be a level 2 or level 3. This process is outline in Section 2.1 Activation Process.

There are various levels of Municipal, Provincial, and potentially Federal organizations that may also be activated in response to an incident. Milk River Pipeline will integrate with these agencies and coordination of efforts must be established.

**2.1 Activation Process**



**Overview**  
 This figure provides an overview of the overarching process used to Activate IPLs Emergency Management System. Separate processes are identified in Yellow in the overview and more details and specifics are available within those processes.

ECC Manager will inform Corporate Security who will complete this assessment.

## 2.2 Determining the Emergency Level

The following table should be used to determine the level of emergency.

### Appendix 4 Assessment Matrix for Classifying Incidents

1. Consequence of incident			2. Likelihood of incident escalating*		
Rank	Category	Example of consequence in category	Rank	Descriptor	Description
1	Minor	<ul style="list-style-type: none"> <li>No worker injuries</li> <li>Nil or low media interest</li> <li>Liquid release contained on lease</li> <li>Gas release impact on lease only</li> </ul>	1	Unlikely	The incident is contained or controlled, and is unlikely to escalate. There is no chance of additional hazards. Ongoing monitoring is required.
2	Moderate	<ul style="list-style-type: none"> <li>First aid treatment required for on-site worker(s)</li> <li>Local and possible regional media interest</li> <li>Liquid release not contained on lease</li> <li>Gas release impact has potential to extend beyond lease</li> </ul>	2	Moderate	Control of the incident may have deteriorated but imminent control of the hazard by the duty holder is probable. It is unlikely that the incident will escalate.
3	Major	<ul style="list-style-type: none"> <li>Worker(s) requires hospitalization</li> <li>Regional and national media interest</li> <li>Liquid release extends beyond lease—not contained</li> <li>Gas release impact extends beyond lease—public health/safety could be jeopardized</li> </ul>	3	Likely	Imminent or intermittent control of the incident is possible. The duty holder has the capability of using internal and external resources to manage and bring the hazard under control in the near term.
4	Catastrophic	<ul style="list-style-type: none"> <li>Fatality</li> <li>National and international media interest</li> <li>Liquid release off lease not contained – potential for or is affecting water or sensitive terrain</li> <li>Gas release impact extends beyond lease – public health/safety jeopardized</li> </ul>	4	Almost certain or currently occurring	The incident is uncontrolled and there is little chance that the duty holder will be able to bring the hazard under control in the near term. The duty holder will require assistance from outside parties to remedy the situation.

Sum the rank from both columns to obtain the risk level and the incident classification

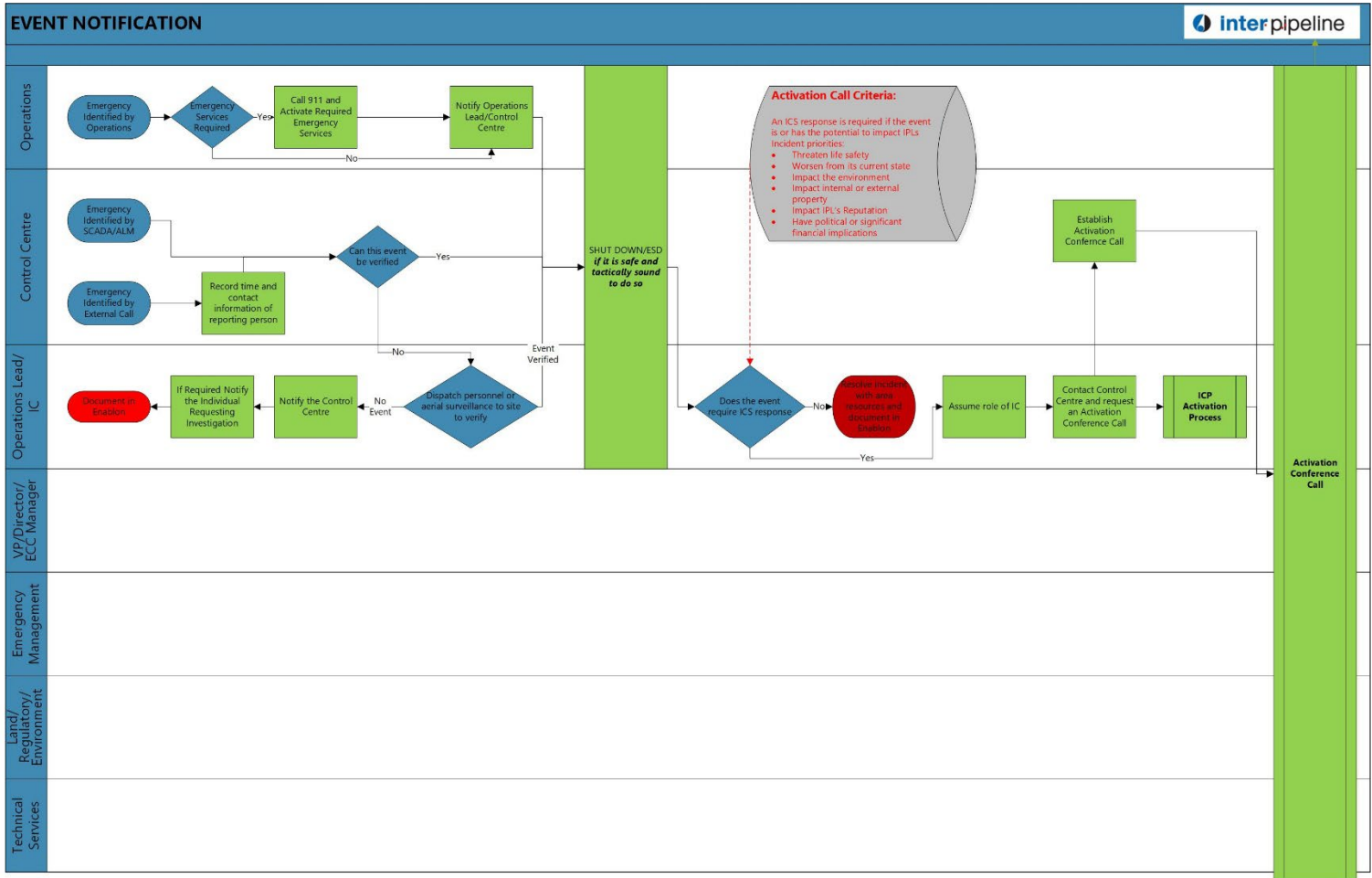
Assessment results	
Very low 2–3	<b>Alert:</b> An incident that can be handled on site by the duty holder through normal operating procedures and is deemed a very low risk to the public.
Low 4–5	<b>Level 1:</b> The incident presents no danger outside the duty holder's property or threat to the public and has a minimal environmental impact. Duty-holder personnel can manage the incident themselves with immediate control of the hazard. There is little or no media interest.
Medium 6	<b>Level 2:</b> The incident presents no immediate danger outside the duty holder's property but could potentially extend beyond the duty holder's property. Outside agencies must be notified. Imminent control of the hazard is probable, but there is a moderate threat to the public or the environment or both. There may be local and regional media interest in the event.
High 7–8	<b>Level 3:</b> The safety of the public is in jeopardy from a major uncontrolled hazard. There are likely significant and ongoing environmental impacts. Immediate multiagency municipal and provincial government involvement is required.

## 2.2.1 Required Response by Incident Level

Responses by incident level				
Response	Alert	Level 1	Level 2	Level 3
<b>Communications</b>				
Internal	Discretionary, depending on duty holder's policy.	Notification of off-site management.	Notification of off-site management.	Notification of off-site management.
Public	Courtesy, at duty holder's discretion.	Mandatory for individuals in the EPZ who have requested notification.	Planned and instructive in accordance with the specific ERP.	Planned and instructive in accordance with the specific ERP
Media	Reactive.	Reactive, as required.	Proactive media management to local or regional interest.	Proactive media management to national interest.
Government	Reactive. Notify AER if public or media is contacted.	Notify local AER field centre. Call local authority and health authority if public or media is contacted.	Notify local AER field centre, local authority, and health authority.	Notify local AER field centre, local authority, and health authority
<b>Actions</b>				
Internal	On site as required by the duty holder.	On site as required by the duty holder. Initial response is in accordance with the AER-approved ERP or corporate ERP.	Predetermined public safety actions are under way. Corporate management team alerted and may be engaged to support on-scene responders.	Full implementation of the incident command system.
External	On site as required by the duty holder.	On site as required by the duty holder.	Potential multiagency response (i.e. Operator, municipal, provincial, federal)	Immediate multi-agency response (i.e., operator, municipal, provincial, federal).
<b>Resources</b>				
Internal	Immediate and local. No additional personnel required.	Establish what resources are required.	Limited supplemental resources or personnel are required.	Significant resources are required.
External	None.	Begin to establish resources that may be required.	Possible assistance from government agencies and external support services.	Assistance from government agencies and external support services are required.

## 2.3 Incident Notification

The Incident Commander (IC) determines the level of emergency and whether the support of the Incident Management Team (IMT) is required. If so, they will activate the remainder of the IMT. The IC oversees the IMT and will be responsible for the overall coordination and direction of response activities at Incident Command Post (ICP) until they are relieved by a transfer of command or when the incident is stood down.



### 2.3.1 Executive Notification

The Incident Support Team (IST) must be activated for Level 2 or 3 emergency, or during a Level 1 emergency if the IC determines IST support is needed. The IST is activated by a notification from the IC to the Emergency Director.

The Emergency Director will determine if the Crisis Management Team (CMT) is required and will activate the team by calling on-call Crisis Manager. The Crisis Manager will determine which CMT roles need to be activated and will contact team members to activate the team.

### 2.3.2 Internal Notification

Internal notifications are completed by the Emergency Management Team using the ALERT notification system (Everbridge). A notification will go to the appropriate MRPL emergency response team depending on the nature of the incident. They have the capability of notifying the Incident Support Team, Crisis Management Team, the Field Initial Response and Support Team as well as all Milk River Pipeline personnel.

### 2.3.3 External Notification

The Liaison Officer is responsible for conducting regulatory notifications or delegating the task to the IST. The IC has responsibility for ensuring all regulatory notifications are made. Information on external notifications to regulatory bodies, local authorities, emergency services, and others can be found in the applicable site-specific plan.

## 2.4 Communications

### 2.4.1 Means of Communication

Effective communication during an incident is essential and extends to both internal and external audiences. Milk River Pipeline can utilize Multiple communication methods with redundancies identified in case of a failure of a particular system. The following table provides guidance on the preferred means of communication, the infrastructure that enables it and the backup means.

Process	Primary Means	Reliant infrastructure	Alternate Means	Reliant infrastructure
Activation	Everbridge	<ul style="list-style-type: none"> <li>Internet or cellular connectivity</li> </ul>	Phone call down list	<ul style="list-style-type: none"> <li>Cellular connectivity or internet or land line</li> </ul>
Field Responder Communications	Radio	<ul style="list-style-type: none"> <li>Radio system</li> </ul>	Cell Phone	<ul style="list-style-type: none"> <li>Cellular connectivity</li> </ul>
			Satellite Phone	<ul style="list-style-type: none"> <li>Internet or cellular connectivity</li> </ul>
Field Responder to ICP	Radio	<ul style="list-style-type: none"> <li>Radio system</li> </ul>	Cell Phone	<ul style="list-style-type: none"> <li>Cellular connectivity</li> </ul>
	Everbridge	<ul style="list-style-type: none"> <li>Internet or cellular connectivity</li> </ul>		
ICP to IST	MS Teams / email	<ul style="list-style-type: none"> <li>Internet or cellular connectivity</li> <li>MS Office</li> </ul>	Satellite phone	<ul style="list-style-type: none"> <li>Internet or cellular connectivity</li> <li>Satellite connectivity</li> </ul>
	Cell Phone	<ul style="list-style-type: none"> <li>Cellular connectivity</li> </ul>		
	Landline	<ul style="list-style-type: none"> <li>Internet</li> </ul>		
IST to CMT	MS Teams / email	<ul style="list-style-type: none"> <li>Internet or cellular connectivity</li> <li>MS Office</li> </ul>	Satellite Phone	<ul style="list-style-type: none"> <li>Internet or cellular connectivity</li> </ul>
	Cell Phone	<ul style="list-style-type: none"> <li>Cellular connectivity</li> </ul>		
	Landline	<ul style="list-style-type: none"> <li>Internet</li> </ul>		
External bodies / public	Landline	<ul style="list-style-type: none"> <li>Internet</li> </ul>	Alternate ISP Alternate cell phone provider	
	Cell Phone	<ul style="list-style-type: none"> <li>Cellular connectivity</li> </ul>		
	MS Teams / email	<ul style="list-style-type: none"> <li>Internet or cellular connectivity</li> <li>MS Office</li> </ul>		
	Website / social media	<ul style="list-style-type: none"> <li>Internet or cellular connectivity</li> </ul>		
Mass notification	Everbridge	<ul style="list-style-type: none"> <li>Internet or cellular connectivity OR</li> <li>Land Line</li> </ul>	Notification Group	<ul style="list-style-type: none"> <li>Cellular connectivity</li> <li>Land Line</li> <li>Individual people.</li> </ul>

## 2.4.2 Contacting Key Stakeholders

Key stakeholders that may need to be contacted are listed in maps for the specific pipeline or facility.

## 2.4.3 Members of the Public

If members of the public are required to be notified within a hazard area, this will be conducted using public protection measures (**See Section 5.3 Public Protection Measures.**)

Further informational updates to the public either inside or outside the hazard area will be coordinated and distributed via the Corporate Communications Team. The Information Officer may be involved in dissemination of updates under the guidance of the Corporate Communications team.

### 2.4.3.1 Information Distributed to the Public

The Alberta Energy Regulator (AER) stipulates the information below must be made be made available to the public.

#### **To persons evacuated or sheltered at the onset of the incident:**

- type and status of the incident
- location and proximity of the incident to people in the vicinity
- public protection measures to follow, evacuation instructions, and any other emergency
- response measures to consider
- actions being taken to respond to the situation, including anticipated time

#### **To persons evacuated or sheltered during the incident:**

- description of the products involved and their short-term and long-term effects
- effects the incident may have on people in the vicinity
- areas affected by the incident
- actions the affected public should take if they experience adverse effects

#### **To the public during the incident:**

- type and status of the incident
- location of the incident
- areas affected by the incident
- description of the products involved
- contacts for additional information
- actions being taken to respond to the situation, including anticipated time

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#### 2.4.3.2 Members of the Media

All requests for information from the media will be directed to Corporate Communications Staff. During office hours, the number for head office reception may be given for media to contact **403-290-6000**. After hours, media may call **1-855-683-5701**. Should the need arise, a spokesperson from Calgary may attend the site to facilitate communication with the media.

#### 2.4.3.3 Crisis Communications Plan

In addition to items in this plan, there is a complimentary Crisis Communications Plan that would be used during an event. This plan is maintained by the Corporate Communications Staff.

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### 3 INCIDENT PLANNING

Milk River Pipeline utilizes the Incident Command System (ICS) to respond to any type of incident the Corporation may face. The ICS structure can expand or contract to meet the needs of the incident. Emergency response teams are activated depending on the scope and complexity of the incident, Regulatory Level of Emergency, and anticipated resource needs. Depending on the size and scope of the emergency, Milk River Pipeline's emergency response structures can be tailored to the incident requirements by activating different response teams as the need arises.

#### 3.1 Incident Priorities

Milk River Pipeline uses the following priorities to run every incident. They will remain constant throughout the life cycle of the incident.

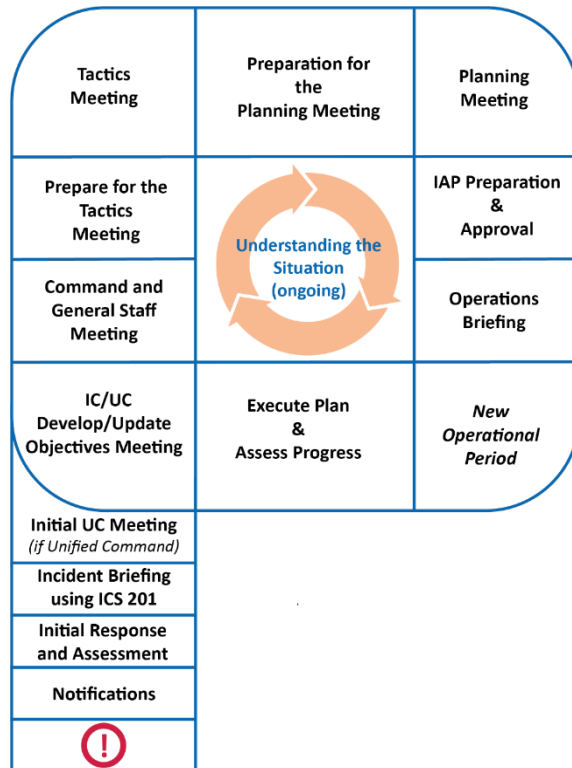
- #1 Life and safety
- #2 Incident stabilization
- #3 Protection of the environment
- #4 Limitation of damage to property and assets

#### 3.2 Planning Process

The Planning process used by Milk River Pipeline is known as the Planning P. Adherence to this planning cycle will allow an Incident Management Team to develop a coherent, fully resourced Incident Action Plan.

##### 3.2.1 Utilizing the Planning P

A step-by-step guide on initial actions in the planning process i.e. Initial Response and notifications can be found in the ***Milk River Pipeline Initial Responder Guide***. The remainder of the steps in the Planning P are detailed in the ***Milk River Pipeline Command Post Operating Guide***.



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## 4 ROLES AND RESPONSIBILITIES

### 4.1 Response & Incident Management Teams

#### 4.1.1 Incident Management Team

The Incident Management Team (IMT) is the collective group of Milk River Pipeline personnel and external responders, who will plan and execute the tactical actions required to respond to an incident. They will operate from an Incident Command Post (ICP) that is located close enough to the incident site to influence the activities being conducted. The IMT:

- Is responsible for the planning and execution of onsite tactical response and public/worker safety.
- Develops and implements efficient and effective measures to ensure site safety.
- Controls the source of the incident, and protects people, the environment and property.
- Interacts with the Incident Support Team (IST), government agency officials, and other involved or interested parties.
- Continuously assesses the incident to determine the adequacy of tactical response operations and the need for assistance from the Emergency Coordination Centre (ECC).

#### 4.1.2 Incident Support Team

An Incident Support Team (IST) is the collective group of people that will:

- Support / action requests from the Incident Management Team.
- Request funding support for the incident, if outside the Incident Commander's pre-authorized spending level.
- Ensure internal/external communications are approved in a timely manner and communications requiring Disclose Committee approval follow the approval process as set-out in the Crisis Communication Plan.
- Identify, assess, communicate potential business continuity impacts to the BU Operations Director / VPs.
- Consult with BU Operations Director / VPs on potential impacts to customers, contracts, reputation, or other potential economic/business impacts to Milk River Pipeline; Provide updates prior to Situation Reports.
- Manage the impact of the emergency on the wider Milk River Pipeline business.
- Assist in operationalizing requests from the Crisis Management Team.

The IST will operate from an Emergency Coordination Centre (ECC), which would typically be located in the Corporate Office.

#### 4.1.3 Crisis Management Team

The Crisis Management Team (CMT) is a collection of Corporate Officers that will identify strategic risk and develop strategic objectives to be implemented to mitigate these risks.

The CMT may operate in isolation of all, or part of an IST, to execute the strategic objectives.

- Identify a Crisis Manager at the time of an incident to manage continuity of operations.
- Delegate necessary roles and responsibilities to the Emergency Director.
- Delegate necessary authorities to the Incident Commander.
- Approve emergency funding for incident.
- Update Executive and Board on the status of the incident, as appropriate.
- Work with the BU Operations Director / VPs to identify / manage risks and stakeholder interests.
- Work with Incident Support Team to manage the impact to the company's reputation.
- Establish lines of communication between the CMT and Incident Support Team.
- Monitor the progress of the incident.
- Receive reports from Emergency Director on incident status and/or recovery operations.
- Receive draft statements for media, investors, etc. from the Public Information Officer. Review them for accuracy and in compliance with MRPL's Disclosure Policy.
- Authorize the release of media statements as outlined in the Crisis Communications Plan.

## 4.2 Incident Command / Coordination Centres

Type	Description	Established Location(s)
<b>Incident Command Post (ICP)</b>	<p>The ICP is the primary location for on-scene incident command and management; it will be activated during an emergency as required at the established locations. The ICP conducts tactical / operational level activities and is staffed by the IMT. The ICP must have the appropriate equipment, personnel, and materials resources to manage the emergency.</p> <p>As the event becomes more serious or complex, it may become necessary to activate an ECC to support incident management activities. The ECC is activated at the request of the IC, or as part of established policy, to offer support for complex emergencies.</p>	<p><b>Primary ICP:</b> District Office</p> <p><b>Alternate ICP:</b> Alternate locations maybe utilized to be closer to the incident location or if the District Office has been impacted by the incident</p>
<b>Corporate Emergency Coordination Centre (ECC)</b>	<p>The ECC conducts operational / strategic level activities and is staffed by the Incident Support Team. The ECC provides centralized and coordinated operational and technical support, guidance, and strategic planning. The ECC will be activated during an emergency, as appropriate, at the established locations. The ECC must have the appropriate equipment, personnel, and materials resources to manage the emergency. SMEs and Technical Specialists should be available to provide support to the ICP, as requested.</p> <p><b>Responder Notes:</b> The main purpose of the ECC is to support the IMT by actioning objectives as requested / delegated by the ICP and thinking of things that need to happen from a wider and longer-term perspective. The ECC enables the field to do their “right now emergency duties”, while also helping to facilitate next steps and longer-term planning.</p> <p>The Corporate Crisis Management Team (CMT) may also operate out of the ECC, or an adjoining boardroom, if activated, and as appropriate.</p>	<p><b>Primary ECC</b> MRPL Head Office ECC/Training Room 34010, Floor 34 Unit 3200, 215 2 St. SW, Calgary, AB T2P 1M4</p> <p><b>Alternate ECC</b> Cochrane Extraction Plant, Admin Building, Parkland Boardroom</p>

## 4.3 Incident Management Team Responsibilities

It is important to remember that the Incident Commander assumes all roles until they are delegated to others. The same person can hold Multiple roles depending on their ability and the complexity of the event. Not all positions listed below need to be staffed, only those required by the Incident Commander.

Detailed guidance on all Incident Management Team Roles and responsibilities can be found in the ***Milk River Pipeline Command Post Operating Guide***.

#### 4.3.1 Incident Commander

The Incident Commander is responsible for providing leadership, direction, and guidance to personnel at the Incident Command Post. The Incident Commander analyzes the overall requirements of the incident and determines the most appropriate direction to follow during the response.

This is accomplished by:

- Identifying the necessary functions required to deliver a response,
- Setting incident priorities,
- Identifying limitations and constraints,
- Developing response objectives,
- Determining response resource requirements,
- Identifying critical information requirements,
- Making key decisions,
- Determining operating procedures,
- Assigning work (tasks), and
- Assessing progress.

If necessary, an Incident Commander may request the activation and deployment of the First Team and/or the Incident Support Team to support the response.

The Incident Commander may have one or more Deputy Incident Commanders who report directly to the Incident Commander. The Deputy Incident Commander must have the same qualifications as the Incident Commander and can assume some, or all, of the responsibilities of the Incident Commander.

The responsibilities of the Incident Commander are as follows:

- Developing and prioritizing incident objectives.
- Ensuring the Incident Command Post organizational structure and staffing is sufficient to meet the needs of the incident.
- Ensuring plans are developed to respond and recover from the incident.
- Monitoring progress of the action plan against the objectives.
- Ensuring regular information updates are provided to the Emergency Coordination Centre.
- Ensuring internal and external communications are accurate.
- If necessary, act within a Unified Command structure for the incident.

#### 4.3.2 Safety Officer

The Safety Officer develops and recommends measures to ensure personnel safety and occupational health of not only response workers, but also the public.

The Safety Officer should anticipate, recognize, assess, and control hazardous and unsafe conditions or situations.

If the incident requires response personnel to conduct activities outside routine Milk River Pipeline activities, the Safety Officer will develop mitigation strategies to ensure the continued safety of response personnel and the public.

The Safety Officer may be supplemented with Assistant Safety Officers. Assistants may be required to take on some of the responsibilities of the Safety Officer or to provide specific subject matter expertise (e.g. Public Health).

The responsibilities of the Safety Officer are:

- Continuous monitoring of the health and safety of personnel impacted by a response and to advise the Incident Commander on issues regarding safety.
- Identification and mitigation of hazardous situations.
- Development and recommendation of measures to ensure the safety of response personnel and the public.
- If necessary, development of an incident-specific Safety Plan based upon a hazard analysis.
- Investigation of accidents that have occurred within the incident area.
- Staffing and organization of the Safety function.

#### 4.3.3 Liaison Officer

The Information Officer is responsible for interfacing with the general public, the media, and with other stakeholders with incident-related information in accordance with the Milk River Pipeline Crisis Communications Plan. This also includes ensuring that timely and accurate information is distributed internally within Milk River Pipeline, both to those responding and across the wider organization. Communications with the following groups should be considered during an incident:

- Affected jurisdictions.
- Elected officials.
- Community leaders.
- Milk River Pipeline employees.
- Responders.
- Assisting or cooperating agencies.
- Industrial partners and customers.
- Shareholders.
- Media.
- The general public.
- Community Support Organizations (e.g. volunteer groups, associations, etc.).
- Other impacted groups.

The means and methods by which information is passed will vary according to the scale and scope of the incident and may be done entirely by Milk River Pipeline or using a Unified Command structure and/or the establishment of a Joint Information Centre.

#### 4.3.4 Information Officer

The Information Officer (IO) is responsible for developing and releasing information about the incident to the public, media, incident personnel and other appropriate agencies.

Ongoing Actions:

- Advise the Incident Commander on all public information matters relating to the incident.
- Identify key information that needs to be communicated externally and internally.
- Act as the point of contact for all public information issues from external agencies and organizations involved in the response.
- Ensure the Incident Commander verifies the accuracy of information produced.
- Disseminate authorized messages across the response using the most effective means available.
- Maintain an ICS214 – Activity Log.

#### 4.3.5 Operations Section Chief

The Operations Section Chief is responsible for managing all tactical operations at an incident. They will identify, assign and supervise all the resources needed to accomplish the incident objectives.

During the planning process, the Operations Section Chief also directs the preparation of strategies and tactics required for the Incident Action Plan for the next operational period, requests or releases resources, and monitors and reports progress against the incident objectives. In addition to this planning role, they will have to concurrently oversee the execution of the current plan.

The exact structure of the Operations Section will vary according to the needs of the incident. The Operations Section Chief must maintain an effective span of control throughout.

The following sub-units within an Operations section are common to many responses.

- **Staging Area(s):** These are established for the temporary location of available resources prior to deployment to support tactical operations.
- **Public Protection Branch:** Established to ensure the safety of the public and stakeholders.
- **Response Branch:** Established to conduct all containment and clean-up activities in the event of a fire, spill, or release.

The Operations Section Chief will need assistance conducting their role, and the appointment of a Deputy Operations Section Chief is recommended.

The responsibilities of an Operations Section Chief are:

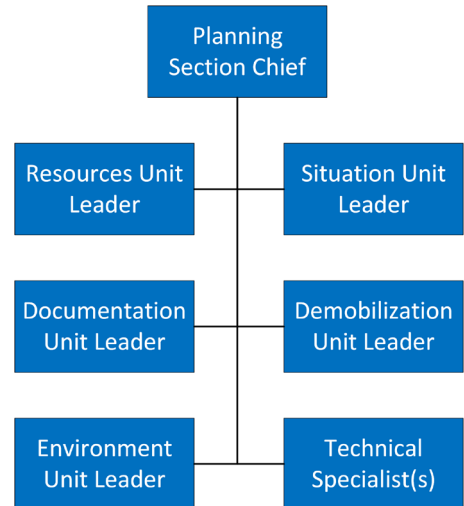
- Supervising the execution of all tactical operations during the response.
- Ensuring the safety of tactical operations during the response.
- Developing and organizing the Operations Section to deliver the objectives considering operational efficiency, personnel safety, and adequate span of control.
- Developing the strategies and tactics for the Incident Action Plan for the next operational period.
- Requesting additional resources to support tactical operations.
- Approving the release of resources from active operational assignments.
- Maintaining close contact with the Incident Commander, Command Staff, Operations personnel and other agencies involved in the incident.
- During the execution of the Incident Action Plan, the Operations Section Chief may make or approve changes to the plan but must inform the Incident Commander immediately of these changes.

#### 4.3.6 Planning Section Chief

The Planning Section Chief coordinates and facilitates all planning activity within the Incident Command Post.

This includes:

- Facilitation of all meetings.
- The collection, evaluation, dissemination, use of incident related information.
- Production of maps for the Incident Action Plan.
- Assembling and distributing the Incident Action Plan.
- Providing documentation services to the Incident Management Team.
- Maintaining the currently available resources and their status.
- Identify resource shortfalls (and surpluses).
- Planning and implementing the demobilization of unused resources.
- Identification of Resources at Risk (ICS232).
- Coordinating the activity of any technical specialists deployed to the Incident Management Team.



As there are so many responsibilities, a Planning Section Chief should appoint a Deputy Planning Section Chief and activate additional units to assist in the delivery of the Planning function if an Incident Action Plan is going to be developed.

#### 4.3.7 Logistics Section Chief

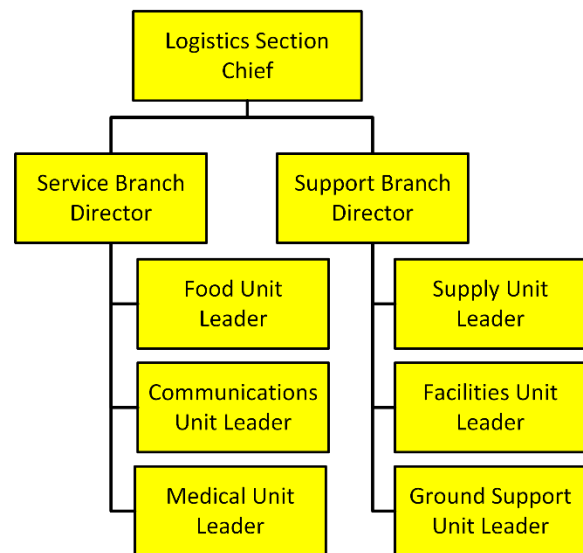
The Logistics Section Chief is responsible for providing facilities, services, people, and materials in support of the incident. They participate in the development and implementation of the Incident Action Plan. The Logistics Section has two key purposes:

- Servicing the needs of the responders.
- Supporting the needs of the response.

A large number of people may be required to staff the logistics function. As a planning figure, the Logistics Section should have approximately 10% of the staff in the Operations Section. In larger responses, the Logistics Section may be broken down into Branches to ease span of control. The responsibilities of the Logistics Section are:

##### Service Branch

- Communications Unit
  - Enables communications across the entire response organization.
  - If necessary, develops a Communications Plan (ICS205) for the Incident Action Plan.
- Medical Unit
  - Provides first aid and transportation to injured responders.
  - If necessary, develops a Medical Plan (ICS206) for the Incident Action Plan.
- Food Unit
  - Provides food and water to all responders (field and in the Incident Command Post).



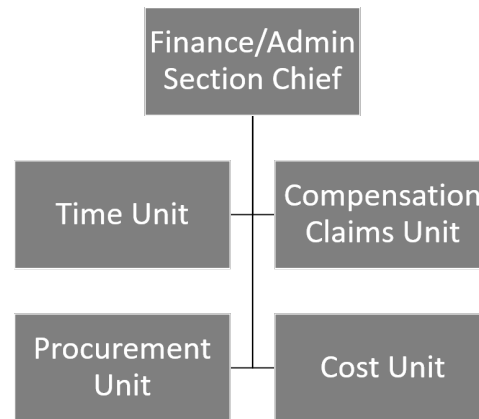
##### Support Branch

- Supply Unit
  - Orders resources required to keep the response going.
  - Stores supplies for the incident.
  - Maintains an inventory of supplies.
- Facilities Unit
  - Locates and lays out the Incident Command Post and camps.
  - Maintains the Incident Command Post and camps.
  - Provides security at the Incident Command Post and camps.
- Ground Support Unit
  - Maintains resource equipment.
  - Provides fuel for responders.
  - Provides transportation services for responders.

#### 4.3.8 Finance/Administration Section Chief

The Finance and Administration Section Chief is responsible for managing all financial and cost-analysis aspects of an incident. The Finance and Administration Section Chief will provide financial and cost-analysis information, as requested.

The Finance and Administration Section Chief will need to work closely with members of the Emergency Coordination Centre over issues relating to procurement, compensation, insurance, payroll and safety.



There are four functions that are fulfilled by the Finance and Administration Section. Unless these units are activated or delegated, the Finance and Administration Section Chief will need to perform all these functions:

- **Time Unit:** Responsible for ensuring the accurate recording of daily personnel time, compliance with agency time recording policies and managing commissary operations if established at the incident.
- **Procurement Unit:** Responsible for all financial matters pertaining to vendor contracts, leases, and fiscal agreements.
- **Compensation/Claims Unit:** Responsible for all injury-related compensation and claims made against Milk River Pipeline during the response.
- **Cost Unit:** Ensures the proper identification of all equipment and personnel requiring payment, records all cost data, analyzes and prepares estimates of incident costs, and maintains accurate records of incident costs.

Personnel deploying to the Finance and Administration Section are expected to have specialist knowledge of Milk River Pipeline's financial/accounting procedures and procurement systems.

#### 4.3.9 Scribe

The Scribe is responsible for recording critical incident communications and event activities. These records will help ensure accuracy in planning and execution of objectives, provide documentation for legal, insurance, and regulatory matters, and for continuous improvement purposes.

The Scribe role is critical to ensure information is captured efficiently and accurately. There may be Multiple Scribes allocated to an incident and they may work directly with an individual, for example, the Incident Commander or to a specific function (e.g. the Planning Section).

Scribes may also be tasked to arrange meetings and when virtual command posts are being used, they may be required to share their screen with the other responders during the various briefings or meetings.

Responsibilities may vary according to the role the Scribe is supporting but it may include recording:

- Summaries of conversations.
- Lists of issues that need to be addressed.
- Actions taken and decisions made.
- Objectives and status of objectives.
- Meeting minutes.
- Task assignments and progress reports.
- Injuries.
- Key information received.
- Key information passed on.
- Contact details for personnel with whom you have communicated.

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## 5 SPECIFIC ACTIONS

### 5.1 Determining the Hazard Zones

#### 5.1.1 Emergency Planning Zone (EPZ)

A geographical area surrounding a well, pipeline, or facility containing hazardous product that requires specific emergency response planning by the industrial operator.

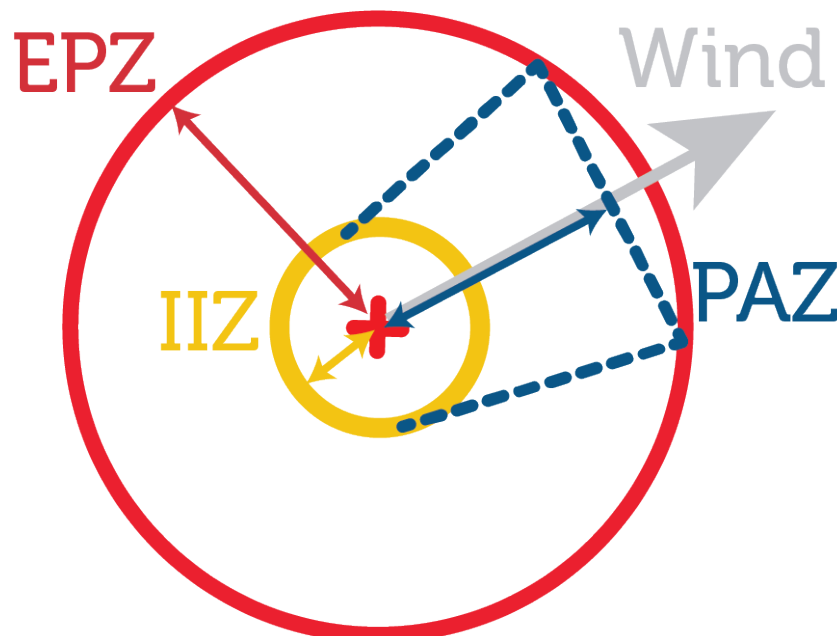
#### 5.1.2 Initial Isolation Zone (IIZ)

An area in close proximity to a continuous hazardous release where the public may be exposed to dangerous and life-threatening outdoor pollutant concentrations and indoor sheltering may provide limited protection due to the proximity of the release. If safe to do so, the licensee must attempt to evacuate the residents from the IIZ.

#### 5.1.3 Protective Action Zone (PAZ)

The PAZ is the area downwind of a hazardous release where outdoor pollutant concentrations may result in life-threatening or seriously irreversible health effects on the public.

The estimated size of the Protection Action Zone (PAZ) is calculated using the Plume Dispersion Model ERCBH2S. Immediately following a release of H<sub>2</sub>S or HVP product, the approximate size and direction of the PAZ can be determined using actual conditions at the time. Once monitoring equipment arrives, the actual size of the PAZ can be determined based on the monitored conditions.



#### 5.1.4 Area Outside EPZ

In the unlikely event that public protection measures are required beyond the EPZ, they will be conducted in accordance with MRPL arrangements with the local authority. Provincial or Federal emergency plan(s) may also be activated for Level 2 and 3 emergencies to provide support to the incident response.

## 5.2 Responder Safety

To effectively and safely respond to any incident, establishing responder safety/site control zones is crucial. These zones, set by the Incident Commander or Safety Officer, aim to:

- **Ensure responder safety** by limiting access to authorized personnel based on the risks within the zone.
- **Prevent the spread of hazardous substances** by controlling movement within the site.
- **Reduce exposure to hazards** through restricted access and appropriate mitigative measures, including personal protective equipment (PPE).

Responder safety zones specify:

- The type of operations allowed in each zone.
- The degree of hazards at different locations within the incident site.
- Areas to be avoided by unauthorized or unprotected employees.

Responder safety zones are incident-specific and must be identified based on on-site hazards. Typically, they include the Exclusion, Contamination Reduction, and Support zones.

### The Three Main Zones:

#### 1. Exclusion (Hot) Zone:

- This area has actual or potential contamination and the highest potential for exposure to hazards. It is where the incident is taking place, posing risks to people, the environment, and property.
- The Incident Commander must clearly define and mark the Hot Zone to prevent unauthorized entry. Factors to consider when determining its size include vapor monitoring results, plume direction, site stability, weather conditions, and toxicity data.
- The Hot Zone typically extends on the downwind side and must be evacuated of non-authorized personnel to ensure public safety.

#### 2. Contamination Reduction (Warm) Zone:

- This is the transition area between the Hot and Cold Zones, where responders and equipment enter and exit the Hot Zone and where decontamination activities occur.
- The Warm Zone must be clearly defined and marked to prevent unauthorized entry and is typically located uphill and upwind from the emergency site. If the emergency escalates, the Hot Zone could expand to include the Warm Zone.

**3. Support (Cold) Zone:**

- This area is free from contamination and is used for support services and staging. It is where tactical responders assemble before responding to the incident.
- No PPE is required in the Cold Zone, but its boundaries must be clearly defined to prevent unauthorized access during the incident response. Public safety is ensured by keeping members of the public outside the working area, with plans in place for changing conditions.



### 5.3 Public Protection Measures

Detailed guidance on the execution of Public Protection Measures can be found in the *Initial Responder Guide*.

The **Public Protection Branch Director** is responsible for implementing all public protection measures during a response. In consultation with the **Operations Section Chief**, the **Public Protection Branch Director** will determine the structure of the Public Protection Branch required to ensure public safety.

This may include setting up the following groups:

- Roadblock Group – Control access into the EPZ.
- Rover and Evacuation Group – Locate personnel within the EPZ and assist with the evacuation of residents.
- Notification Group – Notify impacted residences and other stakeholders to provide public safety instructions.
- Air Monitoring Group – Acquiring and providing air quality readings to the Public Protection Branch Director.
- Reception Centre Group – Responsible for liaising with and coordinating activities at a reception centre for evacuated personnel.

The **Public Protection Branch Director** reports to the **Operations Section Chief** in the ICP who will provide tasks for the branch to perform. The Public Protection Branch can contain many people so maintaining an effective span of control is essential.

### 5.3.1 Air Monitoring

Air monitoring helps identify the extent of a plume and verifies if the EPZ is keeping the public and responders outside of the hazard area. Milk River Pipeline is expected to provide air monitoring results on a regular basis throughout the emergency to the relevant government regulator, environmental agency, health authority, local authorities, and on request to the public. This applies to any release.

Air monitoring may be used to:

- Track the plume.
- Determine if ignition concentration criteria are met.
- Determine whether evacuation and/or sheltering concentration criteria have been met.
- Determine concentration levels in areas considered for evacuation or being evacuated to ensure that evacuation is safe.
- Confirm roadblock locations.
- Assist in determining when the emergency can be downgraded.

Air monitoring may be mandated by agencies in the event of any release.

**Urban Centres:** If the EPZ includes a portion of urban density or an urban centre there must be minimum of two mobile air monitors, one to monitor the boundary of the urban density development or urban centre and the other to track the plume.

**Unmanned Operations:** If notified of a release by an alarm or by a reported odor, you must investigate the source of the release and send out air monitors upon confirmation of the release location.

Air Monitoring Outcomes	
Responsible	Operations Section Chief / Public Protection Branch Director
<input type="checkbox"/>	Appoint an <b>Air Monitoring Group Supervisor</b> if personnel are available to fill the position.
<input type="checkbox"/>	Order qualified third parties to conduct air monitoring. Details of qualified third parties can be found in the Emergency Response Plan.
<input type="checkbox"/>	Confirm the nature and type of hazards present and ensure the correct type of Air Monitoring is deployed.
<input type="checkbox"/>	Provide a schedule for the <b>Air Monitoring Group Supervisor</b> to provide you with updated Air Monitoring Results.
<input type="checkbox"/>	Record decision to use air monitoring on the ICS214 Individual Event Log.
<input type="checkbox"/>	Provide consolidated updates to the <b>Operations Section Chief</b> on air monitoring results.
<input type="checkbox"/>	Provide action levels that must be reported immediately if met or exceeded.

### 5.3.2 Roadblocks

The Roadblock Group are responsible for maintaining assigned roadblock positions, controlling access into an area and communication with transients. If necessary, they may also act as air monitoring stations.

The locations of the roadblocks are determined by the **Public Protection Branch Director**. However, they may delegate the identification of roadblock locations to the **Roadblock Group Supervisor**.

A key responsibility is to record and report who is entering and leaving the controlled area. Impacted personnel inside the controlled area will be informed by the Notification Group so it is essential to confirm and communicate if they have left. Other personnel will require access into the controlled area such as emergency services or response personnel.

The recording of transit into, and out of, controlled areas is vital in ensuring the safety of the public and responders.

The **Roadblock Group Supervisor** is responsible for:

- Coordinating and directing the activities of personnel within the Roadblock Group.
- Controlling access into and out of any controlled areas.
- Ensuring the logging of details for all personnel entering and leaving the controlled area.
- Providing regular updates to the Public Protection Branch Director on personnel who have entered or left the controlled area.
- Providing Air Monitoring results to the Public Protection Director if required.

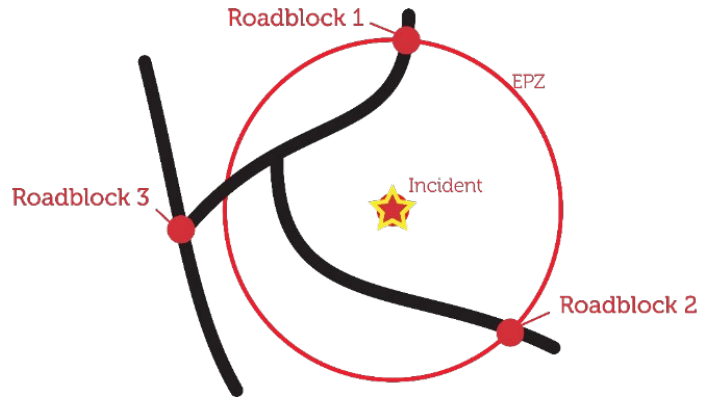
#### 5.3.2.1 Planning Roadblocks

Equipment required for planning:

- Map of area. The map in the ERP may already have predetermined roadblock locations marked on it.
- Knowledge of the hazardous area (see ERP for details).
- Roadblock locations must be outside of any hazardous area to ensure the safety of responders and members of the public. Before determining locations of roadblocks, consider:
  - Could the hazard extend beyond the current area? If so, plan for the worst case and place roadblocks at these worst-case locations.
  - Try and utilize road junctions as roadblocks. This could reduce the total number of roadblocks required.
  - Turning circles for vehicles. A semi having to reverse down a highway may cause further issues.
  - Locating roadblocks at intersections can permit easier onward movement for diverted vehicles.

5.3.2.2 Mapping Roadblock Locations

- Roadblocks should be plotted on a map and provided a call sign. Do not use people’s names as this will cause confusion later when shift changes occur.
- Starting at noon and moving clockwise, number each roadblock location, starting at one.
- Assign a call sign to each location – RB1, RB2 etc.
- Ensure the Public Protection Branch Director and Operations Section Chief approves the roadblock locations.
- Pass the locations of the roadblocks to the Roadblock Group Supervisor.
- Staff the Roadblock Group appropriately. Plan on having two people and a vehicle for every roadblock.
- Request resources required to maintain the roadblocks through the Public Protection Branch Director/Operations Section Chief.
- Provide consolidated updates on the status of roadblocks and personnel entering of leaving the hazardous area.
- Establish means of communications for each roadblock and standard check in times.
- The following statement may be utilized with members of the public at roadblock locations:



*"I am representing Milk River Pipeline, and we are presently experiencing control problems ahead. This situation is serious enough to warrant restricted access beyond this point. For your own safety I must ask you not to proceed."*

Roadblock Outcomes	
Responsible	Operations Section Chief / Public Protection Branch Director
<input type="checkbox"/>	Area isolated with sufficient roadblocks.
<input type="checkbox"/>	Roadblock crews sufficiently resourced.
<input type="checkbox"/>	Location of roadblocks plotted on situational awareness map.
<input type="checkbox"/>	If required, additional roadblock resources ordered through the Logistics Section.

### 5.3.3 Public Notification

Notification inside the hazard zone may be conducted by phone using the confidential versions of the ERP or using the Everbridge mass notification tool. If mass notification is required, the EM Team should be contacted to initiate the mass notification. Notification must include individual members of the public and area users. It may also include:

- Trappers.
- Wildlife Management Unit permit holders.
- Industrial Operators.
- Forestry Management permit holders.
- Recreational area users including campgrounds and parks.
- Schools/Bus Routes.

If an urban or population centre is located within the EPZ, or if public protection measures are required outside of the EPZ, notification of the public will be coordinated with the local authority. Communication will be made by local emergency responders, local media, and provincial alert systems.

### 5.3.3.1 Conduct of Notification

The **Notification Group Supervisor** is responsible for:

- Coordinating and directing the activities of personnel within the Notification Group.
- Ensuring members of the public are provided the appropriate public protection messages.
- Logging and tracking the status of resident notifications throughout the response.
- Providing regular updates to the Public Protection Branch Director on the status of residents within the impacted area. This includes:
  - Those requiring assistance.
  - Residents who cannot be contacted.
  - Residents who are not in the area.
  - Residents who are at or moving to a reception centre.
- Maintaining contact with residents throughout the response.

**Notes:**

- Depending on the number of stakeholders affected, it may be necessary to assign Multiple personnel to conduct notifications.
- Once members of the public have been notified, the **Operations Section Chief** should report this to the Planning Section to permit an update of the situational awareness board.
- If an area cannot be confirmed as being clear, it may be necessary to dispatch Rovers to verify the area is clear, and if necessary, assist personnel with evacuation. This will potentially require sending a person into a hazardous area. This should only be implemented in conjunction with the **Safety Officer** and on approval of the **Incident Commander**.

Public Notification Outcomes	
Responsible	Operations Section Chief / Public Protection Branch Director
<input type="checkbox"/>	Residents notified
<input type="checkbox"/>	Industrial operators notified
<input type="checkbox"/>	Guides & outfitters notified
<input type="checkbox"/>	Trappers notified

## 5.3.3.2 Shelter in Place Script

<p>Hello, this is (<i>your name</i>) of Milk River Pipeline. Is this the (<i>name</i>) residence at (<i>telephone number</i>)?                  Milk River Pipeline is responding to an emergency at (<i>location</i>) in your area.                  For your safety, it is extremely important that you, and those with you, stay indoors until the potential hazard no longer exists, or you are advised to evacuate.                  To help us understand your immediate needs, we need to know:</p>	
How many people are at your location now?	
Is there anyone in your household that you cannot contact to inform them of the situation and advise them to evacuate away from the area?	Y / N
Do you have children in school at this time?	Y / N
<i>Details</i>	
Do you have the shelter-in-place instructions provided to you?	Y / N
<p>If NO.....verbally explain:                  Immediately gather everyone indoors and stay there. Do not leave even if you see people outside.                  Close and lock all outside doors and windows. Tape gaps around doors and windows. Leave all inside doors open.                  Turn off appliances or equipment that blows out indoor air or sucks in outside air.                  Turn down furnace thermostats to the minimum setting and turn off air conditioners.                  Extinguish all potential sources of ignition (do not smoke or attempt to start your vehicle).                  Stay off the phone so that you can be contacted by emergency personnel.                  Stay tuned to local radio and television for possible updates.</p>	
Is there an alternate number we can contact you at?	
Do you understand everything I have told you?	Y / N
Are you leaving immediately?	Y / N
<p>Thank you for your cooperation. Thank you for your cooperation. If you have any urgent questions, please call (emergency number)</p>	

## 5.3.3.3 Evacuation Script

<p>Hello, this is (your name) of Milk River Pipeline. Is this the (name) residence at (telephone number)?</p> <p>Milk River Pipeline is responding to an emergency at (location) in your area. For your safety, it is extremely important that you and your family leave your residence immediately and travel in a north / east / south / west direction to our reception centre located at (location of reception centre).</p> <p>To help us understand your immediate needs, we need to know:</p>	
How many people are at your location now?	
Is there anyone in your household that you cannot contact to inform them of the situation and advise them to evacuate away from the area?	Y / N
Do you have children in school at this time?	Y / N
<i>Details</i>	
<p>If YES..... we will contact the school to ensure the safety of your children. Buses will be directed to leave the area immediately. If school is in session, your children will be redirected to the reception centre by their regular bus driver when the school day is over.</p>	
Do you require evacuation or transportation assistance?	Y / N
<p>If YES.....we are sending someone to assist you. Please stay indoors and close all doors and windows until a Rover or the local police arrive to evacuate you.</p>	
<p>Please contact Milk River Pipeline if you are unable to make it to the reception centre for any reason. Please keep your phone line free so that we can contact you if necessary.</p>	
Is there an alternate number we can contact you at?	
<p>A company representative at the reception centre will address any questions you may have and will make arrangements for your temporary accommodations.</p>	
Do you understand everything I have told you?	Y / N
Are you leaving immediately?	Y / N
<p>Thank you for your cooperation. If you have any urgent questions, please call (emergency number)</p>	

#### 5.3.4 Reception Centres

If personnel are required to evacuate from a hazard zone, a reception centre may need to be established. The reception centre is a place to register evacuees for emergency shelter, assess their needs, and ascertain where they can be contacted if not at the reception centre.

The role of the **Reception Centre Group Supervisor** will vary depending on if the Local Authority or Milk River Pipeline establish the reception centre.

**Local Authority Reception Centre:** In most cases, the reception centre will be established by the local authority. In these cases, the Reception Centre Group will coordinate with the local authority **Reception Centre Manager** and exchange incident information. This includes the incident status and number of evacuees expected.

**Milk River Pipeline Reception Centre:** Where Milk River Pipeline establish their own reception centre, the Reception Centre Group will coordinate all activity, including establishing accommodation, feeding, communication and documentation for compensation purposes.

No matter who establishes a reception centre the following apply:

- In order to account for evacuees, close coordination within the Public Protection Branch will be required.
- Community relations support must be deployed. This will be provided by the Milk River Pipeline ECC based in Calgary and should be requested through the Public Protection Branch Director.

For a small number of evacuees, this may be achieved by providing hotel accommodation and registering them by phone prior to arrival at the hotel. For larger numbers of personnel, contacting the local authority via the **Liaison Officer** may be a more efficient method as they may activate their Emergency Social Services (ESS) Plan.

The **Reception Centre Group Supervisor** is responsible for:

- Liaison with the local authority Reception Centre Manager.
- Coordinating and directing the activities of Milk River Pipeline personnel within the Reception Centre Group.
- Logging all personnel who arrive at the reception centre.
- Providing regular updates to the Public Protection Branch Director on:
  - The status of activities at the reception centre.
  - Residents who have arrived at the reception centre.

Refer to specific map section for the pipeline / facility for local authority contacts.

### 5.3.5 Ignition Procedures

Ignition is the final means of providing public protection from a release of sour gas. Ignition does not, by itself, negate the need for continuing with an evacuation. It does, however, have an impact on the urgency of the notification or evacuation activities being carried out.

Until such time that a decision has been made to intentionally ignite a release, steps should be taken to minimize any chance of unplanned ignition in the area. The decision to ignite should be made by a Milk River Pipeline representative on site and is based upon the following ignition considerations below.

<input type="checkbox"/>	What are the safety and health risks to emergency personnel?
<input type="checkbox"/>	What is the proximity of release to public areas?
<input type="checkbox"/>	What is the availability of air monitoring equipment and personnel?
<input type="checkbox"/>	What is the detectable concentration of H <sub>2</sub> S and/or flammable gases near the source of the release and within the EPZ?
<input type="checkbox"/>	What are the weather conditions?
<input type="checkbox"/>	What is the duration of the release and potential volume?
<input type="checkbox"/>	What are the impacts to livestock?
<input type="checkbox"/>	What are the impacts to other property at risk including property, timber, or infrastructure?

Ignition **must take place if one or more of the following factors is met:**

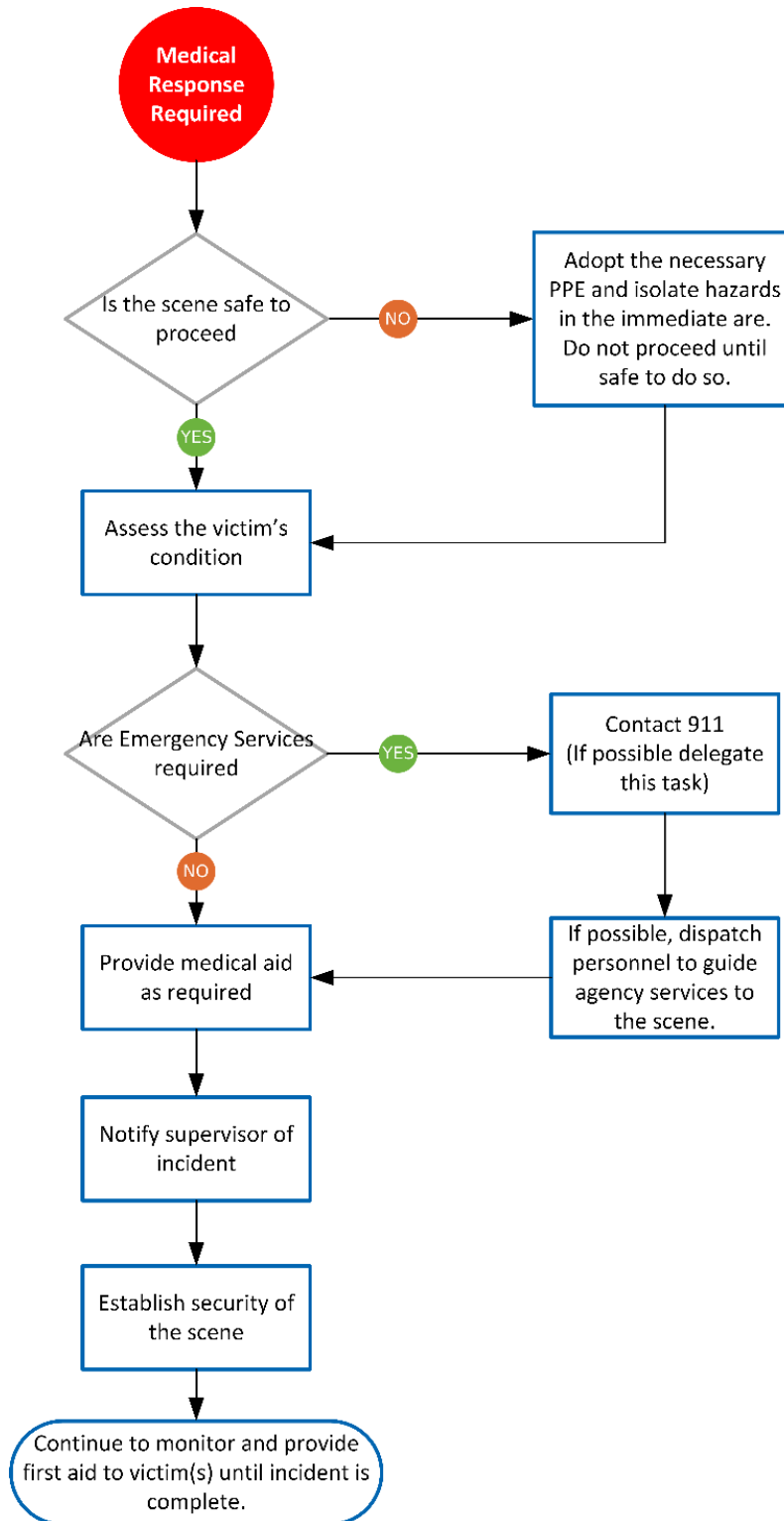
<input type="checkbox"/>	Evacuation of the response zones has not yet taken place.
<input type="checkbox"/>	Monitoring results indicate H <sub>2</sub> S concentrations more than 10 ppm over a 3-minute average in un-evacuated parts of the EPZ. <b>IF MONITORED LEVELS ARE DECLINING, THE SITUATION NEEDS TO BE CONTINUOUSLY ASSESSED FOR IGNITION.</b>
<input type="checkbox"/>	Monitored H <sub>2</sub> S concentrations exceed 1 ppm (1-hour average) in urban density developments.
<input type="checkbox"/>	Monitoring is not taking place due to weather or other unforeseen circumstances.
<input type="checkbox"/>	The release cannot be brought under control in the short term (in these cases, the ignition decision will be made in consultation with the Regulatory authority).
<b>Ignition must occur within 15 minutes of the decision to ignite.</b>	

Whatever decision is made, the factors considered and the decision on whether to ignite or not to ignite must be recorded on the ICS214 Individual Event Log or signed off below.

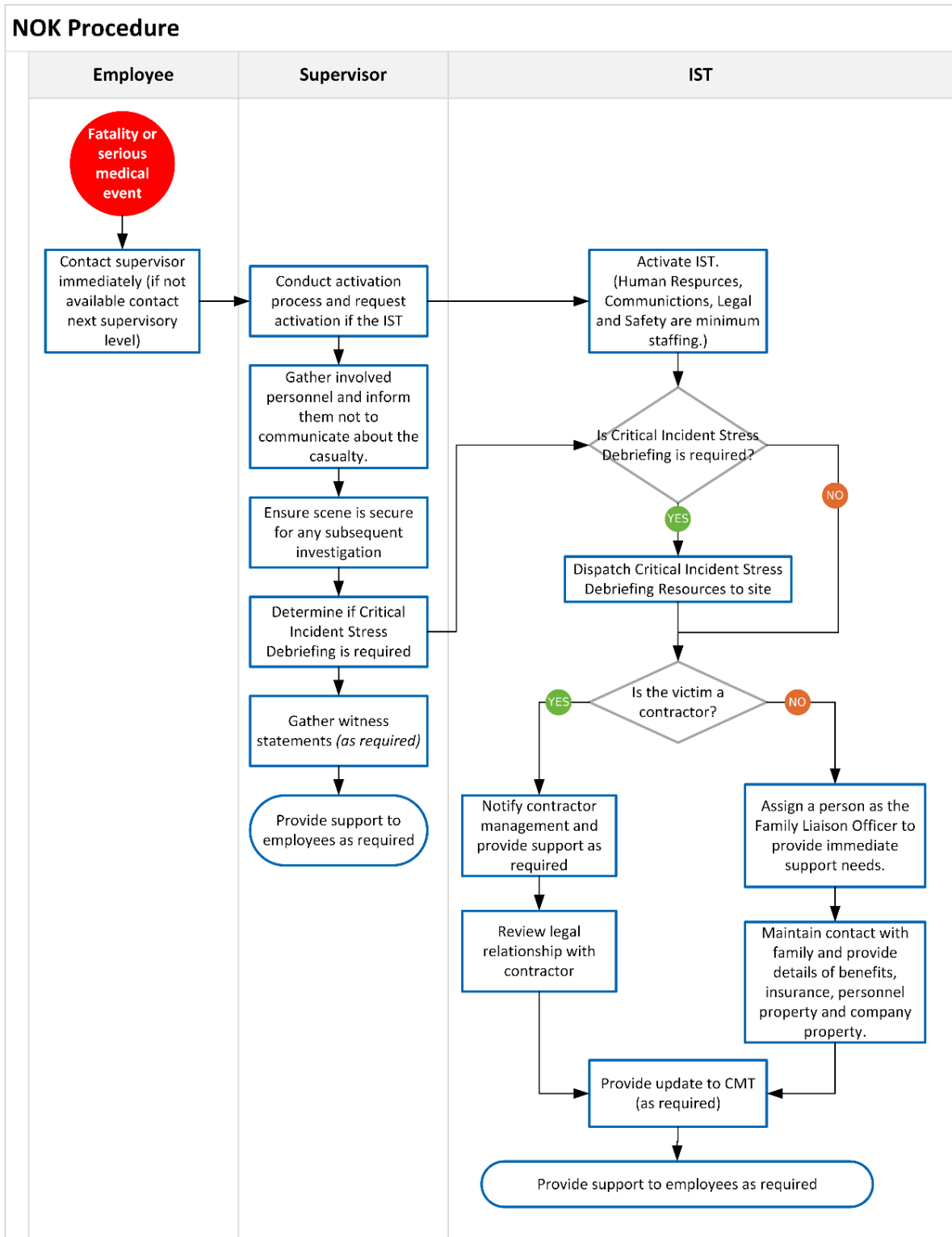
The **Incident Commander** must be informed of the decision to ignite or not to ignite, and the reasons behind the decision, as soon as reasonably possible.

**5.4 Injury / Medical Response**

The following flow chart outlines the steps to take in the event of a medical emergency



5.4.1 Notification of Next-of-Kin



Important note:

- Death notifications may only be carried out by law enforcement or the health care agency the casualty is in the custody of. Milk River Pipeline will not interact with the Next-of-Kin until confirmation of NOK notification has occurred.
- If the incident occurs during work hours but away from an MRPL site, it is possible that Milk River Pipeline may not be aware of a death and a next of kin notification occurring.

Upon recognition of an employee or contractor fatality, or serious injury requiring hospitalization, **do the following:**

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*Do not allow family members or friends direct access to the affected individuals office, locker or other workplace storage areas.*

*Do not discuss the names of affected individuals in public places or via a means of communication that is not private.*

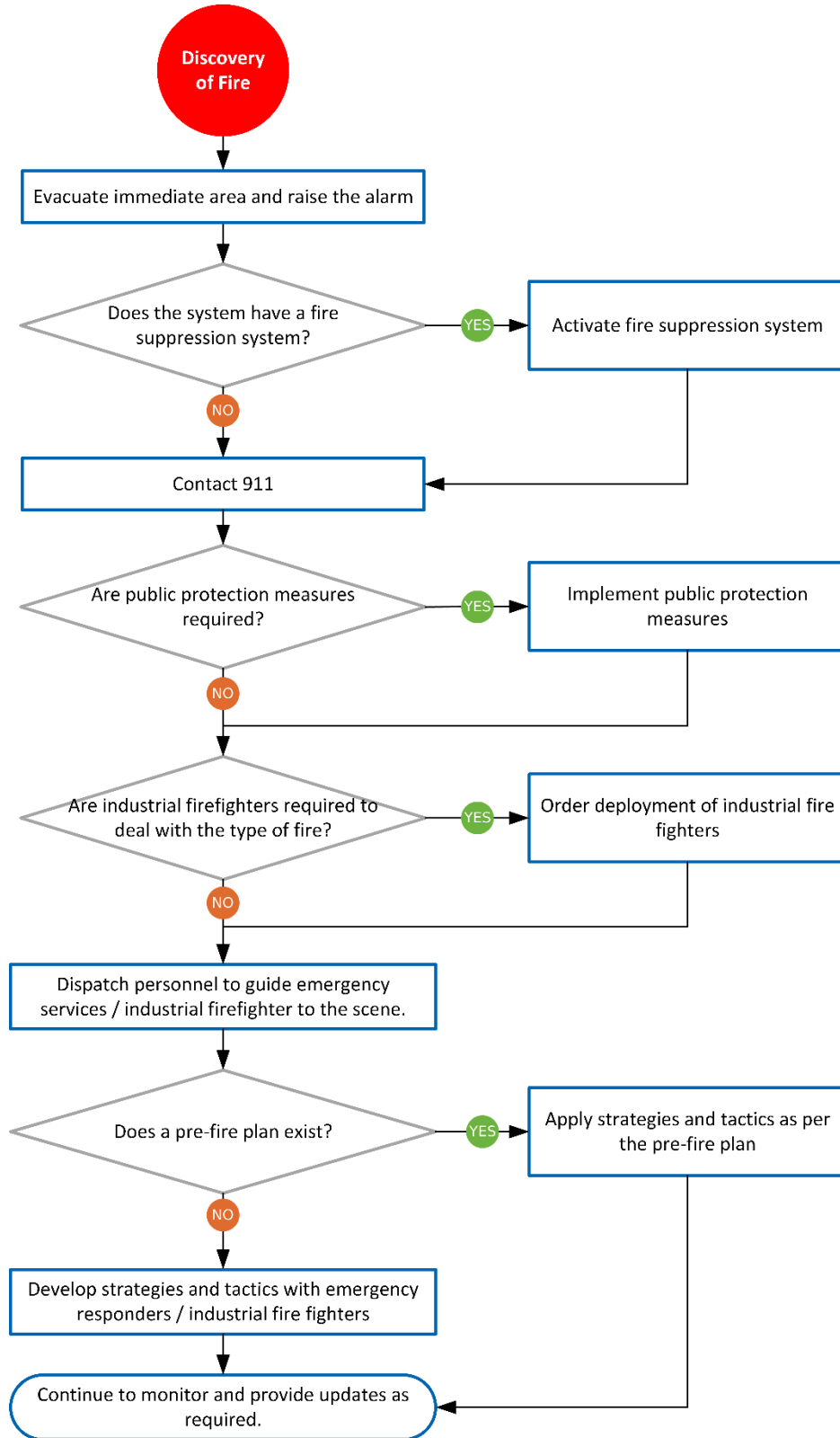
*Do not release the names of affected personnel until the next-of-kin are notified.*

*Do not have multiple point of contacts for the Next of Kin – ensure they have a single point of contact.*

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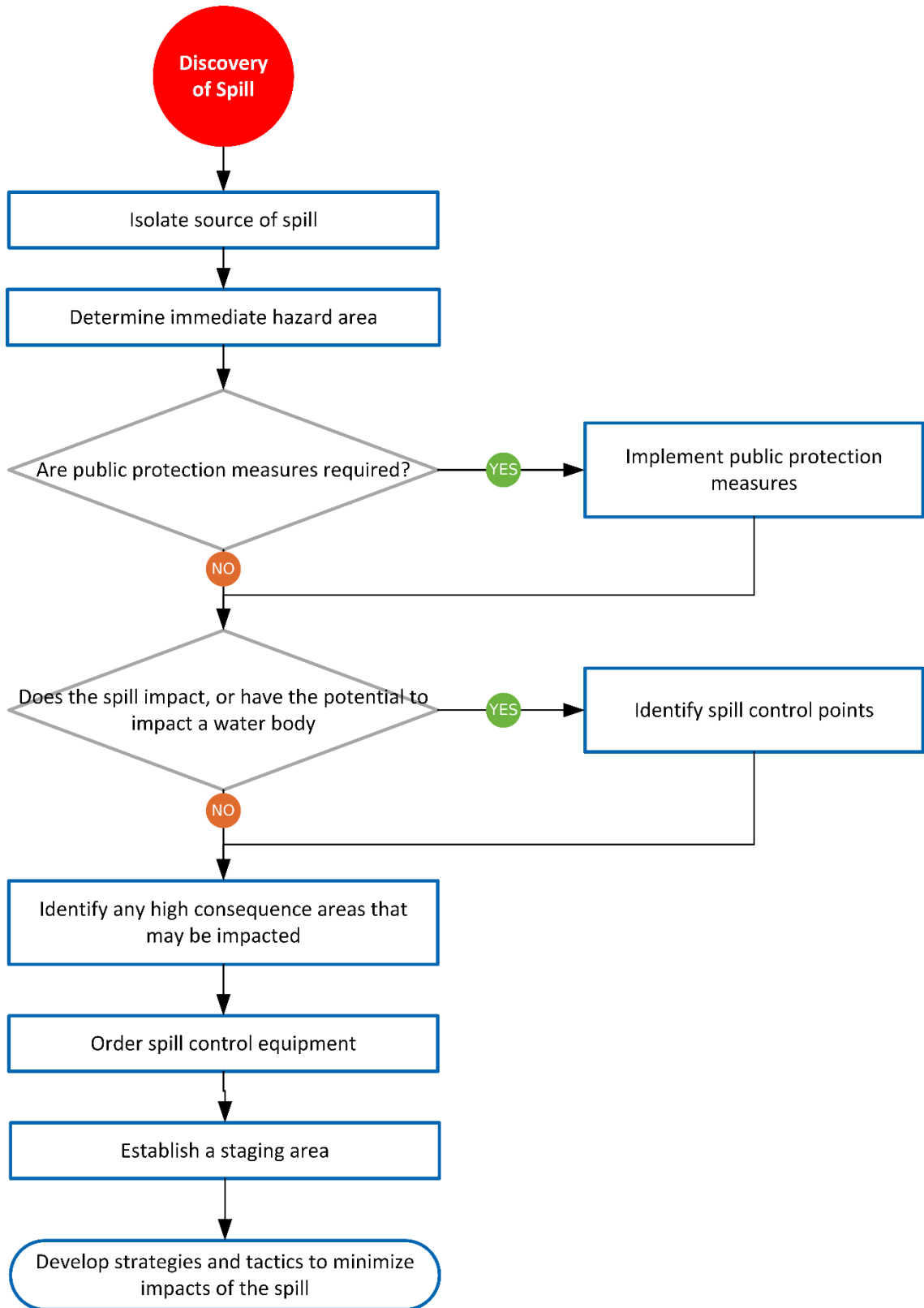
### 5.5 Fire Response



### 5.5.1 Initial Response

- Assess the situation, raise the alarm and ensure people are out of the immediate danger area.
- If fire suppression systems are available, activate them.
- Contact 911.
- Size up the situation:
  - Extent of fire.
  - Potential hazard area (smoke, radiant heat, explosions, BLEVE, boil over)
  - Equipment involved.
  - Fuel sources.
  - Ignition sources.
  - Water supply.
  - Potential spread.
  - Additional hazards.
  - Wind direction.
  - Requirement for public protection measures.
- Implement public protection measures if required.
- Shut down involved or threatened equipment, close valves, turn off power, shut off fuel supplies, and activate Emergency Shutdown if necessary.
- If required, order industrial fire fighters.
- If safe to do so, protect nearby assets by relocating equipment, covering sensitive apparatus, shutting down equipment, and closing openings.
- Create a staging area in which fire fighting equipment can be staged.
- Ensure personnel are dispatched to meet firefighting equipment
- On arrival of fire fighters, use the strategies and tactics in the pre-fire plan. If no pre fire plan exists, develop strategies and tactics with the fire fighters.
- Maintain public protection measures until the hazard is removed.
- Post extinguishment, secure the incident scene for investigation.

**5.6 Spill/Release Response**



### 5.6.1 Initial Response

- If safe to do so, isolate the source of the spill.
- Size up the situation:
  - Type, and state (gas, liquid, solid) of the release.
  - Wind direction.
  - Hazard area from the spill.
  - Potential for the spill to migrate.
- Enact public protection measures as required.
- If the spill is, or has the potential to impact a water body, identify spill control points.
- Identify high consequence areas that may be impacted.
- Order the appropriate spill control equipment.
- Establish a staging area.
- Ensure the appropriate PPE is being worn (consult SDS sheet if required)
- Develop the strategies and tactics required to contain and clean up the spill.

## 5.7 Security Procedures

This section describes the graduated security controls that should be implemented at sites at the 'Low Threat' level, and in response to raised threat levels, 'Medium' 'High' or 'Imminent'.

**Definition of Security Incident:** A security incident is an actual or potential violation of criminal law, MRPL Environmental, Health and Safety policy, security standards or procedures on MRPL premises or while conducting work for MRPL.

**Consult the MRPL Physical Security Standard ([IP-RMO-STD-0003](#)) for additional direction on security controls for various threat levels.**

Threat levels may also be raised by MRPL management in response to change threat levels within the business or as the result of external threats.

Any change in the threat levels will be communicated to affected operations by the Emergency Management team, MRPL Management or Security and/or to designated contacts by the Provincial Security and Intelligence Office (PSIO). These security procedures aim to provide guidance on an effective response by company workers in the event of a changing threat level.

<b>Minimal</b>	There is no intelligence indicating a threat. An act of violence directed at MRPL is highly unlikely.
<b>Low</b>	Intelligence has identified an individual or group which is assessed as having either the capability or the intent to perform an act of violence, but a violent act is unlikely
<b>Medium</b>	Intelligence has identified an individual or group which is assessed as having the capability and the intent to commit an act of violence. There is no intelligence indicating that an attack against MRPL is forthcoming.
<b>High</b>	Intelligence has identified an individual or group which is assessed as having the capability and the intent to commit an act of violence. Intelligence indicates an attack against MRPL is <b>probable</b> .
<b>Imminent</b>	Intelligence has identified an individual or group which is assessed as having the capability and the intent to commit an act of violence against MRPL in the <b>immediate future</b> .

### 5.7.1 Minimal Threat Security Level

- Normal operations
- Base security requirements as outlined in the MRPL Physical Security Standard ([IP-RMO-STD-0003](#))

### 5.7.2 Low Threat Security Level

This condition exists where there is a low risk of criminal activity, public disorder, or terrorist threat. Operations continue normally.

Ensure the security controls outlined in the Minimal Threat Security Level have been implemented

#### Access Control/Perimeter Protection

1. Contractors, sub-contractors and other visitors sign in and out of facility (including daily safe work permits) and conform to all company site security protocols
2. Contractors must be pre-approved to access facility, including weekends and holidays
3. Temporary access cards to be signed out and returned the same day by contractors at CI sites where practicable and in use
4. Visitors must show government issued photo identification
5. Confirm destination of all visitors, contractors, deliveries, etc. and inform indicated staff member of their arrival
6. Site access denied to anyone who does not comply with security requirements, such as identification verification
7. Existing baseline security measures as directed by the MRPL Physical Security Standard [IP-RMO-STD-0003](#) are in place and functioning correctly (fencing, barriers, lighting, signage, access control, closed circuit television-CCTV, locks )
8. Perimeter fence, exterior lighting and access control repairs a priority

#### Communications

1. Maintain emergency and on-call numbers of key personnel

#### Procedures/Policies/Plans

1. Company staff aware of their responsibility to notify their Supervisors and MRPL Security all unusual or suspicious activities around the site and follow up – **'If You See Something, Say Something'**
2. Periodic location checks and perimeter checks. Records of results of these checks.
3. Report and follow up on all unidentified vehicles parked or operated in a suspicious manner around the site
4. Deliveries deemed unscheduled or unusual should have supervisory approval before access to site is given or delivery is accepted
5. Secure all facilities, buildings and storage areas if not in regular use
6. Tours approved by a supervisor and visitors accompanied by company personnel
7. Road barrier/temporary fencing redundancy on hand where required OR pre-plan for delivery and placement of temporary barriers at CI sites

8. No photographs or videos are to be taken of facility without supervisor/manager approval

### 5.7.3 Medium Threat Security Level

This condition exists when there is an elevated risk of criminal activity, public disorder or terrorist threat. Senior management in Calgary and the security advisor must be informed immediately of a raised site security threat level.

Ensure the security controls outlined in the Low Threat Security Level have been implemented

#### Access Control/Perimeter Protection

1. Close and secure all unnecessary points of entry/exit
2. Monitor main access point 24 hours a day by human or electronic means
3. Visitors by appointment only, confirm that they have a need to be at the facility at that time/day and must be accompanied by a staff member
4. Visitors must be checked in and verified using their photo identification.
5. Maintain detailed log of deliveries including driver information, vehicle license number, description of items being delivered
6. Add additional barriers (fencing, bollards, etc.) to vulnerable areas. Increase the height of barriers at vulnerable points.
7. Consider external support for explosives detection at entry points.

#### Communication

1. Inform all company staff and contractors of the change in Threat Level
2. Communications to the public should only be through an authorized company spokesperson
3. All staff to immediately report any suspicious activity
4. Update staff regularly to prevent any rumours, ensure understanding, cooperation and effective implementation of security measures

#### Policies/Procedures/Plans

1. All deliveries to be pre-authorized and inspected for broken seals, tampering
2. Weekly testing of security systems, alarms, CCTV, motion sensors for proper function
3. Contractors on site only during daylight hours, if practicable
4. The Emergency Control Center put on standby to be activated, staffed and ready for use
5. Inspect equipment that is used off-site when returned
6. Close and secure areas that are in minimum use and do not affect operations
7. Suspend facility tours to non-MRPL personnel
8. Prepare to increase security personnel,

#### 5.7.4 High Threat Security Level

This condition exists when there is a high risk of criminal activity, public disorder or terrorist threat.

Ensure the security controls outlined in the Medium Threat Security Level have been implemented

##### Access Control/Perimeter Protection

1. Reduce facility access points to the absolute minimum for continued operation, preferably one access point.
2. Add additional security personnel. Utilise contract security where appropriate
3. Essential vehicles ONLY. Contract security to inspect thoroughly on entering the facility, including cargo areas, glove boxes, and other areas where dangerous items could be concealed.
4. Maintain detailed log of deliveries including driver & vehicle information including cargo
5. Restrict access to essential, pre-authorized personnel only
6. If the location is unstaffed, order and place temporary barriers at entrance roadways to prevent vehicle access.
7. Order portable lighting in preparation for imminent level

##### Communications

1. Inform all employees of the change in Threat Level
2. Advise of the measures being employed
3. Daily updates to staff and key external stakeholders

##### Policies/Procedures/Plans

1. Increase frequency of call-ins to every 2 hours for staff working alone
2. Ensure extra security personnel are available as needed
3. Conduct daily location checks and perimeter patrols (mainline stations)
4. Cancel any public events
5. Prepare to work at an alternate site or with a dispersed workforce if practicable and appropriate
6. Close all roof access
7. Suspend all non-critical work/projects that require additional site access by contractors unless directed by senior management
8. Existing work permits are cancelled. No new work permits will be issued unless approved by management
9. Test all security systems, alarms, CCTV, motion sensors daily
10. Escort essential deliveries to destination
11. Close blinds and curtains
12. Securely store equipment after use if possible
13. Place all emergency/special response personnel on 24-hour stand-by
14. Change passwords, pass codes, locks, etc. where applicable
15. Maintain regular contact with law enforcement
16. Increase perimeter, roadway and entry lighting. Use portable light towers or similar.
17. Consider installation of additional or temporary security cameras. Monitor security cameras full time.

### 5.7.5 Imminent Threat Security Level

This condition applies when there is an imminent risk of serious civil unrest next to the facility, serious criminal activity or terrorist attack.

Ensure the security controls outlined in the High Threat Security Level have been implemented

#### Access Control/Perimeter Protection

1. Consider evacuating & lockdown of facility where possible
2. Access only to emergency, security, employee shuttle and law enforcement vehicles
3. Essential staff on site only
4. One access point only
5. Essential vehicles only with pre-approved access
6. All non-essential entrances, exits, access points, doors, windows to be locked, barricaded or sealed

#### Communications

1. Inform all employees of the Imminent Threat Level
2. Stop non-essential communications
3. 15 to 30 minutes check calls from security personnel

#### Policies/Procedures/Plans

1. Suspend/delay deliveries unless approved by management
2. Remove or isolate all unauthorized vehicles from the site
3. Determine the need for escorts and shuttle service for key personnel
4. Immediate response to security maintenance issues
5. Shut down all non-essential operations
6. Place additional portable lighting units at facilities where necessary to ensure that access points and perimeter are well illuminated.
7. No movement of hazardous material unless absolutely critical
8. Instruct personnel to change network passwords.
9. Only critical deliveries and shipments are allowed and must be approved by security advisor Check vehicles and verify contents at a location away from sensitive areas such as offices, operating equipment and storage tanks
10. Maintain regular contact with law enforcement

### 5.7.6 Suspicious /Unknown Persons/Trespassing

1. If you see a suspicious or unknown person, you should:
  - Maintain a safe distance
  - Retreat immediately if the person becomes hostile or aggressive.
  - Get help
  - Maintain observations
  - Report developments
  - Notify supervisor/others
2. Ensuring your own safety, ask:
  - What is your name?
  - What are you doing here?
  - Who are you here to see?
  - What department are you visiting?
  - How can I help?
3. If the person is not authorized to be at the MRPL location, ask them to leave immediately and escort them to the exit or property boundary.
4. If they refuse, inform them that they are trespassing on MRPL property and that they need to leave immediately.
5. If they continue to refuse, call local police and request assistance. Never attempt to physically remove a trespasser.
6. Observe individual's activities
7. Make note of the person's physical characteristics (height, build, race, hair colour, clothing, etc.)
8. Note mode of transportation (make, model, colour, licence plate)
9. Monitor CCTV
10. Do not attempt to impede or follow the trespasser

**CAUTION!** Any sign of a weapon, aggression, threats or acts of violence:

- Do not engage
- Move away quickly
- Warn others and call 911 immediately

### 5.7.7 Suspicious Packages/Letters

Some items that can trigger suspicion:

- Discolouration, crystals on surface, strange odours or oily stains
- Envelope with powder or powder-like residue
- Excessive tape or string
- Unusual size or weight given size
- Lopsided or oddly shaped envelope
- Postmark that does not match return address
- Restrictive endorsements such as "Personal" or "Confidential"
- Excessive postage
- Handwritten, block-printed or poorly typed addresses
- Incorrect titles
- Title but no name
- Misspellings of common words
- No return address
- Addressed to individual no longer with organisation

If you come across a package or a letter which looks suspicious, take the following action:

- Do not open or handle it
- Alert supervisor immediately
- Call Security Advisor
- Any doubts about item call Police
- Isolate the package. Do not move it.
- Evacuate the immediate vicinity
- If you do open an item wash your hands with soap and warm water

### 5.7.8 Active Assailant/Terrorism:

1. If In Doubt, Get Out! RUN if a safe path is available
2. Always try to escape or evacuate, even if others insist on staying
3. Warn and encourage others to leave with you, but don't let the indecision of others slow down your own effort to escape
4. Leave everything behind
5. Keep your hands visible
6. Once you are out of the line of fire, try to prevent others from walking into the danger zone and call 911
7. If you can't get out safely, find a place to HIDE.
8. When hiding, turn out lights, remember to lock doors, and silence your ringer and vibration mode on your cell phone
9. Barricade the door if you cannot lock it
10. Remain in the room until a police officer or other authority gives the "all clear"
11. As a last resort, act with aggression, use improvised weapons and FIGHT.

### 5.7.9 Bomb Threat

While the police will seek to determine the credibility of bomb threats and locate, dispose of, and neutralize any discovered item, a quick preliminary search can be made by company personnel on police recommendation.

1. Inform supervisor, security advisor immediately AND call police from a different phone
2. Use the MRPL Bomb Threat Checklist on MyHub
3. Do not antagonise caller
4. Do not state the nature of the call to anyone else initially
5. Do not destroy written threats or envelopes
6. Don't reply to emails

Searchers must be cautioned to:

- Never touch or move a suspicious object
- Leave office doors open when evacuating
- Avoid using portable radios or cell phones
- Only perform a quick visual search
- Look for objects that are clearly out of place

If an evacuation is required due to a bomb threat:

- Leave drawers and filing cabinets unlocked.
- Notify Police immediately if you locate an object that looks suspicious
- Take personal items with you (lunch box, purse etc.)

#### 5.7.9.1 Specific Bomb Threats

Although rare, specific threats are considered more dangerous. Detailed information will be provided about the exact location of the device, its description, why it was placed, time of detonation and how it would be detonated.

### 5.7.10 Civil Disturbance or Protest

Incidents of civil disturbance, riots or protests may target MRPL locations or may not be targeted at MRPL and affect MRPL locations as collateral damage. Protests may be legal, and MRPL cannot interfere with a legal protest. In the event of a civil disturbance or protest that is or may affect an MRPL location the follow steps should be taken:

1. Secure the facility. Lock all gates, entrances and buildings.
2. Notify your Supervisor and MRPL Security
3. Monitor the civil disturbance or protest from a safe place. Document what you see.
4. Notify police if you see any violation of law.
5. Deal with any trespassers as directed under the Suspicious Persons/Trespassers heading. Do not attempt to physically remove anyone from the location.
6. Do not speak with protestors unless it is to convey trespass or safety information.
7. Do not argue with protestors. Protestors may attempt to provoke a confrontation to further their cause or gain media attention or to harm MRPL's reputation.
8. Report the incident via MRPL's incident management system.

### 5.7.11 Vehicular Attack

Vehicles can be used to attack facilities and personnel. Most often vehicles are used to ram and damage gates, fences, building and operating assets to gain entry to further a theft or vandalism incident. They can also be used to attempt to strike and harm personnel or deliver explosive devices known as Vehicle Borne Improvised Explosive Devices (VBIED) in workplace violence and terrorism incidents. If an incident involves a vehicle attack, follow these additional steps:

1. Retreat to a safe area and contact police. Note the vehicle make, model, colour and license plate number. Provide a description of the driver and direction of travel.
2. Take cover in buildings, behind bollards or barriers that will stop a vehicle if you are attacked.
3. Do not approach a stopped, stalled or apparently disabled vehicle. Stay in your safe area until police arrive.
4. Notify your Supervisor and MRPL Security
5. Report the incident via MRPL's incident management system.

## 6 POST INCIDENT

### 6.1 Stand Down Procedures

Once the emergency has been brought under control, the decision to downgrade the level of emergency can be made by the IC in consultation with jurisdictional energy regulators (if applicable).

De-escalation of the incident happens when the Incident Commander:

- Recognize that the scope of emergency response activities is reducing.
- Assess that the situation is moving towards a state of being handled using standard operating procedures.
- Assess that the situation is moving towards a state of recovery and restoration.
- Can stand down various incident personnel.

#### 6.1.1 Declaring an Emergency Over

Once the assessment is made by the Incident Commander that the incident has stabilized and is transitioning into a state of normal business operations, the Incident Commander will ensure that all information and physical records produced by the ICP, is completed and documented into Cority. Requirements for storage of physical documentation will be determined by the Planning Section Chief.

Documentation will be used for the after-action report and may be used for investigative, litigation, auditing, or training purposes and will be kept and stored for five (5) years.

#### 6.1.2 Debriefing

Once the ICP has been stood down, the Incident Commander in coordination with the Planning Section Chief will conduct a quick debrief with IMT members involved in the response. Questions to ask include:

- What was planned to happen?
- What actually happened?
- What went well?
- What went wrong?
- What can we do to improve the next time?

Information from the debrief will be used in the lessons learned report and will contribute to the continuous improvement of the Emergency Management Program.

## 6.2 After-Action Review/Debriefing

Following an emergency that triggers the activation of one or more response teams, a lessons learned review should take place with key stakeholders. Ideally, this review will take place within a few weeks of the emergency to ensure responders can reflect accurately on the response.

The primary aim of the review is to identify successes and opportunities for improvement during the response and recovery of the emergency. Emergency management aspects of the review should include an examination of gaps/weaknesses or successes in:

- Emergency management policies, plans, procedures, or training.
- Activation and notification of response teams.
- Communication and coordination between response teams.
- Communication and coordination with external agencies.
- The after-action report will detail findings from the after-action review, specifically:
  - The sequence of events before, during and after the incident.
  - The details relating to the severity and potential re-occurrence of the incident.
  - A root cause determination of the cause of the incident.
  - The systems used for internal and external communications.
  - The effectiveness of communications efforts with the media, community and government agencies.
  - All action taken to provide public safety (if applicable).
  - All actions taken to reduce risks and liability.
  - The assessment of legal or environmental issues that were raised because of the incident or the response actions.
  - Plans to reduce the risk of a similar incident re-occurring, including recommendations for future actions and improvements to the emergency preparedness program.
- Corrective actions and parties responsible for remedying the problem.

## 6.3 Investigation Process

Every emergency involving a fatality, a serious injury, and loss or significant damage to Milk River Pipeline property should be investigated, analyzed, and followed up. As soon as possible after an incident, personnel designated by the IMT will conduct an investigation into the incident.

Particular care must be exercised to ensure that all evidence is preserved in its original state. Where loss or damage to Milk River Pipeline property or loss of revenue has occurred, evidence will not be disturbed until permission has been received from the insurance company adjuster or any government agencies involved.

### 6.3.1 Third-Party Investigations

Third party agencies, such as the local policing authority, government and insurance companies may be required to investigate an incident site. It is important to cooperate with third party investigators. However, Milk River Pipeline personnel should be aware of its internal guidelines including:

- Obtaining the name, title, address and telephone number of all inspectors and immediately informing a Milk River Pipeline HSE and/or Corporate Communications representative.
- Ensuring an Milk River Pipeline representative accompanies the Inspector at all times.
- Only giving the Inspector the information, they request. Avoid offering additional information. Limit the tour to the specific area the inspector wishes to investigate.
- Always tell the truth.
- Document all items of evidence that the Inspector has retained. Where possible, keep copies of the evidence provided to the Inspector.
- Wait until legal counsel is present before answering questions where the Inspector indicates that any statements may be used as evidence or indicates that you have the right to counsel.

### 6.4 Insurance Compensation and Claims

Legal and Insurance Services should be engaged throughout the emergency response and after the emergency is stood down. Legal Services is responsible for providing guidance and responding to any litigation resulting from the emergency. This includes litigation arising from a fatality or any third-party actions where Milk River Pipeline may have threatened or harmed a third-party. Legal Services will also be involved in litigation arising from insurance responses.

### 6.5 Regulatory Reporting


Regulatory reporting required by government agencies or energy regulators will be prepared within the prescribed manner and timelines. Reports may be prepared by Regulatory, Legal, or Health, Safety & Environment business units, or any other relevant subject matter expert appropriate to the incident.

**DISTRICT ERP**

**ANNEX A – MILK RIVER PIPELINE ERP**

**ANNEX B – MILK RIVER TERMINAL FACILITY PLAN**

**APPENDIX 1 MILK RIVER PRE\_FIRE PLAN**

		<b>Plan</b>
Department: Transportation H.S.S.E.		Next Review: 2027-Jan
Document Title: Milk River Emergency Response Plan		Revision Date: 2026-Jan
Document Number: MR-EM-ERP-001	Doc. Status: Active	Rev: 1

**Milk River Emergency Response Plan  
ANNEX A Taber District  
Emergency Response Plan**

**24 Hour Emergency Control Centre number: 1-800-727-7163  
Calgary Office: 403-290-6000**

**Manual #: \_\_\_\_\_**

**Issued to (location): \_\_\_\_\_**

**Issued to (person): \_\_\_\_\_**

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## **1.0 CONTACTS**

### **1.1 BST/CMT/IMT/FIRST**

A list of 24-hour contacts for members of the Milk River Pipeline Incident Support Team, Crisis Management Team (executives), Pipeline Incident Management Team, and the Field Initial Response and Support Team will be kept in a Contact List binder in the Primary, Secondary, Tertiary ECC's as well as in the Everbridge system. Notification should go out via Everbridge as the primary means of notification, but if the system is down manual phone calls can be made.

### **1.2 District Offices**

**Section Redacted**

### **1.3 Business Continuity/Emergency Management Specialists**

**Section Redacted**

### **1.4 Security Advisor**

**Section Redacted**

### **1.5 Environmental Specialists**

**Section Redacted**

### **1.6 Health and Safety Specialists**

**Section Redacted**

### **1.7 Milk River Pipeline Corporate Emergency Coordination Centre (when active)**

**Section Redacted**

## **1.8 Pipeline Management – Staff and Office Phone Numbers**

**Section Redacted**

## **1.9 Taber (Bow River Pipeline) – Staff and Office Phone List**

**Section Redacted**

## 1.10 Government Contacts

**Section Redacted**

## 1.11 Municipal Contacts

**Section Redacted**

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## **1.12 Local Government Response**

**Section Redacted**

## **1.13 Alberta Irrigation Projects Association (AIPA)**

**Section Redacted**

## **1.14 Key Numbers**

**Section Redacted**



## 1.16 Consultants and Response Organizations

**Section Redacted**



### 1.18 Response Equipment

<b>IPL EQUIPMENT</b>			
<p>A detailed listing and location of Milk River Pipeline Response Equipment can be found here:</p> <p><a href="https://mycontent/otcs/lisapi.dll/link/21719326">https://mycontent/otcs/lisapi.dll/link/21719326</a></p>			
<p><b>**If no answer at site number below, contact SPCC for assistance locating a district staff member for IPL response equipment assistance**</b></p>			
<b>Conventional Control Centre</b>		<b>1-800-727-7163</b>	
<b>Cold Lake Control Centre</b>		<b>1-855-664-5011</b>	
<b>Corridor Control Centre</b>		<b>1-800-721-6761</b>	
<b>Location</b>	<b>Unit Type</b>	<b>Unit Name</b>	<b>Contact</b>
Brooks	Vessel - Small Response	Lil Rascal	Section Redacted
Brooks	Vessel - Zodiac	Scamp	Section Redacted
Brooks	ATV	OR-54530	Section Redacted
Brooks	Boom Trailer	Brooks 1	Section Redacted
Brooks	Spill Response Equipment Trailer	Brooks 2	Section Redacted
Brooks	Wildlife Response Unit	Brooks 3	Section Redacted
Brooks	Misc Equipment		Section Redacted
Coleville	Vessel - Zodiac	Rufrider	Section Redacted
Conklin	Vessel - Zodiac	Scooter	Section Redacted
Conklin	ATV	OR-0001	Section Redacted
Conklin	ATV	OR-0002	Section Redacted
Conklin	ATV	OR-0006	Section Redacted
Conklin	ATV	OR-1031	Section Redacted
Conklin	ATV	OR-15377	Section Redacted
Conklin	ATV	OR-33102-1	Section Redacted
Conklin	ATV	OR33102-2	Section Redacted
Conklin	ATV	OR-37443	Section Redacted
Conklin	ATV	OR-42673	Section Redacted
Conklin	Misc Equipment		Section Redacted
Coronation	ATV	OR-23123	Section Redacted
Coronation	Misc Equipment		Section Redacted
Fort McMurray	Vessle - Landing Craft	Little Boomer	Section Redacted
Fort McMurray	Vessle - Landing Craft	Big Boomer	Section Redacted

Location	Unit Type	Unit Name	Contact
Fort McMurray	Vessel - Small Response	Tiny	Section Redacted
Fort McMurray	Vessel - Air Boat	AirBoomer	Section Redacted
Fort McMurray	ATV	39524	Section Redacted
Fort McMurray	ATV	Argo	Section Redacted
Fort McMurray	ATV	Argo	Section Redacted
Fort McMurray	ATV	Q-427	Section Redacted
Fort McMurray	ATV	Q-157	Section Redacted
Fort McMurray	ATV	S-661	Section Redacted
Fort McMurray	ATV	S-661	Section Redacted
Fort McMurray	ATV	SL-317	Section Redacted
Fort McMurray	ATV	SL-279	Section Redacted
Fort McMurray	Spill Response Equipment Trailer	Ft McMurray 12	Section Redacted
Fort McMurray	Wildlife Response Unit	Ft McMurray 3	Section Redacted
Fort McMurray	Winter Response Unit	Ft McMurray 4	Section Redacted
Fort McMurray	Misc Equipment		Section Redacted
Fort McMurray	HVP Response Unit		Section Redacted
Hardisty	Decon Unit		Section Redacted
Hardisty	Vessel - Small Response	Scorpion	Section Redacted
Hardisty	Vessel - Zodiac	HardNDusty	Section Redacted
Hardisty	ATV	OR-12837	Section Redacted
Hardisty	ATV	OR-36244-4	Section Redacted
Hardisty	Boom Trailer	Hardisty 1	Section Redacted
Hardisty	Spill Response Equipment Trailer	Hardisty 2	Section Redacted
Hardisty	Misc Equipment		Section Redacted
Kindersley	Boom Trailer	Coleville 1	Section Redacted
Kindersley	Spill Response Equipment Trailer	Coleville 2	Section Redacted
Kindersley	Misc Equipment		Section Redacted
La Corey	Boom Trailer	LaCorey 1A	Section Redacted
La Corey	Spill Response Equipment Trailer	LaCorey 2	Section Redacted
La Corey	Boom Trailer	LaCorey 1B	Section Redacted
La Corey	Spill Response Equipment Trailer	LaCorey 2B	Section Redacted
La Corey	Misc Equipment		Section Redacted
LaCorey	Vessle - Landing Craft	Nina	Section Redacted
LaCorey	Vessel - Small Response	Pinta	Section Redacted
LaCorey	Vessel - Zodiac	Santa Maria	Section Redacted
Off Gas	Misc Equipment		Section Redacted
Sherwood Park	ATV	OR-12876a	Section Redacted

Location	Unit Type	Unit Name	Contact
Sherwood Park	ATV	OR-37444	780-410-9534
Sherwood Park	ATV	OR-39755	780-410-9534
Sherwood Park	ATV	OR-42054	780-410-9534
Sherwood Park	ATV	OR-6248	780-410-9534
Sherwood Park	ATV	OR-CFU14	780-410-9534
Sherwood Park	Boom Trailer	Sherwood Park 1A	780-410-9534
Sherwood Park	Boom Trailer	Sherwood Park 1B	780-410-9534
Sherwood Park	Boom Trailer	Sherwood Park 1C	780-410-9534
Sherwood Park	Spill Response Equipment Trailer	Sherwood Park 2A	780-410-9534
Sherwood Park	Spill Response Equipment Trailer	Sherwood Park 2B	780-410-9534
Sherwood Park	Spill Response Equipment Trailer	Sherwood Park 2C	780-410-9534
Sherwood Park	Spill Response Equipment Trailer	Sherwood Park 2D	780-410-9534
Sherwood Park	Wildlife Response Unit	Sherwood Park 3	780-410-9534
Sherwood Park	Winter Response Unit	Sherwood Park 4	780-410-9534
Sherwood Park	Misc Equipment		780-410-9534
Sherwood Park - CDR	Vessle - Landing Craft	Liquid Asset	780-410-9534
Sherwood Park - CLPL	Landing Craft	River Dog	780-410-9534
Sherwood Park - CLPL	Vessel - Small Response	Water Wolf	780-410-9534
Sherwood Park - CLPL	Vessel - Zodiac	Pup	780-410-9534
Sherwood Park - POL	Vessel - Zodiac	Interwake	780-410-9534
Stettler	Misc Equipment		780-888-1316
Taber	ATV	OR-6893	780-888-1316
Taber	Misc Equipment		780-888-1316

<b>EXTERNAL EQUIPMENT</b>		
WCSS Oil Spill COOP	Alberta	1-866-541-8888 24 hours
SWAT Consulting	Alberta	1-866-610-7928 24 Hours
ProActiveEnvironmental Rentals	Alberta	1-877-471-3336 24 Hours
Firemaster	Alberta	1-877-343-3473 24 Hours
Clean Harbors	Alberta	1-800-645-8265 24 Hours
Alberta Environment Spill trailers housed at Fire Stations. Trailers typically include at a minimum: 200' river boom; 200' lake boom; 120' sorbent boom; 600 sorbent pads (16'X18") plus various bridles, rope, tools, etc.		
AENV Spill Trailer	Ponoka – Fire station	403-783-3100 (dispatch)
AENV Spill Trailer	Olds – Fire station	403-507-4850 or 9-1-1 and request Olds Fire Dept.
AENV Spill Trailer	Taber – Fire station	9-1-1 and request Taber Fire Dept.
AENV Spill Trailer	Hinton – Fire station	Call 9-1-1 and request Edson or Hinton Fire Dept.
AENV Spill Trailer	Lac La Biche – Fire station	9-1-1 and request Lac La Biche Fire Dept.
AENV Spill Trailer	High Prairie – Fire station	780-536-6028 duty officer or 9-1-1 and request High Prairie Fire Dept.

## **1.19 Shipper/Producer contacts**

**Section Redacted**

## **2.0 MUTUAL AID**

### **2.1 Milk River Pipeline Ltd.**

Milk River Pipeline has equipment stationed at various locations and this equipment can be moved between pipelines should need dictate.

### **2.2 Industry Mutual Emergency Assistance Agreement**

Milk River Pipeline is a member of a Mutual Emergency Assistance Agreement (MEAA) with ATCO Pipelines, Pembina Pipeline Corporation, Plains Midstream Canada, TransCanada Pipelines Ltd., TransGas Ltd./Sask. Energy, Transmountain Corporation, Trans-Northern Pipelines Inc., Wolf Midstream Inc., and Wolf NGL. We can request resources or be requested for resources from or by these companies in a time of need via use of this document. The agreement can be found within the Milk River Pipeline Reference Library:

IP-RM-PLN-0010 <https://mycontent/otcs/llisapi.dll/link/35942665>

Milk River Pipeline also can request or receive requests from non-members of this agreement via use of the Emergency Assistance Agreement (EAA) which is a supporting agreement that allows for use of the Mutual Emergency Assistance Agreement via non-members.

This supporting agreement can also be found within the IPL Reference Library:

IP-RM-PLN-0011 <https://mycontent/otcs/llisapi.dll/link/35943457>


### **2.3 Western Canadian Spill Services (WCSS)**

Milk River Pipeline is a member in good standing with the Western Canadian Spill Services (WCSS), which is a spill cooperative between oil and gas companies.

The mandate of the WCSS is to ensure the provision of cost-effective, integrated, emergency response capabilities and to continually improve and communicate to members, stakeholders, and regulators. This includes planning, preparedness / response, and research and development for the petroleum industry.

WCSS maintains an assortment of equipment, stationed throughout the province, which is accessible to members upon request.

Web site link: [WCSS](#)

		<b>Plan</b>
Department: Transportation H.S.S.E.		Next Review: 2027-Jan
Document Title: Milk River Pipeline Emergency Response Plan		Revision Date: 2026-Jan
Document Number: MR-EM-ERP-0001	Doc. Status: Active	Rev: 1

**Milk River Pipeline  
Emergency Response Plan**

**24 Hour Emergency Control Centre number: 1-800-727-7163**

**Calgary Office: 403-290-6000**

**Manual #:** \_\_\_\_\_

**Issued to (location):** \_\_\_\_\_

**Issued to (person):** \_\_\_\_\_

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## 1.0 PIPELINE INFORMATION

The Milk River Pipeline System consists of 2 operating - 10" and 12" pipelines, 3 inactive - 6", 10", and 10" pipelines, and 2 abandoned 3", and 3" pipelines. Medium and heavy crude oil is shipped by pipeline from the Milk River Terminal to the United States border. Facilities installed at the Milk River Terminal include 3 boost pumps, 6 injection pumps, 5 flow meters and a 10,000 barrel tank that is supplied by Inter Pipeline Bow River Pipeline assets within the same terminal. The maximum operating pressure for the pipelines is 9930 kpa. The current maximum concentration of H<sub>2</sub>S is less than 20 ppm.

### 1.1 Warning/Alarm/Shutdown Systems

Milk River Pipeline manages the pipeline remotely using a Supervisory Control and Data Acquisition (SCADA) system for pipeline control at the Sherwood Park Control Centre. Pipeline control uses remote sensors and transmitters installed at our sites to monitor pipeline properties such as the temperature, pressure and flow rates for the pipeline through the SCADA system. The SCADA system has a built-in alarm for these parameters to provide an alarm for Control Centre Operator response and possible emergency shut-down. Pipeline control monitors the performance of the pipeline 24 hours a day and has the ability to remotely close certain valves, if necessary, or to send a field technician on a call-out to troubleshoot pipeline concerns.

The Control Centre Operator shuts down the line, when an alarm is received. The leak detection system (LDS) also receives data from the SCADA system. The LDS provides continuous leak detection that will trigger alarms on the detection of a leak.

### 1.2 Facilities

Facility	LEGAL LOCATION	LONGITUDE	LATITUDE	COMMENTS/ELEVATION
Milk River Terminal	Section Redacted	Section Redacted	Section Redacted	1046 meters

### 1.3 Stations & Valve sites – GPS & ATS Legal locations

VALVE SITE	VALVE SIZE	LEGAL LOCATION	TYPE	LONGITUDE	LATITUDE	COMMENTS/ELEVATION
MRRL - N	10"	Section Redacted	Manual	Section Redacted	Section Redacted	1046 Meters
MRRL - S	10"	Section Redacted	Manual	Section Redacted	Section Redacted	1113 Meters
MRRL - S	10"	Section Redacted	Manual	Section Redacted	Section Redacted	1113 Meters
MRRL - S	10"	Section Redacted	Manual	Section Redacted	Section Redacted	1113 Meters
BV 14963-0	10"	Section Redacted	Manual	Section Redacted	Section Redacted	1046 Meters
BV 14963-13220	10"	Section Redacted	Manual	Section Redacted	Section Redacted	1081 Meters
BV 14963-16394	10"	Section Redacted	Manual	Section Redacted	Section Redacted	1113 Meters
BV 14964-0	6"	Section Redacted	Manual	Section Redacted	Section Redacted	1046 Meters Discontinued
BV 14964-13196	6"	Section Redacted	Manual	Section Redacted	Section Redacted	1081 Meters Discontinued
BV 14965-0	10"	Section Redacted	Manual	Section Redacted	Section Redacted	1081 Meters Discontinued
BV 14965-3176	10"	Section Redacted	Manual	Section Redacted	Section Redacted	1113 Meters Discontinued
Ball Valve - N	12"	Section Redacted	Manual	Section Redacted	Section Redacted	1046 Meters
Ball Valve - S	12"	Section Redacted	Manual	Section Redacted	Section Redacted	1113 Meters

## **2.0 MAPS**

### **2.1 Milk River Terminal Map**

**Section Redacted**

### **2.2 System Map (Active lines)**

**Section Redacted**

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## **2.3 System Map (Comprehensive)**

**Section Redacted**

**2.4 Route Maps**  
**Section Redacted**  
**Section Redacted**

## **2.5 Western Canadian Spill Services (WCSS) Co-op Maps**

**Section Redacted**

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## ANNEX B – MILK RIVER TERMINAL

### 1 FACILITY OPERATIONS

The Milk River Station at [REDACTED], is a registered CEPA E2 facility with the reportable substances of Butane and Petroleum Crude Oil. The facility is located along the Bow River Pipeline (BRPL) which is a crude oil and condensate feeder and gathering system that transports product from south-eastern Alberta to the Terminal.

Licensed Facility Name	Facility ID (if required)	Legal Location	Latitude	Longitude
Milk River Terminal [REDACTED]	4728	[REDACTED]	[REDACTED]	[REDACTED]

#### 1.1 CEPA E2 Storage

The Milk River Terminal has an assigned Facility Storage Emergency Planning Zone (EPZ) of 1600m. This EPZ is a safety measure based on the effects of a possible BLEVE of a butane bullet as per the *Emergency Response Guidebook* (Transportation Canada, 2024).

Product	CAS	UN	Largest Container (tonnes)	Expected quantity (Tonnes)	ERG Reference	Hazard Category	Largest EPZ (m)
Crude	8002-05-09	1267	2592	4009.50	128	Pool Fire (F)	<b>800</b>
Butane	106-97-8	1011	205.44	205.44	115	Explosive (E)	<b>1600</b>

#### 1.1.1 Tank Volumes

Identifier	Tank / Bullet #	Substance	Height (m)	Dia (m)	Vol (m <sup>3</sup> )	Area of pool (m <sup>2</sup> )	Calculated Hazard Radius (m)		EPZ (m)
							Radiant Heat from Pool Fire to 5 kW/m <sup>2</sup> (m)	NFPA Boilover Standoff Distance (m)	
AST 1	TK-103	Crude Oil	9.7	15.25	1,669	2,928	800	150	<b>800</b>
AST 2	TK-104	Crude Oil	9.7	20.72	3,053	2,928	800	201	
AST 3	-	Butane	41.18	3.65	343	n/a	n/a	n/a	<b>1600</b>

#### 1.2 Pipeline Data

License	Line	Name	Licensed substance	Primary substance	IIZ (m)	PAZ (m)	EPZ (m)
<b>Operating Pipelines</b>							
4912	97	LS2000 NPS 10 Fincastle to Milk River ML (Original)	Crude Oil	BR Crude	10	10	10
4912	102	LS2002 NPS 10 03-02 to Milk River ML (10" loop E)	Crude Oil	BR Crude	10	10	10
4912	105	LS2001 NPS 12 03-15 to Milk River ML (12" loop)	Crude Oil	BR Crude	10	10	10
80104	3	LS9005 NPS 12 Milk River Mainline	Crude Oil	BR Crude	0	0	0

Milk River - 2Milk River

License	Line	Name	Licensed substance	Primary substance	IIZ (m)	PAZ (m)	EPZ (m)
80104	5	LS9006 NPS 10 Milk River Replacement Line	Crude Oil	BR Crude	0	0	0
<b>Discontinued Pipelines</b>							
80104	2	LS9000 NPS 10 Milk River Mainline	Crude Oil	BR Crude	0	0	0
80104	1	LS9001 NPS 6 Milk River Mainline	Crude Oil	BR Crude	0	0	0

### 1.3 Product Characteristics

For Safety Data Sheets (SDS), including specific product composition, initial response actions to an accidental release, and potential short- and long-term effects from exposure, refer to Inter Pipeline's SDS database available on the internal intranet site.

### 1.4 Warning, Alarm and Shutdown Systems

Operators attend to the facility, and pumps 7 days a week. Facilities are equipped with alarms that results in operators being notified on a 24/7 basis and result in on-call operators responding to the field or site. All pumps have IR fire detection.

Additional information on pipeline monitoring systems can be found in the *Bow River Pipeline ERP, Section 6.1 Warning/Alarms/Shutdown Systems*.

### 1.5 Potential Hazard Scenarios

The following table provides a list of the potential scenarios that may occur at the facility.

Hazard	Substance	Identified Emergencies			
		Scenario	Harm to environment	Danger to human health	Impact distance outside boundary
Pool Fire (F)	Crude	Tank overfilling	X	X	
		Tank release to diked area	X	X	
		Tank release to non-diked area, contained within facility	X	X	
		Ignited release causing pool fire	X	X	
		<b>Ignited release involving the largest / maximum capacity container causing complete substance release and fire / explosion</b>	X	X	X
		Tank release to non-diked area, not contained within facility and impacting high consequence area(s)	X	X	X
Explosive (E)	Butane	Tank overfilling	X	X	
		Tank release	X	X	
		Uncontrolled release resulting in ignition	X	X	

Hazard	Substance	Identified Emergencies			
		Scenario	Harm to environment	Danger to human health	Impact distance outside boundary
		<b>Ignition leading to BLEVE</b>	X	X	X
		Exposure from adjacent fire leading to BLEVE	X	X	X

Scenarios listed in **bold**, are considered to be the worst-case scenario for this substance.

### 1.5.1 Potential Consequences

The identified environmental emergencies resulting from a substance(s) release will likely expose the following to risk/hazards:

Atmosphere: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	Waterways: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	Land: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
--	---	--

In the event of an environmental emergency at this location, the following table indicates assessed risk level and potential consequences:

Rank Highest (1) Lowest (4)	Impacted Party	Potential Consequence
1	Company Employees	<ul style="list-style-type: none"> <li>• LEL exposure</li> <li>• Ignited hydrocarbons / liquid gas release (e.g., pool fire)</li> <li>• Ignited gas cloud/vapour cloud explosion</li> </ul>
2	Others working in the area	<ul style="list-style-type: none"> <li>• LEL exposure</li> <li>• Ignited hydrocarbons / liquid gas release (e.g., pool fire)</li> <li>• Ignited gas cloud/vapour cloud explosion</li> </ul>
3	General Public	<ul style="list-style-type: none"> <li>• Atmospheric release</li> <li>• LEL exposure</li> <li>• Ignited gas cloud/vapour cloud explosion</li> <li>• Potential impact to environmental receptors/high consequence areas</li> </ul>
4	Environment	<ul style="list-style-type: none"> <li>• Possible LEL exposure offsite depending on weather (wind speed and direction)</li> <li>• Potential vapour explosion</li> <li>• Potential release into water</li> </ul>

### 1.6 Area Users

Inter Pipeline has created a Public Information Pamphlet (PIP) to discuss the following:

- The possibility that the environmental emergency could occur.
- The potential effects of the environmental emergency on the environment and on human life or health (taking into account the substance, the activity the substance is used, and the facility and surrounding area features).
- The measures that will be taken to protect the environment and human life or health.
- The means of communications in the event that the environmental emergency occurs.

The PIP was provided to any area users within the CEPA EPZ including the local authority, RCMP, local fire department, Oil and Gas Operators, Railways, and Guides & Outfitters. Emergency contact information was gathered for the surface developments within the CEPA EPZ and is included in [Section 3 Contact Information](#).

To access resident information, refer to Inter Pipeline MyMap - EMGIS viewer or hardcopy information at the local district office. Information is loaded into Everbridge for mass notification if required. Surface Developments and residents within Milk River will be notified by the Town of Milk River.

## 1.7 Characteristics of Surrounding Area

The Milk River Terminal is located within the County of Warner No. 5 and is in close proximity to a number of residences and farms. The facility's EPZ enters the southern tip of Town of Milk River (population +/- 824). There are no First Nations in proximity to the facility.

The following sensitive receptors are located within the Milk River Terminal EPZ.

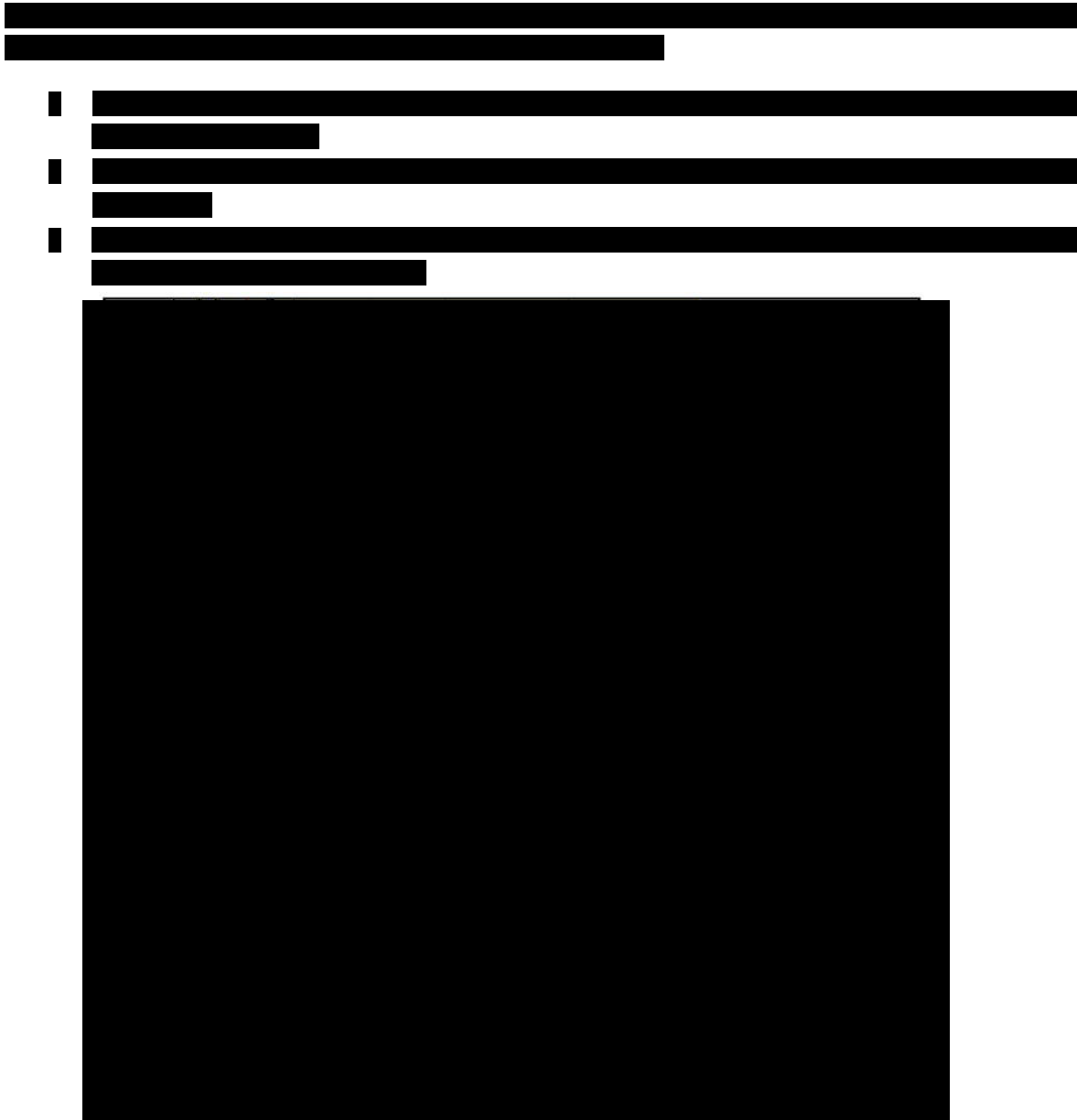
Sensitive Receptors	Distance to facility (m)	Notes
Healthcare Facilities*	1285	Milk River Medical Clinic.
Long Term Care Facilities*	1600	Prairie Rose Lodge.
Schools*	1500-1600	Erie Rivers High School (Horizon School District).
Commercial Areas*	1100-1600	Multiple businesses and town hall.
Residential Areas*	120-1600	Multiple residences in Town of Milk River.
Industrial Buildings	120-1200	Multiple farms.
Highways	50	Highways 4 and 524.
Railways	15	Canadian Pacific Kansas City (CPKC) rail line.
Water Bodies (e.g. rivers, lakes, streams)	250	Milk River and a few unnamed waterbodies.
Recreational Areas* (e.g., public parks, camping)	800-950	Campground, golf course, Rec Centre.
Fish and Wildlife Areas	0	WMU 104 Aden.
Other*	1170	Milk River Cemetery, multiple churches.

*\*Indicates location within Milk River. Surface/developments and residents within Milk River will be notified by the Town of Milk River.*

Refer to [Section 3 Contact Information](#) for additional information. Refer to [Section 4.2 Facility EPZ Map](#), for the location of sensitive receptors within the Terminal's EPZ.

## 2 SITE SPECIFIC PROCEDURES

### 2.1 Site Access



*Figure 1 - Access to Milk River Terminal*

The following access considerations apply to the facility:

- Personnel working in the area that would have no egress in the event of an emergency.
- Roadblocks that someone would have to pass through the hazard area to get to.
- Winter roads and roads that are impassible in certain weather.
- Single lane bridges.

## 2.2 Site Muster

Upon discovery of an emergency by the first person on-scene, evacuate to the muster point. Instruct all personnel on site to evacuate to the muster point via radio.

Once at the muster point, ensure that all personnel are accounted for using the sign-in sheet located in the office. Instruct them to stay clear of the site until they receive explicit permission to re-enter.

Flag the area of the emergency and access routes with warning ribbon and post signs to warn people to stay away. If necessary, assign someone to monitor the area and prevent people from entering.

The muster points for the Milk River Terminal are located at each entrance of the facility outside the Terminal gates.



*Figure 2 - Milk River Terminal Muster Points*

### 2.3 Site Communications

The primary method of communication will be cellular phone and comms two-way radios.

Roads within the area are radio controlled. Personnel working in the EPZ may be difficult to notify / contact in the event of an emergency as there are areas without cell reception.

### 2.4 Driver Safety

Each operator carries the following equipment in their vehicles:

- Number 2 First Aid Kit
- Intrinsically safe flashlight with one set spare batteries
- High visibility safety vest
- Shovel
- Booster cables
- Road hazard triangle markers
- Blankets: 1 wool & 2 foil
- Vehicle cellular phone booster
- Nitrile gloves
- 50-litre spill kit (Seton # 79116 or equivalent)

Potential roadblock locations have been identified on the map that are a safe distance outside of the EPZ. Roadblock kits are available at the Taber district office and can be acquired from Safety Contracting companies.

### 3 CONTACT INFORMATION

#### 3.1 Site and Corporate Personnel

Refer to the *Bow River Pipeline ERP, Section 7: Contacts*.

#### 3.2 Government and Regulatory Bodies

Refer to the *Bow River Pipeline ERP, Section 7: Contacts*.

#### 3.3 Emergency Response Vendors and Equipment

Refer to the *Bow River Pipeline ERP, Section 7: Contacts*.

#### 3.4 Industrial Operators

The following industrial operators have pipelines located within the facility's EPZ and may require notification in the event of an emergency.

Company	Contact Information
ATCO Gas and Pipelines Ltd.	██████████
Chinook Gas Co-Op Ltd.	██████████
Milk River Pipeline	██████████

#### 3.5 Highway Maintenance Contractors (CMW)

The following highways are located within the facility's EPZ and may require notification in the event of an emergency.

Highway	Contact	Contact Information
4	Volker Stevin Highways Ltd.	1-888-877-6237
524		

#### 3.6 Railways

The following railways are located within the facility's EPZ and may require notification in the event of an emergency.

Rail Company	Contact	Contact Information
Canadian Pacific Kansas City	CPKC Police	1-800-716-9132

#### 3.7 Wildlife Management (WMU)

WMU 104 Aden, WMU 106 Verdigris, and WMU 108 Milk River Ridge are located within the facility's EPZ and may require notification in the event of an emergency.

Name	Contact	Contact Information
925879 Alberta Ltd.	██████████	██████████
APEX Outfitters Inc.	██████████	██████████
Broken Coulee Trophy Outfitters	██████████	██████████
Chinook Waterfowl Ltd.	██████████	██████████

Name	Contact	Contact Information
Deseret Ranches of Alberta Ltd.	[REDACTED]	[REDACTED]
East Slope Adventures	[REDACTED]	[REDACTED]
Milk River Outfitters Ltd.	[REDACTED]	[REDACTED]
Open Range Outfitting Inc.	[REDACTED]	[REDACTED]
Ranchland Outfitters Inc.	[REDACTED]	[REDACTED]
Ridge Country Outfitters	[REDACTED]	[REDACTED]
Tactical Adventures and Outfitting Inc.	[REDACTED]	[REDACTED]
Wild West Outfitters	[REDACTED]	[REDACTED]
Wildlife West Adventures Inc.	[REDACTED]	[REDACTED]

### 3.8 School Divisions

The following School Divisions are located within the facility's EPZ and may require notification in the event of an emergency.

Name	Contact	Contact Information
Horizon School Division No. 67	Taber Office	[REDACTED]
	Maintenance Department	[REDACTED]
Southern Francophone Education Region No. 4	Head Office	[REDACTED]

### 3.9 Airport

The Milk River (Madge) Airport is within the facility's EPZ and may require notification in the event of an emergency. The operational status of the airport/airfield is unknown. Contact Town of Milk River in the event of an emergency.

*Note: The Milk River Airport is located east of the Terminal and is not within the facility EPZ.*

Document Title: Milk River Facility

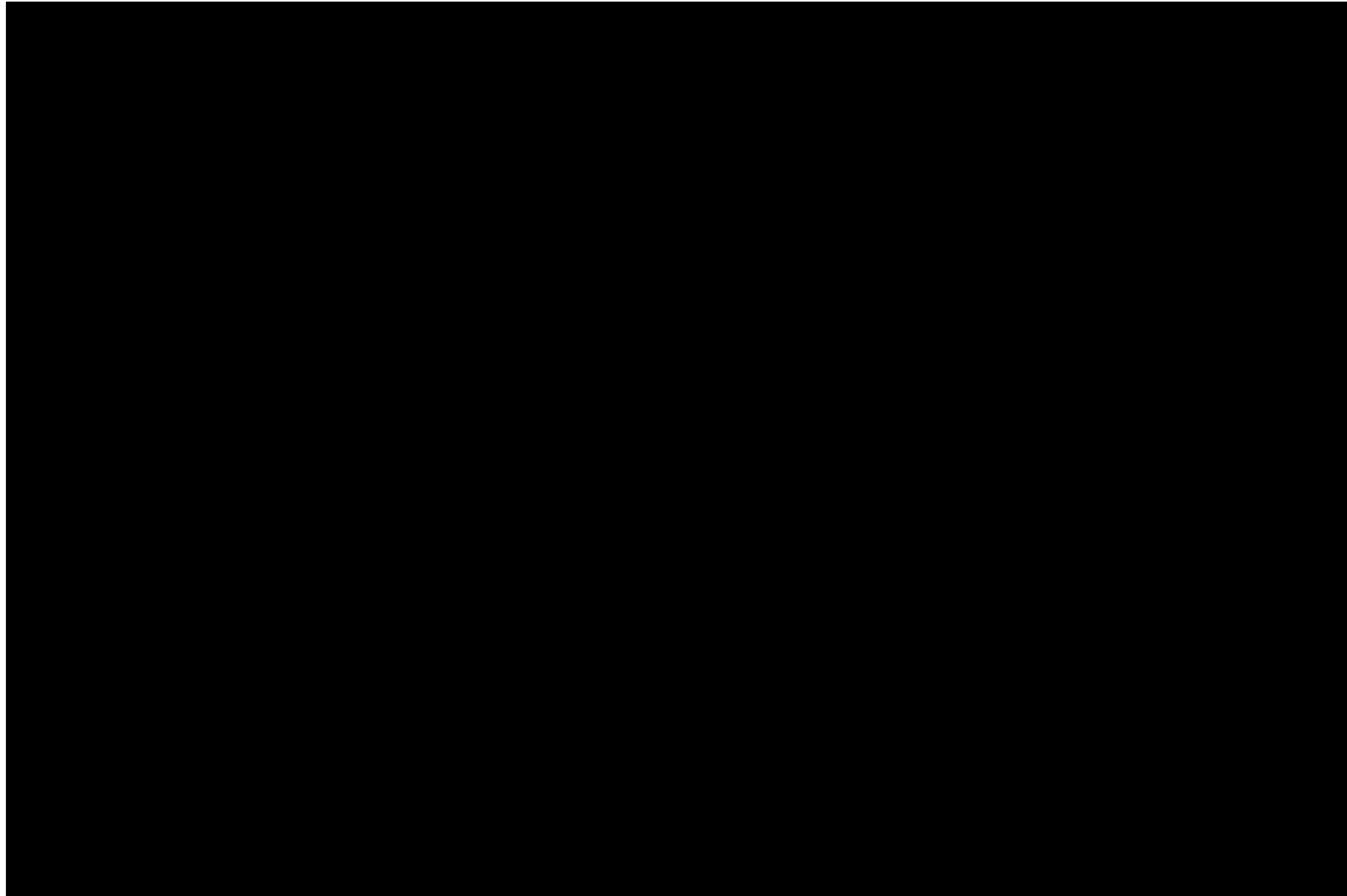
Document Number: BR-RM-PLN-0020

Revision Purpose: IFImp

Revision Date: Nov 1, 2022

Rev: 1

Page [1](#) of [2](#)



Document Title: Milk River Facility

Document Number: BR-RM-PLN-0020

Revision Purpose: IFImp

Revision Date: Nov 1, 2022

Rev: 1

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**Important Information**

<b>Control Centre 24hr Emergency</b>	<b>1-800-727-7163</b>	Site Location	GPS: [REDACTED]	LSD: [REDACTED]	Rural Address: [REDACTED]
IPL Area Supervisor	[REDACTED]	Driving directions			
Fire Department - Emergency	9-1-1	[REDACTED]			
Ambulance - Emergency	9-1-1	[REDACTED]			
RCMP - Emergency	9-1-1	Nearest Ambulance: Milk River, AB T0K 1M0 Nearest Fire Department: 124 Center Ave SE, Milk River, AB T0K 1M0 Nearest Police 605 Main St NW, Milk River, AB T0K 1M0 Nearest Hospital: 517 Centre Ave NE, Milk River, AB T0K 1M0			

**IF THE STATION EMERGENCY SHUTDOWN IS ACTIVATED**

- This condition may be indicated by a station horn and/or flashing lights outside of the building;
- Stop work and shut off tools & equipment;
- If inside exit the building immediately through the nearest safe exit;
- Inform others of the need to proceed to the muster point;
- Check windsock for wind direction, walk cross wind;
- Go to the closest, safe, muster point. Do not go to vehicles; Notify your Supervisor;
- Notify the control centre;
- Do not return to work until given all clear from the Area Supervisor.

**IF THERE IS AN INJURY**

- Assess scene safety
- Call 9-1-1 if required;
- Notify Supervisor;
- Send someone for first aid kit and AED if available;
- Begin to administer first aid;
- Only move the injured worker if the area is unsafe;
- Transport injured worker to hospital if necessary and you are able to do so comfortably and safely, otherwise call ambulance for transport (have ambulance met at main gate).
- Notify your Supervisor. Next of Kin notifications are only to be executed by those authorized to do so;
- Incident scene is frozen until authorization to continue work is provided.

**IF THERE IS A NON-DEFENDABLE FIRE**

- Only attempt to extinguish the fire if it is safe to do so, the fire is small and you are familiar with the fire extinguishing equipment;
- Leave area immediately via the nearest, safe, exit closing. Close the doors behind you;
- Activate the station emergency shutdown (ESD);
- Call 9-1-1 from a safe location to report the incident;
- Call the Sherwood Park Control Room and notify your Supervisor;
- Do not return to the area until given the all clear from the Area Supervisor.

**IF THERE IS A DEFENDABLE FIRE**

- If safe and you are comfortable doing so, fight the fire;
- Keep yourself between the fire and the exit, do not have the fire between you and the exit.
- Use the nearest fire extinguisher using the PASS method:
  - **PULL** safety pin from handle of fire extinguisher
  - **AIM** at the base of the fire
  - **SQUEEZE** the fire extinguisher handle to activate
  - **SWEEP** the nozzle of the fire extinguisher at the base of the fire
- If the situation becomes unsafe immediately move to the closest, safe, muster point;
- Call the Sherwood Park Control Room and notify your Supervisor;

**IF YOU DISCOVER A DOWNED PERSON**

- Assess scene safety – Do not enter into immediate area;
- Call 9-1-1 to request medical assistance;
- Send someone for first aid kit and AED (if available);
- If back-up personnel are available, you are trained and have a plan, don onsite SCBA;
- If there are no indications of spinal injury (fall from height, explosion, head injury), and the area is felt to be unsafe, move worker to fresh air;
- Begin to administer first aid;
- Notify your supervisor. Next of Kin notifications are only to be executed by those authorized to do so;
- Incident scene is frozen until authorization to continue work is provided

**IF THERE IS A SPILL**

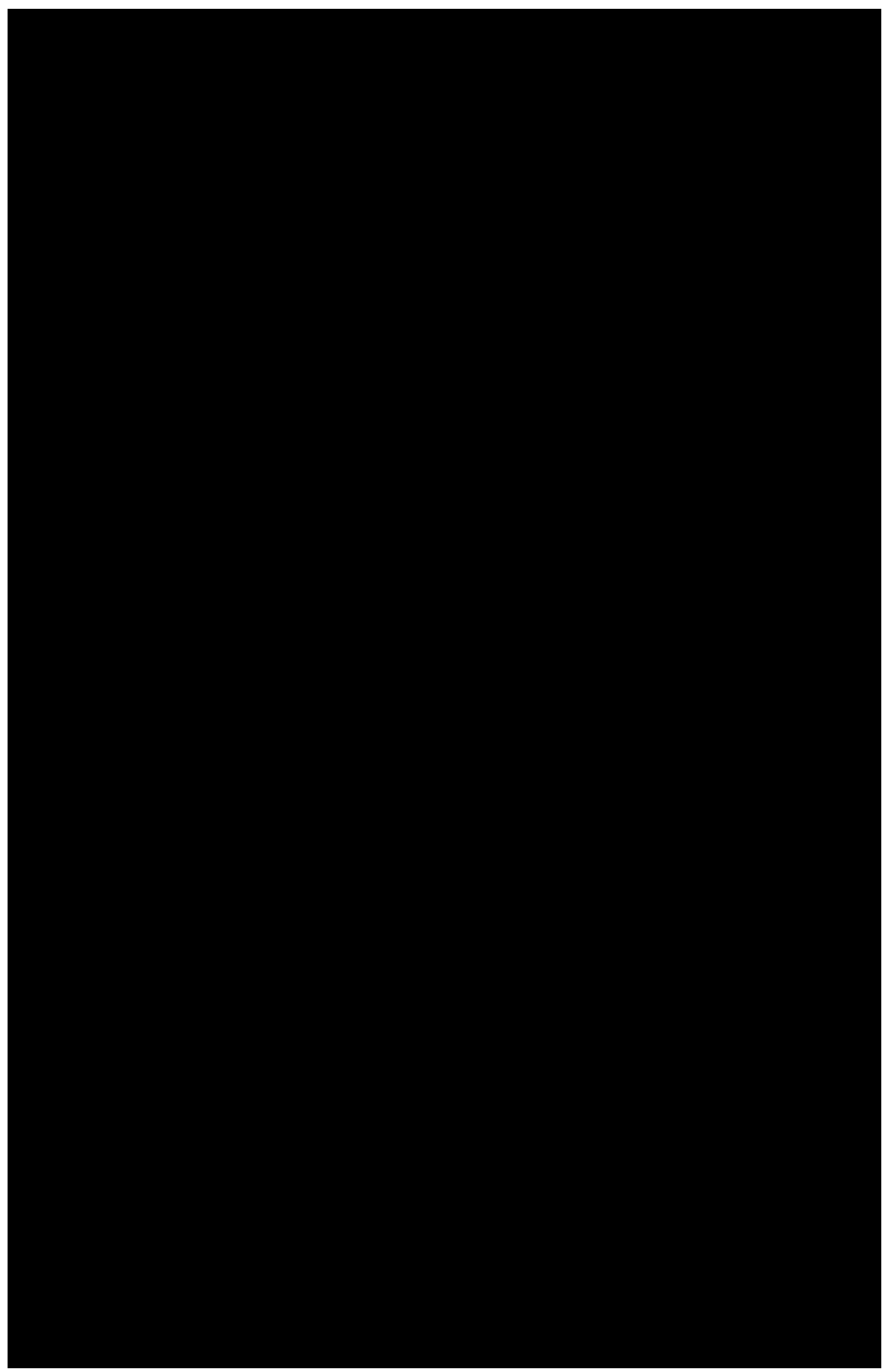
- Locate spill kits;
- Don appropriate PPE and ensure proper ventilation; place metal pails under leaks where possible, ensure that the pails are bonded;
- Use absorbent pads to clean up small spills;
- Dispose of contaminated material and equipment in the appropriate waste bins;
- Notify your Supervisor.

**LIGHTNING**

- Use the 30/30 rule to determine the distance from the storm. If the time between seeing a lightning flash and hearing thunder is 30 seconds or less, seek shelter for 30 minutes;
- Ensure that all workers onsite have sought shelter.

**IF THERE IS A SECURITY BREACH**

- Contact Supervisor and/or Security Advisor with any security concerns; and,
- If you are in imminent danger, call 9-1-1.



## 5 REGULATORY CONCORDANCE TABLE

### 5.1 Canadian Environmental Protection Act, Environmental Emergency Regulations (SOR/2019-51)

Sec.	Requirement	Location in ERP
<b>Required contents</b>		
<b>(2) The environmental emergency plan must include the following:</b>		
(a)	a description of the properties and characteristics of the substance and the maximum expected quantity of the substance at the facility;	<i>Milk River Terminal ERP, Section:</i> <ul style="list-style-type: none"> <li>• 1.1 CEPA E2 Storage</li> <li>• 1.3 Product Characteristics</li> </ul>
(b)	a description of the commercial, manufacturing, processing or other activity involving the substance that takes place at the facility;	<i>Milk River Terminal ERP, Section:</i> <i>1 Facility Operations</i>
(c)	a description of the facility and of the area surrounding the facility that may be affected by an environmental emergency referred to in paragraph (d), including any hospitals, schools, residential, commercial or industrial buildings and any highways, public transit infrastructure, parks, forests, wildlife habitats, water sources or water bodies;	<i>Milk River Terminal ERP, Section:</i> <i>1.7 Characteristics of Surrounding Area</i>
(d)	an identification of any environmental emergency that could reasonably be expected to occur at the facility and that would likely cause harm to the environment or constitute a danger to human life or health, including the environmental emergency referred to in paragraph (e) and, if applicable, the environmental emergency that is more likely to occur than the environmental emergency referred to in paragraph (e) and that would have the longest impact distance outside the boundary of the facility;	<i>Milk River Terminal ERP, Section:</i> <i>1.5 Potential Hazard Scenarios</i>
(e)	an identification of the harm to the environment or danger to human life or health that would likely result from an environmental emergency involving the release of <ul style="list-style-type: none"> <li>(i) the maximum quantity of the substance that could be contained in the container system that has the largest maximum capacity, if a quantity of the substance is in a container system, and</li> <li>(ii) the maximum expected quantity of the substance that will not be in a container system, if a quantity of the substance is not in a container system;</li> </ul>	<i>Milk River Terminal ERP, Section:</i> <i>1.5.1 Potential Consequences</i>
(f)	an identification of the harm to the environment or danger to human life or health that would likely result from the environmental emergency identified under paragraph (d), if any, that is more likely to occur than the environmental emergency referred to in paragraph (e) and would have the longest impact distance outside the boundary of the facility;	<i>Milk River Terminal ERP, Section:</i> <i>1.5 Potential Hazard Scenarios</i>

Sec.	Requirement	Location in ERP
(g)	a description of the measures to be taken to prevent and prepare for the environmental emergencies identified under paragraph (d) and the measures that will be taken to respond to and recover from such emergencies if they were to occur;	<i>Inter Pipeline Integrity Program</i>  <i>Bow River Pipeline ERP, Section:</i> <ul style="list-style-type: none"> <li>• 5.5 Spill/Release Response</li> <li>• 5.6 Public Safety Responses.</li> </ul>
(h)	a list of the position titles of the persons who will make decisions and take a leadership role in the event of an environmental emergency and a description of their roles and responsibilities;	<i>Bow River Pipeline ERP, Section:</i> <ul style="list-style-type: none"> <li>• 4.0 Roles, Responsibilities and Position Aids</li> <li>• Section 7.10 Taber Staff and Office Phone List</li> </ul>
(i)	a list of the environmental emergency training that has been or will be provided to prepare personnel at the facility who will respond in the event that an environmental emergency identified under paragraph (d) occurs;	<i>Emergency Management and Business Continuity Exercise and Training Standard</i>
(j)	a list of the emergency response equipment that is necessary for the measures described in paragraph (g) and the equipment's location;	<i>Bow River Pipeline ERP, Section:</i> <i>7.20 Response Equipment</i>
(k)	a description of the measures that will be taken by a responsible person or by a responsible person and local authorities, acting jointly, to communicate with the members of the public who may be adversely affected by the environmental emergency referred to in paragraph (f) to inform them, before the environmental emergency occurs, of <ul style="list-style-type: none"> <li>(i) the possibility that the environmental emergency could occur,</li> <li>(ii) the potential effects of the environmental emergency on the environment and on human life or health, taking into account the factors referred to in paragraphs (a) to (c), and</li> <li>(iii) the measures that will be taken by the responsible person to protect the environment and human life or health, and the means by which the responsible person will communicate with them, in the event that the environmental emergency occurs;</li> </ul>	<i>Milk River Terminal ERP, Section:</i> <i>1.6 Area Users</i>
(l)	a description of the measures that will be taken by a responsible person or by a responsible person and local authorities, acting jointly, to, in the event that an environmental emergency involving the release of a substance occurs, communicate with the members of the public who may be adversely affected to provide them, during and after its occurrence, with information and guidance concerning the actions that could be taken by them to reduce the potential harm to the environment and danger to human life or health, including an explanation of how those actions may help to reduce the harm or danger;	<i>Bow River Pipeline ERP, Section:</i> <ul style="list-style-type: none"> <li>• 2.2.3 External</li> <li>• 2.2.5 Members of the public</li> <li>• 5.5 Spill/Release Response</li> <li>• 5.6 Public Safety Response</li> <li>• 7.14 Local Government Response</li> <li>• 7.14.1 AHS Oil and Gas Roles and Responsibilities</li> </ul>

Sec.	Requirement	Location in ERP
(m)	the position title of the person who will communicate with the members of the public referred to in paragraphs (k) and (l);	<i>Bow River Pipeline ERP, Section: 2.2.5 Members of the public</i>
(n)	a description of the consultations that a responsible person had with local authorities, if any, with respect to the measures referred to in paragraph (k) and (l); and	<i>Inter Pipeline Emergency Management Program</i>
(o)	a plan of the facility showing the location of any substances in relation to the physical features of the facility.	<i>Milk River Terminal ERP, Section: 4.1 Site Plot Plan</i>



Milk River

# PRE-FIRE PLAN

Prepared by:

**Firemaster** OILFIELD SERVICES INC.

257 - 27312 TWP 394 • North Aspelund Industrial Park  
Lacombe County, AB • T4M 0R9  
24 Hour Service: (403) 342-7500  
website: [www.firemaster.ca](http://www.firemaster.ca)  
e-mail: [contact@firemaster.ca](mailto:contact@firemaster.ca)

30-Nov-23 Version 1.1

# PRE-FIRE PLAN

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# PRE-FIRE PLAN

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# PRE-FIRE PLAN

## DOCUMENT LOCATIONS

Doc #	Organization	Location	Contact	Document Type
1	Inter Pipeline (Operator)	Milk River Terminal	Control room	Hardcopy
2	Inter Pipeline (Operator)	Supervisor, Pipeline Field Operations	[REDACTED]	Hardcopy
3	Inter Pipeline (Operator)	Emergency Response Specialist	[REDACTED]	Digital
4	Tank Fire Specialist	Firemaster Oilfield Services – Red Deer	[REDACTED]	Hardcopy
5	Fire Department	Milk River Fire Chief	[REDACTED]	Hardcopy
6	Fire Department			Hardcopy

# PRE-FIRE PLAN

## REVISION RECORD

Version #	Date of Change / New Plan Date	Who Changed (ie. Inter Pipeline / Firemaster)	What Was Changed (Include Page #)
1.0	30-Nov-23	Inter Pipeline, Operator of Milk River Terminal / Firemaster	New plan
1.1	30-Nov-23	Inter Pipeline, Operator of Milk River Terminal / Firemaster	Corrects formatting error in Version 1.0
2.0			
3.0			
4.0			
5.0			
6.0			
7.0			
8.0			
9.0			
10.0			
11.0			
12.0			
13.0			
14.0			
15.0			

# TAB 1.0

# INTRODUCTION

## **PURPOSE**

The enclosed information covers various aspects of Inter Pipeline Ltd. ('Inter Pipeline') operator of the Milk River Terminal, with regards to pre-fire and pre-incident planning in the event of an emergency. This plan should be used in conjunction with the Milk River Pipeline Emergency Response Plan ('Milk River Pipeline ERP').

The information contained within will greatly assist Inter Pipeline, local fire departments and tank fire specialists to deal with an emergency promptly, effectively, and safely.

The information contained within this document must be reviewed annually for accuracy and contents. Training with internal and external responders is also held annually.

It is important to remember that the enclosed information is only a guideline and as with any emergency, the course of action taken will be dictated by the specific situation.

### **In case of an emergency call:**

**Inter Pipeline Control Center  
24 hour Emergency 1-800-727-7163**

**&**

**Firemaster Oilfield Services Inc.  
24/7 Emergency Response Number  
1-877-343-3473**

**&**

**911**

## **DEFINITIONS**

**BLEVE:** The phenomenon known as a Boiling Liquid Expanding Vapor Explosion (BLEVE) is the result of a liquid within a container reaching a temperature well above its boiling point at atmospheric temperature, causing the vessel to rupture into two or more pieces. A BLEVE can occur when fire impinges on the tank shell at a point or points above the liquid level of the contents of the tank. This impingement causes the metal to weaken and fail from the internal pressure.

**Boilover:** An event in the burning of certain oils within a tank when, after a long period of burning, there is a sudden increase of fire intensity associated with the expulsion of burning oil from the tank.

**Cold Zone:** The cold zone is the largest zone and includes all areas not immediately involved in the emergency. Take all possible efforts to ensure contamination does not spread to this area. Locate the command post and staging area in the cold zone.

**Defensive Strategy:** A defensive fire response “First Aid” strategy is to allow a fire to burn out under controlled conditions or have engineered systems in place that will extinguish the fire. The principal strategy is to minimize loss and protect exposures by use of equipment spacing, cooling water, fireproofing, shielding product transfer, system depressurizing and fuel isolation. Manual extinguishment of a fire (if safe to do so) in its Incipient Stage in open areas is acceptable and still within the definition of a defensive strategy.

**ESD:** Emergency shut-down

**External First Responders:** The first personnel to respond to an incident. They are generally fire department / firefighting personnel. First responders require appropriate emergency response training to ensure that their response is suitable and is performed safely.

**Flame Arrester:** A device used on vents and air intakes to allow the passage of air but prevent the passing through of flame.

**Frothover:** Can occur when small amounts of water already present inside a tank comes in contact with a hot viscous oil and the super heated oil is forced to overflow from the tank.

**Gallon:** All references within this document for gallon are given in U.S. gallons.

**H<sub>2</sub>S:** H<sub>2</sub>S gas is colorless, heavier than air in its pure state and is extremely toxic. In low concentrations, it has a rotten egg smell and causes eye and throat irritation. H<sub>2</sub>S can deaden your sense of smell and hyper concentrations cause death.

**Hot Zone:** The hot zone is the release site or site of cleanup operations. Restrict access to the hot zone to emergency response personnel only, except where personnel not involved in emergency operations are escorted through the site. All appropriate personal protective equipment must be used in the hot zone.

**Incipient Stage Fires:** A fire which is in the initial or beginning stage and which can be controlled or extinguished by means of portable fire extinguishers, class 2 fixed standpipe systems or small portable hand lines without the need for special protective clothing or breathing apparatus.

**Inter Pipeline First Responder:** The first employee to arrive at an emergency. Their actions will be dictated by the severity of the situation, limitations of training and equipment and direction by on-scene commander.

**Inter Pipeline Incident Commander:** The first responder functions as the incident commander until relieved by appointed personnel. Management appoints the incident commander based on the nature, size, and complexity of the emergency.

**Iron Sulfide:** Iron sulfide is created when hydrogen sulfide reacts (usually violently) with hydrated iron oxide, phenyl diazonium chloride, metal oxides, metals, rust, soda, lime, and oxidants. The moist sulfide readily oxidizes in air exothermally and may reach incandescence. The impure sulfide forms when steel processing equipment is used with materials containing hydrogen sulfide or volatile sulfur. The created compounds are pyrophoric (spontaneously explodes when in contact with air) and have caused many fires and explosions when such equipment is opened up.

**Milk River Pipeline ERP:** Inter Pipeline's operating and procedures manual covering emergency response. This manual is maintained by Inter Pipeline and digitally available with hardcopies located at district offices.

**Offensive Strategy:** An offensive fire response strategy is based on extinguishment of the fire in the shortest possible time without placing response personnel under undue risk. It utilizes all of the elements of a defensive strategy to minimize the overall fire loss; however, resources are provided to allow personnel to approach the fire with the intent of extinguishment. Employees should not attempt this approach until they have received proper training and resources. Only trained External Emergency Responders should undertake this strategy.

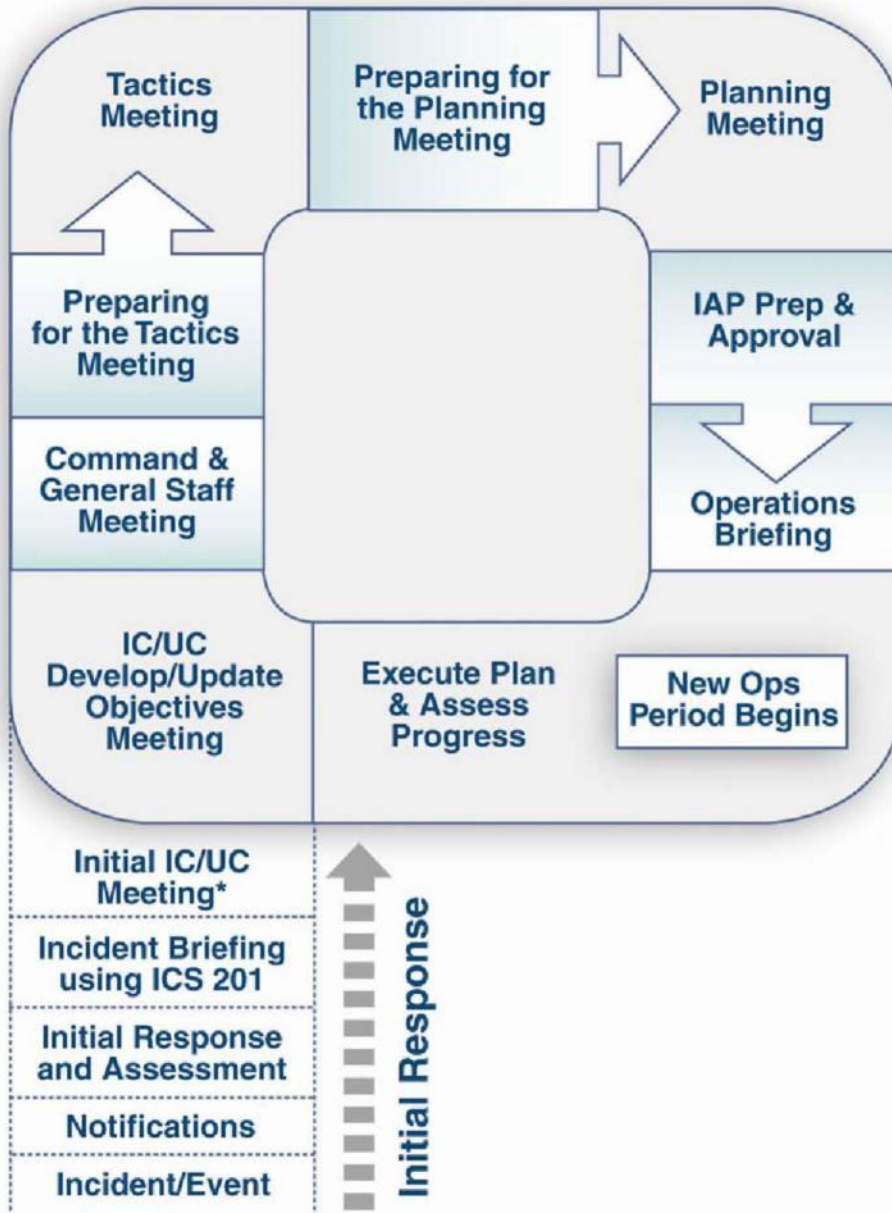
**Rim Cooling:** The act of using water nozzles or monitors to cool the top rim of a tank. This cooling also entails wind boards, fixed foam system piping and generally the heat exposed upper portion of a tank.

**Slopover:** Can result when a water stream is applied to the hot surface of burning oil, provided that the oil is viscous, and its temperature exceeds the boiling point of water.

**Warm Zone:** The warm zone is a transition zone where equipment may be cleaned, and contaminated clothing removed before leaving the site. Depending on the emergency, establish decontamination stations in the warm zone (see page 3.5).

## EMERGENCY RESPONSE ACTION PLAN

The Emergency Response Action Plan and Milk River Pipeline ERP detail the initial response actions and response operations used for all emergency events.



\*During this timeframe a meeting with the Agency Administrator/Executive can occur.

## **TAB 2.0**

# **SITE SPECIFIC INFORMATION**

## TERMINAL LOCATION

### **Address:**

#### **Mailing Address: (Correspondence)**

Inter Pipeline  
[REDACTED]

#### **Physical Address (Milk River Terminal):**

[REDACTED]

### **Telephone:**

[REDACTED]

### **Coordinates:**

[REDACTED]

### **Legal Land Description:**

[REDACTED]

### **Driving Directions:**

#### **From Milk River:**

[REDACTED]

### **Staging Area:**

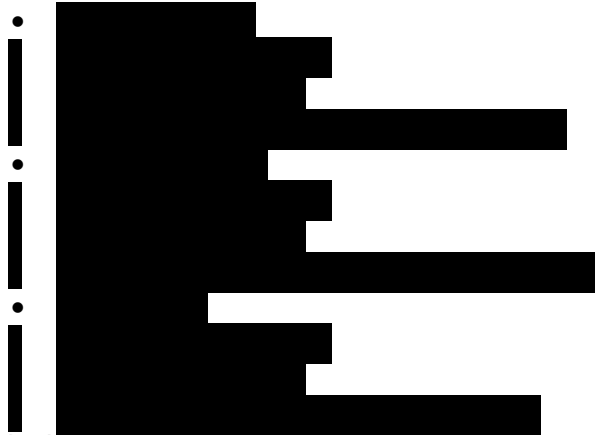
- ◆ Milk River Civic Center  
313 - 3rd Ave NE  
Milk River, AB
- ◆ Milk River Visitor Center  
504 Railway Street  
Milk River, AB

## CONTACT INFORMATION

### ***Inter Pipeline Employees***

**24-Hour Emergency Number (Toll Free) 1-855-664-5011**

Supervisor, Pipeline Field Operations



Senior Manager, Pipeline Field Operations

Emergency Response Specialist

Inter Pipeline employee contact information is in the Milk River Pipeline ERP.  
(See definitions section)

### ***Regulatory Agencies***

Applicable regulatory agency contact information is in the Milk River Pipeline ERP.  
(See definitions section)

### ***Contractors***

The following types of contractor contact information are in the Milk River Pipeline ERP.

- ◆ Accommodations and lodging
- ◆ Catering
- ◆ Communication equipment (phones and radios)
- ◆ Construction equipment (dozers, loaders, backhoes, cranes)
- ◆ Environmental testing services and equipment (downwind monitoring)
- ◆ Equipment rental (roadblocks, small equipment)
- ◆ Firefighting foam suppliers
- ◆ Fuel delivery
- ◆ Helicopters and aircraft
- ◆ Industrial ambulances (long term)
- ◆ Irrigation pumps
- ◆ Portable generators and light towers
- ◆ Portable offices and camp buildings
- ◆ Portable outhouses
- ◆ Portable tanks (frac tanks)
- ◆ Safety supplies
- ◆ Service companies (laborers)
- ◆ Vacuum trucks
- ◆ Vehicle rental
- ◆ Water trucks
- ◆ Welders and fabricators (shop and portable)

## **RESOURCE INFORMATION**

### ***Inter Pipeline Resources***

***Personnel Available (typical):***

On-site Weekday:

- ◆ 2 (0700 – 1630)

Night/Weekend:

- ◆ On-site: 0

- ◆ Call-out: 3      Response Time: 30-minutes

***Milk River On-site Fire Equipment List:***

<b>Quantity</b>	<b>Equipment</b>	<b>Description</b>
14	Various Fire Extinguishers	Various locations around terminal – see site specific Emergency Reference Map in Milk River ERP and on site
1	Fire eye detection	Located at east side of scale and pointed towards butane truck unload area
1	LEL sensors	At butane unload and butane injection skid

## Local Fire Departments

### Milk River Fire Department

124 Centre Ave, Milk River, AB T0K 1M0

#### **Contact Information:**

- ◆ Emergency: 911
- ◆ Fire Chief: [REDACTED]
- ◆ Non-emergency: Day: [REDACTED]  
Night: [REDACTED]
- ◆ Fax: [REDACTED]
- ◆ Email: [REDACTED]

#### **Firefighter Information:**

Department Status: Volunteer  
Personnel Available: 20  
Response Time: 15 minutes

#### **Equipment List:**

Quantity	Equipment	Description
2	Fire Pumper Trucks	850 GPM, 1,000 Gal water on board
1	Water Truck	3,000 Gal c/w 1,000 Gal drop tank
1	Rescue Vehicle	
2	Brush units	

#### **Response Details: (Capabilities, Limitations, Services)**

- ◆ Limited tank fire training
- ◆ Unified command system would be used

## Tank Fire Specialist

### Firemaster Oilfield Services Inc.

**Contact Information:**

Pre-planning Contact: Scott Squires  
Phone:

- ◆ Emergency: 403-342-7500
- ◆ Non-emergency: 855-203-8989

**Firefighter Information:**

Personnel Available: 50+  
Response Time to Milk River:

- ◆ provide expert advice (consulting) remotely by phone or other means:  
*within 30 minutes*
- ◆ provide expert advice (consulting) on site: *3 hours*
- ◆ provide equipment and firefighters to stop the emergency from worsening or to provide extinguishment:  
*6 hours*

Firemaster Office Locations	Equipment (firefighting)
Red Deer, AB <b>(Canada Head Office)</b> 257-27312 TWP Road 394 North Aspelund Industrial Park Lacombe County, AB Canada T4M 0R9 Phone: 403-342-7500 Fax: 403-346-0400	7 – Combination Units 1 – Well Control Unit 2 – Shower Unit 3 – Shower Fire Combination with 3,000-pound dry chemical trailer 2 – Twin Agent Fire Trailers 4 – Wheeled Unit Fire Extinguishers H <sub>2</sub> S Safety Trailers Breathing Air Equipment 100+/- 265 Gallon (1000L) foam concentrate totes 60 – Pails of AR-AFFF type foam 20 – Pails Class “A” type foam concentrate 1 – 500, 1 – 4,000, 2 – 2,000 GPM monitors 1 – Daspit Monitor 3 – Mobile Down Wind Monitoring Units 4 – Shower Trailers 1 – Detroit / Hale Pump 2,000 GPM 1 – Cat / Fairbanks 2,000 GPM 1 – Cummins / Peerless 2,000 GPM 1 – Detroit/Fairbanks 1,500 GPM 1 – Goodwin Boost Pump 3,500 GPM 1 – 1,000 GPM Monitor 1 – Fire Fighting Pumper (2000 GPM) – Unit 208 1 – 1,000 GPM Monitor – Unit 221 1 – Daspit Monitor 1 – Stainless Steel water Tanker – Unit 00292

<b>Firemaster Office Locations continued</b>	<b>Equipment (firefighting)</b>
Grande Prairie, AB 6-721072 Range Road #53, County of Grande Prairie, AB T8X 0N5 780-539-4400	2 – Combination Unit 1 – Shower Unit 3 – Wheeled Unit Fire Extinguishers H <sub>2</sub> S Safety Trailers 1 – Medical Trailer Breathing Air Equipment 74 – Pails of AR-AFFF type foam 3 – 265 Gal Foam Totes AR-AFFF type foam

See Firemaster equipment lists for truck and equipment specifications.

## **Firemaster Equipment Specifications**

### 2,113 GPM (8 m<sup>3</sup>/min) Pump & Monitor System

This transportable tractor and trailer mounted system has the capability of pumping, proportioning, and delivering up to 2,113 GPM (8 m<sup>3</sup>/min) of firefighting foam.

#### Major system components include:

- Detroit Diesel 6V53T Engine
- 2,113 GPM (8 m<sup>3</sup>/min) Hale Pump
- Pump Suction and Discharge Manifolds
- Skid Mounted Pump with Integral Fuel Tank
- Bolted Frame Assembly with Lifting Eyes
- 1,057 Gal (4,000 L) of Foam Concentrate
- Pre-connected Jet Ratio Controllers for Foam Delivery
- Remote Monitor Capable of Delivering 2,113 GPM / 4,226 GPM (8 m<sup>3</sup>/16 m<sup>3</sup>/min) of Foam Solution
- Terminator II 2,000 / 4,000 trailer mounted monitors

### Fire Trucks

- Diesel Powered Chassis Equipped with Sleeper and Automatic Air Shutdown
- Pressurized Portable 35 L Emergency Eye Wash Station
- Two Trained Personnel
- Two 30 lb (13.6 kg) ABC Fire Extinguishers
- All Twin Agent System equipment is Ansul
- Trauma / Burn Kit
- Two Scott Air Packs

#### Twin Agent System:

- 3,000 / 1,500 lb (1,364 / 682 kg) Purple K Dry Chemical
- 500 / 300 Gal (1,890 / 1,134 L) Alcohol Type Foam Solution
- Nitrogen Powered
- 100' (30 m) Twin Agent Lines and Reel
- 150' (50 m) Dry Chemical Line and Reel

#### Continuous Foam System:

- 140 Gal (545 L) Alcohol Type Foam Concentrate
- One 4" (100 mm) or 5" (125 mm) Suction
- Hydraulic Driven 500 GPM (2 m<sup>3</sup>/min) or 750 (2,850 L/min) Waterous Pump
- Two – 2½" (65 mm) and Two – 1½" (38 mm) Pump Outlets
- Four 50' (15 m) – 2½" (65 mm) Hoses
- Six 50' (15 m) – 1½" (38 mm) Hoses

Combination Units

- Diesel Powered Chassis Equipped with Sleeper and Automatic Air Shutdown
- Two Trained Personnel
- Two 30 lb (13.5 kg) ABC Fire Extinguishers
- All Twin Agent System equipment is Ansul
- Trauma / Burn Kit
- Two Scott Air Packs

Twin Agent System:

- 3,000 / 1,500 lb (1,364 / 682 kg) Purple K Dry Chemical
- 500 / 300 Gal (1,890 / 1,134 L) Alcohol Type Foam Solution
- Nitrogen Powered
- 100' (30 m) Twin Agent Lines and Reel
- 150' (50 m) Dry Chemical Line and Reel

Shower Unit System:

- Fully Enclosed Heated Compartment
- 600 Gal (2,315 L) of Portable Water
- Eye Wash Stations
- Four to Six Overhead Showers
- Four to Six Mid-Section Showers
- Two Scott Air Packs
- Heated Water for Winter Conditions
- Recovery Station

Continuous Foam System:

- 140 Gal (545 L) Alcohol Type Foam Concentrate
- One 4" (100 mm) or 5" (125 mm) Suction
- Hydraulic driven 500 GPM (2 m<sup>3</sup>/min) or 750 (2,850 L/min) Waterous Pump
- Two – 2½" (65 mm) and Two – 1½" (38 mm) Pump Outlets
- Four 50' (15 m) – 2½" (65 mm) Hoses
- Six 50' (15 m) – 1½" (38 mm) Hoses

Shower Units

- Fully Enclosed Heated Compartment
- 600 Gal (2,315 L) of Portable Water
- Eye Wash Stations
- Four to Six Overhead Showers
- Four to Six Mid-Section Showers
- Two Scott Air Packs
- Heated Water for Winter Conditions
- Recovery Station

Fire Suppression Trailers

- 2,000 lb Purple K c/w 150 ft hose reels, all in enclosed trailer
- 3,000 lb Purple K c/w 150 ft hose reels, all in enclosed trailer

## ***Mutual Aid Organization***

### **Mutual Aid**

#### **Participating Organizations:**

- ◆ N/A

#### **Contact Information:**

Emergency Contact:

Deploying Organization:

Phone:

- ◆ Emergency:
- ◆ Non-emergency: Phone:  
Fax :

#### **Equipment List:**

Quantity	Equipment	Organization & Location	Response Time	Description

#### **Response Details: (Capabilities, Limitations, Services)**

- ◆ N/A

## ***Adjacent Facilities***

### **Areas of concern that may increase the likelihood of fire risk to the terminal:**

#### ***Adjacent Petroleum Facilities:***

- ◆ BRPL Milk River Station is located at the same site and includes:
  - There is additional infrastructure located on this site, operated by Inter Pipeline and governed under provincial jurisdiction.
    - These assets include Tank 104 and Butane Bullet

As Inter Pipeline is the operator of the infrastructure at this entire site, a full site plan is included to ensure alignment during an emergency event.

The remainder of this plan will include information on all infrastructure located at the Milk River Site in order to properly facilitate firefighting efforts in an emergency event.

## ***Wildfire Control and Protection***

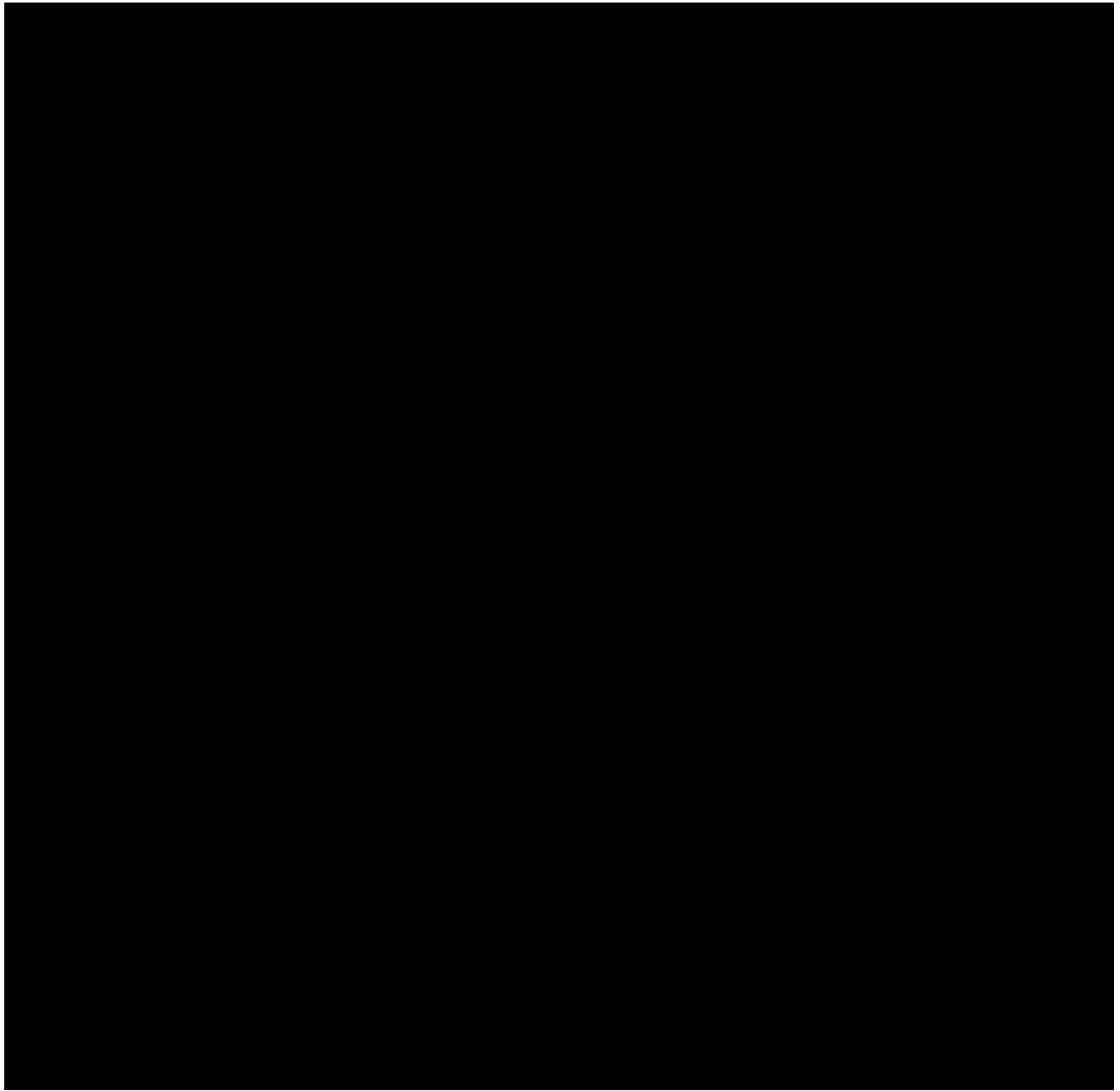
### **Detail any wildfire prevention measures at the facility:**

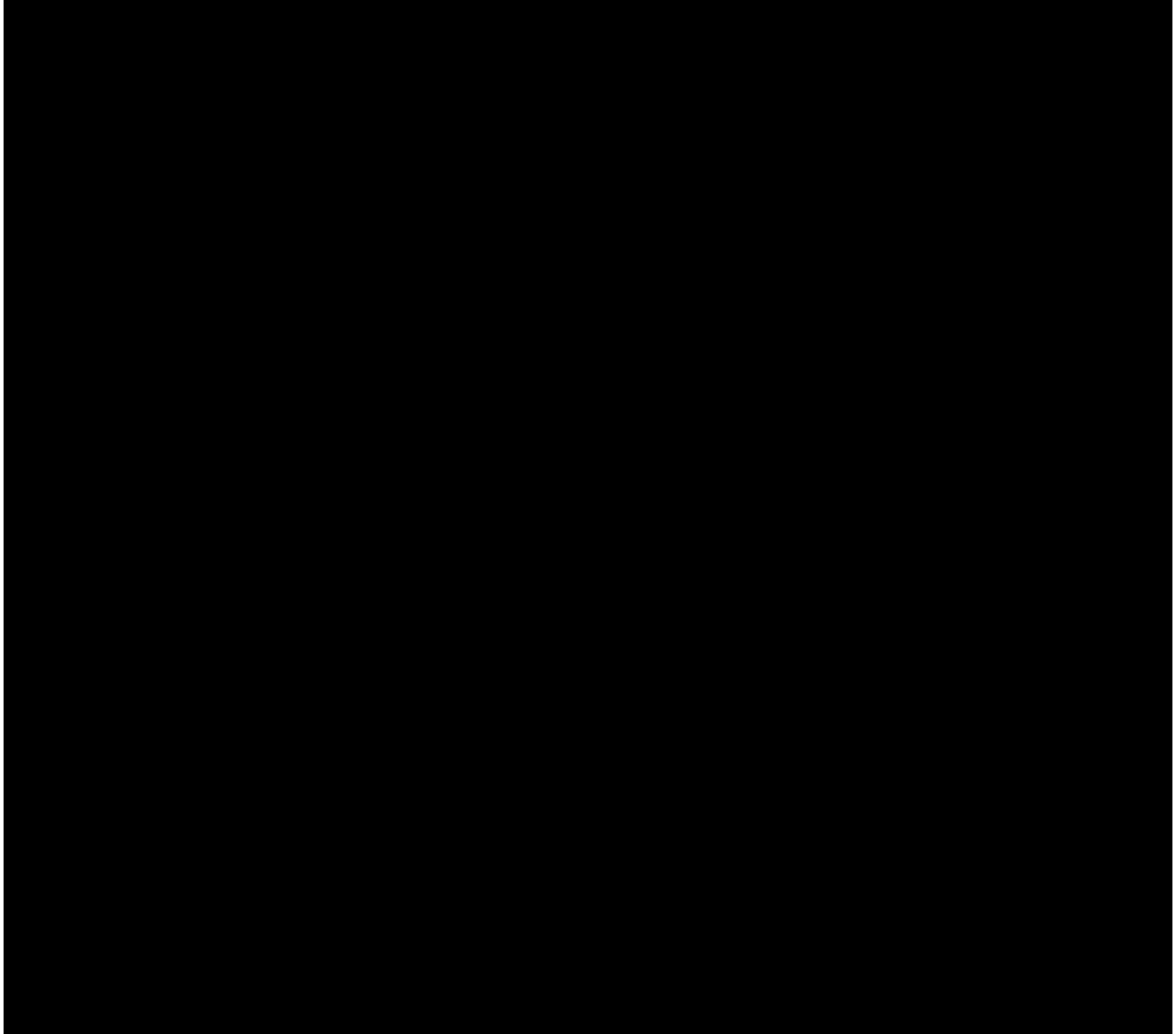
- ◆ Vegetation clearing within the site
- ◆ Perimeter vegetation management (maintaining a buffer zone extending from structures outward – to 30 feet)
- ◆ Education (employee wildfire suppression training, awareness training, evacuation training)
- ◆ Communication or cooperative relationship with government or other organization for the purposes of managing wildfire concerns.
- ◆ Inter Pipeline personnel are trained to fight small fires, using hand-held or other portable fire extinguishers at tankage locations. Larger fires requiring additional firefighting resources shall only be extinguished by fully equipped fire departments trained for the purpose.
- ◆ In the event of a major fire at the Milk River Terminal site, the local fire department and Firemaster Oilfield Services shall be notified of the incident and shall respond to the scene. Company personnel shall evacuate and secure the site and assist fire personnel in procedures related to facility operations and control.

## TERMINAL MAPS AND PHOTOS



Aerial View





Entrance



CER Tank 103 & Mainline Pumps



Adjacent Facilities – Tank 104 & Boost Pumps



CER and Adjacent Facilities - Tank 103 & 104 in a Common Berm



CER and Adjacent Facilities - Truck Scale, Tanks 104 (left) and 103 (right)



Adjacent Facilities - Butane Bullet

Document Title: Milk River Terminal

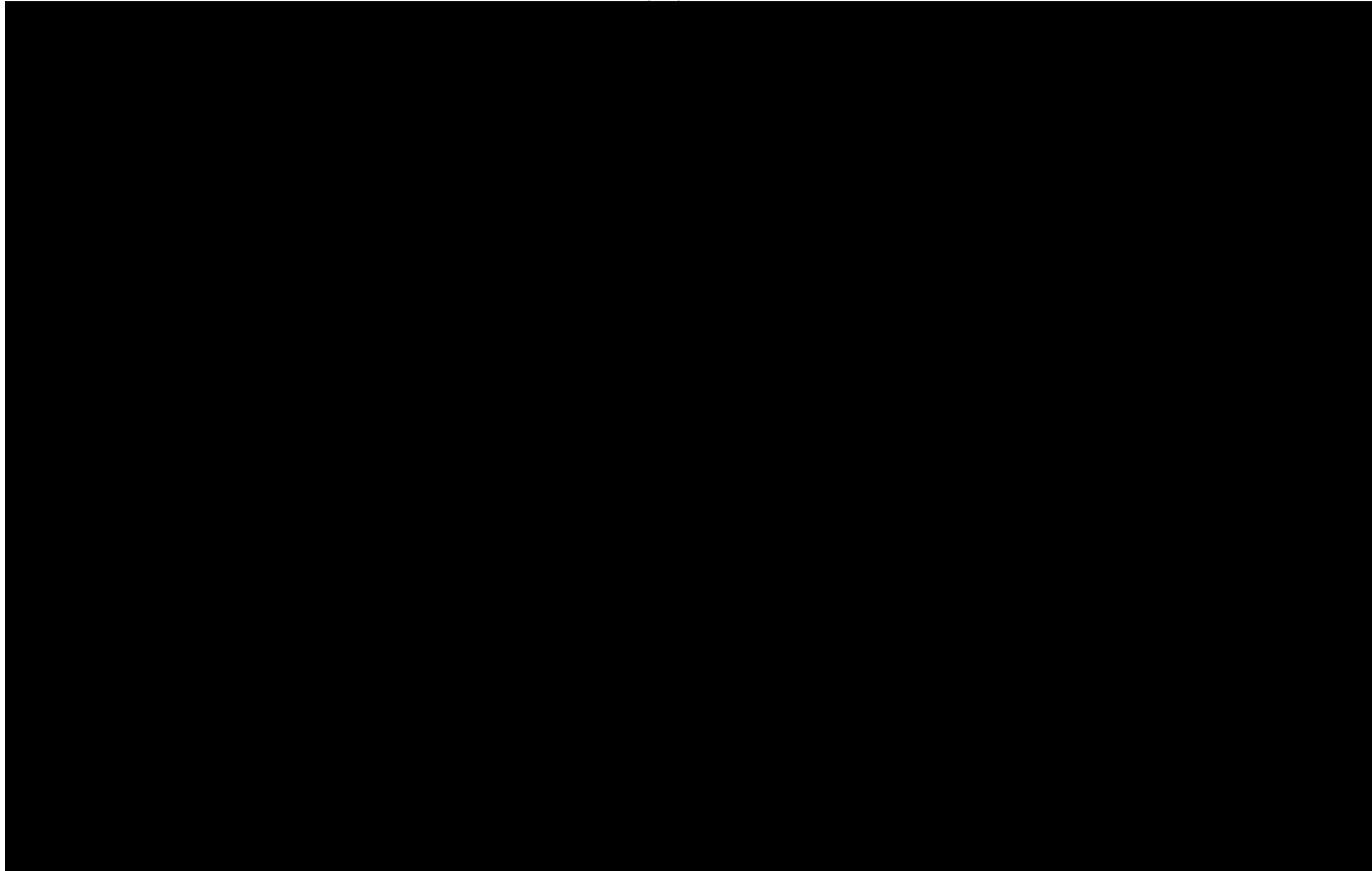
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## **TAB 3.0**

# **ROLES AND RESPONSIBILITIES**

## **INTER PIPELINE FIRST RESPONDER**

**Consider hazards and take all necessary steps to ensure personal safety prior to initiating emergency actions.**

### **Hazards with tank fires include:**

- ◆ Extreme heat
- ◆ Smoke
- ◆ Hazardous gases (as well as the products of combustion)
- ◆ Possible or imminent potential for a vapor flash or explosion
- ◆ Boilover, frothover, slopover

Make use of the information in Tab 4.0 - Tank Information Sheets, Tab 5.0 - Fire Situations, and Tab 6.0 - Safety and Hazard Information.

**See Milk River Pipeline ERP for initial response actions and response operations.**

### **Emergency Notification:**

Off-hours - proceed to step 1

On-hours - proceed to step 3

1. Upon notification to respond, proceed immediately to area of concern to confirm emergency.
2. Establish and maintain constant or scheduled contact with regional management / on-call person.

**If an emergency is confirmed, activate the Incident Command System (see Milk River Pipeline ERP) and perform the initial duties of the Inter Pipeline Incident Commander until relieved by someone of far greater experience or district supervisor:**

3. Sound alarm and initiate site evacuation procedures.
4. Treat and evacuate the injured immediately.
5. Contact local fire department, notify regional management / on-call person of:
  - ◆ Present status (terminal(s) involved, known injuries, actions taken).
  - ◆ Internal and external notifications made.
  - ◆ Identify back-up needs (company personnel, local fire department, tank fire specialists).
6. Initiate Site Security and Control procedures as per the Milk River Pipeline ERP and as manpower allows. Consider the following recommended minimum tank fire control perimeters:
  - ◆ Hot zone 82 feet (25 meters)
  - ◆ Warm zone 320 feet (100 meters)
  - ◆ Cold zone 1,000 feet (305 meters)
7. Account for all personnel. As manpower allows initiate search and rescue procedures for on-site personnel unaccounted for. May need to involve local fire departments for assistance.

8. Identify hazards and assess the risks. Prepare a summary of the situation for the incoming Inter Pipeline Incident Commander, which may include:
  - ◆ What is burning?
  - ◆ Has it stabilized or is it growing?
  - ◆ What resources are readily available?
  - ◆ What emergency response resources have been contacted?

**Inter Pipeline employees are strictly prohibited  
from climbing on a fire involved tank!**

**Inter Pipeline employees shall not enter the bermed area  
of a fire involved tank unless safe to do so.**

## **INTER PIPELINE INCIDENT COMMANDER**

1. Review the situation summary prepared by Inter Pipeline First Responder. Ensure that all first response tasks have been (or are being) completed. Use the Response Group software and accompanying apps or if necessary, use the ICS forms located in the Milk River Pipeline ERP.
2. Establish Unified Command Structure with external emergency responders, as necessary.
3. Identify the type of fire. The following information may aid in the identification:
  - ◆ Small amount of smoke / fire appears not to originate from tank wall, no noticeable increase within 30 minutes, possible vent / gauging hatch fire.
  - ◆ Small amount of smoke / fire, generated from around the tank wall area with an increase of size noticed within 30 minutes, possible seal fire.
  - ◆ Larger amounts of smoke / fire noticed around the tank wall area with a noticeable hollow area within center of tank, possible partial or full circumference seal fire.
  - ◆ Large amounts of smoke / fire noticed around tank walls and including portions of the tank center area, possibility that the fire has migrated to be a partially or fully involved surface fire.
4. Review hazards and assess the risks. Hazards associated with tank fires include:
  - ◆ Extreme heat
  - ◆ Smoke
  - ◆ Hazardous gases (as well as the products of combustion)
  - ◆ Possible or imminent potential for a vapor flash or explosion
  - ◆ Boilover, frothover or slopover

Use the resources in Tab 4.0 - Tank Information Sheets, Tab 5.0 - Fire Situations, and Tab 6.0 - Safety and Hazard Information. Ensure that hazards are communicated to all responders (internal and external), and that appropriate mitigation measures are implemented, including proper use of PPE, respiratory protection and rescue equipment.

5. Develop a strategy to address the emergency situation. The strategy will be based on the circumstances of the emergency and the available resources. As a guideline, use the “Defensive” and “Offensive” Strategies identified for various fire situations in Tab 5.0.

When evaluating strategies, ask the following questions:

- ◆ How much and what part of the area is involved?
- ◆ What are the conditions of the area?
- ◆ Can the responders enter the area and stay long enough to perform their job?
- ◆ Are sufficient resources available for this action?

6. Develop an action plan and specific tactics that are to be employed to achieve the goal of the strategy. The following three priorities must be addressed IN THE FOLLOWING ORDER:

I.	Life Safety:
	<ul style="list-style-type: none"><li>- <b>Evacuation</b></li><li>- <b>Rescue</b></li><li>- <b>General Safety</b></li></ul>
II.	Incident Stabilization
III.	Environment:
	<ul style="list-style-type: none"><li>- <b>Environmental Protection</b></li><li>- <b>Surrounding Facility Exposures</b></li><li>- <b>Incident Confinement</b></li><li>- <b>Extinguishment</b></li></ul>
IV.	Assets:
	<ul style="list-style-type: none"><li>- <b>Prevent Re-kindling</b></li><li>- <b>Clean-up</b></li><li>- <b>Repair</b></li><li>- <b>Salvage</b></li></ul>

7. Establish initial control perimeter minimums based on the following guidelines (see Figure 1):
  - ◆ Hot zone 25 meters (82 feet)
  - ◆ Warm zone 100 meters (320 feet) - could initially be considered bermed area
  - ◆ Cold zone 305 meters (1,000 feet)

Set up a Command Post, Staging Areas, and Decontamination Stations as necessary for the circumstances.

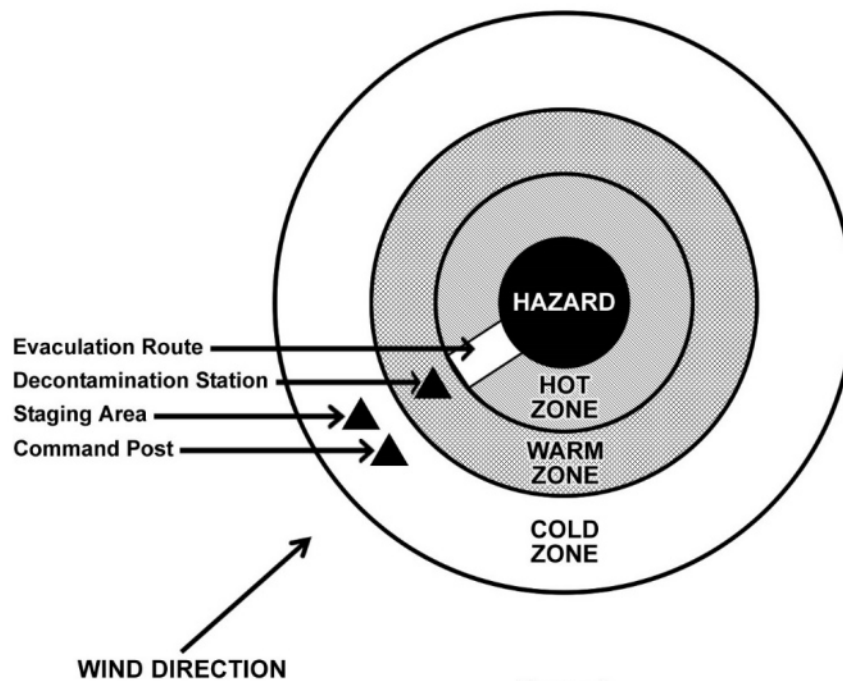


Figure 1  
Protective Zones

8. Ensure that flow into or out of the tank has been halted and that tank mixers have been shut off to allow the product in the tank to stabilize. **Tank level adjustments should only be made after the situation has been assessed – the decision to pump out of or into a tank should include on-site operations, local emergency responders, tank fire specialists and the control centre.**
9. Evaluate the situation at various times during the emergency. Use risk assessment criteria (loss versus gain) in developing plans. A “size-up” of the situation will include answering the following questions:
  - ◆ What do you have?
  - ◆ What are you doing?
  - ◆ What do you need?
  - ◆ Who is in command?

**The incident commander shall continuously re-evaluate the situation and may change the strategy at any time!**

## **INTER PIPELINE RESPONDERS**

Inter Pipeline recognizes that firefighting roles are not the core job responsibility of its employees; however, there are steps that can be taken by employees to safely mitigate the loss and damage incurred during a fire situation. In general, the “Defensive Strategy” identified in specific fire response situations (Tab 5.0 of this manual) is within the scope of a trained Inter Pipeline employee.

For a fire emergency, Inter Pipeline employees will be expected to:

- ◆ Report any emergencies or potential emergencies as per Milk River Pipeline ERP
- ◆ Respond to and evaluate the emergency
- ◆ Coordinate with on-call person, control center, management, and the Incident Commander. Provide call out assistance as required (internal and external notifications, response resources)
- ◆ Provide for any medical and rescue assistance that may be required
- ◆ Ensure site security is established and maintained
- ◆ Not carry out any work if it will cause imminent danger to the health and safety of the employee or any other worker present at the terminal

Employees and contractors must not engage in direct firefighting activities related to large or fully involved fires. Tactics to approach these types of fires should be developed in consultation with professional firefighters or tank fire specialists; however, Inter Pipeline employees may assist professional firefighters or tank fire specialists by:

- ◆ Providing guidance, emergency control, equipment, and terminal information
- ◆ Coordinating isolation and draining of product lines
- ◆ Coordinating de-energizing of terminal (e.g. substations, cubicles)
- ◆ Providing logistics support and coordination
- ◆ Protecting adjacent facilities (close berm drains, etc.)

**Inter Pipeline employees are strictly prohibited from climbing on a fire involved tank!**

**Inter Pipeline employees shall not enter the bermed area of a fire involved tank unless safe to do so.**

## **EXTERNAL EMERGENCY RESPONDERS**

### **Local Fire Department's Role:**

The local fire department will play an essential role within the response to a fire on the Milk River Terminal Site. They will work with Inter Pipeline employees to try to ascertain the exact extent of the emergency and develop a plan to lessen the impact of, control and / or stop the fire emergency. Inter Pipeline understands that the Milk River Terminal site may have situations that will exceed the training, equipment, or mandate of the local fire department. Tank fire specialists (Firemaster) should be consulted at this time.

Inter Pipeline recognizes that all local fire departments have the jurisdictional authority to enter the affected property as it deems necessary. However, in the absence of an imminent threat to life or public safety, Inter Pipeline requests that local fire departments NOT enter the property until accompanied by an Inter Pipeline employee. There are inherent hazards present at all Inter Pipeline locations, which may not be fully understood or appreciated by the external emergency responders. An Inter Pipeline employee will be an invaluable resource to protect their safety.

The local fire departments' role will be governed by their mandate, experience, training, and available equipment. Their roles may include:

- ◆ Providing search and rescue personnel
- ◆ Fire suppression of any tank related fire
- ◆ Fire suppression of oilfield or terminal fires not pertaining to tank related fires
- ◆ Fire suppression of small or incipient fires not pertaining to activities requiring climbing of storage tanks
- ◆ Protecting adjacent facilities or structures
- ◆ Participating in joint command of the scene under Unified Command System
- ◆ Assuming a secondary role under Unified Command System
- ◆ Providing manpower, equipment, foam, water, or other resources
- ◆ Assisting Inter Pipeline employees (under direct supervision) in pipeline operational tasks

Please see fire department information sheets for equipment lists, roles, and limitations identified by the local fire department for this facility (page 2.4).

### **Tank Fire Specialist's Role:**

Tank fire specialists can be called upon to assist during a tank fire emergency. Their role may include:

- ◆ Providing expert advice (consulting) remotely by phone or other means.
- ◆ Providing expert advice (consulting) on site.
- ◆ Providing equipment and firefighters to stop the emergency from worsening or to provide extinguishment.

## **TAB 4.0**

# **TANK INFORMATION SHEETS**

**Tank Number: AST 1 (TK-103)**

**Terminal: Milk River**

<b>Specifications</b>		
Diameter	50 ft	15.25 m
Height	32 ft	9.7 m
Fuel Surface Area	1,963 ft <sup>2</sup>	183 m <sup>2</sup>
Tank Contents ***	Crude oil	
Tank Construction	Lap welded plate steel	
Roof Type	Cone roof with Sandborn internal floating	
Mixers	1	
Number of Inlets/Outlets	2	
Foam Dam (Size/Surface Area)	N/A	

<b>Exposures (Tank)</b>		
Adjacent Tanks/Exposures	AST-2, (TK104)	
Risks	Medium	
Cooling Water**	2 portable monitors	
Rate (each)	500 GPM	1,890 L/min

<b>Firewater System</b>		
Hydrant Supported	N/A	
Connections		
Monitor(s)		
Flows/System Capacity		

See Test Results

<b>Minimum Extinguishment Requirements</b>			
	<b>Fully Involved</b>		<b>Seal Fire</b>
Application Rate Formula	0.16 GPM/ft <sup>2</sup>	6.5 L/min·m <sup>2</sup>	N/A
Solution Application Rate	314 GPM	1,190 L/min	
Application Time	65 minutes	65 minutes	
Total Solution Required	20,415 Gal	77,350 L	
Water Required **	19,803 Gal	75,030 L	
Concentrate Required	612 Gal	2,320 L	

Notes:

- \*\* Water supply may be required from a portable source
- \*\*\* Tank contents may vary, consult with terminal Foreman/Supervisors for specifics, BS&W report and amount of water on roof.
- ◆ All foam calculations are based on National Fire Protection Association recommended standards.
- ◆ All foam calculations are made at the minimum amounts and flow required. Fire situations may dictate higher rates and amounts.

<b>Fixed Foam System</b>		
Number of Chambers	N/A	
Flow Each		
Fixed/Semi Fixed		
Application Time		
Total Flow		

<b>Bermed Area (2 tanks common berm)</b>		
Berm Dimensions	315 ft x 100 ft	96 m x 30.5 m
Potential Fuel Surface Area	31,500 ft <sup>2</sup>	2,928 m <sup>2</sup>
Foam Solution Application Rate	5,040 GPM	19,032 L/min
Minimum Concentrate Required	8,828 Gal	37,112 L
Minimum Water Required**	317,772 Gal	1,199,968 L

<b>Exposures (Berm)</b>		
Adjacent Tanks/Exposures	Tanks AST-1,2 &3, meters, pumps, piping	
Risks	High	
Cooling Water**	Up to 4 portable monitors	
Rate (each)	750 GPM	2,840 L/min

Map/Drawing Number	BR-RM-PLN-0020
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**Tank Number:** AST 2 (TK-104)

**Adjacent Facilities:** Milk River

Specifications		
Diameter	68 ft	20.72 m
Height	32 ft	9.7 m
Fuel Surface Area	3,630 ft <sup>2</sup>	32.53 m <sup>2</sup>
Tank Contents ***	Crude oil	
Tank Construction	Lap welded plate steel	
Roof Type	Cone roof with Sandborn internal floating	
Mixers	1	
Number of Inlets/Outlets	2	
Foam Dam (Size/Surface Area)	N/A	

Exposures (Tank)		
Adjacent Tanks/Exposures	AST – 2, (TK103)	
Risks	Medium	
Cooling Water**	2 portable monitors	
Rate (each)	500 GPM	1,890 L/min

Firewater System		
Hydrant Supported	N/A	
Connections		
Monitor(s)		
Flows/System Capacity		

See Test Results

Minimum Extinguishment Requirements			
	Fully Involved		Seal Fire
Application Rate Formula	0.16 GPM/ft <sup>2</sup>	6.5 L/min·m <sup>2</sup>	N/A
Solution Application Rate	580 GPM	2,195 L/min	
Application Time	65 minutes	65 minutes	
Total Solution Required	37,752 Gal	142,695 L	
Water Required **	36,620 Gal	138,414 L	
Concentrate Required	1,133 Gal	4,280 L	

Notes:

\*\* Water supply may be required from a portable source

\*\*\* Tank contents may vary, consult with terminal Foreman/Supervisors for specifics, BS&W report and amount of water on roof.

- ◆ All foam calculations are based on National Fire Protection Association recommended standards.
- ◆ All foam calculations are made at the minimum amounts and flow required. Fire situations may dictate higher rates and amounts.

Fixed Foam System		
Number of Chambers	N/A	
Flow Each		
Fixed/Semi Fixed		
Application Time		
Total Flow		

Bermed Area (2 tanks common berm)		
Berm Dimensions	315 ft x 100 ft	96 m x 30.5 m
Potential Fuel Surface Area	31,500 ft <sup>2</sup>	2,928 m <sup>2</sup>
Foam Solution Application Rate	5,040 GPM	19,032 L/min
Minimum Concentrate Required	8,828 Gal	37,112 L
Minimum Water Required**	317,772 Gal	1,199,968 L

Exposures (Berm)		
Adjacent Tanks/Exposures	Tanks AST-1,2 &3, meters, pumps, piping	
Risks	High	
Cooling Water**	Up to 4 portable monitors	
Rate	750 GPM	2,840 L/min

Map/Drawing Number	BR-RM-PLN-0020
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**Tank Number:** AST 3 Butane Bullet **Adjacent Facilities:** Milk River

<b>Specifications</b>		
Diameter	12 ft	3.658 m
Length	135 ft	41.18 m
Fuel Surface Area	1,620 ft <sup>2</sup>	150.5 m <sup>2</sup>
Tank Contents ***	Butane	
Tank Construction	Welded Steel Vessel (bullet)	
Roof Type	N/A	
Mixers	N/A	
Number of Inlets/Outlets	3	
Foam Dam (Size/Surface Area)	N/A	

<b>Exposures (Tank)</b>		
Adjacent Tanks/Exposures	Tanks 103, & 104, butane skid & piping	
Risks	Medium	
Cooling Water**	Up to 3 cooling monitors	
Rate	750 GPM	2,840 L/min

<b>Firewater System</b>	
Hydrant Supported	N/A
Connections	
Monitor(s)	
Flows/System Capacity	

See Test Results

<b>Minimum Extinguishment Requirements</b>		
	<b>Fully Involved</b>	<b>Seal Fire</b>
Application Rate Formula	N/A	N/A
Solution Application Rate		
Application Time		
Total Solution Required		
Water Required **		
Concentrate Required		

Notes:

- \*\* Water supply may be required from a portable source
- \*\*\* Tank contents may vary, consult with terminal Foreman/Supervisors for specifics, BS&W report and amount of water on roof.
- ◆ All foam calculations are based on National Fire Protection Association recommended standards.
- ◆ All foam calculations are made at the minimum amounts and flow required. Fire situations may dictate higher rates and amounts.

<b>Fixed Foam System</b>	
Number of Chambers	N/A
Flow Each	
Fixed/Semi Fixed	
Application Time	
Total Flow	

<b>Bermed Area</b>	
Berm Dimensions	Not Bermed
Potential Fuel Surface Area	
Foam Solution Application Rate	
Minimum Concentrate Required	
Minimum Water Required**	

<b>Exposures (Berm)</b>	
Adjacent Tanks/Exposures	N/A
Risks	
Cooling Water**	
Rate	

Map/Drawing Number	BR-RM-PLN-0020
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## **TAB 5.0**

# **FIRE SITUATIONS (RESPONSE SENARIOS)**

## **GAUGING HATCH / ROOF VENT FIRE**

**Only the fire department or tank firefighting personnel may attempt to extinguish a fire at the gauging hatch or vent.**

Gauging hatch fires and roof vent fires are generally small in nature but still require extreme caution in their extinguishment. Static electricity, lightning, welding, or iron sulfides commonly cause these types of fires. Considerations include:

- ◆ Flame arresters may fail thus allowing the flame to enter a possible vapor space under the roof, allowing for a larger and explosive fire
- ◆ Static electricity buildup may hamper extinguishment, as it may re-ignite the product

**All firefighting operations should be carried out by professional firefighters only.**

**Inter Pipeline employees are strictly prohibited from approaching a fire involved tank.**

**Inter Pipeline employees shall not enter the bermed area of a fire involved tank unless safe to do so.**

**All personnel are prohibited from walking on a tank roof to extinguish vent fires.**

**Inter Pipeline employees may provide advice to fire departments and should be prepared to provide facility, product, and product level information.**

## Defensive Strategy

Only to be done once two or more employees are on scene

- ◆ Assess situation
- ◆ Call for assistance / callout procedures
- ◆ Discontinue pumping out of tank
- ◆ Shut mixers down
- ◆ Initiate Incident Command System (ICS)
- ◆ Contact firefighting personnel
- ◆ Pump into tank at a slow rate, if room allows
- ◆ Discontinue pumping into adjacent tanks, to avoid the presence of flammable vapors in the area
- ◆ Ensure berm drain is closed

## Offensive Strategy

Only to be done by fire department or tank fire specialists

- ◆ Extinguishment of fire, by means of long range nozzles, utilizing a crane and basket or similar apparatus
- ◆ Dry chemical, water fog and foam applications may be needed

## **Caution!**

All firefighting operations must be done in combination with a portable hand line to allow for personal protection.

- I. An attempt should be made to stop the fire from progressing beyond the hatch. This can be accomplished by:
  - ◆ Extinguishment of the fire.
  - ◆ Pumping into the tank at a slow rate; watch tank levels to avoid overfilling.
  - ◆ Do not cool the involved tank with water as this may allow air to be drawn into the tank.
  - ◆ Fire of this type should be assessed by the means of a crane with basket or a similar means (e.g. aircraft, aerial fire apparatus).

## FIRE WITHIN BERM AREA

Fires within the berm area are generally large in nature and require extreme caution in their extinguishment. Considerations include:

- ◆ Piping and / or tank walls may rupture due to the extreme heat generated from the fire, as well as the pressure built up in the lines.
- ◆ Do not cool the tank within the involved berm until berm fire is extinguished, there may not be sufficient room within the berm to support the influx of water. Also, the water will generally spread and expand the fire.
- ◆ Reference tank information sheets for specific tank information.

**All strategies and tactics are only to be completed if they can be conducted safely!**

### Defensive Strategy

Only to be done once two or more employees are on scene

- ◆ Assess situation
- ◆ Discontinue pumping in or out of tank
- ◆ Initiate Incident Command System (ICS)
- ◆ Call for assistance / callout procedures
- ◆ ESD area remotely if applicable
- ◆ Contact firefighting personnel
- ◆ Shut mixers down remotely
- ◆ Cool exposures, within other berms if fire is large enough to produce sufficient radiant heat
- ◆ Discontinue pumping into adjacent tanks, to avoid the presence of flammable vapors in the area
- ◆ Ensure berm drain is closed

### Offensive Strategy

Only to be done by fire department or tank fire specialists

- ◆ Extinguishment of fire other than fixed system
- ◆ Apply foam (small fire) from portable hand lines / monitors
- ◆ Direct valve / source isolation
- ◆ Adjustment of product levels
- ◆ Mixers may be run in adjacent tanks
- ◆ Large fires will require copious amounts of foam, use foam calculations below. This will have to be applied using outside resources

- I. Spill fires within a bermed area can be small, and pertain directly to a flange, valve, or a small spill area, unless tank overfilling has occurred. Caution must be used because the fire can grow if flanges or valves become separated from the tank, thus releasing the previously contained product. Fires within the berm area must be extinguished before attempting to extinguish any tank fire.

- II. Foam calculations for small spill fires in this area must be dictated by the amount of fluid spilt. Use the following calculations or the reference spill fire graph if the fluid is less than 25 mm (1 inch) in depth. If fluid is in-depth (more than 25 mm or 1 inch), reference the tank information sheet.

**TOTAL FOAM VOLUME = Area x Application Rate x Application Time**

**Area = fuel surface area = Length x Width (m<sup>2</sup> or ft<sup>2</sup>)**

**Application Rate = 6.5 L/min/m<sup>2</sup> or 0.16 GPM/ft<sup>2</sup>**

**Application Time = 15 min**

**FOAM CONCENTRATE VOLUME = Total Foam Volume X Foam Concentration**

**Foam Concentration = 0.03 (3 %) or 0.06 (6 %)**

**WATER VOLUME = Total Foam Volume - Foam Concentrate Volume**

- III. Temporary containment for product within berm area must be considered, as the application of foam into a berm area in which a tank has split or ruptured will generally exceed the capacity of the berm.
- IV. Although the fire may appear extinguished, hazardous conditions may persist. Foam will still be required to control flammable vapors. Depending on the situation, it may be necessary to secure the fuel surface for several days to prevent re-ignition. The tank should not be considered safe until the entire product has been removed.
- V. Water management will be crucial for fires of this size. Cooling operations may be reduced, for example: if no steam is present on the metal surfaces, then reduce water consumption. Test areas with hose lines and begin cooling when required. These will reuse firefighting water and run off in containment operations. A thermal imaging camera may be utilized to monitor the travel of heat within a tank.
- VI. Secure tank.

## FLOATING ROOF SEAL FIRE

Floating roof seal fires are generally small in nature and require extreme caution in their extinguishment. Considerations include:

- ◆ Rim cooling must begin as soon as possible to ensure the tank does not warp or become damaged from the heat. A thermal imaging camera may be utilized to monitor the travel of heat within a tank. Fire department personnel should be requested to conduct these.
- ◆ Reference tank information sheets for specific tank information.

Do not adjust any product levels until the initial foam application has been applied, if that is the appropriate action to be taken.

**All strategies and tactics are only to be completed if they can be conducted safely!**

### Defensive Strategy

Only to be done once two or more employees are on scene

- ◆ Assess situation
- ◆ ESD area remotely
- ◆ Call for assistance / callout procedures
- ◆ Contact firefighting personnel
- ◆ Initiate Incident Command System (ICS)
- ◆ Isolate tank from manifold
- ◆ Begin rim cooling
- ◆ Shut mixers down
- ◆ Cool affected area
- ◆ Discontinue pumping into adjacent tanks, to avoid the presence of flammable vapors in the area
- ◆ Ensure berm drain is closed

### Offensive Strategy

Only to be done by fire department or tank fire specialists

- ◆ Extinguishment of fire other than fixed system
- ◆ Extinguishment of fire, by means of long range nozzles, utilizing a crane and basket or similar apparatus
- ◆ Direct valve / source isolation
- ◆ Adjustment of product levels
- ◆ If the fire evolves into a berm fire, refer to Berm Fire section

- I. If an external foam application is made, it must be monitored for progress; this will also lessen the amount of weight put on the floating roof and help keep it afloat. Excessive weight may cause the floating roof to sink allowing for the possibility of a fully involved fire.

- III. Water management will be crucial for fires of this size. Cooling operations may be reduced, for example: if no steam is present on the metal surfaces, then reduce water consumption. Test areas with hose lines and begin cooling when required. These will reuse firefighting water and run off in containment operations. A thermal imaging camera may be utilized to monitor the travel of heat within a tank.
- IV. Once the fire is extinguished an assessment must be made and foam applied, as this will be the only means of sealing the now exposed fuel surface area.
- V. Although the fire may appear extinguished, hazardous conditions may persist. Foam will still be required to control flammable vapors. Depending on the situation, it may be necessary to secure the fuel surface for several days to prevent re-ignition. The tank should not be considered safe until the entire product has been removed. Refer to tank information sheets for foam application rates.

## FULLY INVOLVED TANK FIRE

**Only qualified fire department personnel or tank firefighting personnel may attempt to extinguish a fully involved fire by means other than a fixed system.**

The incident command system must be implemented before calling in tank firefighting personnel. Considerations include:

- ◆ Cooling must begin as soon as possible to ensure the tank does not warp or become damaged from the heat. A thermal imaging camera may be utilized to monitor the travel of heat within a tank. Fire department personnel should be requested to conduct these.
- ◆ Boilover, slopover and frothover are a major concern.
- ◆ May need to protect adjacent tanks by keeping them cool. Be prepared by planning a safe evacuation route from a cooling location in case conditions change.
- ◆ Reference tank information sheets for specific tank information.

**All strategies and tactics are only to be completed if they can be conducted safely!**

### Defensive Strategy

Only to be done once two or more employees are on scene

- ◆ Assess situation
- ◆ Call for assistance/ callout procedures
- ◆ ESD area remotely
- ◆ Isolate tanks at manifold
- ◆ Shut mixers down
- ◆ Initiate Incident Command System (ICS)
- ◆ Contact firefighting personnel
- ◆ Ensure berm drain is closed
- ◆ Discontinue pumping into adjacent tanks, to avoid the presence of flammable vapors in the area
- ◆ Cool exposures
- ◆ Cool affected area

### Offensive Strategy

Only to be done by fire department or tank fire specialists

- ◆ Extinguishment of fire
- ◆ Direct valve/source isolation
- ◆ Adjustment of product levels
- ◆ Large fires will require copious amounts of foam, use foam calculations on tank information sheet. This will have to be applied using outside resources

- I. There are no fixed or semi-fixed systems for fire suppression within the Milk River Pipeline Terminal that will accommodate a fully involved fire. Foam and water will be required from other outside (tank fire specialists) sources.

- II. Water management will be crucial for fires of this size. Cooling operations may be reduced, for example: if no steam is present on the metal surfaces, reduce water consumption. Test areas with hose lines and begin cooling when required. These will reuse firefighting water and run off in containment operations. A thermal imaging camera may be utilized to monitor the travel of heat within a tank.
  
- III. Although the fire may appear extinguished, hazardous conditions may persist. Foam will still be required to control flammable vapors. Depending on the situation, it may be necessary to secure the fuel surface for several days to prevent re-ignition. The tank should not be considered safe until the entire product has been removed. Refer to tank information sheets for foam application rates.

## **EXPOSED ADJACENT FACILITIES (TANKS)**

Tanks adjacent to a tank on fire are also at risk of igniting. Steps should be taken to protect these facilities as best as possible. Considerations include:

- ◆ Cooling must begin as soon as possible to ensure the tank does not warp or become damaged from the heat. A thermal imaging camera may be utilized to monitor the travel of heat within a tank. Fire department personnel should be requested to conduct these.
- ◆ Reference fire situations for specific hazards. Be prepared by planning a safe evacuation route from a cooling location in case conditions change.
- ◆ Reference tank information sheets for specific tank information.

**All strategies and tactics are only to be completed if they can be conducted safely!**

### Defensive Strategy

Only to be done once two or more employees are on scene

- ◆ Assess situation
  - ◆ ESD area remotely
  - ◆ Remote activities such as shutting mixers down and isolating tanks at manifold
  - ◆ Ensure berm drains are closed
  - ◆ Discontinue pumping into tanks, to avoid the presence of flammable vapors in the area
  - ◆ Cool exposures
  - ◆ Remove hatches on cone roof tanks if additional ventilation is required
- I. Water management will be crucial for fires of this size. Cooling operations may be reduced, for example: if no steam is present on the metal surfaces, reduce water consumption. Test areas with hose lines and begin cooling when required. These will reuse firefighting water and run off in containment operations. A thermal imaging camera may be utilized to monitor the travel of heat within a tank.
- II. Roof vents on cone roof tanks are not designed for emergency pressure relief. Additional tank venting may be required if the tank is subjected to heat from an adjacent fire involved tank or fire within a berm area. This may require pumping down of adjacent tanks below the working bottoms position. This is to ensure roof legs do not make contact to tank floor, possibly creating a void between the product and floating roof. Roof hatches may also be removed to provide adequate ventilation. THIS IS NOT A CONCERN ON FLOATING ROOF TANKS.

## ADJACENT FACILITIES - BUTANE BULLET

- ◆ Cool vessels and exposures with unmanned monitors only
- ◆ Establish / adjust control perimeters
  - Hot zone 100meters
  - Warm zone 150 meters
  - Cold zone 200 meters
- ◆ Use extreme caution as the potential for a BLEVE could be approaching. See following “Butane Emergencies” as a reference.
- ◆ Use table ‘Defensive Strategy’ or ‘Aggressive Strategy’ for resource information:

### Defensive Strategy

- ◆ Cool exposures
- ◆ Cool affected area
- ◆ ESD area remotely
- ◆ Shutting down fuel supply.
- ◆ Evacuation of nonessential personnel

### Aggressive Strategy

- ◆ Extinguishment of fire other than fixed system (not recommended)
- ◆ Cooling of exposed storage vessels.
- ◆ Direct valve / source isolation
- ◆ Adjustment of product levels

### **Butane Emergencies**

From the following examples, it should be evident that problems of fire prevention and fire fighting for butane and gasoline are not the same.

A butane spill (short term) or large leak is much more serious than one of gasoline of equal quantity. Butane is much more volatile than gasoline. Being more volatile will produce a larger vapor cloud that will drift faster and to a greater distance in a shorter time to a source of ignition than will gasoline vapor.

In order for firefighters to understand and appreciate these differences, they must learn about the properties of butane. There are two major differences between extinguishing butane fires and gasoline fires.

A standard rule is not to extinguish a butane fire unless the fuel supply is shut off first. It is safer to let the butane fire burn out, under control. If extinguished, and the source of fuel is not shut off, a cloud of unburned vapor will accumulate and possibly re-ignite. If confined indoors a serious and violent explosion can result.

A burning liquid spill of butane cannot be extinguished with foam because the butane will evaporate under the blanket, rise up through it, and burn on top of the blanket. On the other hand, foam will seal gasoline vapor under the blanket and smother the fire.

A butane leak with fire should not be extinguished unless the butane leak may be immediately shut off. If the leak cannot be shut off, cooling streams must be applied to the vapor space of vessels that are exposed to flame impingement. Cooling priority should be given to the vapor space where flame impingement is occurring. Once protection is obtained for the involved storage vessel and if closing a valve cannot shut off the leak or other means, controlled burning of the butane is an acceptable firefighting technique.

The weakest points of a horizontal tank or vessel are the ends. Do not conduct firefighting operations or approach the tank or vessel from the ends. Firefighting operations should always be conducted from the sides of the tank or vessel.

Use unmanned monitors when cooling exposed vessels. As in smaller butane fire operations, do not extinguish the fire. Instead, shut down the gas supply. Where there is direct flame impingement on an exposed vessel, apply a minimum of 500 GPM (1,890 L/min) of water at every point of flame impingement

### **Shell Failure**

Structural weakening of the butane vessel may occur when the vessel shell is heated above 800°F (426°C). High metal temperatures are reached when the flames impinge and overheat the vessel shell above the liquid level. Flame impingement on the shell below the liquid level remains cool because the liquid absorbs heat.

The shell failure is localized bulging and thinning out of the shell due to the flame softening the metal shell about the liquid level. The bulging occurs due to a loss in strength in the shell plate at high temperatures. With localized bulging there is a reduction in the shell thickness at the bulge. Increased pressure, combined with loss in shell thickness causes the violent vessel rupture (BLEVE). Often the tear propagates in a helix around the vessel.

Generally, radiant heat on adjoining vessels is not a major hazard unless there is flame contact. Radiant heat alone may not heat the shell to 800°F (426°C). To determine the shell temperature, "sweep" nearby vessels occasionally with hose line. If the water turns to steam on contact with the hot shell, then cooling is needed.

If a liquid pool has not ignited, use water spray to control/dilute the vapors. Water should not contact the spilled material where possible because it will increase the vaporization. Use combustible gas indicators to determine the extent of the vapors. Always remember to position fire apparatus upwind and uphill.

## **TAB 6.0**

# **SAFETY AND HAZARD INFORMATION**

## **TANK TYPE-SPECIFIC HAZARDS**

### ***Fixed Roof Internal Floater (Geodesic Dome / Cone Roof)***

#### *Safety Concerns Include:*

- ◆ Tanks in which the roof floats on the surface of the product surface. Within the Inter Pipeline network all the roof types are steel pontoon or pan / pontoon type internal floater.
- ◆ No roof drains on internal floaters.
- ◆ Sinking of the roof becomes possible if weight limit is exceeded (likely for non-steel internal floaters).
- ◆ Metal shunts used to keep the roof in contact with the tank wall for grounding, can become an ignition source if the seal is compromised.
- ◆ Generally, product levels can be adjusted from or to these tanks, if required.
- ◆ See applicable fire situation for extinguishment information.
- ◆ Fixed roof tanks are extremely susceptible to an explosion within its vapor space when an ignition source is introduced. The resulting explosion can, by design of a weak roof to shell seam, remove the lid of the tank. Caution must be exercised as the lid can fly great distances; up to 0.80 km (0.5 miles).
- ◆ If the lid does not come off completely, it may rest back in place on the top of the tank. This lid can open occasionally allowing heat and fire out, and air in; this is known as – “cat’s eyes”.

#### *Types of Fires Applicable:*

- ◆ Seal fires
- ◆ Fully involved fires
- ◆ Vent fires
- ◆ Fires within bermed area

---

## **OTHER SAFETY HAZARDS**

### ***Boilover, Frothover, and Slopover***

**Boilover:** An event in the burning of certain oils within a tank when, after a long period of burning, there is a sudden increase of fire intensity associated with the expulsion of burning oil from the tank. Boilover occurs when residues from surface burning become denser than the unburned oil and sink below the surface to form a hot layer. This layer progresses downward much faster than the regression of the liquid surface. When this hot layer called a “Heat Wave” reaches water or water in oil emulsion near the bottom of the tank, the water is first super heated and then boils almost explosively, overflowing the tank.

**Frothover:** Can occur when small amounts of water already present inside a tank comes in contact with hot viscous oil and the super heated oil is forced to overflow from the tank. A typical example occurs when hot asphalt is loaded into a tank car that contains some water. The asphalt is initially cooled by contact with the cold metal, and there is no reaction. However, the water can later become super heated, eventually start to boil, and cause the asphalt to overflow the tank car.

**Slopover:** Can result when a water stream is applied to the hot surface of burning oil, provided that the oil is viscous, and its temperature exceeds the boiling point of water. It can also occur when the heat wave contacts a small amount of stratified water within crude oil. As with a boilover, when the heat wave contacts the water, the water converts to steam and causes the product to “slopover” the top of the tank. Slopovers can range from a quiet-like boiling of the product over the tank to a large explosion of burning slop.

## ***Iron Sulfides***

### ***History***

Iron sulfide is created when hydrogen sulfide reacts (usually violently) with hydrated iron oxide, phenyl diazonium chloride, metal oxides, metals, rust, soda, lime, and oxidants. The moist sulfide readily oxidizes in air exothermally and may reach incandescence. The impure sulfide forms when steel processing equipment is used with materials containing hydrogen sulfide or volatile sulfur. The created compounds are pyrophoric (spontaneously explodes when in contact with air) and have caused many fires and explosions when such equipment is opened up.

As the product at the Milk River Terminal site is a sweet product, the hydrogen sulfide risk is significantly lower.

### ***Locations Iron Sulfides Can Be Found***

All process equipment containing hydrogen sulfides

- ◆ Tank vents
- ◆ Tank / product piping
- ◆ Valves and flanges
- ◆ Product pumps
- ◆ All associated piping where sour product may travel

### ***Fires Involving / Caused by Iron Sulfide***

- ◆ Ensure personnel safety
- ◆ Call for assistance
- ◆ Use water fog from hand line, ABC type hand portable fire extinguisher
- ◆ Ensure that iron sulfide remains wet by using water or water mixed with wetting agents (surfactants)
- ◆ Monitor situation to ensure the fire remains out

### ***Fires Caused by Iron Sulfides***

- ◆ Extinguishment must take place in direct relation to the product that is burning. Refer to that area for information.
- ◆ Generally, these fires start explosively but the iron sulfides will not be involved for long. The other products will continue burning.
- ◆ Monitor situation to ensure the fire remains out.

### ***Preventative Measures***

- ◆ Proper purging with an inert gas is essential prior to disassembling of piping and equipment.
- ◆ Use water and wetting agents (surfactants) to ensure equipment is kept wet prior to and during disassembly.

## ***BLEVE***

**This information is included as a reference only; the principles expressed hold the same potential for bolted / riveted cone roof tanks.**

The phenomenon known as a Boiling Liquid Expanding Vapor Explosion (BLEVE) is the result of a liquid within a container reaching a temperature well above its boiling point at atmospheric temperature, causing the vessel to rupture into two or more pieces. A BLEVE can occur when fire impinges on the tank shell at a point or points above the liquid level of the contents of the tank. This impingement causes the metal to weaken and fail from the internal pressure.

BLEVEs can result from mechanical damage to a tank, as well. This damage can be the result of a train derailment, traffic accident, or other physical shock. When a BLEVE occurs, debris may travel hundreds of feet, with tremendous force, and the escaping fuel can ignite causing an expanding fireball.

Although most BLEVEs that involve container failure result from fire exposure, a few BLEVEs have occurred due to container failures from other causes, such as corrosion or impact from an outside force. Impact failures are particularly noticeable in transportation accidents involving railcars and cargo vehicles. In these cases, the BLEVE generally occurs simultaneously with impact.

The size of a BLEVE depends upon the weight of the container pieces and upon how much liquid vaporizes when the container fails. This is analogous in many respects to the performance of rockets, as far as propulsion of container parts is concerned. Most BLEVEs occur when containers are from slightly less than  $\frac{1}{2}$  to about  $\frac{3}{4}$  full of liquid. The liquid vaporization-expansion-energy to container-piece weight ratio is such that pieces are propelled for distances up to approximately 0.8 km (0.5 miles). Deaths from such missiles have occurred up to 244 m (800 ft) from larger containers. Fireballs several hundred feet in diameter are not uncommon, and deaths from burns have occurred to persons as much as 76 m (250 ft) from the larger containers.

The time between initiation of flame contact and a BLEVE varies because it depends upon such widely varying factors as the size and nature of the fire as well as the container itself and any damage done to the tank. Uninstalled containers located above ground can BLEVE in the absence of water cooling in a matter of a very few minutes.

### **Firefighting Operations and Hazards**

In responding to incidents involving storage tanks, fire departments have many factors to consider.

Training: Firefighters should be familiar with the basic properties of the stored product. Knowledge of these properties allows firefighters to make decisions regarding exposures and evacuations.

Firefighters should be aware of the dangers posed by flame impingement to a tank container. By reviewing the dangers of these, the fire officer or firefighter can make decisions based on the potential danger present (risk vs. benefit).

Operations: When controlling a fire, the following three methods of control should be utilized:

1. If there is a leak with no fire present, the flow of gas should be slowed or stopped. This action is appropriate when the flow can be controlled, through intact valves or control devices, and by personnel that are trained in the operation of the control devices.
2. Dispersing gas vapors through ventilation or the application of water streams prevents the vapors from reaching a flammable mixture within the flammable range.
3. Apply water to exposed containers and equipment to cool them and prevent failures and BLEVEs from occurring. The major consideration for this method is the availability of an adequate water source for the constant and long-term application of water to the exposed equipment. The amount of water required is dependent on the size of the leak or fire and its location.
  - ◆ The water supply must be of sufficient volume for the prolonged application of water streams. The supply must also be reliable.
  - ◆ If the supply is a water source such as a pond, lake, or river, determine if the supply is available in cold weather. Is the supply available on-site or near-by?
  - ◆ Estimate the amount of time it is going to take to establish the water supply based on the distance from the site.

If a container is being exposed to fire or flames, water should be applied directly to the vessel; the larger the container, the greater the potential BLEVE hazard. The cooling water should be applied at a minimum rate of 500 GPM (1,890 L/min), at each point of flame impingement, by unmanned master streams, as not to expose firefighters to any further danger.

When confronted with a container that is being impinged upon by flames, time is the most important factor to consider. Containers can be in serious danger of experiencing a BLEVE after less than ten minutes of intense flame impingement of a dry portion of the outer surface. This time frame can encompass the time it takes the fire department to arrive, size-up the scene, and begin to place sufficient hose streams in operation. In other words, there is not a safe time period in which operations can be established.

The decision to remove fire units to a safe location and evacuate any civilians in danger can be a difficult one for firefighters. The first instinct of firefighters may be to attempt to attack the fire or attempt to control escaping gas vapors. The officer or firefighter must weigh the information available with the potential outcomes and perform a “risk vs. benefit” analysis of the situation. In many cases the better course of action may be to retreat to a safe location and monitor the situation from a distance.

### **Conclusion on BLEVE**

Training programs warning the fire service of the potential dangers of BLEVEs, should be re-emphasized. It is recommended that the lessons learned from these incidents be used to help develop operational plans and procedures to guard against similar incidents.

In each of these incidents, the relief valves were operating upon arrival of the fire department. The weakened tank shells ruptured sending tank pieces in all directions striking near-by buildings, equipment, and personnel. Therefore, it should not be assumed that because the relief vents are operating, a BLEVE would not occur. When flames are impinging on a tank, there is no safe side or end to approach. In a BLEVE, sections are thrown in all directions. The potential for a BLEVE should be considered any time there is direct flame impingement on a dome tank, at the vapor space of the vessel, when venting through relief valves is not adequate to relieve the pressure build-up. Since it is difficult to detect if the venting is adequate in an emergency, the potential of a BLEVE should always be given the utmost consideration.

The most effective way to reduce the potential of a BLEVE is to apply large quantities of water to the effected tanks, to cool the vessel. This evolution requires that large amounts of water be readily available and for extended time periods. Unattended hose stream or monitor devices should be utilized to complete this task. Use of these devices limits the exposure to firefighters from an explosion.

If a sufficient amount of water cannot be applied to the tank safely, then firefighters should be withdrawn to a safe remote location, and fire should be allowed to burn. In the case of train derailments or other large-scale incidents, a large "hot zone" should be established to reduce the exposure to fire forces and civilian population.

## **H<sub>2</sub>S**

Hydrogen sulfide or H<sub>2</sub>S is a naturally occurring gas found in a variety of geological formations. It is also formed by the natural decomposition of organic material in the absence of oxygen. It is encountered in a variety of industrial processes including sewage and wastewater treatment, and in the production and refining of petroleum, pulp and paper, metals, sulfur compounds and heavy water. H<sub>2</sub>S may also be referred to as sour gas, acid gas, stink damp or sulphuretted hydrogen.

H<sub>2</sub>S gas is colorless, heavier than air in its pure state and is extremely toxic. In low concentrations, it has a rotten egg smell and causes eye and throat irritation. H<sub>2</sub>S can deaden your sense of smell and higher concentrations cause death.

As the product at the Milk River Terminal site is a sweet product, the hydrogen sulfide risk is significantly lower.

# **APPENDIX A**

# **FIREWATER SYSTEM**

## **FIREWATER SYSTEM**

### ***On-site Water Storage:***

- ◆ None on site

### ***Alternate Water Sources:***

- ◆ There is no water on site for firefighting.

Inter Pipeline has explored various options to obtain water in the case of an incident. Below are the three sources that could be enacted if required.

a) Source from the Town of Milk River –

a. The Town of Milk River has a Bulk Water Filling Station, approximately 0.6 km away, that operates on a key/fob system and is open twenty-four hours a day. Vehicle access will be through the local roads.

b. Approximately 6 – 8 hours:

- Acquire water (3 - 6 hours)
- Acquire foam (approximately 6 hours arriving from Firemaster's location)
- Acquire tanks for holding water from 3 - 5 hours.

c. Approvals:

- There are no consent or approval required – there are two options for accessing the water:
  - Access to the Bulk Water Filling Station through the District Fire Department who has access to the Bulk Water Filling Station as part of emergency service.
  - Inter Pipeline can set up an account with the Town of Milk River. Account holders are issued a key/fob that allows access for water withdrawal for usage (Inter Pipeline will be invoiced accordingly based on usage).

b) Source from the MD of Warner – The MD of Warner has two water bulk stations, one in the Town of Milk River and the second in the Village of Warner.

- Time to acquire water (2 - 3 hours) and foam (approximately 6 hours arriving from Firemaster's location)

a. Time to acquire water & portable tanks for holding water from 3 hours.

b. Approvals: The process of accessing the water bulk station is by opening an account, depositing funds to the account, and obtaining the key fob. Bulk water cost for the water station at the Village of Warner is \$2.00 per 1,000 liters. There are no consent or approval processes for account holders because key fob system works as preapproval system that allows water usage if funds are available on the account. Automated email is issued to the account holder after each water fill up to advise on water usage and remaining funds on the account.

- c) Source from the Milk River
  - a. Time to acquire water (4 - 8 hours) and foam (approximately 6 hours arriving from Firemaster's location)
  - b. Time to acquire water & portable tanks for holding water from 3 hours.
  - c. Approvals:
    - i. Regulator:
      - 1. In advance of pulling the water, diversion of water applications for the purposes of fire fighting is exempted from requiring a licence under the *Water Act* (TDL Approval). As proper paperwork and approval will need to be put in to reflect what was completed, the Liaison Officer and Environment Planner will be consulted throughout the incident to ensure compliance and provide direction on the logistics, such as end-of-pipe water intake fish screens and withdrawal record keeping.
    - ii. Landowner/Stakeholder: Liaison Officer and Land Planner will obtain consents from applicable landowners/ third party stakeholders where access through their property is required to access Milk River for water supply.

**Areas Serviced by Hydrants**

- ◆ N/A

**Distribution Network:**

- ◆ N/A

**Inter Pipeline Drawings:**

- ◆ BR-RM-PLN-0020

**Areas NOT Serviced by Hydrants**

- ◆ N/A

# **APPENDIX B**

## **FIRE SUPPRESSION SYSTEM INFORMATION**

## **FIRE SUPPRESSION SYSTEM INFORMATION**

### ***Fire Detection Capability:***

- ◆ One fire located at east side of scale and pointed towards butane truck unload area
- ◆ LEL detection at butane unload and butane injection skid

### ***Fire Prevention:***

- ◆ Good housekeeping practices
- ◆ Control of vegetation

### ***Fire Suppression:***

- ◆ Fire extinguishers in operators' trucks
  - 14 – various fire extinguishers in various locations around the terminal

### ***Fire Pump:***

- ◆ N/A

# APPENDIX C

## SAFETY DATA SHEETS

**Reference the E2 plan or the IPL SDS online system**  
<https://ipl.msdsbinders.com/CustomBinder/Search/Inter+Pipeline+Products%20>

## **SAFETY DATA SHEETS** **(TANK CONTENTS)**

- ◆ All unrefined products (e.g. crude oil) shall be considered to contain hydrogen sulfide (H<sub>2</sub>S). Contact control center for current tank products. Consult SDS for information.
- ◆ Extreme caution must be used when dealing with tank products, benzene may be present, consult SDS for information.

# **APPENDIX D**

# **MUTUAL AID AGREEMENTS**

## **MUTUAL AID AGREEMENTS**

N/A



Milk River

# PRE-FIRE PLAN

Prepared by:

**Firemaster** OILFIELD SERVICES INC.

Section Redacted

30-Nov-23 Version 1.1

# PRE-FIRE PLAN

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## APPENDIX D MUTUAL AID AGREEMENTS

# PRE-FIRE PLAN

## DOCUMENT LOCATIONS

Doc #	Organization	Location	Contact	Document Type
1	Inter Pipeline (Operator)	Section Redacted	Section Redacted	Hardcopy
2	Inter Pipeline (Operator)	Section Redacted	Section Redacted	Hardcopy
3	Inter Pipeline (Operator)	Section Redacted	Section Redacted	Digital
4	Tank Fire Specialist	Section Redacted	Section Redacted	Hardcopy
5	Fire Department	Section Redacted	Section Redacted	Hardcopy
6	Fire Department			Hardcopy

# PRE-FIRE PLAN

## REVISION RECORD

Version #	Date of Change / New Plan Date	Who Changed (ie. Inter Pipeline / Firemaster)	What Was Changed (Include Page #)
1.0	30-Nov-23	Inter Pipeline, Operator of Milk River Terminal / Firemaster	New plan
1.1	30-Nov-23	Inter Pipeline, Operator of Milk River Terminal / Firemaster	Corrects formatting error in Version 1.0
2.0			
3.0			
4.0			
5.0			
6.0			
7.0			
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9.0			
10.0			
11.0			
12.0			
13.0			
14.0			
15.0			

# **TAB 1.0**

# **INTRODUCTION**

## **PURPOSE**

The enclosed information covers various aspects of Inter Pipeline Ltd. ('Inter Pipeline') operator of the Milk River Terminal, with regards to pre-fire and pre-incident planning in the event of an emergency. This plan should be used in conjunction with the Milk River Pipeline Emergency Response Plan ('Milk River Pipeline ERP').

The information contained within will greatly assist Inter Pipeline, local fire departments and tank fire specialists to deal with an emergency promptly, effectively, and safely.

The information contained within this document must be reviewed annually for accuracy and contents. Training with internal and external responders is also held annually.

It is important to remember that the enclosed information is only a guideline and as with any emergency, the course of action taken will be dictated by the specific situation.

### **In case of an emergency call:**

**Inter Pipeline Control Center  
24 hour Emergency 1-800-727-7163**

**&**

**Section Redacted**

**&**

**911**

## **DEFINITIONS**

**BLEVE:** The phenomenon known as a Boiling Liquid Expanding Vapor Explosion (BLEVE) is the result of a liquid within a container reaching a temperature well above its boiling point at atmospheric temperature, causing the vessel to rupture into two or more pieces. A BLEVE can occur when fire impinges on the tank shell at a point or points above the liquid level of the contents of the tank. This impingement causes the metal to weaken and fail from the internal pressure.

**Boilover:** An event in the burning of certain oils within a tank when, after a long period of burning, there is a sudden increase of fire intensity associated with the expulsion of burning oil from the tank.

**Cold Zone:** The cold zone is the largest zone and includes all areas not immediately involved in the emergency. Take all possible efforts to ensure contamination does not spread to this area. Locate the command post and staging area in the cold zone.

**Defensive Strategy:** A defensive fire response “First Aid” strategy is to allow a fire to burn out under controlled conditions or have engineered systems in place that will extinguish the fire. The principal strategy is to minimize loss and protect exposures by use of equipment spacing, cooling water, fireproofing, shielding product transfer, system depressurizing and fuel isolation. Manual extinguishment of a fire (if safe to do so) in its Incipient Stage in open areas is acceptable and still within the definition of a defensive strategy.

**ESD:** Emergency shut-down

**External First Responders:** The first personnel to respond to an incident. They are generally fire department / firefighting personnel. First responders require appropriate emergency response training to ensure that their response is suitable and is performed safely.

**Flame Arrester:** A device used on vents and air intakes to allow the passage of air but prevent the passing through of flame.

**Frothover:** Can occur when small amounts of water already present inside a tank comes in contact with a hot viscous oil and the super heated oil is forced to overflow from the tank.

**Gallon:** All references within this document for gallon are given in U.S. gallons.

**H<sub>2</sub>S:** H<sub>2</sub>S gas is colorless, heavier than air in its pure state and is extremely toxic. In low concentrations, it has a rotten egg smell and causes eye and throat irritation. H<sub>2</sub>S can deaden your sense of smell and hyper concentrations cause death.

**Hot Zone:** The hot zone is the release site or site of cleanup operations. Restrict access to the hot zone to emergency response personnel only, except where personnel not involved in emergency operations are escorted through the site. All appropriate personal protective equipment must be used in the hot zone.

**Incipient Stage Fires:** A fire which is in the initial or beginning stage and which can be controlled or extinguished by means of portable fire extinguishers, class 2 fixed standpipe systems or small portable hand lines without the need for special protective clothing or breathing apparatus.

**Inter Pipeline First Responder:** The first employee to arrive at an emergency. Their actions will be dictated by the severity of the situation, limitations of training and equipment and direction by on-scene commander.

**Inter Pipeline Incident Commander:** The first responder functions as the incident commander until relieved by appointed personnel. Management appoints the incident commander based on the nature, size, and complexity of the emergency.

**Iron Sulfide:** Iron sulfide is created when hydrogen sulfide reacts (usually violently) with hydrated iron oxide, phenyl diazonium chloride, metal oxides, metals, rust, soda, lime, and oxidants. The moist sulfide readily oxidizes in air exothermally and may reach incandescence. The impure sulfide forms when steel processing equipment is used with materials containing hydrogen sulfide or volatile sulfur. The created compounds are pyrophoric (spontaneously explodes when in contact with air) and have caused many fires and explosions when such equipment is opened up.

**Milk River Pipeline ERP:** Inter Pipeline's operating and procedures manual covering emergency response. This manual is maintained by Inter Pipeline and digitally available with hardcopies located at district offices.

**Offensive Strategy:** An offensive fire response strategy is based on extinguishment of the fire in the shortest possible time without placing response personnel under undue risk. It utilizes all of the elements of a defensive strategy to minimize the overall fire loss; however, resources are provided to allow personnel to approach the fire with the intent of extinguishment. Employees should not attempt this approach until they have received proper training and resources. Only trained External Emergency Responders should undertake this strategy.

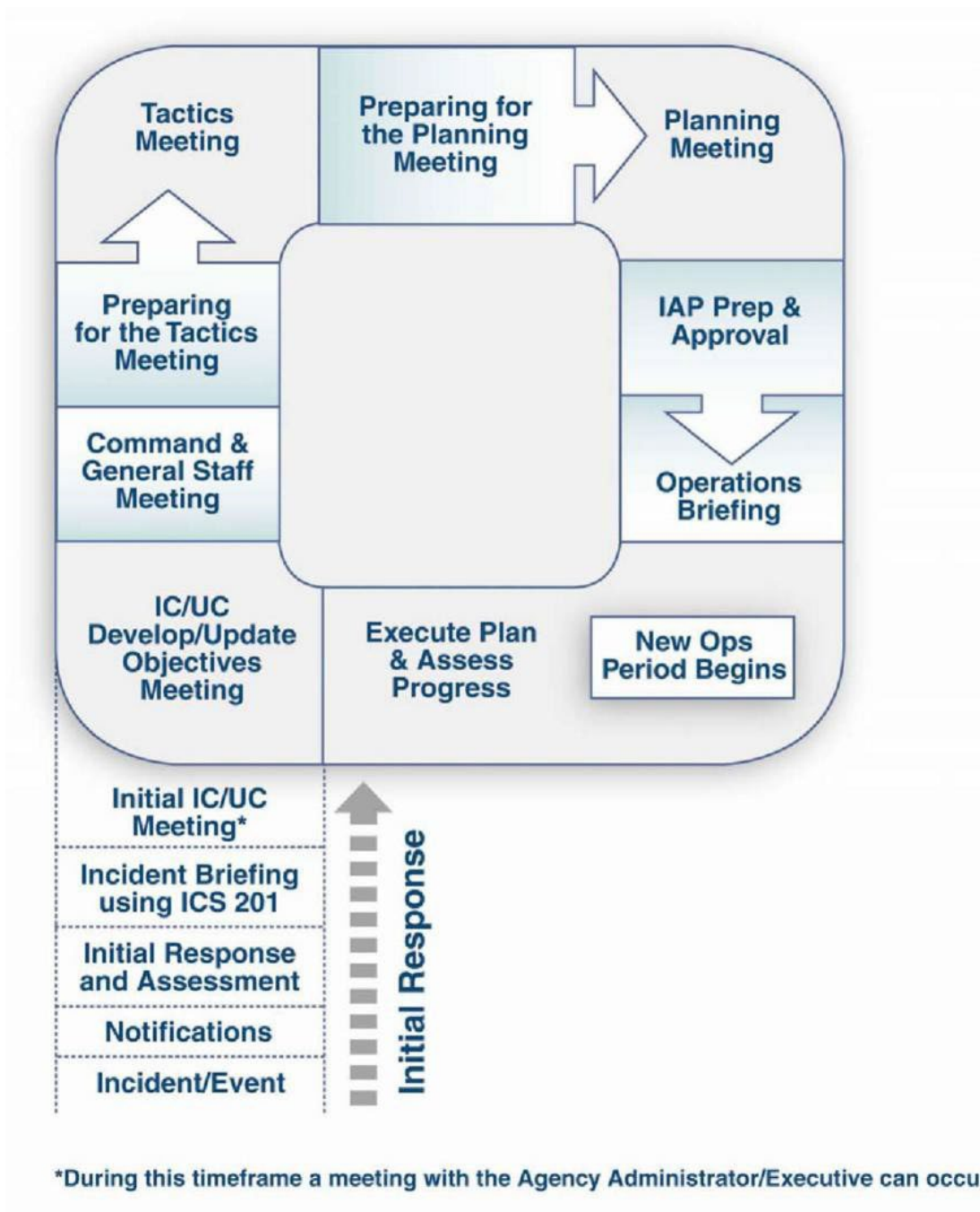
**Rim Cooling:** The act of using water nozzles or monitors to cool the top rim of a tank. This cooling also entails wind boards, fixed foam system piping and generally the heat exposed upper portion of a tank.

**Slopover:** Can result when a water stream is applied to the hot surface of burning oil, provided that the oil is viscous, and its temperature exceeds the boiling point of water.

**Warm Zone:** The warm zone is a transition zone where equipment may be cleaned, and contaminated clothing removed before leaving the site. Depending on the emergency, establish decontamination stations in the warm zone (see page 3.5).

## EMERGENCY RESPONSE ACTION PLAN

The Emergency Response Action Plan and Milk River Pipeline ERP detail the initial response actions and response operations used for all emergency events.



## **TAB 2.0**

# **SITE SPECIFIC INFORMATION**

**Section Redacted**

## ***Inter Pipeline Employees***

24-Hour Emergency Number (Toll Free) 1-855-664-5011

## ***Section Redacted***

## ***Regulatory Agencies***

Applicable regulatory agency contact information is in the Milk River Pipeline ERP.  
(See definitions section)

## ***Contractors***

The following types of contractor contact information are in the Milk River Pipeline ERP.

- ◆ Accommodations and lodging
- ◆ Catering
- ◆ Communication equipment (phones and radios)
- ◆ Construction equipment (dozers, loaders, backhoes, cranes)
- ◆ Environmental testing services and equipment (downwind monitoring)
- ◆ Equipment rental (roadblocks, small equipment)
- ◆ Firefighting foam suppliers
- ◆ Fuel delivery
- ◆ Helicopters and aircraft
- ◆ Industrial ambulances (long term)
- ◆ Irrigation pumps
- ◆ Portable generators and light towers
- ◆ Portable offices and camp buildings
- ◆ Portable outhouses
- ◆ Portable tanks (frac tanks)
- ◆ Safety supplies
- ◆ Service companies (laborers)
- ◆ Vacuum trucks
- ◆ Vehicle rental
- ◆ Water trucks
- ◆ Welders and fabricators (shop and portable)

## **RESOURCE INFORMATION**

### ***Inter Pipeline Resources***

***Section Redacted***

### ***Milk River On-site Fire Equipment List:***

***Section Redacted***

~~Milk River Fire~~  
**Local Fire Departments**

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**Milk River Fire Department**

**Section Redacted**

## ***Tank Fire Specialist***

***Firemaster Oilfield Services Inc.***

***Section Redacted***

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## Firemaster Equipment Specifications

### 2,113 GPM (8 m<sup>3</sup>/min) Pump & Monitor System

This transportable tractor and trailer mounted system has the capability of pumping, proportioning, and delivering up to 2,113 GPM (8 m<sup>3</sup>/min) of firefighting foam.

#### Major system components include:

- Detroit Diesel 6V53T Engine
- 2,113 GPM (8 m<sup>3</sup>/min) Hale Pump
- Pump Suction and Discharge Manifolds
- Skid Mounted Pump with Integral Fuel Tank
- Bolted Frame Assembly with Lifting Eyes
- 1,057 Gal (4,000 L) of Foam Concentrate
- Pre-connected Jet Ratio Controllers for Foam Delivery
- Remote Monitor Capable of Delivering 2,113 GPM / 4,226 GPM (8 m<sup>3</sup>/16 m<sup>3</sup>/min) of Foam Solution
- Terminator II 2,000 / 4,000 trailer mounted monitors

### Fire Trucks

- Diesel Powered Chassis Equipped with Sleeper and Automatic Air Shutdown
- Pressurized Portable 35 L Emergency Eye Wash Station
- Two Trained Personnel
- Two 30 lb (13.6 kg) ABC Fire Extinguishers
- All Twin Agent System equipment is Ansul
- Trauma / Burn Kit
- Two Scott Air Packs

#### Twin Agent System:

- 3,000 / 1,500 lb (1,364 / 682 kg) Purple K Dry Chemical
- 500 / 300 Gal (1,890 / 1,134 L) Alcohol Type Foam Solution
- Nitrogen Powered
- 100' (30 m) Twin Agent Lines and Reel
- 150' (50 m) Dry Chemical Line and Reel

#### Continuous Foam System:

- 140 Gal (545 L) Alcohol Type Foam Concentrate
- One 4" (100 mm) or 5" (125 mm) Suction
- Hydraulic Driven 500 GPM (2 m<sup>3</sup>/min) or 750 (2,850 L/min) Waterous Pump
- Two – 2½" (65 mm) and Two – 1½" (38 mm) Pump Outlets
- Four 50' (15 m) – 2½" (65 mm) Hoses
- Six 50' (15 m) – 1½" (38 mm) Hoses

Combination Units

- Diesel Powered Chassis Equipped with Sleeper and Automatic Air Shutdown
- Two Trained Personnel
- Two 30 lb (13.5 kg) ABC Fire Extinguishers
- All Twin Agent System equipment is Ansul
- Trauma / Burn Kit
- Two Scott Air Packs

Twin Agent System:

- 3,000 / 1,500 lb (1,364 / 682 kg) Purple K Dry Chemical
- 500 / 300 Gal (1,890 / 1,134 L) Alcohol Type Foam Solution
- Nitrogen Powered
- 100' (30 m) Twin Agent Lines and Reel
- 150' (50 m) Dry Chemical Line and Reel

Shower Unit System:

- Fully Enclosed Heated Compartment
- 600 Gal (2,315 L) of Portable Water
- Eye Wash Stations
- Four to Six Overhead Showers
- Four to Six Mid-Section Showers
- Two Scott Air Packs
- Heated Water for Winter Conditions
- Recovery Station

Continuous Foam System:

- 140 Gal (545 L) Alcohol Type Foam Concentrate
- One 4" (100 mm) or 5" (125 mm) Suction
- Hydraulic driven 500 GPM (2 m<sup>3</sup>/min) or 750 (2,850 L/min) Waterous Pump
- Two – 2½" (65 mm) and Two – 1½" (38 mm) Pump Outlets
- Four 50' (15 m) – 2½" (65 mm) Hoses
- Six 50' (15 m) – 1½" (38 mm) Hoses

Shower Units

- Fully Enclosed Heated Compartment
- 600 Gal (2,315 L) of Portable Water
- Eye Wash Stations
- Four to Six Overhead Showers
- Four to Six Mid-Section Showers
- Two Scott Air Packs
- Heated Water for Winter Conditions
- Recovery Station

Fire Suppression Trailers

- 2,000 lb Purple K c/w 150 ft hose reels, all in enclosed trailer
- 3,000 lb Purple K c/w 150 ft hose reels, all in enclosed trailer

## ***Mutual Aid Organization***

### **Mutual Aid**

***Section Redacted***

## ***Adjacent Facilities***

### **Areas of concern that may increase the likelihood of fire risk to the terminal:**

#### ***Adjacent Petroleum Facilities:***

- ◆ BRPL Milk River Station is located at the same site and includes:
  - There is additional infrastructure located on this site, operated by Inter Pipeline and governed under provincial jurisdiction.
    - These assets include Tank 104 and Butane Bullet

As Inter Pipeline is the operator of the infrastructure at this entire site, a full site plan is included to ensure alignment during an emergency event.

The remainder of this plan will include information on all infrastructure located at the Milk River Site in order to properly facilitate firefighting efforts in an emergency event.

## ***Wildfire Control and Protection***

### **Detail any wildfire prevention measures at the facility:**

- ◆ Vegetation clearing within the site
- ◆ Perimeter vegetation management (maintaining a buffer zone extending from structures outward – to 30 feet)
- ◆ Education (employee wildfire suppression training, awareness training, evacuation training)
- ◆ Communication or cooperative relationship with government or other organization for the purposes of managing wildfire concerns.
- ◆ Inter Pipeline personnel are trained to fight small fires, using hand-held or other portable fire extinguishers at tankage locations. Larger fires requiring additional firefighting resources shall only be extinguished by fully equipped fire departments trained for the purpose.
- ◆ In the event of a major fire at the Milk River Terminal site, the local fire department and Firemaster Oilfield Services shall be notified of the incident and shall respond to the scene. Company personnel shall evacuate and secure the site and assist fire personnel in procedures related to facility operations and control.

## **TERMINAL MAPS AND PHOTOS**

**Section Redacted**

## **TAB 3.0**

# **ROLES AND RESPONSIBILITIES**

## **INTER PIPELINE FIRST RESPONDER**

**Consider hazards and take all necessary steps to ensure personal safety prior to initiating emergency actions.**

### **Hazards with tank fires include:**

- ◆ Extreme heat
- ◆ Smoke
- ◆ Hazardous gases (as well as the products of combustion)
- ◆ Possible or imminent potential for a vapor flash or explosion
- ◆ Boilover, frothover, slopover

Make use of the information in Tab 4.0 - Tank Information Sheets, Tab 5.0 - Fire Situations, and Tab 6.0 - Safety and Hazard Information.

**See Milk River Pipeline ERP for initial response actions and response operations.**

### **Emergency Notification:**

Off-hours - proceed to step 1

On-hours - proceed to step 3

1. Upon notification to respond, proceed immediately to area of concern to confirm emergency.
2. Establish and maintain constant or scheduled contact with regional management / on-call person.

**If an emergency is confirmed, activate the Incident Command System (see Milk River Pipeline ERP) and perform the initial duties of the Inter Pipeline Incident Commander until relieved by someone of far greater experience or district supervisor:**

3. Sound alarm and initiate site evacuation procedures.
4. Treat and evacuate the injured immediately.
5. Contact local fire department, notify regional management / on-call person of:
  - ◆ Present status (terminal(s) involved, known injuries, actions taken).
  - ◆ Internal and external notifications made.
  - ◆ Identify back-up needs (company personnel, local fire department, tank fire specialists).
6. Initiate Site Security and Control procedures as per the Milk River Pipeline ERP and as manpower allows. Consider the following recommended minimum tank fire control perimeters:
  - ◆ Hot zone 82 feet (25 meters)
  - ◆ Warm zone 320 feet (100 meters)
  - ◆ Cold zone 1,000 feet (305 meters)
7. Account for all personnel. As manpower allows initiate search and rescue procedures for on-site personnel unaccounted for. May need to involve local fire departments for assistance.

8. Identify hazards and assess the risks. Prepare a summary of the situation for the incoming Inter Pipeline Incident Commander, which may include:
  - ◆ What is burning?
  - ◆ Has it stabilized or is it growing?
  - ◆ What resources are readily available?
  - ◆ What emergency response resources have been contacted?

**Inter Pipeline employees are strictly prohibited  
from climbing on a fire involved tank!**

**Inter Pipeline employees shall not enter the bermed area  
of a fire involved tank unless safe to do so.**

## **INTER PIPELINE INCIDENT COMMANDER**

1. Review the situation summary prepared by Inter Pipeline First Responder. Ensure that all first response tasks have been (or are being) completed. Use the Response Group software and accompanying apps or if necessary, use the ICS forms located in the Milk River Pipeline ERP.
2. Establish Unified Command Structure with external emergency responders, as necessary.
3. Identify the type of fire. The following information may aid in the identification:
  - ◆ Small amount of smoke / fire appears not to originate from tank wall, no noticeable increase within 30 minutes, possible vent / gauging hatch fire.
  - ◆ Small amount of smoke / fire, generated from around the tank wall area with an increase of size noticed within 30 minutes, possible seal fire.
  - ◆ Larger amounts of smoke / fire noticed around the tank wall area with a noticeable hollow area within center of tank, possible partial or full circumference seal fire.
  - ◆ Large amounts of smoke / fire noticed around tank walls and including portions of the tank center area, possibility that the fire has migrated to be a partially or fully involved surface fire.
4. Review hazards and assess the risks. Hazards associated with tank fires include:
  - ◆ Extreme heat
  - ◆ Smoke
  - ◆ Hazardous gases (as well as the products of combustion)
  - ◆ Possible or imminent potential for a vapor flash or explosion
  - ◆ Boilover, frothover or slopover

Use the resources in Tab 4.0 - Tank Information Sheets, Tab 5.0 - Fire Situations, and Tab 6.0 - Safety and Hazard Information. Ensure that hazards are communicated to all responders (internal and external), and that appropriate mitigation measures are implemented, including proper use of PPE, respiratory protection and rescue equipment.

5. Develop a strategy to address the emergency situation. The strategy will be based on the circumstances of the emergency and the available resources. As a guideline, use the “Defensive” and “Offensive” Strategies identified for various fire situations in Tab 5.0.

When evaluating strategies, ask the following questions:

- ◆ How much and what part of the area is involved?
- ◆ What are the conditions of the area?
- ◆ Can the responders enter the area and stay long enough to perform their job?
- ◆ Are sufficient resources available for this action?

6. Develop an action plan and specific tactics that are to be employed to achieve the goal of the strategy. The following three priorities must be addressed IN THE FOLLOWING ORDER:

- I. Life Safety:
  - Evacuation
  - Rescue
  - General Safety
  
- II. Incident Stabilization
  
- III. Environment:
  - Environmental Protection
  - Surrounding Facility Exposures
  - Incident Confinement
  - Extinguishment
  
- IV. Assets:
  - Prevent Re-kindling
  - Clean-up
  - Repair
  - Salvage

7. Establish initial control perimeter minimums based on the following guidelines (see Figure 1):
  - ◆ Hot zone 25 meters (82 feet)
  - ◆ Warm zone 100 meters (320 feet) - could initially be considered bermed area
  - ◆ Cold zone 305 meters (1,000 feet)

Set up a Command Post, Staging Areas, and Decontamination Stations as necessary for the circumstances.

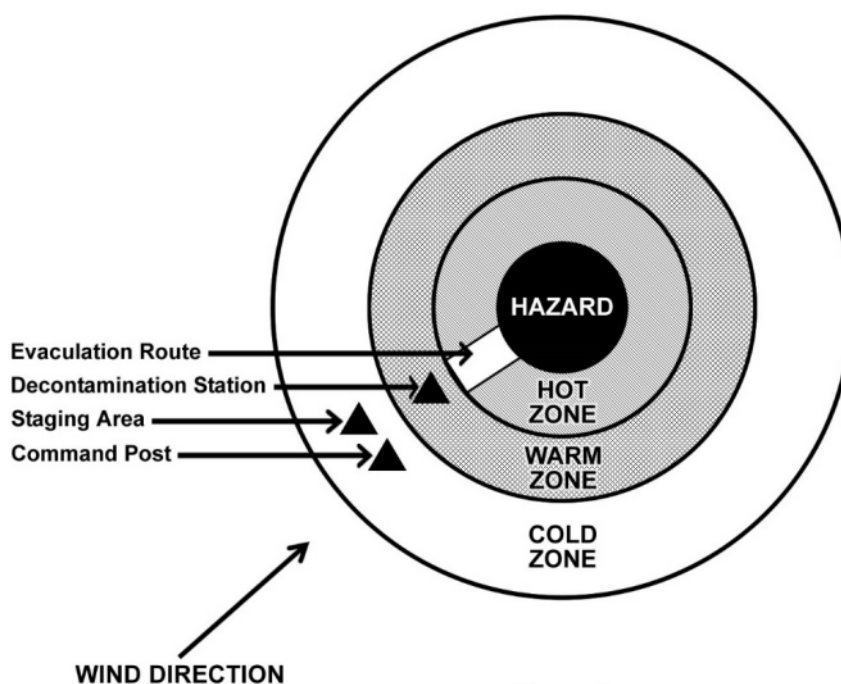


Figure 1  
Protective Zones

8. Ensure that flow into or out of the tank has been halted and that tank mixers have been shut off to allow the product in the tank to stabilize. **Tank level adjustments should only be made after the situation has been assessed – the decision to pump out of or into a tank should include on-site operations, local emergency responders, tank fire specialists and the control centre.**
9. Evaluate the situation at various times during the emergency. Use risk assessment criteria (loss versus gain) in developing plans. A “size-up” of the situation will include answering the following questions:
  - ◆ What do you have?
  - ◆ What are you doing?
  - ◆ What do you need?
  - ◆ Who is in command?

**The incident commander shall continuously re-evaluate the situation and may change the strategy at any time!**

## **INTER PIPELINE RESPONDERS**

Inter Pipeline recognizes that firefighting roles are not the core job responsibility of its employees; however, there are steps that can be taken by employees to safely mitigate the loss and damage incurred during a fire situation. In general, the “Defensive Strategy” identified in specific fire response situations (Tab 5.0 of this manual) is within the scope of a trained Inter Pipeline employee.

For a fire emergency, Inter Pipeline employees will be expected to:

- ◆ Report any emergencies or potential emergencies as per Milk River Pipeline ERP
- ◆ Respond to and evaluate the emergency
- ◆ Coordinate with on-call person, control center, management, and the Incident Commander. Provide call out assistance as required (internal and external notifications, response resources)
- ◆ Provide for any medical and rescue assistance that may be required
- ◆ Ensure site security is established and maintained
- ◆ Not carry out any work if it will cause imminent danger to the health and safety of the employee or any other worker present at the terminal

Employees and contractors must not engage in direct firefighting activities related to large or fully involved fires. Tactics to approach these types of fires should be developed in consultation with professional firefighters or tank fire specialists; however, Inter Pipeline employees may assist professional firefighters or tank fire specialists by:

- ◆ Providing guidance, emergency control, equipment, and terminal information
- ◆ Coordinating isolation and draining of product lines
- ◆ Coordinating de-energizing of terminal (e.g. substations, cubicles)
- ◆ Providing logistics support and coordination
- ◆ Protecting adjacent facilities (close berm drains, etc.)

**Inter Pipeline employees are strictly prohibited from climbing on a fire involved tank!**

**Inter Pipeline employees shall not enter the bermed area of a fire involved tank unless safe to do so.**

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## **EXTERNAL EMERGENCY RESPONDERS**

### **Local Fire Department's Role:**

The local fire department will play an essential role within the response to a fire on the Milk River Terminal Site. They will work with Inter Pipeline employees to try to ascertain the exact extent of the emergency and develop a plan to lessen the impact of, control and / or stop the fire emergency. Inter Pipeline understands that the Milk River Terminal site may have situations that will exceed the training, equipment, or mandate of the local fire department. Tank fire specialists (Firemaster) should be consulted at this time.

Inter Pipeline recognizes that all local fire departments have the jurisdictional authority to enter the affected property as it deems necessary. However, in the absence of an imminent threat to life or public safety, Inter Pipeline requests that local fire departments NOT enter the property until accompanied by an Inter Pipeline employee. There are inherent hazards present at all Inter Pipeline locations, which may not be fully understood or appreciated by the external emergency responders. An Inter Pipeline employee will be an invaluable resource to protect their safety.

The local fire departments' role will be governed by their mandate, experience, training, and available equipment. Their roles may include:

- ◆ Providing search and rescue personnel
- ◆ Fire suppression of any tank related fire
- ◆ Fire suppression of oilfield or terminal fires not pertaining to tank related fires
- ◆ Fire suppression of small or incipient fires not pertaining to activities requiring climbing of storage tanks
- ◆ Protecting adjacent facilities or structures
- ◆ Participating in joint command of the scene under Unified Command System
- ◆ Assuming a secondary role under Unified Command System
- ◆ Providing manpower, equipment, foam, water, or other resources
- ◆ Assisting Inter Pipeline employees (under direct supervision) in pipeline operational tasks

Please see fire department information sheets for equipment lists, roles, and limitations identified by the local fire department for this facility (page 2.4).

### **Tank Fire Specialist's Role:**

Tank fire specialists can be called upon to assist during a tank fire emergency. Their role may include:

- ◆ Providing expert advice (consulting) remotely by phone or other means.
- ◆ Providing expert advice (consulting) on site.
- ◆ Providing equipment and firefighters to stop the emergency from worsening or to provide extinguishment.

# TAB 4.0

## TANK INFORMATION SHEETS

**Tank Number:** AST 1 (TK-103)

**Terminal:** Milk River

Specifications		
Diameter	50 ft	15.25 m
Height	32 ft	9.7 m
Fuel Surface Area	1,963 ft <sup>2</sup>	183 m <sup>2</sup>
Tank Contents ***	Crude oil	
Tank Construction	Lap welded plate steel	
Roof Type	Cone roof with Sandborn internal floating	
Mixers	1	
Number of Inlets/Outlets	2	
Foam Dam (Size/Surface Area)	N/A	

Exposures (Tank)		
Adjacent Tanks/Exposures	AST-2, (TK104)	
Risks	Medium	
Cooling Water**	2 portable monitors	
Rate (each)	500 GPM	1,890 L/min

Firewater System		
Hydrant Supported	N/A	
Connections		
Monitor(s)		
Flows/System Capacity		

See Test Results

Minimum Extinguishment Requirements			
	Fully Involved		Seal Fire
Application Rate Formula	0.16 GPM/ft <sup>2</sup>	6.5 L/min·m <sup>2</sup>	N/A
Solution Application Rate	314 GPM	1,190 L/min	
Application Time	65 minutes	65 minutes	
Total Solution Required	20,415 Gal	77,350 L	
Water Required **	19,803 Gal	75,030 L	
Concentrate Required	612 Gal	2,320 L	

Notes:

- \*\* Water supply may be required from a portable source
- \*\*\* Tank contents may vary, consult with terminal Foreman/Supervisors for specifics, BS&W report and amount of water on roof.
- ◆ All foam calculations are based on National Fire Protection Association recommended standards.
- ◆ All foam calculations are made at the minimum amounts and flow required. Fire situations may dictate higher rates and amounts.

Fixed Foam System		
Number of Chambers	N/A	
Flow Each		
Fixed/Semi Fixed		
Application Time		
Total Flow		

Bermed Area (2 tanks common berm)		
Berm Dimensions	315 ft x 100 ft	96 m x 30.5 m
Potential Fuel Surface Area	31,500 ft <sup>2</sup>	2,928 m <sup>2</sup>
Foam Solution Application Rate	5,040 GPM	19,032 L/min
Minimum Concentrate Required	8,828 Gal	37,112 L
Minimum Water Required**	317,772 Gal	1,199,968 L

Exposures (Berm)		
Adjacent Tanks/Exposures	Tanks AST-1,2 &3, meters, pumps, piping	
Risks	High	
Cooling Water**	Up to 4 portable monitors	
Rate (each)	750 GPM	2,840 L/min

Map/Drawing Number	BR-RM-PLN-0020
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**Tank Number:** AST 2 (TK-104)

**Adjacent Facilities:** Milk River

Specifications		
Diameter	68 ft	20.72 m
Height	32 ft	9.7 m
Fuel Surface Area	3,630 ft <sup>2</sup>	32.53 m <sup>2</sup>
Tank Contents ***	Crude oil	
Tank Construction	Lap welded plate steel	
Roof Type	Cone roof with Sandborn internal floating	
Mixers	1	
Number of Inlets/Outlets	2	
Foam Dam (Size/Surface Area)	N/A	

Exposures (Tank)		
Adjacent Tanks/Exposures	AST - 2, (TK103)	
Risks	Medium	
Cooling Water**	2 portable monitors	
Rate (each)	500 GPM	1,890 L/min

Firewater System		
Hydrant Supported	N/A	
Connections		
Monitor(s)		
Flows/System Capacity		

See Test Results

Fixed Foam System		
Number of Chambers	N/A	
Flow Each		
Fixed/Semi Fixed		
Application Time		
Total Flow		

Bermed Area (2 tanks common berm)		
Berm Dimensions	315 ft x 100 ft	96 m x 30.5 m
Potential Fuel Surface Area	31,500 ft <sup>2</sup>	2,928 m <sup>2</sup>
Foam Solution Application Rate	5,040 GPM	19,032 L/min
Minimum Concentrate Required	8,828 Gal	37,112 L
Minimum Water Required**	317,772 Gal	1,199,968 L

Exposures (Berm)		
Adjacent Tanks/Exposures	Tanks AST-1,2 &3, meters, pumps, piping	
Risks	High	
Cooling Water**	Up to 4 portable monitors	
Rate	750 GPM	2,840 L/min

Map/Drawing Number	BR-RM-PLN-0020
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Minimum Extinguishment Requirements			
	Fully Involved		Seal Fire
Application Rate Formula	0.16 GPM/ft <sup>2</sup>	6.5 L/min·m <sup>2</sup>	N/A
Solution Application Rate	580 GPM	2,195 L/min	
Application Time	65 minutes	65 minutes	
Total Solution Required	37,752 Gal	142,695 L	
Water Required **	36,620 Gal	138,414 L	
Concentrate Required	1,133 Gal	4,280 L	

Notes:

\*\* Water supply may be required from a portable source

\*\*\* Tank contents may vary, consult with terminal Foreman/Supervisors for specifics, BS&W report and amount of water on roof.

- ◆ All foam calculations are based on National Fire Protection Association recommended standards.
- ◆ All foam calculations are made at the minimum amounts and flow required. Fire situations may dictate higher rates and amounts.

**Tank Number:** AST 3 Butane Bullet **Adjacent Facilities:** Milk River

<b>Specifications</b>		
Diameter	12 ft	3.658 m
Length	135 ft	41.18 m
Fuel Surface Area	1,620 ft <sup>2</sup>	150.5 m <sup>2</sup>
Tank Contents ***	Butane	
Tank Construction	Welded Steel Vessel (bullet)	
Roof Type	N/A	
Mixers	N/A	
Number of Inlets/Outlets	3	
Foam Dam (Size/Surface Area)	N/A	

<b>Exposures (Tank)</b>		
Adjacent Tanks/Exposures	Tanks 103, & 104, butane skid & piping	
Risks	Medium	
Cooling Water**	Up to 3 cooling monitors	
Rate	750 GPM	2,840 L/min

<b>Firewater System</b>	
Hydrant Supported	N/A
Connections	
Monitor(s)	
Flows/System Capacity	

See Test Results

<b>Fixed Foam System</b>	
Number of Chambers	N/A
Flow Each	
Fixed/Semi Fixed	
Application Time	
Total Flow	

<b>Bermed Area</b>	
Berm Dimensions	Not Bermed
Potential Fuel Surface Area	
Foam Solution Application Rate	
Minimum Concentrate Required	
Minimum Water Required**	

<b>Exposures (Berm)</b>	
Adjacent Tanks/Exposures	N/A
Risks	
Cooling Water**	
Rate	

Map/Drawing Number	BR-RM-PLN-0020
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<b>Minimum Extinguishment Requirements</b>		
	<b>Fully Involved</b>	<b>Seal Fire</b>
Application Rate Formula	N/A	N/A
Solution Application Rate		
Application Time		
Total Solution Required		
Water Required **		
Concentrate Required		

Notes:

- \*\* Water supply may be required from a portable source
- \*\*\* Tank contents may vary, consult with terminal Foreman/Supervisors for specifics, BS&W report and amount of water on roof.
- ◆ All foam calculations are based on National Fire Protection Association recommended standards.
- ◆ All foam calculations are made at the minimum amounts and flow required. Fire situations may dictate higher rates and amounts.

**TAB 5.0**

**FIRE SITUATIONS**  
**(RESPONSE SENARIOS)**

## **GAUGING HATCH / ROOF VENT FIRE**

**Only the fire department or tank firefighting personnel may attempt to extinguish a fire at the gauging hatch or vent.**

Gauging hatch fires and roof vent fires are generally small in nature but still require extreme caution in their extinguishment. Static electricity, lightning, welding, or iron sulfides commonly cause these types of fires. Considerations include:

- ◆ Flame arresters may fail thus allowing the flame to enter a possible vapor space under the roof, allowing for a larger and explosive fire
- ◆ Static electricity buildup may hamper extinguishment, as it may re-ignite the product

**All firefighting operations should be carried out by professional firefighters only.**

**Inter Pipeline employees are strictly prohibited from approaching a fire involved tank.**

**Inter Pipeline employees shall not enter the bermed area of a fire involved tank unless safe to do so.**

**All personnel are prohibited from walking on a tank roof to extinguish vent fires.**

**Inter Pipeline employees may provide advice to fire departments and should be prepared to provide facility, product, and product level information.**

## Defensive Strategy

Only to be done once two or more employees are on scene

- ◆ Assess situation
- ◆ Call for assistance / callout procedures
- ◆ Discontinue pumping out of tank
- ◆ Shut mixers down
- ◆ Initiate Incident Command System (ICS)
- ◆ Contact firefighting personnel
- ◆ Pump into tank at a slow rate, if room allows
- ◆ Discontinue pumping into adjacent tanks, to avoid the presence of flammable vapors in the area
- ◆ Ensure berm drain is closed

## Offensive Strategy

Only to be done by fire department or tank fire specialists

- ◆ Extinguishment of fire, by means of long range nozzles, utilizing a crane and basket or similar apparatus
- ◆ Dry chemical, water fog and foam applications may be needed

### **Caution!**

All firefighting operations must be done in combination with a portable hand line to allow for personal protection.

- I. An attempt should be made to stop the fire from progressing beyond the hatch. This can be accomplished by:
  - ◆ Extinguishment of the fire.
  - ◆ Pumping into the tank at a slow rate; watch tank levels to avoid overfilling.
  - ◆ Do not cool the involved tank with water as this may allow air to be drawn into the tank.
  - ◆ Fire of this type should be assessed by the means of a crane with basket or a similar means (e.g. aircraft, aerial fire apparatus).

## FIRE WITHIN BERM AREA

Fires within the berm area are generally large in nature and require extreme caution in their extinguishment. Considerations include:

- ◆ Piping and / or tank walls may rupture due to the extreme heat generated from the fire, as well as the pressure built up in the lines.
- ◆ Do not cool the tank within the involved berm until berm fire is extinguished, there may not be sufficient room within the berm to support the influx of water. Also, the water will generally spread and expand the fire.
- ◆ Reference tank information sheets for specific tank information.

**All strategies and tactics are only to be completed if they can be conducted safely!**

### Defensive Strategy

Only to be done once two or more employees are on scene

- ◆ Assess situation
- ◆ Discontinue pumping in or out of tank
- ◆ Initiate Incident Command System (ICS)
- ◆ Call for assistance / callout procedures
- ◆ ESD area remotely if applicable
- ◆ Contact firefighting personnel
- ◆ Shut mixers down remotely
- ◆ Cool exposures, within other berms if fire is large enough to produce sufficient radiant heat
- ◆ Discontinue pumping into adjacent tanks, to avoid the presence of flammable vapors in the area
- ◆ Ensure berm drain is closed

### Offensive Strategy

Only to be done by fire department or tank fire specialists

- ◆ Extinguishment of fire other than fixed system
- ◆ Apply foam (small fire) from portable hand lines / monitors
- ◆ Direct valve / source isolation
- ◆ Adjustment of product levels
- ◆ Mixers may be run in adjacent tanks
- ◆ Large fires will require copious amounts of foam, use foam calculations below. This will have to be applied using outside resources

- I. Spill fires within a bermed area can be small, and pertain directly to a flange, valve, or a small spill area, unless tank overfilling has occurred. Caution must be used because the fire can grow if flanges or valves become separated from the tank, thus releasing the previously contained product. Fires within the berm area must be extinguished before attempting to extinguish any tank fire.

- II. Foam calculations for small spill fires in this area must be dictated by the amount of fluid spilt. Use the following calculations or the reference spill fire graph if the fluid is less than 25 mm (1 inch) in depth. If fluid is in-depth (more than 25 mm or 1 inch), reference the tank information sheet.

**TOTAL FOAM VOLUME = Area x Application Rate x Application Time**

**Area = fuel surface area = Length x Width (m<sup>2</sup> or ft<sup>2</sup>)**

**Application Rate = 6.5 L/min/m<sup>2</sup> or 0.16 GPM/ft<sup>2</sup>**

**Application Time = 15 min**

**FOAM CONCENTRATE VOLUME = Total Foam Volume X Foam Concentration**

**Foam Concentration = 0.03 (3 %) or 0.06 (6 %)**

**WATER VOLUME = Total Foam Volume - Foam Concentrate Volume**

- III. Temporary containment for product within berm area must be considered, as the application of foam into a berm area in which a tank has split or ruptured will generally exceed the capacity of the berm.
- IV. Although the fire may appear extinguished, hazardous conditions may persist. Foam will still be required to control flammable vapors. Depending on the situation, it may be necessary to secure the fuel surface for several days to prevent re-ignition. The tank should not be considered safe until the entire product has been removed.
- V. Water management will be crucial for fires of this size. Cooling operations may be reduced, for example: if no steam is present on the metal surfaces, then reduce water consumption. Test areas with hose lines and begin cooling when required. These will reuse firefighting water and run off in containment operations. A thermal imaging camera may be utilized to monitor the travel of heat within a tank.
- VI. Secure tank.

## FLOATING ROOF SEAL FIRE

Floating roof seal fires are generally small in nature and require extreme caution in their extinguishment. Considerations include:

- ◆ Rim cooling must begin as soon as possible to ensure the tank does not warp or become damaged from the heat. A thermal imaging camera may be utilized to monitor the travel of heat within a tank. Fire department personnel should be requested to conduct these.
- ◆ Reference tank information sheets for specific tank information.

Do not adjust any product levels until the initial foam application has been applied, if that is the appropriate action to be taken.

**All strategies and tactics are only to be completed if they can be conducted safely!**

### Defensive Strategy

Only to be done once two or more employees are on scene

- ◆ Assess situation
- ◆ ESD area remotely
- ◆ Call for assistance / callout procedures
- ◆ Contact firefighting personnel
- ◆ Initiate Incident Command System (ICS)
- ◆ Isolate tank from manifold
- ◆ Begin rim cooling
- ◆ Shut mixers down
- ◆ Cool affected area
- ◆ Discontinue pumping into adjacent tanks, to avoid the presence of flammable vapors in the area
- ◆ Ensure berm drain is closed

### Offensive Strategy

Only to be done by fire department or tank fire specialists

- ◆ Extinguishment of fire other than fixed system
- ◆ Extinguishment of fire, by means of long range nozzles, utilizing a crane and basket or similar apparatus
- ◆ Direct valve / source isolation
- ◆ Adjustment of product levels
- ◆ If the fire evolves into a berm fire, refer to Berm Fire section

- I. If an external foam application is made, it must be monitored for progress; this will also lessen the amount of weight put on the floating roof and help keep it afloat. Excessive weight may cause the floating roof to sink allowing for the possibility of a fully involved fire.

- III. Water management will be crucial for fires of this size. Cooling operations may be reduced, for example: if no steam is present on the metal surfaces, then reduce water consumption. Test areas with hose lines and begin cooling when required. These will reuse firefighting water and run off in containment operations. A thermal imaging camera may be utilized to monitor the travel of heat within a tank.
- IV. Once the fire is extinguished an assessment must be made and foam applied, as this will be the only means of sealing the now exposed fuel surface area.
- V. Although the fire may appear extinguished, hazardous conditions may persist. Foam will still be required to control flammable vapors. Depending on the situation, it may be necessary to secure the fuel surface for several days to prevent re-ignition. The tank should not be considered safe until the entire product has been removed. Refer to tank information sheets for foam application rates.

## FULLY INVOLVED TANK FIRE

**Only qualified fire department personnel or tank firefighting personnel may attempt to extinguish a fully involved fire by means other than a fixed system.**

The incident command system must be implemented before calling in tank firefighting personnel. Considerations include:

- ◆ Cooling must begin as soon as possible to ensure the tank does not warp or become damaged from the heat. A thermal imaging camera may be utilized to monitor the travel of heat within a tank. Fire department personnel should be requested to conduct these.
- ◆ Boilover, slopover and frothover are a major concern.
- ◆ May need to protect adjacent tanks by keeping them cool. Be prepared by planning a safe evacuation route from a cooling location in case conditions change.
- ◆ Reference tank information sheets for specific tank information.

**All strategies and tactics are only to be completed if they can be conducted safely!**

### Defensive Strategy

Only to be done once two or more employees are on scene

- ◆ Assess situation
- ◆ Call for assistance/ callout procedures
- ◆ ESD area remotely
- ◆ Isolate tanks at manifold
- ◆ Shut mixers down
- ◆ Initiate Incident Command System (ICS)
- ◆ Contact firefighting personnel
- ◆ Ensure berm drain is closed
- ◆ Discontinue pumping into adjacent tanks, to avoid the presence of flammable vapors in the area
- ◆ Cool exposures
- ◆ Cool affected area

### Offensive Strategy

Only to be done by fire department or tank fire specialists

- ◆ Extinguishment of fire
- ◆ Direct valve/source isolation
- ◆ Adjustment of product levels
- ◆ Large fires will require copious amounts of foam, use foam calculations on tank information sheet. This will have to be applied using outside resources

- I. There are no fixed or semi-fixed systems for fire suppression within the Milk River Pipeline Terminal that will accommodate a fully involved fire. Foam and water will be required from other outside (tank fire specialists) sources.

- II. Water management will be crucial for fires of this size. Cooling operations may be reduced, for example: if no steam is present on the metal surfaces, reduce water consumption. Test areas with hose lines and begin cooling when required. These will reuse firefighting water and run off in containment operations. A thermal imaging camera may be utilized to monitor the travel of heat within a tank.
  
- III. Although the fire may appear extinguished, hazardous conditions may persist. Foam will still be required to control flammable vapors. Depending on the situation, it may be necessary to secure the fuel surface for several days to prevent re-ignition. The tank should not be considered safe until the entire product has been removed. Refer to tank information sheets for foam application rates.

## **EXPOSED ADJACENT FACILITIES (TANKS)**

Tanks adjacent to a tank on fire are also at risk of igniting. Steps should be taken to protect these facilities as best as possible. Considerations include:

- ◆ Cooling must begin as soon as possible to ensure the tank does not warp or become damaged from the heat. A thermal imaging camera may be utilized to monitor the travel of heat within a tank. Fire department personnel should be requested to conduct these.
- ◆ Reference fire situations for specific hazards. Be prepared by planning a safe evacuation route from a cooling location in case conditions change.
- ◆ Reference tank information sheets for specific tank information.

**All strategies and tactics are only to be completed if they can be conducted safely!**

### **Defensive Strategy**

Only to be done once two or more employees are on scene

- ◆ Assess situation
  - ◆ ESD area remotely
  - ◆ Remote activities such as shutting mixers down and isolating tanks at manifold
  - ◆ Ensure berm drains are closed
  - ◆ Discontinue pumping into tanks, to avoid the presence of flammable vapors in the area
  - ◆ Cool exposures
  - ◆ Remove hatches on cone roof tanks if additional ventilation is required
- I. Water management will be crucial for fires of this size. Cooling operations may be reduced, for example: if no steam is present on the metal surfaces, reduce water consumption. Test areas with hose lines and begin cooling when required. These will reuse firefighting water and run off in containment operations. A thermal imaging camera may be utilized to monitor the travel of heat within a tank.
- II. Roof vents on cone roof tanks are not designed for emergency pressure relief. Additional tank venting may be required if the tank is subjected to heat from an adjacent fire involved tank or fire within a berm area. This may require pumping down of adjacent tanks below the working bottoms position. This is to ensure roof legs do not make contact to tank floor, possibly creating a void between the product and floating roof. Roof hatches may also be removed to provide adequate ventilation. THIS IS NOT A CONCERN ON FLOATING ROOF TANKS.

## **ADJACENT FACILITIES - BUTANE BULLET**

- ◆ Cool vessels and exposures with unmanned monitors only
- ◆ Establish / adjust control perimeters
  - Hot zone 100meters
  - Warm zone 150 meters
  - Cold zone 200 meters
- ◆ Use extreme caution as the potential for a BLEVE could be approaching. See following “Butane Emergencies” as a reference.
- ◆ Use table ‘Defensive Strategy’ or ‘Aggressive Strategy’ for resource information:

### **Defensive Strategy**

- ◆ Cool exposures
- ◆ Cool affected area
- ◆ ESD area remotely
- ◆ Shutting down fuel supply.
- ◆ Evacuation of nonessential personnel

### **Aggressive Strategy**

- ◆ Extinguishment of fire other than fixed system (not recommended)
- ◆ Cooling of exposed storage vessels.
- ◆ Direct valve / source isolation
- ◆ Adjustment of product levels

### **Butane Emergencies**

From the following examples, it should be evident that problems of fire prevention and fire fighting for butane and gasoline are not the same.

A butane spill (short term) or large leak is much more serious than one of gasoline of equal quantity. Butane is much more volatile than gasoline. Being more volatile will produce a larger vapor cloud that will drift faster and to a greater distance in a shorter time to a source of ignition than will gasoline vapor.

In order for firefighters to understand and appreciate these differences, they must learn about the properties of butane. There are two major differences between extinguishing butane fires and gasoline fires.

A standard rule is not to extinguish a butane fire unless the fuel supply is shut off first. It is safer to let the butane fire burn out, under control. If extinguished, and the source of fuel is not shut off, a cloud of unburned vapor will accumulate and possibly re-ignite. If confined indoors a serious and violent explosion can result.

A burning liquid spill of butane cannot be extinguished with foam because the butane will evaporate under the blanket, rise up through it, and burn on top of the blanket. On the other hand, foam will seal gasoline vapor under the blanket and smother the fire.

A butane leak with fire should not be extinguished unless the butane leak may be immediately shut off. If the leak cannot be shut off, cooling streams must be applied to the vapor space of vessels that are exposed to flame impingement. Cooling priority should be given to the vapor space where flame impingement is occurring. Once protection is obtained for the involved storage vessel and if closing a valve cannot shut off the leak or other means, controlled burning of the butane is an acceptable firefighting technique.

The weakest points of a horizontal tank or vessel are the ends. Do not conduct firefighting operations or approach the tank or vessel from the ends. Firefighting operations should always be conducted from the sides of the tank or vessel.

Use unmanned monitors when cooling exposed vessels. As in smaller butane fire operations, do not extinguish the fire. Instead, shut down the gas supply. Where there is direct flame impingement on an exposed vessel, apply a minimum of 500 GPM (1,890 L/min) of water at every point of flame impingement

### **Shell Failure**

Structural weakening of the butane vessel may occur when the vessel shell is heated above 800°F (426°C). High metal temperatures are reached when the flames impinge and overheat the vessel shell above the liquid level. Flame impingement on the shell below the liquid level remains cool because the liquid absorbs heat.

The shell failure is localized bulging and thinning out of the shell due to the flame softening the metal shell about the liquid level. The bulging occurs due to a loss in strength in the shell plate at high temperatures. With localized bulging there is a reduction in the shell thickness at the bulge. Increased pressure, combined with loss in shell thickness causes the violent vessel rupture (BLEVE). Often the tear propagates in a helix around the vessel.

Generally, radiant heat on adjoining vessels is not a major hazard unless there is flame contact. Radiant heat alone may not heat the shell to 800°F (426°C). To determine the shell temperature, "sweep" nearby vessels occasionally with hose line. If the water turns to steam on contact with the hot shell, then cooling is needed.

If a liquid pool has not ignited, use water spray to control/dilute the vapors. Water should not contact the spilled material where possible because it will increase the vaporization. Use combustible gas indicators to determine the extent of the vapors. Always remember to position fire apparatus upwind and uphill.

## **TAB 6.0**

# **SAFETY AND HAZARD INFORMATION**

## **TANK TYPE-SPECIFIC HAZARDS**

### ***Fixed Roof Internal Floater (Geodesic Dome / Cone Roof)***

#### *Safety Concerns Include:*

- ◆ Tanks in which the roof floats on the surface of the product surface. Within the Inter Pipeline network all the roof types are steel pontoon or pan / pontoon type internal floater.
- ◆ No roof drains on internal floaters.
- ◆ Sinking of the roof becomes possible if weight limit is exceeded (likely for non-steel internal floaters).
- ◆ Metal shunts used to keep the roof in contact with the tank wall for grounding, can become an ignition source if the seal is compromised.
- ◆ Generally, product levels can be adjusted from or to these tanks, if required.
- ◆ See applicable fire situation for extinguishment information.
- ◆ Fixed roof tanks are extremely susceptible to an explosion within its vapor space when an ignition source is introduced. The resulting explosion can, by design of a weak roof to shell seam, remove the lid of the tank. Caution must be exercised as the lid can fly great distances; up to 0.80 km (0.5 miles).
- ◆ If the lid does not come off completely, it may rest back in place on the top of the tank. This lid can open occasionally allowing heat and fire out, and air in; this is known as – “cat’s eyes”.

#### *Types of Fires Applicable:*

- ◆ Seal fires
- ◆ Fully involved fires
- ◆ Vent fires
- ◆ Fires within bermed area

## **OTHER SAFETY HAZARDS**

### ***Boilover, Frothover, and Slopover***

**Boilover:** An event in the burning of certain oils within a tank when, after a long period of burning, there is a sudden increase of fire intensity associated with the expulsion of burning oil from the tank. Boilover occurs when residues from surface burning become denser than the unburned oil and sink below the surface to form a hot layer. This layer progresses downward much faster than the regression of the liquid surface. When this hot layer called a “Heat Wave” reaches water or water in oil emulsion near the bottom of the tank, the water is first super heated and then boils almost explosively, overflowing the tank.

**Frothover:** Can occur when small amounts of water already present inside a tank comes in contact with hot viscous oil and the super heated oil is forced to overflow from the tank. A typical example occurs when hot asphalt is loaded into a tank car that contains some water. The asphalt is initially cooled by contact with the cold metal, and there is no reaction. However, the water can later become super heated, eventually start to boil, and cause the asphalt to overflow the tank car.

**Slopover:** Can result when a water stream is applied to the hot surface of burning oil, provided that the oil is viscous, and its temperature exceeds the boiling point of water. It can also occur when the heat wave contacts a small amount of stratified water within crude oil. As with a boilover, when the heat wave contacts the water, the water converts to steam and causes the product to “slopover” the top of the tank. Slopovers can range from a quiet-like boiling of the product over the tank to a large explosion of burning slop.

## ***Iron Sulfides***

### ***History***

Iron sulfide is created when hydrogen sulfide reacts (usually violently) with hydrated iron oxide, phenyl diazonium chloride, metal oxides, metals, rust, soda, lime, and oxidants. The moist sulfide readily oxidizes in air exothermally and may reach incandescence. The impure sulfide forms when steel processing equipment is used with materials containing hydrogen sulfide or volatile sulfur. The created compounds are pyrophoric (spontaneously explodes when in contact with air) and have caused many fires and explosions when such equipment is opened up.

As the product at the Milk River Terminal site is a sweet product, the hydrogen sulfide risk is significantly lower.

### ***Locations Iron Sulfides Can Be Found***

All process equipment containing hydrogen sulfides

- ◆ Tank vents
- ◆ Tank / product piping
- ◆ Valves and flanges
- ◆ Product pumps
- ◆ All associated piping where sour product may travel

### ***Fires Involving / Caused by Iron Sulfide***

- ◆ Ensure personnel safety
- ◆ Call for assistance
- ◆ Use water fog from hand line, ABC type hand portable fire extinguisher
- ◆ Ensure that iron sulfide remains wet by using water or water mixed with wetting agents (surfactants)
- ◆ Monitor situation to ensure the fire remains out

### ***Fires Caused by Iron Sulfides***

- ◆ Extinguishment must take place in direct relation to the product that is burning. Refer to that area for information.
- ◆ Generally, these fires start explosively but the iron sulfides will not be involved for long. The other products will continue burning.
- ◆ Monitor situation to ensure the fire remains out.

### ***Preventative Measures***

- ◆ Proper purging with an inert gas is essential prior to disassembling of piping and equipment.
- ◆ Use water and wetting agents (surfactants) to ensure equipment is kept wet prior to and during disassembly.

## ***BLEVE***

**This information is included as a reference only; the principles expressed hold the same potential for bolted / riveted cone roof tanks.**

The phenomenon known as a Boiling Liquid Expanding Vapor Explosion (BLEVE) is the result of a liquid within a container reaching a temperature well above its boiling point at atmospheric temperature, causing the vessel to rupture into two or more pieces. A BLEVE can occur when fire impinges on the tank shell at a point or points above the liquid level of the contents of the tank. This impingement causes the metal to weaken and fail from the internal pressure.

BLEVEs can result from mechanical damage to a tank, as well. This damage can be the result of a train derailment, traffic accident, or other physical shock. When a BLEVE occurs, debris may travel hundreds of feet, with tremendous force, and the escaping fuel can ignite causing an expanding fireball.

Although most BLEVEs that involve container failure result from fire exposure, a few BLEVEs have occurred due to container failures from other causes, such as corrosion or impact from an outside force. Impact failures are particularly noticeable in transportation accidents involving railcars and cargo vehicles. In these cases, the BLEVE generally occurs simultaneously with impact.

The size of a BLEVE depends upon the weight of the container pieces and upon how much liquid vaporizes when the container fails. This is analogous in many respects to the performance of rockets, as far as propulsion of container parts is concerned. Most BLEVEs occur when containers are from slightly less than  $\frac{1}{2}$  to about  $\frac{3}{4}$  full of liquid. The liquid vaporization-expansion-energy to container-piece weight ratio is such that pieces are propelled for distances up to approximately 0.8 km (0.5 miles). Deaths from such missiles have occurred up to 244 m (800 ft) from larger containers. Fireballs several hundred feet in diameter are not uncommon, and deaths from burns have occurred to persons as much as 76 m (250 ft) from the larger containers.

The time between initiation of flame contact and a BLEVE varies because it depends upon such widely varying factors as the size and nature of the fire as well as the container itself and any damage done to the tank. Uninstalled containers located above ground can BLEVE in the absence of water cooling in a matter of a very few minutes.

### **Firefighting Operations and Hazards**

In responding to incidents involving storage tanks, fire departments have many factors to consider.

Training: Firefighters should be familiar with the basic properties of the stored product. Knowledge of these properties allows firefighters to make decisions regarding exposures and evacuations.

Firefighters should be aware of the dangers posed by flame impingement to a tank container. By reviewing the dangers of these, the fire officer or firefighter can make decisions based on the potential danger present (risk vs. benefit).

Operations: When controlling a fire, the following three methods of control should be utilized:

1. If there is a leak with no fire present, the flow of gas should be slowed or stopped. This action is appropriate when the flow can be controlled, through intact valves or control devices, and by personnel that are trained in the operation of the control devices.
2. Dispersing gas vapors through ventilation or the application of water streams prevents the vapors from reaching a flammable mixture within the flammable range.
3. Apply water to exposed containers and equipment to cool them and prevent failures and BLEVEs from occurring. The major consideration for this method is the availability of an adequate water source for the constant and long-term application of water to the exposed equipment. The amount of water required is dependent on the size of the leak or fire and its location.
  - ◆ The water supply must be of sufficient volume for the prolonged application of water streams. The supply must also be reliable.
  - ◆ If the supply is a water source such as a pond, lake, or river, determine if the supply is available in cold weather. Is the supply available on-site or near-by?
  - ◆ Estimate the amount of time it is going to take to establish the water supply based on the distance from the site.

If a container is being exposed to fire or flames, water should be applied directly to the vessel; the larger the container, the greater the potential BLEVE hazard. The cooling water should be applied at a minimum rate of 500 GPM (1,890 L/min), at each point of flame impingement, by unmanned master streams, as not to expose firefighters to any further danger.

When confronted with a container that is being impinged upon by flames, time is the most important factor to consider. Containers can be in serious danger of experiencing a BLEVE after less than ten minutes of intense flame impingement of a dry portion of the outer surface. This time frame can encompass the time it takes the fire department to arrive, size-up the scene, and begin to place sufficient hose streams in operation. In other words, there is not a safe time period in which operations can be established.

The decision to remove fire units to a safe location and evacuate any civilians in danger can be a difficult one for firefighters. The first instinct of firefighters may be to attempt to attack the fire or attempt to control escaping gas vapors. The officer or firefighter must weigh the information available with the potential outcomes and perform a "risk vs. benefit" analysis of the situation. In many cases the better course of action may be to retreat to a safe location and monitor the situation from a distance.

### **Conclusion on BLEVE**

Training programs warning the fire service of the potential dangers of BLEVEs, should be re-emphasized. It is recommended that the lessons learned from these incidents be used to help develop operational plans and procedures to guard against similar incidents.

In each of these incidents, the relief valves were operating upon arrival of the fire department. The weakened tank shells ruptured sending tank pieces in all directions striking near-by buildings, equipment, and personnel. Therefore, it should not be assumed that because the relief vents are operating, a BLEVE would not occur. When flames are impinging on a tank, there is no safe side or end to approach. In a BLEVE, sections are thrown in all directions. The potential for a BLEVE should be considered any time there is direct flame impingement on a dome tank, at the vapor space of the vessel, when venting through relief valves is not adequate to relieve the pressure build-up. Since it is difficult to detect if the venting is adequate in an emergency, the potential of a BLEVE should always be given the utmost consideration.

The most effective way to reduce the potential of a BLEVE is to apply large quantities of water to the effected tanks, to cool the vessel. This evolution requires that large amounts of water be readily available and for extended time periods. Unattended hose stream or monitor devices should be utilized to complete this task. Use of these devices limits the exposure to firefighters from an explosion.

If a sufficient amount of water cannot be applied to the tank safely, then firefighters should be withdrawn to a safe remote location, and fire should be allowed to burn. In the case of train derailments or other large-scale incidents, a large "hot zone" should be established to reduce the exposure to fire forces and civilian population.

## **H<sub>2</sub>S**

Hydrogen sulfide or H<sub>2</sub>S is a naturally occurring gas found in a variety of geological formations. It is also formed by the natural decomposition of organic material in the absence of oxygen. It is encountered in a variety of industrial processes including sewage and wastewater treatment, and in the production and refining of petroleum, pulp and paper, metals, sulfur compounds and heavy water. H<sub>2</sub>S may also be referred to as sour gas, acid gas, stink damp or sulphuretted hydrogen.

H<sub>2</sub>S gas is colorless, heavier than air in its pure state and is extremely toxic. In low concentrations, it has a rotten egg smell and causes eye and throat irritation. H<sub>2</sub>S can deaden your sense of smell and higher concentrations cause death.

As the product at the Milk River Terminal site is a sweet product, the hydrogen sulfide risk is significantly lower.

# **APPENDIX A**

# **FIREWATER SYSTEM**

## **FIREWATER SYSTEM**

### ***On-site Water Storage:***

- ◆ None on site

### ***Alternate Water Sources:***

- ◆ There is no water on site for firefighting.

Inter Pipeline has explored various options to obtain water in the case of an incident. Below are the three sources that could be enacted if required.

a) Source from the Town of Milk River –

a. The Town of Milk River has a Bulk Water Filling Station, approximately 0.6 km away, that operates on a key/fob system and is open twenty-four hours a day. Vehicle access will be through the local roads.

b. Approximately 6 – 8 hours:

- i. Acquire water (3 - 6 hours)
- ii. Acquire foam (approximately 6 hours arriving from Firemaster's location)
- iii. Acquire tanks for holding water from 3 - 5 hours.

c. Approvals:

- There are no consent or approval required – there are two options for accessing the water:
  - Access to the Bulk Water Filling Station through the District Fire Department who has access to the Bulk Water Filling Station as part of emergency service.
  - Inter Pipeline can set up an account with the Town of Milk River. Account holders are issued a key/fob that allows access for water withdrawal for usage (Inter Pipeline will be invoiced accordingly based on usage).

b) Source from the MD of Warner – The MD of Warner has two water bulk stations, one in the Town of Milk River and the second in the Village of Warner.

- i. Time to acquire water (2 - 3 hours) and foam (approximately 6 hours arriving from Firemaster's location)

a. Time to acquire water & portable tanks for holding water from 3 hours.

b. Approvals: The process of accessing the water bulk station is by opening an account, depositing funds to the account, and obtaining the key fob. Bulk water cost for the water station at the Village of Warner is \$2.00 per 1,000 liters. There are no consent or approval processes for account holders because key fob system works as preapproval system that allows water usage if funds are available on the account. Automated email is issued to the account holder after each water fill up to advise on water usage and remaining funds on the account.

- c) Source from the Milk River
  - a. Time to acquire water (4 - 8 hours) and foam (approximately 6 hours arriving from Firemaster's location)
  - b. Time to acquire water & portable tanks for holding water from 3 hours.
  - c. Approvals:
    - i. Regulator:
      - 1. In advance of pulling the water, diversion of water applications for the purposes of fire fighting is exempted from requiring a licence under the *Water Act* (TDL Approval). As proper paperwork and approval will need to be put in to reflect what was completed, the Liaison Officer and Environment Planner will be consulted throughout the incident to ensure compliance and provide direction on the logistics, such as end-of-pipe water intake fish screens and withdrawal record keeping.
    - ii. Landowner/Stakeholder: Liaison Officer and Land Planner will obtain consents from applicable landowners/ third party stakeholders where access through their property is required to access Milk River for water supply.

**Areas Serviced by Hydrants**

- ◆ N/A

**Distribution Network:**

- ◆ N/A

**Inter Pipeline Drawings:**

- ◆ BR-RM-PLN-0020

**Areas NOT Serviced by Hydrants**

- ◆ N/A

# **APPENDIX B**

## **FIRE SUPPRESSION SYSTEM INFORMATION**

## **FIRE SUPPRESSION SYSTEM INFORMATION**

### ***Fire Detection Capability:***

- ◆ One fire located at east side of scale and pointed towards butane truck unload area
- ◆ LEL detection at butane unload and butane injection skid

### ***Fire Prevention:***

- ◆ Good housekeeping practices
- ◆ Control of vegetation

### ***Fire Suppression:***

- ◆ Fire extinguishers in operators' trucks
  - 14 – various fire extinguishers in various locations around the terminal

### ***Fire Pump:***

- ◆ N/A

# APPENDIX C

## SAFETY DATA SHEETS

**Reference the E2 plan or the IPL SDS online system**  
**<https://ipl.msdsbinders.com/CustomBinder/Search/Inter+Pipeline+Products%20>**

## **SAFETY DATA SHEETS** **(TANK CONTENTS)**

- ◆ All unrefined products (e.g. crude oil) shall be considered to contain hydrogen sulfide (H<sub>2</sub>S). Contact control center for current tank products. Consult SDS for information.
- ◆ Extreme caution must be used when dealing with tank products, benzene may be present, consult SDS for information.

# **APPENDIX D**

# **MUTUAL AID AGREEMENTS**

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N/A