Emergency Response Plan

Terminals

TRANSMOUNTAIN

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PLAN MAINTENANCE

Responsibility

Single point accountability for the Emergency Response Plan development and maintenance rests with the Manager, Emergency Management. This accountability is for:

- The development of the Emergency Response Plan and managing any future revisions,
- Ensuring the pre-plans are evergreen, i.e., review and modify as needed,
- Ensuring the systems (ICS) and response structure are in place and able to meet the requirements set out in the Plan, and
- Ensuring an annual review of the plan is conducted for completeness with all updates issued to Plan holders.

Manual holders are responsible:

- For keeping their copies current and ensuring that all revisions are appropriately filed
- Studying all new material issued and incorporating it into their work practice
- Suggesting changes to correct existing material and contributing new text material to improve the quality of the manual

PLAN REVISIONS

Initiating Revisions

All requests for change must be made through the Manager, Emergency Management using the Revision Request Form located in this section of the manual.

Revision Distribution

Plan revisions are issued with an Acknowledgement of Receipt Form and a brief description of the changes itemized by chapter. The Acknowledgment of Receipt Form must be signed and returned to the Emergency Management Department as specified. Revisions to the Distribution List will be maintained in a secure Trans Mountain (electronic) location and will be distributed to confidential manual holders only. All other revisions will be distributed to manual holders in a timely manner. A revised date is shown at the bottom of each updated or new page. The original date of the manual is 05/2013, with a revision completed on 04/2024. All revisions will be tracked on the Control Sheet.

Revisions after Release or Exercise

In the event that Trans Mountain experiences a release (worst case or otherwise), or conducts an exercise or training session, the effectiveness of the plan will be evaluated and updated to include any learnings as necessary. Time frames for completing Plan updates after a release or exercise are provided within the Emergency Management Documentation Procedure and guided by applicable regulations.

Changes in Operating Conditions

If a new or different operating condition or information would substantially affect the implementation of the plan, Trans Mountain will modify the plan to address such a change. Time frames for completing Plan updates after a change in operating condition are provided within the Emergency Management Documentation Procedure and guided by applicable regulations.

REVISION REQUEST FORM

Requested by:			Date:
Dept/ Agency:			Phone No.:
Revision Type:	Addition:	Deletion:	Correction:
Manual Section:			Page:
Revision (attach separate sheet if necessary):			
Signature of Requestor:			
Send to: Manager, Emergency Management Trans Mountain 2700-300 - 5th Avenue S.W. Calgary, AB T2P 5J2 Canada emergency_management@transmountain.com			

To be completed by Manager, Emergency Management	
Date Received:	Comments:
Date Reviewed:	
Issued as Revision: Y/ N	
If No, reason for Rejection:	
Signature Manager, Emergency Management:	

CONTROL SHEET

Revision Number	Date of Revision	Change(s)	Approval
1	May 2013	Issued for Training	K. Malinoski
2	July 2013	Updated Contact Lists, first distribution	K. Malinoski
3	August 21, 2013	Updated 9.8 with input from Strathcona County Emergency Services.	K. Malinoski
4	July 2014	Updated 2.0, 5.0, and 7.0 to include Kamloops, Sumas and Burnaby for comment.	K. Malinoski
5	October 2015	Minor updates to Preface, 2.0, 7.0 – SDMAP Request Form added, 10.0 – replaced Air Monitoring Plan and 16.0	K. Malinoski
6	September 2016	Updated minor wording throughout manual, updated Preface, 2.0 and 7.0 extensively. Removed Confidential information to Confidential Appendix stored in a separate location.	K. Malinoski
7	September 2017	Updates to minor wording in the Preface and Introduction 2.1 Spill Verification, 2.13 Other Notifications, 6.0 all, 8.13 Liaison Officer, 8.19 Incident Records, 9.6 Emergency Equipment and Response Times	K. Malinoski
8	April 2018	Updated wording throughout manual including: Preface, 2.11 – Reporting Requirements, 2.13.4 – Agency Contacts, 3.1 – Site Assessment Guidelines, 5.0 – Protection of High Consequence Areas, 7.1 – Edmonton Terminal, 7.2 – Kamloops Terminal, 7.3 – Sumas Terminal, 7.4 – Burnaby Terminal, 8.13 – Liaison Officer, 8.14 – Government Agency Representatives, 8.18 – Terminating/Downgrading the Response, 8.20 – Post Incident Reporting and Debrief, 9.4 Waste Management Plan, 9.5 – Emergency Response Equipment and Response Times, 9.6 – Decontamination Plan, 9.7 – Public Evacuation Plan, 10.3 – Sampling and Monitoring Plan, 10.4 – Demobilization, 10.7 – Air Monitoring Plan, 11.4 – Communications, 13.0 – Supplemental Plans, 15.0 – Response Plan Certification, 16.3 – Regulatory Background Provincial – British Columbia, 17.0 – Training and Exercises	K. Malinoski
9	Oct 2018	Rebranding from Kinder Morgan Canada to Trans Mountain: headers, footers and throughout the document.	K. Malinoski
10	April 2019	Updates to Sections 2.11, 2.12, 7.2.5, 7.3.5, 7.4.5, 9.0, 9.2, 9.3, 9.5.2, 9.5.6, 9.5.7 9.7 and 15.1	K. Malinoski
11	April 2020	Updated wording throughout manual, including: ERL to TAS, NEB to CER. Updates to 2.5 – Incident Management Team Notification/Activation, 4.8 – Response Tactics for Non-Floating Oil 7.1 – Edmonton Terminal, 7.4– Burnaby Terminal, 9.5 – Emergency Equipment & Response Times, 13.0 – Supplemental Plans and 16.0 – Regulatory Background	K. McLernon

Revision Number	Date of Revision	Change(s)	Approval
12	April 2021	Minor wording updates to Preface and Introduction 2.9 – updated CER Incident Reporting Line telephone number 2.11 – Updated Reporting Requirements language for EMBC and included BC EAO drinking water reporting 2.13.2 – addition of Landowner Notification procedure 7.0 – minor wording updates to facility descriptions 8.13.1 – Added reference to On-Site Community Monitor procedure 13.8 – Added reference and link to Convergent Volunteer Management Plan 17.0 – additional detail added to descriptions of responder training and exercises Updated all E:\Manuals references to Trans Mountains internal Emergency Tool Kit	K. McLernon
13	April 2022	Annual Review Completed. Contact Information Updates to 2.8 – Facility Contacts; 2.14 – Industry Contacts & 2.16 – Mutual Aid. 5.0 – additional language added to High Consequence Areas 7.0 – Updated Initial Public Safety Zone Maps 7.5 – Revised Product Summary Table 9.7 – Revised wording to Public Evacuation/Shelter in Place 10.7 – Addition of Common Operating Picture description	K. McLernon
14	July 2022	Change of title, removed reference to Tank Farms Plan generally updated to include Line 2; Trans Mountain Pipeline Systems Emergency Response Philosophy- re-arranged sections- PPE now first 2.1.4 Automated -Spill Detection- Updated for Line 2 technology 2.1.5 Automated -Spill Detection- Updated for Line 2 technology 2.10 – External Notification Chart- Minor editorial revision 2.11 – External Notification Chart- editorial revision 2.14 – Added Industry Contacts for Sumas and Burnaby Terminals 2.18 - Changed title to Community Support Centres; added reference to evacuee reception centres and convergent volunteer coordination centres 5.1 Terminal Hazards moved from 5.0 to 6.1 6.1 Terminal Hazards- revised content 6.2.1 Wildfire/Grass Fires – Added reference to searching for missing persons 6.2.2. Earthquake - Added reference that seismic event data received by Control Centre; and searching for missing persons 6.2.3 Floods – Added reference to searching for missing persons; gas & water shut off	K. McLernon

Revision Number	Date of Revision	Change(s)	Approval
14, continued	July 2022, continued	6.2.4 Avalanche – Added reference to searching for missing persons 6.2.5 Tornado – Added reference to searching for missing persons; gas & water shut off 6.4.2 Pump Station Fire – Added reference to searching for missing persons 6.4.3 Right-of-way Pipeline Fire – Added reference to searching for missing persons 6.5.1 Terrorism – Added reference to searching for missing persons 6.5.3 Bomb Threat – Added reference to searching for missing persons 7.1 Edmonton Terminal- Updated with Line 2 information 7.1.2 Air Monitoring – updated with Line 2 information and content alignment with Public Health Assessment & Response Plan for Airborne Risks Plan 7.1.4 Site Drainage 7.1.5 Initial Protective Action Zone- language revised 7.1.5.1 Initial Protective Action Zone Map – Map updated; language added regarding vulnerable population 7.1.6 Edmonton Terminal Diagram 7.1.7 SDMAP Equipment Request Form 7.2 Kamloops Terminal- Small revisions to align with other terminal site information 7.2.2 Air Monitoring –content alignment with Public Health Assessment & Response Plan for Airborne Risks Plan 7.2.5 Initial Protective Action Zone- language revised 7.2.5.1 Initial Protective Action Zone Map – Map updated; language added regarding vulnerable population 7.3 Sumas Terminal – Updated with Line 2 information 7.3.2 Air Monitoring – updated with Line 2 information and content alignment with Public Health Assessment & Response Plan for Airborne Risks Plan 7.3.5 Initial Protective Action Zone- language revised 7.3.5.1 Initial Protective Action Zone Map – Map updated; language added regarding vulnerable population 7.4 Burnaby Terminal – Updated with Line 2 information 7.4.2 Air Monitoring – updated with Line 2 information and content alignment with Public Health Assessment & Response Plan for Airborne Risks Plan 7.4.5 Initial Protective Action Zone- language revised 7.4.5.1 Initial Protective Action Zone Map – Map updated; language added regarding vulnerable population 8.14.Government Agency Representatives- re-numbered 9.5.6 Mobile Spill Equipment List – Updated with new and repositioned equipment	

Revision Number	Date of Revision	Change(s)	Approval
14, continued	July 2022, continued	9.5.7 Mobile Fire Equipment List – Updated with new and repositioned equipment 9.7 Public Evacuation – Updated with reference to Terminal Evacuation Plan; content updated to align with Evacuation Plan 9.7.1 removed; merged with 9.7 10 Planning - addition of Qualified Professional 13.11 Terminal Evacuation Plan – new section added . 14.2 Safety Data Sheets- content added regarding sharing of SDS with responders 15.1 -Table 1 –reference to COP added 16.1 Regulatory Background – Federal – Updated language 16.3 Regulatory Background – Provincial British Columbia – Updated language	
15	April 2023	Distribution – description changed location of Incident Notification Guideline 2.6 and 2.7 changed location of Incident Notification Guideline 2.11 changed BCOCG to BCER 2.13 Other Notification – updated language 2.15 and 2.16 changed location of Incident Notification Guideline 2.18 changed location of Incident Notification Guideline 4.1 -Initial Containment Actions – new section added 4.3 Terminal – Primary Recovery/Removal – Spills – added language for urban environment 6.2.4 Landslides -new section 6.3.2 Responding on Ice Covered Waterbody – section removed 6.4.1 Terminal Fire Response – updated language 7.1.2 SDMAP Equipment Request Form – section moved and updated 7.1.3 Air Monitoring – updated language 7.1.5 Public Evacuation – new section 7.2.2 Air Monitoring – updated language 7.2.4 Public Evacuation – new section 7.3.2 Air Monitoring – updated language 7.3.4 Public Evacuation – new section 7.4.2 Air Monitoring -updated language 7.4.4 Public Evacuation – new section 8.5 Response Team Organization New diagram; addition of Security Officer to Command 8.13 Security Officer- New section with description of Security Officer 9.0 Operations Section- updated diagram 9.2 - updated diagram; addition of positions in the Pipeline Protection Branch	K. Malinoski

Revision Number	Date of Revision	Change(s)	Approval
15, continued	April 2023, continued	9.5.6 Mobile Spill Equipment – section updated 9.5.7 Mobile Fire Equipment – section updated 9.5.8 changed location of Incident Notification Guideline 11.3.1, 11.3.2, 11.4.2 changed location of Incident Notification Guideline 11.5 Table 1 revised name to Incident Notification Guideline 12.2 Finance Section Organization Chart – updated diagram 13.2 Groundwater Assessment Plan – new section 15. Declaration of Contingency Plan – updated language, table 1 updates. 16.3 changed BCOGC to BCER 18.5.1 revised name to Incident Notification Guideline	
16	April 2024	Preface Table of Contents. Revision distribution – Revised date. Revision Request Form – Added emergency management email. Distribution List – 3102 Central Region Office changed to Director, Edmonton Terminal and Control Centre. 3103 Western Region Office changed to Director, Burnaby and Westridge Marine Terminal. 3112 Spare changed to Manager, Emergency Response. Removed 3116 Spare. Emergency Response Philosophy – PPE – Added fire resistant clothing. 1.1.1 Skin Contact – Added fire resistant clothing. 2.1.5 Automated Fire Detection – Added local Control Room and specified Control Centre to be in Edmonton, staffed on a 24/7 basis. 2.4 Internal Notification Procedures – Specific Response Level is in Introduction – Emergency Levels. 2.5 IMT Notification/Activation – Under mandatory calls, added Manager, Emergency Response. 2.8 Facility Contacts – Verified and revised contact information. 2.9.1 External Notification – All references of Emergency Management BC (EMBC) changed to BC Ministry of Environment and Climate Readiness (EMCR), acronyms added for AEMA. 2.11 Reporting Requirements – Added acronyms throughout, name reference changes: Alberta Environment and Parks (AEP) to Alberta Ministry of Environment and Protected Areas (EPA), Environment Canada changed to Environment and Climate Change Canada (ECCC), EMBC to EMCR. 2.13.5 Agency Contacts – Acronyms added throughout. 2.14.1 Edmonton Terminal Contacts – Verified and revised contact information and company names.	K. Malinoski

Revision Number	Date of Revision	Change(s)		Approval
16, continued	April 2024, continued	7.0	Site Information – Specified all Terminals contained in ERP in description.	
		7.1.2	SDMAP Equipment Request Form – Removed Fire Foam Bladder Trailer.	
		7.1.3	Air Monitoring – AEP changed to EPA.	
		7.1.5	Public Evacuation – Revised refence of 7.1.6 Initial Protective Action Zone (PAZ) Edmonton Terminal to 7.1.7.	
		7.1.7	Initial PAZ – Edmonton Terminal – Revised table.	
		7.1.7.1	Edmonton PAZ Map – Revised version.	
		7.1.8	Edmonton Terminal Diagram – Revised version.	
		7.2.6	Initial PAZ – Kamloops Terminal – Revised table.	
		7.2.6.1	Kamloops Initial PAZ Map – Revised version.	
		7.2.7	Kamloops Terminal Diagram – Revised version.	
		7.3.5	Initial PAZ – Sumas Terminal – Revised table.	
		7.3.5.1	Sumas Terminal PAZ Map – Revised version.	
		7.3.6	Sumas Terminal Diagram – Revised version.	
		7.4.6	Initial PAZ – Burnaby Terminal – Revised table.	
		7.4.6.1	Burnaby PAZ Map – Revised version.	
		7.4.7	Burnaby Terminal Diagram – Revised version.	
		9.5.2	Response Equipment – Added SPU Trailer, revised Wildfire Response Trailer, removed Fire Foam Trailer.	
		9.5.4	Response Times – Changed response time from eight to nine response targets.	
		9.5.6	Mobile Spill Equipment List – Verified and revised equipment location and quantities.	
		9.5.7	Mobile Fire Equipment List - Verified and revised equipment location and quantities, removed fire foam trailer.	
		10.5	Shoreline Cleanup Assessment Technique (SCAT) – References of Environment Canada changed to ECCC.	
		10.7	Common Operating Picture – References of Trans Mountain pipeline changed to Trans Mountain Pipeline.	
		13.5	Ground Water Assessment Plan – added provisions for safe drinking water.	
		13.10	Wildfire Plan – Changed section name to Wildfire Response Plan.	
		14.1	Summary Safety Data Sheet – Changed MSDS to SDS.	
		14.2	Safety Data Sheets – Revised hyperlink to correct website.	
		15.1	Declaration of Contingency Plan – Table 1 reference changed to Table 5.	
		Table 5:	Verified and revised all section locations.	
		16.0	Regulatory Background – Added CER website for Online Event Reporting System (OERS), added acronyms, reference changes: Environment Canada to ECCC, AEP to EPA, EMBC to EMCR, Ministry of Forests Lands Natural Resource Operations & Rural Development to Ministry of Forests, OGC to BCER.	

DISTRIBUTION

As of September 2016, the Emergency Response Plan is available online to all external agencies and members of the public. Material that has been placed in the Incident Notification Guideline has been protected in accordance with CER Board Order MO-006-2016. Controlled copies are distributed as below; however, the distribution list may change from time to time. A new version of the Emergency Response Plan will not be issued for a revision to the distribution listing.

No.	Issued To
Uncontrolled Copies - External	
3000	Canada Energy Regulator
3001	Canada Energy Regulator – Vancouver Office
Controlled Copies - Internal	
3100	Control Centre – Edmonton
3101	Back-up Control Centre – Edmonton
3102	Director, Edmonton Terminal and Control Centre
3103	Manager, Burnaby and Westridge Marine Terminal
3104	Director, Emergency Management
3105	Manager, Emergency Management
3106	Fraser Room
3107	Manager, Edmonton Terminal
3108	Supervisor, Ops, Kamloops Station
3109	Supervisor, Ops, Sumas Terminal
3110	Supervisor, Ops, Sumas Station
3111	Burnaby Terminal
3112	Manager, Emergency Response
3113	Spare
3114	Spare
3115	Director, Burnaby and Westridge Marine Terminal

INTRODUCTION

Initial Incident Actions

The initial responder to arrive at a spill site will take some immediate actions to ensure responder safety as well as the public and protect the environment. The initial responder will complete the following things, if appropriate and safe to do so while waiting for the Qualified Individual.[1]

1. Ensure the safety of all workers and public in the area of the spill
2. Assess the situation (i.e., incident size, severity, likely impacts)
3. Notify the Control Centre and/or Operations Supervisor/Manager immediately to activate the Trans Mountain Alert System (TAS) as outlined in 2.0 Internal and External Notification.
4. Take appropriate action to mitigate the impacts to life, safety, the environment, and property prior to the arrival of the Qualified Individual (QI)

Note: the initial responder will begin documentation on an ICS 201 form, and/or notes on other paper, or will relay the information to personnel at the Control Centre or District Supervisor who will initiate an ICS 201 form. This initial documentation will be kept with all other incident documentation.

How to use this Plan

This Plan is divided into 3 sections:

[1] The person who has been given authority to fund response efforts without consulting Trans Mountain leadership for further authorization and knows how to commence the response procedures identified in the pertinent response plans.

Purpose of the Plan

This is the Emergency Response Plan for the Terminals associated with the Trans Mountain Pipeline System operated by Trans Mountain. These entities are all referred to as “Trans Mountain”, “Trans Mountain Corporation” or "The Company”.

The purpose of this Plan is to provide guidance for quick, safe, and effective response to an emergency, in order to protect the public, personnel, environment and company property.

Scope of the Plan

This Emergency Response Plan (ERP) covers emergencies that originate at inland Terminals in Alberta and British Columbia. As part of the Emergency Response Plan maintenance practice, Trans Mountain implements a Hazard Assessment Process in order to generate an all-encompassing hazard inventory list. This list identifies potential emergency conditions that result from hazards associated with the Trans Mountain Pipeline System including Terminals.

Emergency Conditions may be defined as the result of a hazard negatively impacting people, property and/or the environment. Through the evaluation of hazards and their subsequent consequences, the Emergency Management Department develops and maintains plans and procedures to assist in mitigation, planning and response efforts for all real or potential emergencies.

The hazard inventory list is reviewed on an annual basis to ensure that new hazards are identified and evaluated against their potential emergency condition. This assessment is also used to determine if existing plans and procedures continue to meet the response requirements for all identified hazards and their associated risks. The Emergency Management Department maintains the hazard inventory evaluation internally.

The response zones for this plan are all for refined and crude oil products storage facilities as outlined in Section 7.0 Site Information. The potential effects of those products are outlined within the Safety Data Sheet for each product with information provided in Section 14.0 Safety Data Sheets. An incident at each Terminal has the potential to cause harm to the environment and/or people.

This plan will not cover the tactical response techniques to be implemented for a fire. Detailed response actions including tactical information for fires can be found in the site-specific Fire Pre-Plan.

Plan Implementation

This Emergency Response Plan (ERP) will be implemented for any emergency or drill (exercise) within Alberta or British Columbia impacting an inland Terminal. If a different plan is identified as more applicable it may be used if the decision to use an alternate plan is first approved by Unified Command.

Emergency Definition

An emergency is defined as any condition that results in or may result in:

- Death or injury requiring hospitalization
- Explosion or fire
- Leak, rupture, or spill
- Any significant event such as: earthquake, flood, severe storm or bomb threat that may threaten inland Terminals

Emergency Levels

The Trans Mountain Emergency Response Organization is based on a three-tiered response structure. Incidents are identified and categorized into one of the three tiers. Each Tier is managed by an escalating degree of management seniority and authority, and assistance from outside the initial response organization. The standardization of the ICS Structure and Incident Management Process provides the flexibility to tailor the size of the response organization to the specifics of the incident and allows for rapid adjustments as an incident evolves. Where appropriate, the Trans Mountain Incident Commander will invite the participation of federal, provincial and local agencies to form a Unified Command.

Level	Definition	Examples
1	The Company has the capability to manage and control a Level I emergency using company resources available within the area. The District Supervisor will assume the Incident Commander position.	• Oil spills confined to company property (pipeline station, terminal, or scraper trap) • Public, contractor, or employee safety not endangered • Public property not endangered • Local response handled by district personnel • Notification may not be required to regulatory authorities • Little or no media interest
2	The Company has the capability to manage and control a Level II emergency using company resources and expertise, with some assistance from local contractors. The Region Director or designate may assume the Incident Commander position.	• Oil has migrated beyond company property (pipeline station, terminal, or scraper trap) but not into a waterway • Emergency services may be required (e.g., fire, police, ambulance) • Public, contractor, or employee safety and/or property may be endangered • Notification required to regulatory authorities • May use a unified command organizational structure in the emergency • Local media interest

3	The Company may request assistance from other industry, municipal, or state agency personnel to support the response to the incident. The Region Director will assume the Incident Commander position.	• Major emergency condition such as:
		  ○ uncontrolled leak
		  ○ spill on a watercourse
		  ○ large fire at an operating facility or office building
		  ○ fatality or serious injury to an employee, contractor, or the public
		  ○ spill of hazardous substances
		• Major off-site environmental impact has occurred
		• Public, contractor, or employee safety and/ or property is endangered
		• Emergency services are required (e.g., police, fire, ambulance)
		• Notification required to regulatory authorities
		• Use of a Unified Command organizational structure in the emergency, as required, to facilitate coordination of company, government, and other agency response to the emergency.
		• Local, provincial/state, and/or national media interest.

Emergency Response Philosophy

On all emergency incidents, Trans Mountain will follow the following basic response approach:

- **Select and Don Personal Protective Equipment (PPE)**
    - All incident responders must be protected with the PPE appropriate to the hazards present:
        - Approved fire-resistant coveralls / clothing
        - Hard hats (where overhead hazards are present)
        - Gloves
        - Splash goggles
        - Rubber steel-toed boots
    - Also:
        - PPE must be worn properly in order to fully protect responders.
        - Damaged or heavily oiled PPE should be replaced as soon as possible.
        - All responders leaving the *Hot Zone* must go through a decontamination zone *(Warm Zone)* to ensure that contamination is not spread into the *Cold Zone*.
- **Control the Incident Site**
    - The incident scene must first be controlled to ensure a safe and effective response to any incident:
        - Don't rush in; hazards must first be fully assessed
        - Conduct vapour monitoring and confirm levels (H_2S, LEL levels) are safe as approaching the incident site
        - Establish and maintain an isolation perimeter, with hot, warm, and cold zones
        - Establish communications with the Control Centre; request information regarding the situation (e.g., alarms, product, pipeline readings, shutdown actions and other relevant information)
        - Establish and announce command at the ICP, either at the incident scene location or, if necessary, at a remote location
        - Establish staging area(s)
- **Size Up the Situation**
    - A site assessment will identify the scope and nature of the incident, as well as any potential hazards to responders:
        - Assess whether or not visual alarms have been activated
        - Recognize and identify any hazardous materials involved
        - Source of any releases
        - Potential exposures
- **Evaluate the Hazards and Risks**
    - An assessment must be conducted to evaluate the level of risk to responders and the public:
        - Assess health, physical and chemical hazards
        - Gather technical data (SDSs, etc.)
        - Conduct vapour monitoring

- **Establish Initial Objectives**
    - After the potential hazards have been identified, the Incident Commander(s) can establish the initial objectives for the response. Typical initial objectives include:
        - Control the incident Scene
        - Ensure the safety of responders and the public
        - Establish Incident Command Post
- **Manage Information and Coordinate Resources**
    - It is essential that information flows quickly and freely to all resources to ensure a safe and coordinated response:
        - Expand the ICS as needed, especially if a Unified Command is established
        - Ensure that all (internal and external) notifications are made
        - Conduct briefings
        - Confirm all communications to ensure that they are fully understood and implemented
- **Implement Response Objectives**
    - Once initial objectives have been established, it will be possible to develop, and implement, strategies and tactics to achieve these objectives. These may be:
        - Offensive (i.e., emergency rescue, firefighting, spill source control)
        - Defensive (i.e., protecting the public, fire control, spill response)
        - Non-intervention (protecting the public)
- **Manage the Incident**
    - On larger incidents, it will be necessary to operate over a number of Operational Periods. In these cases, it will be necessary to fully staff the Incident Management Team, especially the Planning Section:
        - Establish Incident Objectives for each Operational Period
        - Conduct Tactics and Planning Meetings
        - Develop and approve Incident Action Plans
        - Conduct Operations Briefings
- **Terminate the Incident Response**
    - Once the emergency phase of the incident is over, the Incident Commander will stand down the Incident Management Team and ensure that all post-incident activities are completed:
        - Transition to, and conduct the post-emergency phase of the response
        - Conduct an incident debrief
        - Ensure that all incident documentation is completed
        - Ensure that all equipment, PPE and ICP supplies are replenished
        - Transition from Emergency Phase to Project Phase with adequate documentation and continue any required project phase activities, i.e., site remediation, repair to terminal assets

1.0 RESPONDER HEALTH AND SAFETY

It is important to understand that the different hydrocarbon products handled pose different hazards when spilled, and/or are on fire, depending on their chemical composition. Therefore, the primary hazards, and the need for vapour monitoring, and the cleanup techniques will depend on the characteristics and volume and type of product.

Many crude oils (including “sweet” crudes) can emit potentially dangerous levels of H_2S, and most crude oils also contain Benzene. Typically, the risks associated with the concentration of potentially dangerous vapours will diminish with time, due to reduced vapour production as the lighter components volatize, and vapours disperse. There are exceptions to this however, i.e., in some cases, where crude oil pools into thick layers, a skin may develop on the surface, trapping vapours. Later, if the skin is broken and the oil disturbed, the oil might emit vapours normally associated with freshly spilled oil. Some crude oils have low flash points, especially during the initial hours after being spilled, when hydrocarbons burn there are other risks to consider, such as the combination of chemicals in the smoke plume and radiant heat emitted by the fire. In all of these cases, the risk of accidental ignition and/or the inhalation of toxic vapours must be mitigated, and a detailed site assessment (see Section 3.0 Spill/Site Assessment) must be completed before on-scene operations are initiated. This assessment will be made by the Safety Officer. In all cases, the results of the initial site assessment should be used to develop a Health and Safety Plan.

The Initial Site Health & Safety Plan (ISHSP) should be completed as soon as possible by one of the initial responders and updated as required. When completing the ISHSP some of the information may not apply during the initial stages of the response, but may change within a short period, thereby altering the PPE and/or other requirements.

The ISHSP:

- Aids the initial responders in assessing hazards related to the incident
- States the required PPE to be used
- Documents important health and safety information
- Serves as an interim "Plan" until the Site Health & Safety Plan (Section 1.3 Health and Safety Plan) is developed
- Assigns responsibilities, i.e., completion of the ICS 201 and notification
- Identifies "site set-up" features that may be required
- Authorizes work to be completed (in lieu of a Safe Work Permit)

Upon the completion and delivery of the Site Health & Safety Plan, the Initial Site Health & Safety Plan becomes void.

1.1 Safety Guidelines

1.1.1 Skin Contact

The accidental absorption of toxins through skin/eye contact can be greatly reduced through the wearing of oil-resistant personal protective equipment (PPE). These include:

- Approved fire-resistant coveralls/clothing
- Hard hats (where overhead hazards are present)
- Gloves
- Splash goggles
- Rubber steel-toed boots

Also:

- PPE must be worn properly in order to fully protect responders.
- Damaged or heavily oiled PPE should be replaced as soon as possible.
- All responders leaving the *Hot Zone* must go through a decontamination zone (*Warm Zone*) to ensure that contamination is not spread into the *Cold Zone*.

1.1.2 Inhalation of Vapours

The need for respiratory protection will be determined by the Safety Officer after a review of the SDS and data retrieved from the initial site assessment (see Section 3.0 Spill/Site Assessment). If toxic vapour levels are determined to exceed safe working limits (see Section 3.3 Vapour Monitoring Flowchart for details), it might be possible for responders to work while wearing half-face respirators fitted with organic cartridges, or SCBA. In this case, ongoing vapour monitoring is essential to ensure that vapour levels do not exceed safe working limits.

1.1.3 Fire/Explosion

All hydrocarbon products are capable of ignition if certain conditions are met. It is important to review the SDS to determine the flash point of the material spilled and perform vapour monitoring (for LEL). Whenever vapour levels are approaching 10% of the LEL for any spilled product, responders will leave the area immediately. In the event of a fire and response efforts are required the responders will have radiant heat protection.

1.1.4 Other Hazards

There are a number of additional potential hazards faced during spill response including slips, trips and falls, and working around water and equipment. Special care should be taken when walking on oiled surfaces, especially during night-time operations. The Site-Specific Health and Safety Plan shall identify these potential hazards, and they must be clearly communicated to responders.

1.2 Initial Health and Safety Plan

The Initial Health and Safety Plan form is available on the intranet site in the Emergency Toolkit.

1.3 Health and Safety Plan

The Health and Safety Plan form is available on the intranet site in the Emergency Toolkit.

2.0 INTERNAL AND EXTERNAL NOTIFICATION

Immediate notification is a key element of any emergency response action. The health and safety of employees and the public is paramount and, as a result, immediate notification is essential. This section describes both the internal and external notification processes, and includes the contact information for Trans Mountain resources, and external resources.

2.1 Incident Verification

The first step in many incidents is to confirm that an emergency condition exists. Reports may come from a number of sources including automated detection systems, on-site Trans Mountain or other personnel, and members of the public and/or emergency services (police, ambulance, and fire).

2.1.1 Trans Mountain Personnel Detection

Trans Mountain employees and contractors conduct routine maintenance and inspection work at all Trans Mountain Terminals on a regular basis. In the course of this work Trans Mountain employees and contractors may come across signs of a facility emergency or potential emergency. In the event that a Trans Mountain employee or contractor identifies or suspects that an emergency has or may occur they are to follow the internal notification procedure as outlined in Section 2.4 Internal Notification Procedure of this Emergency Response Plan.

2.1.2 Member of the Public

Facility releases, both real and/or suspected, may be identified by a member of the public. Signs of a facility release may include:

- A strong petroleum odour (like gasoline or diesel fuel)
- Strong sulphur smell (like rotten eggs)
- Dead or discoloured vegetation
- Pools of liquid when the rest of the right-of-way is dry
- Petroleum sheen on water
- Unusual hissing or roaring sound

In the event that a member of the public identifies or suspects an emergency at a Trans Mountain terminal, they are to call the Emergency Number at **1-888-876-6711**. This number connects directly to Trans Mountain's Control Centre and is monitored on a 24/7 basis.

2.1.3 Emergency Services

In the event that an emergency services agency (police, fire, EMS) is notified of, or suspects, a terminal emergency, they are to call the Emergency Number at **1-888-876-6711**.

2.1.4 Automated Spill Detection

The pipeline is equipped with pressure and flow monitors, which exercise local control and transmit data to the Control Centre. These systems are set to alarm or shut down on pre-set deviations of pressure flow.

Engineering Operating Limits establish the alarm thresholds for mainline pressures and flow rates for all operating line segments.

The Trans Mountain pipeline system is continuously monitored by four types of protective monitoring systems:

- Distributed Fiber Optic Sensing System
- Real-Time Transient Hydraulic Modeling Leak Detection
- Statistical Pressure Deviation Leak Detection
- Statistical Flow Imbalance Pipeline Leak Detection

Trans Mountain has flexibility and redundancy in the manner in which data is transmitted to the Control Centre. Network configuration and transmission protocols provide the flexibility to establish guaranteed delivery transmissions as required. Communication system redundancy provides accurate and reliable data to pipeline operators. The SCADA system acquires data primarily via a dedicated fibre-optic network. Fiber optic Satellite communications allow large volumes of data to be transmitted both to and from all field locations very rapidly. Fibreoptic connectivity via a fibre line exclusive to Trans Mountain provides the primary telecoms and secondary telecoms are provided by a third party.

In case of an alarm, the Control Centre personnel will take the appropriate actions in accordance with operating procedures. The following are a summary of the operating procedures for automated spill detection:

- SCADA System 5-Second Data Access – Control Centre monitor and control pipeline operations with the SCADA system in the Control Centre. The ultimate decision on leak detection lies with the Control Centre.
- Operating Limits Alarms – is a parameter alarm which is programmed in the station PLC to alert upset conditions regardless of whether the Operator is actively monitoring the data point in question.
- Tank Gauging with Parameter Alarms – tank gauge data is available to Control Centre. The systems are gauged automatically by the SCADA System. Operating Limit Parameter alarms are also available for tank levels to ensure no potential tank discharge.
- Operating Limits Alarms Parameter alarms, in combination with five-second data acquisition rates, provide near-instantaneous notification of potential upset conditions on all operation mainlines.
- Terminal and Pump Stations Hydrocarbon monitors – detection of hydrocarbons at the Terminals and Pump Stations alarm in the Control Centre and the local Terminal control room
- Trending – the SCADA system and the protective monitoring systems include a trending facility which graphically displays pressures, temperature, and flow rate data for each mainline pump and oil receiving location on the system. This system can provide valuable insight into operations history and can help the operator proactively address potential upset conditions.

2.1.5 Automated Fire Detection

Fire detection systems consist of early detection multi-spectrum infra-red/ultraviolet detectors on all tanks except geodesic dome tanks and fixed roof tanks which have thermal heat detection cable systems.

When an alarm is signalled to the Programmable Logic Controller (PLC), the PLC initiates a local fire alarm and alarms at the local Control Room and the Control Centre in Edmonton, which are staffed on a 24/7 basis. Following this, the fire will be visually verified by Trans Mountain onsite personnel. If a fire is confirmed, the onsite operator will inform the Control Centre Operator of the incident, who will then initiate the internal Trans Mountain notification procedure.

2.1.6 Automated/Complaint Detection Verification

If the detection method comes from alarms to the Control Centre Operator (CCO) or a member of the public the potential incident must then be visually verified by Trans Mountain personnel. If a leak, fire, or other emergency event is confirmed the on-site operator will inform CCO of the incident and CCO will initiate the internal notification procedure.

2.1.7 Early Detection Methods

Aerial patrol flights are made on a regular basis along the right-of-way. The intent of the patrol is to observe the area directly over the pipeline right-of-way for leaks, exposed pipes, washes, missing markers, and other unusual conditions. Construction on the right-of-way, or adjacent to the right-of-way is also closely monitored.

Discharge to the land and/or surface waters may also be detected by company personnel when employees perform daily scheduled inspections of the site.

Right-of-way marker signs are installed and maintained at road crossings and other noticeable points and provide an emergency telephone number for reporting emergency situations. The company also participates in the “call before you dig” or “One Call” utility notification services which can be contacted to report a leak and determine the owner/operator of the pipeline.

If a notification is made to a local office or pump station, the Trans Mountain representative receiving the call will generally implement the following actions:

- Notify the Control Centre and regional office/Qualified Individual
- Dispatch field personnel to the site to confirm discharge and conduct preliminary assessment
- Notify their immediate supervisor and provide assessment results.

2.1.8 Detection in Adverse Weather

Line ruptures that cause worst case spills in adverse weather conditions would normally be detected and acted upon within 5 minutes by the Control Centre Operator. In the event of detection by a member of the public, or where a leak is suspected it must be visually verified. If adverse weather is preventing visual detection, the pipeline will be shut down for safety reasons, until visual detection occurs. Additional equipment may be used in these situations which may include vapour detection, and thermal/infrared imagery.

2.1.9 Detection of Spills to Groundwater

In an area where a spill occurs that is not on impermeable ground a contractor will be used to assist with the detection and ongoing evaluation of a spill that may impact groundwater.

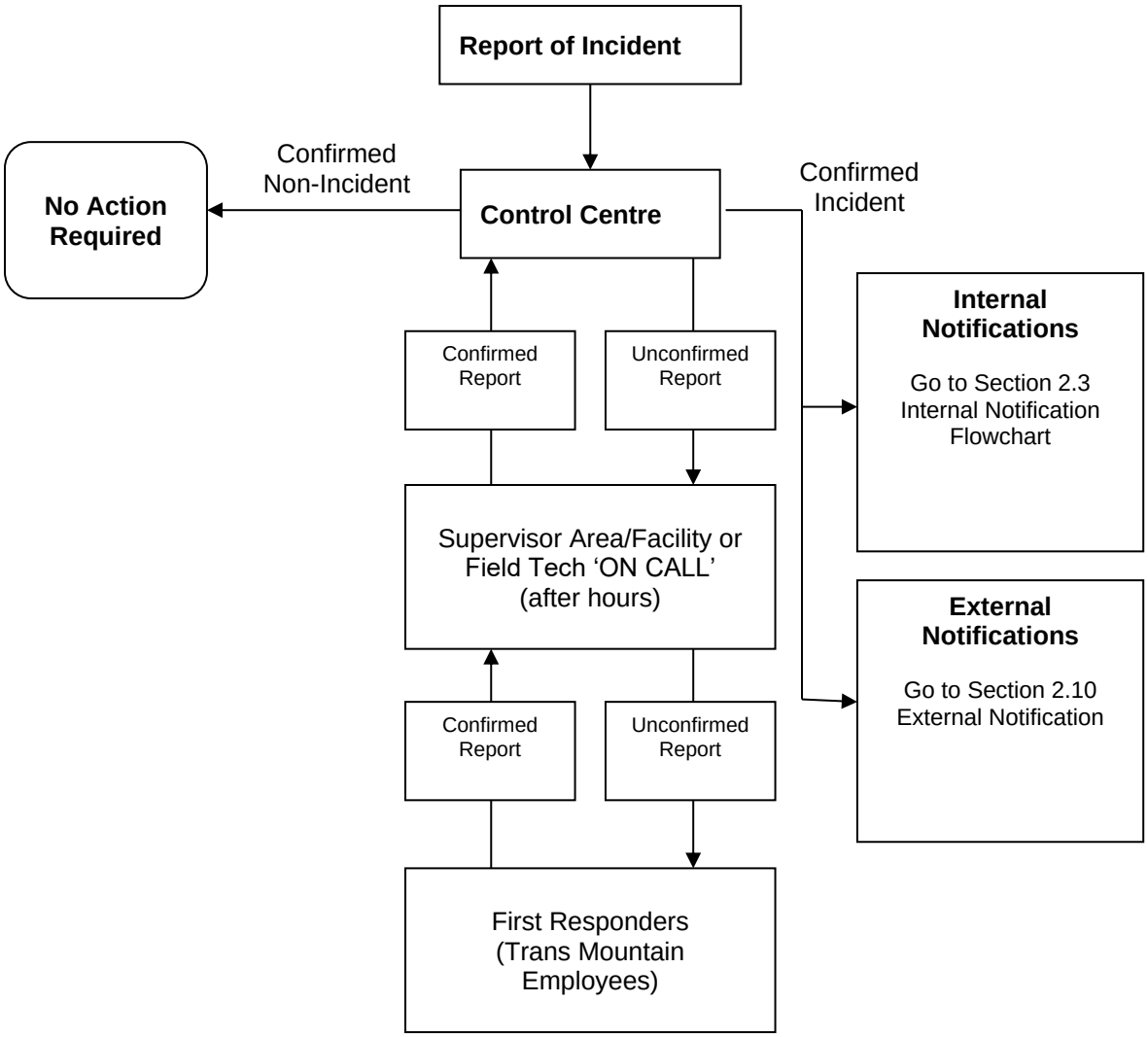
2.1.10 Shutdown Events

If abnormal conditions exist, the Control Centre will take the appropriate actions to ensure that a release does not occur. If a discharge has occurred, the Control Centre will take actions to limit the magnitude. In either case appropriate actions taken by the Control Centre may include, but are not limited to:

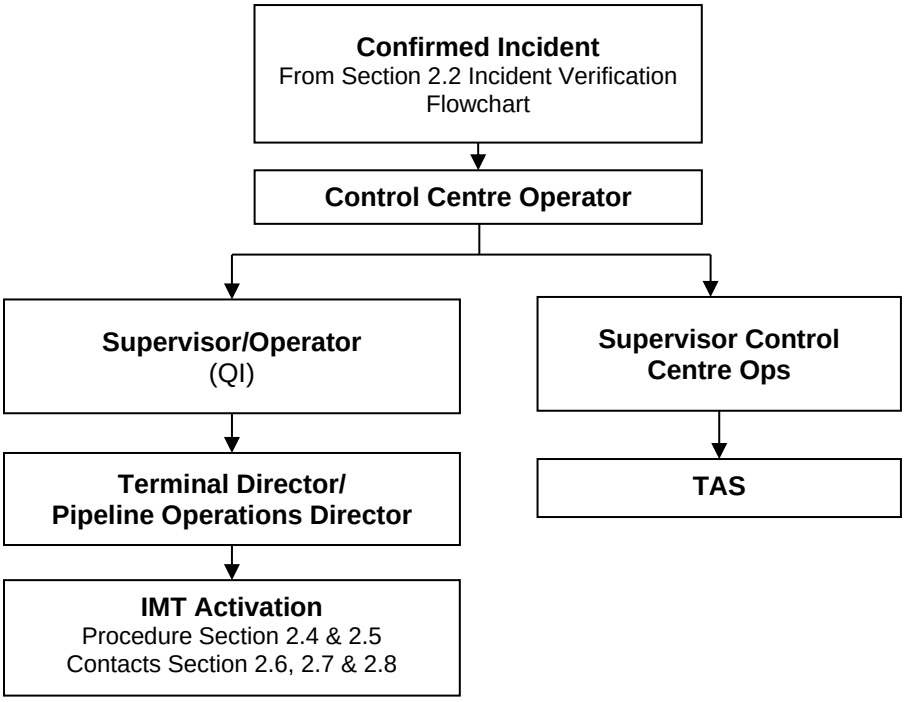
- Shut down affected line segment if there is an indication of a leak
- Isolate line segment
- Depressurize line
- Start internal and external notifications
- Mobilize additional personnel as required

2.2 Incident Verification Flowchart

The first step in many incidents is to confirm that a spill has actually occurred. Spill reports may come from a number of sources including the public, and first responders (police, fire and ambulance). Once a report is received the following flowchart shows the direction of communication to verify an incident.



2.3 Internal Notification Flowchart



2.4 Internal Notification Procedure

All spills, regardless of size, must be reported immediately to the Control Center, who will:

- Contact the Supervisor to verify and assess the situation
- Determine the Response Level (i.e., Level 1, 2 or 3. See Introduction – Emergency Levels for a description of the 3 Response Levels)
- Initiate the notification of company and external personnel

2.4.1 Information to Report

Information about the incident should be as clear, concise, accurate and timely as possible. The minimum information required, for initial report and update reports, should be:

- Name and telephone number of the caller
- Date and time of the call
- Name of facility/pipeline
- Location of the incident
- Type of incident
- Product(s) involved
- Estimated quantity
- Actions taken to-date
- Assistance required
- Injuries
- Weather conditions
- Reason for discharge (if known)

2.4.2 How to report

Call the Control Centre at 1-888-876-6711.

Note: The Control Centre number is monitored 24 hours a day and voice recorded.

2.5 Incident Management Team (IMT) Notification/Activation

Upon being notified of the incident, the Control Centre will issue a TAS. The TAS system is an online tool that delivers an automated group text message to designated Trans Mountain personnel when notification of an emergency or non-emergency event is required. The CCO fills in the Emergency Condition Report and issues a TAS call. Once received the mandatory call-in personnel will participate in a conference call to determine next actions, and the IMT members that need further contact/mobilization. An initial IMT will be set up using these individuals. The mandatory callers are as follows:

- Director, Pipeline Operations
- Director, Edmonton Terminal & Control Centre
- Director, Burnaby & Westridge Terminals
- Director, EHS (Calgary)
- Director, Emergency Management
- Director, Pipeline Integrity
- Director, Engineering and Facility Integrity
- Manager, Emergency Management
- Manager, Emergency Response
- Manager, Environment
- Public Affairs Representative
- Legal Representative
- Field Representative
- Security Representative

Other Active Participants:

- Chief Operating Officer
- VP, Operations & Engineering
- Manager/Supervisor Control Centre
- Impacted Terminal Manager
- EHS, Regional Contact
- Shipper Services Representative

If the online system is not operational, the CCO will begin a manual call down of the above individuals and request they join the conference call. If the conferencing telephone lines are not operational the flow of information will occur via individual telephone calls until an alternate conferencing solution is available.

The following positions will be assigned at a minimum during this call:

- Incident Commander
- Safety Officer
- Security Officer
- Information Officer
- Liaison Officer
- Legal Officer
- Operations Section Chief
- Planning Section Chief
- Logistics Section Chief
- Finance/Administration Section Chief

As core IMT members arrive at the site or are assigned, they are responsible for contacting the remaining members of their respective sections/units/groups/division, deemed necessary based on the size and nature of the incident.

2.6 Trans Mountain Contacts

"Trans Mountain Contacts" consist of a list of Trans Mountain personnel names and contact information, who have been trained in the use of the Incident Command System (ICS) and their applicable ICS roles. In the event of an emergency, these personnel would fill the ICS functional roles. This information has been removed from the manual following the requirements of the Personal Information Protection and Electronic Documents Act (PIPEDA) (federal legislation). The information is provided on a controlled basis within the Incident Notification Guideline located in the Emergency Toolkit.

2.7 Trans Mountain Alert System Contacts

The "Trans Mountain Alert System (TAS) Contacts" is a list of Trans Mountain business unit leadership including supervisors/managers/directors and their alternates contact information. If an event were to occur, these personnel participate in the initial emergency notification briefing and any follow-up calls, if required. This briefing normally occurs via a telephone conference call by-way of a pre-designated emergency conference call telephone number but could occur in person, if all were in the same location at the same time. This information has been removed from the manual following the requirements of the Personal Information Protection and Electronic Documents Act (PIPEDA) (federal legislation). The information is provided on a controlled basis within the Incident Notification Guideline which is located in the Emergency Toolkit.

2.8 Facility Contacts

District	Facility	Phone
Edmonton Terminal	Edmonton Terminal	780-449-5900
	Edmonton Office	780-449-5900
Kamloops Terminal	Kamloops Office	250-371-4000
	Kamloops Station	250-371-4050
	Kamloops Central Stores	250-371-4090
Sumas Terminal	Sumas Station	604-852-4008
	Sumas Terminal	604-861-7931
Burnaby Terminal	Burnaby Terminal	604-268-3050

2.9 External Notification

2.9.1 External Notification – Potential Emergency Condition

In the case of a potential emergency condition[2] notification to the Transportation Safety Board of Canada (TSB), Canada Energy Regulator (CER), Emergency Management and Climate Readiness British Columbia (EMCR), and /or Alberta Emergency Management Agency (AEMA) is made by the on-call EHS Representative when any of the following conditions are met:

1. **Emergency Shutdown** – is an event or situation that could imminently be hazardous to persons, property, or the environment. This includes but is not limited to component malfunction or personnel error that could cause a hazard to persons, property or the environment, an operational failure causing a hazardous condition, natural disaster, a terrorist threat, third-party damage that could affect pipeline operations, leaks or spills, fires, or a response to the activation of an emergency system.

2. **Safety Shutdown** – is a situation where a pipeline is shut down due to an emergency or abnormal operating condition along a pipeline, or at a terminal, station, or other facility. The automated shutdown of a pipeline due to the activation of a protective device in response to an abnormal operating condition is also considered a Safety Shutdown.

3. **Odour Complaint** – in the event of multiple complaints and/or a single complaint in conjunction with available operating data, the CCO has a reason to suspect a release of product and decides to do a Safety Shutdown of the pipeline and/or station.

Canada Energy Regulator Online Event Reporting System (OERS)

Emergency Management and Climate Readiness British Columbia: 800-663-3456

Alberta Emergency Management Agency: 866-618-2362

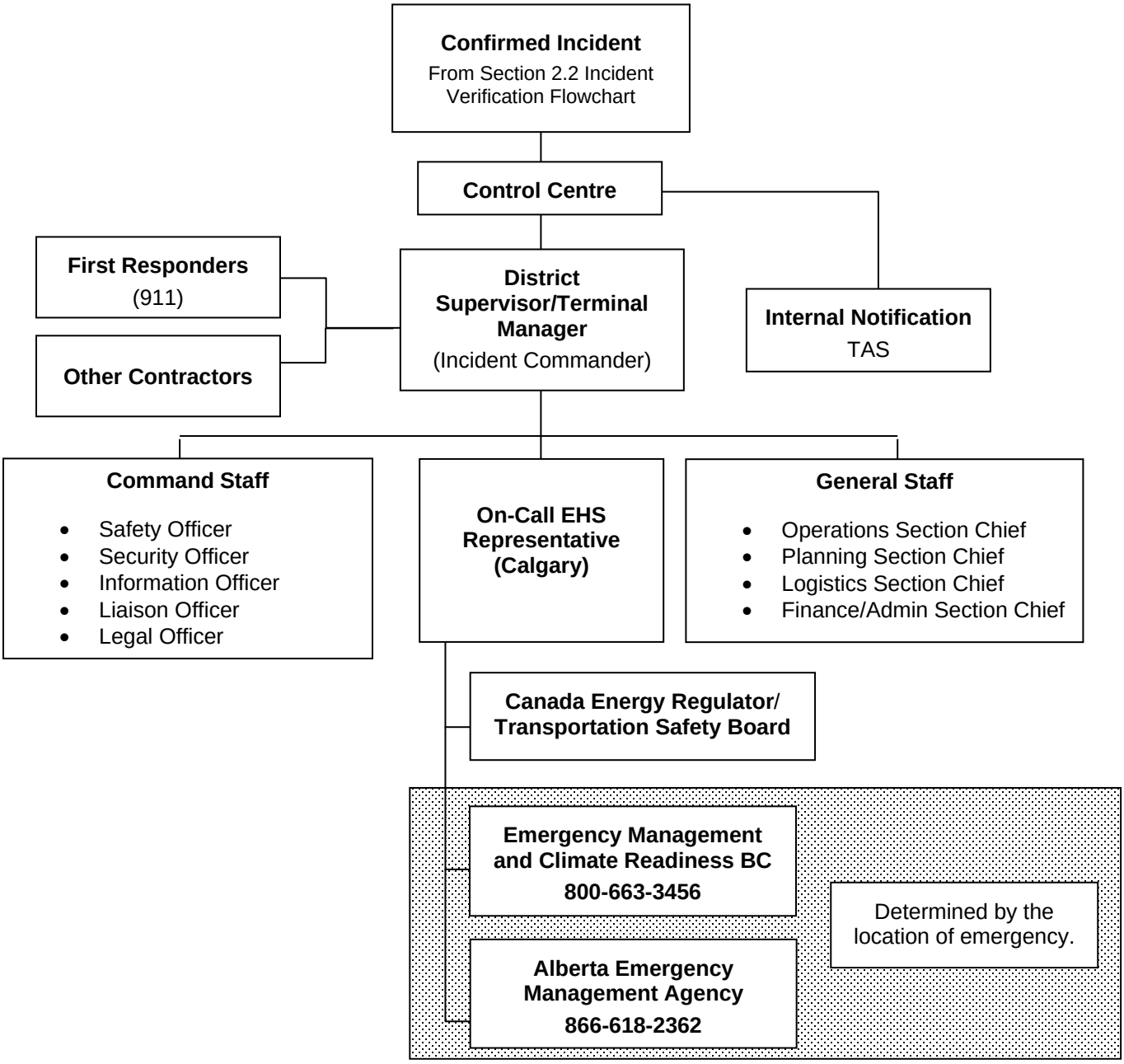
Notes: The CCO has the authority and the responsibility to shut down a pipeline, station, or terminal during an emergency or as a precaution when in their judgment, further operation is unsafe. The CCO will not be faulted for shutting down under these conditions.

A field technician, Terminal Manager, or District Supervisor may request a shutdown as the result of local conditions in response to the investigation of a complaint or regular duties where a release or other abnormal operating condition is suspected. The CCO will comply with the request and initiate the Emergency Condition Response Procedures.

Notification to the Canada Energy Regulator OERS System is through the online portal https://apps.cer-rec.gc.ca/ers. CER Incident Reporting Line 403-299-2773 may also be used when there is a potential emergency situation. If there is some doubt as to whether an event should be reported, or whether an event has occurred, a potential event will be reported at the very least.

[2] A potential emergency can be defined as a spill of unknown volume, unconfirmed and is adjacent to water or where there is a pathway to water, and the environmental conditions, such as rain events or known shallow groundwater make impacts to water likely.

2.10 External Notification Chart – Confirmed Emergency Condition



Note: Notification to the Canada Energy Regulator/Transportation Safety Board is conducted through the one window Online Event Reporting System (OERS) https://apps.cer-rec.gc.ca/ers. Where an event qualifies as a significant incident it must be reported immediately via the TSB Reporting Hotline, then the details are entered into OERS as soon as possible and within a minimum of three (3) hours after the incident occurrence.

2.11 Reporting Requirements

Call Order	Agency	Notes
District Supervisor/Terminal Manager/Incident Commander Initial Calls		
1	**911 Call Centre** 911 *or* 9911 - from a company land line.	The local 911 call centre will be notified of any incident to inform the call centre operators of the problem or potential problem, so they do not allocate additional unneeded resources to the event.
Trans Mountain On-Call EHS Representative – All Incidents		
1	**Canada Energy Regulator/ Transportation Safety Board** https://apps.cer-rec.gc.ca/ers **Significant Event TSB Reporting Hotline** 819-997-7887	Reportable incidents must be reported through the one window Online Event Reporting System (OERS). Where an event qualifies as a *significant* incident it must be reported *immediately* via a call to the TSB Reporting Hotline; incident details then entered into OERS as soon as possible and within 3 hours.
District Supervisor/Incident Commander/EHS Representative or Designate		
1	**Western Canada Spill Services (WCSS)** 866-541-8888	Equipment provider for spills that are in Alberta or on land in British Columbia. Note: caller to request a spill specialist.
Trans Mountain On-Call EHS Representative – Incident in Alberta		
1	**Alberta Emergency Management Agency (AEMA)** 866-618-2362	Coordinates the provincial government response.
2	**Alberta Ministry of Environment and Protected Areas (EPA)** **Alberta Energy Regulator (AER)** **Environment and Climate Change Canada (ECCC)** 800-222-6514 780-422-4505	Notifications for all environmental emergencies, including spills, can be made by one call to the Alberta Energy and Environmental Emergency 24 Hour Response Line at 800-222-6514. EPA makes notification to other provincial agencies as needed including ECCC and Fisheries and Oceans Canada.

Call Order	Agency	Notes
Trans Mountain On-Call EHS Representative – Incident in British Columbia		
1	**Emergency Management and Climate Readiness (EMCR)** 800-663-3456	Notifications for all environmental emergencies, including spills, can be made by one call to EMCR at 800-663-3456. EMCR makes notifications to other provincial agencies as needed including MoE, ECCC, Canadian Coast Guard, BCER[3], and affected municipal governments.
2	**British Columbia Ministry of Environment & Climate Change Strategy (MoE)** 800-663-3456	Must report a spill that enters, or is likely to enter, a body of water, or the quantity of the substance spilled is, or is likely to be, equal to or greater than the listed quantity for the listed substance (BC Spill Reporting Regulation). In the event that a spill originating from a Terminal is confirmed to contaminate drinking water, the company must notify BC MoE within the following time periods: • As soon as practicable; • Within 72 hours, whichever is less. The BC MoE 24-hour toll free number connects with Emergency Coordination Centre (part of EMCR).
3	**BC Environment Assessment Office (BC EAO)** 800-663-3456	In the event that a spill originating from a Terminal is confirmed to contaminate drinking water, the company must notify BC EAO within the following time periods: • As soon as practicable; • Within 72 hours, whichever is less. The 24-hour, toll free number connects with the Emergency Coordination Centre (part of EMCR).

[3] EMCR discretion to include BC Energy Regulator on incident notification and update list.

2.12 External Agency Reporting Form

Name and Address of Company/Oil Handling Facility
Name of Pipeline/Identity of Vessel Involved
Name and Position of On-Scene Commander/Person Responsible for Implementing ER Plan
Date and Time Discharge
Location of Discharge
What is the receiving environment? Land, Water, Wetland, Solid Surface (asphalt, concrete)
Name of Product Involved and associated SDS
Reason for Discharge (i.e., Material Failure, Excavation Damage, Corrosion)
Estimated Volume of Discharge
Weather Conditions On-Scene
Actions Taken or Planned by Persons On Scene

2.13 Other Notifications

2.13.1 Local Governments

Notification of the local government agencies may occur through 911 and on-scene coordination with emergency services. Alternately the impacted communities will be identified based on the location of the incident using the Geographic Information System mapping applications. Trans Mountain maintains a database of local contacts, including emergency managers, and will contact affected communities as soon as possible. The Liaison Office will be provided with all local contacts for additional notifications and follow up as soon as possible, but within 24 hours of the immediately reportable incident occurring.

2.13.2 Landowners

Notification to landowners, including those whose land may be affected, occurs through the Affected Landowner Coordinator as part of the incident Liaison Office. The impacted landowners will be identified based on the location of the incident using the Geographic Information System mapping applications. Trans Mountain maintains a database of landowner contacts and will contact affected Landowners with priority to those that are geographically closest to the incident.

2.13.3 Indigenous Communities

Notification of the Indigenous communities, including those whose traditional territories may be affected, occurs through the Indigenous Relations Coordinator as part of the incident Liaison Office. The impacted communities will be identified based on the location of the incident using the Geographic Information System mapping applications. Trans Mountain maintains a database of Indigenous community contacts and will contact affected communities as soon as possible, but within 24 hours of the immediately reportable incident occurring. Priority will be given to those that are geographically closest to the incident.

The Trans Mountain Indigenous Advisory and Monitoring Committee (IAMC) will be notified in accordance with the established protocol.

2.13.4 Other Government Contacts

Alberta and British Columbia have one window reporting which is to trigger call-down of additional resources if required. Trans Mountain recognizes that in some situations a provincial response may not be required, however the local authorities and/or other potentially impacted provincial agencies may wish to receive additional information regardless of the decision to respond from the provincial or federal governments, therefore is committed to making additional notification calls, as time allows and establish conference call solutions to ensure potential responders are aware of the situation. The following list is a list of agencies that may be contacted after all other mandatory reporting is complete.

2.13.4.1 Coordination Call

An inter-agency coordination call will be arranged by the Liaison Officer to provide an incident briefing, including confirming Unified Command membership and establishing an ongoing briefing schedule. The call's purpose is to:

- Provide a situation update utilizing verified information only (approved situation reports from previous or current operational period):
- Incident situation: location, magnitude, and potential impacts
- Consequences (actual and potential) including communities affected; consequences could include:
    - Contamination of water (drinking (human, livestock), irrigation, or agricultural watering)
    - Air contamination
    - Other actual or potential consequences
    - Initial/ongoing response status including mitigation measures taken
    - Activation (status and level) of the Emergency Response Plan(s)
    - Agencies, stakeholders, and Indigenous communities who have been notified

2.13.5 Agency Contacts

The following list is a list of agencies that may be contacted after all other mandatory reporting is complete.

Agency	Contact
When contacting agencies be clear as to whether the call is for the purposes of awareness, or for the purposes of requesting support.	
Federal Government	
Department of Fisheries and Oceans	604-666-0384
Parks Canada (Jasper) Dispatch	780-852-6155
Provincial Government: Alberta	
Alberta Health Services Single Point of Contact	24/7: 1-844-755-1788 24/7 email: edp@ahs.ca
Alberta Occupational Health & Safety	866-415-8690
Alberta Ministry of Transportation	800-272-9600
Alberta Energy Regulator (AER)	800-222-6514
First Nations and Inuit Health Branch, Alberta Region, Department of Indigenous Services Canada	Regional MHO on call: 780-495-8430 Regional Environmental Health Offices: 780-719-8782
Provincial Government: British Columbia	
BC Energy Regulator (BCER)	800-663-3456 250-794-5200
BC Ministry of Transportation and Infrastructure (MOTI)	250-387-3198
Health Emergency Management BC (HEMBC)[4]	855-554-3622 (24 hour)
First Nations Health Authority (FNHA)	604-693-6500 (Daytime number) 844-666-0711 (After Hours)
Fraser Health Authority[5]	604-587-4600
Interior Health Authority	250-469-7070
Vancouver Coastal Health Authority[6]	604-736-2033
WorkSafe BC	After Hours: 866-922-4357 M-F (8-4:30): 888-621-7233

[4] HEMBC should be contacted for all BC incidents, together with the appropriate regional health authority and BC First Nations Health Authority to invite them to participate in Liaison Office and/or Planning Section – Environmental Unit activities.

[5] If an incident involves either the Westridge Marine Terminal or the Burnaby Terminal, then both Fraser Health and the Vancouver Coastal Health Authority should be contacted.

Agency	Contact
Municipal Government	
Abbottsford Municipality Emergency Management Office	604-853-2281 After Hours: 604-864-5552
Burnaby Municipality Emergency Management Office	604-294-7097
Kamloops Municipality Emergency Management Office	8:00 am–4:00 pm: 250-828-3461 After hours: 250-372-1710
Strathcona Municipality Emergency Management Office	911
Indigenous Communities	
Sumas First Nation	604-852-4041
Non-Government	
NAV Canada Flight Information Centre[6]	Edmonton FIC: 866-541-4102 Kamloops FIC: 866-541-4101
Simon Fraser University (SFU) – Campus Safety & Security Services[7]	General Inquiries: 778-782-3253 Emergency 24/7: 778-782-4500

2.14 Industry Contacts

The following are lists of terminal neighbours and industry contacts that may be contacted after mandatory reporting is complete, per terminal.

2.14.1 Edmonton Terminal Contacts

Agency/Company	Contact
AB Truss	780-464-5551
Advanced Engineered Products Ltd.	780-467-8891
Air Liquide Canada	780-438-5600 514-878-1667
Air Products Canada	780-438-5600
Alberta's Industrial Heartland Association	780-998-7453 888-414-0032
Alta Steel	780-468-1133
Altalink	866-667-3400
AT Plastics	780-468-0800
ATCO Pipelines	800-511-3447 877-496-9380
Canadian National Railway (CN)	800-465-9239
CPKC Rail Police	800-716-9132; option 1 for an emergency
Capital Power - Clover Bar	780-392-5100

[6] In the event of a hazardous release into the atmosphere, including large amounts of smoke and/or toxic material, request issuance of Notice to Airmen (NOTAM) from NAV Canada. Provide location of the incident (coordinates), direction and altitude of plume (if known).

[7] Notification to SFU is required for all emergencies impacting, or that have the potential to impact Westridge Marine Terminal or Burnaby Terminal

Agency/Company	Contact
Container King	780-800-5625
E Construction Ltd.	780-467-7701
Enbridge Pipelines Inc.	780-449-2617
EPCOR	Power and Water: 780-412-4500 Natural Gas: 780-420-5585
Esso Strathcona Refinery	780-449-8511
FortisAB	866-717-3113
Gibsons	866-553-0111
Inter Pipeline	800-727-7163
Keyera – Envirofuels	780-449-7800
Keyera Energy	800-661-5642
Link Scaffolding	780-449-6111
Owens Corning Canada	800-438-7465
Pembina Pipeline	780-400-4700
Plains Midstream	866-875-2554
Praxair Distribution	Tanks and Containers: 800-363-0042 On-site Gas Supply: 800-661-5312
SECURE Energy	866-391-0444
Shell Canada Products	800-661-7378
Strathcona Science Park	780-644-3880
Suncor Energy Logistics Corp.	800-378-6267
Supreme Steel	780-467-2266

2.14.2 Kamloops Terminal Contacts

Agency/Company	Contact
Kamloops Correctional Facility	250-571-2200
Pacific Coast Heavy Truck Group Kamloops (Mack/Volvo)	250-374-3883
Pembina Pipeline	800-360-4706 250-372-7756
Versatile Storage	250-374-7867

2.14.3 Sumas Terminal Contacts

Agency/Company	Contact
Innovative Mining Services Inc.	604-556-7625
Lafarge Aggregates (Ward Road)	604-256-3309
Mainland Sand and Gravel	604-882-5650

2.14.4 Burnaby Terminal Contacts

Agency/Company	Contact
Shell Canada Products (Burmount Terminal)	800-661-7378

2.15 Support Services

"Support Services" consists of the names and contact telephone numbers of all entities that have been identified and pre-approved to supply services to Trans Mountain in day-to-day business or in the event of an emergency. Support Services information consists of primary response contractors, industrial firefighting and air monitoring providers, communications equipment and aviation providers, lodgings, equipment, etc. These are private entities with which Trans Mountain has a contractual relationship. The removal of this information follows the requirements of The Personal Information Protection and Electronic Documents Act (PIPEDA) (federal legislation). The information is provided on a controlled basis within the Incident Notification Guideline located in the Emergency Toolkit.

2.16 Mutual Aid Activation

Contact information and specific procedures for the activation of the mutual aid agreements is contained within the Incident Notification Guideline located in the Emergency Toolkit. In many cases these numbers are those of specific personnel or unpublished numbers. The removal of this information is consistent with the requirements of the Personal Information Protection and Electronic Documents Act (PIPEDA).

Mutual Aid Agreement	Activation Instructions
Mutual Emergency Assistance Agreement (MEAA)	• Contact the Emergency Management Department to identify nearby resources and request assistance in accordance with the procedures outlined in the MEAA.
Strathcona District Mutual Aid Partnership (SDMAP)	• Provides assistance and equipment in the Edmonton Area for the Terminal Operations. It is activated at the request of Strathcona County Emergency Services, or by directly calling a member company by the Terminal Supervisor.
Kamloops Fire and Rescue	• Emergency Response support for incidents inside the City of Kamloops. Activation is by direct contact between Emergency Services and Trans Mountain Supervisor or the Emergency Management Department.
Burrard Industrial Mutual Assistance Group (BIMAG)	• Requests for Assistance will be made in writing or through the requested 'Responding Member's emergency 24-hour numbers set out in Section 2 of the 'BIMAG' Mutual Aid Agreement by the Emergency Management Department.

2.17 Incident Command Post and Staging Area Locations

There are pre-designated potential Incident Command Post (ICP) and Staging Areas identified in communities where Trans Mountain Terminals are located. Access to these facilities, and the lead time required to establish them varies depending on the location and type of facility being used. Trans Mountain has agreements and protocols in place where appropriate with the service providers. All facilities meet the requirements for internet and telephone connectivity, food, lodging, meeting space, parking, and security for a multi-agency response.

Incident Command Post facilities are private entities with which Trans Mountain may have contractual relationship. The information is provided on a controlled basis within the Incident Notification Guideline located in the Emergency Toolkit. The removal of this information follows the requirements of The Personal Information Protection and Electronic Documents Act (PIPEDA) (federal legislation).

2.18 Community Support Centres

“Community Support Centres” are locations, separate from the ICP, that can be utilized as media relations centres, evacuee reception centres, or convergent volunteer coordination centres.

The Media Relations Centre, in the event of an emergency, will be designated at the time of an emergency, based on the location of the ICP. The identification of a facility to be used for evacuees or other community support, such as convergent volunteer coordination centres, will be made, as appropriate and able, in collaboration with the community (Local Authority or First Nation).

These are private entities with which Trans Mountain has a contractual relationship. The removal of this information follows the requirements of The Personal Information Protection and Electronic Documents Act (PIPEDA) (federal legislation). The information is provided on a controlled basis within the Incident Notification Guideline located in the Emergency Toolkit.

3.0 SPILL/SITE ASSESSMENT

The primary purpose of a site assessment is to evaluate the presence of risk to both incident responders and the public. However, if it is safe to do so, information about the incident should be gathered as quickly as possible in order to evaluate the situation and develop an initial response plan. It might also be possible for the Site Assessment Team to take measures to reduce possible impacts.

NOTE: Site Assessment Team members should wear all PPE (boots, FR coveralls, gloves, eye protection, hard hat, and half-face respirators) while assessing the incident. This may include radiant heat protection. If vapour levels reach 10% of the LEL, Site Assessment Team members should leave the area immediately.

3.1 Site Assessment Guidelines

When conducting the initial site assessment of the spill the following parameters must be documented:

- Identify and evaluate the immediate risks to and impacts on human health, environment, and infrastructure.
- Classify the spill according to the following factors:
  - Substance spilled
  - Quantity of the substance spilled
  - The location and circumstances of the spill
- Assess:
  - What is to be done to protect the safety of response personnel and the public,
  - Whether or not an evacuation is necessary.

3.1.1 Safety Checklist

- ❑ Conduct vapour monitoring (see 3.3 Vapour Monitoring Flowchart)
- ❑ Conduct Pre-Entry Safety Checklist (ISHSP, or HSP)
- ❑ Remove all non-intrinsically safe radios, pagers, etc.
- ❑ Establish communications with the Control Centre
- ❑ Request information regarding the situation (e.g. alarms, product, pipeline reading, shutdown actions and other relevant information)
- ❑ Establish communications procedures/schedules
- ❑ Don appropriate PPE, as per health and safety plan
- ❑ Refer to SDS
- ❑ Determine wind speed and direction
- ❑ Determine current direction
- ❑ Approach spill from upwind/up current if possible
- ❑ Conduct vapour monitoring

3.1.2 Incident Intelligence Checklist

- ❑ Determine status of any injured personnel
- ❑ Determine spill source
- ❑ Confirm spilled product (if different, leave the area)
- ❑ Determine if source is isolated
- ❑ Estimate spill rate/volume
- ❑ Determine if product has or will reach the water
- ❑ Determine if product has escaped local containment

3.1.3 Incident Mitigation Checklist

- ❑ Evacuate and attend to any injured personnel
- ❑ Isolate spill source
- ❑ Close all valves

3.2 Vapour Monitoring Site Assessment Procedure

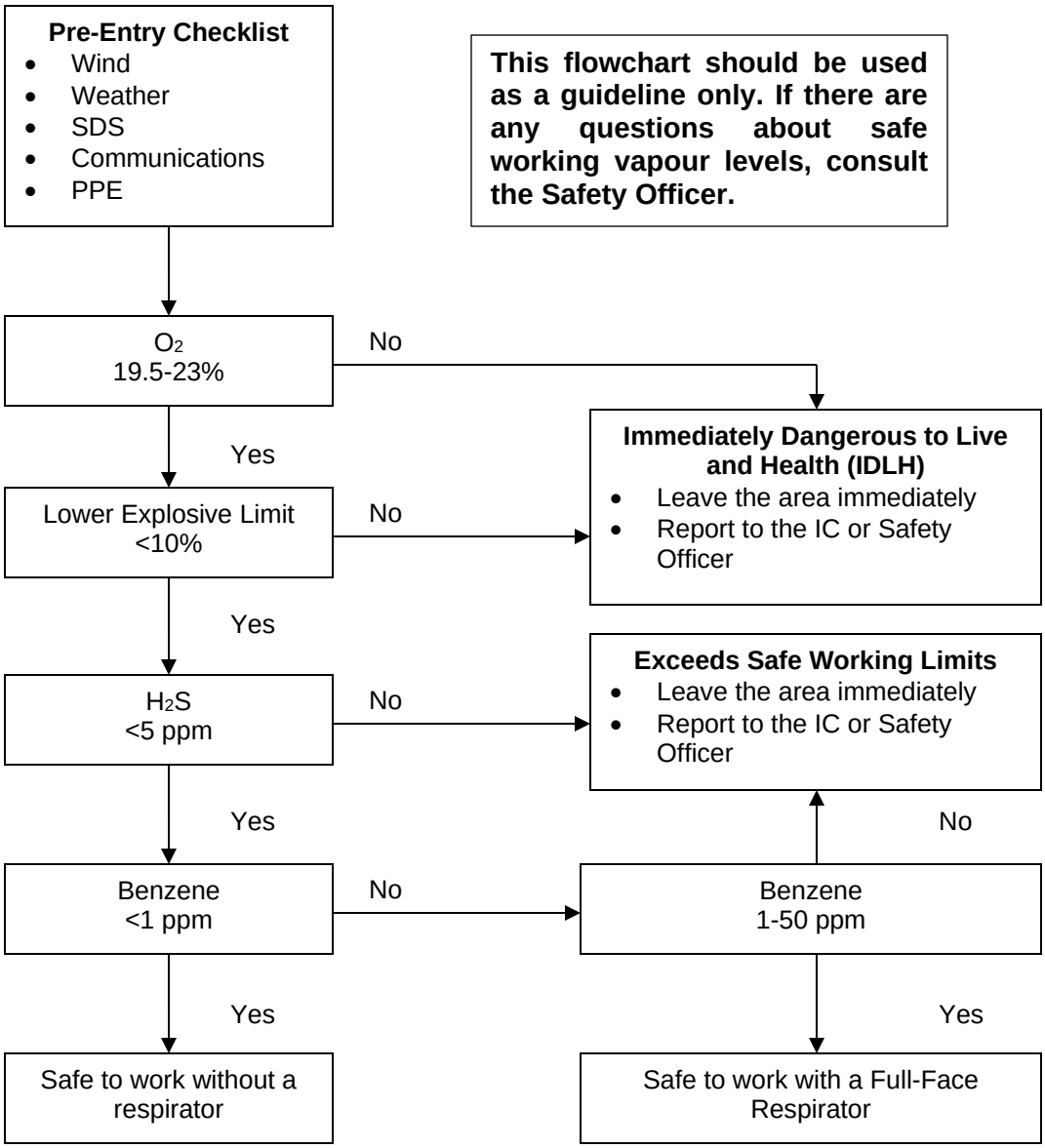
The team should move toward the area and stop at an acceptable location, preferably upwind, to make final preparations for assessment. The team must evaluate its options and decide the best approach route. Frequent reading of air monitoring instruments can ensure the safety of the survey party during the approach. The assessment team leader needs to exercise caution and use controls that will best protect the team.

The survey should continue as long as air monitoring instrument readings remain within acceptable limits, with the objective of (a) obtaining readings across the zone and (b) locating a significant accumulation to provide a detailed assessment. A safe and effective site assessment will require caution, persistence, and field decisions.

The team leader must take immediate action if at any time the air monitoring instrument readings meet or exceed “evacuation” levels. If “evacuation” levels are met or exceeded, move upwind from the spill, and halt the assessment. Notify the Incident Commander.

When sufficient representative locations have been recorded, the air-monitoring phase of the initial site assessment is complete. The identification of physical, environmental, or other hazards will complete the assessment.

3.3 Vapour Monitoring Flowchart



3.4 Spill Observation/Assessment/Estimation Factors

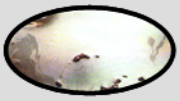
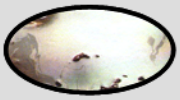
3.4.1 Spill Surveillance

The following guidelines should assist in spill surveillance:

- Surveillance of an oil spill should begin as soon as possible following discovery to enable response personnel to assess spill size, movement, and potential impact locations. Dispatch observers to crossings downstream or down gradient to determine the spills maximum spread.
- Efforts should be made to approach from an uphill/upwind direction.
- Clouds, shadows, sediment, floating organic matter, submerged sand banks or wind-induced patterns on the water may resemble an oil slick if viewed from a distance.
- Spill surveillance is best accomplished using helicopters or small planes; helicopters are preferred due to their superior visibility and manoeuvrability.
- All observations should be documented in writing and with photographs and/ or video recording devices.
- Record observations on detailed maps.
- Surveillance is also required during spill response operations to gauge the effectiveness of response operations; to assist in locating skimmers; and assess the spill's size, movement, and impact.

3.4.2 Estimating Spill Volume

If possible, the initial assessment should also include an estimate of the volume of oil spilled. Oil volumes can be estimated by multiplying the area of the slick by the average estimated thickness. The following chart applies when the oil is on the water. In the case of an impoundment area the spill can be estimated by multiplying the thickness by the area covered.

Appearance	Slick Thickness	Spill Volume
 Barely visible	0.05 µm	50 L/km^2
 Visible as silvery sheen	0.08 µm	80 L/km^2
 First trace of colours	0.15 µm	150 L/km^2
 Bright bands of colour	0.3 µm	300 L/km^2
 Colours begin to turn dull	1 µm	1,000 L/km^2
 Colours are much darker	2 µm	2,000 L/km^2

3.4.3 Rapid Methods for Estimating Spill Size

- Transfer operations: Multiply the pumping rate by the elapsed time that the leak was in progress, plus the drainage volume of the line between the two closest valves or isolation points (volume loss = pump rate [bbl./ min] x elapsed time [min] + line contents [bbl.])
- Tank overfills: Elapsed time multiplied by the pumping rate
- Visual assessment of the surface area and thickness (note that this method may yield unreliable results):
- Interpretation of sheen color varies with different observers
- Appearance of a slick varies depending upon amount of available sunlight, sea-state/turbulence, and viewing angle
- Different products may behave differently, depending upon their properties.

4.0 SPILL CONTAINMENT AND RECOVERY

4.1 Initial Containment Actions

Initial containment actions will focus on utilizing containment on site in the most effective manner to prevent oil from impacting water, thus reduce the surface area and shoreline to be cleaned; concentrate the oil (when safe to do so), making physical recovery more efficient; and limit the environmental impact to the immediate spill area.

The containment of spilled oil will:

- Reduce the spread of slicks and their impacts beyond the property
- Reduce potential impacts to the surrounding environment
- Reduce potential economic impacts
- Maximize the thickness of floating slicks
- Maximize the effectiveness of mechanical countermeasures (i.e., skimmers and sorbents)

Selection of the appropriate location and containment and recovery tactic method will depend upon:

- Length of time since the spill occurred
- Amount and type of spilled material
- Area of coverage
- Environmental factors such as wind speed and direction

The following sections outline spill mitigation procedures, and response options for containment and recovery of spilled oil. Refer to the specific Geographic Response Plan for detailed information on response tactics.

4.2 Spill Mitigation Procedures

Trans Mountain Terminals are designed to contain any released product onsite. Early actions implemented to reduce or eliminate harm to people, environment and property can alleviate the negative impact of an oil spill. Response actions and mitigation procedures undertaken at the time of a release can ultimately influence the duration, magnitude and extent of impacts. Trans Mountain personnel must ensure that spills are treated with great care and dealt with promptly to minimize the possibility of them becoming a major issue. The following table describes spill mitigation procedures.

Failure	Procedure
Failure of Transfer Equipment	• Personnel safety is the first priority. Evacuate nonessential personnel or personnel at high risk. • Terminate transfer operations and close block valves. • Drain product into containment areas if possible. • Eliminate sources of vapour cloud ignition by shutting down all engines and motors.
Tank/Cavern Overfill/Failure	• Personnel safety is the first priority. Evacuate nonessential personnel or personnel at high risk. • Shut down or divert source of incoming flow to tank. • Transfer fluid to another tank with adequate storage capacity (if possible). • Shut down source of vapour cloud ignition by shutting down all engines and motors. • Ensure that containment bay discharge valves are closed. • Monitor containment area for leaks and potential capacity limitations. • Begin transferring spilled product to another tank as soon as possible.

Failure	Procedure
Piping Rupture/Leak (under pressure and no pressure)	• Personnel safety is the first priority. Evacuate nonessential personnel or personnel at high risk. • Shut down pumps. Close the closest block valves on each side of the rupture. • Drain the line back into contained areas (if possible). Alert nearby personnel of potential safety hazards. • Shut down source of vapour cloud ignition by shutting down all engines and motors. • If piping is leaking and under pressure, then relieve pressure by draining into a containment area or back to a tank (if possible). Then repair line according to established procedures.
Fire/ Explosion	• Personnel safety is the first priority. Evacuate nonessential personnel or personnel at risk of injury. • Notify local fire and police departments. • Attempt to extinguish fire if it is in incipient (early) stage. • Shut down transfer or pumping operation. Attempt to divert or stop flow of product to the hazardous area (if it can be done safely). • Eliminate sources of vapour cloud ignition shutting down all engines and motors. • Control fire before taking steps to contain spill.
Manifold Failure	• Personnel safety is the first priority. Evacuate nonessential personnel or personnel at high risk. • Terminate transfer operations immediately. • Isolate the damaged area by closing block valves on both sides of the leak/ rupture. • Shut down source of vapour cloud ignition by shutting down all engines and motors. • Drain fluids back into containment areas (if possible).

4.3 Terminal – Primary Recovery/Removal - Spills

At the Terminals, the primary recovery of product from the impoundment areas is via vacuum truck. Small spills at tank areas may use sorbents or other manual removal techniques, whereas skimmers may be used in the remote impoundment areas or drainage ponds. For more significant spills within the impoundment areas that result in unsafe working conditions and/or offsite odours complaints, the use on-site foam application systems may be utilized at the discretion of the Safety Officer.

Urban environments pose a challenge to response tactics due to varying surface materials including those that are impermeable such as asphalt and concrete. Initial response tactics should consider if a spill could enter the wastewater and/or urban subterranean networks. Possible methods of preventing the spread of a spill include the use of booms, cardboard, plywood, drainage covers, sorbents sandbags and other barriers to contain the spill and prevent entry of product to openings leading to subterranean municipal public works.

4.3.1 Cleanup Techniques – Removal

Assessing the overall environmental impact must be considered when selecting a removal recovery technique. There are several variables that will influence the removal strategy used during a spill, such as product type and spilled area restrictions. A combination of removal cleanup methods will be used.

Technique	Description	Recommended Equipment	Applicability	Potential Environmental Impacts
Manual Removal	Hand tool (scrapers, wire brushes, shovels, cutting tools, wheelbarrows, etc.) are used to scrape oil off surfaces or recover oiled sediments, vegetation, or debris where oil conditions are light or sporadic and/ or access is limited.	Equipment misc. hand tools Personnel 10-20 workers	• Can be used on all habitat types • Light to moderate oiling conditions for stranded oil or heavy oils that have formed semi-solid to solid masses • In areas where roosting or birthing animals cannot or should not be disturbed.	• Sediment disturbance and erosion potential.
Mechanical Removal	Mechanical earthmoving equipment is used to remove oiled sediments and debris from heavily impacted areas with suitable access.	Equipment motor grader, backhoe, dump truck elevating scrapers Personnel 2-4 workers plus equipment operators	• On land, wherever surface sediments are accessible to heavy equipment • Large amounts of oiled materials.	• Removes upper 5 to 30 cm of sediments.
Sorbent Use	Sorbents are applied manually to oil accumulations, coatings, sheens, etc. to remove and recover the oil.	Equipment misc. hand tools misc. sorbents Personnel 2-10 workers	• Can be used on all habitat types • Free-floating oil close to shore or stranded on shore, secondary treatment method after gross oil removal • Sensitive areas where access is restricted.	• Sediment disturbance and erosion potential • Trampling of vegetation and organisms • Foot traffic can work oil deeper into soft sediments.
Vacuum/ Pumps/ Skimmers	Pumps, vacuum trucks, skimmers are used to remove oil accumulations from land or relatively thick floating layers from the water.	Equipment 1-2 50- to 100-bbl vacuum trucks w/ hoses 1-2 nozzle screens or skimmer heads Personnel 2-6 workers plus truck operators	• Can be used on all habitat types • Stranded oil on the substrate • Shoreline access points.	• Typically, does not remove all oil • Can remove some surface organisms, sediments, and vegetation.

4.3.2 Recovery Techniques – Washing

Washing is often a viable method for removing stranded oil from hard surfaces, like large rocks and seawalls. However, while effective, when used incorrectly washing may drive oil to further contaminate clean areas and triggered additional environmental effects. Because of these considerations, responders need to be very cautious about the situations and habitats in which washing is employed. Washing techniques should normally be combined with an effort to contain and collect the mobilized oil.

Technique	Description	Recommended Equipment	Applicability	Potential Environmental Impacts
Flooding	High volumes of water at low pressure are used to flood the oiled area to float oil off and out of sediments and back into the water or to a containment area where it can be recovered. Frequently used with flushing.	Equipment 1-5 380- to 750-lpm pumping systems 1 100-ft perforated header hose per system 1-2 200-ft containment booms per system 1 oil recovery device per system Personnel 6-8 workers per system	• All shoreline types except steep intertidal areas • Heavily oiled areas where the oil is still fluid and adheres loosely to the substrate • Where oil has penetrated into gravel sediments • Used with other washing techniques.	• Can impact clean down gradient areas • Can displace some surface organisms if present • Sediments transported into water can affect water quality.
Flushing	Water streams at low to moderate pressure, and possibly elevated temperatures, are used to remove oil from surface or near-surface sediments through agitation and direct contact. Oil is flushed back into the water or a collection point for subsequent recovery. May also be used to flush out oil trapped by shoreline or aquatic vegetation.	Equipment 1-5 189- to 380-lpm/ 689 kpa pumping systems with manifold 1-4 30 m hoses and nozzles per system 1-2 60 m containment booms per system 1 oil recovery device per system Personnel 8-10 workers per system	• Substrates, riprap, and solid man-made structures • Oil stranded onshore • Floating oil on shallow intertidal areas.	• Can impact clean down gradient areas • Will displace many surface organisms if present • Sediments transported into water can affect water quality • Hot water can be lethal to many organisms • Can increase oil penetration depth.
Spot (High Pressure Washing)	High pressure water streams are used to remove oil coatings from hard surfaces in small areas where flushing is ineffective. Oil is directed back into water or collection point for subsequent recovery.	Equipment 1-5 1,200- to 4,000-psi units with hose and spray wand 1-2 30 m containment booms per unit 1 oil recovery device per unit Personnel 2-4 workers per unit	• Bedrock, man-made structures, and gravel substrates • When low-pressure flushing is not effective • Directed water jet can remove oil from hard-to-reach sites.	• Will remove most organisms if present • Can damage surface being cleaned • Can affect clean down gradient or nearby areas.

4.4 Off-Site Spill Containment/Recovery

In the event that a hydrocarbon product is able to migrate off site, please refer to the Trans Mountain Pipeline Emergency Response Plan for containment/recovery and removal techniques for land, creeks/rivers, and open water.

5.0 PROTECTION OF HIGH CONSEQUENCE AREAS

The term High Consequence Areas (HCA) is used to define those areas where a terminal incident can have a significant negative impact on, but not limited to:

- Populated areas
- Ecological areas
- Heritage resources
- Essential infrastructure

Terminals are designed to contain all released liquids within the property boundaries limiting the potential for offsite impacts to High Consequence Areas. Initial response tactics will focus on ensuring that product remains on site. Should product migrate offsite, then HCA protection techniques as outlined within the Trans Mountain Pipeline Emergency Response Plan and associated Geographic Response Plan would be employed.

Populated Areas are the most likely impacted HCA receptor stemming from an onsite incident at a Terminal. Hazards that may be associated with onsite incident may include vapour, heat, boil over and smoke, the majority of which are directly linked to fire events. Trans Mountain Fire Pre Plans outline the specific response strategies and resources requirements needed to affect a response to onsite fire scenarios. In the event of an impact to Terminal associated HCA (Populated Areas), Trans Mountain will take immediate steps to ensure the safety of its responders and the public. Information pertaining to public protection measures, including evacuation/shelter in place, are outlined in Section 9.7 Public Evacuation and the appropriate Terminal Evacuation Plan. Amalgamated protective action zone maps for each Terminal are depicted in Section 7.0 Site Information.

6.0 TERMINAL RELATED HAZARDS AND ASSOCIATED RISKS

Trans Mountain's Terminals are located between the City of Edmonton in central Alberta to the Lower Mainland of British Columbia. The hazards associated with an incident at a Terminal include heat, vapours, smoke, and tank boil-over.

The terminals may be exposed to a range of natural and human induced hazards, each with the ability to negatively impact operations and personnel. The following sections aims to describe hazards that could negatively impact the Terminals in order to provide hazard context and to outline actions that may be undertaken in order to mitigate and/or respond to such events.

6.1 Terminal Hazards

6.1.1 Heat

Thermal radiation decreases as the distance from the source increases. Potential impacts from heat include:

- Injuries
- Burns from thermal radiation (in extreme cases)

Calculations have been done to determine the radiant heat effects based on product, volume, and infrastructure present at the Terminal. In the scenario of a full-surface fire (the credible worst-case scenario for the Terminal), the distance that could be impacted by heat is 192 m.

6.1.2 Boil-Over

A boil-over is a potential consequence of a full-surface tank fire and can has the ability to impact the public outside of Terminal boundaries. When a boil-over occurs, hot and/or burning crude oil is ejected upward and outward from the impacted storage tank and then falls to the ground, potentially in all directions from the impacted storage tank.

Potential impacts from a boil-over include:

- Injuries resulting from contact with hot and/or burning crude oil, e.g., burns

In the scenario of a full-surface fire (the credible worst-case scenario for the Terminal), the distance that could be impacted is up to 10x the diameter of the tank that is on fire. Therefore, the Protective Action Zone for a full-surface tank fire is 10x the diameter of the largest tank at the Terminal to ensure public safety during extinguishment activities.

6.1.3 Vapour & Smoke

Dispersion of vapour and/or smoke is dependent on environmental and atmospheric conditions and may pose risks beyond the boundaries of the Terminal.

Potential impacts from vapour and/or smoke include:

- Injuries resulting from inhalation
- Reduced air quality that may impact community members with pre-existing respiratory conditions such as asthma

Air monitoring of vapour and smoke is an essential component in determining when to implement applicable public safety measures and which measure (evacuation or shelter-in-place) is appropriate. Odours can be strong and may be detected by the nose at levels much lower than the levels that pose negative health effects.

Smoke dispersion is incident specific. Smoke dispersion modelling is dependent on several product-based variables, including the rate of release, estimated cloud size, atmospheric conditions, height of release, and distance from the release. Modelling can also support local authorities and the Medical Health Officer in making incident-specific decisions regarding any expansion of initial public safety measures and/or returning people safely home.

6.1.4 Other

Dispersion of product, and/or firefighting fluids, beyond the boundaries of the terminal is dependent on environmental and atmospheric conditions. These may pose a risk to human health if there is transdermal contact or ingestion. Public protection measures may include rerouting or minimizing traffic, closure of roads and trails, and limitation of access to surrounding areas.

6.2 Natural Hazards

Natural Hazards may be defined as naturally occurring physical phenomena caused either by rapid or slow onset events which may be geophysical (earthquakes), hydrological (avalanches, floods), climatological (extreme temperatures, wildfires), meteorological (hurricanes and storms/wave surges) or biological (disease epidemics and insect/animal plagues). While the Trans Mountain Pipeline may not be exposed to the entirety of the aforementioned hazards there are some naturally occurring hazards that could certainly be expected to impact pipeline operations and personnel.

6.2.1 Wildfire/Grass Fires

Wildfires, including forest fires and grassland fires, are a natural hazard in any forested and grassland region of Alberta and British Columbia. These fires are common between May and September and are most often caused by human activity and lightning strikes. Of particular concern are interface wildfires, the area where wildfire and human development meet. Interface fires often destroy homes and other critical infrastructure and typically lead to local or large-scale public evacuations.

A hazard specific Wildfire Mitigation and Response Plan has been developed to assist with the response to wildfires/grass fires.

In the event that Trans Mountain personnel identify a significant wildfire or grassfire they are to report the fire immediately to the local fire department and the provincial wildfire agency. In Alberta contact Alberta Wildfire at 310-FIRE (3473), in B.C. contact the British Columbia Wildfire Service at 800-663-5555. Be prepared to provide the following information:

1. **Location**: i.e., Where is the fire? How far up the hillside?
2. **Size**: e.g., Metres? Hectares? Size of a house? Size of a football field?
3. **Rate of spread**: i.e., How quickly is the fire spreading?
4. **Fuel**: i.e., What is burning? Grass, bushes, trees?
5. **Smoke/flames**: i.e., What colour is the smoke? Are flames visible?
6. **Threat**: i.e., Are there any people or infrastructure at risk?
7. **Action**: i.e., Is anyone fighting the fire?

In the event Trans Mountain personnel discover a small grass fire along access roads or the pipeline Right-of-Way personnel may utilize small handheld equipment including shovels and portable fire extinguishers to suppress the fire if it is safe to do so. If the fire increases in size, spreads or presents a threat to life safety then personnel are to evacuate the area and contact the local fire department and the provincial wildfire body.

6.2.1.1 Wildfire/Grass Fire Checklist

- ❑ Notify Edmonton Control Center and your supervisor, issue TAS.
- ❑ For large, uncontrolled fires, notify local fire department (call 911) & Provincial Wildfire Authority. In Alberta call toll free 310-3473. In British Columbia call 800-663-5555.
- ❑ Evacuate all non-essential personnel and secure area.
- ❑ Muster company response personnel at a safe location.
- ❑ If required, and safe to do, search for missing people. Utilize appropriate equipment and resources.
- ❑ Conduct initial wildfire assessment and following the wildfire decision tree as outlined in Section 2 of the Wildfire Response Plan.
- ❑ Determine strategic options, including offensive, defensive or monitoring as per Section 3 of the Wildfire Response Plan.
- ❑ Determine strategies and tactics as per Section 4 of the Wildfire Response Plan.
- ❑ Coordinate response with the fire department or provincial wildfire officials.

6.2.2 Earthquake

An earthquake is a sudden and/or violent shaking of the ground, sometimes causing great destruction and injuries, as a result of movements within the earth's crust or volcanic action. While earthquakes may occur anywhere along the Trans Mountain Pipeline it is the coastal areas of British Columbia that pose the greatest risk.

In the event that Trans Mountain operations are affected by an earthquake it is vital to first ensure personnel safety and immediately notify the on-site supervisor and the Edmonton Control Centre. The Edmonton Control Centre also receives alerts and data on seismic events from various external services.

If an earthquake does occur and impacts Trans Mountain personnel while working in the field or at an office location, personnel should take steps to ensure the safety of themselves and coworkers.

At the outset of an earthquake Trans Mountain personnel should follow the ***Drop, Cover and Hold-On*** technique. This technique involves dropping to the ground once shaking is felt and moving underneath sturdy furniture such as a table or desk. Once safely underneath solid furniture, cover your head and torso to avoid being hit by falling objects. Finally hold onto the object you are underneath in order to remain covered. Once the shaking has stopped remain in place for a least one minute to let any loose objects settle. Before exiting your safety location scan the area to look for additional hazards that may have developed as a result of the shaking. Examples may include broken glass, fallen objects and fire. While completing this scan consider the most appropriate means of exiting the building as quickly and safely as possible. Once outdoors, personnel should gather at pre-determined muster points in order to complete head counts.

Trans Mountain personnel who are outdoors during the onset of an earthquake should attempt to move to a clear area if it is safe to do so. Extra attention should be paid towards overhead power lines, trees, signs, buildings, vehicles, and other potential falling hazards. The Drop, Cover, and Hold-On technique should be utilized as it will protect individuals from objects thrown horizontally, even if nothing is directly above them.

If Trans Mountain personnel are in a vehicle during the onset of an earthquake they should immediately and safely pull over to the side of the road, stop, and set the parking brake. Drivers should avoid overpasses, bridges, power lines, signs, and other hazards. Stay inside the vehicle until the shaking stops. After the shaking has stopped proceed carefully by avoiding fallen debris, cracked, or shifted pavement, and emergency vehicles. If a power line falls on the car, stay inside until a trained person removes the wire.

Notify your supervisor and/or the Edmonton Control Centre as soon as safely possible. Additional details including facility, pipeline or equipment damage and shutdowns should also be communicated at this time.

6.2.2.1 Earthquake Checklist

In the event of an earthquake, the following steps and procedures should be taken:

If Indoors

- ❑ Follow the Drop, Cover and Hold-On technique once an earthquake is felt.
- ❑ Remain in place for at least one minute after the shaking has stopped to let any loose objects settle.
- ❑ Before exiting the building, scan the area for additional hazards (e.g. broken glass, fire, fallen objects).
- ❑ Exit the building.
- ❑ Notify Supervisor.

If Outdoors

- ❑ Move to a clear area if safe to do so; pay attention to:
    - Overhead power lines
    - Trees
    - Signs
    - Vehicles
    - Potential falling hazards
- ❑ Follow the Drop, Cover and Hold-On technique once an earthquake is felt.
- ❑ Remain in place for at least one minute after the shaking has stopped to allow movement of objects to settle.
- ❑ Notify Supervisor.

If in Vehicle

- ❑ Pull off the road to the far-right shoulder, if possible, immediately.
    - Avoid overpasses, bridges, and power lines.
    - Stop on the median only if there is no other option; ensure that the vehicle is well off the travelled lanes.
- ❑ Set parking brake.
- ❑ Activate hazard warning lights.
- ❑ Shut off the vehicle.
- ❑ Stay in the vehicle.
    - If a powerline falls on the vehicle, stay inside until trained personnel remove the wire.
- ❑ Notify Supervisor.

After the Shaking Stops

- ❑ Complete a headcount and account for all personnel.
    - If any personnel are unaccounted for, determine last check-in time and location or known whereabouts and relay to emergency services.
    - If required, and safe to do, search for missing people. Utilize appropriate equipment and resources.
- ❑ Notify the Edmonton Control Center Operator and Site Supervisor of response steps taken and obtain further instructions.
- ❑ Evacuate all nonessential personnel and third parties to a safe location.

- ❑ Shut down any transfer/loading operations and secure facilities:
    - Close isolation valves and tank valves.
    - Shut off nonessential power supplies.
- ❑ In the event of earthquake damage to critical Trans Mountain infrastructure enact the Emergency Response Plan.
    - If applicable, refer to the facilities Fire-Pre Plan in the event of a tank fire or 3-dimensional fire.
- ❑ Monitor site for evidence of leaks from pipelines and storage tanks.
- ❑ Exercise caution when entering damaged buildings watch for:
    - Downed power lines
    - Fire
    - Flooding
    - Debris
- ❑ Secure facility for aftershocks.

6.2.3 Floods

Floods are the most frequent and costly natural disaster often causing large-scale damage to properties, facilities and infrastructure while also posing a threat to life safety. Flooding events known as flash floods are of particular concern. Flash floods are typically caused by abrupt and extreme rain fall that causes a river, stream, pond or other body of water to swiftly overflow its banks in a short period of time, often in several hours or less. Flash floods can also be caused by erosion of soil and sand, or by ice jams on rivers/streams in conjunction with a winter or spring thaw.

Trans Mountain Emergency Management monitors for, and the risk of, flood of the waterways in the vicinity of the Trans Mountain Pipeline. If a flood does occur and impacts Trans Mountain personnel while working in the field or at an office location, personnel should take steps to ensure the safety of themselves and coworkers. Notify your supervisor and/or the Edmonton Control Centre as soon as safely possible.

Government entities provide current and forecast streamflow conditions, including modeled forecast data, and flood advisories and warnings, using the following stages:

High Streamflow Advisory: River levels are rising or expected to rise rapidly, but that no major flooding is expected. Minor flooding in low-lying areas is possible.

Flood Watch: River levels are rising and will approach or may exceed bank full. Flooding of areas adjacent to affected rivers may occur.

Flood Warning: River levels have exceeded bank-full or will exceed bank-full imminently, and that flooding of areas adjacent to the rivers affected will result.

In the event the risk of a flood has been identified, the following steps and procedures should be taken:

Mitigation from Flood Risk

- ❑ Receive notice of potential for flood.
- ❑ Identify and action appropriate activities based on alert levels and risk assessment to protect workers, the public, and the environment. Such activities could include:
    - Preparation of incident specific pre-emptive controlled evacuation plan.
    - Procurement, and set-up of sandbags or polyethylene barriers to protect buildings or equipment.
    - Removal of critical records from site.
    - Movement, or removal, of hazardous materials and dangerous goods from low-lying areas to prevent environmental damage.
    - Movement of critical equipment to higher ground.
    - Buoying any above-ground facilities that could become submerged to prevent damage from craft operating in flooded areas.

Decision to Evacuate Site

- ❑ Receive order to evacuate.
- ❑ If required, and safe to do, search for missing people. Utilize appropriate equipment and resources.
- ❑ Inform the Edmonton Control Centre if this has not already been done and issue a TAS.
- ❑ Take action to shut down, isolate and de-pressurize equipment, as required.
    - Shut off electricity and electrical equipment.
    - Do not attempt to shut off electricity if water is already present; the combination of water and live electrical current can be lethal.
    - Shut off gas supply and water supply if safe to do so.
    - Shut down and isolate the section of the pipeline area at risk.
- ❑ Implement and follow applicable evacuation plan.
- ❑ Evacuate site to the pre-determined location.
    - Follow the specified evacuation route. Do not attempt to take short cuts as they may lead to a dangerous or blocked-in area.
    - Never try to walk or swim in flood waters.
    - If evacuating by vehicle:
        - Do not drive through flood waters.
        - Water will often prove deeper than it appears, and the vehicle could get struck or swept away by fast water.
        - Avoid driving across bridges if the water is high and flowing quickly, unless advised by Responders that it is the safest route.
        - If caught in fast-rising waters and the vehicle stalls, exit and remain with the vehicle until help arrives.

Re-entry to Site

- ❑ Confirm re-entry has been approved by Supervisor.
- ❑ Determine site and damage assessment requirements; determine if there is sufficient cover over pipeline.
- ❑ Notify landowners of areas of reduced cover.
- ❑ Monitor for damage to buildings and unsafe work areas. Indicators to watch for include:
    - Buckled walls or floors, holes in the floor, bent or broken piping, broken glass and other potentially dangerous debris.
    - Water that is heavily contaminated with sewage and other pollutants that can cause sickness and infections.
    - Electrical components and panels that need to be cleaned, dried, and tested by a qualified electrician. All equipment, heating, pressure, or sewage systems (including appliances) will need to be thoroughly cleaned, dried, inspected and deemed safe before use.
- ❑ In the event of flood damage, follow the Emergency Response Plan Section 3.0 Spill/Site Assessment.
- ❑ Conduct an aerial overflight.

6.2.4 Landslides

Landslides are defined by collapsing / falling soil, rock, and debris in a work area, and/or in the vicinity of the pipeline or terminal, due to proximity and exposure to an unstable natural slope. The severity of a landslide can vary, with debris volume ranging from a few cubic metres up to 10km3. Landslides are a hazard to Trans Mountain personnel, first responders, the public, natural resources, and infrastructure.

Trans Mountain personnel working on site should be aware of the signs of a potential landslide, such as:

- Unusual sounds such as trees cracking or rocks knocking together.
- Any increase in the flow of a river or a change in water colour; both can indicate upstream debris activity that could have been triggered by a landslide.

It is important to note that excavation activities taking place during snowmelt or following significant rainstorms can increase the risks of landslides. An effective response prioritizes the health and safety of rescuers. If you are on site at the time of a landslide, **move uphill and away from the falling debris**. Personnel should stay mustered until the landslide has stopped, and there are no indicators of subsequent landslides. Scan the area carefully before returning to the site muster. Notify your supervisor and/or the Edmonton Control Centre as soon as safely possible.

6.2.4.1 Landslide Response Checklist

In the event of a landslide, reference the steps below:

If on Site

- ❑ Move quickly uphill and away from its likely path.
- ❑ Remain in place until debris is no longer falling, and noises of cracking trees, knocking rocks or rushing water can not be heard.
- ❑ Before moving, scan the area for any hazards that may have developed, such as fallen power lines, and/or loose or hanging debris.
- ❑ Notify Supervisor

If in a Vehicle

- ❑ Remain in the vehicle.
- ❑ Shut off engine and headlights.
- ❑ Leave flashers and radio on.
- ❑ Call for help.
- ❑ If you must evacuate the area in your vehicle, watch for collapsed pavement, mud, fallen rocks and other road debris.

If a Landslide is Witnessed

- ❑ Evacuate the area to the site muster; complete a headcount and account for all personnel.
    - If any personnel are unaccounted for, determine last check-in time and location or known whereabouts and relay to emergency services.
    - Be aware that the slope may experience further movement for hours to days afterward. Do not look for missing people if sounds of cracking trees or knocking rocks can be heard, indicating another landslide.

- ❑ Call 911; communicate:
    - Time and date
    - Reporting persons name
    - Witness name
    - Time of accident
    - Location of accident (ROW KP or access route) GPS Coordinates (Lat/Long)
    - Number of persons involved, injured and/or missing
    - Vehicular involvement
    - Additional relevant information (weather [flyable?] and road condition, special requirements)
    - A call back number for reporting personnel

- Notify supervisor and relay the above preliminary accident details to the Control Centre 888-876-6711.
- Brief arriving rescuers.
- Document evacuations, arrivals, departures, environmental concerns (shelter, food/water, lights), site sketch, and photos.
- Notify off-site personnel and expected travelers and visitors; instruct them to postpone attendance to site or provide alternative routes of travel.

Re-entry to Site

- ❑ Confirm re-entry to the site has been approved by Supervisor.
- ❑ Determine site and damage assessment requirements to determine if there is sufficient cover on the pipelines.
- ❑ Notify landowners of areas of reduced cover
- ❑ Monitor for damage to buildings and unsafe work areas:
    - Buckled walls or floors, holes in the floor, bent or broken piping, broken glass and other potentially dangerous debris.
    - Water that is heavily contaminated with sewage and other pollutants that can cause sickness and infections.
    - Electrical components and panels that need to be cleaned, dried, and tested by a qualified electrician. All equipment, heating, pressure, or sewage systems (including appliances) will need to be thoroughly cleaned, dried, inspected and deemed safe before use.

- ❑ In the event of pipeline damage, follow the Emergency Response Plan Section 3.0 Spill/Site Assessment.
- ❑ Conduct an aerial overflight.

6.2.5 Avalanche

An avalanche is a mass of snow, often mixed with ice and debris which travels down mountain sides and causes massive destruction to objects located within its pathway. Avalanches occur due to any of the following triggers: overloading, temperature, slope angle, snowpack conditions, and vibration. Avalanches typically occur in mountainous regions of Canada and while unlikely to impact Trans Mountain operations they can still prove hazardous to operators in the field.

Response to an avalanche incident must be orderly and efficient and keep the safety of rescuers in mind at all times. A successful rescue depends on a rapid response by appropriately trained and equipped personnel. The full Avalanche Safety Plan is available by request.

6.2.5.1 Avalanche Response Checklist

Should an avalanche occur, the following steps and procedures should be taken:

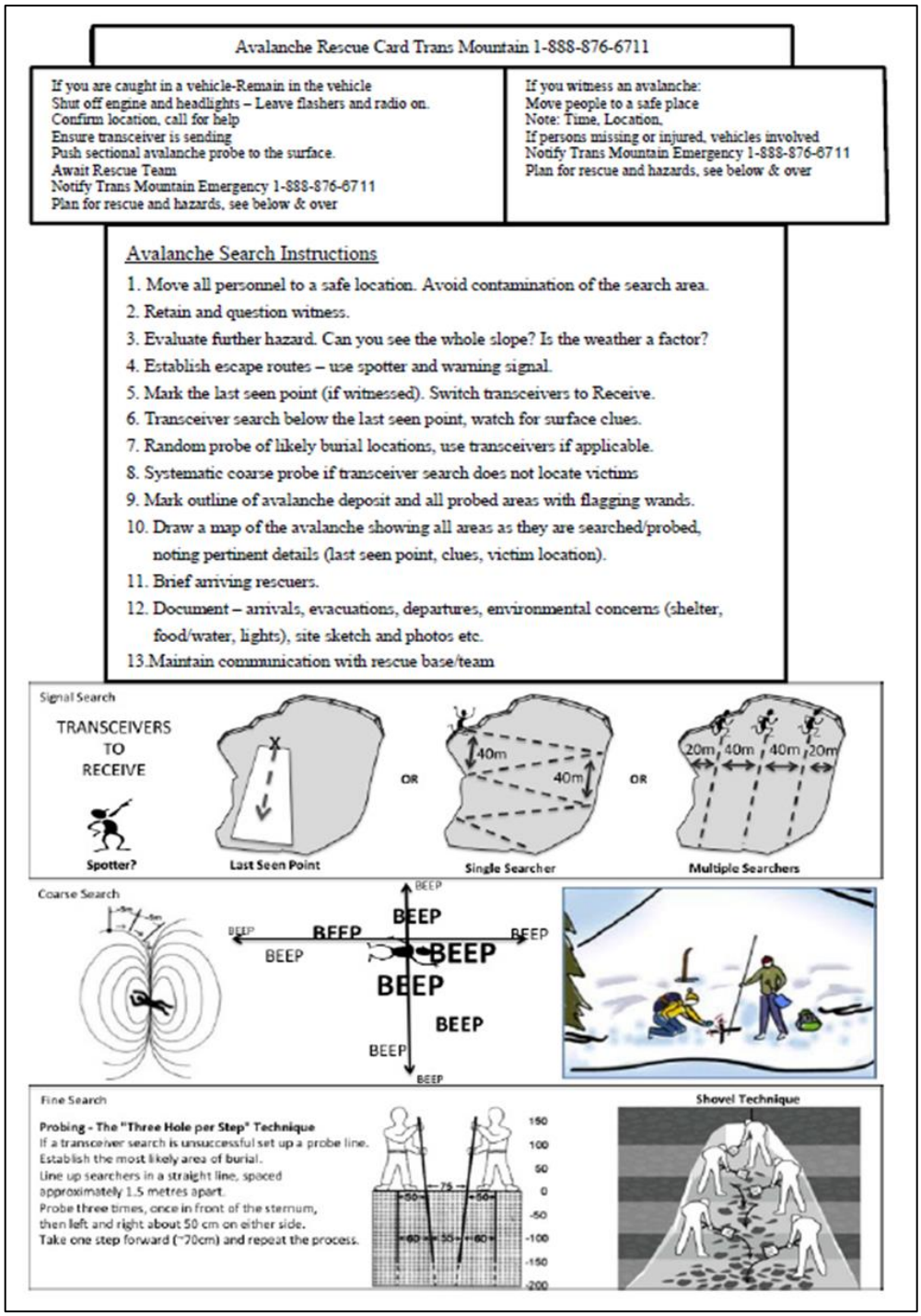
If in Vehicle

- ❑ Remain in the vehicle.
- ❑ Shut off engine and headlights.
- ❑ Leave flashers and radio on.
- ❑ Call for help.
- ❑ Switch transceiver to ‘Send’.
- ❑ Push sectional avalanche probe to the surface.
- ❑ Await Rescue Team.

If Avalanche Witnessed

- ❑ Evacuate area to the site muster; complete a headcount and account for all personnel.
    - If any personnel are unaccounted for, determine last check-in time and location or known whereabouts and relay to emergency services. If required, and safe to do, search for missing people. Utilize appropriate equipment and resources.
- ❑ Call 911; communicate:
    - Time and date
    - Reporting persons name
    - Witness name (hold witness)
    - Time of accident
    - Location of accident (ROW KP or access route) GPS coordinates
    - Number of persons involved, injured and/or missing
    - Number of responders with avalanche equipment
    - Vehicular involvement
    - Additional relevant information (weather [flyable?] and road condition, special requirements)
    - A call back number for reporting personnel
- ❑ Notify supervisor and relay the above Preliminary Accident Details to the Edmonton Control Centre 888-876-6711.
- ❑ Brief arriving rescuers.
- ❑ Document evacuations, arrivals, departures, environmental concerns (shelter, food/water, lights), site sketch, and photos.
- ❑ Commence shelter-in-place arrangements.
- ❑ Notify off-site personnel and expected travelers and visitors; instruct them to postpone attendance to site or provide alternative routes of travel.

6.2.5.2 Avalanche Rescue Card



6.2.6 Tornado

While tornadoes are not common along the majority of the Trans Mountain Pipeline there are locations, particularly in Alberta District, where tornado activity could develop and negatively impact Trans Mountain operations and personnel.

Tornadoes are defined as a violently rotating column of air which is in contact with the ground. They often develop during severe thunderstorms with frequent thunder and lightning. Tornadoes usually hit in the afternoon and early evening but have been known to strike at night as well.

Trans Mountain personnel should be aware of the potential signs of an incoming tornado. These may include:

- An extremely dark sky, sometimes highlighted by green or yellow clouds
- A rumbling sound or a whistling sound
- A funnel cloud at the rear base of a thundercloud, often behind a curtain of heavy rain or hail

In Canada, Environment and Climate Change Canada is responsible for warning the public when conditions exist that may produce tornadoes, through radio, television, social media, and the Environment and Climate Change Canada website and weather phone lines, using the following tornado alert system:

It is important to know the difference between a Tornado Watch and a Tornado Warning.

Tornado Watch – A tornado formation is likely in the area

Tornado Warning – A tornado has been sighted or seen on radar

6.2.6.1 Tornado Response Checklist

In the event the risk of a tornado has been identified, the following steps and procedures should be taken:

Tornado Watch

- ❑ Monitor for signs of a tornado and/or the issuance of a Tornado Warning.
- ❑ Shut down activities and/or muster personnel as required:
    - Shut down, isolate, and de-pressurize equipment, as time permits.
    - Shut off electricity and electrical equipment, as time permits.
    - Shut off gas supply and water supply, as time permits.

Tornado Warning and/or Tornado Sited

- ❑ Discontinue work and muster personnel indoors immediately.
    - Take shelter, preferably in a basement of a strong building.
    - If there is no basement, take cover under heavy furniture in the centre part of the building.
- ❑ Stay away from windows.
- ❑ Complete a headcount and account for all personnel.
- ❑ If required, and safe to do, search for missing people. Utilize appropriate equipment and resources.
- ❑ Provide regular updates to supervisor.
- ❑ Cell phones are the safest form of communication to use during a storm.
- ❑ Monitor the radio, social media on non-electrical devices for weather information updates, if safe to do so.
- ❑ Stay indoors until the tornado warning has been rescinded, and the order to muster has been rescinded.

If Outdoors

- ❑ Lie flat in the nearest depression such as a ditch or ravine.
    - Avoid tall objects, like trees, cranes, utility poles, etc.
- ❑ Cover your head to protect yourself from flying debris.
- ❑ Remain in place until certain the tornado has passed.
- ❑ Assess area for additional hazards that may have developed as a result of the storm, such as downed power lines, flood, fire, smell of natural gas, debris, etc.
- ❑ Provide regular updates to supervisor.

After the Storm

- ❑ Before moving out from cover survey the local area for any hazards that may have developed as a result of the tornado. Take caution against down power lines, fallen debris including broken glass, fires and potential flooding
- ❑ Provide first aid to anyone injured
- ❑ Notify your supervisor and Edmonton Control Centre of the situation status including injuries and infrastructure damage.
- ❑ If damage has occurred to Trans Mountain infrastructure such as the pipeline, follow the Emergency Response Plan Section 3.0 Spill/Site Assessment.

6.3 Seasonal Response Hazards

As response to pipeline and facility emergencies may occur at any time of year there is a possibility that personnel may be required to respond during adverse weather conditions. Given the location of the Trans Mountain Pipeline and its related facilities, responders may face conditions ranging from high heat to extreme cold, blizzard like conditions. It is imperative that responders take weather conditions into consideration as part of their overall response planning. Responders themselves must be aware of their own personal health at all times if effective operations are to be conducted. Ensuring a thorough Hazard Assessment/Tailgate Meeting is completed and a Safety Watch is appointed prior to operations cannot be overstated.

6.3.1 Winter Response Considerations

During a winter response personnel must consider the impacts that wind-chill and cold temperatures may have on responder health. Winter hazards that should be considered as part of the Health and Safety Plan include:

- **Hypothermia** – when the body loses heat faster than it can be produced leading to a reduced overall body temperature. Characterized by shivering, clumsiness and/or confusion.
- **Frostbite** – a freezing of the skin and underlying tissue leading to numbness, hard, red and/or pale skin.
- **Visibility during blizzards**, especially when driving and operating equipment
- **Warm-up areas**, including tents and vehicles, should be available and on-site in order to provide responders with a place to take breaks and effectively recover.

6.3.2 Summer Response Considerations

During the summer months personnel must be aware of the impact that heat and/or humidity will have on overall health. Summer related hazards that should be considered as part of the Health and Safety Plan include:

- **Heat Exhaustion** - a condition that occurs when the body is overheated and dehydrated. Symptoms associated with this illness may include heavy sweating, dizziness and fainting
- **Heat Stoke** – occurs when the body is overheated, at or above 104 F (40 C), due to prolonged heat exposure. Is considered a medical emergency requiring immediate treatment in order to prevent permeant physical damage
- **Biological hazards** – a review of potentially hazardous wildlife (insects, mammals) and plants (poisonous weeds) should be completed with responders as part of the pre-job Tailgate Meeting
- **Shaded areas** with adequate rehab supplies, including water, should be established on-site in order to provide responders with an area to rest and recover during break periods

6.4 Fire Hazards

Fire hazards, other than wildfire, which could impact Trans Mountain operations can be grouped into three main categories:

- Terminal and tank area fires
- Pump station fires
- Pipeline right-of-way fires

In general, there are three classes of fire that Trans Mountain responders should be familiar with. These classifications stem from the type of fuel that ignited and maintains the fire. The following descriptions provide a brief overview of these classes.

- **Class A Fires** - Consist of ordinary combustibles such as wood, paper, trash or anything else that leaves an ash. Water works best to extinguish a Class A fire.
- **Class B Fires** - Are fueled by flammable or combustible liquids or gasses, which include oil, gasoline, and other similar materials. Class B fires often spread rapidly and, unless properly secured, can re-flash after the flames are extinguished. Smothering effects which deplete the oxygen supply work best to extinguish Class B fires.
- **Class C Fires** - Energized electrical fires are known as Class C fires. Always de-energize the circuit then use a non-conductive extinguishing agent, such as Carbon dioxide. They can be caused by a spark, power surge or short circuit and typically occur in locations that are difficult to reach and see.

In the event of a fire originating from a Trans Mountain facility priority must be given to life safety. Notification and evacuation of the hazard area are the primary means of initial response. Once personnel are accounted for the On-Scene Commander may determine response options including offensive, defensive or non-intervention strategies.

6.4.1 Terminal Fire Response

All Terminals have Fire Safety Plans which provide information regarding building evacuation procedures, evacuation routes, on-site fire equipment and fire prevention practices. For additional information refer to the specific terminal Fire Safety Plan

Strategies and tactics to be utilized when responding to a Terminal fire are specifically outlined in their corresponding facility Fire Pre-Plan. Fire Pre-Plans provide initial responders with immediate response options including defensive and offensive firefighting tactics. The plans incorporate fire calculations for necessary amounts of water, foam concentrate, and pumping capacities needed to extinguish rim seal, full surface and containment bay fires. They also include strategies for the extinguishment of three-dimensional fires that may occur at valve and/or manifold locations.

6.4.2 Vehicle Fires

Most vehicle fires are a result of malfunctioning electrical components, fuel lines or a fuel pipe splitting. In the case that Trans Mountain personnel are in a vehicle and begin to see smoke or smell burning material they should safely pull over and shut off the vehicle. Shutting off the engine will stop the flow of fuel and may prevent a full-blown fire. It is critical for the driver and other personnel to ensure they immediately exit the vehicle, and if safe, move off the road in order to reduce the likelihood of secondary accidents.

- For small fires only (passenger section, electrical fault, fires contained to contents of cargo space or trunk) use a vehicle ABC type fire extinguisher, if it is safe to do so.
- For large fires or fires involving fuel or storage tanks on the vehicle, evacuate the area by at least 25 metres and call for assistance from emergency responders. Once in a safe area you should stand by, assess the situation, and wait for assistance from emergency responders.

6.4.2.1 Vehicle Fire Response Checklist

- ❑ If smoke or flames are detected from an operating vehicle, safely pull to the side of the road and exit the vehicle.
- ❑ Move away from the vehicle and call 911 for any large or out of control fire.
- ❑ If the fire is small in size attempt extinguishment with vehicle fire extinguisher if it is safe to do so.
- ❑ Notify your supervisor and the Edmonton Control Centre.

6.5 Security Hazards

Security hazards present themselves in a variety of ways including, terrorism, breach of security events and vandalism. Often the main objective of these actions is to halt or disrupt normal operations. For these reasons Trans Mountain has established robust security protocols for the Trans Mountain Pipeline and its related facilities. Security protocols and response actions are further supported by an active Security Management Program. The Security Management Program focuses on direct and/or impending threats to ongoing operations and in most instances resolves issues without concern. However, in the event that a substantial security incident results in an impact to operations there is a strong likelihood that the Incident Management Team and Emergency Response Plans are activated. For these reasons a brief overview of common security hazards and response actions are outlined in the following subsections.

6.5.1 Terrorism

Terrorism is used to intimidate, coerce or attain ransom through the use of violence and/ or threats against persons (employees, general public, governing bodies, etc.) or property (pipeline, facilities, equipment, etc.). Violence is not the main goal of terrorism but a means to draw the attention of the local public, the government and the world to their cause.

The main reasons terrorist groups commit acts of violence to:

- Satisfy vengeance.
- Create a desired influence on Governing bodies decisions, legislations or other crucial actions.
- Attract media attention in order to acquire worldwide, national or local recognition for their cause.
- Discourage foreign investment, tourism or assistance programs that may affect the target country’s economy.
- Produce widespread fear of society.
- Destroy key infrastructure and facilities that will disturb lines of communication and create societal uncertainty about the Government’s ability to protect and provide for its citizens.

6.5.1.1 Terrorism Response Checklist

If you experience or witness a direct, credible threat to Trans Mountain personnel or property:

- ❑ Call 911 immediately to report the situation.
- ❑ If possible, evacuate the site and move to a secure location.
- ❑ If required, and safe to do, search for missing people. Utilize appropriate equipment and resources.
- ❑ If unable to leave the facility/building choose a safe location such as an office to hide. Lock and/or barricade yourself in a secure room if possible.
- ❑ Notify your supervisor and the Edmonton Control Centre as soon as safely possible.

6.5.2 Breach of Security or Vandalism

In the event that a Trans Mountain employee or contractor arrives at a company owned site and notices suspicious and/or unusual activity, including property damage they should contact local police/security and the Edmonton Control Centre before proceeding to investigate.

Other unusual activity may include:

- The presence of drones flying overhead or hovering around the incident site
- Media representatives or unidentified individuals using cameras, cell phones, video recording devices or any other devices to document the incident site
- Fixed wing aircraft or helicopters exhibiting behaviour indicating their presence is related to the incident

6.5.2.1 Breach of Security or Vandalism Checklist

- ❑ Notify the Control Centre immediately of any of the following in the vicinity of an active Trans Mountain site; provide details to the Control Centre Operator:
    - Suspicious individuals
    - Suspicious vehicles parked at, or near, the incident site
    - Suspicious packages located at, or near, the incident site
    - Signs of unauthorized access including vandalism or breach of security
- ❑ If the situation is judged to be UNSAFE in any way:
    - Withdraw to what is judged to be a safe distance.
    - Immediately contact Police (911).
    - Do not engage any individuals in any way.
    - Await the arrival of the Police at the incident site.
- ❑ If the situation is considered SAFE:
    - Request that Police (911) be called to the site.
    - Try to preserve any possible evidence found which may indicate malicious activity.
    - Notify Trans Mountain Security Manager.
- ❑ Remain on-site to serve as a point of contact for the authorities.
- ❑ Be available as a liaison between Company Management and the local authorities.
- ❑ Inventory damages/property loss and estimate cost of repair or replacement.
- ❑ Make notes of evidence obtained.
- ❑ Obtain duplicate photos taken during the investigation.
- ❑ Evaluate the necessity of security personnel during non-business hours

6.5.3 Bomb Threat

A bomb threat or threat of any other nature may be received by anyone in Trans Mountain. In most cases, persons making such threats will deliver their message by phone to the first person contacted and will not wait for the call to be transferred. Consequently, it is important that a call of this nature be handled in accordance with an established plan.

6.5.3.1 Bomb Threat Checklist

All threats must be taken seriously.

- ❑ If threat is received by telephone, record the following information:
    - Exact wording
    - Time call was received
    - Record callers phone number if available on call display
    - Time the device or bomb is set to go off
    - Sex of caller
    - Age (young, old, teen)
    - Accent
    - Background noise (music, traffic, etc.)
- ❑ If the caller remains on the line, attempt to ascertain the following information:
    - Exact location of the bomb or nature of any other threat
    - When it is set to go off?
    - The kind and size of bomb?
    - Why it was put there?
    - How did it get into the facility?
- ❑ While the caller in on the line, attempt to locate your supervisor to listen in on the call.
- ❑ If the threat is received by email, do not delete, and contact management immediately.
- ❑ If threat is received by mail:
    - Do not handle it unnecessarily.
    - Place it in a plastic cover immediately.
- ❑ After call is over, or email/mail received contact your supervisor, and VP Operations or designate to determine further actions i.e., terminal shut down and evacuation. If required, and safe to do, search for missing people. Utilize appropriate equipment and resources.

7.0 SITE INFORMATION

The Trans Mountain system consists of 4 land-based Terminals linked to the Trans Mountain Pipeline between Edmonton and Burnaby:

- Edmonton Terminal
- Kamloops Terminal
- Sumas Terminal
- Burnaby Terminal

This section provides a simple description of each terminal addressed by this Emergency Response Plan.

This plan does not cover pipeline emergencies outside the boundaries of the terminal or any migration of spilled product offsite; please refer to the Trans Mountain Pipeline Emergency Response Plan for response actions. This plan also does not cover the Westridge Marine Terminal; please refer to the Westridge Marine Terminal Emergency Response Plan for response actions at that facility.

7.1 Edmonton Terminal

Edmonton Terminal is located at kilometre zero of the Trans Mountain Pipeline. The physical location of the Terminal is the northeast corner of the intersection of Highway 16A East (Baseline Road) and 17th Street in the County of Strathcona. Access to the Terminal is via a service road which intersects with 17th Street. In addition to bulk product storage the Edmonton Terminal also houses the Trans Mountain Control Centre, which controls the Terminal. The Edmonton Terminal is staffed 24 hours a day year-round enabling ease of access to response equipment.

The total area of the Terminal is 55.1 ha (136.1 acres) and the site enclosed by security fencing with controlled access. The site is generally level with surface drainage directed through a ditch collection network to the north side of the Terminal.

The Edmonton Terminal is divided into two (2) distinct areas, the East Tank Area and the West Tank Area. Overall, the Terminal houses 39 atmospheric storage tanks which range in size from 80,000 bbl (13,100 m^3) to 400,000 bbl (63,595 m^3). 14 of the 39 tanks are located within the West Tank Area and 25 of the 39 tanks are located within the East Tank Area.

The West Tank Area includes 14 of the 39 tanks located at the Terminal. These tanks are:

- 4 fixed roof internal floating tanks;
- 3 steel internal floating roof tanks with geodesic domes;
- 2 aluminum internal floating roof tanks with geodesic domes; and
- the remaining are open floating roof tanks.

The East Tank Area includes 25 of the 39 tanks located at the Terminal. These tanks are:

- 23 are open floating roofs; and
- 2 steel internal floating roof tanks with geodesic domes.

All tanks have fire suppression systems installed. There is also supplemental on-site fire suppression equipment including foam bladder trailer, foam cannon and large volume hoses.

Detailed information pertaining to fire suppression systems and onsite fire response, including strategies, tactics, and equipment is located within the Edmonton Terminal Fire Pre-Plans.

Of note: the North 40 Terminal is located on the Edmonton Terminal, however, it is not owned nor operated by Trans Mountain. The fire suppression systems and drainage system for the North 40 tanks are connected to the Trans Mountain Edmonton Terminal. There are 9 tanks located within the North 40 Terminal.

7.1.1 Mutual Aid

Trans Mountain belongs to the Strathcona District Mutual Assistance Program website (SDMAP). SDMAP is a partnership of more than 30 industrial and community agencies dedicated to emergency response planning in east Edmonton and Strathcona County. Since 1979, SDMAP has been sharing best practices for industrial incident planning and response. The activation and coordinator of SDMAP is done through Strathcona County Emergency Services.

7.1.2 SDMAP Equipment Request Form

1. Check information in boxes A, B and C to determine the equipment requested.
2. Call 911 - Ensure you are speaking to the Sherwood Park call centre.

"*Hello this is {insert name} calling from Trans Mountain's Edmonton Terminal. We are requesting assistance from SDMAP for the following items {list requested items from box D indicating the company name} to report to Staging Area {insert staging area from box B}, all responders should be wearing the following personal protective equipment {insert items from box A}*."

Box A PPE Required:

- ❑ Approved Fire-Resistant Coveralls
- ❑ Hard Hats
- ❑ Gloves
- ❑ Safety Glasses
- ❑ Steel-Toed Boots
- ❑ Fire Turn out gear, SCBA

Box B Staging Area:

- ❑ Emergency Response Location A: Main Gate
- ❑ Emergency Response Location B: Northwest Construction Gate
- ❑ Emergency Response Location C: Control Centre
- ❑ Emergency Response Location D: District Office

Box C – Other Information

Box D – Equipment Request

Alberta Envirofuels

- ❑ 11,000 Litres (2900 Gallons) AFFF Foam
- ❑ 4 Stingers (monitors)
- ❑ 1 portable generator

Imperial Oil Ltd.

- ❑ 10,000 Gallons AFFF Foam
- ❑ 2,000 gpm pumper truck
- ❑ 5 portable monitors
- ❑ 2,500' – 38mm hose
- ❑ 2,850 – 65mm hose
- ❑ 200' – 100mm hose
- ❑ 100' – 125mm hose

Suncor Energy Refinery

- ❑ 8,000 Gallons AFFF Foam
- ❑ 3,000 gpm pumper truck (87' aerial)
- ❑ 6,000 gpm fire pump
- ❑ 2,000 x 6,000 gpm fire cannon
- ❑ 10 portable monitors
- ❑ 600' – 38mm hose
- ❑ 4,000' – 65mm hose
- ❑ 600' – 100 mm hose
- ❑ 9,000' – 125mm hose

Trans Mountain Edmonton Terminal

- ❑ 2,000 x 8,000 gpm fire cannon
- ❑ 6,000' – 6" hose

7.1.3 Air Monitoring

Edmonton Terminal has a permanent air monitoring station that provides continuous monitoring of volatile organic compounds, ozone, and select gases. Meteorological parameters of air temperature, relative humidity, wind speed and direction, atmospheric pressure, and precipitation are continuously measured. Personal air monitors can be used to supplement monitoring.

Additionally, Trans Mountain belongs to the Strathcona Industrial Association (SIA) which are non-profit groups gathering air quality data in the vicinity of Edmonton Terminal. The real time data can be obtained from www.capitalairshed.ca.

The Environmental Monitoring and Science Division (EMSD) within Alberta Ministry of Environment and Protected Areas (EPA) is responsible for monitoring, evaluating, and reporting on key air, water, land, and biodiversity indicators. EMSD operates the Mobile Air Monitoring laboratory (MAML) which can provide immediate air quality "snapshots" on location. The unit samples air quality at specified time or distance intervals and analyzes samples immediately. The MAML can respond to air quality concerns from Alberta communities and explore potential sites for Alberta's permanent monitoring network in locations that lack permanent monitoring stations. Several similarly equipped trailers, the Portable Air Monitoring Laboratories (PAML), offer similar benefits and are used for three to six-month time periods.

In the event of an emergency, the Public Health Assessment and Response Plan for Airborne Health Risks will be activated in conjunction with this Plan. Fixed air monitoring units will be set up around the impacted area to assess migration of air emissions. These monitors can send real time data to the EU, including: LELs, O_2, VOCs, and toxic gases (H_2S, SO_2, CO or NO_2). Mobile air monitoring teams will be deployed to nearby communities or public areas to assess ambient air quality using direct reading instrument.

Additionally, Trans Mountain response personnel will perform continuous air sampling for H_2S, LEL, O_2, and CO along the perimeter of the Initial Isolation Zone using the Ventis MX4 personal gas monitor until contracted services arrive to confirm the initial isolation zone and need for the expansion of the zone.

An incident specific Air Monitoring Plan will be developed to support the Incident Action Plan.

7.1.4 Fire Safety Plan

There are a number of site drawings for Edmonton Terminal which outline the individual buildings and tank areas with respect to mustering locations and fire escape routes. Please refer to the "Fire Safety Plan" for detailed drawings of each of the buildings.

7.1.5 Public Evacuation

If an incident occurs, Trans Mountain personnel will determine and communicate to the IC or Control Centre the Protective Action Zone and recommended public protective measures. Local authorities are responsible for enforcing the measures, including public evacuation alerts and orders. For additional information on public evacuations, refer to Section 7.1.7 Initial Protective Action Zones – Edmonton Terminal of this ERP and the Edmonton Evacuation Plan.

7.1.6 Site Drainage

Edmonton Terminal has been designed to ensure any leaked product and/or surface water does not leave the terminal property until it is safe to be released.

The West Tank Area contains 14 tanks within common or individual tank bays. Tank 23 has a lowered containment bay wall and directs overflow to tank bay 7,8, 9 and/or 10. Tanks 1, 2, 3, 4, 20, 21 and 22 have partial containment within the tank bays. When a spill exceeds the partial containment volume the overflow is directed to the remote impoundment via underground pipe. In the event that the remote impoundment is at capacity and cannot receive additional volume an automated valve will close. In this case the maximum credible spill will be retained by a shared containment of Tanks 1, 2, 3, 4, 20, 21 and 22. All tanks in the West Tank Area have surface run-off contained within the secondary containment areas. After release the clean runoff from the tank bays will be combined with surface run-off from the other areas of the facility and ultimately reach the lift station via underground piping and then enter remote impoundment via manual valve before leaving the site.

The East Tank Area has been designed as a full remote impoundment per NFPA 30 “Flammable and Combustible Liquids Code”. The principle is that the maximum credible spill of 385,000 bbl. will be completely contained in the remote impoundment, which also has a generous allowance for accumulated rainwater. Additional containment within the common area is for the very large contingency precipitation and fire-water volumes or for impounding spilled oil if the remote impoundment were to reach the maximum containment limit. The common area has not been designed for containment of product as it has been designed to flow all product to the remote impoundment on the northwest corner of the property where it can be safely handled by responders.

There is a natural drainage creek that intersects the terminal and has been rerouted through a culvert bypass system. This culvert system takes run off water from Enbridge and Pipeline Alley via a concrete vault at the east side of the property (MH-12) and terminates at the existing culvert at northwest road. Eventually this water ends up in the North Saskatchewan River. This culvert system has a hydrocarbon detection system at MH-12. In the event that hydrocarbons are detected at MH-12 it will trigger the closure of the normally open bypass culvert gate at MH-15, a second normally closed gate will open to divert the culvert flow to the remote impoundment until the culvert is cleared of all hydrocarbons.

There are two normally open automated sluice gates located at MH-09 which connects the East Tank Area to the remote impoundment. These gates would be closed in the event of a minor spill in the tank area to limit contamination. However, these gates would remain open for normal operations and for a major spill, until the remote impoundment area reaches a high level of 675.5m. A high-level alarm will automatically close the sluice gates at MH-09, if there is a loss of power to these gates, they can be closed manually.

The remote impoundment area is equipped with a pollution control system where there is a normally closed manually operated sluice gate to regulate the flow from remote impoundment to the creek which eventually flows into the North Saskatchewan River. The water is not released until it is tested and accepted for discharge and is controlled at a maximum allowable release rate of 4.1 L/s/ha as set by Strathcona County.

The Alberta District Geographic Response Plan contains Control Point Data Sheets which contain specific information and tactics that can be used during a spill.

7.1.7 Initial Protective Action Zones – Edmonton Terminal

During the outset of the incident, the local authority makes the decision whether to implement the initial public safety measures for the Protective Action Zone.

Trans Mountain personnel will provide the local authority and other relevant government departments and supporting entities with incident-specific technical information and air monitoring data. Trans Mountain personnel will also communicate the incident-specific Protective Action Zone and suggested public safety measures.

Using Table 1 on the following page, and the Edmonton Terminal Evacuation Plan as a reference together with the incident-specific technical and hazard information provided by Trans Mountain and the local authority’s evacuation procedures, the local authority will identify the appropriate public safety measures and determine, if required, the size and boundaries of the evacuation or shelter-in-place area. The local authority may use its own distances, but they should not be smaller than those calculated by Trans Mountain.

Trans Mountain will support, as required, the implementation of the public safety measures under the direction of the local authority.

Table 1: Incident-specific Protective Action Zones – Edmonton Terminal

Incident Type	Hazard	Protective Action Zone
Spill, no fire	Vapour	300 metres
3-D fire[8]/rim seal fire	Heat	192 metres
Full-surface fire	Heat	192 metres
	Boil-over	616 metres (10x diameter of largest tank at the Edmonton Terminal)

The ICP, together with the local authority, will continually monitor the hazards and the incident outside of Terminal boundaries to determine if the situation has evolved, using the technical information and air monitoring data collated by the Environment Unit. This additional assessment will be used to determine if subsequent actions are required, including if the Protective Action Zone requires expansion or contraction. Trans Mountain will support the local authority in these efforts by assisting with the implementation of further public safety measures, as required.

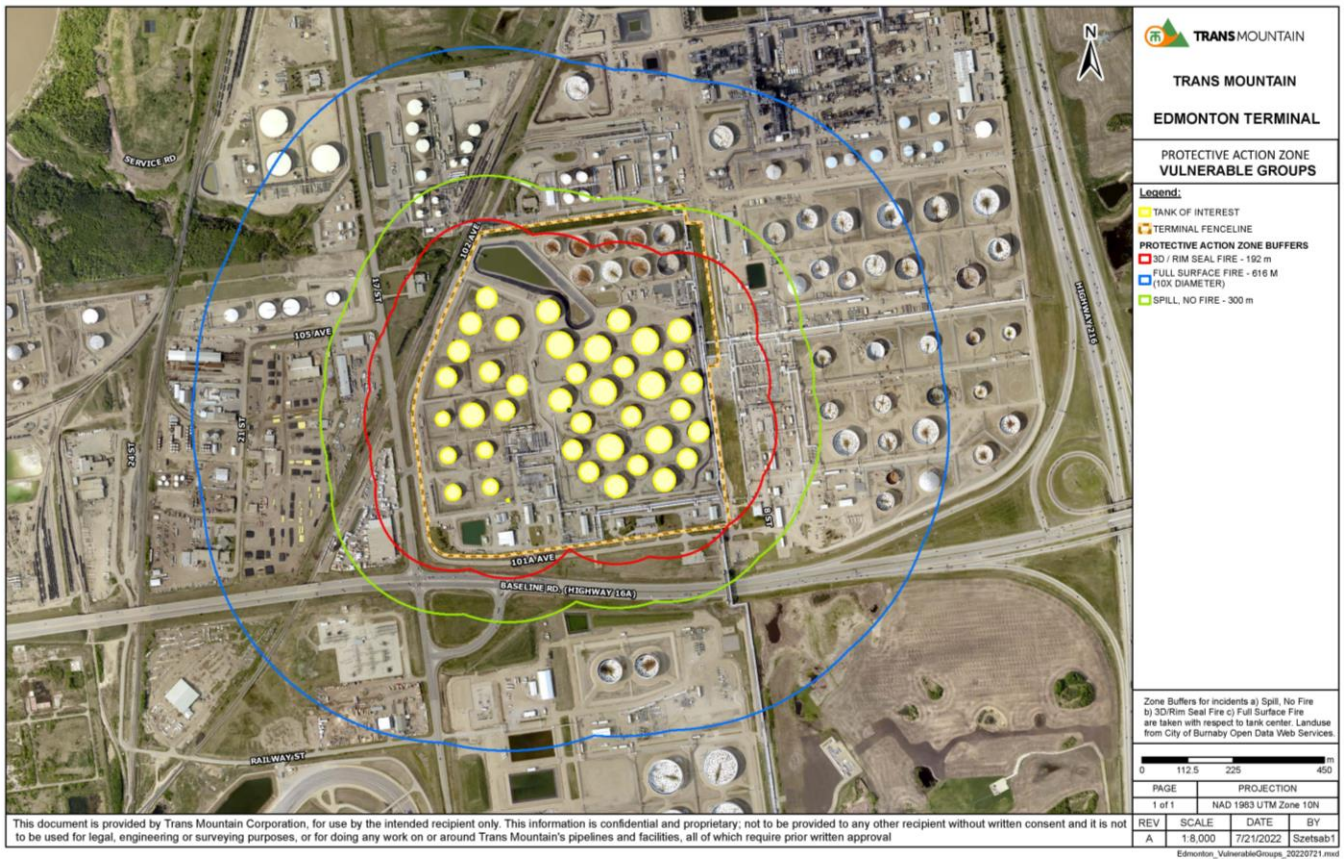
7.1.7.1 Initial Protective Action Zone Map

The following map depicts the Protective Action Zone buffers for Edmonton Terminal including a credible worst-case scenario. At the time of an incident, and based off the incident location, the protective action zones will be identified and confirmed upon by the Incident Commander and the Local Authority.

GIS specialists (Planning Section) have access to a variety of mapping layers, to prepare high resolution, incident-specific maps with the information on High Consequence Areas and receptors required to support the response.

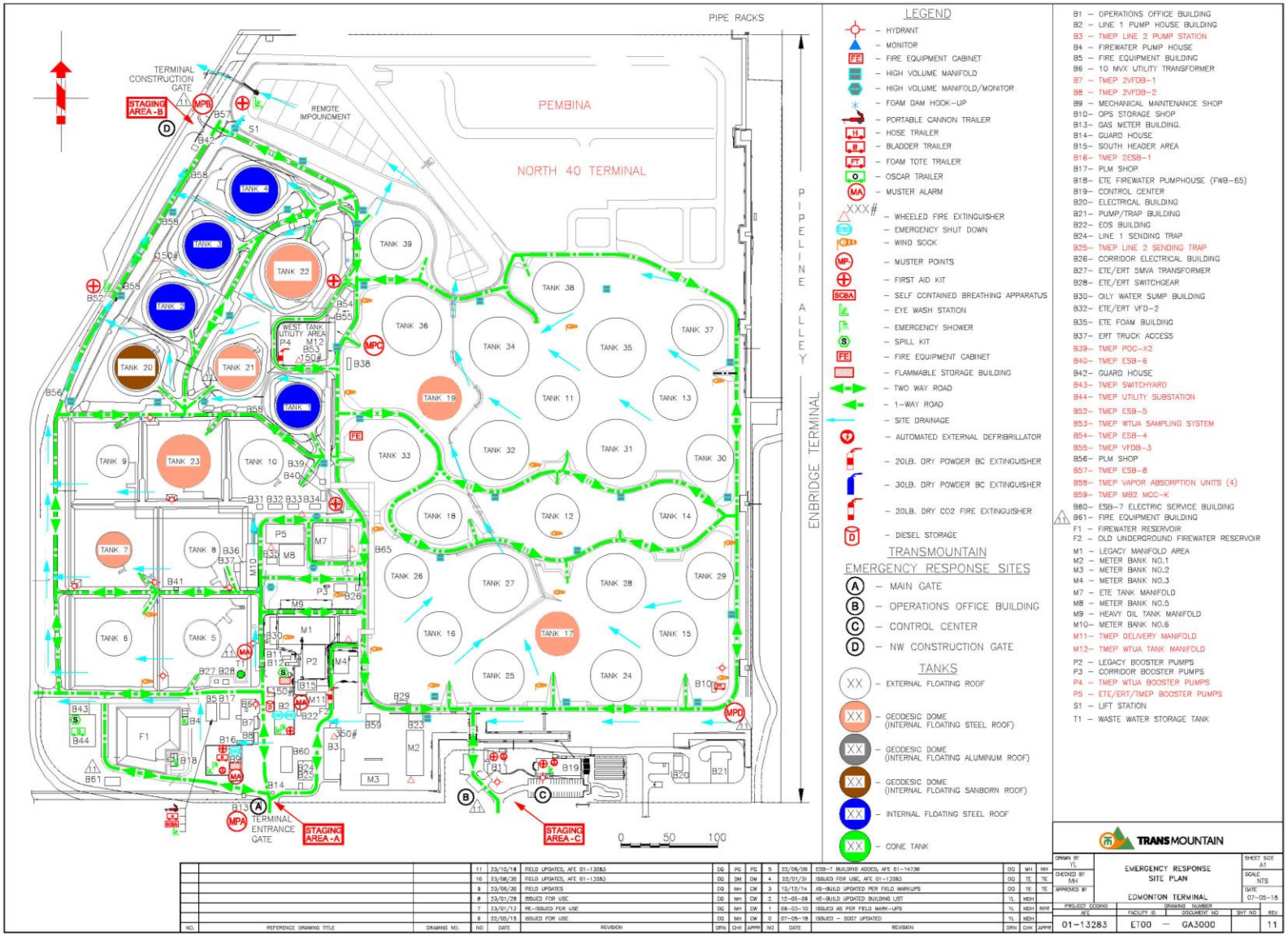
At this time, no vulnerable groups have been identified, at this time, within the Protective Action Zone for Edmonton Terminal.

[8] A three-dimensional fire is a liquid-fuel fire in which the fuel is being discharged from an elevated or pressurized source, creating a pool of fuel on a lower surface.



Note: GIS specialists (Planning Section) will produce high resolution maps for reference in the case of an emergency.

7.1.8 Edmonton Terminal Diagram



7.2 Kamloops Terminal

Kamloops Terminal is located west of the city of Kamloops in the province of British Columbia. The terminal is located south of the Trans-Canada Highway off Frontage Road. The surrounding land use is a combination of industrial, government (penitentiary) and undeveloped landscapes. The terminal property encompasses a total of 23.2 hectares (57.3 acres) of which 22.96 hectares (56.7 acres) is fenced.

Kamloops Terminal acts as both a pumping and terminal facility. The Terminal houses two 12,650 m^3 (80,000 bbl.) tanks, as well as a relief tank with a capacity of 1,590 m^3 (10,000 bbl.). Both tanks are open floating roof tanks.

The general topography of the site slopes downward in a north-easterly direction in steps from the tank area located at back of the property, down to the main pump building and on to the Central Division Office.

The Trans Mountain Pipeline system traverses the terminal site from the northwest to southeast, originating from Darfield Pump Station and supplying Stump Pump Station. The Terminal is controlled by the Control Centre, located in Edmonton.

All tanks have fire suppression systems installed. There is also supplemental on-site fire suppression equipment including large volume hoses, wildfire response equipment and additional foam supply.

Spill equipment is also stored at the Terminal, including Oil Spill Containment and Recovery (OSCAR) trailer, boom trailer, two response boats, non-floating oil response trailer, wildfire trailer, wildlife trailer, and a winter response trailer.

Response equipment is accessible to Trans Mountain operational staff who have 24-hour access to the Terminal.

Detailed information pertaining fire suppression systems and onsite fire response, including strategies, tactics, and equipment is located within the Kamloops Terminal Fire Pre-Plans.

7.2.1 Mutual Aid

Trans Mountain has entered into a Mutual Aid Agreement with the Kamloops Fire Rescue Department, in which both parties recognize that it is in the community's best interest to be proactive in planning responses to Emergencies and to cooperate with each other in the event of an Emergency.

7.2.2 Air Monitoring

Kamloops Terminal has fixed combustible gas detection located within the Manifold Building. The Terminal has various LEL and vapour monitoring options on-site, including Personal four head air monitors and VOC detectors which can be used in the short term to determine air quality.

The Public Health Assessment and Response Plan for Airborne Health Risks will be activated in conjunction with this Plan. Fixed air monitoring units will be set up around the impacted area to assess migration of air emissions. These monitors can send real time data to the EU, including: LELs, O_2, VOCs, and toxic gases (H_2S, SO_2, CO or NO_2). Mobile air monitoring teams will be deployed to nearby communities or public areas to assess ambient air quality using direct reading instruments.

Additionally, Trans Mountain response personnel will perform continuous air sampling for H_2S, LEL, O_2, and CO along the perimeter of the initial isolation zone using the Ventis MX4 personal gas monitor until contracted services arrive to confirm the initial isolation zone and need for the expansion of the zone.

An incident-specific Air Monitoring Plan will be developed to support the Incident Action Plan.

7.2.3 Fire Safety Plan

There are a number of site drawings for Kamloops Terminal which outline the individual buildings and tank areas with respect to mustering locations and fire escape routes. Please refer to the “Fire Safety Plan” for detailed drawings of each of the buildings.

7.2.4 Public Evacuation

If an incident occurs, Trans Mountain personnel will determine and communicate to the IC or Control Centre the Protective Action Zone and recommended public protective measures. Local authorities are responsible for enforcing the measures, including public evacuation alerts and orders. For additional information on public evacuations, refer to Section 7.2.6 Initial Protective Action Zones – Kamloops Terminal of this ERP and the Kamloops Evacuation Plan.

7.2.5 Site Drainage

Kamloops Terminal has been designed to ensure any leaked product and/or surface water does not leave the terminal property until it is safe to be released. The Terminal contains 2 - 80,000-barrel tanks and 1 relief that have individual tank bays designed to contain 110% of their volume.

The site’s natural drainage flows through the site, following the road infrastructure. Currently storm water runoff and drainage remediation work are under way; to ensure additional containment measures are available in the event of a release. Currently any collected surface water is retained within the containment bay area and is removed through evaporation.

7.2.6 Initial Protective Action Zones – Kamloops Terminal

During the outset of the incident, the local authority makes the decision whether to implement the initial public safety measures for the Protective Action Zone.

Trans Mountain personnel will provide the local authority and other relevant government departments and supporting entities with incident-specific technical information and air monitoring data. Trans Mountain personnel will also communicate the incident-specific Protective Action Zone and suggested public safety measures.

Using the Table 2 on the following page and the Kamloops Terminal Evacuation Plan as a reference together with the incident-specific technical and hazard information provided by Trans Mountain and the local authority’s evacuation procedures, the local authority will identify the appropriate public safety measures and determine, if required, the size and boundaries of the evacuation or shelter-in-place area. The local authority may use its own distances, but they should not be smaller than those calculated by Trans Mountain.

Trans Mountain will support, as required, the implementation of the public safety measures under the direction of the local authority.

Table 2: Incident-specific Protective Action Zones – Kamloops Terminal

Incident Type	Hazard	Protective Action Zone
Spill, no fire	Vapour	300 metres
3-D fire[9]/rim seal fire	Heat	192 metres
Full-surface fire	Heat	192 metres
	Boil-over	366 metres (10x diameter of largest tank at the Kamloops Terminal)

The ICP, together with the local authority, will continually monitor the hazards and the incident outside of Terminal boundaries to determine if the situation has evolved, using the technical information and air monitoring data collated by the Environment Unit. This additional assessment will be used to determine if subsequent actions are required, including if the Protective Action Zone requires expansion or contraction. Trans Mountain will support the local authority in these efforts by assisting with the implementation of further public safety measures, as required.

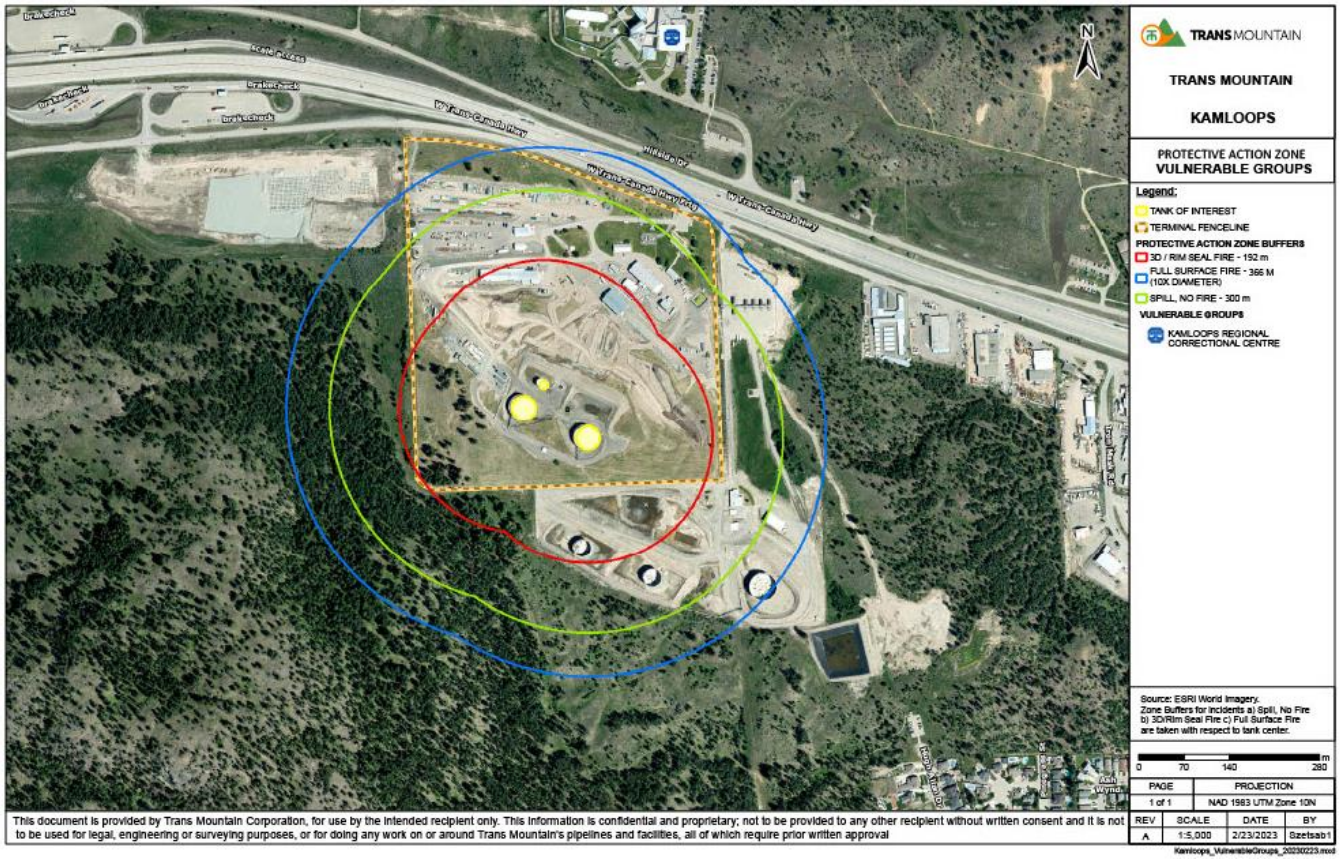
[9] A three-dimensional fire is a liquid-fuel fire in which the fuel is being discharged from an elevated or pressurized source, creating a pool of fuel on a lower surface.

7.2.6.1 Initial Protective Action Zone Map

The following map depicts the Protective Action Zone buffers for Kamloops Terminal including a credible worst-case scenario. At the time of an incident, and based off the incident location, the Protective Action Zones will be identified and confirmed upon by the Incident Commander and the Local Authority.

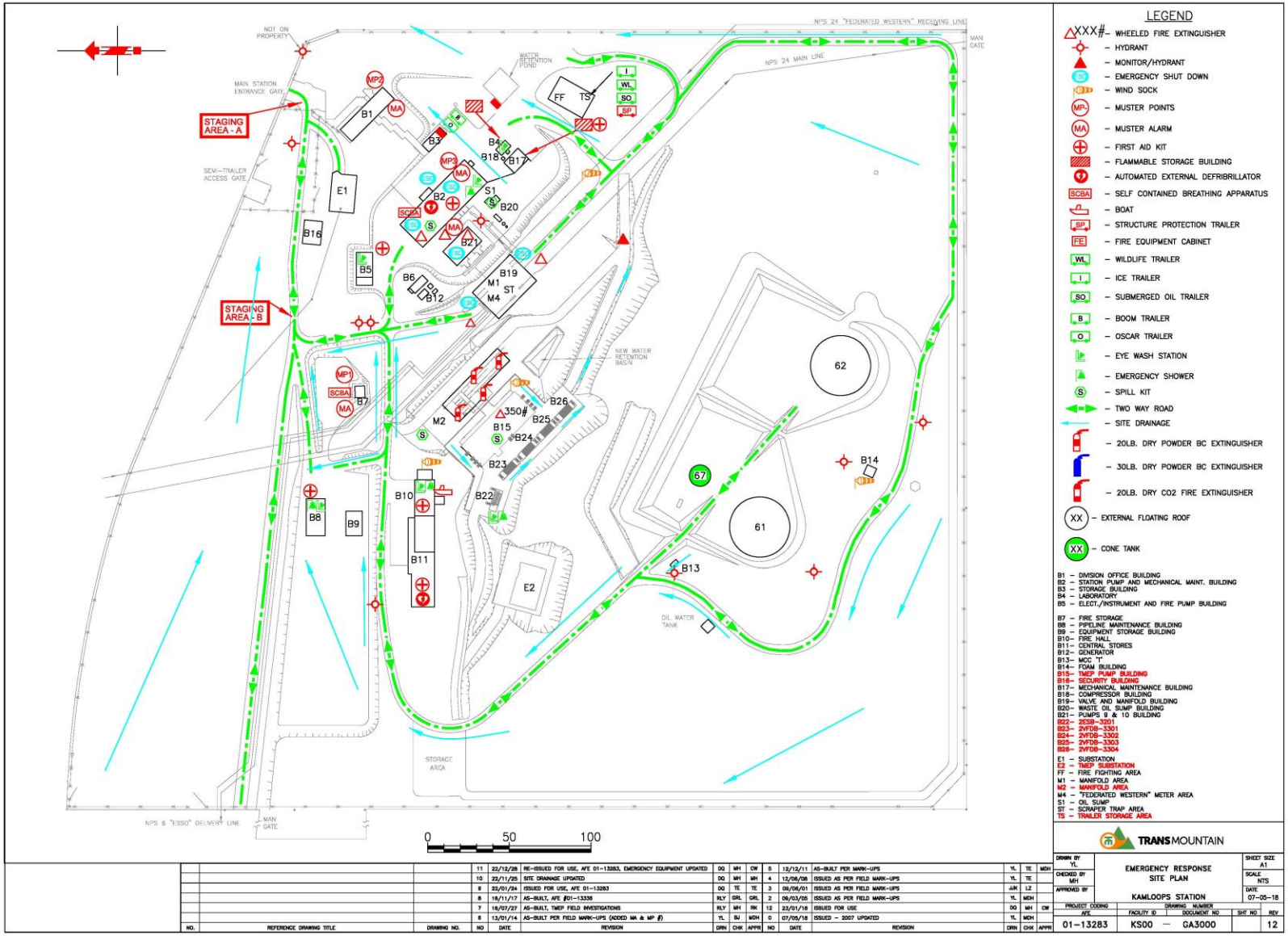
GIS specialists (Planning Section) have access to a variety of mapping layers, to prepare high resolution, incident-specific maps with the information on High Consequence Areas and receptors required to support the response.

No vulnerable groups have been identified, at this time, within the Protective Action Zone for Kamloops Terminal.



GIS specialists (Planning Section) will produce high resolution maps for reference in the case of an emergency.

7.2.7 Kamloops Terminal Diagram



7.3 Sumas Terminal

Sumas Terminal is located in Abbotsford, BC. The Terminal is located on Sumas Mountain Road. The property is adjacent to the Upper Sumas Mountain, McKee, and Keeping Roads. Semá:th First Nation Order is south of the Terminal, and a residential development is northwest of the site. Industrial mining operations also neighbour the Terminal.

Sumas Terminal encompasses a total of 43.2 hectares (106.7 acres) including the 12.2 hectares (30.1 acres) within the terminal fence line. It includes seven tanks ranging in size from 8,586 m^3 (54,000 bbl.) to 28,024 m^3 (176, 270 bbl.). There are:

- 1 fixed roof internal floating roof tank;
- 2 steel internal floating roof tanks with geodesic domes; and
- 4 open floating roof tanks.

The general topography of the property slopes downward in a southerly direction from the Terminal at an elevation of 261 metres to the fire make-up pump located at the southernmost point of the property. The Terminal is controlled by the Control Centre, located in Edmonton.

All tanks have fire suppression systems installed. There is also supplemental on-site fire suppression equipment including a hose trailer, foam canon, and portable fire pump. Detailed information pertaining to onsite fire response, including strategies, tactics, equipment, and fire suppression systems, is located within the Sumas Terminal Fire Pre Plans.

Response equipment is accessible to Trans Mountain operational staff who have 24-hour access to the Terminal.

Detailed information pertaining fire suppression systems and onsite fire response, including strategies, tactics, and equipment is located within the Sumas Terminal Fire Pre-Plans.

7.3.1 Air Monitoring

Sumas Terminal has a permanent air monitoring station that provides continuous monitoring of volatile organic compounds, ozone, and select gases. Meteorological parameters of air temperature, relative humidity, wind speed and direction, atmospheric pressure, and precipitation are continuously measured. Fixed gas detection is located within Tank Bays 121 and 122. Personal air monitors can be used to supplement monitoring.

In the event of an emergency, the Public Health Assessment and Response Plan for Airborne Health Risks will be activated in conjunction with this Plan. Fixed air monitoring units will be set up around the impacted area to assess migration of air emissions. These monitors can send real time data to the EU, including: LELs, O_2, VOCs, and toxic gases (H_2S, SO_2, CO or NO_2). Mobile air monitoring teams will be deployed to nearby communities or public areas to assess ambient air quality using direct reading instruments.

Additionally, Trans Mountain response personnel will perform continuous air sampling for H2S, LEL, O2, and CO along the perimeter of the initial isolation zone using the Ventis MX4 personal gas monitor until contracted services arrive to confirm the initial isolation zone and need for the expansion of the zone.

An incident specific air monitoring plan will be developed to support the Incident Action Plan.

7.3.2 Fire Safety Plan

There are a number of site drawings for Sumas Terminal which outline the individual buildings and tank areas with respect to mustering locations and fire escape routes. Please refer to the “Fire Safety Plan” for detailed drawings of each of the buildings.

7.3.3 Public Evacuation

If an incident occurs, Trans Mountain personnel will determine and communicate to the IC or Control Centre the Protective Action Zone and recommended public protective measures. Local authorities are responsible for enforcing the measures, including public evacuation alerts and orders. For additional information on public evacuations, refer to Section 7.3.5 Initial Protective Action Zones – Sumas Terminal of this ERP and the Sumas Evacuation Plan.

7.3.4 Site Drainage

Sumas Terminal has been designed to ensure any leaked product and/or surface water does not leave the terminal property until it is safe to be released. The west tank area section contains 5 tanks. Tank 100 is situated north of Tank 103 and Tank 104. Tank 100 and Tank 103 share a secondary containment area; Tanks 101, 102 and Tank 104 have their own individual containment. The east section tanks are in a separate containment area. This area contains 2 tanks with a joined tank bay. If Tank 121 or Tank 122 spills its contents, it will fill its containment bay and overflow into the adjacent containment bay.

The site has a natural drainage creek running along the northwest corner of the property, in addition to the natural drainage of the mountain slope, which extends from the east tank section towards the west tank section. Drainage out of the east tank section is controlled by two pumps that must be manually started to drain the tank bays. When the collected water is released, the natural drainage moves down the mountain side and follows the culvert system into the Tank 104 containment area.

The shared secondary containment area for Tank 100 and Tank 103 is designed with a storm drainage collection and discharge system. Storm water drainage is through a normally closed motor operated valve and will gravity flow via enclosed pipe directly to the Tank 102 containment area. From the Tank 102 secondary containment area storm water can then be pumped into the Tank 101 secondary containment area. From Tank 101 secondary containment area, storm water flows through the oil-water separator, to a storm water filter package, then discharged via the lift station to a site drainage point. During storm water release the discharge is monitored by a hydrocarbon detector; the discharge valve will automatically close in the event hydrocarbons are present.

7.3.5 Initial Protective Action Zones – Sumas Terminal

During the outset of the incident, the local authority makes the decision whether to implement the initial public safety measures for the Protective Action Zone.

Trans Mountain personnel will provide the local authority and other relevant government departments and supporting entities with incident-specific technical information and air monitoring data. Trans Mountain personnel will also communicate the incident-specific Protective Action Zone and suggested public safety measures.

Using Table 3 on the following page and the Sumas Terminal Evacuation Plan as a reference together with the incident-specific technical and hazard information provided by Trans Mountain and the local authority's evacuation procedures, the local authority will identify the appropriate public safety measures and determine, if required, the size and boundaries of the evacuation or shelter-in-place area. The local authority may use its own distances, but they should not be smaller than those calculated by Trans Mountain.

Trans Mountain will support, as required, the implementation of the public safety measures under the direction of the local authority.

Table 3: Incident-specific Protective Action Zones – Sumas Terminal

Incident Type	Hazard	Protective Action Zone
Spill, no fire	Vapour	300 metres
3-D fire[10]/rim seal fire	Heat	192 metres
Full-surface fire	Heat	192 metres
	Boil-over	457 metres (10x diameter of largest tank at the Sumas Terminal)

The ICP, together with the local authority, will continually monitor the hazards and the incident outside of Terminal boundaries to determine if the situation has evolved, using the technical information and air monitoring data collated by the Environment Unit. This additional assessment will be used to determine if subsequent actions are required, including if the Protective Action Zone requires expansion or contraction. Trans Mountain will support the local authority in these efforts by assisting with the implementation of further public safety measures, as required.

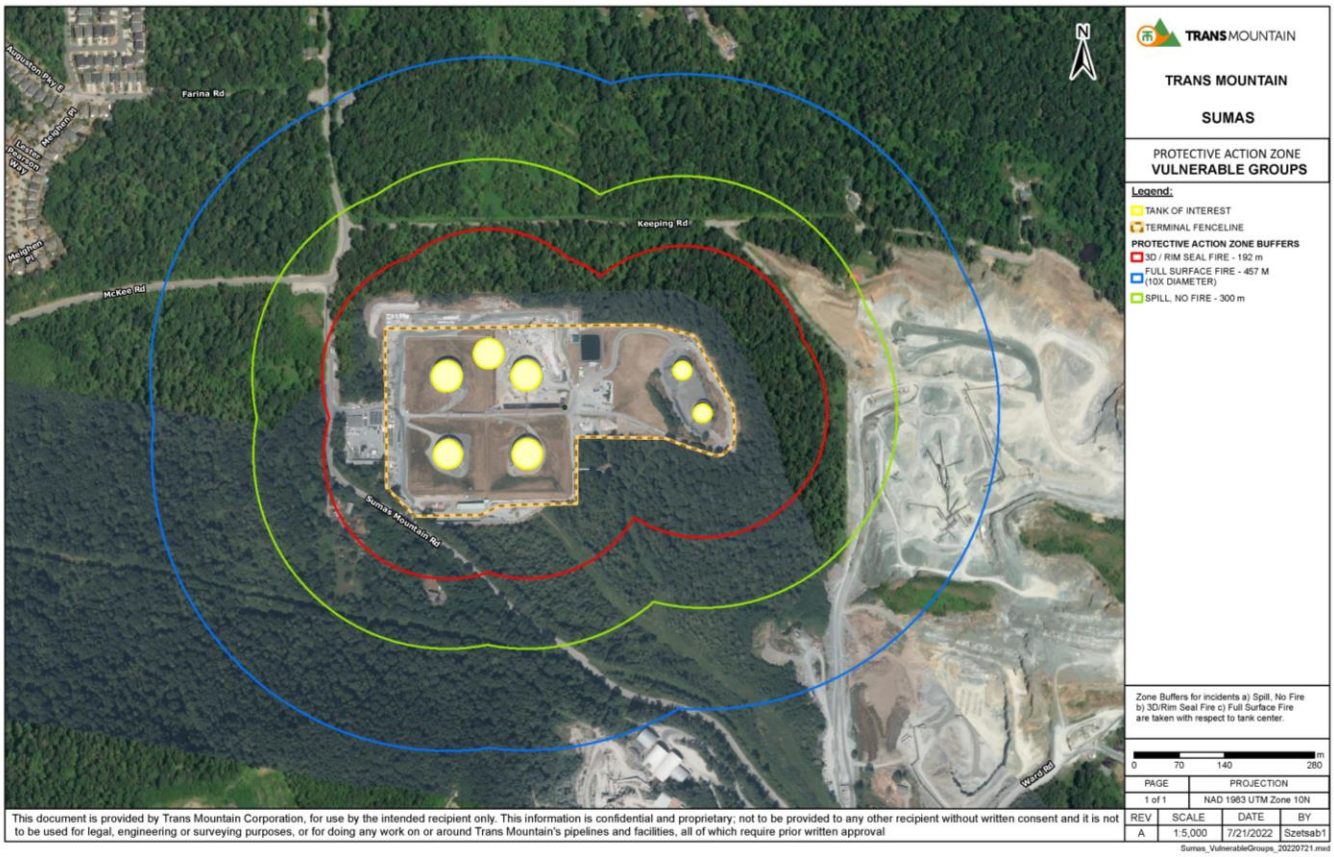
7.3.5.1 Initial Protective Action Zone Map

The following map depicts the Protective Action Zone buffers for Sumas Terminal including a credible worst-case scenario. At the time of an incident, and based off the incident location, the protective action zones will be identified and confirmed upon by the Incident Commander and the Local Authority.

GIS specialists (Planning Section) have access to a variety of mapping layers, to prepare high resolution, incident-specific maps with the information on High Consequence Areas and receptors required to support the response.

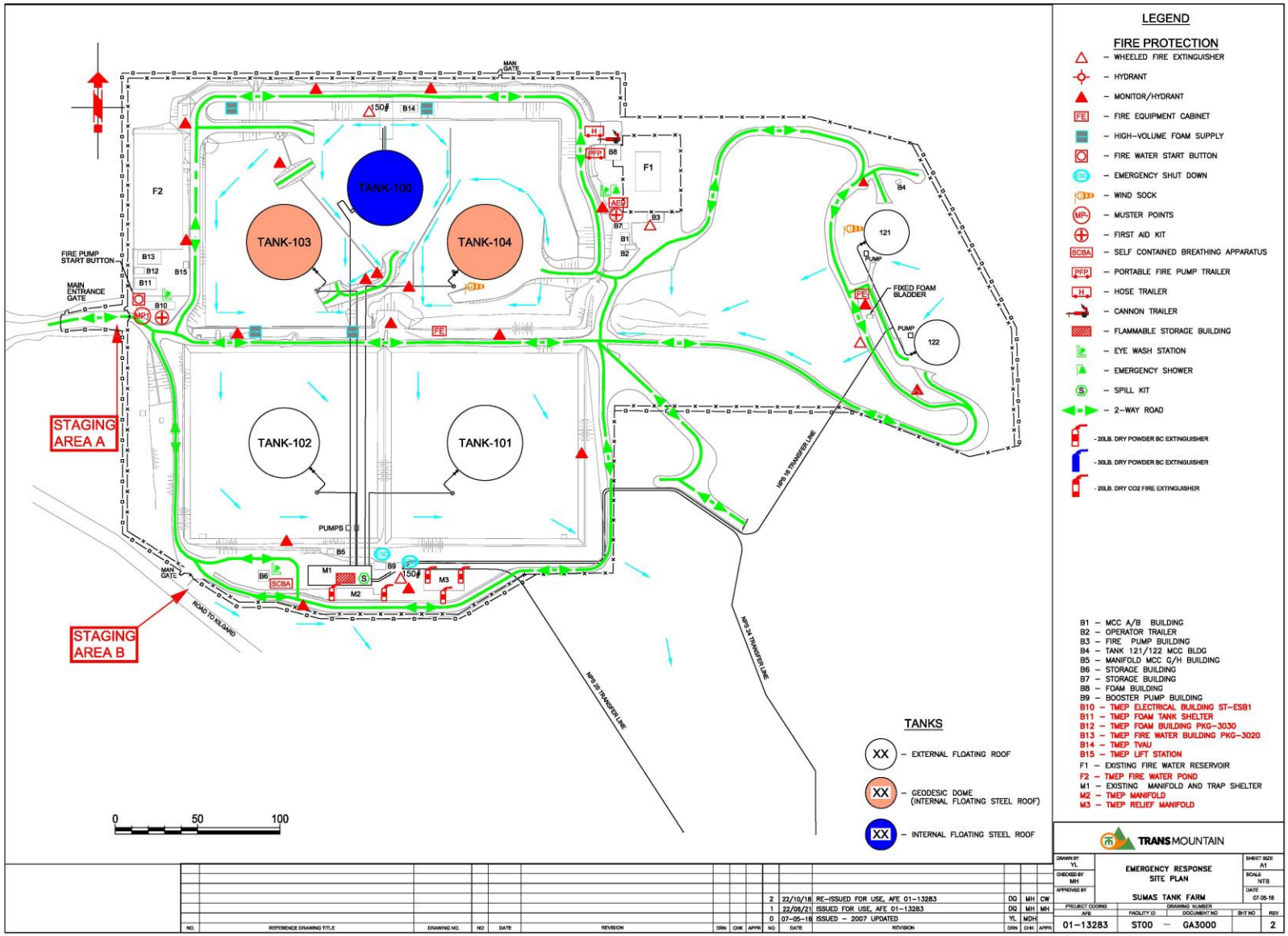
No vulnerable groups have been identified, at this time, within the Protective Action Zone for Sumas Terminal.

[10] A three-dimensional fire is a liquid-fuel fire in which the fuel is being discharged from an elevated or pressurized source, creating a pool of fuel on a lower surface.



GIS specialists (Planning Section) will produce high resolution maps for reference in the case of an emergency.

7.3.6 Sumas Terminal Diagram



7.4 Burnaby Terminal

The Burnaby Terminal is located within the City of Burnaby. The Terminal is located on Shellmont Street. The Terminal is bordered by Shellmont Street, Greystone Street/Arden Avenue, Burnaby Mountain Parkway, and the Gaglardi Way roads. The surrounding land use is industrial operations, residential developments, recreational facilities and parks, and Simon Fraser University to the northeast of the site. The Burnaby Terminal is staffed 24 hours a day year-round enabling ease of access to response equipment.

Total area occupied by the Terminal and is 70.2 hectares (173.5 acres). During normal working hours, controlled access to the Terminal is through the Main Gate which is manned by onsite Security.

The Burnaby Terminal is located on the southwest side of Burnaby Mountain and the site slopes steeply from Plant North to Plant South, with the tanks situated in a series of four (4) terraces. The elevation difference between each terrace ranges from 13 to 18 m. The fire suppression water reservoir is located at the highest elevation, and the fire pump building is situated on the western edge of the second tier below the reservoir. Tank Manifold, Booster Pumps, Mainline Receiving Barrel, Crude and Products Prover loops and the Control Building complex are all located at the same level. The Terminal is controlled by the Control Centre, located in Edmonton.

Trans Mountain's underground tunnel houses three 30-inch delivery pipelines that connect the Burnaby and Westridge Marine terminals to load vessels at the Westridge Marine Terminal. The tunnel is 130 metres below the surface, at its deepest, and is 2.6 km in length, and 4 metres in diameter. The tunnel is heavy steel-lined and fully sealed with concrete to increase product containment and safety features. The underground tunnel contains valves at each side with multiple leak detection mechanisms in place. Should a leak be detected, the pipeline will be shut-in, drained and repaired via inline tools.

Burnaby Terminal includes 26 atmospheric storage tanks ranging in size from 12,720 m^3 (80,000 bbl.) to 45,331 m^3 (285,123 bbl.) and one mainline relief tank (1,081 m^3 (6,800 bbl.)).The 26 atmospheric storage tanks consist of:

- 14 tanks with a steel pontoon internal floating roof (IFR) and a fixed steel cone roof;
- 6 tanks with external floating roofs, and
- 6 tanks with an internal floating roof and a geodesic dome roof.

All tanks have fire suppression systems installed. There is also supplemental on-site fire suppression equipment including a foam canon, fire hose trailer and large volume hoses.

Detailed information pertaining fire suppression systems and onsite fire response, including strategies, tactics, and equipment is located within the Burnaby Terminal Fire Pre-Plans.

7.4.1 Mutual Aid

Trans Mountain belongs to the Burrard Industrial Mutual Assistance Group (BIMAG). The agreement is amongst industrial operators in the Burrard inlet area.

7.4.2 Air Monitoring

Burnaby Terminal has a permanent air monitoring station that provides continuous monitoring of volatile organic compounds, ozone, and toxic gases. Meteorological parameters of air temperature, relative humidity, wind speed and direction, atmospheric pressure, and precipitation are continuously measured. Personal air monitors can be used to supplement monitoring.

In the event of an emergency, the Public Health Assessment and Response Plan for Airborne Health Risks will be activated in conjunction with this Plan. Fixed air monitoring units will be set up around the impacted area to assess migration of air emissions. These monitors can send real time data to the EU, including: LELs, O_2, VOCs, and toxic gases (H_2S, SO_2, CO or NO_2). Mobile air monitoring teams will be deployed to nearby communities or public areas to assess ambient air quality using direct reading instruments.

Additionally, Trans Mountain response personnel will perform continuous air sampling for H2S, LEL, O2, and CO along the perimeter of the initial isolation zone using the Ventis MX4 personal gas monitor until contracted services arrive to confirm the initial isolation zone and need for the expansion of the zone.

An incident specific air monitoring plan will be developed to support the Incident Action Plan.

7.4.3 Fire Safety Plan

There are a number of site drawings for Burnaby Terminal which outline the individual buildings and tank areas with respect to mustering locations and fire escape routes. Please refer to the “Fire Safety Plan” for detailed drawings of each of the buildings.

7.4.4 Public Evacuation

If an incident occurs, Trans Mountain personnel will determine and communicate to the IC or Control Centre the Protective Action Zone and recommended public protective measures. Local authorities are responsible for enforcing the measures, including public evacuation alerts and orders. For additional information on public evacuations, refer to Section 7.4.6 Initial Protective Action Zone – Burnaby Terminal of this ERP and the Burnaby Evacuation Plan.

7.4.5 Site Drainage

Burnaby Terminal has been designed to ensure any leaked product and/or surface water does not leave the terminal property until it is safe to be released. Secondary containment is provided by earthen berms with an impermeable liner or concrete berms. Of the 26 tanks at the Burnaby Terminal 12 have been designed with individual containment bays. A spill of any of these tanks will fill the containment bay which is capable of containing the full tank volume. The remaining 14 tanks are located in shared containments consisting of 2 tanks in each common containment area.

The storm water management at the Burnaby Terminal includes draining storm water collected in the housekeeping pad around the Existing Manifold Area, to Tank 99 (currently designated relief tank). Storm Water collected in the existing tank bay secondary containment areas at the terminal is directed to the existing East and West Oil Water Separators for removal of any hydrocarbons from the water before being discharged into the Tertiary Containment Area.

The Burnaby Terminal has a storm water collection and treatment system which collects and treats potentially contaminated water from housekeeping pads around Line 2 process areas and tank secondary containment areas associated with Line 2 tanks and some of the Line 1 tanks.

The Intermediate Storm Water Retention Area (ISWRA) allows for more effective management of overall site stormwater by providing a drainage system and additional intermediate storage capacity before water is discharged to the Tertiary Area. The high-efficiency oil-water separator downstream of the ISWRA provides an additional means to treat potentially oily water before it enters the Tertiary Containment Area. Stormwater areas not at risk for contamination flow directly to the Tertiary Containment Area before discharging to Eagle Creek. The Basin is monitored for the presence of hydrocarbons before discharge from the site. Eagle Creek also traverses the site from north to south. Through the main portion of the Terminal, the creek flow is routed through a buried pipeline to prevent contamination.

The Tertiary Containment Basin located in the lower southwest corner of the Terminal collects surface run-off from the Terminal site and discharges from the Oil Water Separators. A ditch and concrete swale system along the south boundary of the Terminal also channels run-off into the containment basin.

Discharge from the Tertiary Containment Basin is regulated by an adjustable outer ring on the standpipe and operates like a weir system taking the water from the lower portion of the water column. A valve on the line leading from the standpipe may be used to shut off discharge from the basin before it reaches a public water course (Eagle Creek) at the edge of the Trans Mountain property. Flow eventually enters Burnaby Lake. The water is tested on a regular basis to ensure there are no hydrocarbons being released to Eagle Creek and ultimately Burnaby Lake.

7.4.6 Initial Protective Action Zone – Burnaby Terminal

During the outset of the incident, the local authority makes the decision whether to implement the initial public safety measures for the Protective Action Zone.

Trans Mountain personnel will provide the local authority and other relevant government departments and supporting entities with incident-specific technical information and air monitoring data. Trans Mountain personnel will also communicate the incident-specific Protective Action Zone and suggested public safety measures.

Using Table 4 below and the Burnaby Terminal Evacuation Plan as a reference together with the incident-specific technical and hazard information provided by Trans Mountain and the local authority's evacuation procedures, the local authority will identify the appropriate public safety measures and determine, if required, the size and boundaries of the evacuation or shelter-in-place area. The local authority may use its own distances, but they should not be smaller than those calculated by Trans Mountain.

Trans Mountain will support, as required, the implementation of the public safety measures under the direction of the local authority.

Table 4: Incident-specific Protective Action Zones – Burnaby Terminal

Incident Type	Hazard	Protective Action Zone
Spill, no fire	Vapour	300 metres
3-D fire[11]/rim seal fire	Heat	192 metres
Full-surface fire	Heat and boil-over	562 metres (10x diameter of largest tank at the Burnaby Terminal)

The ICP, together with the local authority, will continually monitor the hazards and the incident outside of Terminal boundaries to determine if the situation has evolved, using the technical information and air monitoring data collated by the Environment Unit. This additional assessment will be used to determine if subsequent actions are required, including if the Protective Action Zone requires expansion or contraction. Trans Mountain will support the local authority in these efforts by assisting with the implementation of further public safety measures, as required.

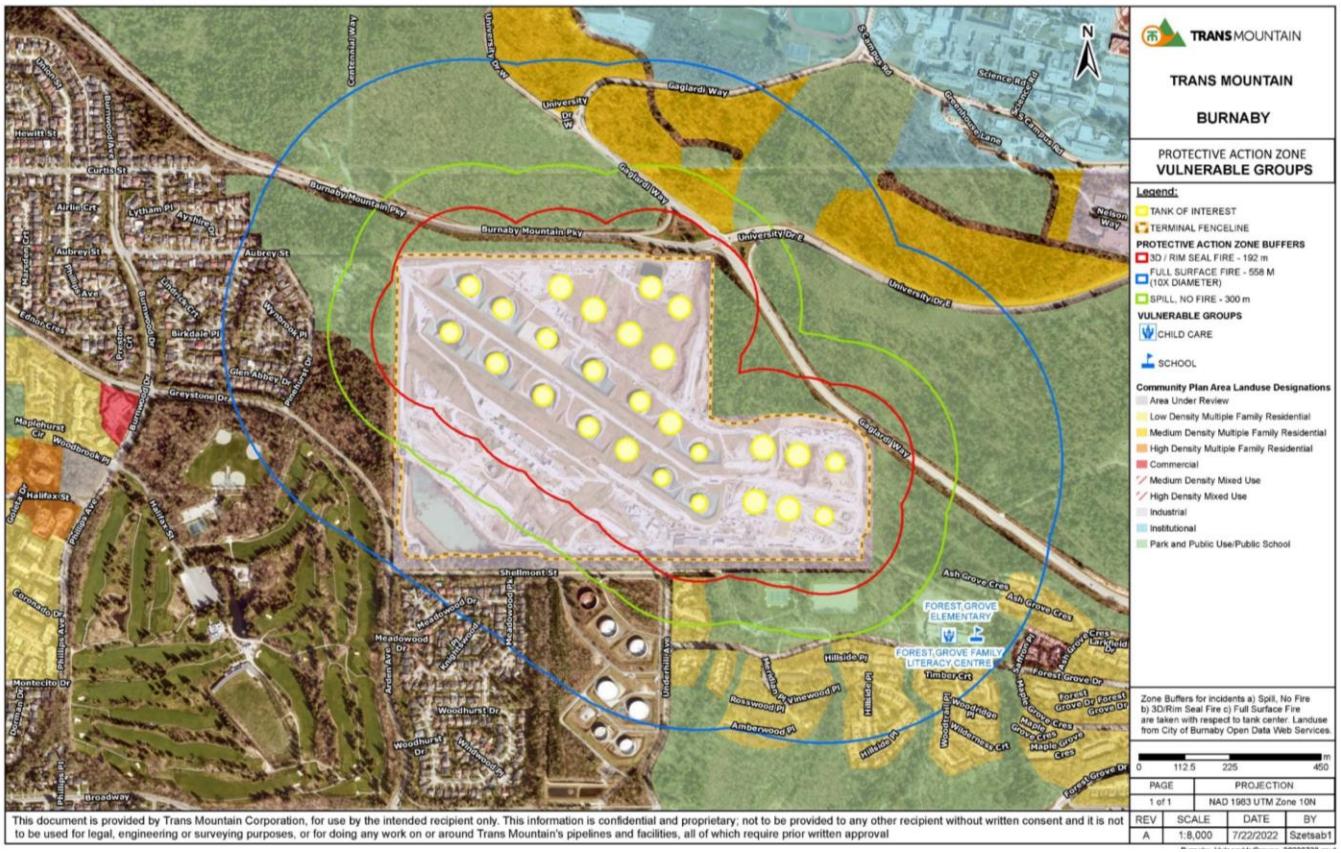
7.4.6.1 Initial Protective Action Zone Map

The following map depicts the Protective Action Zone buffers for Burnaby Terminal including a credible worst-case scenario. At the time of an incident, and based off the incident location, the protective action zones will be identified and confirmed upon by the Incident Commander and the Local Authority.

GIS specialists (Planning Section) have access to a variety of mapping layers, to prepare high resolution, incident-specific maps with the information on High Consequence Areas and receptors required to support the response.

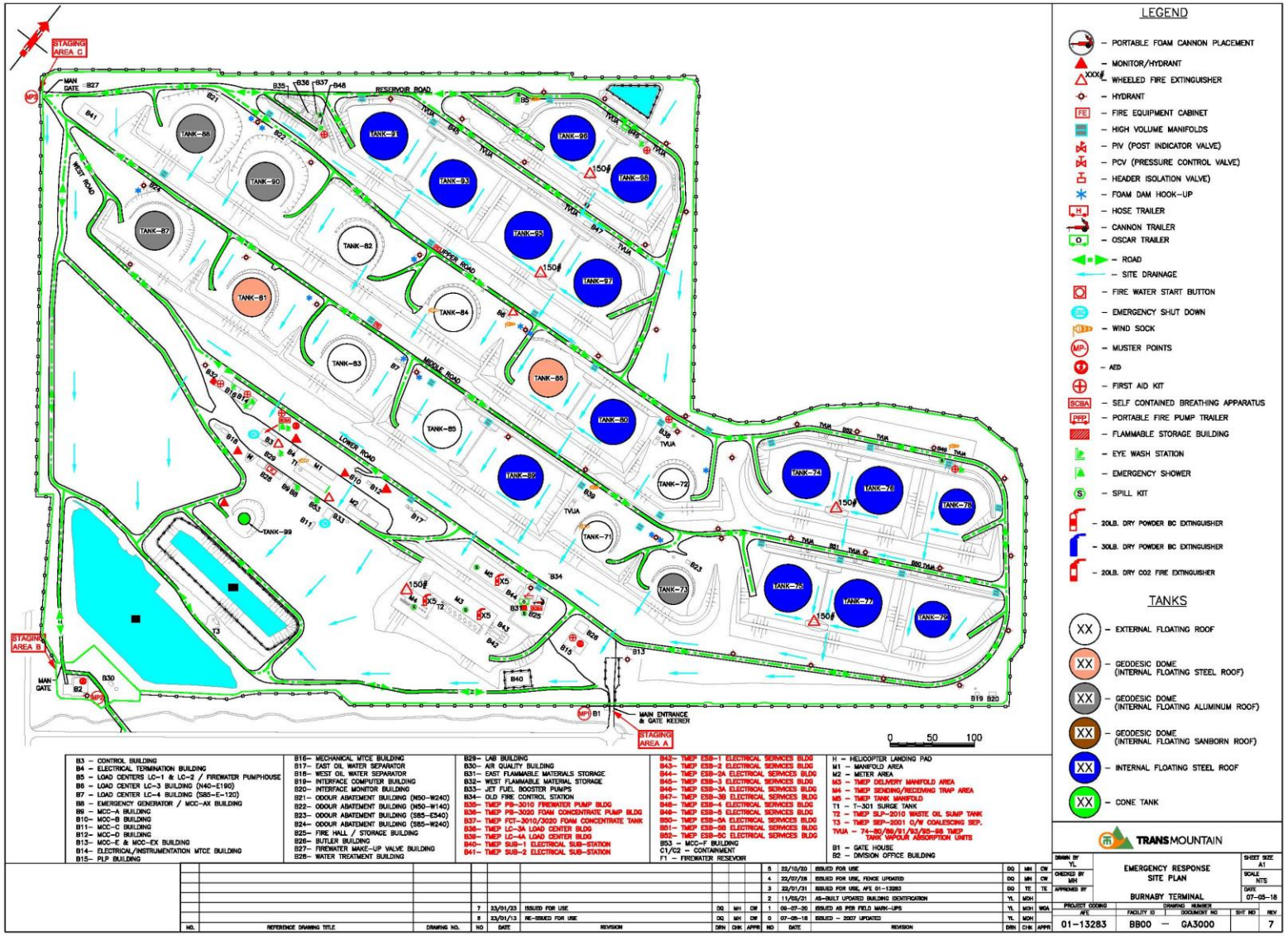
There is a school and a childcare centre (vulnerable groups) within the Protective Action Zone for Burnaby Terminal.

[11] A three-dimensional fire is a liquid-fuel fire in which the fuel is being discharged from an elevated or pressurized source, creating a pool of fuel on a lower surface.



GIS specialists (Planning Section) will produce high resolution maps for reference in the case of an emergency.

7.4.7 Burnaby Terminal Diagram



7.5 Trans Mountain Products Summary

Product Name	Product Identifier	Vapour Density	Specific Gravity	API	Oil Group Number	Total Sulfur (wt.%)
REFINED PRODUCTS						
Diesel	DSL	>1	0.85	34.7	3	<0.005
Ethanol Blend Gasoline	G85	>1	0.74	59.8	2	0.03
Premium Gasoline	G91	>1	0.68	76.2	2	<0.005
SUPER LIGHTS						
Pembina Condensate	CPM	>1	0.76	53.1	2	0.12
Fort Sask Condensate	FSC	>1	0.70	70.8	2	0.09
LIGHT SWEET						
Central Alberta Sweet	CSW		0.83	38.6	2	0.36
Peace River Crude	PCR	>1	0.80	45.0	2	0.45
Pembina Crude	PEM	>1	0.82	41.1	2	0.40
Pembina North	PNC	>1	0.83	40.1	2	0.40
Rainbow Crude	RBW	>1	0.83	39.6	2	0.42
Gibson Light Sweet	MGL	>1	0.83	40.1	2	0.50
LIGHT SOUR						
Central Alberta KOC	CAL	>1	0.85	34.9	3	1.13
Peace Sour Crude	PCSR	>1	0.83	39.1	2	1.29
LIGHT SYNTHETIC						
Horizon Synthetic	CNS		0.87	31.3	3	0.14
Suncor Synthetic A	OSA	>1	0.86	32.8	3	0.25
Premium Albian Synthetic	PAS	>1	0.87	30.9	3	0.09
Shell Synthetic	SSX	>1	0.88	29.9	3	0.16
Syncrude	SYN	>1	0.86	33.8	3	0.19
HIGH – TAN- DILBIT						
Access Western Blend	AWB	>1	0.91	23.2	3	3.89
Borealis Heavy Blend	BHB	>1	0.94	19.4	3	3.60
Fort Hills Reduced Carbon Lifecycle Dilbit Blend	FRB	>1	0.94	19.2		3.91
Kearl	KRL	>1	0.92	22.0	3	3.84
Sunrise Dilbit	SDB	>1	0.93	20.8	3	4.19
Surmont Heavy Dilbit	SHD	>1	0.92	22.0	3	4.10
Western Canada Dilbit	WDB	>1	0.92	21.9	3	4.09

Product Name	Product Identifier	Vapour Density	Specific Gravity	API	Oil Group Number	Total Sulfur (wt.%)
HIGH TAN SYNBIT						
McKay Heavy	MKH	>1	0.94	19.3	3	2.85
Surmont Mix A	SMA	>1	0.92	21.7	3	3.37
LOW-TAN DILBIT						
Cold Lake Blend	CL	>1	0.93	22.4	3	3.72
OTHER HEAVIES						
Albian Heavy Synthetic	AHS	>1	0.94	19.6	3	2.75
Albian Vacuum Blend	AVB	>1	0.94	19.7	3	3.21
Suncor Synthetic H	OSH	>1	0.94	19.2	3	2.91
Suncor Synthetic PTCN	OSP	>1	0.92	21.6	3	3.07

8.0 INCIDENT MANAGEMENT

8.1 Incident Management Team Organization

Trans Mountain has a pre-defined Incident Command Structure with role descriptions defined and personnel pre-assigned to the key roles. In addition to the ICS Management Structure, Trans Mountain has a number of response operations components:

8.2 Initial Response Team

Initial Response resources are managed by the Senior On-Site Individual who assumes the role of Incident Commander until such time as a more senior employee takes over.

8.3 Local Incident Management Team

The Local Incident Management Team (IMT), which is comprised of terminal personnel in each response area, will respond to incidents beyond the capability of the Initial Responders.

If deployed, the Local IMT's primary tasks are to:

- Ensure the safety of all workers in the area of the spill
- Assess the situation (i.e., incident size, severity, likely impacts)
- Take appropriate action to mitigate the impacts to life safety, the environment, and property

The Local IMT will perform these tasks until relieved or replaced by a higher level of management within the response organization.

8.4 Trans Mountain Incident Management Team

On larger spills, where the local IMT cannot manage a response without assistance, additional IMT personnel will we asked to attend from within Trans Mountain's company-wide support system.

The IMT is headed by the Incident Commander who directs and coordinates all response activities and resources. The Deputy Incident Commander provides on-site staff support to the Incident Commander through the Command Staff and relieves the Incident Commander as required.

Each Section is headed by a Section Chief reporting directly to the Incident Commander. The Initial Response Team and initial IMT may be absorbed into the response organization as additional IMT personnel arrive on the scene. The Operations Section Chief is also responsible for directing the activities of outside contractors called in to assist with the response.

8.5 Response Team Organization

The following diagram depicts a typical response organization to the branch director/unit leader level. If a position below a specific chief, director, supervisor, manager, or unit leader is not filled then the chief, director, supervisor, manager, or unit leader must complete the tasks of reporting position as well. For further information on each position and the supporting roles, please see the Trans Mountain Incident Command System Guide.

8.6 Initial Response

The initial response will be carried out by local Trans Mountain personnel.

These are employees who are present at or near the scene of an incident who are properly trained in emergency response, defensive firefighting, safety and first aid. All other employees should be cleared from the incident scene immediately.

The senior person at the scene is automatically designated as the Incident Commander. Depending on the circumstances, the person-in-charge may be replaced by the Terminal Supervisor.

The initial responder's primary tasks are to:

- Ensure the safety of all workers and public in the area of the spill
- Assess the situation (i.e., incident size, severity, likely impacts)
- Notify the Terminal Supervisor immediately
- Take appropriate action to mitigate the impacts to life safety, the environment, and property

Initial responders will perform these tasks until relieved or replaced by a higher level of management within the IMT organization. In the event of a Level 1 incident, the initial responders may conduct the entire response effort. On larger incidents, the initial responders will typically be incorporated into the Operations Section of the IMT organization.

8.7 Control Centre Emergency Duties

8.7.1 Control Centre Operator

- Initiate the Emergency Conditions Report (ECR)
- Advise caller as appropriate
- Contact first responders, as required
- Contact "affected" Field Supervisor(s)
- Contact the Supervisor, Control Centre Operations
- Record all events in the "Additional Information" section of the ECR for the full duration of the incident
- Assume notification role of the Supervisor, Control Centre Operations, if no contact acknowledgment is received

8.7.2 Supervisor, Control Centre

- Send a TAS using the appropriate TAS list
- If the TAS system in unavailable, contact personnel as shown in Section 2.0 Internal and External Notification for back up TAS contacts.
- Call into the TAS line to start the Initial Information Exchange
- Participate in conference calls as required
- Send additional TAS updates as needed or required
- Forward the completed ECR to the Manager, Technical Services and Control Centre, for approval

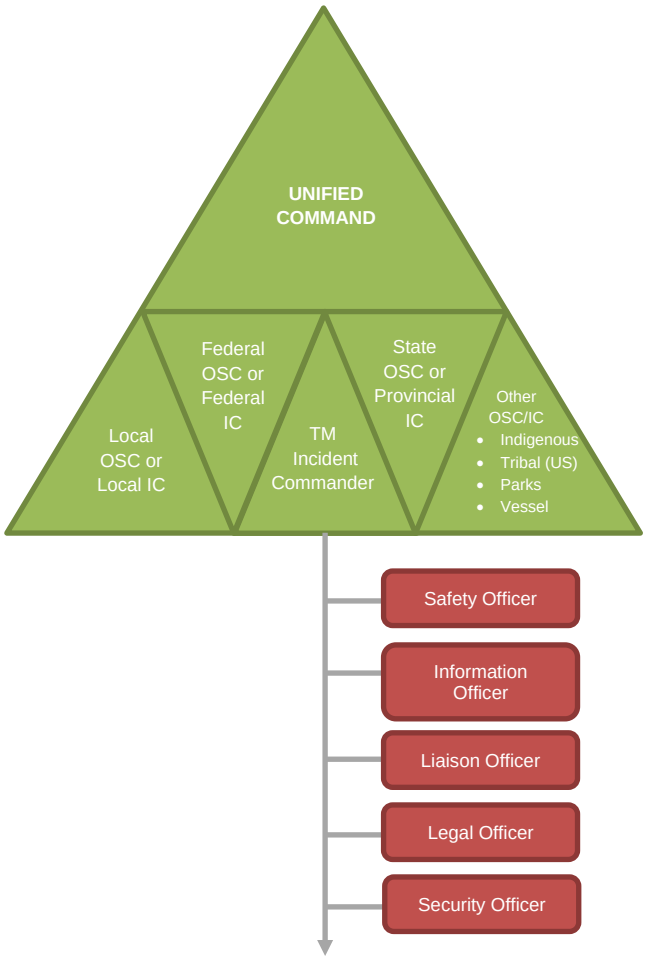
8.8 Transfer of Command

The Trans Mountain Incident Management Team is designed to work on a 24-hour basis. If 24-hour coverage is required, Command Staff and other response personnel will normally be relieved on a 12-hour shift schedule. Briefing meetings for Command Staff and other essential response personnel will be held at the time of each shift change. The Planning Section will be responsible for providing a summary of the ending shift activities along with a plan for the next shift. Written plans will be made in consultation with government agencies. Key ICS positions will be transferred on a 4-7-day rotation as needed after the initial transfer of command. The resources unit has the responsibility to identify and obtain any additional personnel required.

Whether internal or external, transfers of command for ICS positions will overlap to ensure that operations are not interrupted. The individual incoming and the individual leaving are required to meet and discuss any relevant information so that the position can be properly filled in and necessary task accomplished.

8.9 Unified Command

Wherever possible, the IMT will establish, and operate within, a Unified Command structure as warranted by the circumstances of an incident. When a federal or state/provincial agency arrives on-scene to participate in managing a response action, the agencies will utilize a unified command structure to jointly manage the spill incident. In the unified command, decisions with regard to the response will be made by consensus and documented through a single Incident Action Plan (IAP) for each operational period. In the event that the Unified Command is unable to reach consensus, the FOSC/FIC has ultimate decision-making authority. The unified command may incorporate additional indigenous or local government on-scene coordinators into the command structure as appropriate.



Incident Commanders for oil discharges and hazardous substance releases will, whenever possible and practical be organized under the Unified Command Structure which includes, but not limited to:

- The pre-designated Federal On Scene Coordinator (FOSC)/Incident Commander (FIC);
- The State/Provincial On Scene Coordinator (SOSC)/Incident Commander (PIC);
- The representative of the Responsible Party (RP); and
- The local and/or Indigenous On Scene Coordinators, as appropriate.

To be considered for inclusion as a UC member, the following criteria must be considered:

- The organization must have jurisdictional authority or functional responsibility under a law or ordinance for the incident; and
- The organization must be specifically charged by law or ordinance with commanding, coordinating or managing a major aspect of the incident response; and
- The incident or response operations must have impact on the organization's Area Of Responsibility; and
- The organization should have the resources to support participation in the response organization.

Actual Unified Command makeup for a specific incident will be determined on a case-by-case basis taking into account:

- The specifics of the incident;
- Determinations outlined in the four criteria listed above; and
- Decisions reached during the initial meeting of the Unified Command.

The Unified Command is responsible for the overall management of the incident. The Unified Command directs incident activities including the development and implementation of strategic decisions, approval of the incident action plan, and approves the ordering and releasing of resources. It is expected that each Unified Command member will have the authority to make decisions and commit resources on behalf of their organization.

8.10 Incident Commander/Deputy Incident Commander

The Incident Commander's responsibility is the overall management of the incident. On Level 1 incidents, the command activity will likely be carried out by a single (Trans Mountain) Incident Commander. On larger, Level 2 and 3 incidents, a Unified Command structure will be employed, with additional Incident Commanders from key agencies.

The initial IC is the senior person witnessing the incident. One or more changes of the IC role might take place during the initial phase of the incident, as more-senior personnel arrive on-scene until the ultimate IC takes over and the ICP is established.

The Incident Commander may have a deputy, who may be from Trans Mountain, or from an assisting agency. Deputies must be fully qualified to take over that position at any time.

The Incident Commander/Deputy IC Responsibilities can be found in the Incident Command System Guide; in general the duties are to:

- Ensure that adequate safety measures are in place.
- Assess the situation and/or obtains a briefing from the prior Incident Commander.
- Determine Incident Objectives and strategy.
- Establish the immediate priorities.
- Establish an Incident Command Post.
- Establish an appropriate organization.
- Ensure planning meetings are scheduled as required.
- Approve and authorize the implementation of an Incident Action Plan.
- Coordinate activity for all Command and General Staff.
- Coordinate with key people and officials.
- Approve requests for additional resources or for the release of resources.
- Keep agency administrator informed of incident status.
- Approve the use of trainees, Convergent Volunteers, and auxiliary personnel.
- Authorize release of information to the news media.
- Order the demobilization of the incident when appropriate.

8.11 Safety Officer

The Safety Officer's function on the Command Staff is to develop and recommend measures for assuring personnel safety, and to assist and/or anticipate hazardous and unsafe situations.

Only one Safety Officer will be assigned for each incident. The Safety Officer may have assistants as necessary, and the assistants may also represent assisting agencies or jurisdictions. Safety assistants may have specific responsibilities such as air operations, hazardous materials, etc.

The specific duties related to the Safety Officer's responsibilities can be found in the Incident Command System Guide; in general the duties are to:

- Develop a Site-Specific Health and Safety Plan.
- Participate in planning meetings.
- Identify hazardous situations associated with the incident.
- Review the Incident Action Plan for safety implications.
- Exercise emergency authority to stop and prevent unsafe acts.
- Investigate accidents that have occurred within the incident area.
- Assign assistants as needed.
- Review and approve the Medical Plan.

8.12 Information Officer

The Information Officer is responsible for implementing the external communications plan during any emergency incident.

The external communications plan objectives are to:

- Provide information about the incident and the related response effort to all stakeholders in a timely, accurate, and responsible fashion.
- Ensure that information about the incident is clear, factual, and consistent with that provided by other responders and government agencies.
- Minimize unnecessary speculation, rumour, or concerns about the incident and potential risks to the public.
- Protect the company's reputation as a responsible corporate citizen.

The Information Officer is supported by a team of pre-assigned employees to assist in implementing the communications plan. This group is known as the External Communications Team.

The Information Officer, in consultation with the Incident Commander, ensures that the necessary contacts have been made to Trans Mountain public affairs staff at the Trans Mountain's head office in Calgary.

The Information Officer's responsibilities are to:

- Determine from the Incident Commander if there are any limits on information release.
- Develop material for use in media briefings.
- Obtain Incident Commander's approval of media releases.
- Establish a Media Relations Center.
- Inform media and conduct media briefings.
- Arrange for tours and other interviews or briefings that may be required.
- Obtain media information that may be useful to incident planning.
- Maintain current information summaries and/or displays on the incident and provide information of status of incident to assigned personnel.
- Activate a 24-hour, recorder public information line.

8.13 Security Officer

The Security Officer is responsible for providing safeguards for protecting personnel and property from loss or damage.

The Security Officer's responsibilities are to:

- Develop Security Plan for the incident site and facilities, including Staging Area, ICP and any location where personnel are house; adjust Plan for personnel and equipment changes and releases.
- Establish security for the ICP
- Implement identification program for incident facilities.
- Establish contacts with law enforcement agencies, as required
- Contact agency representatives to discuss any special custodial requirements which may affect operations
- Coordinate security activities with appropriate incident personnel
- Keep the peace, prevent assaults and settle disputes by coordinating with Agency Representatives
- Prevent theft of company and personal property
- Document all complaints and suspicious occurrences.

8.14 Liaison Officer

The Liaison Officer is the contact point for agency (federal, provincial/state, local government) or Indigenous Community representatives assigned to the incident by an assisting or co-operating agency or Indigenous Community. These are personnel other than those on direct tactical assignments or those involved in Unified Command.

The Liaison Officer's responsibilities are to:

- Be a contact point for Agency and/or Indigenous Community representatives.
- Organize and chair coordination calls in order to provide incident status updates. Refer to the Liaison Office Toolkit for coordination call agenda.
- Maintain a list of assisting and cooperating agencies, Indigenous Communities and their Representatives.
- Keep agencies and Indigenous Communities supporting the incident aware of the incident status.
- Keep Indigenous Communities and other surrounding communities that are not assisting/supporting the incident aware of the incident status through regular updates and coordination calls.
- Arrange and schedule on-site Community Monitors to access select divisions of the incident site, subject to required training and PPE, as required.
- Monitor incident operations to identify current or potential inter-organizational issues.
- Participate in Planning Meetings, providing current resource status, including limitations and capability of assisting agency resources.
- Arrange for and provide personnel to act as an External Liaison Officer at any responding agency Incident Command Post, and/or Emergency Operations Centre as needed/requested by a federal agency, provincial/state agency, Indigenous Community and/or local authority.
- Appoint and supervise, as required, positions to assist the Liaison Officer.

8.14.1 On-Site Community Monitors

Trans Mountain has developed an On-Site Community Monitors procedure which identifies the process for providing safe and timely access of non-responders to incident sites. Timely access of monitors is important for collaboration and transparency between Trans Mountain and Indigenous Communities, community groups, and other stakeholders who may be associated with the area of impact. On-site access of monitors may assist with the incorporation of local and/or cultural knowledge into response operations and the remediation phase.

8.15 Government Agency Representatives

Agency Representatives assigned to an incident from Federal, Provincial or local government agency report to the Liaison Officer or to the Incident Commander in the absence of a Liaison Officer. These representatives should have full authority to make decisions on all matters affecting that agency's participation at the incident.

8.15.1 Agency Representatives Responsibilities

- Ensure that all agency resources are properly checked-in at the incident.
- Attend briefings and planning meetings as required.
- Provide input on the use of agency resources unless resource technical specialists are assigned from the agency.
- Cooperate fully with the Incident Commander and the General Staff on agency involvement at the incident.
- Ensure the well-being of agency personnel assigned to the incident.
- Advise the Liaison Officer of any special agency needs or requirements.
- Report to home agency dispatch or headquarters on a prearranged schedule.
- Ensure that all agency personnel and equipment are properly accounted for and released prior to departure.

8.15.2 Canada Energy Regulator (CER)

The CER's top priority in any emergency is to make sure that people are safe and secure, and that property and the environment are protected. Any time there is a serious incident, CER Inspectors may attend the site to oversee a company's immediate response. The CER will require that all reasonable actions are taken to protect employees, the public and the environment. Further, the CER will verify that the regulated company conducts adequate and appropriate clean-up and remediation of any environmental effects caused by the incident.

- Monitors, observes and assesses the overall effectiveness of the company's emergency response in terms of:
    - Emergency Management
    - Safety
    - Security
    - Environment
    - Integrity of operations and facilities; and
    - Energy Supply
- Investigates the event, either in cooperation with the TSB, under the Canada Labour Code, or as per the Canada Energy Regulator Act or Canada Oil & Gas Operations Act (whichever is applicable)
- Inspects the pipeline or facility
- Examines the integrity of the pipeline or facility
- Requires appropriate repair methods are being used
- Requires appropriate environmental remediation of contaminated areas is conducted
- Coordinates stakeholder and Indigenous community feedback regarding environmental clean-up and remediation
- Confirms that a company is following its Emergency Procedures Manual(s) commitments, plans, procedures, and CER regulations and identifies non-compliances
- Initiates enforcement actions as required
- Approves the restart of the pipeline

8.15.3 Transportation Safety Board of Canada

The TSB's role is to advance transportation safety through the investigation of transportation occurrences in the marine, pipeline, rail and aviation modes

TSB Classification System - The primary criterion for determining if an occurrence in any mode will be investigated is whether or not such analysis is likely to lead to a reduction of risk to persons, property, or the environment.

Class 1 Occurrences (Public Inquiry)

- the potential for reducing the risk to persons, property, or the environment;
- whether an inquiry would uncover facts that might not otherwise be made known;
- whether an inquiry would result in quicker remedial action;
- the actual or potential extent of injuries and/or loss of life;
- the degree of public interest in and concern about public safety; or
- the possible involvement of an arm of government.

Class 2 Occurrence (Individual Occurrence Investigation)

- there is a high probability of advancing Canadian transportation safety in that there is significant potential for reducing the risk to persons, property, or the environment; or
- the Governor in Council so requests (pursuant to Section 14(1) of the CTAISB Act).

Class 3 Occurrences (Individual Occurrence Investigation)

- there is significant public expectation that the TSB should independently make findings as to cause(s) and contributing factors; or
- there is potential for better understanding the latent unsafe conditions contributing to a significant safety issue; or
- a government representative so requests (pursuant to Section 14(2) of the CTAISB Act); or
- the Board must do so to meet its obligations or commitments.

Class 4 Occurrences (Safety Issue Investigation)

Multiple occurrences, which the Board deems to be indicative of significant unsafe situations or conditions, will be subject to a safety issue investigation when:

- there is a high probability of advancing Canadian transportation safety by reducing the risk to persons, property, or the environment; or
- in the Board's opinion, there is widespread public expectation that the TSB should independently analyze a particular safety issue.

Class 5 Occurrences (Data Collection)

Data pertaining to occurrences that do not meet the criteria of classes 1 through 4 will be recorded in suitable scope and detail for possible safety analysis, statistical reporting, or archival purposes.

8.15.4 Strathcona County Emergency Services

Strathcona County Emergency Services has provided Trans Mountain with a list of duties and response capabilities. This document is available from the Trans Mountain Emergency Management Group.

8.15.5 Kamloops Fire and Rescue Department

Kamloops Fire and Rescue Department has provided Trans Mountain with a list of duties and response capabilities. This document is available from the Trans Mountain Emergency Management Group.

8.15.6 Alberta Health Services

Alberta Health Services will aid in an emergency response through the following duties and response capabilities:

- Monitor incidents impacting health and provides advice / direction.
- Provide public direction during emergencies impacting environmental and human health (Air & Water).
- Provide Public with Health information during public health emergencies.
- Alberta Health sets and enforces standards and required practices for Alberta emergency medical services (EMS) and ambulance services.
- As per the Alberta Public Health Act, in the event of an emergency, Alberta Health Services has full authority to order public safety protective measures.
- EMS ground and air practitioners follow a set of evidence-based Medical Control Protocols when attending to patients that ensure consistent standards of care are being provided province-wide.
- Provide Indigenous community support
- Provide support to municipal reception centres
- Ensuring public health matters are monitored and addressed as per the Public Health Act (e.g. Infection Prevention & Control, Environmental and Housing requirements, food safety, etc.)
- Provide information to the public who call 811 on location(s) and health services offered at reception centres
- Support public health, home care and environmental health functions at the reception centres.

8.15.7 Alberta Region Department of Indigenous Services Canada

The Alberta Region Department of Indigenous Services Canada, First Nations and Inuit Branch, offers an Indigenous Health Program that partners with Indigenous peoples, communities and key stakeholders to provide accessible, culturally appropriate health services for Indigenous, Métis and Inuit people in Alberta. During emergencies in Indigenous communities, FNIHB provides environmental public health and nursing services to all residents on reserve.

8.15.8 British Columbia Health Authorities

British Columbia Health Authorities will aid in an emergency response through the following duties and response capabilities:

- Act as a consultant utilizing provided information on toxic chemicals to the Emergency Operations Center.
- Monitor health effects of the incident to ensure appropriate data is collected and investigate such health effects.
- Provide advice to the government on the existing or potential health effects of the incident.
- Establish and operate trauma teams for emergency health services.
- Provide health advice and safety levels for any health care or special care facility and for the more vulnerable residents.
- Monitor adverse effects/contamination of water systems.
- Enforce and regulate Public Health Regulations.

8.15.9 British Columbia First Nations Health Authority (FNHA)

The FNHA is a province-wide health authority that has assumed the programs, services, and responsibilities formerly handled by Health Canada's First Nations and Inuit Health Branch – Pacific Region. The FNHA does not replace the role or services of the Ministry of Health and Regional Health Authorities. The FNHA will collaborate, coordinate, and integrate with other health authority's health programs and services to assist BC First Nations.

8.15.10 Health Emergency Management British Columbia (HEMBC)

HEMBC provides expertise, education, tools, and support for the BC health authorities to effectively mitigate, prepare for, respond to, and recover from the impacts of emergency events, ensuring the continuity of health services.

During an emergency HEMBC will:

- Provide a representative to collaborate with the Liaison Officer;
- Provide Subject Matter Expert representatives from the Health Authorities to ICP – Environmental Unit to communicate and coordinate air monitoring data to enhance and expedite public safety assessments and protective measures; and
- Coordinate between Health Authorities Communications personnel and the ICP Public Information Officer on public messaging and media releases related to public health.

8.16 Legal Officer

The Legal Officer is responsible for providing advice and direction on all matters that may have a legal impact on Trans Mountain and should participate in:

- Legal requirements in execution of agreements
- Incident investigation report reviews/meetings
- Environmental damage assessments
- Claims, where applicable
- Any major contracts that are not standard to the operation

- Any insurance issues/concerns
- Major health & safety issues/injuries
- Information releases
- Government Agency requests
- Reporting to Incident Commander

Note: Legal maintains contact information for Insurance and other agencies for claims in the Calgary office.

8.17 Response Planning (Short-Term and Initial Phase of Long-Term Events)

Short-term responses that are small in scope and/or duration and require few resources can often be managed using only the Incident Command Briefing (ICS 201 Form). Responses to longer-term events will also begin with the completion of the ICS 201 and Incident Briefing.

8.17.1 Incident Briefing

During the transfer of command process, an Incident Briefing provides the incoming Incident Commander with basic information regarding the incident situation and the resources allotted to the incident. Most importantly, it is the de facto Incident Action Plan (IAP) for the initial response and remains in force and continues to develop until the response ends or the Planning Section generates the incident's first IAP. It is also suitable for briefing individuals newly assigned to Command and General Staff, as well as needed assessment briefings for the staff.

When	• Upon the arrival of a new Incident Commander a transfer of Command will take place. The Incident Briefing also serves as an opportunity to provide initial information to incoming key IMT and agency personnel.
Facilitator	• The Incident Briefing is facilitated by the Current (and often initial) Incident Commander.
Attendees	• The Incident Briefing is attended by the incoming IC, the Command and General Staffs, as well as any senior responding Government Agency personnel and senior contractor representatives.
Agenda	• Situation (note territory, exposures, safety concerns, etc. use map/charts) • Objectives and priorities • Strategy(s) and tactics • Current organization • Resource assignments • Resources enroute and/or ordered • Facilities established

8.18 Response Planning (Long-Term Events)

Trans Mountain follows the ICS model for incident response planning. The planning cycle and associated meetings can be found in the Trans Mountain Incident Command System Guide located in the Emergency Toolkit.

8.19 Terminating/Downgrading the Response

The decision to terminate and/or downgrade emergency operations and to demobilize personnel and equipment shall be made on a site-specific basis, based on the status of the incident. Factors that may affect the decision to terminate the response include the following:

- The emergency condition has been controlled and immediate threats to the health and safety of the public have been eliminated
- Any leaks or spills have been contained, and all remaining free oil, petroleum products, or hazardous materials have been recovered from the site

- Repair operations have been undertaken to prevent further leaks or spills from occurring
- Further emergency operations at the site will cause more damage to property and the environment than that which resulted from the leak or spill initially.

The Regional Director or designee shall consult appropriate government agencies and other involved parties before making any decisions related to terminating response activities. These agencies and involved parties include representatives from federal, provincial and/or municipal agencies with jurisdiction in the emergency.

Prior to terminating the response, the following issues should be considered by the Unified Command:

- Demobilize equipment and personnel at the first opportunity in order to reduce cost
- Consider which resources should be demobilized first; for example, berthing expenses can be saved by demobilizing out-of-area contractors before local ones
- Equipment may need both maintenance and decontamination before being demobilized
- All facilities (staging area, Incident Command Post, etc.) should be returned to their pre-incident condition before terminating operations
- Determine what documentation should be maintained, where, and for how long
- Contract personnel may be more susceptible to injuries as they approach termination
- Some activities will continue after the cleanup ends; examples include incident debriefing, bioremediation, claims, and legal actions
- Express gratitude to the community, police department, fire department, and emergency crews for their work during the response.
- Develop project plans and/or Recovery Plans as required prior to terminating the response

8.20 Incident Records

Trans Mountain utilizes the Incident Command System when responding to any real and/or potential emergency. As part of this process Trans Mountain's Incident Management Team utilizes ICS Forms in order to support and respond to the emergency. Any sustained response will result in the Incident Management Team establishing a Planning Cycle in order to generate an Incident Action Plan that will address all aspects of the emergency.

All forms generated as part of the incident response will be submitted to the Documentation Unit, under the Planning Section. Upon termination of the incident the Documentation Unit will ensure all original documents are properly stored with the Legal Department. Incident Records will be used to generate reports and for any follow up investigations, both internal and external, if required.

Incident Records are retained by the Legal Department who store all incident files in accordance with Trans Mountain's Record Retention Policy and procedures.

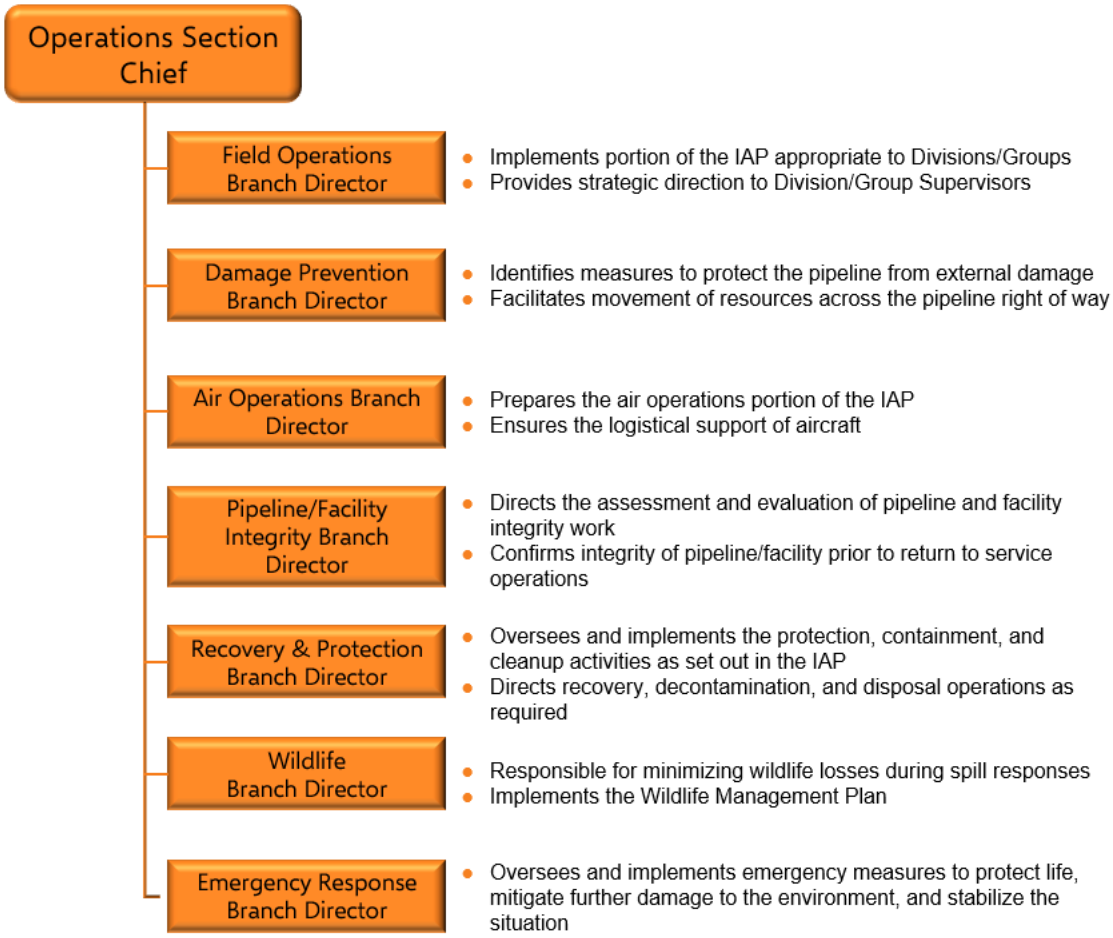
8.21 Post-Incident Reporting and Debrief

Trans Mountain reviews all incident responses using the Emergency Management Exercise Reporting Procedures and produces a report focusing on the effectiveness of the response and emergency procedures and emergency procedure manuals. The Incident Investigation Committee investigates the cause of the incident.

9.0 OPERATIONS SECTION

The Operations Section is responsible for the oversight of all tactical assignments in the response. These include all contractors or other agencies that supply tactical resources in response to the incident including representatives from the Fire Department, Police, Ambulance Service, and response organizations. Detailed duties and responsibilities for individuals in the Operations Section can be found in the Trans Mountain Incident Command System Guide in the Emergency Toolkit.

The Operations Section may consist of numerous (functional) Groups and Branches, (geographic) Divisions. If Staging Areas are used, these are also managed by the Operations Section.



9.1 Response Objectives

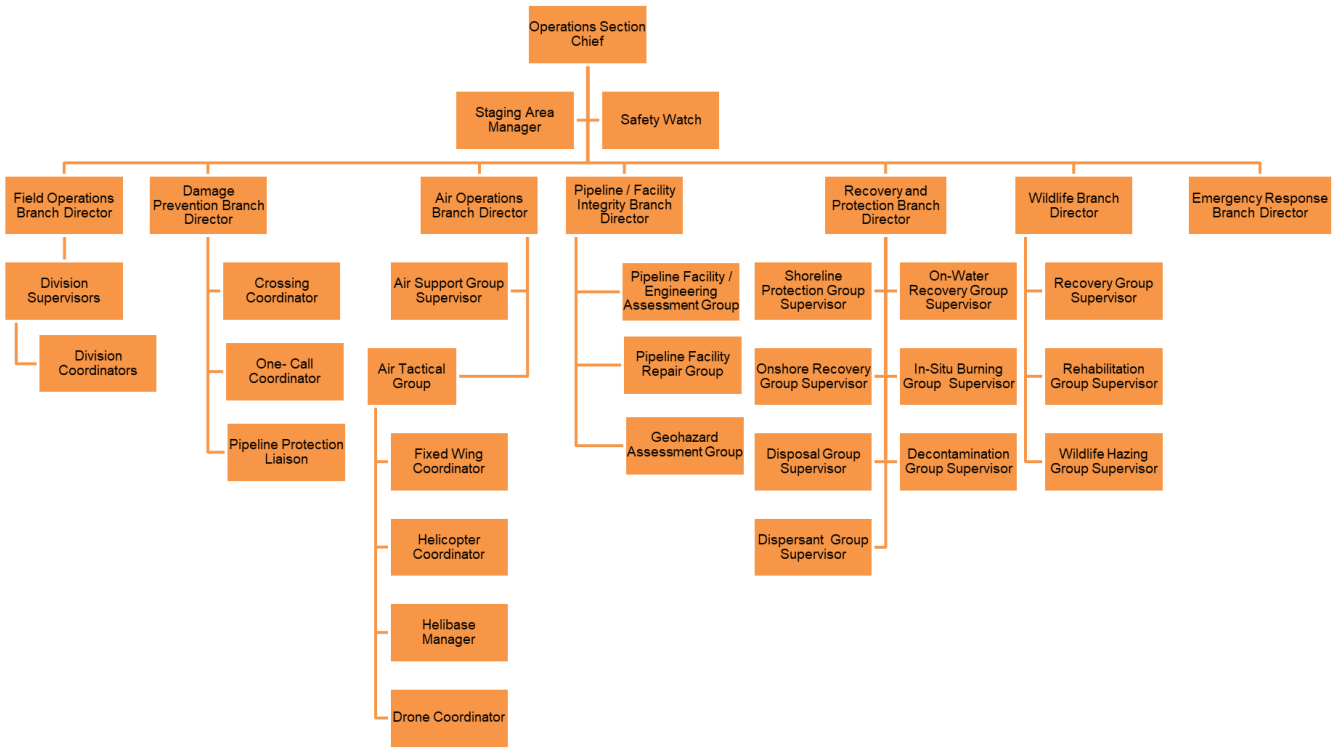
Once the safety of all personnel has been ensured, the source of discharge is secured, and initial notification has been activated, the overall tactical priorities covered are:

- Containment and Recovery of Spilled Oil
- Protection of Sensitive Resources
- Site and Shoreline Clean-Up

Response objectives and priorities will be determined by the Incident Commander, Unified Command, and the Planning and Operations Section members. Critical advice will be provided by representatives of key government agencies.

9.2 Operations Section Organization Chart

Not all roles will be filled for all incidents; however, the following chart is an outline of the possible positions to be filled. Detailed descriptions of each position and its duties can be found in the Trans Mountain Incident Command System Guide.



9.3 Operations Section Chief

The Operations Section Chief, a member of the general staff, is responsible for managing all operations directly applicable to the primary mission. The Operations Chief activates and supervises elements in accordance with the Incident Action Plan and directs its execution; activates and executes the Site Health and Safety Plan; directs the preparation of unit operational plans, requests or releases resources, makes expedient changes to the Incident Action Plans as necessary, and reports such to the Incident Commander.

9.4 Waste Management Plan

The management of waste from a spill is a priority for Trans Mountain and a key component supporting incident response. The appropriate handling, storage, transport, disposal and tracking of waste associated with a spill is essential for effective planning and response to a spill.

In the event of an emergency that has the potential for generating waste, the Waste Management Plan will be activated in conjunction with this Plan. After the initial assessment has been conducted an incident specific waste management plan will be developed to support the Incident Action Plan.

Responsibility for working with the provincial authorities to develop an incident specific waste management plan lies with the Environmental Unit Leader. More information on the duties of the Disposal (Waste Management) Technical Specialist can be found in the Incident Command System Guide as well as in the Waste Management Plan both located in the Emergency Toolkit.

All waste materials collected from a spill should be sorted and stored in separate containers or piles that are clearly marked showing the type of waste they contain. Temporary storage locations on the terminal premises should be totally contained and secure to prevent further leakage or migration of spilled product.

9.4.1 Temporary Storage Methods

Method of Containment	Product						
	OIL	Oily Water	Oily Soil	Oil/Debris (Small)	Oil/Debris (Medium)	Oil/Debris (Large)	Capacity
Drums	✓	✓	✓				0.2-0.5 yd^3
Bags		✓	✓	✓			1.0-2.0 yd^3
Boxes			✓	✓			1-5 yd^3
Open top roll-off	✓	✓	✓	✓	✓	✓	8-40 yd^3
Roll top roll-off	✓	✓	✓	✓	✓	✓	15-25 yd^3
Vacuum box	✓	✓					15-25 yd^3
Frac tank	✓	✓					500-20,000 gal
Poly tank	✓	✓					200-4,000 gal
Vacuum truck	✓	✓	✓				2,000-5,000 gal
Tank trailer	✓	✓					2,000-4,000 gal
Barge	✓	✓					3,000+gal
Berm, 4 ft		✓	✓	✓	✓	✓	1 yd^3
Bladders	✓	✓					500-1,500 gal

9.5 Emergency Equipment and Response Times

Trans Mountain owns and maintains a large fleet of emergency response equipment strategically placed at various points along the Trans Mountain Pipeline. The equipment ensures that the company is able to respond to any emergency in a timely manner in accordance with the planning standard.

9.5.1 Planning Standard

The Planning Standard establishes the desired response outcomes and forms the basis for Trans Mountain's emergency response plans, procedures, and processes.

The planning standard:

- Outlines the hazard assessment process, which includes a hazard listing (spill, fire, explosion);
- Specifies the quantity and location of response equipment and personnel needed to respond within maximum target response times; and
- Defines maximum target response times to be used for response planning to warrant a prompt, safe and effective response to an emergency

Maximum target times are based, in part, on a variety of regulatory requirements. Real response times are reviewed after any event requiring activation of the Emergency Response Plan to confirm Trans Mountain has resources and equipment placed in the appropriate location to meet the maximum target response times.

Current emergency response capabilities and equipment are strategically placed to meet the planning standard and include:

- Early detection systems/alarms and firefighting equipment for fires and spills (storage tanks and pump stations);
- Contracted, on-call third-party responders to a support tank fire response at Terminals
- Personnel and company vehicles to respond to spill and fires (terminal storage tanks, pump stations and right-of-way); and
- Oil Spill Containment and Response (OSCAR) units strategically placed to ensure rapid response along the right-of-way and at facilities.

9.5.2 Response Equipment

Emergency response equipment, such as spill drums with absorbent material to assist in immediate cleanup of any local spill, is available at all facilities. Other emergency resources, such as river boats and response trailers, are located at strategic locations along the Trans Mountain Pipeline. All company facilities, fleet vehicles and emergency response vehicles/trailers contain first aid equipment.

Air Monitoring Equipment – All Trans Mountain initial responders will arrive on site with personal air monitoring equipment that they will use to assist in the development of the Initial Site Health and Safety Plan. The initial on-site results will also identify if there are any potential public safety concerns. The Public Health Assessment and Response Plan for Airborne Health Risks Associated with Pipeline/Terminal Operations and Incidents (Air Monitoring Plan) will be implemented for potential on-going public safety concerns.

Boats – Trans Mountain owns and maintains a number of boats along the pipeline route to ensure response actions can be carried out on rivers and lakes in locations where a spill could potentially impact water bodies. Response boats are jet drive boats that range in size from 18' to 24' and allow for response in all expected water environments, including shallow water.

Boom Trailer – Boom trailers may vary in size however their primary purpose is to house containment boom for on-water spill operations. The trailers contain supplementary equipment, such as additional rope, to assist with boom deployment.

Decontamination Trailer – Decontamination trailers are sized to be towed by half-ton or three-quarter ton trucks and contain equipment to facilitate the cleaning of personnel and small equipment. The use of decontamination trailers ensures when personnel leave an impacted area, they are not tracking contaminates with them. The trailer includes wash stations, pools, tents, detergent, hand sprayers and other equipment necessary to decontaminate people and small equipment.

Fire Hose Trailer – Hose trailers contain large quantities of fire hoses to support fire response efforts as required.

Foam Bladder Trailer – A Foam Bladder Trailer is a wheel mounted bladder foam storage tank with inline proportioning used to mix and inject water/ foam concentrate into a facilities fire piping system. The trailers can draw water/foam directly from the bladder or externally from foam concentrate drums utilizing a hose. The trailers include a mounted monitor which may be used for direct fire suppression.

Foam Cannon – Foam cannons are located at Trans Mountain Terminals for use in the unlikely event of a tank fire. These mobile large volume discharging platforms can deliver water or foam solution for fire suppression, tank cooling, personnel protection and vapour suppression.

Land/Creek Response Trailer – Land/Creek Trailers contain specialized equipment designed to be used for spills on land or in small creeks and/or ditches. Equipment includes Watergate dams, turner valley gates and water block dams as well as sandbags and sorbent materials and other common spill response equipment.

OSCAR Trailer – Oil Spill Containment and Recovery (OSCAR) trailers are located strategically at various points along the Trans Mountain Pipeline. These trailers contain various tools and spill response equipment ranging from absorbent materials and skimmers, to booms and other cleanup tools specific to the area.

Portable Fire Pump – Portable fire pumps are located at Trans Mountain Terminals for use in the unlikely event of a large tank fire. These mobile pumps assist the existing fire systems by providing higher capacity pumping of water and/or foam solution.

Rapid Response Trailer – Rapid Response trailers are similar to OSCAR trailers however, they are smaller in size (typically under 30’ long), can be towed behind a half-ton or three-quarter ton truck and are more maneuverable in tight locations. Rapid response trailers have containment, recovery, and storage equipment on board.

Non-Floating Oil Response Trailer – Non-Floating Oil Response Trailers contain specialized equipment designed to be used for the detection of sunken and/or submerged oil. Equipment such as silt fencing, boom, view boxes, pompoms and other sorbent materials are housed inside a trailer to be dispatched in the event there is a possibility of the spilled product becoming sunken or submerged.

Structural Protection Unit (SPU) Trailer - The SPU trailers are designed to protect at risk facilities along the pipeline right-of-way. Equipment housed in the SPU trailers includes foam, hose, nozzles, sprinklers (tripod and perimeter) pumps, pumpkin bladder and various tools.

Wildlife Response Trailer – Wildlife Response Trailers are deployed to spill locations to deter wildlife, including birds and a variety of ground animals, from entering or landing near the contaminated area(s). A variety of equipment including fencing, flags and effigies are housed within these trailers.

Wildfire Response Trailer – Wildfire Response Trailers are designed as a self-supplied water and/or foam deployment system. Equipment on the Wildfire Response Trailers include foam, hose, pump, nozzles, various tools and a water tank.

Winter Response Trailer – Winter Response Trailers contain specialized equipment designed to be used in ice and snow. Winter response equipment includes specialized ice cutting devices (ice auger, chainsaw), ice rescue equipment, specialized ice lifting devices and additional rehabilitation supplies. Personal protective equipment and safety equipment that would be useful during a cold weather response, such as blankets, heaters, winter liners for hard hats, are also included.

9.5.3 Response Equipment Maintenance

Trans Mountain response equipment is tested and inspected as noted below.

- Daily and Weekly – portions of the fire suppression systems are tested and inspected on a weekly and daily basis depending on the system component and regulatory requirements.
- Monthly – all emergency response equipment is inspected and inventoried monthly to ensure response readiness.
- Spring Inspection – all emergency response equipment undergoes a thorough spring maintenance check which may include inspection by a third-party inspection facility. All equipment is function tested at this time.
- Fall Inspection – all emergency response equipment undergoes a thorough fall inspection and maintenance check which includes winterizing any equipment that is at risk of freezing. Some equipment is also inspected by a third-party inspection facility.
- Exercises – all equipment is deployed at least annually during an exercise at which time all components are inspected and tested in a response environment. All equipment used during an exercise is inspected in accordance with its Post-use Inspection procedures, which may include decontamination of watercraft, function testing pumps/generators, drying ropes, and boom etc.
- Multi-year Programs – some emergency equipment such as fixed fire suppression systems undergo 3-year inspections and 5-year inspection and maintenance activities in accordance with guidance provided by industry standards.

Trans Mountain will produce, upon request of the BC Minister of Environment & Climate Change Strategy, records evidencing the inspection and maintenance of equipment.

9.5.4 Response Times

Trans Mountain has a planning standard to identify the maximum times by which specific activities are anticipated to occur. The planning standard is used to strategically locate people and equipment to ensure a prompt response to any event involving the Trans Mountain Pipeline. These response times are for planning purposes only and do not act as target times. All incidents are responded to immediately upon notification of a potential incident or at the confirmation of an incident. Response times are reviewed after any event requiring activation of the Emergency Response Plans to ensure they are adequate and effective. Response times are divided into nine response targets and are measured from the time an emergency is confirmed.

ACTIVITY AND RESPONSE TIME

Activity	Response Time
Confirmed emergency – shutdown of operations	Immediate
Internal emergency response (TAS) conference call	30 Minutes
Initial site safety assessment	1 Hour
Secondary containment boom is in place *Applicable only to Westridge Marine Terminal*	1 Hour
Emergency Response Equipment arrives on site	2 Hours
Emergency Response equipment deployed to initiate extinguishment of full-surface tank fires and flammable liquid storage facilities	4 Hours
Emergency Response Equipment at site deployed (boom and skimmers)	6 Hours
Incident Command Post established	6 Hours
Advanced spill response equipment at site	12 Hours
Additional equipment at site (as needed)	24+ Hours

9.5.5 Equipment Requirements

To determine equipment placement and requirement the worst-case discharge volume is used. The worst-case discharge volume is calculated based on the highest volume for each response zone using the highest volume for each of the following criteria:

- The maximum time to detect the release, plus the maximum shutdown response time multiplied by the maximum flow rate per hour, plus the largest line drainage volume after shutdown;
- The maximum historic discharge from the pipeline; or
- The largest single breakout tank or battery of breakout tanks, without a secondary containment system.

9.5.6 Mobile Spill Equipment List

Trans Mountain Location*	Boat	Boom Trailer	Secondary Boom (Not mobile)	Decontamination Trailer	Land/Creek Trailer	Non-Floating Oil Trailer	OSCAR Trailer	Rapid Response Trailer	Structural Protection Unit SPU)	Wildlife Trailer	Winter Response Trailer
Blackpool Station				x							
Blue River Station	x	x					x				x
Burlington Station							x				
Burnaby Terminal	x						x				
Edson Station	x			x							
Gainford Station	x	x					x				x
Hope Station	x							x			x
Jasper Station	x	x					x		x	x	x
Kamloops Terminal	x (2)	x				x	x		x		x
Kingsvale Station				x				x			
Laurel Station	x (3)			x			x				
Rearguard Station				x							
Sumas Station		x		x	x		x			x	
Westridge Marine Terminal	x (2)		x	x[1]			x[2]				

**Equipment is subject to movement based on risk.*

[1]*Decontamination Trailer stored in a sea can.*

[2]*Spill equipment is stored in a sea can.*

9.5.7 Mobile Fire Equipment List

Trans Mountain Location*	Fire Hose Trailer	Foam Bladder Trailer	Foam Cannon	Gorilla	Wildfire Trailers
Blue River Station					x
Burnaby Terminal	x		x	x	
Edmonton Terminal	x (2)	x	x	x	
Hope Station					x
Jasper Station					x
Kamloops Terminal			x		
Sumas Terminal	x		x		

9.5.8 Contractors, Contractor Equipment and Labor

Trans Mountain's primary response contractors and support services are private entities with which Trans Mountain has a contractual relationship. The removal of this information follows the requirements of The Personal Information Protection and Electronic Documents Act (PIPEDA) (federal legislation). The information is provided on a controlled basis within the Incident Notification Guideline located in the Emergency Toolkit.

9.6 Decontamination Plan

All personnel and equipment must go through a decontamination process to ensure spilled material does not contaminate a larger area than needed. The Decontamination Plan will be activated in conjunction with this Plan. After the initial assessment has been conducted an incident specific decontamination plan will be developed to support the Incident Action Plan. A copy of the Decontamination Plan can be found in each Decontamination Trailer or on the intranet site in the Emergency Toolkit.

9.7 Public Evacuation

When an emergency is declared, and it has been determined that the incident has risk to the public, which may require the implementation of immediate public safety measures, the applicable Terminal Evacuation Plan will be activated.

The Terminal Evacuation Plans are intended to be activated in coordination with the Local Authority and in conjunction with this plan (the ERP) and the Trans Mountain Public Health Assessment and Response Plan for Airborne Health Risks. See Section 13.12 Terminal Evacuation Plan.

The Local Authority sets the direction of appropriate public safety measures and lead the development of the incident-specific evacuation plan. Trans Mountain will support the local authority by supplying incident-specific information and resources, as needed, to implement public evacuation.

Trans Mountain has no legislative authority to evacuate the public, except for within the Terminal boundaries. Trans Mountain is responsible to:

- Take immediate action to identify the hazards and/or potential hazards that may arise from an incident at the Terminal.
- Confirm the parameters of the Initial Isolation Zone and implement the appropriate safety measures to protect people and property.
- Provide hazard-specific and technical information to the local authority to aid in the determination of public safety measures required for the community surrounding the Terminal.

As the incident evolves, Trans Mountain is responsible for providing updated information to the local authority to support the ongoing assessment of risk to the public and the implementation of public safety measures.

Trans Mountain support may include, as requested, the sharing of personnel and resources to aid in the preparation and execution of the local authority's evacuation plan.

The ICP together with the local authority will continually monitor the hazards and the incident outside of Terminal boundaries to determine if the situation has evolved, using the technical information and air monitoring data collated by the Environment Unit. This additional assessment will be used to determine if subsequent actions are required, including if the Protective Action Zone requires expansion or contraction. Trans Mountain will support the local authority in these efforts by assisting with the implementation of further public safety measures, as required.

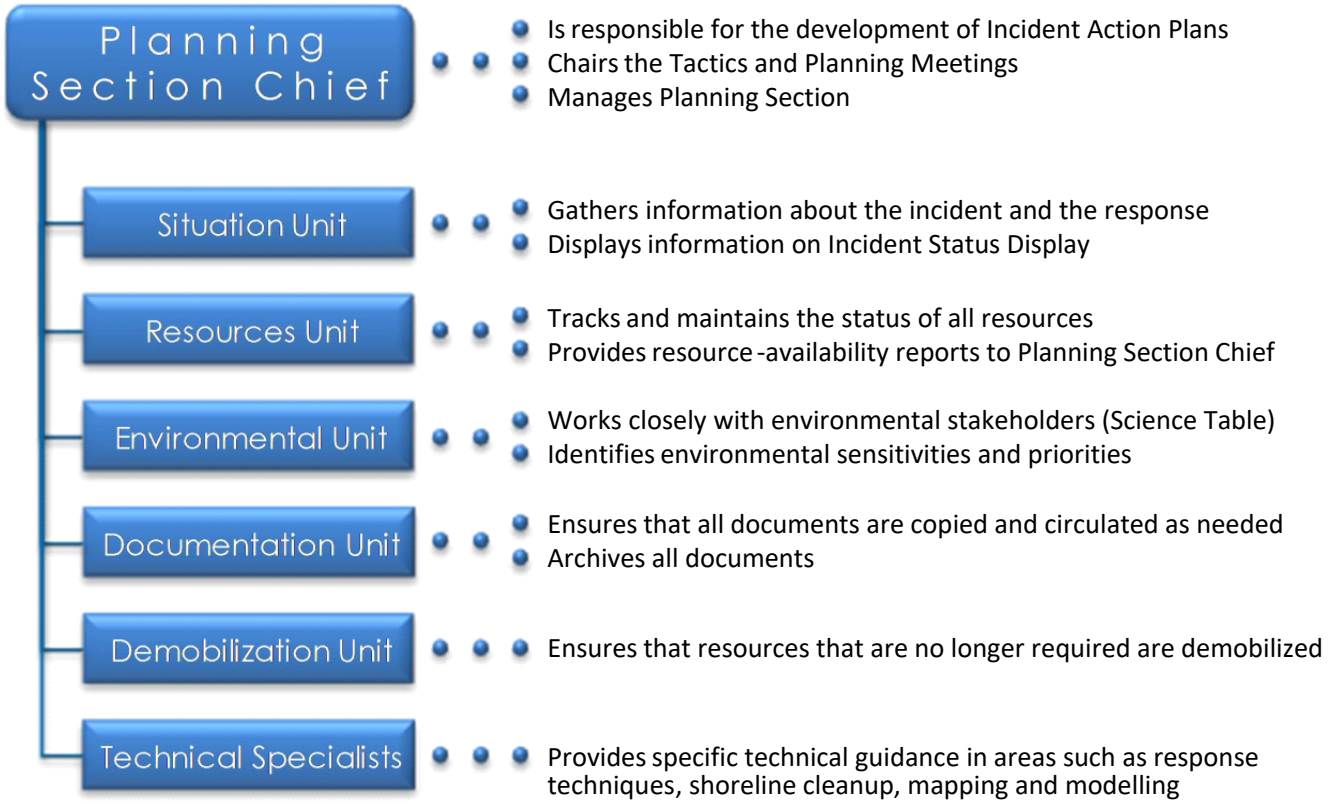
Note - Public protection measures do not apply to responders who are wearing appropriate PPE to respond.

A copy of each Terminal Evacuation Plan can be found in the Emergency Toolkit.

10.0 PLANNING SECTION

The Planning Section is responsible for the gathering of incident intelligence, and the development of Incident Action Plans. This includes the tracking of incident information and resources, and the documentation of the incident. Detailed duties and responsibilities for individuals in the Planning Section can be found in the Trans Mountain Incident Command System Guide in the Emergency Toolkit.

Technical Specialists (i.e., fire or oil spill specialists) will also be assigned to the Planning Section. Technical Specialists will be Qualified Professionals.[12]



10.1 Planning Section Chief

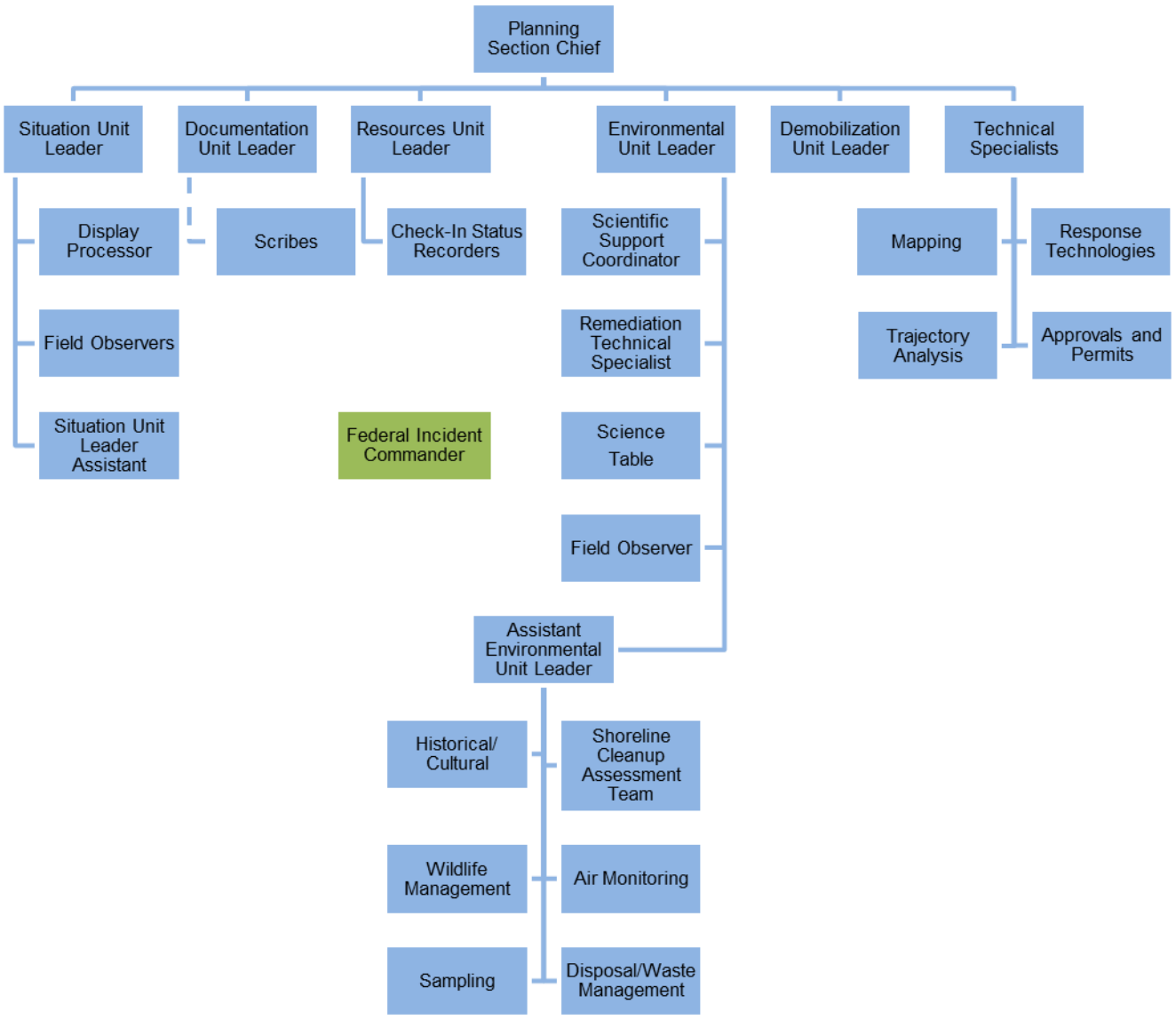
The Planning Section Chief, a member of the General Staff, is responsible for collecting, evaluating, disseminating, and using information about the incident and status of resources. Information is needed to:

1. understand the current situation,
2. predict probable course of incident events, and
3. prepare alternative strategies for the incident.

[12] A Qualified Professional is an applied scientist or technologist specializing in a relevant applied science or technology including, but not necessarily limited to, agrology, forestry, biology, engineering, geomorphology, geology, hydrology, hydrogeology, or landscape architecture. A qualified professional must be registered in Alberta or British Columbia with the appropriate professional organization and acting under that association's Code of Ethics and subject to disciplinary action by that association. He or she must also be someone who, through demonstrated suitable education, experience, accreditation, and knowledge relevant to the particular matter, may be reasonably relied on to provide advice within his or her area of expertise.

10.2 Planning Section Organization Chart

Not all roles will be filled for all incidents; however, the following chart is an outline of the possible positions to be filled. Detailed descriptions of each position and its duties can be found in the Trans Mountain Incident Command System Guide.



10.3 Sampling and Monitoring Plan

10.3.1 Spill Monitoring and Sampling

The protection of water resources in an emergency is a priority for Trans Mountain. Monitoring and mitigation of impacts during the response to a spill is a main focus of the Incident Management Team which will establish, and be located in, the Incident Command Post (ICP). The timely assessment of the condition of water quality, and sediment quality, provides valuable information, allowing for mitigation planning, and the response to a spill.

The procedures in the Sampling and Monitoring Plan will be used to identify and document the location and movement of, and the area covered by, the spill.

In the event of an emergency, the Sampling and Monitoring Plan will be activated in conjunction with this Plan. After the initial assessment has been conducted an incident specific sampling and monitoring plan will be developed to support the Incident Action Plan.

10.3.2 Assessment of Adverse Effects

The Sampling and Monitoring Plan procedures will be utilized to continuously to assess and document the current and potential effects of the spill on the human health, environment, and infrastructure.

A copy of the Sampling and Monitoring Plan can be found in the Emergency Toolkit.

10.3.3 Spill Response Planning

The terminals have been designed to be fully self-contained with released product remaining onsite. In the event of migration offsite the Trans Mountain Pipeline Emergency Response Plan will take effect.

The protection of human health, environment, and infrastructure are of the highest priority in spill response planning. High Consequence Areas (HCAs) have been identified in each District in which Terminals are located including:

- Populated Areas
- Ecological Areas
- Heritage Resources
- Essential Infrastructure

Response actions and mitigation procedures undertaken at the time of a release can ultimately influence the duration, magnitude, and extent of impacts to HCA. Tactics are contained within Geographic Response Plans and in Section 4.3 Terminal – Primary Recovery/Removal - Spills. In the event of an offsite release HCAs identified within the Control Point Datasheets and GIS database are used to develop incident-specific response plans.

For planning purposes, the worst-case scenario is used when determining the magnitude of the risk posed to HCAs from a spill. Thus, the tactics and equipment deployment procedures used in the response plans reflect the worst-case scenario.

10.4 Demobilization

Trans Mountain will develop a Demobilization Plan, to ensure the resources available are what is required. Therefore, emphasis must be placed on establishing efficient demobilization procedures. Further information on the Demobilization Unit Leader is available in the Incident Command System Guide located in the Emergency Toolkit.

10.4.1 Demobilization Procedures

- The Planning Section will initiate the development of a Recovery Plan for implementation upon completion of the response phase of the incident
- Operations Section will determine which resources are ready for release from a specific collection site
- The Planning Section will provide guidance on release priorities and demobilization recommendations
- Information maintained by the Planning Section will be utilized to assist in the prioritization
- Decontaminated equipment will be returned to appropriate staging area for release or re-deployment
- Transports for equipment will be required if remote from staging area
- The Planning Section will document all demobilization and decontamination activities
- Equipment designated for re-assignment will be mobilized to the appropriate staging area
- The Division Supervisor will ensure a log is maintained documenting that proper decontamination procedures are performed for each piece of equipment
- The Operations Section will ensure that redeployed personnel receive proper rest prior to returning to duty. The Planning Section Chief will monitor personnel redeployment activities to ensure number of hours worked is within acceptable guidelines

10.5 Shoreline Cleanup Assessment Technique (SCAT)

The SCAT process is conducted as part of the overall planning activity to identify sensitive shoreline resources, develop appropriate protection plans as outlined above, and identify recommended pre-treatment and cleanup techniques. A SCAT Team Leader, under the Environmental Unit Leader, is responsible for coordinating and directing these activities.

The specific goals of the SCAT process are to:

- identify the shoreline areas that are, and are not, oiled as a result of the spill through aerial surveys
- conduct ground surveys of these areas, if necessary, to define precise oil conditions, operational limitations, and to establish clean-up locations and priorities
- determine the most environmentally suitable methods of clean-up based on shoreline type and characteristics
- conduct and monitor shoreline clean-up operations

A comprehensive, practical description of the SCAT process is contained in Environment and Climate Change Canada's Oil Spill SCAT Manual for the Coastlines of British Columbia.

10.6 Public Health & Air Monitoring

Trans Mountain contractors will conduct air monitoring operations during emergencies in order to obtain accurate and reliable air quality data. As per Trans Mountain's Public Health Assessment and Response Plan for Airborne Health Risks, the collected information will be used to determine appropriate response actions to ensure public protection.

In the event of an emergency, the Public Health Assessment and Response Plan for Airborne Health Risks will be activated in conjunction with this Emergency Response Plan. After the initial assessment has been conducted an incident specific air monitoring plan will be developed to support the Incident Action Plan.

A copy of the Public Health Assessment and Response Plan for Airborne Health Risks can be found in the Emergency Toolkit.

10.7 Common Operating Picture

The Common Operating Picture (COP) is a readily available web-based interface that provides visual mapping representation of Trans Mountain assets and resources, in relation to nearby land, people, and resources. It has the capacity to provide relevant information and data-mapping to all relevant portions of the Trans Mountain Pipeline and associated Terminals. Data can be seen against both current and historical aerial imagery, satellite imagery, and terrain models. It also contains data synchronized to publicly available Government alerts and databases, that together, provide an up-to-date common operating picture during the response.

In the event of an incident, the COP will be used to provide a spatial context of the incident in relation to the Right-of-Way and facilities. Information available includes:

- Resources: Trans Mountain assets, offices, and equipment caches
- High consequence areas, including ecological areas, heritage resources, and essential infrastructure
- Potentially affected persons or groups
- Natural hazards
- Spill Response control points and boat launches
- Information regarding third-party contractors and Mutual Aid, such as location, coverage, and/or equipment

Additional information which can be added to the COP, if available:

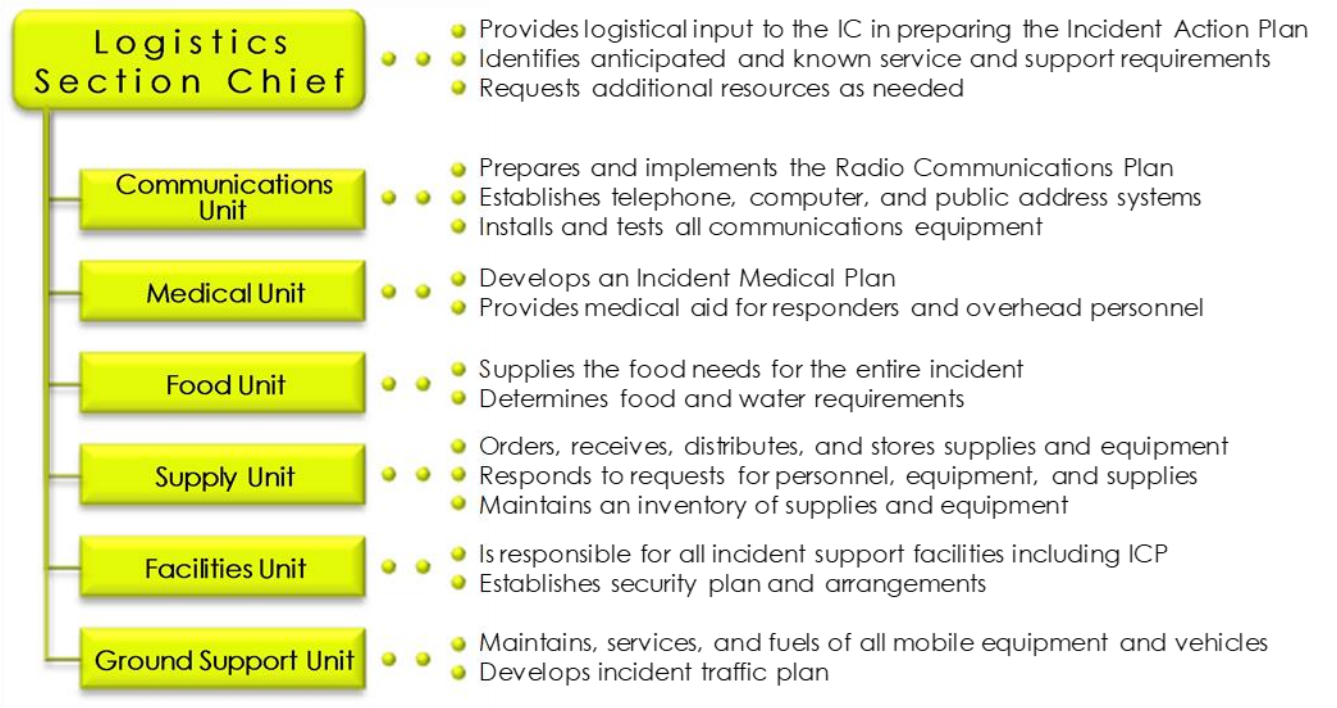
- Driving alerts and notifications
- Weather station readings
- Flood and wildfire alerts and warnings
- Government-issued evacuation alerts and orders

COP users can determine access routes, obtain a visual 3D context with terrain, and conduct a ‘desktop’ assessment of safety, which can be combined with field observations as part of developing a comprehensive assessment in the quickest amount of time. The COP can also be used to calculate response times for deployment of equipment, Trans Mountain personnel (from offices and facilities), mutual aid personnel and third-party contractors.

The COP Tool itself is managed by the Incident Command Post- Planning Section - Mapping/GIS Technical Specialists; information is added at the request of the ICS Section Chiefs, Unit Leaders and Emergency Management.

11.0 LOGISTICS SECTION

The Logistics Section is responsible for providing support to the incident, including all incident facilities (including the Incident Command Post). The Logistics Section will also source all required resources, including personnel and equipment, accommodations, food, and supplies. Detailed duties and responsibilities for individuals in the Logistics Section can be found in the Trans Mountain Incident Command System Guide in the Emergency Toolkit.

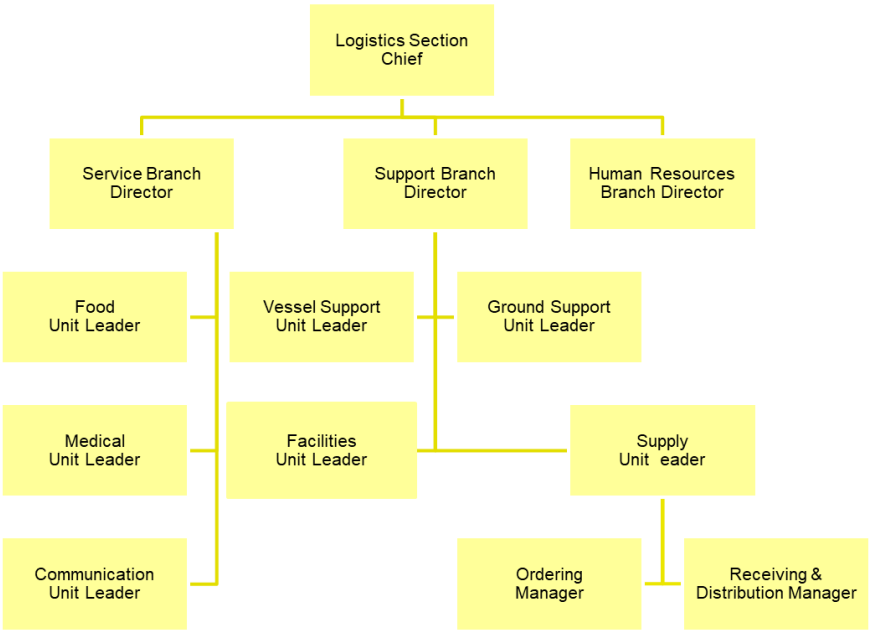


11.1 Logistics Section Chief

The Logistics Section Chief, a member of the General Staff, is responsible for providing facilities, services, and material in support of the incident response. The Logistics Section Chief participates in developing and implementing the Incident Action Plan and activates and supervises Branches and Units within the Logistics Section.

11.2 Logistics Section Organization Chart

Not all roles will be filled for all incidents; however, the following chart is an outline of the possible positions to be filled. Detailed descriptions of each position and its duties can be found in the Trans Mountain Incident Command System Guide.



11.3 Facilities

11.3.1 Incident Command Post

Typically, the ICP is located near the incident site and is the focus for the conduct of direct, on-scene control of tactical operations. Incident planning is also conducted at the ICP; an incident communications center also would normally be established at this location. The ICP may be collocated with the incident base if the communications requirements can be met. The ICP may perform local Emergency Operations Center-like functions in the context of smaller jurisdictions or less complex incident scenarios.

Upon arrival at the site, IMT members should go directly to the primary ICP location. The IMT will assemble at the designated Command Post as soon as possible following notification. If another location is being utilized, team members will be notified upon arrival.

There are pre-designated potential Incident Command Post (ICP) and Staging Area locations along the pipeline corridor and in communities where its facilities are located. Access to these facilities, and the lead time required varies depending on the location and type of facility being used. Specifically, Trans Mountain has identified resources in the following communities: In British Columbia Burnaby, Richmond, City of Vancouver, Abbotsford, Chilliwack, Hope Merritt, Kamloops, Clearwater, Blue River, Valemount, and in Alberta Jasper, Hinton, Edson, Gainford, Edmonton, Sherwood Park. Trans Mountain has agreements and protocols in place where appropriate with the service providers. All facilities meet the requirements for internet and telephone connectivity, food, lodging, meeting space, parking and security for a multi-agency response.

Incident Command Post facilities are private entities with which Trans Mountain may have contractual relationship. The information is provided on a controlled basis within the Incident Notification Guideline located in the Emergency Toolkit. The removal of this information follows the requirements of The Personal Information Protection and Electronic Documents Act (PIPEDA) (federal legislation).

11.3.2 Media Relations Centre

The designated Media Relations Centre in the event of an emergency will be designated at the time of an emergency, based on the location of the ICP. Media Relations facilities are private entities with which Trans Mountain may have contractual relationship. The information is provided on a controlled basis within the Incident Notification Guideline located in the Emergency Toolkit. The removal of this information follows the requirements of The Personal Information Protection and Electronic Documents Act (PIPEDA) (federal legislation).

11.3.3 Staging Areas

A number of locations may serve as the key staging areas for response activities, the actual location of the staging area will depend on the type of emergency event. It is important to note that Logistics is responsible for establishing staging areas but once established, Operations is responsible for their continued operation and staffing.

Factors considered in the selection of staging areas include:

- Safety and security
- Accessibility by road, water
- Available space for storing equipment
- Suitability for landing helicopters
- Ease of providing long-term logistics support (personnel changes, fueling, and provisioning)

11.4 Communications

11.4.1 Emergency Communications System

During a response, communications will take place through one or more of the following modes:

- Landline and/or cellular telephones
- Radio System
- Satellite Communication
- Electronic Mail (email) Communications

The Control Point Data Sheets, found in the GRPs, contain areas where communication gaps have been pre-identified. An incident specific communications plan should be developed upon completion of the initial assessment of spill to ensure reliable communications are established.

11.4.2 Telephone Communications

Regular or cellular telephones will be the primary mode of communications between team members to whom cellular phones have been assigned, and the Incident Command Post, and between the Incident Command Post and various outside agencies and organizations. Regular and cellular telephone contacts for all IMT personnel and agencies are provided in Section 2.0 Internal and External Notification.

11.4.3 Radio Communications

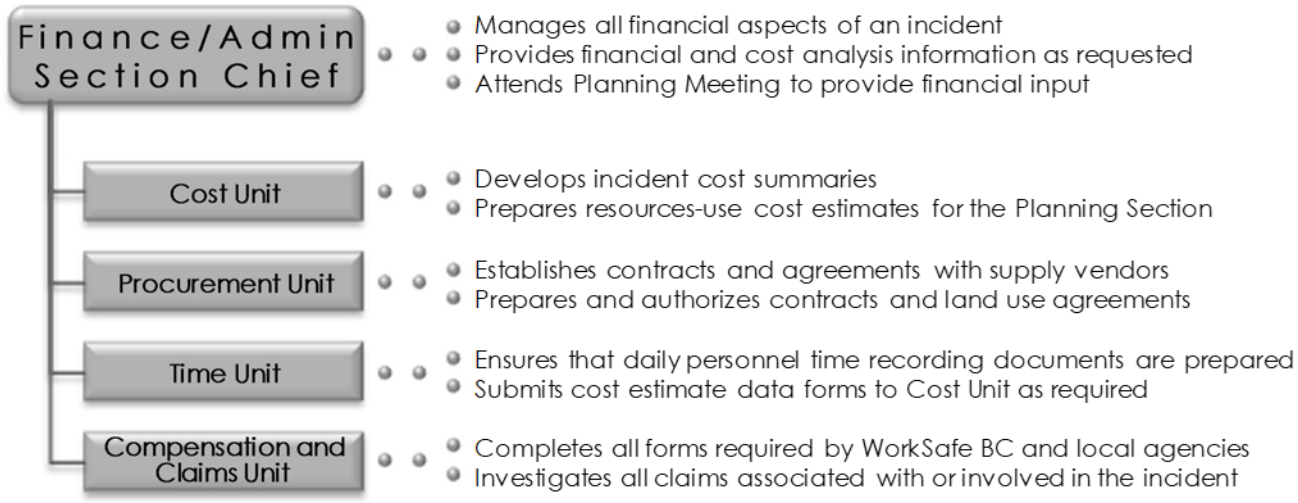
The radio system utilizes Motorola portable radio units. Separate channels may be used for the incident response and normal operations. Also, different contractors operate a number of radios on separate channel. When necessary to facilitate communications between Trans Mountain and contract personnel, radios may be shared during an incident. During an incident, all radio frequencies used will be tracked using the ICS 205.

11.5 Security

Due to the large amount of public attention created at an incident site, additional security measures are required. Security needs will be evaluated for any command post, staging area as well as the incident site. Additional duties for security can be found in the Incident Command System Guide.

12.0 FINANCE AND ADMINISTRATION SECTION

The Finance and Administration Section is responsible for all financial aspects of the response, including assisting in establishing contracts with suppliers, and setting up systems to monitor time and costs. Detailed duties and responsibilities for individuals in the Finance and Administration Section can be found in the Trans Mountain Incident Command System Guide in the Emergency Toolkit.

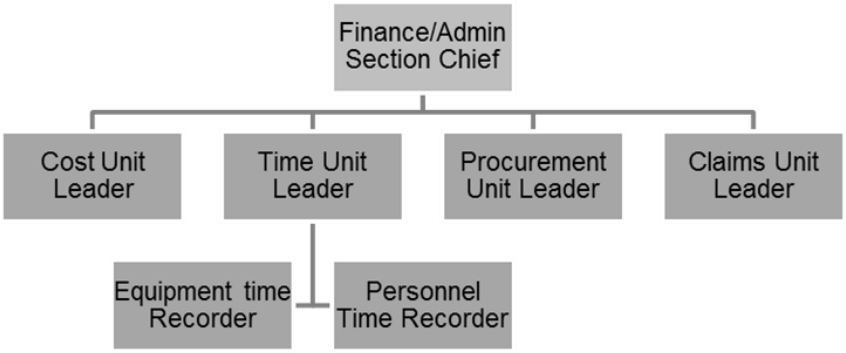


12.1 Finance Section Chief

The Finance/Administration Section Chief, a member of the General Staff, is responsible for all financial and cost analysis aspects of the incident and for supervising members of the Finance/Administration Section.

12.2 Finance Section Organization Chart

Not all roles will be filled for all incidents; however, the following chart is an outline of the possible positions to be filled. Detailed descriptions of each position and its duties can be found in the Trans Mountain Incident Command System Guide.



12.3 Managing Spill Liability Claims

The Insurance/Risk Management Department will do the following things while managing spill liability claims. The Compensation and Claims unit leader will either work closely with the Trans Mountain Insurance Risk Management Department, or the Insurance/Risk Management Department will deploy specific personnel to the ICP.

- Participation in the initial TAS conference call to gather information.
- Provide notice of incident to appropriate insurers.
- Coordinate with legal, operations & procurement to investigate any contractual protections available.
- Establish contact with liability adjuster and instruct them to proceed immediately to the incident site. Adjuster(s) can usually be on site within 4-12 hours of notification.
- Member of Risk Management group will travel to site to work with the adjuster and act as the liaison with the incident commander on site.
- Adjuster can make contact with the displaced residents at the discretion of Trans Mountain or the local authorities. Adjuster will gather pertinent information (phone no., address, damage assessments, costs incurred) and will provide contact information to them for later follow-up.
- If needed, set up an 800 number for the intake of damage claims to be funneled back through the adjuster for processing. This would be coordinated through the Communications Department.
- Adjuster and/or Risk Management to follow-up with displaced residents to address concerns regarding damage claims or out of pocket expenses that resulted from the incident.
- Risk Management to coordinate with the business unit to set up a property damage/liability AFE to cover the costs of damage claims of third parties.
- Instruct adjuster to gather documentation from third-party claimants in order to settle and/or resolve any damage claims arising from the incident.
- Risk Management to coordinate with legal department on those third-party claims in which Trans Mountain is sued or third party has legal representation.

12.4 Managing Spill Liability Claims – Informal Claims Process

A land agent (“Adjustor” in this context) enters the field as soon as possible after the report of the incident, often within hours. The land agent begins identifying and communicating with parties that are either directly affected by the incident or close enough to warrant communications on what is occurring. This land agent has the authority to immediately compensate or make arrangements with affected parties to mitigate the negative effect the event has had on their lives. Examples of this “immediate compensation” might be: Short term accommodations for displaced persons; water, food or groceries provision or compensation; short term lost income payment (in cases where the party has limited resources); payment for boarding of livestock or household pets; rental vehicle compensation necessitated due to loss of access to their own car; travel costs to stay with relatives or to get away from trauma of situation; compensation for short term counseling; payment for destroyed tools/equipment that might prevent the person from carrying on their livelihood until replaced.

These immediate “claims” are identified in the field, settled immediately (with consultation with the Claims Unit Leader, or under agreed terms of reference) and either cash or check is completed on the spot, or company credit cards are used to procure things like hotel rooms. Formal paperwork is not required on these payments, the party must sign a receipt acknowledging the payment. If there are additional claims, the formal process will be followed.

12.5 Managing Spill Liability Claims – Formal Claims Process

In the event that the informal process cannot settle claims by individuals, this formal process will be followed.

12.5.1 Oil Spill Claims Event Tiers

Oil spill claims events can be generally classified by the number of claims anticipated rather than the quantity of product released. These tiers are defined as follows:

- Tier 1 – up to 50 oil spill claims anticipated
- Tier 2 – between 50 and 500 spill claims are anticipated
- Tier 3 – over 500 spill claims are anticipated

12.5.2 Oil Spill Claims Management

Management of oil spill claims will be provided by the Claims Unit Leader and the Trans Mountain Insurance/Risk Management Department representatives in cooperation with the Incident Commander. Outside contractors will support claims processing during all events.

12.5.3 Insurance

Trans Mountain currently has $750 million of spill liability insurance, the first $2 million which is covered by self-insurance.

12.5.4 Oil Spill Claims Handling Process

After an oil spill occurs, Trans Mountain will advertise for claims. Oil spill claims information and forms will be made available through local claims centers, if established, or via the internet. Depending on the anticipated number of claims related to the spill, Trans Mountain will establish local claim centers. Oil spill claims will be accepted by Trans Mountain up to 3-years from the date that Trans Mountain began advertising for claims or 3-years from the date that the injury or damage being claimed was reasonably discovered – whichever date is earlier.

12.5.5 Oil Spill Claims Advertisements

Trans Mountain will advertise for claims after being advised to do so by our legal department, or within 15-days after being designated as the Responsible Party. The geographic extent of the oil spill will dictate the publications in which claim advertisements will be placed. The length of time advertisements will run in local publications will be based on recommendations provided by our legal department or the length of time specified by the regulatory authority.

12.5.6 Oil Spill Claims Contact Information

In the event of an oil spill contact information for oil spill claims, location of local claim centers and mailing address for claims submission will be available via the toll-free Public Information Line, established at the time of an incident, and on the website established at the time of an incident, as well as in advertisements placed in local publications.

12.5.7 Local Claims Centers

Local claims centers will be established based on community need and/or the number anticipated claims. Local claims centers will remain in operation for as long as warranted by workload and community need.

12.5.8 Oil Spill Claims Forms

The claims form used by Trans Mountain will be made available at the time of an incident as soon as the claims process is determined. Information entered in any claim form must be typed or legibly hand-written in blue or blue-black ink. The claim form must include the “sum-certain” monetary amount being claimed and be signed by the claimant in black or blue-black ink. The Claims Tracking Sheet may be used in the claims adjudication process to track the status of claims received and a Claim Check Sheet may be used to record the type of documentation provided with each claim. Samples of the forms are available in the Emergency Toolkit.

12.5.9 Oil Spill Claims Adjudication and Timeframe

Trans Mountain will process claims in the order they are received. Each claim will be assigned a unique identification number which will be used to track the claim internally. The identification number can also be used by claimants who wish to provide additional information to support their claim or inquire about the status of a claim. Trans Mountain will review each claim received to ensure, as much as possible, that all needed information to make a claim decision has been provided by the claimant. If additional information is needed, we will request that the claimant forward that information to us so it can be added to the claim and considered during adjudication. If the information requested is not received within 90 days, Trans Mountain will adjudicate the claim with the available information. This may result in a reduction of possible claim compensation or an outright denial of the claim.

Once Trans Mountain sends the claimant a claim determination, the claimant must either accept or reject the offer within 60 days. The claimant must sign a release before the claim will be processed for payment. If the claimant takes no action within 60 days after receiving the claim determination, the offer to pay the claim will be voided and the claim will be closed. If the claimant rejects the offer, they can provide additional information and ask Trans Mountain to reconsider the claim determination; typically, this would start an entirely new review process with another claim determination made as a result of the reconsideration. Claims submitted to Trans Mountain will be paid in the order that accepted offers (with signed releases) are received. Claims are usually paid with 30-days from the date Trans Mountain receives the claimant's signed release.

12.6 Oil Spill Claims Documentation

The amount and type of documentation needed to make a claim determination depends on many factors, including the claim type and the monetary amount claimed.

The following types of claims may be submitted to Trans Mountain. Example types of documentation are also included below within the listing of each claim type. The examples provided are for reference only; they may or may not represent everything needed to adjudicate a claim.

12.6.1 Removal Costs

Costs to prevent, minimize, mitigate, or clean up the oil spill. Examples of Proof and Documentation that may be needed:

- Proof that actions were coordinated with the FOSC.
- Witness statements
- Detailed description of actions
- Dates on which work was performed
- Analysis of spill substance
- Map of area
- Pictures of area, damage, and spill
- Receipts, invoices, or similar records with description of work
- How rates were determined and any comparison of rates
- Daily records of personnel costs including details on labor rates, hours, travel, and transportation
- Daily records of equipment costs including description and use
- Signed disposal manifests and proof of payment for disposal
- Payroll verification of hourly rate at the time of spill
- Verification of equipment rates for equipment used

12.6.2 Property Damage

Injury or damage to, or economic loss resulting from destruction of real property (land or buildings) or other personal property including a boat. Examples of Proof and Documentation that may be needed:

- Proof of ownership or leasehold interest in the property; lease or rental agreement of any substitute property used
- Proof or evidence that property was injured, destroyed, or not usable because of the oil spill
- Report of any expenses or money lost while the property was unavailable because of spill damage
- Proof of value of property both before and after the spill or injury
- Documented cost of repair or replacement of the property
- Proof of value of property before and after the spill
- Documentation that shows whether or not substitute property was available, and related costs of substitute property if used.
- Documentation that shows how claimant lost money from the damage to the property
- Witness statements
- Copy of title, deed, lease, or license to property in claimant’s name
- Pictures or video recordings of property and/or damage
- Maps or legal documents showing the location of the property within the spill area
- Professional property appraisals for the value of the property prior to and after the spill, actual selling price of the property, and evidence connecting the depressed selling price to the oil spill rather than to other economic or real property factors
- Copies of bills paid for repair of damage or two estimates showing activities and costs to repair the damage

12.6.3 Loss of Profits or Earning Capacity

Damages equal to the loss of profits or impairment of earning capacity due to the injury, destruction, or loss of property or natural resources. Examples of Proof and Documentation that may be needed:

- Proof that property or natural resources that were damaged, destroyed or lost, resulted in claimant's loss
- Proof the claimant's income was reduced due to the damage or loss of the property or natural resources and how much it was reduced
- Documentation showing the amount of profits and earnings in similar time periods
- Documentation showing any alternative employment or business during the period claimed and any income received during that period
- Documentation showing and savings to overhead costs or other normal expenses - those not paid as a result of the spill (commuting costs, utility fees, employee salaries)
- Photos of damaged property (before and after the spill)
- Witness Statements on how the spill led to loss of business income or earning capacity; explain any earnings anomalies
- Statement on how the spill caused a loss in income
- Affidavit from claimant's employer about the impact the spill had on an employees work or income, and if the employer intends to file a claim for lost profits or earning capacity.
- Copies of pay stubs, receipts, timesheets from before, during, and after the spill
- Personnel records from claimant's employer before, during, and after the spill, showing employment
- Claimant's description of efforts to reduce loss, including job search
- Copies of any job-hunting expenses (e.g., travel costs)
- Signed copies of income tax returns and schedules for at least two years prior to spill
- Details of employment expenses not paid during period being claimed (e.g., commuting costs)
- Copies of pay stubs, receipts, timesheets from alternative employment during time of spill (including unemployment compensation)
- Description and documentation of business losses due to spill
- Copies of letters of business cancellations caused by the spill damage
- Maps or descriptions of the area showing the business location and the spill impact area

- Financial statements for at least two years prior to spill and from the year of the spill
- Signed copies of business income tax returns and schedules for at least three years prior to spill
- Details on efforts to mitigate business losses or why no efforts were taken
- For hotels, daily and monthly occupancy information for two years prior to spill and the year of the spill
- Description of marine charter business losses caused by the spill
- Evidence that charter vessel(s) was in the area impacted by the spill and were unable to carry on their business due to the spill
- Maps or descriptions of the area showing charter business location within spill area
- Signed copies of income tax returns (for charter boat business) and schedules for at least three years prior to spill
- Details on expenses not paid out during period being claimed (e.g., wages)
- Booking records for three years prior to spill and year of spill
- List of charter rates, including any services the business specializes in (e.g., sport fishing)
- Copies of any logs relating to boating activities for the year prior to and the year of the spill
- Registration documents for the vessel

12.6.4 Loss of Subsistence Use of Natural Resources

Loss of subsistence use claim if natural resources claimants depend on for subsistence use purposes that have been injured, destroyed, or lost by an oil spill event. Examples of Proof and Documentation that may be needed:

- Proof that injury, destruction, or loss of natural resources would have been used by the claimant to obtain food, shelter, clothing, medicine, or other minimum necessities of life.
- Documentation identifying each specific natural resource for which compensation for loss of subsistence use is being claimed
- Description of the actual subsistence use you make of each specific natural resource you identify;
- Description of how and to what extent claimant's subsistence use of the natural resource was affected by the injury to, destruction of, or loss of, each specific natural resource;
- Description of claimant's efforts to mitigate subsistence use loss
- Description of alternative source(s) or means of subsistence available to claimant during the period

12.6.5 Loss of Government Revenue

Net loss by Federal, State, or Local Governments of taxes, royalties, rents, fees, or net profit shares due to the injury, destruction, or loss of real property, personal property, or natural resources. Examples of Proof and Documentation that may be needed:

- Information showing that the loss of revenue was caused by the injury to, destruction of, or loss of real or personal property or natural resources caused by the discharge
- Information showing the amount, identity, and description of the revenue loss for which compensation is claimed, including the applicable authority for collecting the revenue, method of assessment, applicable rate, and dates of collection or periods of loss
- Documentation showing expenditures saved because revenue was not collected
- The total assessment or revenue collected and related expenditures for comparable revenue periods, typically covering two years
- Description of what revenues were impacted and how the spill caused a loss of revenues
- Copies of statutes, regulations, ordinances, etc., outlining applicable authority to raise such revenues, property affected, method of assessment, rate of assessment, and method and dates of collection of assessment
- Government financial reports showing total assessment or revenue collected for comparable periods, typically covering two years
- Details of any expenses not paid out by government

12.6.6 Increased Public Service Costs

Net costs by State & Local Governments for providing increased or additional public services during or after removal activities, including protection from fire, safety, or health hazards, caused by a discharge of oil or directly attributable to response to the oil spill Event. Examples of Proof and Documentation that may be needed:

- Documentation showing justification for the public services provided, including documentation of what specific services were provided and the relationship to the spill.
- Documentation showing when services were provided during and after the oil spill removal.
- Documentation showing services were in addition to services normally provided
- Documentation showing the net cost for the services and the methods used to compute those costs
- Reports showing the increased public services were required and if the services were due to fire, health, or safety hazards
- Detailed description of what increased services were necessary and why, including a distinction between removal activities, safety acts, and law enforcement acts, and if the increase was actually incurred or if normal resources were diverted for use
- Daily reports on the activities of the government personnel and equipment involved Government Labor and Equipment Rates:
- Payroll verification of the government hourly rate at the time
- Verification of the standard government equipment rates for any equipment claimed
- Signed and dated records of the spill including hourly rates for labor and equipment
- Explanation as to whether rates are fully loaded or not and formulas used
- Certification that rates used reflected actual costs incurred and did not include punitive damages or fees

13.0 SUPPLEMENTAL PLANS

In support of the ERP, a number of supplemental plans have been developed.

13.1 Geographic Response Plans

Geographic Response Plans (GRPs) provide detailed, geographical specific information to assist spill responders in the containment and recovery of released product. GRPs identify and describe environmental sensitivities, including natural and cultural resources, as well as locate and classify Control Points.

Four GRPs have been developed, one for each District:

- Alberta District;
- North Thompson District;
- Kamloops District; and
- Sumas District.

A copy of each GRP can be found in the Emergency Toolkit.

13.2 Waste Management Plan

The management of waste from a spill is a priority for Trans Mountain and a key component supporting incident response. The appropriate handling, storage, transport, disposal and tracking of waste associated with a spill is essential for effective planning and response to a spill.

In the event of an emergency that has the potential for generating waste, the Waste Management Plan will be activated in conjunction with this Plan. After the initial assessment has been conducted an incident specific waste management plan will be developed to support the Incident Action Plan.

A copy of the Waste Management Plan can be found in each Decontamination Trailer or form can be found in the Emergency Toolkit.

13.3 Decontamination Plan

All personnel and equipment must go through a decontamination process to ensure spilled material does not contaminate a larger area than needed. The Decontamination Plan will be implemented by the Decontamination Group Supervisor will work under the Recovery and Protection Branch Director. The Decontamination Group Supervisor is responsible for creating and implementing an incident specific Decontamination Plan, if necessary.

A copy of the Decontamination Plan can be found in each Decontamination Trailer or form can be found in the Emergency Toolkit.

13.4 Sampling and Monitoring Plan

The protection of water resources in an emergency is a priority for Trans Mountain. Monitoring and mitigation of impacts during the response to a spill is a main focus of the Incident Management Team which will establish, and be located in, the Incident Command Post (ICP). The timely assessment of the condition of water quality, and sediment quality, provides valuable information, allowing for mitigation planning, and the response to a spill.

In the event of an emergency, the Sampling and Monitoring Plan will be activated in conjunction with this Plan. After the initial assessment has been conducted an incident specific Sampling and Monitoring Plan will be developed to support the Incident Action Plan.

A copy of the Sampling and Monitoring Plan can be found in the Emergency Toolkit.

13.5 Groundwater Assessment Plan

The Groundwater Assessment Plan is used following a product release to assess and evaluate the potential impacts to groundwater, evaluate its quality and monitor the potential risks to groundwater receptors. Additionally, the plan will facilitate the development of response strategies to protect groundwater and mitigate the impacts of the release.

In the event of an emergency that impacts, or potentially could impact an aquifer, the Groundwater Assessment Plan will be activated in conjunction with the appropriate Geographic Response Plan. The fundamental concepts of the Groundwater Assessment Plan are initiated by the Environmental Unit and are maintained until the development of the incident specific plan, based on the assessment, is completed.

An incident specific approach will be generated to assess potential effects to drinking water sources and provisions will be made as necessary to provide safe drinking water in consultation with the local authorities; see the Groundwater Assessment Plan.

13.6 Public Health Assessment & Response Plan for Airborne Risks (Air Monitoring Plan)

Trans Mountain has developed a Public Health Assessment and Response Plan for Airborne Health Risks. In the event of an emergency, the Public Health Assessment and Response Plan for Airborne Health Risks will be activated in conjunction with this Emergency Response Plan. After the initial assessment has been conducted an incident specific air monitoring plan will be developed to support the Incident Action Plan.

The objectives of the incident specific air monitoring plan are to;

- Anticipate and identify Potential Chemicals of Concern (PCOC) from product releases and/or fires;
- Evaluate, via proper monitoring principles, public health exposures;
- Facilitate development and implementation of incident-specific air monitoring and response strategies to protect the public; and
- Identify action levels for PCOC that triggers assessment of public health risk.

A copy of the Public Health Assessment and Response Plan for Airborne Health Risks can be found in the Emergency Toolkit.

13.7 Wildlife Management Plan

The protection of wildlife in an emergency is a priority for Trans Mountain; monitoring and mitigation of impacts during the response to a spill is a main focus of the Incident Command Post (ICP). The timely assessment of wildlife and wildlife habitat conditions provides valuable information, allowing for mitigation planning, and the response to a spill.

In the event of an emergency, the Wildlife Management Plan will be activated in conjunction with this Plan. After the initial assessment has been conducted an incident specific wildlife management plan will be developed to support the Incident Action Plan.

A copy of the Wildlife Management Plan can be found in the Emergency Toolkit.

13.8 Non-Floating Oil Assessment and Response Plan

The purpose of the Non-floating Oil Assessment and Response Plan is to provide initial guidance for the assessment and response to spilled oil that is at risk of, or has become, non-floating within an inland water environment. In the event of a spill emergency, the Non-floating Oil Assessment and Response Plan will be activated in conjunction with this Emergency Response Plan. will remain active until such time that an incident specific version can be implemented by the Incident Command Post (ICP).

A copy of the Non-floating Oil Assessment and Response Plan can be found in the Emergency Toolkit.

13.9 Convergent Volunteer Management Plan

During an emergency, it is possible that members of the public will converge on the incident scene with the intention of supporting emergency response and restoration efforts. Although Trans Mountain does not request volunteer assistance, if there is a strong interest demonstrated by the community, Trans Mountain will attempt to support and incorporate Convergent Volunteers into the response effort.

In the event of an emergency, the Convergent Volunteer Management Plan will be activated in conjunction with this Plan, if necessary. After the initial assessment has been conducted an incident specific Convergent Volunteer Management Plan will be developed to support the Incident Action Plan.

A copy of the Convergent Volunteer Management Plan can be found in the Emergency Toolkit.

13.10 Wildfire Response Plan

Wildfires, including forest fires and grassland fires, are a natural hazard in any forested and grassland region of Alberta and British Columbia. A Wildfire Response Plan has been developed to assist with the response to wildfires/grass fires. After the initial assessment has been conducted an incident specific Wildfire Plan will be developed to support the Incident Action Plan.

A copy of the Wildfire Response Plan can be found in the Emergency Toolkit.

13.11 Crisis Communications Plan

The Crisis Communications Plan will support the Trans Mountain's Emergency Management Program (EMP) and Integrated Safety and Loss Management System (ISLMS) and is designed to ensure the company has adequate resources and processes in place to quickly and effectively respond to the information needs of its stakeholders, customers, government and regulatory officials, the public and the media during a crisis.

A copy of the Crisis Communications Plan can be found in the Emergency Toolkit.

13.12 Terminal Evacuation Plan

Terminal Evacuation Plans have been prepared for the Edmonton, Sumas, and Burnaby Terminals. Each Terminal Evacuation Plan (Evacuation Plan) describes the measures Trans Mountain personnel, the local authority, and first responders, along with supporting entities, complete during an emergency at the Terminal that may require the evacuation or shelter-in-place of the surrounding community.

The fundamental concepts of the Evacuation Plan are initiated when it has been determined that the incident has risk to the public, which may require the implementation of immediate public safety measures. The local authority sets the direction of appropriate public safety measures. Trans Mountain will supply incident-specific information to assist in the decision to evacuate and supply resources to the local authority, as needed, to implement public evacuation.

A copy of each Terminal Evacuation Plan can be found in the Emergency Toolkit.

14.0 SAFETY DATA SHEETS

14.1 Summary Safety Data Sheet

This Summary Safety Data Sheet represents the range of crude oil products that may be stored at the Terminals. The ranges provide information on the most extreme to least extreme of the specifications a Safety Data Sheet (SDS) will be provided to all responders upon arrival at site which will outline the specific hazards for the product involved.

Physical Description
Liquid, black to colourless, Odors include rotten eggs, sulphur, hydrocarbon, petroleum and solvent

Route of Exposure
Inhalation, Skin absorption, skin or eye contact, accidental ingestion

Hazards
- Inhalation of oil mist vapours from hot oil may cause irritation of the upper respiratory tract. Can also cause headaches, nausea, loss of appetite, drowsiness, vomiting, loss of consciousness and death
- Carcinogenic
- May affect fetal development and heritable genetic damage
- Prolonged exposure may cause serious health effects
- Flammable Liquid
- Extremely toxic and H_2S may be present
- Irritating to eyes, skin, nose, throat and lungs
- May cause headaches and dizziness
- Ingestion may cause chemical pneumonia, sever lung damage, and respiratory failure
- Combustible and can accumulate static charges which may cause an ignition
- Can cause central and peripheral nervous system damage
- May produce thermal burn
- Toxic gases will form upon combustion
- Vapour accumulation could flash and/or explode if ignited

Chemical Properties	
High	**Low**
Boiling Point	
1100°C	-89°C
Density	
1200 kg/m^3 (1.013 g/cm^3)	800 kg/m^3 (0.661 g/cm^3)
Vapour Density	
7.8	>1
Specific Gravity	
1.03	0.7
Flashpoint	
260°C	-40°C
Auto Ignition	
537°C	229°C
Viscosity	
350 mm²/s	0.11 mm²/s
Water Solubility	
Slight	Insoluble

14.2 Safety Data Sheets

The SDS for products shipped through the Trans Mountain Pipeline and/or stored at the Terminal Sites are available to Trans Mountain personnel online via the Safety Data Sheets Trans Mountain intranet site or in the SDS binder at the Terminal.

The SDS for the relevant product will be provided to all First Responders upon arrival at incident site and forwarded to affected and potentially affected communities.

15.0 RESPONSE PLAN CERTIFICATION

15.1 Declaration of Contingency Plan

DECLARATION THAT SPILL CONTINGENCY PLAN IS TRUE,

ACCURATE AND COMPLETE

As an authorized representative of the regulated person, I declare that a spill contingency plan has been prepared for the substance(s) for which the regulated person is a regulated person under the Environmental Management Act, S.B.C. 2003, C. 53. The regulation and Act are administered by the British Columbia's Ministry of Environment and Climate Change Strategy. I declare that the Spill Contingency Plan is true, accurate and complete, and that the information contained in **Table 5** on the following page and substances and quantities listed in Section 7.0 Site Information contain accurate information.

Regulated Person

Trans Mountain Canada Inc.	Davies, Michael	Chief Operating Officer
From	Surname, given name	Title
(original on file)	(original on file)	2700, 300 – 5th Avenue S.W. Calgary, Alberta T2P 5J2
Signature	Date (day-month-year)	Address

Designated Contact

Trans Mountain Canada Inc.	Malinoski, Kelly	Director, Emergency Management
From	Surname, given name	Title
(original on file)	(original on file)	2700, 300 – 5th Avenue S.W. Calgary, Alberta T2P 5J2
Signature	Date (day-month-year)	Address

Table 5: Sections in the Emergency Response Plan where information that satisfies the requirements of the Spill Contingency Planning Regulation (SCPR) is available.

Section of the SCPR	Section in ERP	Section Title
Contents of Spill Contingency Planning Regulation		
3 (a)	Section 15.2	Owner/Operator Information
3 (b)	Section 15.1	Declaration of Contingency Plan
Hazard Assessment		
4 (1)(a)	Section 7.0 and 14.1	7.0 Site Information 14.1 Summary Safety Data Sheet
4 (1)(b)	Section 7.0	Site Information
4 (1)(c)	Section 7.0 And Within the Common Operating Picture Tool, Geographic Response Plans and Terminal Evacuation Plans	Site Information
4 (2)	Introduction – Scope of this Plan	
Spill Response Planning Map	Located within the Geographic Response Plans	
Equipment, Personnel, and Other Resources		
6 (1)(a)	Section 9.5.6	Mobile Spill Equipment List
6 (1)(b)	Section 9.5.3	Response Equipment Maintenance
6 (2)(a)	Section 9.5.7	Mobile Fire Equipment List
6 (2)(b)	Section 9.5.2	Response Equipment
6 (2)(c)	Section 9.5.2	Response Equipment
Incident Command System		
7 (1)(a)(i)	Section 8.10	Incident Commander/Deputy Incident Commander
7 (1)(a)(ii)	Section 8.12	Information Officer
7 (1)(a)(iii)	Section 8.13	Security Officer
7 (1)(a)(iv)	Section 8.11	Safety Officer
7 (1)(a)(v)(A)	Section 12.1	Finance Section Chief
7 (1)(a)(v)(B)	Section 11.1	Logistics Section Chief
7 (1)(a)(v)(C)	Section 9.3	Operations Section Chief
7 (1)(a)(v)(D)	Section 10.1	Planning Section Chief
7 (1)(b)	Information is contained in the Incident Notification Guideline	
Human Health and Safety		
8(a)	Section 1.0	1.0 Responder Health and Safety
8(b)	Section 1.0 And within the Initial Site Health & Safety Plan and Terminal Evacuation Plans	1.0 Responder Health and Safety
Communications		
9(1)(a)	Section 11.4	Communications
9(1)(b)	Section 13.11	Crisis Communications Plan
Waste Management	Section 13.2	Waste Management Plan
Wildlife	Section 13.7	Wildlife Management Plan

Section of the SCPR	Section in ERP	Section Title
Spill Response		
12(1)(a)	Introduction and Sections 1.0 and 3.0	1.0 Responder Health and Safety 3.0 Spill/Site Assessment
12(1)(b)	Section 2.0	Internal and External Notification
12(1)(c)	Sections 1.0, 2.0, 3.0, 4.0 and 5.0	1.0 Responder Health and Safety 2.0 Internal and External Notification 3.0 Spill/Site Assessment 4.0 Spill Containment and Recovery 5.0 Protection of High Consequence Areas
12(1)(d)(i)	Section 8.19	Terminating/Downgrading the Response
12(1)(d)(ii)	Section 8.19	Terminating/Downgrading the Response
12(2)(a)	Introduction and Sections 1.0 and 3.0	1.0 Responder Health and Safety 3.0 Spill/Site Assessment
12(2)(b)	Introduction, Emergency Levels	
12(2)(c)(i)	Introduction and Sections 1.0 and 3.0	1.0 Responder Health and Safety 3.0 Spill/Site Assessment
12(2)(c)(ii)	Section 9.7	Public Evacuation
12(3)(a)(i)	Section 2.11	Reporting Requirements
12(3)(a)(ii)	Sections 2.4 and 2.5	2.4 Internal Notification Procedure 2.5 Incident Management Team (IMT) Notification/ Activation
12(3)(a)(iii)	Sections 2.10, 2.11 and 2.13	2.10 External Notification Chart – Confirmed Emergency Condition 2.11 Reporting Requirements 2.13 Other Notifications
12(3)(b)	Section 9.7	Public Evacuation
12(4)(a)	Section 3.0	Spill/Site Assessment
12(4)(b)	Sections 1.0, 3.0 and 10.3.2	1.0 Responder Health and Safety 3.0 Spill/Site Assessment 10.3.2 Assessment of Adverse Effects
12(4)(c)	Section 10.0	Planning Section
12(4)(d)	Section 11.3	Facilities
12(4)(e)	Sections 2.1 and 2.2	2.1 Incident Verification 2.2 Incident Verification Flowchart
12(4)(f)	Sections 4.0 and 5.0	4.0 Spill Containment and Recovery 5.0 Protection of High Consequence Areas
12(4)(g)	Sections 4.0 and 5.0 and within the Geographic Response Plans	4.0 Spill Containment and Recovery 5.0 Protection of High Consequence Areas
Training	Section 17.0	Training and Exercises

15.2 Owner/Operator Information

Owner: Trans Mountain Corporation
2700, 300-5th Avenue S.W.
Calgary, Alberta T2P 5J2
Phone: 1-888-876-6711

Operator: Trans Mountain Pipeline
2700, 300-5th Avenue S.W.
Calgary, Alberta T2P 5J2
Phone: 1-888-876-6711

15.3 Environment, Health and Safety Policy

TRANSMOUNTAIN

Effective Date	March 6, 2023
Reviewed Date	March 6, 2023
Policy Owner	Director, EHS
Approver	President and CEO

ENVIRONMENT, HEALTH AND SAFETY POLICY

Policy Statement

The Environment, Health, and Safety (EHS) Policy serves to state and reinforce Trans Mountain's commitment to EHS principles in all aspects of its business activities.

Background

Trans Mountain is committed to ensuring that the principles of EHS remain a top priority wherever we operate. All employees and contractors working for, or on behalf of Trans Mountain must share in the commitment of protecting people and the environment, contributing to sustainable development by using materials, natural resources and energy efficiently, and promoting best practices to ensure we continue to earn the confidence of our customers, and the public.

Purpose

This Policy establishes the EHS principles by which Trans Mountain's business activities must be conducted and provides confirmation of Trans Mountain's commitment to the health and safety of our employees and contractors, the public, as well as to environmental protection and sustainability.

Applicability

This Policy applies to all employees, contractors, consultants, entities, companies, and offices under our operational control.

Guiding Principles

- We comply with all environmental, health and safety, laws, rules and regulations, not just because it is legally required, but also because we believe it is the responsible way to conduct our business.
- We have a systematic approach to environmental, health, and safety, (EHS) management designed to comply with the law and follow industry best practice through the implementation of our environmental management system and Life Saving Rules.
- We train our employees and contractors to be aware of and meet their responsibility for environmental protection, as well as health, safety and to achieve continuous performance improvement.
- We ensure all workers are aware of and understand their right to refuse unsafe work and the authority to stop any work they believe will endanger their health or safety, or that of others.
- We actively identify and manage risks to prevent or reduce possible adverse consequences from our operations and undertake a precautionary approach to EHS challenges.
- We have systems in place to ensure we are prepared for emergencies and procedures that coordinate our response plans with emergency response organizations to minimize the impacts to the environment and the communities where we operate.
- We assess and manage exposure of our employees and contractors to EHS hazards in our operations.
- We monitor and report EHS performance in support of our goals.
- We implement strategies to reduce our environmental footprint and meet our emissions reduction goals.
- We engage our leadership and resources to effectively implement and execute the principles above.

Compliance

All employees, contractors, and consultants working for, or on behalf of Trans Mountain shall comply with this Policy; any purposeful violation of this Policy may result in disciplinary action, including, where applicable, termination of employment/employment services agreement and/or legal action.

Review and Approval

This Policy, including any substantial revisions following its initial publication, shall be sanctioned by the Director, EHS and approved by Trans Mountain's President and Chief Executive Officer. Administrative modifications to this Policy and its appendices may be approved by the Director, EHS.

Dawn Farrell, President and CEO
Trans Mountain Corporation

16.0 REGULATORY BACKGROUND

16.1 Federal

Agency	Responsible For Contact	Reporting Requirements	Comments
CER/TSB Single Window Occurrence Reporting	EH&S department	Effective September 01, 1999, the CER & TSB have a single window incident reporting hot line Reporting to this one number satisfies the requirement to advise both these Boards. Note: The same information as that detailed in the CER & TSB sections below is required.	The single window initiative does not detract from the substantive reporting obligations set out in section 52 of the OPR-99. The information required by the CER under section 52 of the OPR 1999 must now be sent to the TSB in accordance with the time frames established by the CER under the OPR-99 and the OPR-99 Guidance Notes.
Canada Energy Regulator **Report to CER through Canadian Transportation Safety Board**	EH&S Department	All "Significant Incidents" must be immediately reported to the TSB reporting line via the Reporting Hotline telephone number (1-819) 997-7887. and through the CER's Online Event Reporting System (OERS) (https://apps.cer-rec.gc.ca/ers). A Significant Incident may be defined as; *(1) fatality; (2) missing person (as reportable pursuant to the Canadian Oil & Gas Drilling & Production Regulations (DPR) under the Canadian Oil & Gas Operations Act (COGOA) or the Oil & Gas Operations Act (OGOA); (3) a serious injury (as defined in OPR or TSB regulations); (4) a fire or explosion that causes a pipeline or facility to be inoperative; (5) a LVP hydrocarbon release in excess of 1.5 m^3 that leaves company property or right of way; (6) a rupture (defined as an instantaneous release that immediately impairs the operation of a pipeline segment such that pressure of the segment cannot be maintained; (7) a toxic plume as defined in CSA Z662*	Typically, within 1 hour, a company should communicate all available factual information to the TSB. The preliminary incident report should: (a) describe the incident, including the events leading up to and following the incident; (b) list all relevant agencies contacted and persons affected by the incident; (c) summarize any losses or impacts to people (e.g., injury, fatalities), environment (e.g., terrain, habitats, animals), production (e.g., interruption or reduction in service), and property; (d) identify any unsafe acts or conditions contributing to or causing the incident; (e) provide details on any emergency response; and (f) state any corrective actions taken or planned to be taken to minimize the effects of the incident.

Agency	Responsible For Contact	Reporting Requirements	Comments
Canada Energy Regulator **Report to CER through Canadian Transportation Safety Board, continued**	EH&S Department	Other events that do not meet the CER/TSB criteria but are still deemed reportable (see below), must be reported via the CER's Online Event Reporting System (OERS) (https://apps.cer-rec.gc.ca/ers) within 24 hours of occurrence or discovery include; *(1) incidents as defined under the OPR, PPR, and DPR/Oil & Gas Drilling Regulations;* *(2) unauthorized activities under the CER Pipeline Crossing Regulations Part II;* *(3) emergency burning or flaring under PPR;* *(4) hazard identification under the PPR;* *(5) suspension of operations under the PPR;* *(6) near-misses under the DRP;* *(7) serious accidents or incidents under the Canadian Oil & Gas Geophysical Operations Regulations/Oil & Gas Geophysical Operations Regulations;* *(8) emergencies or accidents under the Canadian Oil & Gas Installations Regulation/Oil & Gas Installations Regulation; and* *(9) accidents, illness, and incidents under the Canadian Oil & Gas Diving Regulations/Oil & Gas Diving Regulations*	A detailed incident report should correct any information provided in the preliminary incident report and/or provide additional information. The detailed incident report should (a) provide any details regarding the failure mechanism and detailed analysis of the failed component (if necessary); (b) identify the underlying causes and contributing factors of the incident; (c) update the progress of any corrective actions taken or planned to be taken to minimize the effects of the incident; and (d) state any actions taken or planned to be taken to prevent a similar incident. If the OERS is not available, all pipeline occurrences must be reported by telephone to the TSB CER Incident Line 403-299-2773

Agency	Responsible For Contact	Reporting Requirements	Comments
Transportation Safety Board of Canada	EH&S Department	Verbal notification of "significant pipeline occurrences" to the TSB must be made immediately. Such occurrences include: *(1) loss of human life;* *(2) a serious injury (defined in the Onshore Pipeline Regulations or the Transportation Safety Board Regulations);* *(3) a fire or explosion that causes a pipeline or facility to be inoperative;* *(4) a low vapour pressure hydrocarbon release in excess of 1.5 m^3 that leaves company property or the right-of-way;* *(5) a rupture (an instantaneous release that immediately impairs the operation of a pipeline such that pressure cannot be maintained); or* *(6) a toxic plume (defined in Canadian Standards Association Standard Z662).*	The report must contain the following information: (a) the name of the operator; (b) the date and time of the occurrence; (c) the unique identifier of the pipeline or portion of pipeline, such as its name or number; (d) the specific pipeline components that malfunctioned or failed; (e) the location of the occurrence by reference to a specific designation point such as the operator's facility or the pipeline's kilometre post location; (f) the closest city, town or village to the occurrence site; (g) the number of persons who were killed or sustained serious injuries as a result of the occurrence; (h) a list of any commodity contained in or released from the pipeline and an estimate of the volume of commodity released and recovered; (i) the actual or anticipated duration of any interruption of the operation of the pipeline or a portion of the pipeline; (j) a description of the occurrence, the events leading up to it and the extent of any damage, including the consequences on the pipeline or portion of the pipeline and on any other property and the environment; (k) a description of any action taken or planned to address the consequences of the occurrence; (l) a description of any action taken or planned to protect persons, property and the environment, including any evacuation as a result of the occurrence; (m) the name and title of the person making the report and the phone number and address at which they can be reached; and; (n) any information specific to the occurrence that the Board requires

Agency	Responsible For Contact	Reporting Requirements	Comments
Transportation Safety Board of Canada, continued	EH&S Department	Other pipeline occurrences that must be submitted into the Online Event Reporting System (OERS) include *(1) a person is killed or sustains a serious injury; (2) the safe operation of the pipeline is affected by:* *a) damage sustained when another object came into contact with it, or* *b) fire or explosion or an ignition that is not associated with normal pipeline operations; (3) an event or an operational malfunction results in:* *a) an unintended or uncontrolled release of gas,* *b) an unintended or uncontrolled release of HVP hydrocarbons,* *c) an unintended or uncontained release of LVP hydrocarbons in excess of 1.5 m^3, or* *d) an unintended or uncontrolled release of a commodity other than gas, HVP hydrocarbons or LVP hydrocarbons;* *(4) there is a release of a commodity from the line pipe body; (5) the pipeline is operated beyond design limits or any operating restrictions imposed by the Canada Energy Regulator; (6) the pipeline restricts the safety operation of any mode of transportation; (7) an unauthorized third-party activity within the safety zone poses a threat to the safe operation of the pipeline; (8) a geotechnical, hydraulic or environmental activity poses a threat to the safe operation of the pipeline; (9) the operation of a portion of the pipeline is interrupted as a result of a situation or condition that poses a threat to any person, property or the environment; or (10) an unintended fire or explosion has occurred that poses a threat to any person, property or the environment.*	The Online Event Reporting System (OERS) automates the single-window pipeline occurrence notification process that was established by the TSB and the Canada Energy Regulator (CER) in 1999. Starting 1 January 2015, the OERS must be used to report all pipeline occurrences. Except for significant occurrences as listed in the previous section, telephone notification will no longer be required. If the OERS is not available, all pipeline occurrences must be reported by telephone to the TSB Information must be entered in the OERS even if the occurrence has been reported by telephone. Incident Line 819-997-7887, Fax 819-953-7876, email pipelinenotifications@tsb.gc.ca

Agency	Responsible For Contact	Reporting Requirements	Comments
Environment and Climate Change Canada (ECCC) **For Environmental Emergencies pertaining to Gasoline**	EH&S Department	Under requirements of the Environmental Emergency Regulations, notification of an environmental emergency is required for all substances which are accidentally released in quantities which exceed the criteria specified by Environment and Climate Change Canada in the regulations; notified through the appropriate provincial coordinating agency. At least 200 litres of Gasoline. Alberta EPA Telephone: 780-422-4505 or 1-800-222-6514 British Columbia EMCR: 800-663-3456 The 24-hour, toll free number connects with the Emergency Coordination Centre (part of EMCR BC)	The verbal report should include the following information as it is known at the time of the report: (a) the reporting person's name and telephone number at which the person can be immediately contacted (b) the name of the person who owns or has charge, management or control of the substance immediately before the environmental emergency (c) the date and time of the release (d) the location of the release (e) the name/ UN number of the substance (f) the estimated quantity (g) the means of containment (from which the substance was released) and a description of its condition (h) the number of deaths and injuries resulting (i) the surrounding area affected and potential impact of the release (j) a brief description of the circumstances leading to the release (k) the cause of the release (if known) (l) details of the actions taken or further actions contemplated (m) names of the agencies notified or on-scene (n) other pertinent information. Under requirements of the E2 Regulation a written report should be made within 30 days.

Agency	Responsible For Contact	Reporting Requirements	Comments
Environment and Climate Change Canada (ECCC) **For spills or deleterious substances of any size that enter (or may enter) waters frequented by fish**	EH&S Department	*For spills or deleterious substances (i.e., silt) of any size that enter (or may enter) waters frequented by fish (includes creeks, ditches, freshwater streams, tidal and marine waters)* ECCC should be notified through the appropriate provincial coordinating agency. Alberta EPA: 780-422-4505 or 1-800-222-6514 British Columbia: 800-663-3456 The 24-hour, toll free number connects with the Emergency Coordination Centre (part of EMCR BC)	Provides advice to federal and provincial agencies for spill response and protection of sensitive habitat. ECCC administers Section 36(3) (pollution provisions) of the Fisheries Act. Under ECCC's Notification Regulations, Alberta EPA and EMCR BC serve as the reporting window for an incident and will notify ECCC as well as other federal and provincial departments/ministries and agencies, such as the Canadian Coast Guard and BC MoE.
Transport Canada	Liaison Officer	*For spills involving transportation of dangerous goods (other than in the pipeline e.g. tanker truck).* Transport of Dangerous Goods Regulation. Call local authority (911) & 1-888-CANUTEC (1-888-226-8832) or 613-996-6666	
Canadian Coast Guard & Transport Canada (Marine Spill)	Incident Commander	All marine spills must be reported verbally as soon as feasible to the Canadian Coast Guard at 1-800-889-8852 Marine Communications and Traffic Services (MCTS) Marine Channel 16 VHF Department of Transport Canada Marine Safety Office Office: 604-666-3636 Fax: 604-666-9177 All marine spills must be reported in writing as soon as feasible. Form available in the Terminal ERP Manual in section (2.12) page 12 (External Agency Reporting Form)	The report must include the following information: (a) the identity of any vessel involved (b) the name and address of the oil handling facility (c) the name and position of the person who is responsible for implementing and coordinating the oil pollution emergency plan (d) the date, time, and location of the discharge or the estimated date, time and location of the anticipated discharge (e) the nature of the discharge or anticipated discharge, including the type and estimated quantity of oil involved (f) a description of the response actions to be taken (g) on-scene conditions (h) any other relevant information.

Agency	Responsible For Contact	Reporting Requirements	Comments
Transport Canada (Transportation of Dangerous Goods Program (TDG))	Liaison Officer	*For spills involving transportation of dangerous goods (other than in the pipeline or from OHF operations e.g. tanker truck).* Transport of Dangerous Goods Regulation Call local authority (911) & 1-888-CANUTEC (1-888-226-8832) or 613-996-6666	Information to report includes (a) the name and contact information of the person making the report; (b) in the case of a release of dangerous goods, the date, time and geographic location of the release; (c) in the case of an anticipated release of dangerous goods, the date, time and geographic location of the incident that led to the anticipated release; (d) the mode of transport used; the shipping name or UN number of the dangerous goods; (f) the quantity of dangerous goods that was in the means of containment before the release or anticipated release; (g) in the case of a release of dangerous goods, the quantity of dangerous goods estimated to have been released; and (h) if applicable, the type of incident leading to the release or anticipated release, including a collision, roll-over, derailment, overfill, fire, explosion or load-shift.
Fisheries and Oceans Canada (DFO)	EU Lead	Emergency Authorizations Under the Fisheries Act Call DFO 1-855-852-8320	In emergency response situations where Trans Mountain needs to undertake actions which impact or may impact aquaculture activities, Trans Mountain shall ensure that the required emergency authorizations are sought from Fisheries and Oceans Canada. Additionally, Trans Mountain shall take steps to inform Canada Energy Regulator that such authorizations have been requested and the subsequent outcome of those requests.

16.2 Provincial – Alberta

Agency	Responsible For Contact	Reporting Requirements	Comments
Alberta Ministry of Environment and Protected Areas (EPA) and Alberta Energy Regulator (AER)	Liaison Officer	*Spills on the pipeline right-of-way or lands not owned by the Company may be reportable to AER. Generally, spills of refined products in excess of 200 litres and unrefined products in excess of 2m^3, and which have or may have an adverse effect on the environment are reportable.* Note: Contact Law Department before notification for spills on company owned land or for clarification of "reportable" thresholds. Environmental Protection and Enhancement Act (ss. 99 and 100), Release Reporting Regulation; Oil and Gas Conservation Act and Regulations.	Notifications for all environmental emergencies, including spills, can be made by one call to the Alberta Energy & Environment 24 Hour Response Line (1-800-222-6514). EPA makes notification to other provincial agencies as needed including Environment and Climate Change Canada (ECCC) and Fisheries and Oceans Canada.
Alberta Environment & Sustainable Resource Development	Liaison Officer	*In certain areas and at certain times of the year, a fire caused by a leak from the pipeline or by construction or maintenance activities which the Company is unable to extinguish must be reported to a forest officer, the municipality, or the RCMP.* Alberta Forest and Prairie Protection Act.	Wildfires should be reported through the 24-hour Wildfire Reporting Line at Toll Free: 310-FIRE (3473)

16.3 Provincial – British Columbia

Agency	Responsible For Contact	Reporting Requirements	Comments
Emergency Management and Climate Readiness BC (EMCR) **800-663-3456**	Liaison Officer	*For spills equal or greater than 100 litres (0.1 m^3) of petroleum* (*does not apply to CER regulated facilities*). The 24-hour, toll free number connects with the Emergency Coordination Centre (part of EMCR BC).	Notifications for all environmental emergencies, including spills, are to be made with one call to 800- 663-3456. Spill Reporting Regulation, Waste Management Act (Aug/ 1990) EMCR will notify other agencies including: • BC MoE • Environment and Climate Change Canada • Canadian Coast Guard • BC Energy Regulator[13] • Affected municipal governments
Ministry of Forests **800-663-3456**	Liaison Officer	*In the event of fire associated with pipeline maintenance work or a leak.* The 24-hour, toll free number connects with the Emergency Coordination Centre (part of EMCR BC).	Forest Fire Practices Code (Bill 40, Section 86, 88 - duty to report and control fires). Fire Prevention and Suppression Regulation.
BC Energy Regulator **800-663-3456**	Liaison Officer	*Permitting from the BCER* The 24-hour, toll free number connects with the Emergency Coordination Centre (part of EMCR BC*).*	In emergency response situations where Trans Mountain needs to undertake actions in British Columbia which results or may result in the alteration of watercourses, fish collection/isolation or related consequences, Trans Mountain shall ensure the required permitting is obtained from the BCER.

[13] EMCR discretion to include BCER on incident notification and updates list.

Agency	Responsible For Contact	Reporting Requirements	Comments
British Columbia Ministry of Environment & Climate Change Strategy (BC MoE) **800-663-3456**	Liaison Officer	*Responsible for the effective protection, management, and conservation of B.C.'s water, land, air and living resources.* *The 24-hour, toll free number connects with the Emergency Coordination Centre (part of EMCR BC).* *In the event that a spill originating from any Trans Mountain Expansion Project is confirmed to contaminate drinking water, the company must notify BC MoE within the following time periods:* *As soon as practicable;* *Within 72 hours, whichever is less.*	EMCR will advise BC MoE of reportable spills. BC MoE provides advice on response and protective measures to minimize the environmental impacts of spills. Approvals for waste storage, treatment and disposal should be coordinated through this agency. For spills that meet provincial reporting criteria there is a requirement per the BC Spill Reporting Regulation to submit a written End-of-spill report within 30 days of the emergency response completion date. In addition, the BC MoE may order a written Lessons-Learned Report be submitted within 6 months after the emergency response completion date for the spill.
BC Environment Assessment Office (BC EAO) **800-663-3456**	Liaison Officer	*In the event that a spill originating from any Trans Mountain Expansion Project is confirmed to contaminate drinking water, the company must notify BC EAO within the following time periods:* • As soon as practicable; • Within 72 hours, whichever is less. Notified or accessed through the appropriate provincial coordinating agency- EMCR *The 24-hour, toll free number connects with the Emergency Coordination Centre (part of EMCR BC).*	

17.0 TRAINING AND EXERCISES

17.1 Training

Trans Mountain ensures that employees receive the training necessary to protect themselves, the public, the local community, and the environment during and incident. Training will be provided to enable employees to perform their designated emergency responsibilities. Formal training will be reinforced by a program of regular emergency response exercises. Trans Mountain will make reasonable efforts to coordinate training and exercising plans with those of key outside emergency agencies.

There are several types of training available to Trans Mountain employees for emergency response, at a minimum all employees who could be involved in emergency response will receive Incident Command System level 100 training, and additionally field operations staff will receive the following training: Initial Response, Spill Response Tactics and Decontamination Response Tactics. Operators at Trans Mountain's large storage facilities will also be trained in Terminal Fire Awareness and the use of Fire Pre-Plans. Some employees will receive HAZWOPER training if they could reasonably be asked to respond to incidents in Washington State. Employees will also receive training on the Emergency Management Program, including the implementation and use of Emergency Response Plans.

Training records are the joint responsibility of the Operations Training Group, and Manager, Emergency Management. All training is conducted in accordance with the requirements as set out in the Integrated Safety and Loss Management System and the Emergency Management Exercise and Training Plan.

17.2 Exercises

Exercises allow responders to practice the knowledge and skills received in training, identify areas of future training priority, identify improvement opportunities for emergency procedures and/or equipment, and provides opportunity to share exercise learning's to ensure a smooth response in the unlikely event of an incident. Exercises also provide opportunity for Trans Mountain responders to engage with indigenous community responders and those from federal, provincial, and local agencies.

Members of the various response teams will participate in exercises each year that are relevant to their individual operations as outlined in the Emergency Management Exercise and Training Plan. At minimum each facility will conduct an annual fire deployment exercise with larger operating facilities conducting quarterly exercises (tabletop and equipment deployments). Additionally, Terminal Operators will participate in spill response deployments that take place throughout each Operating District. The exercise may be organized by Trans Mountain or may be organized by a response partner.

The Incident Management Team (IMT) will participate in one Level 3 (all resources deployed) Full Scale Exercise per year, the location of which will change from year to year. Full Scale Exercises will be rotated throughout each of the operational Districts and within the communities in which Trans Mountain operates. The Full-Scale Exercises will utilize a diverse range of emergency scenarios to ensure response capabilities are confirmed under varying conditions. The IMT is the same for the Trans Mountain Pipeline ERP, Westridge Marine Terminal ERP, Terminals ERP and the Trans Mountain (Puget Sound) Pipeline ERP; therefore, the IMT will be trained / exercised annually regardless of the ERP used for the actual exercise.