

Westridge Marine Terminal

Evacuation Plan



WESTRIDGE MARINE TERMINAL EVACUATION PLAN

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PLAN MAINTENANCE

Responsibility

Single point accountability for the Trans Mountain Westridge Marine Terminal Evacuation Plan (the Plan) development and maintenance rests with the Manager, Emergency Management. This accountability is for:

- The development of the Plan and management of any future revisions.
- Ensuring the Incident Command System (ICS) and response structure are in place and able to meet the requirements set out in the Plan.
- Ensuring an annual review of the Plan is conducted for completeness.

Plan 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 materials and contributing new content to improve the quality of the Plan.

Plan Revisions

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

Revision Distribution

Plan revisions are issued with an Acknowledgement of Receipt Form and a brief description of the changes itemized by section. 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 electronic location managed by Trans Mountain Corporation and will be distributed to confidential Plan holders only. All other revisions will be distributed to Plan holders in a timely manner. A revised date is shown at the bottom of each updated or new page. The original date of the Plan is 08/2022. All revisions will be tracked on the Control Sheet.

Revisions after an Incident or Exercise

In the event that Trans Mountain experiences an incident (worst case or otherwise) or conducts an exercise or training session that uses this Plan, the effectiveness of the Plan will be evaluated and updated as necessary or no longer than every three years.

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.

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 Corporation 2700-300 - 5 th Avenue S.W. Calgary, AB T2P 5J2 Canada Fax: (403) 514-6401	

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
0	August 30, 2022	Manual submitted as per Trans Mountain Expansion Project CER Condition 123 <i>Evacuation Plans</i>	K. McLernon
1	April 30, 2023	Minor addition of content to Section 2.4, Canadian Coast Guard Minor addition of content to Section 4.0, Initial Incident Assessment Minor addition of content to Appendix B, Roles and Responsibilities Updated agency title change from Emergency Management BC (EMBC) to Emergency Management and Climate Readiness (EMRC)	
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1.0 INTRODUCTION

1.1 Purpose

This Trans Mountain Westridge Marine Terminal Evacuation Plan (Evacuation Plan) describes the measures Trans Mountain personnel complete, in conjunction with those with the authority to issue evacuation orders, shelter in place alerts or Notice to Mariners and/or Navigational Warnings, during an emergency at the Westridge Marine Terminal (the Terminal) that may require the evacuation or shelter-in-place of the surrounding community. For Westridge Marine Terminal this would be the City of Burnaby as the responding first responder (fire and police), and the local authority for land-based response and the Canadian Coast Guard (CCG) as the responding first responder and authority for water-based response, along with assisting entities.

When an emergency is declared at the Westridge Marine Terminal and it has been determined that the incident poses a risk to the public, which may require the implementation of public safety measures, this Plan will be activated.

Trans Mountain will supply incident-specific information to assist in the decision to evacuate and supply resources (financial, human, etc.) to the local authority and the CCG, as needed, to implement public protection measures.

The local authority has the authority to declare a State of Local Emergency (SOLE) in situations where an emergency is imminent or existing to support the implementation of land-based public safety measures. CCG sets the direction of appropriate water-based public safety measures. The CCG can implement navigational changes and warnings on behalf of Transport Canada in the event of an incident in support of broader public safety actions. Correspondingly, the VFPA assists in mitigation activities that may include rerouting or minimizing vessel traffic in areas proximal to an incident.

1.2 Scope

This Evacuation Plan covers:

- The initial actions that Trans Mountain personnel will take to establish the Initial Isolation Zone and to evacuate the area to mitigate *immediate* danger to life and health.
- The actions that the local authority, as well as all other relevant government departments and assisting entities, may complete to implement the appropriate safety measures to mitigate potential impacts to the public arising from an incident at the Terminal, with assistance from Trans Mountain, as required.

Public safety measures within the scope of this Plan include two types of evacuation:

- Evacuation (of area)
- Shelter-in-place

This Evacuation Plan was developed with input from with the City of Burnaby, the CCG, and the Vancouver Fraser Port Authority (VFPA).

This Evacuation Plan is intended to be activated in coordination with the CCG, responsible for water-based response, and the City of Burnaby, responsible for land-based response, and in conjunction with:

- Trans Mountain Westridge Marine Terminals Emergency Response Plan (ERP);
- Trans Mountain Public Health Assessment and Response Plan for Airborne Health Risks Associated with Pipeline/Terminal Operations and Incidents; and

- Westridge Marine Terminal Fire Pre-plan, and applicable tactical workbooks.

The Evacuation Plan is considered a subset of the Trans Mountain Westridge Marine Terminal ERP and has been developed to align with the Incident Command System (ICS).

1.3 Out of Scope

This Evacuation Plan does not cover:

- Evacuation of the Westridge Marine Terminal itself (for further information refer to the Westridge Marine Terminal Fire Safety Plan);
- Procedures for the evacuation of individual buildings;
- Long-term shelter-in-place;
- Re-entry of evacuees;
- Specific evacuation procedures to be taken by local authorities and other relevant government departments and assisting entities.

1.4 Plan Implementation

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

Activation of the Trans Mountain Westridge Marine Terminal ERP (the ERP) will occur when an emergency at the Terminal is declared by Trans Mountain. The Trans Mountain Public Health Assessment and Response Plan for Airborne Health Risks Associated with Pipeline/Terminal Operations and Incidents will be activated in conjunction with the ERP. The Trans Mountain Public Health Assessment and Response Plan for Airborne Health Risks Associated with Pipeline/Terminal Operations and Incidents supports the implementation of public protection measures.

1.5 Legislation

As stated in the *Environmental Management Act*, SBC 2003, c. 53:

Section 91.2 – Responsible Persons – Spill Response

- (2) Subject to the regulations, if a spill occurs or is at imminent risk of occurring, the responsible person in relation to the spill must ensure that the actions necessary to address the threat or hazard caused by the spill are taken, which actions may include, but are not limited to, the following actions, if applicable:
- (a) assess, monitor and prevent, or prevent the continuation of, the threat or hazard caused by the spill;
 - (b) stabilize, contain, remove and clean up the spill;
 - (c) identify and evaluate the immediate risks to and impacts on the environment, human health or infrastructure and, as necessary,
 - (i) advise persons to take protective action in relation to the spill,
 - (ii) protect infrastructure, and
 - (iii) protect, recover and restore the environment;
 - (d) identify and evaluate the long-term impacts of the spill;
 - (e) take steps to resolve or mitigate those immediate and long-term impacts.

Section 91.4 – Government Spill Response

- (1) The government may carry out actions described in section 91.2 (2) [*responsible persons — spill response*] if an officer considers that

- (a) a spill has occurred or there is an imminent risk of a spill occurring,
- (b) action is necessary to address a spill or the risk of a spill or to resolve or mitigate long term effects of a spill, and
- (c) one or more of the following apply:
 - (i) there is no responsible person in relation to the spill;
 - (ii) an officer has reasonable grounds to believe that government action is required to safeguard the environment, human health or infrastructure;
 - (iii) the responsible person in relation to the spill requests that the government assist with spill response and recovery actions.

As stated in the *Emergency Program Act*, RSBC 1996, c 111:

Section 6 – Local Authority Emergency Organization

- (1) Subject to sections 8 (2), 13 (2) and 14 (3), a local authority¹ is at all times responsible for the direction and control of the local authority's emergency response.
- (2) Subject to subsection (2.1), a local authority must prepare or cause to be prepared local emergency plans respecting preparation for, response to and recovery from emergencies and disasters.

Section 8 – Implementation of Local Emergency Plans

- (1) A local authority or a person designated in the local authority's local emergency plan may, whether or not a state of local emergency has been declared under section 12 (1), cause the plan to be implemented if, in the opinion of the local authority or the designated person, an emergency exists or appears imminent or a disaster has occurred or threatens in:
 - (1) the jurisdictional area for which the local authority has responsibility, or
 - (2) any other municipality or electoral area if the local authority having responsibility for that other jurisdictional area has requested assistance.

As stated in the *Fire Services Act*, RSBC 1996, c. 114:

Section 25 – Emergencies

- (1) If an emergency arising from a fire hazard or from a risk of explosion causes the fire commissioner to be apprehensive of imminent and serious danger to life or property, or of a panic, the fire commissioner may immediately take the steps he or she thinks advisable to remove the hazard or risk.
- (2) For the purposes of subsection (1), the fire commissioner may evacuate a building or area, and may call on the police and fire prevention authorities who have jurisdiction to provide assistance.
- (3) If the fire commissioner believes that conditions exist in or near a hotel or public building, that, in the event of a fire, might seriously endanger life or property, the fire commissioner may immediately take the action he or she believes advisable to remedy

¹ Local authority, as defined by the *Emergency Program Act* (1996) (British Columbia) means:

- For a municipality, the municipal council,
- For an electoral area in a regional district, the board of the regional district, or
- In British Columbia, First Nations communities with treaty agreements have the powers and obligations of local authorities under British Columbia's *Emergency Program Act* and its regulations. In this context, "local authority" also means a Treaty First Nations community, the Chief, and Council.
 - Treaty First Nations are considered a "local authority" for the purposes of the *Emergency Program Act* per the Government of Canada and Province of British Columbia bilateral agreement on emergency management support services to on-reserve First Nations.

the conditions to eliminate the danger and may evacuate and close the hotel or public building.

- (4) For the purposes of subsection (3), the fire commissioner may call on the assistance of peace officers and fire prevention authorities.

As stated in the *Public Health Act*, SBC 2008, c. 28:

Section 31 – General Powers Respecting Health Hazards and Contraventions

- (1) If the circumstances described in section 30 [when orders respecting health hazards and contraventions may be made] apply, a health officer may order a person to do anything that the health officer reasonably believes is necessary for any of the following purposes:
 - (a) to determine whether a health hazard exists;
 - (b) to prevent or stop a health hazard, or mitigate the harm or prevent further harm from a health hazard;
 - (c) to bring the person into compliance with the Act or a regulation made under it;
 - (d) to bring the person into compliance with a term or condition of a licence or permit held by that person under this Act.

2.0 ROLES AND RESPONSIBILITIES

In the event of an incident at the Terminal, Trans Mountain will liaise with those with the authority to issue evacuation orders, shelter in place alerts or Notice to Mariners and/or Navigational Warnings during an emergency through Unified Command (UC), and/or in concert with their own Emergency Operations Centre (EOC), if activated. Entities identified in Appendix B *Roles and Responsibilities for Responding Agencies and Assisting Entities* will be notified of the incident and invited to participate in Trans Mountain's Incident Command Post (ICP) as members of the IMT and/or within the Liaison Office.

2.1 Trans Mountain Roles and Responsibilities

Trans Mountain is responsible for:

- Taking immediate action to identify the hazards and/or potential hazards that may arise from an incident at the Terminal.
- Confirming the parameters of the Initial Isolation Zone and implementing the appropriate safety measures to protect people and property.
- Providing hazard-specific and technical information to the local authority and the CCG 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, responsible for land-based response, and the CCG, responsible for water-based response, to support the ongoing assessment of risk to the public and the implementation of public safety measures, as outlined in Section 7.4, Notifications.

Trans Mountain support may include, as requested, the sharing of personnel and resources to aid in the preparation and execution of the local authority, responsible for land-based response, evacuation procedures. Personnel and resources would also be provided to the CCG, responsible for water-based response, and VFPA to aid in the preparation and execution of activities that may include rerouting or minimizing vessel traffic in areas proximal to an incident.

Financial compensation for the consequences arising from an incident at the Terminal is the responsibility of Trans Mountain; the Finance and Administration Section of the Incident Management Team will communicate with displaced residents to address concerns and settle and/or resolve damage claims arising from the incident.

2.2 Unified Command Roles and Responsibilities

Trans Mountain uses ICS. If Unified Command is established, invitations would be extended to the City of Burnaby, the Tsleil-Waututh First Nation, the CCG or Canadian Energy Regulator, and Environment and Climate Change Canada or British Columbia Ministry of Environment and Climate Change Strategy to participate. If Unified Command is not established, Command will fulfill the following responsibilities.

Unified Command's responsibility during an incident is to provide overall guidance and support to respond to the incident at the Terminal. This is achieved through the drafting of key objectives, identifying response priorities, and following an inclusive decision-making process. Unified Command sets the direction of response activities including developing and implementing strategic decisions, endorsing Incident Action Plans (IAPs), and approving the order and release of resources. The Unified Command maintains situational awareness of the incident and its evolving hazards and will confirm the local authority and the CCG has updated information to aid in its decision-making on public safety. Members of the Unified Command will support the local authority, leading land-based response, and the CCG, leading water-based response, in the implementation of the public safety measures, which may include

the activation and implementation of the Greater Vancouver Integrated Response Plan for Marine Pollution Incidents (GVIRP).

The GVIRP is a localized, operational plan that acts as a guide during emergency response to a marine pollution incident. In the event of an incident at Westridge Marine Terminal that presents a potential or realized risk to the marine environment, the CCG may activate the GVIRP. The GVIRP helps to inform others how key response organizations intend to work together to manage a spill. The GVIRP does not replace or supersede Trans Mountain's Westridge Marine Terminal Evacuation Plan, but rather complements the plan to harmonize response actions specific to the Burrard Inlet. Support offered by Unified Command can include the provision of a liaison to the local authority EOC and provincial EOC.

2.3 Local Authority Roles and Responsibilities

The local authority has the authority to declare a State of Local Emergency (SOLE) in situations where an emergency is imminent or existing.² Declaration of a SOLE, as outlined by the *Emergency Program Act* (1996) (British Columbia), provides a local authority with expanded powers to do all acts and implement all procedures that it considers necessary to prevent, respond to or alleviate the effects of an emergency or a disaster. This includes the authority to exercise specific powers in a declared state of emergency that are generally only available to the Minister responsible for the *Emergency Program Act*. As noted in Section 1.5, *Legislation*, the *Emergency Program Act* a SOLE does not require to be in effect for the local authority to implement emergency plans (Section 8 (1) of the *Emergency Program Act*).

The local authority reviews and assesses the incident as per its appropriate procedures and plans, in coordination with the hazard-specific and technical information provided by Trans Mountain, to aid in the identification and determination of appropriate public safety measures.

2.4 Canadian Coast Guard

The CCG is a special operating agency of the Department of Fisheries and Oceans Canada. The CCG supports the protection of the marine environment and ensures public safety on the water through the provision of ships, aircraft, and other marine services. The CCG can implement navigational changes and warnings through issuing a Notice to Mariners and/or Navigational Warnings on behalf of Transport Canada in the event of an incident in support of broader public safety actions. Correspondingly, the VFPA assists in mitigation activities that may include rerouting or minimizing vessel traffic in areas proximal to an incident. Trans Mountain will supply incident-specific information to assist in the decision to notify and/or evacuate marine areas through issuing and implementing a Notice to Mariners and/or Navigational Warnings.

² Non-treaty First Nations can put in place Band Council Resolutions (BCRs) with an evacuation order or to conduct a tactical evacuation if required.

3.0 HAZARD IDENTIFICATION AND ASSOCIATED RISKS

The immediate hazards associated with an incident at the Terminal that could result in the implementation of public safety measures within Terminal boundaries or the surrounding area include heat, vapour, and smoke.

Following an incident, Trans Mountain personnel will conduct an initial assessment, as outlined in Section 4.0, *Initial Incident Assessment*, to distinguish the applicable hazards.

The details on each of the hazards, described below, will be used to support the initial assessment.

3.1 Hazards

3.1.1 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 pool fire in the metering area on the foreshore (the credible worst-case scenario for the Terminal), the distance that could be impacted by heat is 300m.³

3.1.2 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 the local authority, responsible for land-based response, the CCG, responsible for water-based response, and the Medical Health Officer in making incident-specific decisions regarding any expansion of initial public safety measures and/or returning people safely home.

³ Radiant heat impact intensity of 1.0 kW/m² was used to identify the Protective Action Zone, which is the equivalent intensity to potentially cause a sunburn on exposed skin dependent on the time of exposure.

The Trans Mountain Public Health Assessment and Response Plan for Airborne Health Risks Associated with Pipeline/Terminal Operations and Incidents will be activated in conjunction with the Trans Mountain Westridge Marine Terminal ERP and the Evacuation Plan. The Trans Mountain Public Health Assessment and Response Plan for Airborne Health Risks Associated with Pipeline/Terminal Operations and Incidents provides the initial air monitoring strategy as an interim measure until the incident-specific air monitoring plan is developed.

The initial strategy sets out action levels for pre-identified Potential Chemicals of Concern (PCOCs); when monitoring data indicates that an action level is reached, the Environment Unit Leader will initiate an assessment of public health risk, as contact with smoke and/or vapour may pose a risk to human health. The Trans Mountain Public Health Assessment and Response Plan for Airborne Health Risks Associated with Pipeline/Terminal Operations and Incidents includes *Standards for PCOCs: Sources and Detection Limits*⁴ as reference material, which provides action levels to reference when assessing the risk to public health. The Environmental Unit, composed of inter-jurisdictional agencies and the Air Monitoring Technical Specialist(s), will evaluate the air monitoring data and, in consultation with the Medical Health Officer from health authority, determine whether the air monitoring strategy should be altered and if public safety measures should be adjusted. The assessment and recommendation will be communicated to the Unified Command for implementation by the local authority, responsible for land-based response, and the CCG, responsible for water-based response. A copy of the Potential Chemicals of Concern Standards (PCOCs) is included in Appendix E, *Standards for Potential Chemicals of Concern: Sources and Detection Limits*, of this document for ease of reference. The Acute Exposure Guideline Level 1 (AEGL-1) is the airborne concentration (expressed as ppm or mg/m³) of a substance above which it is predicted that the general population, including susceptible individuals, could experience notable discomfort, irritation, or certain asymptomatic non-sensory effects.

3.1.3 Other

Dispersion of product, and/or firefighting fluids, beyond the boundaries of the Terminal is dependent on environmental, atmospheric, and marine conditions. These may pose a risk to human health if there is transdermal contact or ingestion. Public protection measures may include rerouting or minimizing vessel traffic, closure of beaches, limitation of access to shorelines, and/or closure of marine areas through the issuing and implementing a Notice to Mariners and/or Navigational Warnings.

⁴ The *Standards for PCOCs: Sources and Detection Limits* table outlines the published, recognized standards and guidelines for ambient air quality, worker exposure limits, and acute public exposure levels applicable to the measurable PCOCs for a product release or fire.

4.0 INITIAL INCIDENT ASSESSMENT

Each incident type coincides with an Initial Isolation Zone and Protective Action Zone. Table 1 and Table 2 will form the basis of the initial assessment to identify the associated zones at risk.

4.1 Initial Isolation Zone

Trans Mountain personnel will complete an initial assessment of the incident to identify the hazards and determine the corresponding risk to those within the Initial Isolation Zone.⁵ Each incident type corresponds with an Initial Isolation Zone, as seen in Table 1, where access will be restricted to response personnel as there may be an immediate danger to life and health. The size of the Initial Isolation Zone for each incident represents the area where there is potential for significant injury and/or fatality of persons without appropriate personal protective equipment (PPE).⁶

Table 1: Incident-specific Initial Isolation Zone

Incident Type	Hazard	Initial Isolation Zone
Spill, no fire	Vapour	50 metres
3D/Rim seal tank fire	Heat	91 metres
Full surface tank fire	Heat	91 meters
3D/Pool fire in the metering area	Heat	155 metres
3D/Pool fire in the manifold area	Heat	155 metres
3/D Pool fire on a berth	Heat	155 metres

4.2 Protective Action Zone

Trans Mountain personnel will provide the local authority, responsible for land-based response, the CCG, responsible for water-based response, and other relevant government departments and assisting entities with incident-specific technical information and air monitoring data, through the initial first responders and subsequent incident briefings, and/or through the ICP (e.g., UC, Liaison, and/or Environment Unit). Trans Mountain personnel will also communicate the incident-specific Protective Action Zone and recommendations for evacuation or shelter in place due to the potential for imminent threat to health or life.

Using Table 2 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, responsible for land-based response, and the CCG, responsible for water-based response, will be advised to execute a tactical evacuation, issue a shelter-in-place alert and/or issue a Notice to Mariners and/or Navigational Warnings in the areas immediately surrounding the incident, based initially on the thermal intensities, as outlined in Table 2, starting in the downwind direction, as outlined in Section 6.0, *Initial Incident Public Safety Transition*, of this plan.

⁵ Details on the evacuation procedure of the Terminal are contained within the Westridge Marine Terminal Site Safety Plan.

⁶ Zone sizes are calculated according to Centre for Chemical Process Safety and Major Industrial Accidents Council of Canada hazard distance standards for thermal intensities as it relates to Trans Mountain Terminals.

Table 2: Incident-specific Protective Action Zone

Incident Type	Hazard	Protective Action Zone
Spill, no fire	Vapour	300 metres
Rim seal tank fire	Heat	300 metres
Full surface tank fire	Heat	384 meters
3D/Pool fire in the metering area	Heat	300 metres
3D/Pool fire in the manifold area	Heat	300 metres
3/D Pool fire on a berth	Heat	300 metres

Initial Isolation Zone maps and Protective Action Zone maps for each berth and tank at Westridge Marine Terminal are provided in Appendix G, *Westridge Marine Terminal Initial Isolation Zones and Protective Action Zones*. Zone sizes are calculated according to the Centre for Chemical Process Safety and Major Industrial Accidents Council of Canada hazard distance standards for thermal intensities as it relates to Trans Mountain Terminals. The local authority and/or CCG may use its own distances, but they should not be smaller than those calculated by Trans Mountain.

5.0 EVACUATION OF INITIAL ISOLATION ZONE

5.1 Evacuation

Upon identification of an incident, all non-essential personnel at the Terminal will muster at the pre-determined sites highlighted in the Westridge Marine Terminal Fire Safety Plan. Trained responders will confirm and establish physical barriers or other means of demarcation such as flagging or landmarks that are easily identifiable by responders to distinguish the boundaries of the Initial Isolation Zone. This is a high-risk area and only response personnel with appropriate PPE and training are permitted. Terminal personnel will ensure the areas within the Initial Isolation Zone that fall outside the Terminal boundary is evacuated and will erect physical barriers at pathways leading to the evacuated area. Trans Mountain will post security personnel with the intention to prevent members of the public from entering the area. This may include the use of security vessels on water. Trans Mountain may request assistance from local law enforcement on a temporary basis until additional resources arrive.

5.2 Assessment of Initial Isolation Zone

Response personnel and UC will continually monitor the hazards and the incident boundaries to ensure they are appropriate and will expand and/or contract the Initial Isolation Zone, as needed. Once it has been determined that there are no longer adverse risks to personnel, the assessment and recommendation will be communicated to the Unified Command. Upon confirmation, Trans Mountain will remove the physical barriers identifying the Initial Isolation Zone.

6.0 INITIAL INCIDENT PUBLIC SAFETY TRANSITION

During the first hour of an incident Trans Mountain will ensure the safety of responders and the public within the Initial Isolation Zone, due to the immediate threat to life and health. The incident specific tactical workbook contains the procedure for public evacuation. The procedure has been extracted and included as Appendix D, *Evacuation Procedure*. Trans Mountain personnel will expand the Initial Isolation Zone as required, based on the continued air monitoring for the presence and levels of PCOCs and/or intense heat.

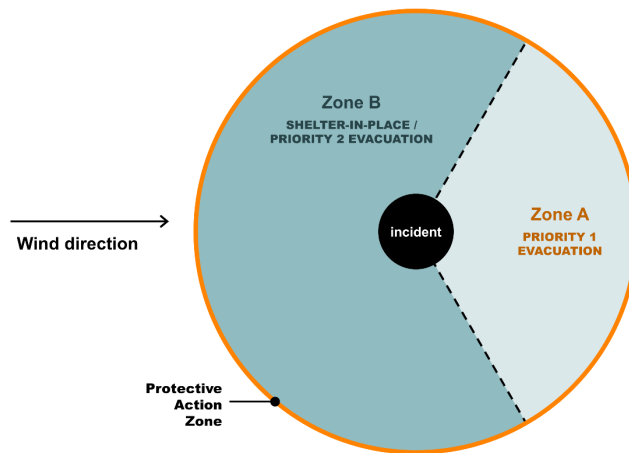
Upon arrival at the entrance or other appropriate meeting location dependent on the incident, of the local authority, responsible for land-based response, and the CCG, responsible for water-based response, Trans Mountain will provide an Initial Incident Briefing as outlined in the ERP. The Initial Incident Briefing, in addition to incident specific information, also includes information on the evacuation of the Initial Isolation Zone, if any members of the public were evacuated, where they were directed to muster, their contact information, and the status/location of any roadway/trail and/or waterway blockages to prevent public entry to the Initial Isolation Zone.

Trans Mountain will recommend public safety measures such as evacuation, shelter in place, and navigation warning to the local authority and/or the CCG upon their arrival. The local authority, responsible for land-based response, and CCG, responsible for water-based response, will determine the appropriate actions to be taken to protect the public and limit the movement of the public in an area of heightened risk and/or responder activity.

7.0 EVACUATION OF PROTECTIVE ACTION ZONE

Trans Mountain recommends evacuation or shelter-in-place measures within the Protective Action Zone for each event as listed in Section 4.2, *Protective Action Zone*, to commence as soon as reasonably practicable by the local authority, responsible for land-based response, and the CCG, responsible for water-based responses, due to the potential for an imminent threat to health. This evacuation/shelter-in-place is to be tactical in nature. Trans Mountain, through the Operations Section and/or Liaison Office of the ICP, will support, as required, the implementation of the public safety measures at the request of the of local authority, responsible for land-based response, and/or the CCG, responsible for water-based response. The evacuation should start in the downwind direction, and those closest to the incident first, followed by those in the upwind direction, moving outward from the incident site.

Diagram 1.0 Evacuation Zones



7.1 Vulnerable Groups

Appendix F, *Westridge Marine Terminal Vulnerable Groups and Land Use*, identifies the community plan area land use designs surrounding the Terminal and any pre-identified vulnerable groups within the Protective Action Zone. Vulnerable groups are considered, in this circumstance, to be schools, daycares, senior centers, and medical centres. This information can aid with preliminary assessment of logistical needs and assistance required to conduct the evacuation and support evacuees. Much of the land use proximal to the Westridge Marine Terminal includes park and public use land, single and two-family residential land, and industrial land use. There are no identified vulnerable groups currently within the combined Protective Action Zones for the Terminal.

7.2 Ongoing Assessment

The ICP, together with the local authority, responsible for land-based response, and the CCG, responsible for water-based response, 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, responsible for land-based response, and the CCG, responsible for water-based response in these efforts by assisting with the implementation of further public safety measures, as required.

7.3 Evacuation Routes, Methods, and Destinations

Trans Mountain has included the anticipated evacuation routes identified in Appendix H, *Westridge Marine Terminal Anticipated Evacuation Routes*. If an evacuation order of the Protective Action Zone and/or Notice to Mariners and/or Navigational Warnings is to be instituted, the local authority, responsible for land-based response, and the CCG, responsible for water-based determines the most appropriate evacuation routes and methods based on the circumstances of the incident. Trans Mountain will support this decision-making process. Evacuation routes can include water ways, applicable roads, walking paths, trails, as well as other local means of egress specific to the Westridge Marine Terminal. Modes of transportation may include boat, walking, driving, bike, transit buses, etc.

Evacuated members of the public may first be directed towards Muster Locations during the early portions of the incident for a short time while resources are being assembled. The Muster Locations are identified in Appendix H, *Westridge Marine Terminal Anticipated Evacuation Routes*. If the event requires mid-term or longer-term evacuation, evacuees will be directed to local Reception Centre(s) that are identified collectively by the City of Burnaby and Trans Mountain. Trans Mountain will support and collaborate with the local authority in the selection and designation of applicable Reception Centre(s). Location options include those identified in the local authority's plans, community support centres identified in the Trans Mountain Westridge Marine Terminal ERP confidential appendix or incident specific locations identified by the Logistics Section of the ICP.

7.4 Notifications

Trans Mountain is responsible for:

- Dissemination of evacuation notifications due to the immediate threat to life and health within the Initial Isolation Zone (as per Section 6.0)
- Dissemination of information on the event
- Dispatching a Trans Mountain representative to reception centres, to liaise between the public and the company
- Collection of relevant information from evacuees

The Information Officer, as a member of the Incident Management Team is responsible for developing and releasing information about the incident to the media (news, social, print, TV), incident personnel, members of the public, and impacted parties through the implementation of the external Communications Plan.

The external Communications Plan's 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.

It is recommended that a Joint Information Centre under Unified Command be established between Trans Mountain, the local authority, responsible for land-based response, and the CCG, leading water-based response as requested. The GVIRP and/or Trans Mountain Crisis Management Plan can guide the

activities of the JIC. A template for the initial media holding statement for the incident is available in Appendix C, *Initial Media Holding Statement (Template)*.

The local authority has the primary responsibility for the development and dissemination of notifications to the community that are specific to land-based evacuation and the CCG, leading the water-based response, for the development and dissemination of notifications to the marine community. The JIC can prepare and/or support these activities; or if not established, Trans Mountain, as requested. Communications could include but is not limited to:

- Public notification and situation updates
- Official communications to key audiences
- Media relations

7.4.1 Notification Platforms

Various notification platforms may be used to share emergency information to affected persons and communities. These could include but are not limited to:

- Personal verbalization, e.g., loud hailer, door-to-door delivery of notifications
- Notice to Mariners and/or Navigational Warnings
- Social media
- Radio and television announcements
- City of Burnaby Alertable notification app
- Trans Mountain's incident-specific website
- Local authority website

APPENDIX A GLOSSARY AND ACRONYMS

Glossary

Word or Phrase	Definition
Evacuation (of area)	Due to an impending or actual risk to public safety, individuals are ordered to vacate (evacuate) a defined area based on the hazards present and the threat to immediate life.
Evacuation Notifications	<p>Evacuation (of area) Alert A notification that informs all or part of a community of a potential or impending danger. It also provides community members and businesses time to undertake preparatory activities prior to an evacuation (of area) order being issued. Evacuation (of area) alerts:</p> <ul style="list-style-type: none"> • Do not require a declaration of a state of local emergency • May be surpassed by the issuance of an evacuation (of area) order <p>Evacuation (of area) Order A notification to all or part of a community of an impending danger that requires individuals to evacuate from the area. Evacuation (of area) orders:</p> <ul style="list-style-type: none"> • Are issued through a formal process and recorded in writing • Require a declaration of a state of local emergency to be in place for the order to be valid • Can only be issued for area(s) of the community identified in the declaration of a state of local emergency • Do not allow for any discretionary action on the part of the population at risk • Should be stated that the identified area(s) will be under controlled access until further notice <p>Evacuation (of area) Rescindment When the emergency that necessitated the evacuation (of area) alert or order is under control, and the primary and secondary emergency zones are declared safe, an evacuation rescindment can be issued.</p>
Heat	A thermal radiation from the ignition of a flammable substance that could be caused by surface tank fires, 3D/pool fires, flash fires, or vapour cloud explosions.
Initial Isolation Zone	The geographical area near a continuous hazardous release where all non-response personnel should be evacuated as there may be an immediate danger to life and health for those not protected by appropriate PPE as the result of the incident.
Navigational Warning (NAVWARN)	Contain information about changes to navigational aids and current marine activities or hazards that may have an impact on safety of navigation.
Notice to Mariners and/or Navigational Warnings (NOTMAR)	Informs mariners of important navigational safety matters affecting Canadian Waters. Notices to Mariners are continuous means employed by the CCG to promulgate information required by the master, pilot, or person in charge of the navigation of a vessel, as well as other interested parties. The Notices to Mariners contain the necessary information to ensure that nautical charts, Sailing Directions, etc. are kept up to date.
Pool Fire	A fire on pooled spilled product may occur in the metering area, the manifold area or on the berth locations on the dock.

Word or Phrase	Definition
Potential Chemicals of Concern (PCOC)	A pre-determined list of chemicals that may be released into the atmosphere during a product release or fire.
Protective Action Zone	The geographical area associated with a credible worst-case incident that is used to educate community members on the public safety measures, including evacuation or shelter-in-place, that may be required during an incident due to the potential for an imminent threat to health. This area will be adjusted during an incident to account for the actual incident type and the safety measures required to mitigate potential impacts to the public. May be referred to by other entities as the Emergency Planning Zone (EPZ).
Shelter-in-place	Due to an impending or actual risk to public safety, individuals are to take refuge (shelter), to remain indoors, or, if outside, to go indoors immediately.
Shelter-in-place Notifications	<p>Shelter-in-place Advisement</p> <p>A notification to all or part of a community of an impending danger that requires individuals to take refuge (shelter).</p> <p>Shelter-in-place advisories:</p> <ul style="list-style-type: none"> • Are issued through a formal process and recorded in writing • Require a declaration of a state of local emergency to be in place for the advisory to be valid • Can only be issued for area(s) of the community identified in the declaration of a state of local emergency • Should be stated that the identified area(s) will be under controlled access until further notice <p>Cancellation of Shelter-in-place Advisory</p> <p>When the emergency that necessitated the shelter-in-place advisory has evolved and/or is under control, such that it has been determined that it is safe to be outdoors, the advisory can be cancelled; cancellation may occur in stages.</p>
Three-dimensional (3D) Fire	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.
Smoke	The mixture of gases and suspended carbon particles that is likely visible and results from the ignition of a flammable substance.
Vapour	A substance diffused or suspended in the air that is normally a liquid or solid. Once diffused or suspended, it may be invisible. It is not the result of the ignition of a flammable substance.
Vulnerable Groups	Pre-identified vulnerable groups when considering evacuation under these circumstances include schools, daycares, senior centers, and medical centres.

Acronyms

Abbreviation	Full Description
CER	Canada Energy Regulator
CCG	Canadian Coast Guard
EOC	Emergency Operations Centre
EMRC	Emergency Management and Climate Readiness
ERP	Emergency Response Plan
ESS	Emergency Support Services
EU	Environmental Unit
IAP	Incident Action Plan
ICP	Incident Command Post
ICS	Incident Command System
JIC	Joint Information Centre
PCOC	Potential chemicals of concern
PPE	Personal protective equipment
PREOC	Provincial Regional Emergency Operations Centre
SOLE	State of Local Emergency
VFPA	Vancouver Fraser Port Authority
3D Fire	Three-dimensional fire

APPENDIX B ROLES AND RESPONSIBILITIES FOR RESPONDING AGENCIES AND ASSISTING ENTITIES

A responding agency is an organization that either has the legislative authority and responsibility to implement evacuation/shelter-in-place orders or has a regulatory responsibility to be a member of Unified Command.

Table 3: Responding Agencies

Responding Agencies		
Entity	Role	Authority
Trans Mountain	<p>Trans Mountain is responsible for taking immediate action to identify the hazards present following an incident and will establish and evacuate members of the public within the Initial Isolation Zone.</p> <p>Trans Mountain provides technical advice to the local authority to aid in the determination of appropriate public safety measures.</p> <p>Trans Mountain supports the local authority with evacuation (of area) or shelter-in-place and the communication of information to impacted community members.</p>	<p>Trans Mountain has no legislative authority to evacuate the public, except in circumstances where there is an immediate threat to life and health.</p> <p>A member of Unified Command.</p>
Local authority: City of Burnaby	<p>The City of Burnaby (the local authority) is responsible for protecting life and property within its jurisdiction. The local authority implements its emergency plan, which includes activation of its evacuation (of area) or shelter-in-place procedures.</p> <p>In coordination with the Trans Mountain ICP, the local authority's Emergency Operation Centre (EOC) issues evacuation order (of area) and rescindments and/or shelter-in-place advisories and cancellations.</p> <p>The local authority may declare a local state of emergency, if required.</p> <ul style="list-style-type: none"> • Supports Burnaby Fire Department with response activities as requested. • Response activities can include assisting with the implementation of a public safety order, traffic management, etc. • Leads setup and staffing of the evacuee Reception Centre, through ESS; provides support services that preserve the emotional and physical well-being of evacuees and response workers in emergency situations. 	<p>Has the authority to declare a state of local emergency and order evacuations and/or advise shelter-in-place.</p> <p>Invited to be a member of Unified Command.</p>
First Responder:	Burnaby Fire Department is responsible for implementing the actions for a tactical	Has authority to evacuate in situations

Responding Agencies		
Entity	Role	Authority
Burnaby Fire Department	evacuation (of area) or shelter-in-place for immediate life safety. Burnaby Fire Rescue Service: <ul style="list-style-type: none"> • Communicates evacuation (of area) alerts and orders or shelter-in-place advisories to threatened or impacted community members and businesses. • May represent the City in Unified Command. 	of immediate life safety.
Local authority: Tsleil – Wauthuth First Nation, Chief	Tsleil – Wauthuth First Nation (local authority) is responsible for protecting life and property within its jurisdiction. It implements its emergency plan, which includes activation of its evacuation (of area) or shelter-in-place plan.	Has the ability to declare a state of local emergency and order evacuations and/or shelter-in-place. Invited to be a member of Unified Command.
Ministry of Environment and Climate Change Strategy (BC MoE) (Provincial representative)	The province will coordinate available resources to provide emergency response assistance that supplements but does not substitute community resources.	No legislative authority to evacuate unless a provincial State of Emergency is declared. A member of Unified Command.
Canada Energy Regulator (CER)	The CER's top priority in any emergency is to make sure that people are safe and secure, and that the environment and property are protected. The CER oversees the company's response, including ensuring emergency plans are in place and executed, and will require that all reasonable actions are taken to protect employees, the public, and the environment.	No legislative authority to evacuate. A member of Unified Command.
Canadian Coast Guard (CCG)	The CCG is the lead federal agency for the response component of Canada's Marine Oil Spill Preparedness Response Regime and serves as the designated lead agency for all ship-source and mystery-source marine spills. The CCG will implement a NAVWARN Navigational Warning to boaters regarding hazards and/or changes to navigational aids on behalf of Transport Canada or other agencies.	No legislative authority to evacuate. A member of Unified Command.

An assisting entity is an organization that has the authority, a role, and/or responsibility to support the implementation of an evacuation/shelter-in-place decision.

Table 4: Assisting Entities

Assisting Entities		
Entity	Role	Authority
Local Authority		
First Responder: Burnaby Detachment RCMP (Police)	Burnaby Detachment RCMP supports the tactical response and executing of actions of an evacuation (of area) or shelter-in-place. <ul style="list-style-type: none"> Acts at the direction of the City of Burnaby. 	Has authority to evacuate in situations of immediate life safety or are of a security nature.
Metro Vancouver (MV)	Metro Vancouver will provide Air Quality Team subject matter experts to identify possible impacts to air quality from the incident. Metro Vancouver: <ul style="list-style-type: none"> Contributes to meteorological and air monitoring via the MV fixed network of stations. Dispatches MV mobile air monitoring for supplemental data collection, if appropriate. Invited to participate in the Trans Mountain ICP; through participation in the Trans Mountain ICP Environment Unit, evaluates air monitoring data and contributes to the air monitoring strategy. 	No legislative authority to evacuate. An assisting agency.
Neighbouring local authorities	Neighbouring local authorities monitor and assess potential risk to their jurisdiction and may provide mutual assistance to the affected community.	No legislative authority to evacuate outside of their jurisdiction. An assisting entity to impacted local authority.
Provincial Entities		
Emergency Management and Climate Readiness (EMCR)	Provides and coordinates provincial support for local authorities and First Nations within designated regional boundaries. Support and coordination at this level are provided by a Provincial Regional Emergency Operations Centre (PREOC). EMCR: <ul style="list-style-type: none"> Authorizes a local authority to implement a local emergency plan or emergency measures for all or any part of the jurisdictional area for which the local authority has responsibility. Requires a local authority for a municipality or an electoral area to implement a local emergency plan or emergency measures for 	EMCR has the legislated authority if and when the criteria outlined in Section 9 of the EPA are met to declare a State of Emergency. An assisting agency.

Assisting Entities		
Entity	Role	Authority
	<p>all or any part of the municipality or electoral area for which the local authority has responsibility.</p> <ul style="list-style-type: none"> Causes the evacuation of persons and the removal of livestock, animals, and personal property from any area of British Columbia that is or may be affected by an emergency or a disaster and makes arrangements for the adequate care and protection of those persons, livestock, animals, and personal property. <p>Invited to participate in the Trans Mountain ICP.</p>	
First Nations Health Authority (FNHA)	<p>The FNHA has subject matter experts who can participate and support the identification of possible impacts to health from the incident.</p> <p>FNHA:</p> <ul style="list-style-type: none"> Provides guidance regarding health impacts and air quality to support Tsleil-Wauthuth First Nation decisions in issuing alerts, orders, and rescindments for both evacuation (of area) and shelter-in-place advisories. <p>Invited to participate in the Trans Mountain ICP.</p>	<p>No legislative authority to evacuate.</p> <p>An assisting agency.</p>
Fraser Health Authority	<p>Fraser Health Authority provides subject matter experts to identify possible impacts to health from the incident.</p> <p>Fraser Health Authority:</p> <ul style="list-style-type: none"> Provides guidance regarding health impacts and air quality to support the local authority decisions in issuing alerts, orders, and rescindments for both evacuation (of area) and shelter-in-place advisories. Invited to participate in the Trans Mountain ICP. 	<p>Has legislated authority to mitigate or prevent further harm of the public from a health hazard if and when the criteria outlined in the <i>Public Health Act</i> is met.</p> <p>An assisting agency.</p>
Health Emergency Management British Columbia (HEMBC)	<p>HEMBC will provide leadership and support to the health authorities.</p> <p>HEMBC:</p> <ul style="list-style-type: none"> Coordinates between health authorities' communications personnel and the ICP Public Information Officer on public messaging and media releases related to public health. 	<p>No legislative authority to evacuate.</p> <p>An assisting agency.</p>

Assisting Entities		
Entity	Role	Authority
	<ul style="list-style-type: none"> • Supports evacuees through the provision of health services and care to existing patients and clients and psychosocial supports through the Disaster Psychosocial Services (DPS) program. • Supports the re-establishment of key health services prior to the lifting of an Evacuation Order. • Invited to participate in the Trans Mountain ICP. 	
Vancouver Coastal Health Authority	<p>Vancouver Coastal Health Authority provides subject matter experts to identify possible impacts to health from the incident.</p> <p>Vancouver Coastal Health Authority:</p> <ul style="list-style-type: none"> • Provides guidance regarding health impacts and air quality to support the VFPA and communities in issuing alerts, orders, and rescindments for both evacuation (of area) and shelter-in-place. • Invited to participate in the Trans Mountain ICP. 	<p>No legislative authority to evacuate.</p> <p>An assisting agency.</p>
Federal Entities		
Vancouver Fraser Port Authority	<p>The Vancouver Fraser Port Authority:</p> <ul style="list-style-type: none"> • Exercises regulatory powers to minimize harm, limit vessel traffic, and establish exclusion zones under the authority of Transport Canada through the affiliated maritime Acts. • Invited to participate in the Trans Mountain ICP 	<p>No legislative authority to evacuate.</p> <p>An assisting agency.</p>

APPENDIX C INITIAL MEDIA HOLDING STATEMENT (TEMPLATE)

The following statement can be issued upon receipt of information that a possible incident has occurred:

MEDIA STATEMENT

(Enter date) – Trans Mountain is investigating a (possible/confirmed) (enter brief description of incident) at the Westridge Marine Terminal. (Enter any initial measures) are being taken to ensure the safety of those in and around the Westridge Marine Terminal in Burnaby

More information will be provided as it becomes available. For the latest information and updates visit www.transmountain.com.

Media Contacts

(Enter name)

(Enter title)

(Enter phone number)

(Enter email address)

###

To provide updates via Twitter

- Use the name of the incident or location to create a unique hashtag and use it consistently throughout response
- Link to the incident response site wherever possible
- Use approved key messages and post regular updates as more information about the incident becomes available
- Respond to legitimate questions about the incident received via Twitter within 2 hours

Possible Tweet Content

Trans Mountain is investigating a possible incident at Westridge Marine Terminal. Information will be provided as it becomes available. Check www.transmountain.com. #Burnaby

UPDATE: #TransMountain crews are responding at the Westridge Marine Terminal in #Burnaby. More information about ongoing response efforts can be found here: LINK

APPENDIX D EVACUATION PROCEDURE⁷

Initial Public Safety Assessment and Actions

Response personnel will continually monitor the hazards and the incident boundaries to ensure they are appropriate and will expand and/or contract the Initial Isolation Zone, as needed.

- Don appropriate PPE; this includes:
 - Flame retardant outerwear
 - CSA/ANSI approved hard hat
 - CSA-approved footwear
 - Protective eyewear
 - In the case of a fire, firefighting turnout gear and/or SCBA may also be required.
- Utilize handheld air monitors for *initial* and continuous monitoring until contracted services arrive to confirm the Initial Isolation Zone and need for the expansion of the zone
- Gather the following equipment to establish radius of gas readings
 - Portable gas detector (Ventis MX4 gas monitor)
 - Communication device (radio)
 - UltraRAE compound specific PID monitor
- Perform air sampling for H₂S, LEL, O₂, and CO along the perimeter of the Initial Isolation Zone using the Ventis MX4 personal gas monitor
- Assign a supplemental rover to conduct at least one 15-minute air sampling event using a Jerome H₂S Analyzer and UltraRAE monitor; One air sampling event consists of four (4) separate air sampling readings taken at five-minute intervals
- Calculate the average of the four readings for the appropriate instrument and parameter
- Maintain a record of the air monitoring results using Section B of the Odour Complaint Investigation Form
 - If abnormal levels are identified notify the IC
- Note wind direction and wind speed.
 - A shift in wind direction requires immediate re-evaluation
- Notify the IC immediately if the numerical average for the second air sampling event meets or exceeds 0.005 ppm for H₂S, and/or 10 ppm for VOC
- Conduct a second air sampling event.
- Maintain awareness of levels in context of responder safety, including rovers and those staffing roadblocks.

If abnormal levels are identified:

- Expand the Initial Isolation Zone if required
- Deploy personnel downwind and upwind depending on how the plume is tracking
- Communicate the need for public protective measures (evacuation) to IC or Control Centre
- Request communication of public protective measures to emergency services
- Identify parties within the Initial Isolation Zone

⁷ Extracted from the Westridge Marine Terminal Fire Pre-Plan tactical workbook, a confidential document.

- Identify roadblock leader
- Identify additional rovers
- Identify exit route and muster points using map (in tactical workbook or evacuation plan)

Rovers

- Deploy personnel downwind and upwind depending on how the plume is tracking
- Monitor gas migration; verify boundary of the safety perimeter
- Advise impacted public to evacuate
- Begin notification of public with those in closest proximity to the incident location and downwind of the location
- Record name and address if evacuation is refused; notify the Control Centre to notify RCMP
- If contact cannot be made through a personal visit, request resources to conduct a thorough survey of the area

Road and trail blocks

- Establish access control (roadblocks) to the Initial Isolation Zone
- Establish roadblocks to limit access; Consider access/egress of responders and evacuees
- Position vehicle in a highly visible area to oncoming traffic
- Use intersecting crossroads as much as possible to maximize the monitoring of traffic flow
- Do not completely block road
- Engage the four-way flashers on vehicle
- Wear traffic vest to maintain visibility to traffic
- Erect physical barriers at pathways leading to evacuated areas (or implement other means of demarcation such as flagging)
- Record names, addresses, and contact information of evacuees leaving the area; ask those leaving the area to register at the identified muster site
- Post security personnel to prevent members of the public from entering the area, this may include the use of security vessels on water (Westridge only)
- Request additional resources to aid in manning sites
- Request assistance, as needed, from local law enforcement on a temporary basis until additional resources arrive

Re-evaluate regularly, or upon a change in the circumstances, to expand or contract the zone in consultation with emergency services.

Upon arrival of the local authority at the fence, Trans Mountain will provide an Initial Briefing as outlined in the ERP which in addition to incident specific information, also includes the evacuation of the Initial Isolation Zone and if any members of the public were evacuated, where they are located, and contact information. The status/location of any roadway/trail to prevent entry to the Initial Isolation Zone.

Trans Mountain recommends evacuation of the Protective Action Zone to the local authority upon their arrival. Shelter-in-place may be used if the local authority determines the incident is either under control or expected to be under control in the immediate future and may choose to isolate the area to prevent additional members of the public from entering the area.

APPENDIX E STANDARDS FOR POTENTIAL CHEMICALS OF CONCERN: SOURCES AND DETECTION LIMITS⁸

PCOC		Guideline Criteria															Monitoring Equipment Detection Limit**
		AB AAQO ¹			BC AAQO ²			Metro Vancouver AAQO ³			AB OHS OEL ⁴	AB OHS CL ⁴	BC OHS STEL ⁵	BC OHS TWA ⁵	AEGL-1 ⁶		
		unit	1-hr	8-hr	24-hr	1-hr	8-hr	24-hr	1-hr	8-hr	24-hr	8-hr			8-hr	1-hr	
H ₂ S	ppb	10	-	3	5	-	2	5 (desirable) 10 (acceptable)	-	-	10,000	15,000	10,000	-	510	330	100
	ppm	0.01	-	0.003	0.005	-	0.002	0.005 (desirable) 0.01 (acceptable)	-	-	10	15	10	-	0.51	0.33	0.1
C ₆ H ₆	ppb	9	-	-	-	-	-	-	-	-	500	2,500	2,500	500	52,000	9,000	50
	ppm	0.009	-	-	-	-	-	-	-	-	0.5	2.5	2.5	0.5	52	9	0.05
SO ₂	ppb	172	-	48	75	-	-	70	-	-	2,000	5,000	5,000	2,000	200	200	100
	ppm	0.172	-	0.048	0.075	-	-	0.07	-	-	2	5	5	2	0.2	0.2	0.1
CO	ppb	13,000	5,000	-	13,000	5,000	-	13,000	5,000	-	25,000	-	100,000	25,000	83,000	27,000	1,000
	ppm	13	5	-	13	5	-	13	5	-	25	-	100	25	83	27	1
NO ₂	ppb	159	-	-	60	-	-	60	-	-	3,000	5,000	1,000	-	500	500	100
	ppm	0.159	-	-	0.06	-	-	0.06	-	-	3	5	1	-	0.50	0.50	0.1
TPM*	ug/m ³	-	-	100	-	-	120	-	-	-	10	-	-	10	-	-	0.001
PM ₁₀	ug/m ³	-	-	-	-	-	50	-	-	50	3	-	-	3	-	-	0.001
PM _{2.5}	ug/m ³	80	-	29	-	-	25	-	-	25	-	-	-	-	-	-	0.001

1 Alberta Ambient Air Quality Objectives
 2 British Columbia Ambient Air Quality Objectives
 3 Metro Vancouver Ambient Air Quality Objectives
 4 Alberta Occupational Health and Safety Occupational Exposure Limit

5 OHS Guidelines Part 5: Chemical Agents and Biological Agents
 6 US Environmental Protection Agency Acute Exposure Guideline Level
 * Particulates Not Otherwise Regulated (Total Dust)
 **PCOC can be detected by fixed and mobile monitoring equipment

C₆H₆ = Benzene
 CO = Carbon Monoxide
 H₂S = Hydrogen Sulfide
 NO₂ = Nitrogen Dioxide
 PCOC = Potential Chemical of Concern

PM₁₀ = Particulate matter 10 micrometers
 PM_{2.5} = Particulate matter 2.5 micrometers
 SO₂ = Sulfur Dioxide
 TPM = Total particulate matter

⁸ From Appendix II of the Trans Mountain Public Health Assessment & Response Plan for Airborne Risk.

APPENDIX F WESTRIDGE MARINE TERMINAL VULNERABLE GROUPS AND LAND USE

This appendix identifies the community plan area land use designs surrounding the Terminal and any pre-identified vulnerable groups within the Protective Action Zone. Vulnerable groups are considered, in this circumstance, to be schools, daycares, senior centers, and medical centres. There are currently no identified vulnerable groups within the combined Protective Action Zones for the terminal.



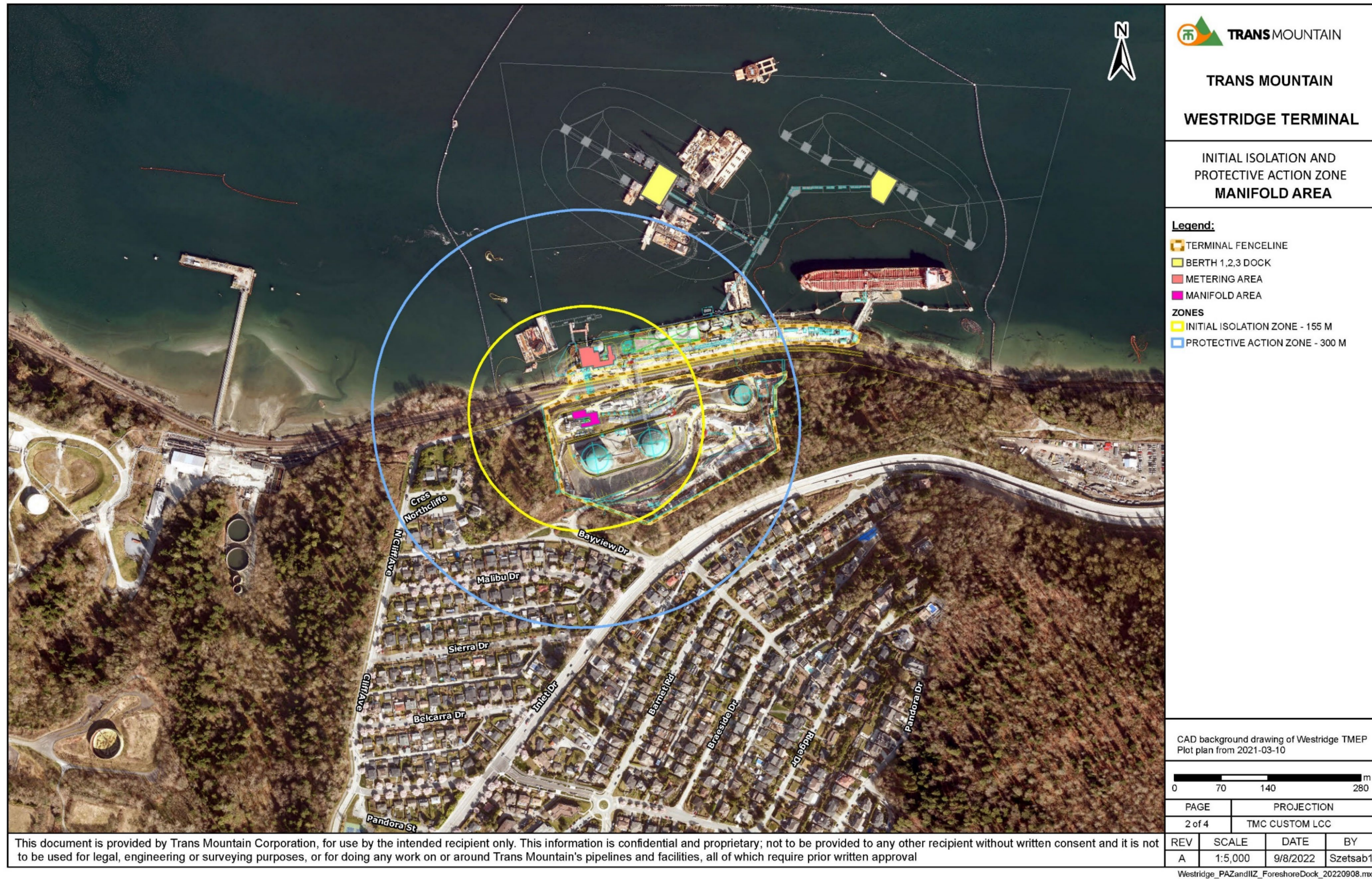
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APPENDIX G WESTRIDGE MARINE TERMINAL INITIAL ISOLATION ZONES AND PROTECTIVE ACTION ZONES

Initial Isolation Zone and Protective Action Zone – Metering Area



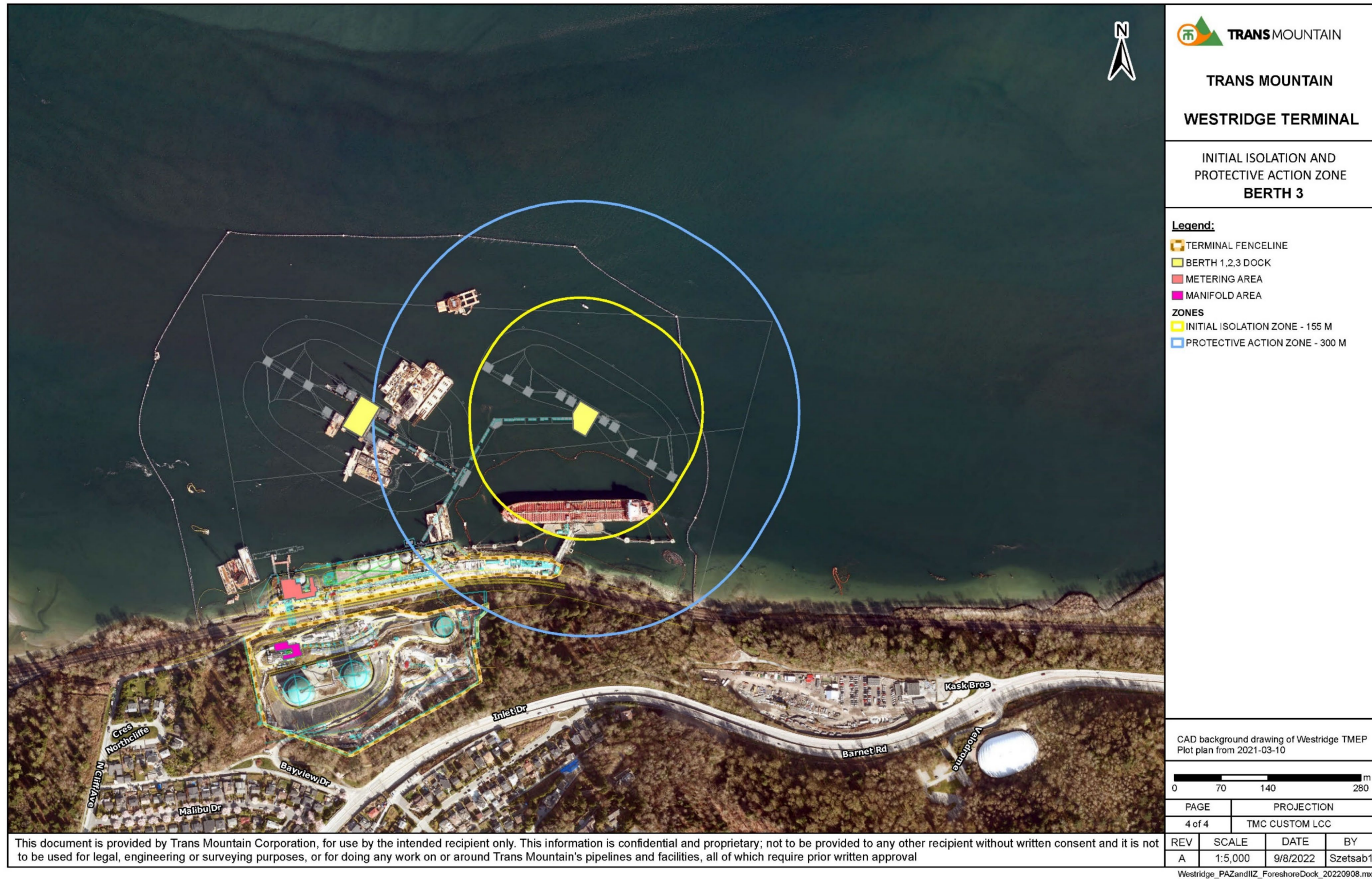
Initial Isolation Zone and Protective Action Zone – Manifold Area



Initial Isolation Zone and Protective Action Zone – Berth 1 & 2



Initial Isolation Zone and Protective Action Zone – Berth 3



Initial Isolation Zone – Tank 93



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Protective Action Zone – Tank 93



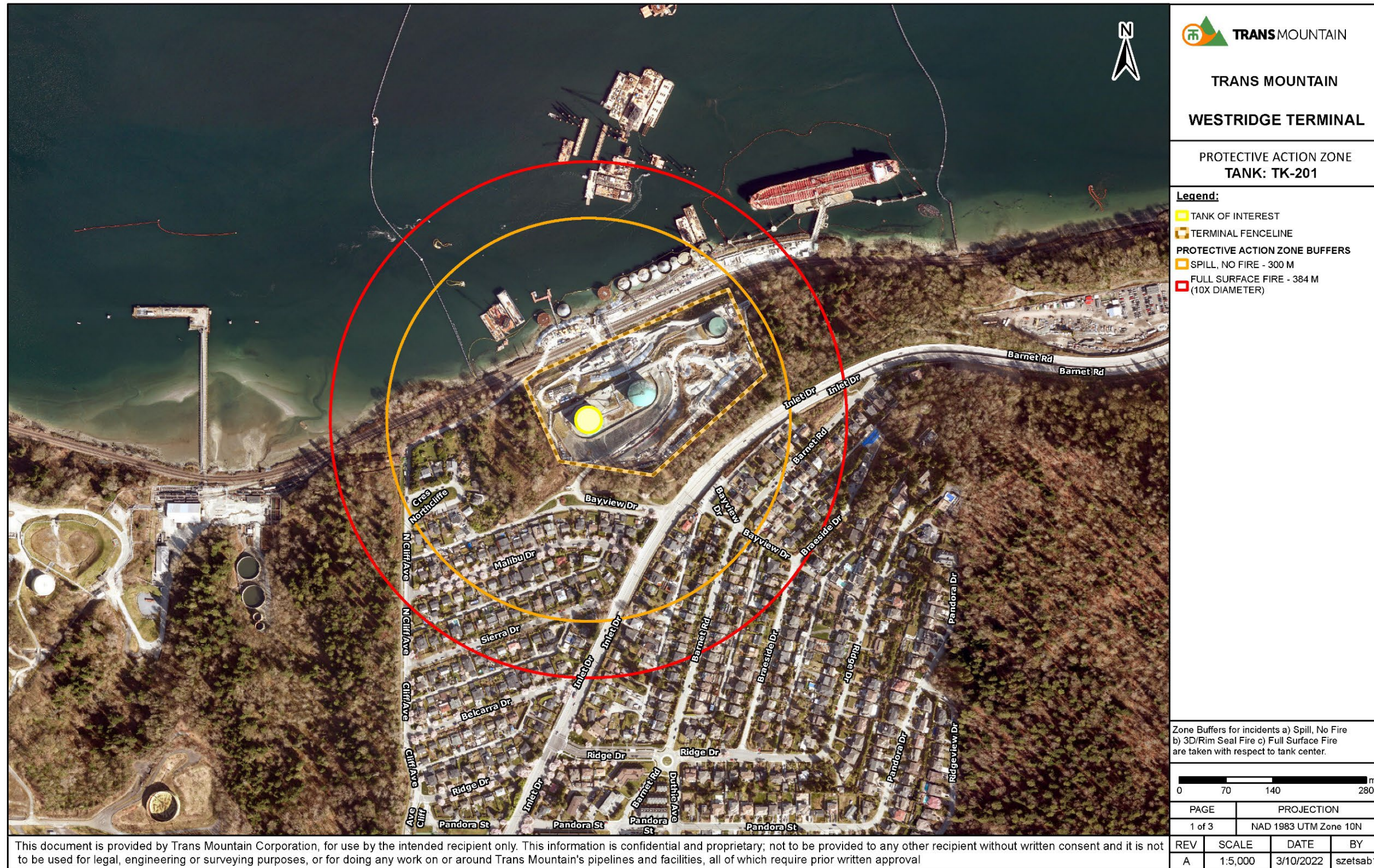
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Initial Isolation Zone – Tank 201



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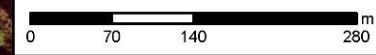
Protective Action Zone – Tank 201



TRANS MOUNTAIN
 TRANS MOUNTAIN
 WESTRIDGE TERMINAL
 PROTECTIVE ACTION ZONE
 TANK: TK-201

- Legend:**
- TANK OF INTEREST
 - TERMINAL FENCELINE
 - PROTECTIVE ACTION ZONE BUFFERS**
 - SPILL, NO FIRE - 300 M
 - FULL SURFACE FIRE - 384 M (10X DIAMETER)

Zone Buffers for incidents a) Spill, No Fire
 b) 3D/Rim Seal Fire c) Full Surface Fire
 are taken with respect to tank center.



PAGE	PROJECTION
1 of 3	NAD 1983 UTM Zone 10N

REV	SCALE	DATE	BY
A	1:5,000	3/10/2022	szetsab1

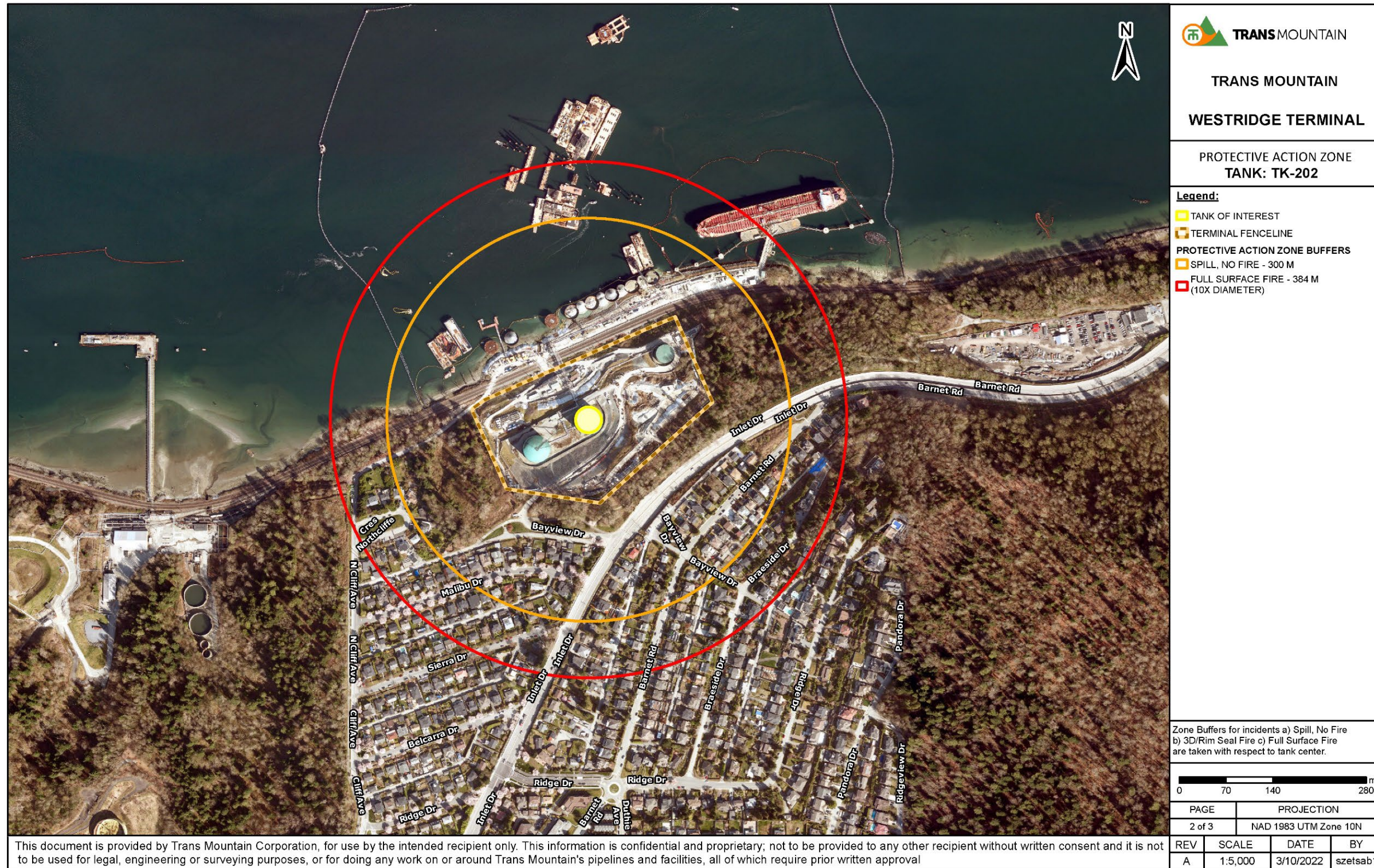
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Westridge_ProtectiveActionZones_20220310.mxd

Initial Isolation Zone – Tank 202



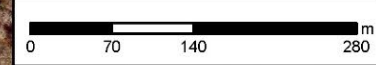
Protective Action Zone – Tank 202



TRANS MOUNTAIN
 TRANS MOUNTAIN
 WESTRIDGE TERMINAL
 PROTECTIVE ACTION ZONE
 TANK: TK-202

- Legend:**
- TANK OF INTEREST
 - TERMINAL FENCELINE
 - PROTECTIVE ACTION ZONE BUFFERS**
 - SPILL, NO FIRE - 300 M
 - FULL SURFACE FIRE - 384 M (10X DIAMETER)

Zone Buffers for incidents a) Spill, No Fire
 b) 3D/Rim Seal Fire c) Full Surface Fire
 are taken with respect to tank center.



PAGE	PROJECTION
2 of 3	NAD 1983 UTM Zone 10N

REV	SCALE	DATE	BY
A	1:5,000	3/10/2022	szetsab1

Westridge_ProtectiveActionZones_20220310.mxd

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APPENDIX H WESTRIDGE MARINE TERMINAL ANTICIPATED EVACUATION ROUTES

Evacuation Route Overview



Evacuation Zone A



Zone A Evacuation Directions:

Exit residential area in a westerly fashion via Northcliffe Cr, turning left onto N Cliff Ave and heading south, and exiting onto Hastings St. westbound.

Evacuation Zone B



Zone B Evacuation Directions:

Exit residential area in a westerly fashion via Malibu Dr, turning left onto Cliff Ave and heading south, and exiting onto Hastings St. westbound.

Evacuation Zone C



TRANS MOUNTAIN
TRANS MOUNTAIN
WESTRIDGE TERMINAL

EVACUATION ROUTES
ZONE C

LEGEND:
 TERMINAL FENCELINE
 EVACUATION ZONE
 EVACUATION ROUTE
 (Exit via Barnet Rd / Hastings St)

NOTES: IMAGERY OBTAINED IN 2020

0 80 160 320 m

PAGE	PROJECTION		
3 of 5	Custom Lambert Conformal Conic		
REV	SCALE	DATE	BY
A	1:6,000	9/8/2022	Szetsab1

Westridge_EvacuationRoutes_20220908.mxd

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Zone C Evacuation Directions:

Exit residential area in a south-westerly fashion via Barnet Rd, then at the roundabout continuing south via Barnet Rd southbound and exiting onto Hastings St. Westbound.

Evacuation Zone D



Zone D Evacuation Directions:

Exit residential area in a westerly fashion via Malibu Dr, turning left onto Cliff Ave and heading south, and exiting onto Hastings St. westbound.

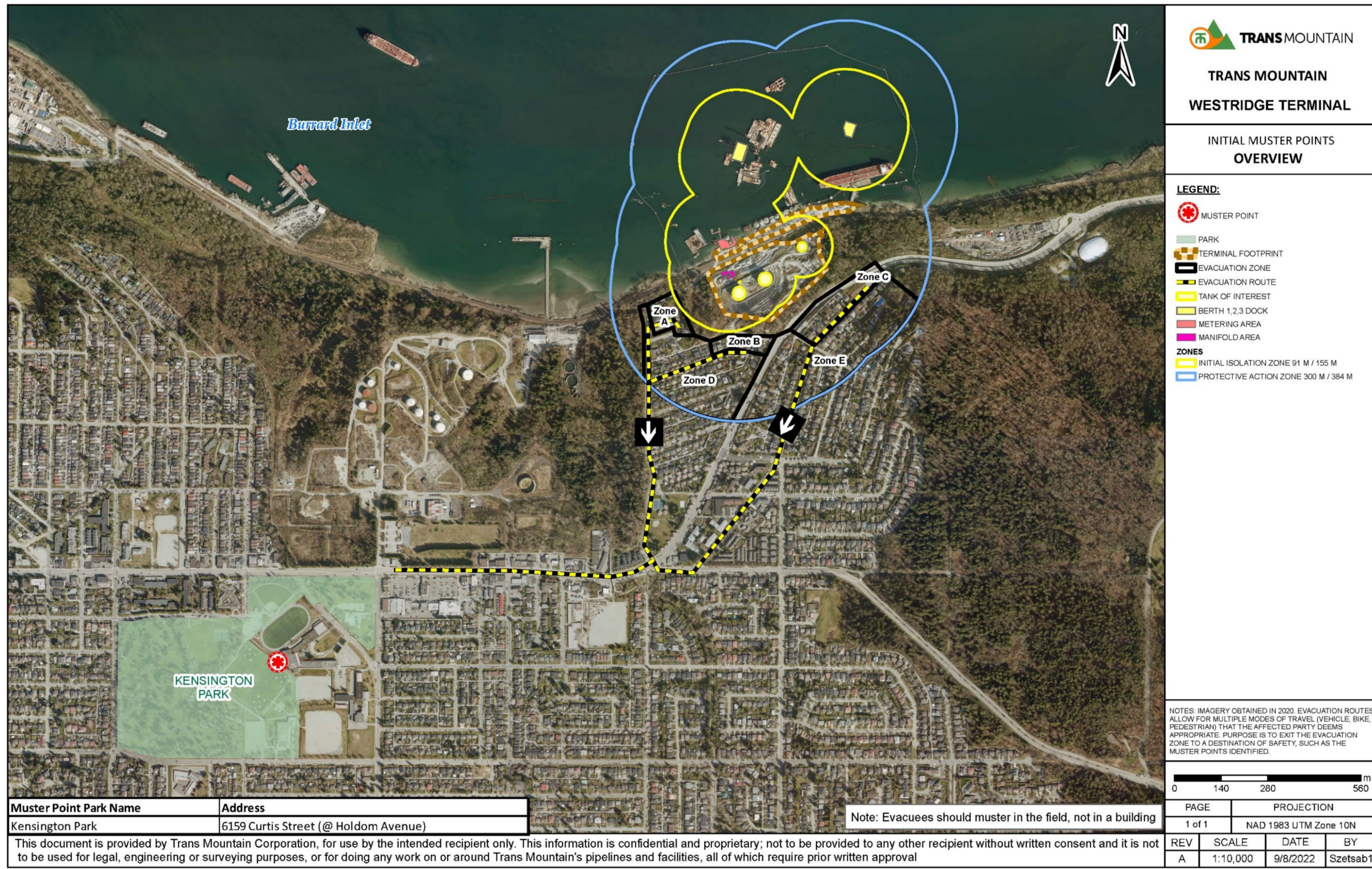
Evacuation Zone E



Zone E Evacuation Directions:

Exit residential area in a south-westerly fashion via Barnet Rd, then at the roundabout continuing south via Barnet Rd southbound and exiting onto Hastings St. westbound.

APPENDIX I POTENTIAL INITIAL MUSTER POINTS (INLAND)



APPENDIX J POTENTIAL INITIAL MUSTER POINTS (PUBLIC DOCKS)

