

## Operations Regulatory Compliance

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### Closed Report - CV1920-166 - 25 May 2020

**Event Type**

Field  
Inspection

**CV Event Number**

CV1920-166

**Selected Related Events**

- CV2021-184

**Project Companies**

- Trans Mountain Pipeline ULC

**Name of the Operating Company**

Trans Mountain  
Pipeline ULC

**Rationale, Scope, and Additional Description**

Environmentally focused field inspection of the Trans Mountain Expansion Project's (TMEP), Spread 2, which spans from Edmonton City limits, and extends to a point near Hinton, AB; ranging approximately 288 kilometers, and parallels Alberta Highway-16. The spread moves through the Boreal Forest Natural Region and the Foothills Natural Region, which is characterized by Central Mixed-wood and Dry Mixed-wood sub-regions of Alberta. The Inspection Officer was accompanied by two Indigenous Monitors representing the Indigenous Advisory and Monitoring Committee (IAMC), pursuant to subsection 102 (5) of the Canadian Energy Regulator Act (CERA). The inspection targeted ongoing work activities on the Right-of-Way (ROW) and temporary work spaces (TWS), including Access Roads to the ROW. Other areas of interest included wildlife mitigation, wetland and watercourse crossings, waste management, storage and handling of hazardous materials, traditional land & resource use, heritage resource sites, invasive species and biosecurity management, and erosion and sediment controls.

**Selected Province/Territory**

- Alberta

**Start Date**

2020-03-09

**End Date**

2020-03-13

**Inspection Officer Number**

- 2194
- 2275

**Selected Disciplines**

- Environmental Protection
- IAMC Observation

**Tool Used:**

- Corrected Non-compliance (CNC) (1)
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**This inspection was undertaken to verify compliance with the following legislative requirements:**

- National Energy Board Act (NEBA)
  - National Energy Board Onshore Pipeline Regulations (OPR)
- Canadian Energy Regulator Act (CERA)
  - Canadian Energy Regulator Act (CERA)
- Standards
  - CSA Z662-19 - Oil and Gas Pipeline Systems
- Plans And Procedures
  - Project-specific Environmental Protection Plan (EPP)
    - Pipeline Environmental Protection Plan For The Trans Mountain ULC Trans Mountain Expansion Project. Condition 72. September 2019.

**Selected Regulatory Instrument Numbers**

- OC-065

**Facility Details****Facility Types**

Pipeline

- Pipeline right of way (ROW)

**Life-cycle Phases**

- Construction
- Pre-Construction

**Additional Information****Selected Facilities**

- TRANS MOUNTAIN EXPANSION PROJECT (Pipeline)
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**Observations (No follow-up required)****General Observations****Date**

2020-03-12

**Discipline**

Environmental Protection

**Categories**

- Soils and Soil Productivity
  - Erosion Control
  - Soil Handling
  - Biosecurity
  - Chemical Spills/Releases
- Water Bodies - Non-Fish-bearing

- Temporary Access Structures
- Erosion
- Water Bodies - Fish-bearing
  - Temporary Access Structures
  - Erosion
  - Sedimentation/Turbidity
  - Disturbance
- Vegetation
  - Species of Concern
- Groundwater
  - Monitoring and Testing
- Housekeeping
  - Waste Management
- Training and Documentation
  - Documentation Available/Up to Date
- Socio-economic
  - Effects on Communities (including indigenous)
  - Traditional Land and Resource Use
  - Navigation and Navigation Safety
  - Heritage Resources

## Facility

- TRANS MOUNTAIN EXPANSION PROJECT

## Observations

### General Observations

- The Inspection Teams vehicle was washed and sanitized (Level 3) prior to entering the RoW. The cleaning was documented and photographed.
- At KP 224+400 the Inspection Team observed a previously reported diesel spill ( that occurred on 27 February 2020. TMEP personnel indicated the contaminated soil was excavated, removed off site and disposed at an approved facility. Soil samples were taken and the company was still waiting for the results. The area is roped off with "Potential Moderate Contamination Area" signage and flagging. TMEP personnel stated if the soils sample results come back clean, the rope and signage would be taken down and the area would be considered clean. If the soil sample results still contained contaminants, additional soil would be excavated and more soil samples would be collected until the samples come back clean.
- Observed slurry being mixed at a hydro-vac sump at KP 224+400 for onsite disposal within the stripped project footprint.
- Construction activities maintained within the extra-temporary workspace boundaries and topsoil and subsoil piles were separated and clearly labeled.
- At KP 224+400 dewatering locations were positioned in well vegetated areas and sediment bags were placed on a diffusion device (plywood) to reduce the chance of erosion and to be easily removed. A small amount of fines were observed coming from one sediment bag but not enough to be considered an issue. The intake hose was elevated to reduce the amount of soil being sucked from the bottom of the trench.
- The tie-in crew at KP 224+400 was finishing a weld and the trench still required some dewatering prior to backfill.
- A coolant spill occurred in the morning at KP224+500 and the contaminated soil was shoveled into bags to be removed from the site. TMEP personnel indicated the spill was reported and procedures were followed.
- Wildlife gaps were observed in the soil windrows and many were seen with animal tracks.

- At KP 244+430 a “No Fueling” sign was observed at a wetland (WT-1032) and the width of the pipeline construction footprint was narrowed in efforts to minimized disturbance.
- Inspection Team discussed the purpose and intent of the Grizzly Bear mitigation that states “Delimb coniferous trees and leave limbs on-site, where practical, to provide seed source (Government of Alberta 2017)” found in the Resource Specific Mitigation Tables (Table 4.2-1). After discussing the rationale with their consultant, TMEP personnel indicated that the intent of the mitigation is to leave the branches with cones behind to help facilitate natural regeneration of conifer trees. They said another option that would meet the intent of the mitigation would be to mulch the limbs so they get mixed into surface soil strippings or left on top in minimum disturbance situations. Cones and branches were observed on the organic layer and mixed into the topsoil. Coarse woody debris was stockpiled in various places along the RoW and TMEP personnel indicated it would be distributed to required locations. The Inspection Team is satisfied the intent of the mitigation is being met.
- Discussed criteria, approvals and required documentation for danger tree removal from the edge of the project footprint with TMEP personnel. Trained authorized personnel will conduct danger tree assessments to remove potential hazardous trees.
- TMEP personnel indicated garbage discarded by the public along the RoW will be removed during clearing by the contractor and disposed of.
- Traditional Land Use areas were identified in the field with signage.
- TMEP personnel stated they are preparing for spring breakup using a tracking table to document areas that will need modifications. A crew will be monitoring throughout the spring and will continually make adjustment as required.
- Observed logging and mulching crew at KP 297+130 and discussed the Steep Slope Plan to grade out slopes with company representatives. Any slope greater than 21 degrees will require a site specific plan. Signage including “Logging and Mulching” and “Stop Active Falling” signs were observed and placed in appropriate locations.
- Generators and fuel cans observed along the RoW were stored in secondary containment to capture and contain any drips or leaks.
- TMEP personnel indicated there are 7 Environmental Inspectors on Spread 2 and they were strategically placed as per their skill set.
- At KP 239+00 the lowering-in crew was installing screw anchors in the wetland for buoyancy control. Observed multiple dewatering locations in the area to control trench water levels. Pumps were all placed in secondary containment. Dewatering bags were intact and placed in a well vegetated area. At KP 240+100 there were 3 sediment bags within a constructed pig pen structure. A pump hose had fallen out of one of the sediment bags and the water was pumping onto a wooden pallet. A small amount of fines from sediment laden water was seen on the ground but no visible erosion or scouring was observed. Crews were immediately onsite repairing the hose, replacing sediment bags and preparing to build a new containment structure. TMEP personnel stated the dewatering locations are tracked, monitored and maintained regularly.
- At KP 241+00, coarse woody debris piles were onsite to be replaced within riparian buffer areas and the treed wetland as stated in Table 10.1-2 of the Resource Specific Mitigation Tables. The Horizontal Directional Drill was drilling under the wetland (WT 515) and a secondary road. The drilling fluid consisted of water only and did not contain any additives. A street sweeper was observed cleaning the road.
- Inspection team discussed rare plant mitigation during clearing activities with company representatives. They indicated rare plant mitigation from the Resource Specific Mitigation Tables will be followed. They provided a photograph of a rare plant location at KP 285+450 along the south RoW boundary near the tree line. The on-RoW area was staked and signed and avoided from construction activities. All merchantable timber was removed with minimal ground disturbance. No topsoil was removed nor stockpiled.

#### **Tool Used**

No

Tool Used

## Watercourse Crossings

### Date

2020-03-10

### Discipline

Environmental Protection

### Categories

- Water Bodies - Fish-bearing
  - Temporary Access Structures
  - Erosion
  - Sedimentation/Turbidity
  - Destruction/Loss of Habitat
  - Disturbance
  - Chemical Spills/Releases
  - Direct Mortality of Fish
  - Species of Concern

### Facility

- TRANS MOUNTAIN EXPANSION PROJECT

### Observations

- Bench Creek crossing
  - Inspection team visited this crossing multiple times over the course of the inspection.
  - During the first visit IOs observed a hydraulic fluid leak from the pile driving attachment of the excavator on the east bank of Bench Creek. Trans Mountain confirmed that the hydraulic fluid in this machine was non-toxic vegetable oil as required in the Project EPP. Trans Mountain voluntarily shut down the machine until repairs could be completed (See CNC #1).
  - IOs observed two 20L pails of vegetable based hydraulic fluid outside of secondary containment, one empty and one with some residual fluid. TMEP installed containment tray beneath pails. Upon requesting SDS for this fluid, IOs confirmed it to be non-hazardous and therefore do not consider this observation as non-compliance.
  - Erosion and sediment control (ESC) measures observed to be appropriate at time of inspection.
  - Spill kits in place.
  - Isolation work observed at time of inspection at this watercourse crossing. Redundant pump capacity confirmed on site. TMEP indicated flow rate of creek is 5.2M3/min. Water quality monitoring at 50/100/200m in place with no anomalies of concern detected by consultants on site. Discharge point from dam and pump inspected. No issues noted.
- KP244+000 Sundance Creek
  - Vehicle crossing observed with appropriate wingwalls and geotextile wrap. No issues noted with ESC measures on site at time of inspection.
  - Whirling Disease protocols discussed with TMEP Environmental personnel who confirmed that all equipment in contact with water and watercourse substrate will get Level 1 cleaning and clean/drain/dry treatment as per provincial requirements.
- KP318+500 Hardisty Creek HDD entry side
  - Site is cleared and graded. Site tidy and no housekeeping issues observed.
  - RoW is within limits of survey, no issues with trespass observed.
  - No activity at time of inspection. No issues noted.

- Access road in area crossed watercourse AB179A, which IOs noted had a geotextile wingwall which would soon be in need of maintenance, but not yet causing an issue. IOs brought this to the attention of TMEP who added it to its deficiency list to be addressed by maintenance crews.
- Cache Percotte Creek
  - Clearing has begun at this crossing. IOs assessed woody debris in creek and confirmed this was equivalent to on and off RoW condition and did not appear to be the result of construction activity.
  - ESC measures at this crossing discussed and deemed to be appropriate by Inspection team.
  - Button top loader observed parked and inactive in the vicinity of crossing, but greater than 100m away. IOs observed hydraulic fluid drips from Button Top Loader attachment. TMEP placed absorbant cloth under drip and requested contractor to repair equipment. (Please refer to CNC #1)
- Sandstone Creek (AB 162a)
  - No activity at site at time of inspection. RoW in this area has been cleared, and a coarse woody debris (CWD) pile was observed segregated on RoW near the crossing.
  - Appropriate watercourse crossing signage observed at crossing.
  - No issues noted.
  -
- Roundcroft Creek (KP297+130)
  - Delimiting processor attachments on excavators inspected. No leaks or drips observed.
  - Bunching and lumber sorting work underway on Southeast side of crossing. Rollback and CWD installed on steep slope on south side of crossing for erosion mitigation.
  - No woody debris observed within watercourse
  - No issues noted.

**Tool Used**

No

Tool Used

**IAMC Indigenous Monitor Observations #1****Date**

2020-03-12

**Discipline**

IAMC

Observation

**Categories**

- General
  - General

**Facility**

- TRANS MOUNTAIN EXPANSION PROJECT

**Observations**

*Additional observations recorded by IAMC Indigenous Monitors participating in the CER inspection. Any compliance-related observations that require specific regulatory follow-up have been recorded above.*

## Observations

- At the March 9th kick-off meeting with CER Inspection Officers (IO) and IAMC IMs, the LSAM IAMC IM noted the following topics are of particular interest to her and the community: TLU sites, crossings of fish bearing watercourses, Whirling Disease, paleontology sites, rare plant / plant gathering sites, wildlife and species at risk sites, and their associated mitigation measures.
  - At watercourse crossings, stumps and root systems consistently were being used as natural sediment and erosion control, reducing the use of silt fencing.
  - Signage, staking and flagging was visible and well maintained with good signage throughout (environmentally sensitive areas, heritage sites, watercourse crossings, buffer zones, wetlands, and biosecurity).
  - Dewatering was good at inspection sites: designated crews monitor, replace and remove dewatering bags.
  - Secondary containment, drip trays and spill kits were used consistently at inspection sites.
  - Separation in soil windrows was good, with signs of animal use.
  - Information requested and questions asked by the IAMC IMs or CER IO were provided or addressed promptly.
  - TMX representatives were very informative at inspection sites, helping broaden the 2 understanding of what has been done or what will be done regarding the different stages of construction.
  - TMX has incorporated preventative measures a level above required regulations pertaining to biosecurity on Spread 2.
  - TMX IMs work alongside EIs with the option to learn more about areas that interest them- soils, water, HDD etc.
  - Transparency, communication and connection were key components during the inspection.
- Several issues were observed and corrected during the inspection:
- At the Bench Creek watercourse crossing (KP 226+400), a pile driver was observed to be operating at the time of inspection with wet oil stained hoses, indicating a leak. To correct this, the equipment was shut down and a new sight glass is needed. Subsequent to the observation being made, TMX informed the inspection team that a plug was put in for the sight glass and that a loose fitting had been tightened. A Corrected NonCompliance (CNC) is to be issued.
  - At the Cache Percotte Creek (KP 315) location, a button top loader, not in use at the time, showed signs of a hydraulic fluid leak. Oil spots were observed on the equipment and the ground. TMX representatives placed absorbant pads under the leak, replaced the O-ring, tightend the fitting and submitted a spill report. A CNC will be issued.
  - At KP 226+400 the inspection team observed that five gallon buckets of hydraulic fluid were being used without secondary containment and asked TMX representatives about this. The TMX representative provided an MSDS sheet specifying biodegradable hydraulic fluid is non-hazardous and therefore does not require secondary containment at a watercourse. Drip trays, however, were put in place under the five gallon buckets and the TMX representative will follow up internally to suggest making secondary containment of biodegradable hydraulic oil standard at watercourses as a good practice.

## Tool Used

No

Tool Used

## IAMC Indigenous Monitor Observations #2

### Date

2020-03-12

### Discipline

IAMC  
Observation  
**Categories**

- General
  - General

**Facility**

- TRANS MOUNTAIN EXPANSION PROJECT

**Observations**

*Additional observations recorded by IAMC Indigenous Monitors participating in the CER inspection. Any compliance-related observations that require specific regulatory follow-up have been recorded above.*

**CER-IAMC-TMX  
Spread 2 Environmental Inspection**

**March 9-12-2020**

**Attended the inspectors 6am meeting following through with an opening meeting with the trans mountain EI's introduction were around the table including the IAMC IM's and CER IO's talk about daily activities that are happening along with the spread, clearing, access striping, grading bores to isolation, talk about the safety of driving due to warmer weather conditions,**

**Right of way inspection:**

- **Before arriving at RoW (right of way) we mobilized to nearest car wash (Edson) to perform a level 3 biosecurity cleaning on vehicle**
- **Observed sheet piling done at Bench Creek, Observed numerous sections at Bench including concrete coating, the tarp was laying under the concrete coating section of pipe. Before arriving back to Bench Creek isolation was done and no fish salvage was needed as one of the IMs from their end said. turbidity team still on-site monitoring the isolation and bypass hoses upstream and downstream, Observed piler driver attachment on excavator was leaking spyglass and fittings were losses due to vibration of attachment driver. was put out of service until repaired. It was good to see the contractor took the time to take corrective action on repairing and showing us the repair. (hose was changed and spyglass was switched out with plug)**
- **Observed numerous TLU sites was great to see that signage and mitigation are in place and visual approach, flagged and marked. they are doing a great job**
- **Observed pigpen was well built and second containment measures were in place, also the crew was in the making of second peg pen, five pumps total leading to pigpens but three were active.**
- **Observed numerous dewatering stations, the first three were good and not currently working, the other three we saw were active with no concerns, the only concern we had with one was the hose popped out of the bag and the other bag beside it look like it was slit open. EI's took corrective action and notified foreman to shut down pumps and crew rectified and replaced the bags with new bags that they had that was a good practice measure**



- pleased to know that trans mountain is gonna start a seed planting program I find that pretty interesting. It was good to see wildlife gaps along the right of way. sites and right of ways look pretty good and button-up, great soil handling, housekeeping was good. mitigations and fencing were good signage and labeling.
- Observed access, clearing crew was good to know anything over 20 degrees needs a steep slope plan, was cool to see crew making the access level to the highway for easier access for big trucks and machinery to smoothly access right of way. Observed the cool processing machine, the crew were properly working safe and wearing corrective PPE
- foremen are doing great jobs and great on ensuring the safety of everyday routine to crew and visitors on-site was good to see on numerous sites foremen and crews connection and answering as many questions and observe and signed on FLHA's, JSA's.

#### **Tool Used**

No Tool Used

## **Compliance Summary**

### **Corrected Non-Compliance (CNC) #1 - Hydraulic Fluid Leaks**

#### **Date**

2020-03-10

#### **Discipline**

Environmental Protection

#### **Categories**

- Water Bodies - Fish-bearing
  - Chemical Spills/Releases

#### **Facility**

- TRANS MOUNTAIN EXPANSION PROJECT

#### **Observations**

CER Inspection Officers observed evidence of hydraulic fluid leaks on sheet metal pilings as well as on the hydraulic pile driver attachment on excavator working at the Bench Creek crossing as well as on a button top loader parked near Cache Percotte creek. Upon bringing this to the attention of TMEP personnel the equipment was voluntarily shut down until repairs could be made, and absorbant rags were used to mitigate any risk of the fluid contacting the ground. TMEP indicated that the hydraulic fluid used in these pieces of equipment was vegetable based non-toxic hydraulic fluid.

#### **Tool Used**

Corrected

Non-compliance (CNC)

#### **Legislative Requirement**

- Pipeline

Environmental Protection Plan For The Trans Mountain ULC Trans Mountain Expansion Project. Condition 72. September 2019.

**Applicable Wording from Legislative Document**

EPP

Section 14.1 General Measures: 35. Ensure all equipment, including hoses and pumps are in good working condition and no leaks are observed.

**Company Action Required**

TMEP will repair the leaking attachments on this equipment and clean up any spilled hydraulic fluid in these areas.

**Due Date**

2020-03-13