

# Environmental Surveillance Activity

Project Name	Trans Mountain Pipeline Reactivation
Parks Canada Internal File	J17-015
Project Proponent	Trans Mountain Pipeline ULC (TM)
Prime Contractor	Simpco Leducor Limited Partnership (SLLP)

Event Type	Parks Canada - IAMC Joint Field Inspection
Date	April 20-21, 2021
Location	Various locations within Jasper National Park
Environmental Surveillance Officer(s)	<ul style="list-style-type: none"> <li>• Jasper National Park ESO</li> <li>• Indigenous Monitor – Montana First Nation</li> <li>• Indigenous Monitor – Lac St. Anne Metis</li> </ul>
TM or SLLP representative	<ul style="list-style-type: none"> <li>• Trans Mountain Indigenous Monitors (accompanied inspection for Day 2)</li> </ul>
Description of Field Inspection	<ul style="list-style-type: none"> <li>• Construction sites – Dig 30C, NHM357, KP336.3 Valve Removal, Dig 9</li> <li>• Post Construction sites – Dig 30B, Sleeve 5, Vine Creek, Sleeve 3, Dig 8</li> <li>• Pre-Construction sites - Dig 31B, Sleeve 21</li> </ul>
Activities Monitored	<ul style="list-style-type: none"> <li>• Pre-Construction</li> <li>• Post-construction/Restoration</li> <li>• Construction</li> </ul>

Observations  
April 20, 2021

April 20,  
2021

JNP ESO

- ESO and IMs meet at Parks Canada Compound in Jasper
- Review maps, discuss plans for site visits, areas of interest and concern.

**Dig 30B**

**KP386.925**

**Post-Construction**

- Access to Dig 30B and Dig 30C is off Highway 16 on built gravel ramp underlain with geo and held with lock blocks. Ramp material is kept in place, no over spilling noted. Access mats in place from base of ramp to dig site.
- Three temporary bridges in place over small creeks on access route. No disturbance of bank materials or built abutments was required. Riparian willows and alders at bridge crossings cut near ground with root mass left intact. Bridges and side walls wrapped in geo fabric with kick plates installed. No dirt or debris from bridge surface can enter creek.
- Birch tree in riparian of one of the creeks still in place – tied back to avoid removal or damage.
- Barrel spill kits in place next to bridge. Seal confirming complete contents intact.
- No fuels or other hazardous material stored near watercourses.
- Integrity dig is complete, backfilled and topsoil replaced. Approximate area of ground disturbance was 25m x 15m. Remainder of 50m x 18m footprint was brushed (willows and alder) but not stripped – matting was used in soil storage locations. Coarse woody debris set on footprint and has been seeded.
- Still requires final cleanup when mat access is removed – survey lathe and some mat shards still on site.

**Dig 30C**

**KP387.29**

**Construction**

- Same access as for Dig 30B
- Repair of pipe complete, but historic contamination was found at this site (likely from 1957 according to TM files). Contaminated soil from excavation was removed and disposed of at Tervita facility. Additional soil testing underway. Trans Mountain Operations will take over site and install groundwater monitoring wells to aid in delineating extent of contamination and developing a remediation plan. Digsite excavation has been temporarily backfilled with 0.75” gravel crush. Uncontaminated topsoil is windrowed on south side and tarped to prevent wind and water erosion.

**Dig 31B**

**KP 401.47**

**Pre-construction**

- Access is along Decoigne west road to the RoW – matting of access is underway.
- One danger tree has been assessed along the access – an aspen with rotten trunk has fallen and is hung up in neighbour trees – potential for it to fall in wind event, so it will be dropped to ground.
- Digsite is near a low-lying area prone to flooding (wetland is found further west). TM/SLLP agreed to shift digsite east and narrowed to minimize tree removal within the digsite footprint and get further from wet area.
- Good moose habitat through whole area, found browse, pellets and wolf scat in area.

**Sleeve 21****KP 401.1****Pre-Construction**

- Majority of access along previously cleared pipeline RoW – will be matted.
- A few smaller tree adjacent to the pipe will need to be removed. Did not see any markings or features to indicate potential for CMT. Noted two trees approximately 20m north of pipeline had squares of bark recently removed. Confirmed these are Canadian Forest Service pine beetle survey locations from 2012.

**Decoigne Temporary Overbridge**

- 110ft steel span bridge was placed overtop of existing bridge on the Miette River at Decoigne to accommodate heavy construction load crossing.
- Bridge approaches are ramped gravel with lock-block wing walls and geo. Some of the geo at the north end of the ramps (>10 metres from watercourse) is coming loose and should be tightened up before any gravels spill over.
- Bridge deck is geo wrapped and kick plates installed to avoid sediment entering watercourse.

**April 20, 2021** | **Indigenous Monitor – Montana First Nation**

To start the day we met up at the Jasper compound. I.M's and Jasper Surveillance Officer discussed which areas we are going to be observing. The weather was sunny and mild great for both days of inspections.

The second day, two of the company I.M's were in attendance for the scheduled inspection. Throughout the two days we've looked at a number of sites.

Observed some post construction, pre construction, and reclamation sites also looked at a historical contaminated site which is where there is going to be wells installed to monitor the pipe which is good.

The pre-construction process of removing trees, it would be ideal and a key focus of less trees to be taken down. I like that Jasper Parks is tightly monitoring that process.

Post construction and reclamation stages looked at are seemingly of good nature and looking great. Housekeeping on the sites is okay

The inspection was good and well organized. I have no concerns and will be glad to work in future inspections

**April 20, 2021** | **Indigenous Monitor – Lac St. Anne Metis****Conifer and Unnamed Creek Crossing****KP 387**

- Wing walls in place
- Spill kits on site
- Staking in place

**Dig 30B****KP 386.925****Post Construction**

- Staking in place
- Post-construction
- Small footprint for dig site

**Dig 30C****KP387.29****Construction**

- Historical contaminated site
- Four monitoring wells in place
- A potential of 12 more monitoring wells to be installed
- Wetland located to the west
- Soil wrapped in geo-textile
- Matting in place up to site

**Dig 31B****KP 401.47****Pre-construction**

- Integrity dig
- Staking in place

**Sleeve 21****KP 401.1****Pre-Construction**

- Staking in place
- Pre-construction
- Signs of moose and elk in the area

Observations  
April 21, 2021

April 21,  
2021

JNP ESO

- IAMC - IMs meet with Trans Mountain IMs for connection and discussion.
- IMs, TM-IMs and ESO discuss plan for the day and safety considerations. TM-IMs accompany inspection for the day.

**Natural Hazard Remediation 357**

**KP357.035**

**Construction**

- Installation of rip-rap in dry creek bed to increase depth of cover over the pipeline. Occasional flows have scoured the creek bed and reduced pipeline cover.
- Workspace and access is matted. Access route has 3 groupings of birch trees adjacent – flagged and have not been disturbed.
- Isolation materials (metre bags, pumps) in place in the event creek starts flowing. Currently no water in the channel
- Placing rip-rap to tie in with natural upstream and downstream channel elevations and re-create thalweg to reduce scouring of the banks.
- Rip-rapped sections will be covered in natural channel material to help fill voids and blend with surroundings.
- Disturbed portion of west bank of creek (approx. 4m wide) has been stabilized with coco matting, seeded and staked with willows. East bank will be restored with same techniques. Coarse woody debris removed from channel for construction will be replaced.
- Pump generators and light stands within secondary containment. All have small spill kits attached.
- Large barrel spill kit on site.
- Designated smoking area and several fire extinguishers (inspections up to date) on site.
- Signage indicating refuelling area away from watercourse is in place.

**Sleeve 5**

**KP 357.06**

**Post-Construction**

- Adjacent to natural hazard remediation 357.
- Removal for pipeline sleeve and replacement with new section of pipe is recently complete.
- Access was matted through wetland area to the west – short duration and removed prior to thaw. Very little impact noted, no stripping or vegetation removal required. No mat shards, survey lathe or other construction materials found.
- Digsite is next to mature spruce forest with birch trees. No birch were removed or impacted.
- Site has been seeded and willow staking completed

**Vine Creek Natural Hazard Remediation**

**KP 351.32**

**Restoration**

- Recoating and rip rap of pipe was completed in October 2020.
- Creek still has ice overtop of work area, but the creek is flowing through and running clean downstream of work area.
- Upstream pump location and downstream discharge point blend into natural creek – can not see signs of erosion as a result of construction.
- Banks and high portion of creek bed have been willow staked.
- Environmentally sensitive area to the NW was flagged off during construction as a “no-go” area.
- Temporary overbridge on the Vine Creek bridge still in place and in good condition, well maintained.

## **Pocahontas valve removal**

**KP 336.3**

### **Construction**

- Removal of vault valve from flood zone that is highly prone to erosion and deposition. No clearly defined channel at this point – primarily overland flow that transports cobbles. A new valve will later be installed in upland area 3km east.
- Access to site has been matted to reduce potential for contact with knapweed.
- Valve has been cut out and crews currently installing lagging on pipe in preparation for backfill.
- Will complete backfill and use cobbles from creek overflow to recreate topography and channels in creek. Will not disturb any vegetated areas when re-contouring the ground.

## **Dig 9**

**KP332.039**

### **Construction**

- Open excavation with trench box to stabilize soft ditch walls. Hoarding for sandblasting in place.
- Subsoils and topsoils piled separately on geocloth to prevent mixing or sliding off matted areas.
- 2 x 3” pumps in place to manage greywater from the ditch, though only one needed to maintain low water volumes.
- Dewatering into dry upland site using large filter bag – no issues with erosion or sedimentation.
- Light stands and generator within secondary containment and barrel spill kit on site.

## **Sleeve 3**

**KP 331.847**

### **Post-Construction**

- Dig very recently completed.
- Bank restoration using coco-wrapped topsoil and log retainers. Banks seeded and staked with willow stakes salvaged from digsite.
- Base of creek has muddy substrate, very little waterflow in this area, so will continue to monitor for subsidence and efficient flows during spring melt when creek is not stagnant.
- Access matting through adjacent wetland is removed, all shards and debris cleaned up and veg raked out to remove compaction.

## **Dig 8**

**KP 331.688**

### **Post Construction**

- Dig very recently completed.
- Gravel ramp access off highway 16 removed and all debris cleaned up.
- Dig backfilled and topsoil replaced, coarse woody debris laid across site.
- Will require ongoing monitoring for vegetation regeneration.

April 21,  
2021

Indigenous Monitor – Montana First Nation

See comments above

TMEP Indigenous Monitors accompanied the inspection team for this day and there was discussion about whether there were any issues or concerns.

### **Natural Hazard Remediation 357**

#### **KP357.035**

##### **Construction**

- Watercourse crossing
- Spill kits on site
- Staking in place
- Drip tray under light plant
- Non-fishbearing stream
- Remediation in progress
- Clean and free of debris

### **Sleeve 5**

#### **KP 357.06**

##### **Post-Construction**

- Birch trees around the site kept undisturbed
- Shrub staking finished
- Seeding complete
- Free from garbage and debris

### **Vine Creek Natural Hazard Remediation**

#### **KP 351.32**

##### **Restoration**

- TMEP crews recoated the pipe
- Free of any garbage and debris
- Restoration complete

### **Pocahontas valve removal**

#### **KP 336.3**

##### **Construction**

- Matting in place
- Open excavation signs on fence
- Ladders staked at the top and tied off for safety
- Staking in place
- Spill containment under generator and heater
- Wooden lagging placed on pipe

### **Dig 9**

#### **KP332.039**

##### **Construction**

- Edge of wet land
- Dewatering with silt bag
- Open excavation with fencing and signage
- Spoil materials covered with geo-textile
- Wind sock present
- Spill containment under light plant

### **Sleeve 3**

#### **KP 331.847**

##### **Post-Construction**

- Coco-matting in place on both sides of creek
- Willow staking on both sides

- Restoration completed with monitoring to continue

**Dig 8**

**KP 331.688**

**Post Construction**

- Post-construction
- All signage and staking has been removed
- No waste materials or debris present
- Wet land

**Unresolved Issues / Observations**

There are no observations or issues that did not get resolved in the field or that otherwise need to be addressed through the Issues Management Process.

**Request**

Please provide us with a copy of any final inspection reports. We also look forward to an opportunity to debrief this inspection.

**Action Items**

Item No.	Date Identified	Issue to be Addressed	Action	TM Response
1.	April 20, 2021	Final cleanup at Dig 30B – mainly survey lathe and some mat shards to be pick up during mat removal.	Regular activity undertaken at all sites	TM will complete final clean up as they remove the mats and access and close the site.
2.	April 20, 2021	Squares of bark removed from beetle killed pine trees north of Sleeve 21	ESO to look into survey records.	ESO confirmed CFS Pine Beetle surveys conducted post-2012.