

## Operations Regulatory Compliance

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### Final Report - CV1920-175 - 13 January 2020

**Event Type**

Field  
Inspection

**CV Event Number**

CV1920-175

**Project Companies**

- Trans Mountain Pipeline ULC

**Name of the Operating Company**

Trans Mountain  
Pipeline ULC

**Rationale, Scope, and Additional Description**

Spread 1 - TMX Project. Safety oversight of construction activities - worker safety [- Assess compliance with the OPR (Safety Management Program), CLC requirements and construction safety manuals/project specific safety plans. - Contractor oversight, pipe handling, and hoisting and rigging

**Selected Province/Territory**

- Alberta

**Start Date**

2019-12-03

**End Date**

2019-12-06

**Inspection Officer Number**

- 2408
- 2648

**Selected Disciplines**

- Damage Prevention
- Safety Management
- IAMC Observation

**Tool Used:**

- Corrected Non-compliance (CNC) (1)
- Notice of Non-compliance (NNC) (1)
- Information Request (IR) (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 Act (NEBA) 2016-06-19
  - National Energy Board Onshore Pipeline Regulations (OPR)
  - National Energy Board Pipeline Damage Prevention Regulations – Authorizations
  - National Energy Board Pipeline Damage Prevention Regulations – Obligations for Pipeline Companies
- Canadian Energy Regulator Act (CERA)
  - Canadian Energy Regulator Act (CERA)
- Canada Labour Code (CLC)
  - Canada Labour Code (CLC)
- Standards
  - CSA Z662-19 - Oil and Gas Pipeline Systems
- Plans And Procedures
  - Project-specific plan or procedure
    - SAEG Site Specific Safety Plan
  - Project-specific plan or procedure
    - TMEP Health and Safety Management Plan

### **Selected Regulatory Instrument Numbers**

Not Selected

### **Facility Details**

#### **Facility Types**

Pipeline

- Pipeline
- Pipeline right of way (ROW)

#### **Life-cycle Phases**

- Construction

### **Additional Information**

#### **Selected Facilities**

- TRANS MOUNTAIN EXPANSION PROJECT (Pipeline)

### **Observations (No follow-up required)**

#### **General Safety- Spread 1**

##### **Date**

2019-12-05

##### **Discipline**

Safety

Management

##### **Categories**

- Workplace Exposures and Protections
  - Safeguarding
  - Personal Protective Equipment
  - Electrical Safety
  - Fire Protection
  - Labels and Documentation
  - Hazard Assessment

- Materials Handling
  - Mobile Cranes and Hoisting Equipment
  - Ropes, Chains and Slings
- Training and Competency
  - Training and Competency
- Temporary Structures
  - Signage

## Facility

- TRANS MOUNTAIN EXPANSION PROJECT

## Observations

- CER inspectors(CER), Indigenous Monitors(IM), and company staff participated in visitor safety orientation.
- Overall TMEP Spread 1 had approximately 200 workers on site at the time of the inspection.
- CER rental vehicle was washed by the CER and cleaned and documented by TMEP as part of their biosecurity plan.
- The ROW at all sites visited were free of garbage and debris. Good housekeeping apparent.
- CER and IMs participated in the daily TMEP inspector/construction progress meeting.
- TMEP stated that all its craft inspectors participated in inspection orientation and focused training for their specific job during the project.
- TMEP stated that had 47 different focused inspections and its inspectors were required to complete one focused inspection per week in addition to their daily inspection reports. CER reviewed a sampling of completed inspection reports for the following crafts:
  - Safety Inspector
  - Stringing
  - Field Bending
- CER observed that the company inspections reports included safety related observations.
- CER and IMs were informed that each specific field activity such as Stringing and Bending have a dedicated TMEP Inspector on site in addition to the contractors foreman for oversight.
- Whip-checks were observed in use as appropriate.
- All generators, compressors,etc observed were noted to be properly grounded.
- CER were told that all incidents are reported immediately verbally and then proper procedures are followed through the classification system for incident reporting

Throughout its Spread 1 inspection CER observed repeated demonstration of a Safety Culture as defined by the CER in its National Energy Board report on Advancing Safety in the Oil and Gas Industry - Statement on Safety Culture. Example of such demonstration were:

- At the leadership level, TMEP and SAEG demonstrated that safety is their overriding value and priority;
- Through observations and conversations with individuals at all levels, it was demonstrated that personnel involved in the work were aware of known hazards and were addressing new threats as conditions changed;
- Every employee the CER spoke with portrayed that they felt empowered and recognized for making safe decisions;
- The individuals that the CER spoke with indicated that they felt they would and could report safety hazards, including instances where they have committed an error and introduced a threat themselves;
- Observed individuals working safely regardless of whether or not someone is watching; and
- Learning from its own and others' experiences with the goal of advancing safety. CER and IMs observed the organization take immediate action for two potential hazards. Further demonstrations were the companies willingness to consider and act on questions from the CER.

## Tool Used

No  
Tool Used

## Pipe Yard Loading of truck and Stringing

### Date

2019-12-05

### Discipline

Safety

Management

### Categories

- Workplace Exposures and Protections
  - Safeguarding
  - Hazard Assessment
- Materials Handling
  - Mobile Cranes and Hoisting Equipment
  - Ropes, Chains and Slings

### Facility

- TRANS MOUNTAIN EXPANSION PROJECT

### Observations

Pipe yard:

- CER inspectors(CER), Indigenous Monitor(IM), and TMEP staff participated in the toolbox talk and signed on to the FLHA for the activities at this location.
- Observed a truck being loaded with 5 sections of pipe. The pipe was loaded using a deckhand.
- Discussed operating practices, the use of spotters, inspection of the load securement straps prior to use, the use of bar to tighten the straps, and requirements for completing the daily log with the Manager of the pipe yard. The CER subsequently observed the aforementioned actions take place in the manner described.
- Observed the pipe being covered with tarps for transportation to the RoW.
- Were told that the same crew is used for both loading of the pipe at the pipe yard and stringing on the RoW.

Stringing near KP46:

- CER, IM, and TMEP staff participated in the toolbox talk and signed on to the FLHA for the activities at this location.
- Were told that the bungee cords used to secure the tarps were removed in such a manner that it would release away from their body; Observed the crew unhook the bungee cords in the manner that was described.
- Observed the crew fold the tarp for transport prior and reuse for the next load rather than bunch it up.
- Observed the crew inspect each tie down strap as it was being rolled up after being removed from the load.
- Observed the deckhand mounted on an excavator remove pipe from the transport truck and place the pipe on the cribbing.
- Observed oilers direct both the pipe truck and the deck hand.

### Tool Used

No Tool Used

**Bending****Date**

2019-12-04

**Discipline**

Safety

Management

**Categories**

- Workplace Exposures and Protections
  - Safeguarding
  - Electrical Safety
  - Hazard Assessment

**Facility**

- TRANS MOUNTAIN EXPANSION PROJECT

**Observations**

- CER inspectors(CER), Indigenous Monitors(IM), and TMEP staff participated in the toolbox talk and signed on to the FLHA for the activities at the bending prep location.
- Observed that the 'hot TGPU line' paralleling the TMEP construction was located and marked with yellow stakes and the edge of the ground disturbance was marked by pink survey stakes. In addition, Rig mats were used over the hot line crossing and hot line signage was present.
- CER reviewed the side boom operator's daily log book
- CER and IMs reviewed ground disturbance permits and locates at this location.
- Observed all electrical line crossings to have goal posts in place and signage warning with the voltage indicated located at the point of electrical line crossing.
- Crew explained the bending activities and equipment to the CER and IMs.

**Tool Used**

No Tool Used

**Spread 1 of the Trans Mountain Expansion Project (TEMP) - IAMC General Observations****Date**

2019-12-05

**Discipline**

IAMC

Observation

**Categories**

- General
  - General

**Facility**

- TRANS MOUNTAIN EXPANSION PROJECT

**Observations**

Opening Meeting at Best Western Hotel, Sherwood Park.

- Introductions between Trans Mountain Safety personal and CER Inspectors/ IAMC-TMX Indigenous Monitors
- Safety reports from different inspectors were observed, Daily Tailgate meeting, FLHA's, JSA's were also observed and talked about, this was very interesting to me, I take safety very seriously.
- A few other topics were discussed, drivers Safety, pipe handling, pipe hauling and other hazards etc.

Right of Way Inspection

- Washing the vehicles before going out on to the RoW, Great practice to be followed so early before construction. Learning the 3 levels of Biosecurity
- Wash station were setup at various locations along the RoW, these wash stations clean the machine before the machine comes on site and before the machine leaves site, Bio Security measures are taken very serious on this project.
- At Enoch Laydown yard we observed how the pipe was loaded on to the pipe truck and wrapped before it went out to the RoW. At the yard Trans Mountain had a meeting with local Emergency Response personal, RCMP and Medical Response.
- Pipe handling on the RoW was observed, got to see a stringing crew and how they work together, them they mentioned that they have been working together for 8 plus years.
- Grade crew was working on the RoW. Did not get to see the Super Dozer, that would have been very interesting to see. We saw on the RoW a giant mulcher that digs up the dirt and makes the material fine and easier for clean up.
- Traditional Land Use site 1a and 1b, stopped by these sites to see if they marked the sites with proper signage as Trans Mountain said they would, went out to clarify this and I was happy with what I seen. Was able to meet up with Trans Mountain Indigenous Monitor at the morning safety meeting, he mentioned a few things that they were doing and I found it great that they shared it with us.

#### **Tool Used**

No

Tool Used

## **Compliance Summary**

### **Cleaning Stations**

#### **Date**

2019-12-05

#### **Discipline**

Safety Management

#### **Categories**

- Workplace Exposures and Protections
  - Safeguarding
  - Personal Protective Equipment
  - Limits of Exposure
  - Hazard Assessment

#### **Facility**

#### **Observations**

Two cleaning stations were observed close to KP36.3 and KP46.6 which included a bay for rough cleaning, a catch basin that is emptied nightly that has double containment, electric chisels, and air compressor with a wand for the purpose of equipment cleaning. During the inspection, the cleaning stations were active, as soil stripping activities were ongoing on the RoW. At the cleaning station close to KP46.6 the CER observed staff not wearing their face shield as intended during the pressure washing. CER and Indigenous Monitors were told that double protection was required to be worn during washing activities. This requirement was also written on the FLHA signed by workers and visitors. Due to issues with the face shield fogging up, the Forman was addressing the issue by replacing the plastic face shields with mesh face shields.

### **Tool Used**

Corrected  
Non-compliance (CNC)

### **Legislative Requirement**

National  
Energy Board Onshore Pipeline Regulations (OPR)

### **Sections Of The Act**

#### **National Energy Board Onshore Pipeline Regulations (OPR)**

##### 6.5 Management System Processes

(1) A company shall, as part of its management system and the programs referred to in section 55,

✓ (k) establish and implement a process for verifying that employees and other persons working with or on behalf of the company are trained and competent and for supervising them to ensure that they perform their duties in a manner that is safe, ensures the security of the pipeline and protects the environment;

##### 18. Construction Safety

(1) If a company contracts for the provision of services in respect of the construction of a pipeline, the company shall

✓ (b.1) inform the contractor of the contractor's responsibilities referred to in paragraph 6.5(1)(l);

### **Company Action Required**

Provide the workers with mesh face shields.

### **Due Date**

2019-12-05

## **Overhead Powerlines**

### **Date**

2019-12-05

### **Discipline**

Safety  
Management

### **Categories**

- Workplace Exposures and Protections
  - Safeguarding
  - Electrical Safety

### **Facility**

- TRANS MOUNTAIN EXPANSION PROJECT

### Observations

CER Inspectors and Indigenous Monitors observed the following:

- Truck moving a heavy equipment load was unable to pass under the energized line marker as the equipment would catch the marker line;
- The truck stopped and the spotter climbed on the equipment and lifted the line as the truck pulled forward enough for the load to clear the line;
- The truck and load once cleared, drove away without incident;
- SAEG confirmed that the energized line marker had not recently been inspected to ensure they were at a safe approach distance; and
- SAEG advised the CER that any contact with the energized line marker or goal posts were considered to an incident.
- While onsite, SAEG immediately took action and the CER and IMs observed surveyors measuring and securing the goal posts at the crossing. The CER were told that all Overhead powerline markers were being measured to ensure the recommended safe approach distances were accurate.

### Tool Used

Notice  
of Non-compliance (NNC)

### Legislative Requirement

National  
Energy Board Onshore Pipeline Regulations (OPR)

### Sections Of The Act

#### National Energy Board Onshore Pipeline Regulations (OPR)

##### 6.5 Management System Processes

(1) A company shall, as part of its management system and the programs referred to in section 55,

- ✓ (k) establish and implement a process for verifying that employees and other persons working with or on behalf of the company are trained and competent and for supervising them to ensure that they perform their duties in a manner that is safe, ensures the security of the pipeline and protects the environment;

##### 18. Construction Safety

(1) If a company contracts for the provision of services in respect of the construction of a pipeline, the company shall

- ✓ (b.1) inform the contractor of the contractor's responsibilities referred to in paragraph 6.5(1)(l);

### Company Action Required

- While onsite on 5 December 2019, SAEG immediately took action and the CER and IMs observed surveyors measuring and securing the goal posts at the crossing. The CER were told that all Overhead powerline markers were being measured to ensure the recommended safe approach distances were accurate.
- CER inspector spoke with TMEP on 20 December 2019 and was told the following actions took place between 5-6 December 2019:
  - A height assessment of all equipment was done by SAEG;
  - All overhead power line crossing goal posts were inspected and measured;
  - All overhead power line crossing signs were update to add the height of the safe approach goal posts listed on them;
  - A safety advisory was shared with all staff outlining the occurrence and measure to be taken going forward. Specifically:
    - That all equipment operators who are required to cross under the lines are aware of the height of their loads and the height restrictions of the overhead powerline prior to attempting to cross;



- Have spotters to verify the safe passage;
  - No persons, with the exception of the utility crew, are permitted to make any contact with any part of the goal post;
  - Should a piece of equipment be unable to safely cross under the goal posts, the operator must immediately stop and contact the 'utility crew' for assistance.
- The overhead powerline procedure was updated to reflect these changes; and
  - This event and overhead power lines was the main theme during the 6 December 2019 weekly safety meeting.
- TMEP will provide a written statement(email) by 17 January 2020 to the CER as verification of the aforementioned actions taken.

**Due Date**

2020-01-17

**Hand-Arm Vibration****Date**

2019-12-05

**Discipline**

Safety

Management

**Categories**

- Workplace Exposures and Protections
  - Safeguarding
  - Personal Protective Equipment
  - Limits of Exposure
  - Hazard Assessment

**Facility**

- TRANS MOUNTAIN EXPANSION PROJECT

**Observations**

CER observed crews at the cleaning stations use electric chisels and pressure washing equipment to clean the heavy equipment. The CER were told that gloves designed for vibration were available for those who choose to wear them, however, it was at the workers discretion. SAEG advised that it would conduct an assessment to determine if additional controls need to be put in place to ensure the health and safety of the workers.

**Tool Used**

Information Request (IR)

**Legislative Requirement**

National Energy Board Onshore Pipeline Regulations (OPR)

**Sections Of The Act****National Energy Board Onshore Pipeline Regulations (OPR)**

## 18. Construction Safety

(1) If a company contracts for the provision of services in respect of the construction of a pipeline, the company shall

✓ (c) take all reasonable steps to ensure that construction activities are conducted in accordance with the manual developed under section 20;  
and

**Company Action Required**

Conduct an assessment to determine if additional controls need to be put in place to ensure the health and safety of the workers.

**Due Date**

2020-02-19