Canada Energy Regulator | Régie de l'énergie du Canada

Canada

Operations Regulatory Compliance

Closed Report - CV1920-176 - 22 May 2020

Event Type
Field
Inspection

CV Event Number
CV1920-176

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), and construction safety manuals/project specific safety plans. - Contractor oversight, pipe handling, trenching, and hoisting and rigging

Selected Province/Territory

- Alberta

Start Date
2020-03-10

End Date
2020-03-11

Inspection Officer Number

- 2408
- 2808T
- 2646

Selected Disciplines

- Safety Management
- IAMC Observation

Tool Used:

- Notice of Non-compliance (NNC) (3)
- Information Request (IR) (1)

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)

- Standards
  - CSA Z662-19 - Oil and Gas Pipeline Systems

- Plans And Procedures
  - Project-specific Contractor/Project Safety Plan (CSP)
    - TMEP Health and Safety Management Plan
  - Project-specific plan or procedure
    - SAEG Site Specific Safety 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

Date
2020-03-11
Discipline
Safety
Management
Categories

- Workplace Exposures and Protections
  - Safeguarding
  - Personal Protective Equipment
  - 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 650 workers on site at the time of the inspection.
- CER rental vehicle was 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.
- TMEP stated that all its craft inspectors participated in inspection orientation and focused training for their specific job during the project.
- TMEP stated that 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.
- CER observed that the company inspections reports included safety related observations.
- CER and IMs were informed that each specific field activity such as welding had a dedicated TMEP Inspector on site in addition to the contractors foreman for oversight.
- Extensive use of rig mats on traveled surfaces.
- ROW and travel areas were marked.
- Overhead powerline crossings were well marked with signage that included the voltage and safe approach distance for the goal posts.
- TMEP staff and contractors were forthcoming in their willingness to converse with inspection staff.
- TMEP project manager joined morning meeting on Wednesday, March 11th demonstrating engaged leadership.
- Vast variation in the quality of TMEP Inspector FLRA was observed. TMEP recognized the variance and agreed coaching efforts are warranted.
- A contractor was observed working without an appropriate high visibility vest. The worker was advised and donned the PPE.
- Drilling Contractor at Wedgewood HDD site provided CER Inspection team with a thorough orientation and description of the work process.
- CER observed backfilling activities and the placement of yellow tape to alert future ground disturbers of the presence of the pipe.
- Hydrovac:
    - Appropriate signage was in place for hydrovac activities to notify of approach limits and hearing protection.
    - The CER were told that grounding and bonding were not required in the location visited as the lines being exposed were fiber optic only.
    - The CER were told that the wand pressure was below 1800psi and the water temp was below 65 degree Celsius.
    - Biosecurity measures were in place and recorded for each person entering and leaving the work area.

- 50th St HDD - site appeared well-organized to address lack of space between workers and heavy equipment. Sound shielding was erected given the sites close proximity to residential housing. Sound monitoring measurements were to be confirmed during casing installation. Welding staff were wearing appropriate PPE; oversight of the work from TMEP appeared adequate.

Tool Used
No
Tool Used

Compliance Summary

NNC #1 Incident Investigation

Date
2020-03-11
Discipline
Safety
Management
Categories

- Workplace Exposures and Protections
  - Safeguarding

Facility

- TRANS MOUNTAIN EXPANSION PROJECT

Observations
CER inspectors reviewed three incidents with TMEP representatives. Incident investigation details were captured on TMEP Contractor Incident Report Forms. Section 10, 11 and 12 of the TMEP Contractor Incident Report Form require acknowledgment that TMEP safety management have reviewed the contractor investigation for quality and completeness as well as the adequacy of corrective actions. On all three incident reviewed TMEP had failed to complete sections 10, 11 or 12.

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,

✓ (r) establish and implement a process for the internal reporting of hazards, potential hazards, incidents and near-misses and for taking corrective and preventive actions, including the steps to manage imminent hazards;

Company Action Required
Provide a plan to ensure TMEP's commitment to assure the quality of contract incident reports and investigations and verify the adequacy of corrective actions.

Due Date
2020-04-30

NNC #2 Excavation

Date
2020-03-11
Discipline
Safety
Management
Categories

- Workplace Exposures and Protections
  - Safeguarding

Facility

- TRANS MOUNTAIN EXPANSION PROJECT

Observations
SF28 Excavation Shoring and Slope:

- CER inspectors were told that the bell hole at site location (KP) 30+ 490 had experienced a cave-in on it NE wall on 29 Feb 2020. The CER were also told that the root cause was due to the fact that the soil had been disturbed within the last two years.
- Company representatives told the CER that improvements to the 'SEEG Excavation Checklist' were made a few days prior to the CER inspection and that all SAEG staff were put through a refresher training with respect to excavations and the checklist that concluded the day prior to the CER inspection.
- While on site the CER reviewed the 'Excavation Checklist' that had entries dating back to 28 Feb 2020. The CER noted that as of 11 March 2020 the soil classification on the checklist for the location was still stated as 'Hard, Compact' even though the forms' soil characteristic chart states Hard or compact soil does not include soil that has previously been excavated.
- The CER were told that SAEG were deemed competent to assess the soil conditions for the excavations as they had taken the Ground Disturbance training. The CER were also told that as an engineer was assigned to the project, however, had not evaluated the soil conditions for all excavations.
- The CER reviewed an excavation checklist at SF 25 and noted that it too was classified as hard compact and even though the excavation was adjacent to buried utilities.

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,

✓ (c) establish and implement a process for identifying and analyzing all hazards and potential hazards;

✓ (e) establish and implement a process for evaluating and managing the risks associated with the identified hazards, including the risks related to normal and abnormal operating conditions;

✓ (f) establish and implement a process for developing and implementing controls to prevent, manage and mitigate the identified hazards and the risks and for communicating those controls to anyone who is exposed to the risks;
✓ (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;

Company Action Required

The company is to ensure that measures are in place to meet its obligations at 6.5..1 (c)(e)(f) and (k) with respect to:

- the identification of hazards and potential hazards;
- the evaluation and management of the risks associated with the identified hazards;
- the implementation of controls to prevent, manage and mitigate the identified hazards and the risks and for communicating those controls to anyone who is exposed to the risks; and
- supervising employees and other persons working with or on behalf of the company them to ensure that they perform their duties in a manner that is safe.

Due Date
2020-04-30

NNC # 3 Pipe cutting

Date
2020-03-11
Discipline
Safety
Management
Categories

- Workplace Exposures and Protections
  - Safeguarding
  - Personal Protective Equipment
  - Hazard Assessment

Facility

- TRANS MOUNTAIN EXPANSION PROJECT

Observations

- The FLHA did not mention cutting or address any of the associated hazards.
- The CER observed the pipe being cut without the coating removed and the workers putting their faces in the path of the fume. The CER reviewed the SWP Welding/Cutting as referenced at the bottom of the Tie In JHA which states the removal of "coating on metal which could emit harmful contaminants (such as lead, chromium, organic materials, or toxic combustion products) from the base metal, whenever practicable, before welding or cutting begins". The CER also note that the SWP is silent on the potential hazards from exposure to the base metal as it reacts with elevated temperatures during cutting and welding. For example, the base metal specifications indicate that it contains chromium and manganese.

- The CER were told that, double eye protection was required, respirators should be used, and workers should tilt their head 45 degrees to avoid the fumes. The CER did not observed any of these controls being implemented. The CER note that the SWP states "Respiratory protective equipment must be provided and worn if an effective means of natural, mechanical or local exhaust ventilation is not practicable (a) during short duration welding, burning or similar operations, and (b) during emergency work." And "Ensure that adequate ventilation is supported since hazardous fumes can be created during welding and cutting"
- The CER has reviewed the Tie-In JHA and noted that it is silent on the following with respect to hazards and controls for cutting and welding:
    - It does not address fumes produced during the cutting process;
    - respirators are not mentioned as potential PPE;
    - ventilation while cutting in the excavation or in open air are not discussed;
    - removal of the coating prior to cutting; and
    - No mention of hearing protection during cutting and welding activities.

The CER has the expectation that the company has adequate and effective oversight of its contractors.

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,

✓ (c) establish and implement a process for identifying and analyzing all hazards and potential hazards;

✓ (e) establish and implement a process for evaluating and managing the risks associated with the identified hazards, including the risks related to normal and abnormal operating conditions;

✓ (f) establish and implement a process for developing and implementing controls to prevent, manage and mitigate the identified hazards and the risks and for communicating those controls to anyone who is exposed to the risks;

✓ (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;

Company Action Required
The company is to ensure that measures are in place to meet its obligations at 6.5..1 (c)(e)(f) and (k) with respect to:

- the identification of hazards and potential hazards;
- the evaluation and management of the risks associated with the identified hazards;
- the implementation of controls to prevent, manage and mitigate the identified hazards and the risks and for communicating those controls to anyone who is exposed to the risks; and
- supervising employees and other persons working with or on behalf of the company them to ensure that they perform their duties in a manner that is safe.

Due Date
2020-04-30

IR # 1

Date
2020-03-11
Discipline
Safety
Management
Categories

- Workplace Exposures and Protections
  - Safeguarding
- Materials Handling
  - Mobile Cranes and Hoisting Equipment
- Training and Competency
  - Training and Competency

Facility

- TRANS MOUNTAIN EXPANSION PROJECT

Observations
Please provide the following documentation to support the inspection:

- SDS - coating materials
- SDS - filler metal for welding
- SDS - base metal pipe
- Base metal specification sheet from manufacturer that detail the make up of the base metal
- TMPU and SAEG welding JSAs for mainline welding, tie-in and back welding
- CHRR and UHRR
- TMPU onboarding requirements and training requirements for its craft inspectors
- Incident management procedure and process
- TLU Photo taken by TMEP IM of the signage and fencing mitigation that was shown to the IAMC monitors during their conversation with the TMEP IM and TMEP Environment Lead on Mar 11.
- Verify training requirement and completion records (if applicable) for Crew Leads and Crew Members as per Triton Safe Work Practice 020: Ice Rescue Technician (NFPA 19.3.1 -19.3.2)
- Provide the noise level readings with respect to the HDD sites, in particular, the noise level impact on the adjacent homes and community in close proximity to the HDD rigs.
- Provide the applicable standard, JSA, procedures, and forms to be completed with respect to hoisting and rigging.

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)
6.5 Management System Processes

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

✓ (l) establish and implement a process for making employees and other persons working with or on behalf of the company aware of their responsibilities in relation to the processes and procedures required by this section;

Company Action Required

- Due COB Tuesday Mar 17:
  - SDS for coating materials
  - SDS filler metal for welding
  - SDS base metal pipe
  - Base metal specification sheet from manufacturer that details the make up of the base metal
  - TMPU and SAEG welding JSAs for mainline welding, tie-in and back welding
  - CHRR and UHRR
  - TMPU onboarding requirements and training requirements for its craft inspectors
  - Incident management procedure and process
  - TLU Photo taken by TMEP IM of the signage and fencing mitigation that was shown to the IAMC monitors during their conversation with the TMEP IM and TMEP Environment Lead on Mar 11.

- Due COD Wed Mar 18:
  - Verify training requirement and completion records (if applicable) for Crew Leads and Crew Members as per Triton Safe Work Practice 020: Ice Rescue Technician (NFPA 19.3.1 -19.3.2)
  - Provide the noise level readings with respect to the HDD sites, in particular, the noise level impact on the adjacent homes and community in close proximity to the HDD rigs.
  - Provide the applicable standard, JSA, procedures, and forms to be completed with respect to hoisting and rigging.

Due Date
2020-03-18