Canada Energy Regulator | Régie de l'énergie du Canada

Canada

Operations Regulatory Compliance

Final Report - CV1920-158 - 25 March 2020

Event Type
Field
Inspection

CV Event Number
CV1920-158

Selected Related Events

- OM2017-532
- CV1920-181
- CV1920-491
- CV1920-472

Project Companies

- Trans Mountain Pipeline ULC

Name of the Operating Company
Trans Mountain
Pipeline ULC

Rationale, Scope, and Additional Description
Environmental protection inspection of operations and maintenance (O&M) activities on the Trans Mountain mainline in Jasper National Park, Alberta. The purpose of this inspection was to verify compliance to mitigation measures, commitments, and other information associated with various plans and procedures submitted by the company. Areas of interest included, but were not limited to the following: erosion and sediment control measures, soil handling, equipment cleaning, site access, waste management, rare plant mitigation, secondary containment, and water management. The segment of NPS 24 pipeline undergoing O&M activities was deactivated in 2008 when the Anchor Loop pipeline project was completed. At the time of deactivation, oil was extracted from the pipeline and it was filled with inert nitrogen gas. Work activities observed included preparation for a pipe replacement at the Snaring River crossing and various integrity work locations. This inspection was conducted in conjunction with Indigenous Monitors representing the Indigenous Advisory Monitoring Committee, whose independent observations are included within this report.

Selected Province/Territory

- Alberta

Start Date
2020-02-24

End Date
2020-02-28

Inspection Officer Number

- 2507
- 1680

Selected Disciplines

- Environmental Protection
- IAMC Observation

Tool Used:

- Information Request (IR) (4)
- Corrected Non-compliance (CNC) (1)
- Notice of Non-compliance (NNC) (1)

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 Contractor/Project Safety Plan (CSP)
    - Project-Specific Safety Plan for the Reactivation Project (Jan. 13 2020, Rev. 5)
  - Project-specific Environmental Protection Plan (EPP)
    - Environmental Protection Plan for the Trans Mountain Pipeline ULC Pipeline Reactivation Program (Aug. 14 2017, Rev. 2)
  - Project-specific plan or procedure
    - Site-Specific Environmental Protection Plan (Feb. 18 2020, Rev. 1), Water Crossing Execution Plan (Feb. 18 2020), and Planting Plan (Feb. 13 2020) for KP 360.1 - Snaring River Crossing Replacement, RMLBV & Hydrotest
  - Project-specific plan or procedure
    - Safe Work Practice for Electrofishing (Feb. 2019) and Working On and Around Ice (Dec. 2019)
  - Project-specific plan or procedure
    - Trans Mountain's Asbestos Management Procedures (Mar. 27 2017, Rev. 4.2)
  - Project-specific plan or procedure
    - Environmental Management Plan for the Trans Mountain Reactivation Project Jasper National Park Integrity Works (KP 331.69-KP 403.64) (Oct. 2019)
  - Project-specific plan or procedure
    - Environmental Management Plan for the Trans Mountain Reactivation Project Natural Hazard Remediation in Jasper National Park (Aug. 11 2017)

Selected Regulatory Instrument Numbers

- OC-2

Facility Details

Facility Types

Pipeline

- Pipeline

Life-cycle Phases

- Construction

Additional Information

Selected Facilities

- Mainline (Pipeline)

Observations (No follow-up required)

Day #1 - 25 February 2020

Date
2020-02-25
Discipline
Environmental Protection
Categories

- Soils and Soil Productivity
  - Erosion Control
  - Soil Handling
  - Soil Integrity
- Surface Water Management
  - Containment and Drainage Structures
- Water Bodies - Fish-bearing
  - Temporary Access Structures
  - Sedimentation/Turbidity
  - Disturbance
  - Chemical Spills/Releases
- Housekeeping
  - Waste Management
  - Temporary Structures
- Socio-economic
  - Navigation and Navigation Safety

Facility

- Mainline

Observations

- Entered the worksite via the south access road that has been covered with wooden matting underlain with geotextile. The access was closed to vehicles, workers parked along the road and walked in.
- Access road crosses through a campground (not currently operational).
- A passenger bus was on site to transport people between the road and work site.
- Signage was in place at the entrance indicating the requirement for use of two-way radio.
- Participated in a safety orientation for the site.
- Workers were hydrovacing the NPS 24 pipeline on the island between the side channel and river.
- Root balls were being salvaged, and the rare plant seed bed was being stripped for storage and future replacement.
- In the process of building a berm to contain wet material from the isolation.

- Workers were setting up bypass pumps for the side channel isolation.
- Observed a generator on site with secondary containment built from poly sheeting and plywood. Company representatives could not immediately confirm if the containment was built to hold 110% of the volume of the generator. Please refer to the observation titled 'Information Request (IR) No. 1'.
- Noted that the work site was generally tidy, secondary containment was in place on each piece of stationary equipment, each vehicle had a drip tray under the engine, waste materials were stacked, and hazardous waste was placed in containment.
- Mud plugs to be used for vapour isolation placed within secondary containment.
- New pipe section placed under plastic hording to allow the concrete coating to cure, end caps were welded on in preparation for installation in the Snaring River. The pipe was located well beyond the 30 m required distance from the water bodies. Discussed that the pipe would be placed on rollers when being installed in the trench.
- Three pieces of equipment were checked for a cleaning sticker, fire extinguisher and spill response materials, all were found to be in compliance:
  # 5472 sideboom tractor;
  #TRT04 rock truck; and
  #67176 250G excavator.
- Riparian and upland topsoil stripped from work area, covered with geotextile and labelled in separate piles, and snow was piled separately. Company representatives indicated that they had attempted to salvage sod but the ground conditions were too frozen.
- Checked the contents of one of the hydrocarbon spill barrels, and observed that barrels were placed at each channel of the Snaring River along with signage at the bridge entrances. No fueling within 100 m signage was also observed.
- Sediment fencing was placed around riparian buffer zones at the side channel and river.
- Sediment fences at the side channel and main stem bridge abutments did not meet procedure or specification. Please refer to the observation titled 'Corrected Non-Compliance'.
- Navigable waters signs erected both up and downstream of each channel.

Tool Used
No
Tool Used

Day #2 - 26 February 2020

Date
2020-02-26
Discipline
Environmental Protection
Categories

- Soils and Soil Productivity
  - Erosion Control
  - Soil Handling
  - Soil Integrity
- Surface Water Management
  - Containment and Drainage Structures
- Water Bodies - Non-Fish-bearing
  - Temporary Access Structures
  - Chemical Spills/Releases
  - Sedimentation/Turbidity
- Water Bodies - Fish-bearing

    - Temporary Access Structures
    - Sedimentation/Turbidity
    - Chemical Spills/Releases

- Housekeeping
    - Waste Management
    - Temporary Structures

Facility

- Mainline

Observations
Dig Site #24

- Participated in site specific safety orientation.
- Observed a large generator placed within secondary containment consisting of poly sheeting, with a drip try placed directly underneath the equipment. One corner of the containment was not adequately constructed in the event of a spill. Please refer to the observation titled 'Notice of Non-Compliance'.
- Access to the site was matted with geotextile underlay.
- Ditch line had been excavated and pipeline exposed to conduct integrity assessment work.
- Fuel container and fire extinguisher were placed in secondary containment.
- Grey water disposal area located away from the work area in a forested location. Geo-matting and woven geotextile in place to prevent erosion, and non-woven geotextile sediment bags being used to capture sediment from the ditch water. The site had been selected by the TM Environmental Inspector, and approved by the Parks Canada Environmental Surveillance Officer to ensure no sensitive resources would be impacted.

Dig Site #25

- Small area over the pipe had been stripped of topsoil and subsoil by hand. Soil materials have been labelled, and the subsoil was stockpiled on topsoil with a geotextile barrier to prevent mixing. A rig mat was placed over the hole and the excavation area was fenced off and signed.
- Some trees in the adjacent area have been cut and stacked in preparation for burning as part of the Parks Canada fire smart management program.

Dig Site #26

- Matting for access in place, and fencing to prevent people and wildlife from falling into the excavation in place. Workers were observed shoveling wooden shards off of the mats to keep them clean.
- Sandblasting was in progress and warning signage in place.
- Topsoil and subsoil piles marked, and geotextile material over topsoil to prevent erosion.
- Pipe ditch dry and access and egress in place.

Sleeve #10

- Hydrovac is being used to expose the pipe rather than the airvac as specified in the plan as the ground is too frozen to cut with the air system. Signage warning of hydrovacing activity in place.

Access over Unnamed Creek

- The bridge over the frozen creek was constructed with stacked rig mats and had a constructed splash guard to prevent soil material from entering the bed and banks of the creek.
- There were two spill materials barrels at either end of the bridge, looked inside one barrel and observed that it was full.

Dig Site #27

- Snow removed and in progress of pumping water from the location where the hydrovac will expose the pipe.
- 3” water pump placed in secondary containment.

Caledonia Creek Bridge

- With Parks Canada approval, TM moved the location for the access bridge to a location that would reduce the environmental impact to the riparian vegetation.
- A 60’ span bridge in place, creek name signs were on the bridge and splash guards have been constructed out of plywood and geotextile, and two barrels with spill response materials were observed on site.
- Used rig mats for bridge approaches piled to incline.
- No ground disturbance in the riparian area, vegetation was pushed down with the matting to facilitate re-growth in the spring, and only trees and shrubs greater than 2” have been cut.
- Willow was salvaged and protected with tarping for use during reclamation of the bridge site. Observed workers burying willow stakes in the snow and covering with a tarp.

Sleeve #11

- Work site delineated by survey markings, brush cut.
- Observed topsoil being stripped and stockpiled.
- Wooden ramp over Line 1 for equipment access.

Sleeve #12

- Hydrovac in process to expose Line 1 and large rocks were being mechanically moved out of the work area to prepare for excavation.
- The “No Fueling within 100 m” signs were up for Caledonia Creek.

Dig Site #28

- Chainsaw, fuel and oil placed in secondary containment.
- Four portable toilets located 100 m away from Caledonia Creek were well maintained.
- Company representatives stated that a hydrovac truck will be onsite in the next few days to expose Line 1.

KP 382.2 Habitat Trees

- Located on the edge of the area cleared area from installation of Line 2, two habitat trees have been flagged for conservation. They were located away from the work dig sites and considered low risk for worker safety.
- The worker responsible for assessing hazard trees explained the value of conserving the trees, how they assessed the hazard and how the risk is being managed.

Sleeve 8

- A worker offered hearing protection to all inspection participants upon arrival on site.
- Topsoil stripped, separated from the subsoil, tarped for erosion and signed.
- Subsoil and boulders stockpiled, and safety fencing in place to keep the public and wildlife out of the work site.
- Observed drilling into Line 1 and air quality testing to confirm safety exposure for workers on site in preparation for cutting out a section of the pipe.
- A generator on site was placed in secondary containment.
- Matting was placed between the road and the excavation.

Tool Used
No
Tool Used

Day #3 - 27 February 2020

Date
2020-02-27
Discipline
Environmental Protection
Categories

- Soils and Soil Productivity
  - Erosion Control
  - Soil Handling
  - Biosecurity
  - Soil Integrity
- Surface Water Management
  - Containment and Drainage Structures
  - Surface Water Management Plan
- Water Bodies - Fish-bearing
  - Temporary Access Structures
  - Sedimentation/Turbidity
  - Destruction/Loss of Habitat
  - Reclamation
  - Disturbance
  - Chemical Spills/Releases
- Wildlife
  - Disturbance
- Vegetation
  - Vegetation Control
  - Vegetation Reclamation
  - Access Control
  - Destruction of Vegetation
- Housekeeping
  - Waste Management
  - Temporary Structures

Facility

- Mainline

Observations
Planting Plan Meeting
During a meeting with Trans Mountain representatives, the following was discussed regarding the Planting Plan:

- Sod salvage will not be implemented in frozen ground conditions as prescribed in the site-specific plan.
- Wooden matting has been installed on the travel and work portions of the O&M activity sites to protect sod and topsoil.
- For topsoil stripping has been conducted using excavator buckets and a piece of equipment called a MeriCrusher.
- The MeriCrusher mulches the frozen topsoil so that it can be stripped and stockpiled. This may have an impact on the structure of the topsoil and should be monitored during reclamation.

- Reclamation will be completed by the contractor: seeding, willow staking, rootball planting and rock armour with the Environmental Inspector and Environmental Aquatic Specialist onsite to ensure results conform to the plan.
- Restoration activities will be conducted by the Trans Mountain Reclamation Team to meet the management objectives and desired end results specified in the Reactivation EPP.
- The Planting Plan has been vetted by technical specialists employed by Trans Mountain.
- Parks Canada Jasper National Park (JNP) has approved the seed mix that will be used on the upland areas and will be obtained from Pick Seeds. One of the seed types may not be available, and if not, approval will be obtained from JNP Parks Canada for an alternate.
- Tree seedlings for upland areas will be sourced by TM and planted by the Reclamation Team.
- Upland plantings will replicate pre-disturbance and eco-zones, and there will be course woody debris and wildlife barriers installed and/or replaced.
- All habitat trees will be retained if possible, eco-islands will be restored and habitat edge re-established.

Snaring River Pipe Replacement

- On the north access into the river, equipment for conducting the installation of the new pipe at the river crossing was stockpiled off of the wooden matting that delineates the footprint of the Parks Canada Authorization for the work activities, including mega bags, pump cages, and pallets of materials. The Parks Canada Environmental Surveillance Officer (ESO) directed the company to remove from the exposed ground and move to a matted location. The CER Inspection Officers (IOs) observed the contractor moving the gravel mega bags onto wooden mats.
- Snow, topsoil and subsoil were stripped and stockpiled separately, and topsoil was covered with geotextile fabric. Observed one pile of grade material placed on geotextile barrier on top of topsoil.
- Pump around system was in the process of being set-up for both the side channel and mainstem – hose and piping for 12 submersible pumps with access ramps.
- Water quality and fisheries specialists explained the system for salvaging fish prior to construction activity and monitoring water quality to ensure that CCME guidelines are not exceeded.
- If parameters are exceeded, the monitors will inform the TM EI to determine if work stoppage is required until acceptable water quality levels are obtained.
- TM will submit a water quality and fish salvage report to Parks Canada at the completion of the instream activity.
- During the site visit, the Snaring River was 0.5-0.8 m3/s flow instream and the side channel was 0.22-0.23 m3/s.
- Salvage of topsoil material at the location of the sensitive plant species *Trichophorum pumilum* was completed and will be tarped and marked.
- Willow was salvaged from the area disturbed by construction activity and bridge installation, and had been prepped for planting, bundled, tarped and labelled. Snow-covered rootballs were placed next to the willow stakings.
- Sediment fences for each of the bridge abutments were inspected to follow-up on the non-compliance identified on 26 February. For the side channel bridge, the SW and NW corners still did not meet the intention of the specification. The Foreman and TM representatives committed to repairing the fence and sending photo documentation upon completion. Please refer to the observation titled 'Corrected Non-Compliance'.

Construction Yard

- Topsoil was salvaged using a "MeriCrusher" and split to the north and south boundaries of the construction yard. The topsoil was tarped and marked. Company representatives stated that three passes were required to complete the operation, and an Agrologist was onsite to monitor the accuracy of the depth.
- The materials stockpiled in the yard were tidy and organized, with a designated smoking area.
- Discussed that there was no equipment cleaning bay in the yard, equipment is instead hauled to Edmonton for cleaning.

- Observed a generator placed in secondary containment with the volume of the containment marked on the wooden skid used for constructing the structure (2050 litres).
- All tractors, vehicles and light plants had drip trays, and some light plants had constructed secondary containment.
- All waste bins were labelled and a random check confirmed that there was no mixing of materials.
- All equipment checked in the yard had a current cleaning sticker.

Bone Yard

- All stockpiled materials were tidy and organized.
- All parked vehicles had a drip tray.

Tool Used
No
Tool Used

IAMC Indigenous Monitor Observations

Date
2020-02-25
Discipline
IAMC
Observation
Categories

- General
    - General

Facility

- Mainline

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
The inspection team visited various locations and observed a variety of activities during the course of the inspection. Locations visited include:
- Several water course crossings (Snaring River, access bridge over an unnamed creek, and Caledonia Creek Bridge)
- Several integrity dig sites (24, 25, 26, 27, 28)
- Sleeve removal and replacement sites (8, 10, 11, 12)
- The Jasper construction yard
Examples of work activities observed include:
- Hydrovacing to expose pipe
- Stockpiling of salvage rock and soil
- Salvage willow harvesting
- Sandblasting
- Construction of bridge crossings over watercourses and set-up of water diversion systems
The inspection team took part in the TMC Safety Orientation prior to initiating the inspection, attended the daily TransMountain ULC (TMC) tailgate meetings and, at all locations, reviewed hazards with site foremen and signed the Field Level Hazard Assessments (FLHA).

Soil Management
Topsoil piles were observed at KP 360.2, active integrity digsites, an access over an unnamed creek, the Snaring River crossing and the Jasper Construction yard. Most topsoil piles were tarped and labelled, except the topsoil pile at the bridge over unnamed creek location which was not yet tarped. At several locations, piles of blasted rock from original construction were observed including Digsite 24 and Sleeve 8.

At the Snaring River Crossing, numerous types of well-marked stockpiles were observed including topsoil, riparian topsoil, and rare plant topsoil. Appropriate tarping was in place and there was good separation between piles. Active backhoe piling of rock and subsoil was occurring at the Snaring River Crossing during the time of the inspection.

Matting on access was used in various locations and activities at these locations were confined to the matting.

Erosion control measures were also observed at the Snaring River Crossing. Sediment fences were in place at the bridge across a secondary channel. On the February 26th inspection a Corrected Non-Compliance was noted as the tie-ins at the corners of the sediment fences required attention.

Vegetation
Willow stake harvesting and root ball salvage for use in future reclamation was observed at several locations.

At one location two habitat trees have been flagged for conservation.

Water Courses
At the Snaring River Crossing (KP 360.2), rig mats were used on the access to avoid erosion/sedimentation issues. Skimmer float booms were present on site if needed. The water diversion system was under construction at the time of inspection and was well-staked and identified.

Required setbacks from water bodies and wetlands are being maintained. For example, at Dig Site 26 signage was in place: “No re-fuelling within 100 m of water body or wetland.”

Health & Safety
The inspection team was informed that as there is potential for asbestos in old pipe coatings. Workers on sections of existing 24” line are trained in and equipped for asbestos management. During the inspection, the inspection team was informed that the pipe at Dig Site 24 was checked and cleared for asbestos.

At the Sleeve 8 dig site in the Jasper Town Site, the site is fenced off with good signage to prevent public access. Security is in place and only workers are allowed near the exposed pipe. During the inspection, hydrocarbon testing of the exposed pipe was taking place.

Housekeeping
Overall, security was on site in all necessary locations observed, work areas were clean and well organized, and proper signage was in place.

The Jasper Construction yard was clean and well organized. Matting was in place and the main parking area was confined to the matting. Aggregate storage was on mats at the east end of the yard. Waste management storage bins were sealed and labelled.

Secondary containment was observed at many of the inspection locations. For example, at the Snaring River Crossing (KP 360.2), secondary containment was in place for stationary equipment (e.g., heaters and generators). At Dig Site #24, a Notice of Non-Compliance was issued by the CER due to a gap in the corner of a secondary containment structure for a generator.

Compulsory drip trays were in use for all vechiles on the construction site.

Fire extinguishers were checked and found to be in good order at the Snaring River Crossing (KP 360.2).

Unresolved Issues / Observations
A Notice of Corrected Non-Compliance was issued by the CER for sediment fence not meeting the requirements of the specification at the Snaring River Crossing location. A Notice of Non Compliance was issued by the CER at Dig Site #24 because requirements were not met. Two Information Requests were issued to the company to obtain clarification of requirements for secondary containment during construction activities.

Tool Used
No
Tool Used

Compliance Summary

Information Request (IR) No. 1

Date
2020-02-25
Discipline
Environmental Protection
Categories

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

Facility

- Mainline

Observations
On the south side of the Snaring River crossing, a generator was observed placed in secondary containment constructed from two rows of wooden dimensional lumber (skids) lined with poly sheeting. On site, company and contractor personnel were unable to confirm the volume of the fuel tank for the generator and the volume of containment. On 27 February 2020 the CER IOs observed that the containment had been improved by adding one more layer of skids to increase the containment volume, and the poly had been nailed down with wooden lathe.

Tool Used
Information
Request (IR)

Legislative Requirement
Environmental
Protection Plan for the Trans Mountain Pipeline ULC Pipeline Reactivation
Program (Aug. 14 2017, Rev. 2)

Applicable Wording from Legislative Document
5.0
Prevention and Mitigation Measures 8. Secondary containment areas not protected from the elements will be monitored regularly to ensure that ice, snow, or rainwater have not decreased the volumetric capacity for storage of a release to

be less than 110% of the aggregate storage volume of the containment area.

Company Action Required
Provide the following information:

1. The volume of the fuel tank for the generator.
2. The volume of the secondary containment.

Due Date
2020-03-05

IR No. 2

Date
2020-02-28
Discipline
Environmental Protection
Categories

- Soils and Soil Productivity
  - Chemical Spills/Releases

Facility

- Mainline

Observations
CER IOs observed inconsistencies in the construction of secondary containment at various locations throughout the inspection. During questioning of construction personnel, it was unclear what the specific purpose of the containment was at different locations (i.e. leaks from equipment, spills from fueling, or the potential of the fuel tank being punctured).

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)

4. General

✓ (2) Without limiting the generality of subsection (1), the company shall ensure that the pipeline is designed, constructed, operated or abandoned in accordance with the design, specifications, programs, manuals, procedures, measures and plans developed and implemented by the company in accordance with these Regulations.

6. When a company designs, constructs, operates or abandons a pipeline, it shall do so in a manner that ensures

✓ (c) the protection of property and the environment.

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;

✓ 48. A company shall develop, implement and maintain an environmental protection program that anticipates, prevents, manages and mitigates conditions that could adversely affect the environment.

Company Action Required

1. Provide the hazards and how the risk will be managed for the potential contamination of soil and water by liquid hydrocarbons.
2. Provide the procedures and specification(s) for ensuring that the environment is protected from the hazards that have been identified.
3. Describe how the company will anticipate, prevent, manage and mitigate hydrocarbon contamination that could adversely affect soil and water.
4. Provide confirmation that Trans Mountain environmental protection plans will be updated to include the results of the hazard assessment and risk management.

Due Date
2020-03-20

Corrected Non-Compliance

Date
2020-02-25
Discipline
Environmental Protection
Categories

- Water Bodies - Fish-bearing
  - Sedimentation/Turbidity

Facility

- Mainline

Observations
During a pre-inspection meeting with Trans Mountain personnel on 31 January 2020, the difficulties of installing sediment fencing in winter conditions were discussed and company representatives confirmed that fencing would be installed as per specifications.

Observed that sediment fencing was not installed to specifications in four corners of abutments at the two bridges constructed over the Snaring River and side channel.

Tool Used
Corrected
Non-compliance (CNC)

Legislative Requirement
Site-Specific
Environmental Protection Plan (Feb. 18 2020, Rev. 1), Water Crossing Execution

Plan (Feb. 18 2020), and Planting Plan (Feb. 13 2020) for KP 360.1 - Snaring River Crossing Replacement, RMLBV & Hydrotest

Applicable Wording from Legislative Document
13.
Erosion and Sediment Control: • Ensure any erosion and sediment control measures implemented onsite are properly installed as per manufacturers' specifications. Site-Specific Watercourse Crossing Execution Plan • Silt fence will be installed along non-stripped riparian buffer zones to mitigate potential sedimentation into the watercourse.

Company Action Required
Repair the sediment fencing at the corners of the bridge abutments at the Snaring River and side channel as per the specification drawing in the Reactivation EPP, and provide photographic evidence upon completion.

Due Date
2020-02-28

Notice of Non-Compliance

Date
2020-02-26
Discipline
Environmental Protection
Categories

- Soils and Soil Productivity
    - Chemical Spills/Releases

Facility

- Mainline

Observations
At integrity dig site #24, observed a generator placed within secondary containment constructed of one row of skids lined with poly sheeting. There was a gap in the corner of the skids that would not function properly to contain the volume of the fuel tank in the event of a release.

Tool Used
Notice
of Non-compliance (NNC)

Legislative Requirement
Environmental
Protection Plan for the Trans Mountain Pipeline ULC Pipeline Reactivation Program (Aug. 14 2017, Rev. 2)

Applicable Wording from Legislative Document
5.0
Prevention and Mitigation Measures 7. Containment structures will be constructed from suitable materials capable of containing the stored product. Liners used for secondary containment shall be placed and maintained to ensure their effectiveness and intended use. 8. Secondary containment areas not protected from the elements will be monitored regularly to ensure that ice, snow, or rainwater have not decreased the volumetric capacity for storage of a release to

be less than 110% of the aggregate storage volume of the containment area.

Company Action Required

1. Build secondary containment for the generator that is capable of containing the product stored in the fuel tank and meets the capacity of 110% of the total volume.
2. Provide photo documentation confirming that the secondary containment meets regulatory requirements.

Due Date
2020-03-05

IR No.3

Date
2020-04-03
Discipline
Environmental Protection
Categories

- Training and Documentation
  - Inspections

Facility

Observations
Over the three days of inspection at various locations the CER Inspection Officers observed inconsistency in the construction of secondary containment. During questioning of construction personnel it was unclear what the specific purpose of the containment was at different locations, for e.g. leaks from equipment, spills from fueling, or the potential of the fuel tank being punctured.

Trans Mountain submitted IR No.2 response dated 20 March, 2020 to the CER Inspection Officers and clarification of the information provided is requested. In addition, further requests are found in IR No.3 to obtain information to evaluate compliance to the *National Energy Board Onshore Pipeline Regulations* with respects to the secondary containment observed during the operations and maintenance activities in Jasper National Park.

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)

4. General

✓ (2) Without limiting the generality of subsection (1), the company shall ensure that the pipeline is designed, constructed, operated or abandoned in accordance with the design, specifications, programs, manuals, procedures, measures and plans developed and implemented by the company in accordance with these Regulations.

6.5 Management System Processes

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

✓ (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;

✓ (i) establish and implement a process for identifying and managing any change that could affect safety, security or the protection of the environment, including any new hazard or risk, any change in a design, specification, standard or procedure and any change in the company's organizational structure or the legal requirements applicable to the company;

✓ (u) establish and implement a process for inspecting and monitoring the company's activities and facilities to evaluate the adequacy and effectiveness of the programs referred to in section 55 and for taking corrective and preventive actions if deficiencies are identified;

18. Construction Safety

✓ (2) The person referred to in paragraph (1)(d) must have sufficient expertise, knowledge and training to competently carry out the obligations set out in that paragraph.

✓ 48. A company shall develop, implement and maintain an environmental protection program that anticipates, prevents, manages and mitigates conditions that could adversely affect the environment.

Company Action Required

1. Section 6.2, Parks Specific Measure: A drip tray will be placed under the motor area of all vehicles and equipment that are parked for more than 30 minutes." In the field we heard from the Parks Canada ESO that drip trays under every vehicle motor is not a Parks Canada requirement, rather it is a Trans Mountain requirement specific to work in Jasper National Park. Please confirm.
2. Spill Prevention - For each potential hazard the potential volume of the spill is not specified. The volume would inform the size and type of secondary containment – e.g. spill pad, drip tray, constructed containment. Please explain how the revised wording in the EPP informs the field personal of the correct control to apply, and the volume of liquid product to capture.
3. Spill Prevention - Is puncture of the fuel tank on a stationary piece of equipment a potential hazard, and if so, what is the control?
4. Spill Prevention - For stationary equipment with built in secondary containment (integral secondary containment), is additional secondary equipment required as a control for spill prevention?
5. Waste and Hazardous Material Storage - What are the appropriate provincial and federal requirements for working in Jasper National Park?
6. Waste and Hazardous Material Storage - What is the criteria the Trans Mountain Environmental Inspector applies when deciding if >1000 litres of hazardous materials can be stored within 100 m of a watercourse?
7. Describe the process for developing the controls to prevent, manage and mitigate the identified hazards and the risks for potential contamination of soil and water from hazardous materials in a liquid form. For example have field personal been consulted?;
8. Describe how the controls to prevent, manage and mitigate the identified hazards and the risks are communicated to anyone who manages the risks. For example how is the workforce trained to identify when the control is required and to what specification?;
9. Describe the process for inspecting and monitoring secondary containment to evaluate the adequacy and effectiveness. For example is there a checklist, and what is the frequency?;
10. Describe the process for taking corrective and preventive actions if deficiencies are identified. For example who is accountable to inspect, how is the deficiency communicated, and how is the action checked for adequacy in the absence of specification drawings?;

11. Describe how the person authorized to halt a construction activity has sufficient expertise, knowledge and training to competently carry out the inspection of secondary containment; and
12. Provide Trans Mountain inspection reports between 1 and 28 February, 2020 for the work being conducted in Jasper National Park that demonstrate inspection of a potential hazard that requires secondary containment as a control, and provide the relevant reference(s) in the associated Environmental Protection Plan(s).

Due Date
2020-04-14

IR No. 4

Date
2020-05-05
Discipline
Environmental Protection
Categories

- Soils and Soil Productivity
  - Chemical Spills/Releases
- Water Bodies - Non-Fish-bearing
  - Chemical Spills/Releases
- Water Bodies - Fish-bearing
  - Chemical Spills/Releases
- Training and Documentation
  - Training
  - Inspections

Facility

Observations
Follow-up Information Requests from IO Analysis of IR No.3

1. Please provide the justification for discontinuing the use of drip trays under vehicles parked for more than 30 minutes in Jasper National Park. Specifically, how did Trans Mountain (TM) determine that the hazard was low or non-existent, and therefore no longer required drip trays as a control during operation and maintenance activities?
2. Please provide training materials demonstrating how the requirements of the *Canada Energy Regulator Onshore Pipeline Regulations* (OPR) 6.5 (1) (j) and (k) have been met to ensure that all Environmental Inspectors' (EI) have the training and competency to determine the appropriate use of secondary containment as a mitigation measure, specifically when a specification is not available for reference.
3. Based on the requirements of OPR s.6.5 (u), demonstrate how a Trans Mountain Inspector or Auditor would determine the adequacy of secondary containment for a tank containing fuel by submitting an example calculation for the size of the secondary containment required to capture all of the product released from a tank with an explanation. Submit for the following: a typical light plant, a typical generator, and a bulk storage tank used during the operations and maintenance activities.
4. In reference to TM EI Report dated 13 February 2020, please submit the February 12 EI Report referenced in the TM IR No. 3 Response. The report states "Deficiencies noted during the yard inspection on Feb. 12, 2020 have been rectified. Secondary containment and waste management now in compliance. EI to close out outstanding deficiencies". Please provide the reference to a specific regulatory requirement for the non-compliance, and describe how

adequacy was measured.

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,

✓ (j) establish and implement a process for developing competency requirements and training programs that provide employees and other persons working with or on behalf of the company with the training that will enable them to perform their duties in a manner that is safe, ensures the security of the pipeline and protects the environment;

✓ (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;

✓ (u) establish and implement a process for inspecting and monitoring the company's activities and facilities to evaluate the adequacy and effectiveness of the programs referred to in section 55 and for taking corrective and preventive actions if deficiencies are identified;

Company Action Required

1. Please provide the justification for discontinuing the use of drip trays under vehicles parked for more than 30 minutes. Specifically, how did Trans Mountain (TM) determine that the hazard was low or non-existent and therefore no longer required drip trays as a control?
2. Please provide training materials demonstrating how the requirements of the Canada Energy Regulator Onshore Pipeline Regulations (OPR) 6.5 (1) (j) and (k) have been met to ensure that all Environmental Inspectors' have the training and competency to determine the appropriate use of secondary containment as a mitigation measure, specifically when a specification is not available for reference.
3. Based on the requirements of OPR s.6.5 (u), demonstrate how a Trans Mountain inspector or auditor would determine the adequacy of secondary containment for a tank containing fuel by submitting an example calculation for the size of the secondary containment required to capture all of the product released from the tank with an explanation for the following: a typical light plant, a typical generator and a bulk storage tank used on the Project.
4. In reference to TM EI Report dated 13 February 2020, please submit the February 12 EI Report referenced in the TM IR No. 3 Response. The report states "Deficiencies noted during the yard inspection on Feb. 12, 2020 have been rectified. Secondary containment and waste management now in compliance. EI to close out outstanding deficiencies". Please provide the reference to a specific regulatory requirement for the non-compliance, and how adequacy was measured.

Due Date
2020-05-22