

Operations Regulatory Compliance

Closed Report - CV1920-156 - 21 May 2020

Event Type

Field
Inspection

CV Event Number

CV1920-156

Selected Related Events

- CV2021-184

Project Companies

- Trans Mountain Pipeline ULC

Name of the Operating Company

Trans Mountain
Pipeline ULC (TransMountain)

Rationale, Scope, and Additional Description

Environmental program-based inspection of the Trans Mountain Expansion Project (TMEP), Spread 2. The primary focus area for this inspection was, but not be limited to, environmental protection. This inspection included verification of the implementation of mitigation measures, commitments, and other information associated with the Project Environmental Protection Plan (EPP), and any other relevant plans, manuals, and procedures. The scope of this inspection included, but was not be limited to the following: temporary sites (bone yards, construction sites/yards, staging areas), as well as ongoing right-of-way (RoW) activities that included survey, resource delineation, access, and forestry activities. Areas of interest included wildlife mitigation, wetland and watercourse crossings, waste management, storage and handling of hazardous materials, traditional lands & resource use, heritage sites, invasive species management, erosion and sediment controls (concentrating on pre-clearing survey methods), RoW delineation and staking, and biosecurity measures. In accordance with the Canada Energy Regulator (CER or Regulator) approach and terms of reference for the Indigenous Advisory and Monitoring Committee (IAMC), and pursuant to subsection 102(5) of the Canadian Energy Regulator Act (CERA), CER Inspection Officers conducted this inspection jointly with Indigenous Monitors (IMs) from the IAMC, whose independent observations are included within this report.

Selected Province/Territory

- Alberta

Start Date

2019-12-09

End Date

2019-12-13

Inspection Officer Number

- 2507
- 2463

Selected Disciplines

- Environmental Protection
- Safety Management
- IAMC Observation

No Tool Used

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)
 - Environmental Plans Volume 2 - Pipeline Environmental Protection Plan (September 2019)
 - Project-specific plan or procedure
 - Environmental Plans Volume 7 - Resource-Specific Mitigation Tables, Spread 2: KP 49.1 to KP 338.03 (July 2019)
 - Project-specific plan or procedure
 - Environmental Plans Volume 8 - Environmental Alignment Sheet Package, Spread 2: KP 49.1 to KP 338.03 (July 2019)
 - Project-specific plan or procedure
 - Environmental Management Plans Volume 6 - Section 2.5 Biosecurity Management Plan (March 2018)

Selected Regulatory Instrument Numbers

- OC-065

Facility Details

Facility Types

Pipeline

- Pipeline right of way (ROW)

Life-cycle Phases

- Construction

Additional Information

Selected Facilities

- TRANS MOUNTAIN EXPANSION PROJECT (Pipeline)
-

Observations (No follow-up required)

Spread 2 Contractor Orientations

Date

2019-12-10

Discipline

Environmental Protection

Categories

- Training and Documentation
 - Training

Facility

- TRANS MOUNTAIN EXPANSION PROJECT

Observations

Midwest Spread 2 Environmental Orientation

Included goals and objectives, environmental policy, management plans and documentation, roles and responsibilities, compliance and deficiencies, an overview of Spread 2, high risk activities, flagging standards, environmental considerations, sensitive wildlife species, Indigenous and community relations, and external communications.

Midwest Quality Orientation

Included applicable quality policy, roles and responsibilities, quality assurance plans, inspections and test plans, audits and continuous improvements, and deficiencies (non-compliances vs. non-conformances vs. Midwest's 'quality catches').

Tool Used

No Tool Used

Morning Daily Meetings

Date

2019-12-10

Discipline

Environmental Protection

Categories

- Training and Documentation
 - Inspections
- Socio-economic
 - Traditional Land and Resource Use
 - Heritage Resources

Facility

- TRANS MOUNTAIN EXPANSION PROJECT

Observations

Inspectors Group Meetings

The inspection team attended the daily Inspector's group meetings from 10-12 December 2019. These meetings are a daily opportunity for the Inspectors to review safety items, confirm assignments, go through the contractor's planned activities, and discuss issues and concerns. Meetings began with

safety moments, environmental reminders, and other projects reminders were also provided. On 11 December 2019 the contractor's weekly safety meeting minutes were also review and discussed.

Environmental Inspector Meetings

The inspection team attended the daily Environmental Inspectors meetings from 11-12 December 2019. These meetings are a daily opportunity for the project Environmental Inspectors as well as Indigenous Monitors to review environmental items and concerns, confirm assignments, discuss requirements for the contractor's planned activities, and discuss any issues and concerns.

Tool Used

No

Tool Used

Edson Yards

Date

2019-12-10

Discipline

Safety

Management

Categories

- Workplace Exposures and Protections
 - Personal Protective Equipment
 - Industrial Sanitation and Personnel Facilities
 - Fire Protection
 - Flammable and Combustible Liquids
 - Labels and Documentation
 - Hazard Assessment
- Temporary Structures
 - Signage
- Lighting
 - Task Lighting

Facility

- TRANS MOUNTAIN EXPANSION PROJECT

Observations

General

- A visitors' orientation was provided which included discussion on ongoing activities and associated hazards, muster point, and first aid.
- Given yard winter conditions, company representatives reminded the inspection team to utilize traction aids as mitigation to slippery winter conditions.
- An onsite trailer had posted Project and site-specific relevant documentation including:
 - Site-Specific Emergency Response Plan (SSERP);
 - Site-Specific Traffic Management Plan (SSTMP) – EDS003;
 - Hazard Registry – Site Specific Hazard Risk Assessment (SSHRA);
 - TMEP Stockpile Management – Orientation Plan;
 - Site-Specific Construction Environmental Execution Plan EDS003;
 - Pipe Yard Contractor Stockpile Management – Waste Management Plan;
 - First Aid Responders;
 - Edson Pipe Storage Facility Security Plan; and

- Site-Specific Safety Plan (SSSP).

Pipe Yard

- There were no ongoing activities in the yard at the time of inspection. A company representative indicated that pipe bends were expected to be unloaded later that day.
- Washroom trailers (toilet room & wash basins) were present adjacent to the site office trailer.
- Housekeeping was appropriate at the office trailer and throughout the yard.
- Two spill kits were observed at the office trailer and one was next to the stockpiles. Members of the inspection team looked in one of the kits and observed that it was full.
- Waste bins were available and segregated into different streams which were labeled (including garbage, cardboard, wood, contaminated soils, plastics, end caps, epoxy, and spent aerosols).
- A designated smoking area was present with appropriate signage and a fire extinguisher that had a valid annual certification and monthly inspection tag.
- Access matting (rig mats) was present throughout the majority of the yard. Company representatives indicated that this was done in order to mitigate compaction and erosion as well as ensure worker safety and minimize muddy conditions.
- Stockpiles throughout the yard were organized by size, wall thickness, and coating.
- Endcaps were present on stockpiled pipes, and stockpiles are chocked. Spare chocks were kept in a storage bin next to stockpiles.
- Onsite sea cans (storage trailers) were neat and tidy with appropriate housekeeping.
- Staged equipment had spill trays placed beneath them. Members of the inspection team reviewed cleaning records (level 2 cleaning) and daily inspection logs for each piece of equipment staged in the yard. A company representative also showed the inspection team an example of an electronic safety inspection report, which included photos of the equipment in the yard and a daily inspection log for a deckhand.

Main Yard

- Company representatives confirmed that local authorities have already conducted multiple inspections for fire code requirements at the yard.
- Copies of ERPs were present in the primary contractor's management trailer and TMEP's safety trailer.
- Copies of the SSSP were available in key locations, notably the TMEP safety trailer and the primary contractor's warehouse.
- Verified that fire extinguishers in temporary buildings had up-to-date monthly inspection tags and valid annual certifications.
- Washroom trailers (toilet room & wash basins) were present adjacent to the site office trailer.
- Housekeeping was appropriate at the site office trailers, in the warehouse and throughout the yard.
- Waste bins were available and segregated into different streams which were labeled (including garbage, cardboard, and wood).
- A designated smoking area was present with appropriate signage and a fire extinguisher.
- Fuel tanks and the refuelling area had necessary signage, as well as secondary containment and spill kits.
- Sufficient temporary lighting was in place in key locations throughout the yard.
- Observed that light plants were grounded and had secondary containment.
- Jersey barriers were in place to protect infrastructure and fuel tanks from accidental contact with vehicles (propane tanks, gas and diesel tanks).
- A large water tank serving as an available water source for firefighting was present.
- In the warehouse, observed flammable/combustible materials neatly stored in cabinets.
- A power generator skid was observed to have an appropriately sized and well-stocked spill kit, necessary signage, double walled fuel tank, and it was placed in a containment berm.

Equipment Yard

- Company representatives working in the wash bay area provided the inspection team with a review of the field-level hazard assessment.

- Members of the inspection team opened and examined both Environmental Response Unit trailers staged in the yard. Inventories of materials included in each trailer were present.
- Two truck and equipment wash bays were present. Forestry equipment was waiting to be washed and inspected.
- A large water tank was present next to the wash bay which serves as a backup water supply for the bay, which uses a small tank inside the bay trailer as its main supply.
- Temporary toilet facilities were present adjacent to site trailers.
- Light plants observed in the yard were grounded, and spill kits and secondary containment were present.
- Waste bins were available and segregated in different streams which were labeled (including garbage, cardboard, wood, batteries, geo, contaminated soil, metal, oily rags and used filters, aerosols, glass, plastics, etc.).
- The battery trailer had separate compartments for different battery types and all bins inside the compartments were placed in secondary containment.
- There was a containment building for oily rags, used filters, plastic pails and lids, and small batteries, as well as two double walled tanks for used oil.
- A designated smoking area was present with appropriate signage and a fire extinguisher.
- Fuel tanks and refuelling areas had necessary signage, as well as secondary containment and spill kits.
- Sufficient temporary lighting was in place in key locations throughout the yard.
- Jersey barriers were in place to protect infrastructure and fuel tanks from accidental contact with vehicles (propane tanks, gas and diesel tanks).

Tool Used

No

Tool Used

Right-of-Way (RoW) Field Day #1

Date

2019-12-10

Discipline

Environmental Protection

Categories

- Soils and Soil Productivity
 - Soil Handling
 - Biosecurity
 - Chemical Spills/Releases
- Housekeeping
 - Temporary Structures
- Socio-economic
 - Heritage Resources

Facility

- TRANS MOUNTAIN EXPANSION PROJECT

Observations

KP 239+584 (Road 106 – Access #1)

- Flagging and geotextile wings were present at the access ramp.
- Signage, cleaning log and brush for level 1 biosecurity cleaning requirements were at the entrance, every member of the inspection group (CER IOs, IAMC IMs and company representatives) brushed off their boots prior to exiting the work site as per requirements.
- An access crew was leveling the work surface near the access road. The inspection group reviewed and signed onto the field-level hazard assessment (FLHA).
- Signage and staking was in place throughout the area, including stakes delineating the existing TMPL line, required buffers for refueling, topsoil pile identification, and wetland riparian buffer.
- A company representative indicated that there had been a small hydraulic leak on a piece of equipment at the site, observed that absorbent pads had been put down over the spill while waiting for repair. Company representatives indicated that they would be cleaning the dirt from the shovel and bagging the contaminated soil for disposal.

KP 224+300 (Road 116 – Access #2)

- The inspection group reviewed and signed onto the site FLHA.
- Workers had recently completed the access ramp by the time the inspection team arrived on site, and were in the process of tidying up the site and getting ready to de-mobilize.
- Discussed the difficult conditions that exist at the site, with multiple hotline crossings and a large treed fen across the RoW (wet conditions observed).
- A large pit was flagged off next to the access ramp where subsoil was sourced as borrow material to build the access ramp.
- Access ramp consisted of matting on borrow material over geo with high wings and a culvert under the ramp.
- Cleared brush was piled separately from topsoil pile.
- Wetland signage and buffer flagging was present throughout the site.
- Observed large equipment tracks through the snow that did not appear to impact soil.

Tool Used

No

Tool Used

RoW Field Day #2

Date

2019-12-11

Discipline

Environmental Protection

Categories

- Soils and Soil Productivity
 - Soil Handling
- Water Bodies - Non-Fish-bearing
 - Chemical Spills/Releases
- Vegetation

- Invasive Plant Management

Facility

- TRANS MOUNTAIN EXPANSION PROJECT

Observations

KP 280+000 (Road 178 – Access #4)

- Only work occurring at the time of the inspection was flagging for hydrovac, as the crew was waiting for a hydrovac truck. Also observed second sweep line locators on the RoW.
- Observed lathing and ribbon around the boundaries of the temporary workspace, where there were portable bathroom facilities, a pile of sand for the hydrovac (placed on a liner), and stored culverts.
- The existing RoWs and centerline were staked out.

KP 170+000 (Road 177 – Access #3)

- The west access ramp had been built and workers were in the process of putting up a wing wall.
- The site had been levelled and soil piles stockpiled along the edge of the temporary workspace.
- RoW boundaries were staked and signage and goalposts were erected near powerlines.
- Topsoil and seconds piles were stored toe-to-toe for easier transition when being put back.
- The inspection group brushed their boots at a level 1 cleaning station.
- Walked to a wetland crossing as identified on the environmental alignment sheet, which was not visible due to heavy snow conditions. Company representatives indicated that the wetland area had been reduced upon field identification, and no riparian buffer was determined to be required. The wetland boundaries were staked and signage was in place. A 'no fueling or service' sign was present near the staked wetland boundary.

Little Brule Creek

- There were no construction activities that had occurred in the area at the time of inspection, with the exception of staking and flagging of the RoW and riparian buffer.

Tool Used

No

Tool Used

RoW Field Day #3

Date

2019-12-12

Discipline

Environmental Protection

Categories

- Soils and Soil Productivity
 - Soil Handling
- Vegetation
 - Destruction of Vegetation
- Housekeeping
 - Temporary Structures

- Socio-economic
 - Traditional Land and Resource Use
 - Heritage Resources

Facility

- TRANS MOUNTAIN EXPANSION PROJECT

Observations

KP 244+300

- No work activities were occurring in the area at the time of inspection.
- Goalposts and signage was in place near powerlines at road crossing.
- RoW and adjacent lines were staked out, some stakes indicated a low depth of cover along the existing TMPL line.
- Walked from the road crossing to Little Sundance Creek, which is surrounded by a wetland and was under heavy snow cover. The watercourse boundary was flagged off.
- A company representative indicated that temporary workspace sections will avoid the wetland, therefore no clearing will be required.
- Discussed complexity of crossing the creek and surrounding wetland, where the currently proposed method is isolated open cut.

KP 236+000 (Road 116)

- Access crew was in the process of stripping topsoil and starting to build the access ramp (observed placement of geotextile and culvert).
- Goalposts were in place near powerlines at road crossing.
- Walked to Bench Creek, which was covered in heavy snow. Some staking and flagging was in place at the creek and at a nearby heritage resource site, as well as a watercourse identification sign indicating the presence of fish. Company representatives indicated that further signage and flagging would be done in this area.

KP 222+500

- Visited the site of the future access pad for the McLeod River HDD entry side. No work has occurred in the area with the exception of some staking and flagging. The site is immediately off of a busy road.

KP 224+300

- Matting was placed over the access ramp and hot line crossing.
- A company representative indicated that they were stopping the mulcher every so often to go through requirements, such as identifying environmental features and assessing soil colour change.
- A company representative stated that they will be mulching and burning at the site, as well as processing some firewood requested by the landowner.
- Observed 'caution – logging' signs in place.
- A stationary feller-buncher was waiting for a hose to be replaced, absorbent pads had been deployed to catch any drips from the hose.
- Cut trees were piled and waiting to be hauled out to avoid exceeding the required mulch density.

KP 240+000

- Observed a feller buncher working on a hillside, and hydrovacating activities on the west side of the access.
- A company representative stated that large boulders were discovered in the area during grading which may result in further assessments to confirm feasibility of the HDD that was originally planned.

Tool Used

No
Tool Used

Indigenous Monitor (IM) Observations**Date**

2019-12-10

Discipline

IAMC

Observation

Categories

- General
 - General

Facility

- TRANS MOUNTAIN EXPANSION PROJECT

Observations

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

Overview

During the TMX Spread 2 inspections three different yards at the Edson work site were visited and inspected: 1) Midwest pipe yard; 2) main contractor yard and warehouse; and, 3) yard with wash bays. At the time of inspections the areas were very organized, disposal bins are provided in each yard with clear labeling. Fire extinguishers were checked and were current, spill kits were in appropriate locations with gloves, and propane tanks were protected by jersey barriers. The fueling area included secondary containment installed flush with the ground. The wash bays were clean, convenient to use, and have overspray containment for added protection. The onsite environmental rescue trailers are available for quick response if needed.

TMX Spread 2 inspections also included ten KP locations. Observations at these locations were consistent with respect to appropriate staking and flagging, identifying buffer zones and boundaries. Wetlands, watercourses, biosecurity, heritage and traditional land use areas were identified, with good signage. Topsoil and subsoil storage piles were present, with silt fences installed properly where required. Powerlines had goal posts and flagging. Road signs were covered when construction was not in progress.

Communication was good and meetings effectively conveyed information of interest and answered questions. Morning meetings focused on awareness of the work area, including familiarization with important features in the work area. Environmental inspectors (EI) and Indigenous monitors (IM) hold morning meetings to discuss areas of interest, review upcoming work areas three to four days prior to work commencing, and verify signage is visible. It is important to inform others of mitigation and precautionary measures. Tran Mountain representatives were very informative and transparent in all our discussions. The approach, integration, and communication between IM's with Trans Mountain Environmental Inspectors (EI) allows IM's to choose areas of interest, allowing for increased learning and knowledge to better protect the land.

Specific Observations

Location: Midwest Pipe Yard **Date:** December 10, 2019

- Pipe laydown area was clean and well organized. Daily inspections and equipment cleaning done via app/photos/reports.
- Each row of pipe is chalked and double nailed, no specific distance between rows.
- End caps on pipes.
- Designated smoking area.
- Fire extinguisher – good.
- Spill kit, complete with gloves.
- Catch tray under equipment.
- Eleven disposal bins, well labeled and organized (end caps, contaminated soil, epoxy, plastic, oily waste, aerosol, cardboard, garbage).

Location: KP 239 **Date:** December 10, 2019

- Two Environmental Inspectors on-site.
- A broken o-ring causing a hydraulic leak on a backhoe was reported and the leak was addressed with a spill kit, and the backhoe is scheduled for repair.
- Proper separation of topsoil and spoil
- Unidentified animal tracks (hoofed mammal)
- Wetland features identified with staking and flagging
- Appropriate signage in place
- Level 1 clean with log book

Location: KP 224.5 **Date:** December 10, 2019

- Dense spruce and tamarack on both sides of existing right-of-way
- Difficult area to work, with unusual circumstances – crossing hotlines at the access point, salvaged subsoil from a wetland adjacent to the shoo fly and used the material to construct the access ramp
- Due to wet conditions there is not enough frost to bring in heavy clearing equipment. Smaller equipment will be brought in to clear trees and snow to allow frost formation.
- Sediment fencing in place.

Location: Main Contractor Yard & Warehouse **Date:** December 11, 2019

- Three disposal bins – labelled with proper materials disposed
- Diesel shed with light plant – secondary containment in place
- Fuelling area – underground secondary containment with grating in place
- Fuel cans properly stored on secondary containment
- Permanent propane tanks are protected by jersey barriers
- Propane tanks are secured upright, off the ground with containment
- Generators are grounded. Double walled tank is sufficient for fuel containment.
- Eye wash, first aid kit, fire proof cabinets with venting and extinguishers are in place.
- Emergency response plan and project specific safety plan are posted at the entrance
- Very clean and well organized

Location: KP 280 **Date:** December 11, 2019

- Environmental Inspector on site
- Hydrovac had not yet arrived on site at time of inspection
- Difficult and congested area with slope, high traffic and three hot lines
- Staking and flagging in place

Location: KP 170 **Date:** December 11, 2019

- Power lines – goal posts and flagging present
- Hydrovac to expose lines performed every 15m
- Topsoil is stripped and piled appropriately
- Wetland with buffer zone identified, appropriate signage, staking and flagging in place
- Alignment sheets showed larger wetland than what is staked, due to reassessment and adjustments made in the field. The staking and flagging of the wetland boundary is appropriate.
- Level 1 cleaning station on site.

Location: KP 172.45 Little Brule **Date:** December 11, 2019

- No activity occurring at site yet.
- Flagging and staking is complete.
- Open cut and isolation will be the crossing method.
- Silt fence present from previous pipeline.

Location: Equipment Yard with Wash Bays **Date:** December 12, 2019

- Midwest environmental response trailers are present. One for river spills and one for ground spills.
- Wash bay on site includes one equipment bay and one vehicle bay. These are well maintained with side barriers in place for containment. Removal and disposal of water occurs by hydrovac.
- Light plant has secondary containment in place.
- Eight disposal bins on site – all well marked. Proper disposal of waste.
- Fueling area – must use secondary containment provided (drip tray), scheduled to install an inground containment with grating, spill kit and extinguishers available.
- Fuel tanks have secondary containment and Geotech beneath.

Location: KP 244 Little Sundance Creek **Date:** December 12, 2019

- No ongoing activities
- Overhead powerlines – have goal post and flagging in place
- Wetlands with spruce, tamarack and alder
- Staking and flagging identifying wetlands/buffer and Little Sundance Creek in place
- Mitigation for this class of wetland does not allow temporary work space through it
- TMX representative explained crossing is isolation open cut, the challenges and the need for a wide width of ditch due to the large size of wetland.
- Unidentified animal tracks throughout area. TMEX representative noted they had seen an elk here previously.
- An owl (Great Grey) was seen. TMEX representative filed an animal sighting.

Location: KP 236 Bench Creek **Date:** December 12, 2019

- Overhead power lines had goal posts and flagging in place.
- Geotech being laid in ditch for culvert installation.
- Staking and flagging for identified watercourse, and buffers.

Location: KP 222.5 McLeod River **Date:** December 12, 2019

- Surveying crew, staking and flagging to the west, east side complete
- Looked at horizontal direction drill (HDD) location, TMEX discussed HDD procedures

Location: KP 224 **Date:** December 12, 2019

- Installed snow fence around pit with signage.
- Mulcher monitoring – after a half hour of mulching, mulching is stopped and depth assessed before proceeding with mulching
- TMX representative discussed boundary stakes, coarse woody debris, stacking and firewood for the landowner
- Feller buncher working at site was shut down due to hydraulic leak. TMEX foreman to assess situation. Spill kit was in place. Hoses to be replaced.

Location: KP 240 **Date:** December 12, 2019

- Hydrovac on small panther, west side of shoefly, good signage
- Feller buncher operating, east side of shoefly
- Foreman made note they ran into large rocks during grading at the horizontal direction drill location.

Tool Used

No

Tool Used

IM Observations

Date

2019-12-10

Discipline

IAMC

Observation

Categories

- General
 - General

Facility

- TRANS MOUNTAIN EXPANSION PROJECT

Observations

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

TMX - Canadian Energy Regulator - Spread 2 - Edson, Alberta

December 9, 2019

- Meet with CER crew, Midwest EI's and Safety at the Edson Holiday Inn Boardroom
- Orientation - Midwest Orientation tomorrow morning @ 11 am
- West of Edson - (Access crew is East of Edson) (Pioneering crew)
- cleaning and access crews: Backwoods (2 crews), Pisim, Dechant, Murcat

December 10, 2019

- Cleaning station - Yards: Edson and Spruce Grove
- EI - Trans Mountain will be on every Inspection on each Spread
- turn left to yard - 2nd intersection between 6-8 am/4-6 pm for traffic safety into Edson Yard
- 6:30 am Inspector Meetings daily
- Yard Inspections: Edson and Midwest Yards
- 9 total EI's (Trans Mountain) on site IM's (2 Ermineskin First Nation) (1 Alexis Nakoda First Nation)

December 10, 2019

- Inspector Meeting @ 6:30 am - safety report: Backwoods clearing and mulching
- Pipe Yard - Edson @ 8:30 am *site Orientation

Yard Inspection: Extinguisher tags up to date, Inspect C-cans - supplies inside, organized, clean and bins are labeled

@ 10:30 am - Orientation - Nova Inn Edson: Security Orientation Trans Mountain Expansion (Security measures and Environment)

11:00 am - Midwest Environment Orientation - Spread 2 Edson (Environmental Plan, Contractor Environmental Execution Plan, Environmental Reference Documents, Environmental Alignment sheets)

- Spread 2 - 288.75 KM of NPS Green and White areas (divided into 5 segments)

- Approximate 179 watercourses; 189 wetlands
- Environmental Compliance - Mandatory Compliance and Deficiencies (reduce, contain, release, clean up, waste bins in Yards)
- High risk Activities - clubroot and weed management (red - High Risk, Yellow - Moderate Risk, Green - Low Risk) special soil handling procedures and cleaning
- cleaning stations available: Level 1 - Mechanical clean (physical removal), Level 2 - Pressure wash (wash stations in Yard), Level 3 - Disinfect station (Level 1 and Level 2 clean then bleach application)
- Water management: ensure compliance with regulatory approvals, water discharge, filter bags, erosion control devices
- Spills and releases: fueling 100 m away from watercourses, replenish spill kits after each use, use automatic shutoff valves when fueling, report and clean up all spills, use drip trays, tarps and proper disposal of waste material
- Water crossing: protect water quality and reestablish watercourse bed and banks to as near preconstruction conditions as possible, proper trench compaction
- Habitat areas: 10-30 m buffers depending on species
- Watercourses: TDL - monitor and log withdrawal rates and volumes
- Waste management: put in proper bins which are available and labeled, doors and lids (closed and secured), no cigarette butts on Yards or RoW are not acceptable, food and garbage contained at all times, use designated bathroom facilities
- Whirling disease: disease of salmonid fish that has infected some trout and whitefish populations in Alberta: Level 1 - WO (clean, drain, dry) Level 3 - (decantamine)
- Flagging standard: EF tape, black standard ribbon
- Landowner concerns: close gates where needed after accessing, respect the land, don't block driveways, communications with landowners through supervisors only
- RoW Boundaries/Buffers/Signage: all work must stay in approved Right of Way
- Signage - watercourses, wetlands, Environmentally sensitive areas, cleaning stations, refueling within 100 m water sources
- Weed cleaning stations: Identified in alignment sheets, clean equipment, follow locations of cleaning stations
- Access/Hydrovac: know direction of work, measure access ramp placement, follow Hydrovac slurry management process
- Soil Handling: White area - agricultural lands and crown, strip to color change or the depth, spoil must be separated from top soil, place stakes
- Erosion control: any temp or perm measure to reduce erosion, control situation and ensure that sediment laden
- Archeological, Heritage Resources and Traditional Land Use: find anything - leave in place and report to supervisor
- Key Wildlife and Biodiversity Zones, Migratory Bird Nesting Zones, Grizzly Bear Zones, Western Toad - approx KM 265-267/297-299 (size 1.5 to 3 inches), Long toad salamander, Bald Eagle, Sharptailed Grouse, Trumpeter Swan
- Environmental Considerations: notify Environmental Team, report all incidents, report when you have hit wildlife, don't work alone, no pets allowed on site
- Waste reduction: reduce the amount of waste, pick up garbage and dispose of properly, recycle, use appropriate bins
- Reduce fuel and emission reduction: do not idle excessively
- Indigenous and Community relations: mitigation measures, reduce and effects to TLU, sign, stake, and flag environmental features and buffers
- Indigenous Monitors: Support Environmental Inspectors, TLU areas, cultural and Heritage sites

Observed: Road access@ 1:40 pm - Crew@ 2:00 pm

Equipment spill: cleaned up and reported, drill bores, minimal tree clearing

Level cleaning KP 239-584 (log in cleaning), walked through Right of Way to observe the, grading and clearing

Access @ 3:30 pm KP 224 and 400 approx RD 110: construction of road access (ramp for access and hotline), tree fen, wetland, organics left, subsoil

December 11, 2019

@ 6:30 am - Inspector Meeting:

- road accesses at KP 239, 224, 300, 170+000, 280+000
- clearing: Backwoods KP 239+584, KP 224+300 grading on RoW
- Pisim - Equipment Inspection
- IM - 4 management coordinators, 2 IM's currently on site, planning on getting 5 more, work close with EIs
- contractor has an environmental execution plan that compliments TM's EPP')
- Cleaning Station: Green crew, Yellow crew, Red crew
- Contractor Environment Execution Plan: TDL signage, fish screens on hoses, tracking all logs of withdrawals and volumes, permits to be kept in tubes available at sites
- Quality checks: checks and balances, non-conformance
- daily reports, on site communication

Edson @ 8:30 am - Yard Inspection observed fuel tanks, spill trays, bins, ware house, proper containment: clean, organized, signs in place and labeled, fuel tanks have secondary containment and some have their own containment

Road access 170: watercourse crossing

Bowman RD@ 11:00 am: signed onto FLHA with site foreman, waiting for Hydrovac to come on site, no access road yet, lathes up and marked existing lines

Hydrovac holes done every 15 m to locate existing lines

KP 172+700 Little Brule - open cut

December 12, 2019

@ 6:30 am Inspector meeting: safety reported spill yesterday at KP 236, ground crews ahead of access crews, Environment crew to ensure signs are up (sweep ahead of equipment)

went out to RD 110 and RD 106

Line 130 - mulcher: clearing (224.3 - Backwood, 239.0, 284.4 Pisim), added and deleted wetlands, updated tables

@ 7:30 am -

- Equipment Yard: observed equipment response trailers (filled and organized), construction bins: labeled, separated bin for materials properly labeled
- Wash Bay: organized, clean, proper containment of liquids and grates used with secondary trays for waste contaminated water

RD Access:

- Mcloed River - 222.5 access open
- Red River - 223 no access
- Bench Creek - 235 access open
- Little Sundance - 249 access open
- 244.400/500 no access
- Wolf Creek - 219 no access

Went to KP244@ 10:00 am KP 239 RD 117: clearing trees, hydrovac on site

Midwest Environment Trailer: Follow up (closing meeting of Inspection) @ 4:30 pm Edson with EIs, CER, IM's and Matrix Environment

Observation:

- Yard Site Inspection: walk through, fuel tanks housekeeping, warehouse, clean and organized, tidy, labeled with signs in place, propane placement, fire extinguishers, wash bay, waste bins product separation, general site secondary containment
- Fire Department Inspections regularly had been complete
- Operator Communication with persons walking through Right of Way – thumbs up signal when safe and cleared
- Resource: Environment features Identified, existing main lines and hotlines, damage prevention is great, proper flagging, fuel fitting is good
- Access: ramps, culverts, signage (flag/sign covered)
- FLHAs - crew's were great with presenting when approached, very informative
- Environment Inspectors: very informative, experienced, work closely together
- Records: observed, equipment spills (produced when requested), spill kits available everywhere, 2 emergency response trailers well equipped and available when needed
- Indigenous Monitor's: work closely with Environment Team, training and integrating

Tool Used

No

Tool Used