

Operations Regulatory Compliance

Closed Report - CV2021-454 - 07 Aug 2020

Event Type

Field
Inspection

CV Event Number

CV2021-454

Selected Related Events

- INC2020-057

Project Companies

- Trans Mountain Pipeline ULC

Name of the Operating Company

Trans Mountain
Pipeline ULC

Rationale, Scope, and Additional Description

Environmental Inspection to follow up on Incident Number: INC2020-057 (Sumas Station EOS Release). CER staff attended the company Incident Command Post and the pump station release site to inspect environmental impacts, the extent of the released product and the site contamination, and ongoing recovery and cleanup.

Selected Province/Territory

- British Columbia

Start Date

2020-06-15

End Date

2020-06-17

Inspection Officer Number

- T
- 1866

Selected Disciplines

- Environmental Protection
- 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)

Selected Regulatory Instrument Numbers

Not Selected

Facility Details

Facility Types

Pipeline

- Pump station

Life-cycle Phases

- Operations

Additional Information

Selected Facilities

- SUMAS (Facility)

Observations (No follow-up required)

General Observation at Sumas Pump Station (incident site)

Date

2020-06-15

Discipline

Safety

Management

Categories

- Workplace Exposures and Protections
 - Personal Protective Equipment
 - Industrial Sanitation and Personnel Facilities
 - Labels and Documentation

Facility

- SUMAS

Observations

On-site at the Sumas Station, Inspection Officer (IO) and Indigenous Monitors for the Indigenous Advisory and Monitoring Committee (IAMC IMs) received site-specific safety information and COVID-19 prevention specific measures. An information board containing information related to the incident was displayed. Safety Data Sheets (SDS) were posted for the released product. A general overview of the cleanup process was given by the on-site manager.

Activities observed were in alignment with acceptable practices.

The inspection team also noted that COVID-19 measures were practiced throughout the site, including close proximity work area, the refreshments and snacks area, and office space.

Workers observed wearing appropriate PPE including half masks.

Tool Used

No
Tool Used

General Observation from Incident Command Post (ICP)

Date

2020-06-16

Discipline

Environmental Protection

Categories

- Soils and Soil Productivity
 - Chemical Spills/Releases
- Groundwater
 - Chemical Spills/Releases

Facility

- SUMAS

Observations

The inspection team reviewed the relevant Incident Action Plan (IAP). The IAP review included: Groundwater Monitoring Plan; Waste Management Plan; and Wildlife Management Plan. All activities onsite appeared to be in accordance with the IAP.

The inspection team met with the Environmental Unit Leader and discussed the Groundwater Monitoring results. The results at the time of the meeting indicated that the current incident did not impact the groundwater.

Tours had been organized for the community members of the local First Nations (FN). Tours included overview of the spill area from outside Division A or the manifold area (hot zone), an overview of the Division B or the pasture area and Division D on the west side of the station.

During a tour with Sumas FN representatives on 13 June 2020, an area with high archeology potential was identified. The area was designated as Division D and was fenced off to prevent inadvertent disturbance. Division D was not impacted by the release.

Tool Used

No
Tool Used

Division A - Manifold area

Date

2020-06-16

Discipline

Environmental Protection

Categories

- Soils and Soil Productivity
 - Chemical Spills/Releases
- Groundwater
 - Chemical Spills/Releases

Facility

- SUMAS

Observations

Division A was located in the manifold area of the station. The inspection team observed:

- "Hotzone" tape surrounded the area.
- Sign-in and sign-out process at the decontamination area.
- Removal of impacted gravel around existing facilities was ongoing using vacuum-trucks.
- Shallow trenches were being dug to trap residual free product.
- Repaired failed 1" line was visible.

Tool Used

No

Tool Used

Division B - Pasture area

Date

2020-06-16

Discipline

Environmental Protection

Categories

- Soils and Soil Productivity
 - Chemical Spills/Releases
- Groundwater
 - Chemical Spills/Releases

Facility

- SUMAS

Observations

Division B was located in the pasture area south of the station fence. The inspection team observed:

- Access to the area was controlled by the existing fence and a decontamination area. Sign-in and sign-out was done at the decontamination area.
- Archeologist (Stantec) accompanied by Monitors for Sumas FN screened the impacted area

- The area was heavily vegetated. The majority of free product had been removed.
- The product followed a surface water drainage pathway, outside of the fence to the adjacent Trans Mountain –owned field. The product gathered in a depression and was mostly in the soil under the vegetation.
- A Qualified Biologist completed the wildlife survey and did not observe any amphibians. The biologist determined that the habitat was not suitable for amphibians. No listed species at risk were observed. A breeding pair of White-crowned Sparrow was observed nearby and a 10m buffer zone was being set up. Other birds observed (American Goldfinch and Starlings) were not using the affected area.
- Vehicular access was being prepared with rig mats. Ground disturbance permits were in place.
- At the time of the inspection, no impacted soil excavation had occurred in division B.

Tool Used

No Tool Used

IAMC Indigenous Monitor Observations

Date

2020-06-15

Discipline

IAMC Observation

Categories

- General
 - General

Facility

- SUMAS

Observations

The following observations were recorded by an IAMC Indigenous Monitor who accompanied the CER Inspection Officer during inspection. These observations related to compliance can be found above in previous observations.

IAMC Monitor Report for Sumas Pump Station Incident

Pre-Inspection

Observations:

- Travel to Abbotsford June.14/2020

Inspection Day June.15/2020

Site overview and initial size up observations:

- We parked our vehicles outside the stations. (station is in a generally open field with tree patches adjacent to site.)
- Public and media were seen onsite.

- Extra security guard.
- The smell of oil product was very evident.
- Many Vac trucks and personnel on site.

Safety

- Site Safety briefing was thorough included Covid-19 Specific points as well as emergency protocol.
- Briefing was division and operation specific.
- Made aware of audio emergency protocols.
- TMX employee would monitor air quality while onsite. (Did not require masks.)
- ICP INFO board Shared.
- Rehab stations for workers to eat and drink and manage fatigue.

Operations:

- Decontamination teams in both divisions using three separate tubs with brushes, sprayers, absorbent pads for boots. Accompanied by extra clothing and bags for transport of contaminated clothing or personal protective equipment. Zones from hot to cold were established to identify your level of contamination and decontamination needs.
- Staging area manager for each division to organize and manage equipment resources arriving and departing, (vac trucks, low beds) and ensure all personnel have PPE.
- Heavy Equipment Create a temporary road into field following all TM (Trans-mountain) Safety ground disturbance plans and procedures to allow transport trucks on to site to carry hazardous waste away to approved facilities.
- Safety Vitals Monitoring teams were established to monitor air quality for hydrocarbons 24hrs a day in addition to personal monitors. Only people directly stirring or moving soil required a mask. Community Ambient Air quality monitoring was also in place and producing safe readings.
- Oil recovery was very complex and dynamic various methods used to trap product most being mechanical in nature. The main resource being utilized for recovery was human power in conjunction with hydro vac trucks, creating a series of ditches and small sumps for the product to pool and create opportunity to recover. Absorbent pads and bundles were in place anywhere surface flow could potentially reach storm drains as well as surrounding some residual pools in division B.
- Waste Management was in place and expanding as the incident progressed. Hazardous waste was being managed, identified by a technician, and sent to multiple facilities for further attempts of product recovery or proper disposal. General waste and recycling were also being managed and expanded.
- Soil monitoring was planned after initial spread was identified to better scope soil content and potential penetration relative to all sites of incident.

BTEX the chemical's benzene, toluene, ethylbenzene, and xylene.

Petroleum Hydrocarbons (PHC's) F1-F2

Extractable Petroleum Hydrocarbons (EPH)

Light & Heavy Extractable Petroleum Hydrocarbons

Methyl tert-butyl ether (**MTBE**)

Polycyclic aromatic hydrocarbons (PAH's)

Metals

Grain Size

- Water quality monitoring was already partially in place due to the site's history with product release. The historic and current data will help monitor any change in readings for the existing 20 plus wells in place surrounding the station. Further well installations will occur in the field or division B when more data is retrieved from the field to best place the new ground water wells.

BTEX the chemical's benzene, toluene, ethylbenzene, and xylene.

Petroleum Hydrocarbons (PHC's) F1-F2

Volatile Petroleum Hydrocarbons (VPH)

Light & Heavy Extractable Petroleum Hydrocarbons

Polycyclic aromatic hydrocarbons (PAH's)

Dissolved Metals

- Archeology was present in division B form of an archaeologist where natural soil disturbance was occurring and Indigenous monitors on site. One potential archaeology site was identified already and was fenced off with temporary fence and was well away from operations. TM stated monitors would be near all ground disturbance.
- Wildlife Management was in place with a biologist on site to evaluate habitat and potential impacts on surrounding eco systems and species. A quick conversation with field technicians provided some

findings and plans to create no work zones and buffer areas for high potential or established eco systems or species. TM assured that the Information was to be represented on the following operational periods maps and Incident action plan. Ongoing wildlife impacts were discussed as well as possible plans for long term wildlife deterrents if needed. Small herd of livestock was moved to adjacent field.

Concerns:

- During the incident, no soil analysis or drill logs for the established wells was present to help extrapolate the spread of product to my knowledge. Clay layer was used and thanked and referred to as a barrier. A liner purpose made is hopefully being implemented in high risk areas. A best practice approach versus acceptable practice should be implemented in spill prevention site considerations.
- The Incident Command post should integrate a Cultural heritage Unit in the plans section to help the ICP (incident Command Post) prepare and communicate possible First nations Archaeology, Cultural, environmental, and socio economic impacts that may not be public or common knowledge.
- Rehabilitation was not represented.
- Existing infrastructure outdated or not upgraded with station growth in capacity and flow increase volume of potential product release or complexity of recovery due to infrastructure.

Tool Used

No

Tool Used

IAMC Indigenous Monitor Observations

Date

2020-06-16

Discipline

IAMC Observation

Categories

- General
 - General

Facility

- SUMAS

Observations

The following observations were recorded by an IAMC Indigenous Monitor who accompanied the CER Inspection Officer during inspection. The observations related to compliance can be found above in previous observations.

Incident Command Post (ICP) was setup in a hotel in Abbotsford, BC.

- I met up with the Inspection team (CER and IAMC) to go over the scope of the inspection, Sumas Pump Station Oil release and the Emergency Response.
- Trans Mountain Environmental team gave us an update approximate how much oil was released and contaminated material was cleaned up and taken to waste facility. Known Archeology site was fenced off so no one could enter and disturb.
- Local leaders from the local First Nation communities were present. They had a lot of issues and concerns, potential contamination to their local water source. In the area of the pump station there could potentially be more archeology sites with any ground disturbance or soil removal.

On Site Inspection of the Sumas Pump Station

- Went through Trans Mountains on site orientation and their COVID19 procedures. Two Trans Mountain representatives gave us a tour around the facility and to go over their plans for cleanup and remediation. The Trans Mountain representatives showed us the hot zone in Division A, where the pipe break was located. Hydro Vac trucks on site doing the cleanup. We observed how the oil got off site and how it entered the pasture land (Division B) through a culvert storm water drainage system; a lot of rain the past few days was the source of that.
- Observed Division B, grazing pasture for cattle. Most of the oil was cleaned up from the culvert area where to oil entered Division B. Contaminated area was staked off.
- Wildlife Biologist was doing sweeps in the pasture, putting in buffers zones for species of birds in the area.
- Rig mats were being setup for access to Division B contaminated area to allow equipment and trucks to haul out the contaminated soils. Archeologists will be on site for any ground disturbance to watch for any potential artifacts.
- Water sampling will be an ongoing process in both Division A and B
- Emergency response trailer was on site that had all the tools they needed for cleanup.

Incident Command Post Observation

- Able to observe the Incident Action Plan. A document that is updated as information from the Sumas Pump station received.
- Observed how the ICP was functioning. No Heritage Resource Specialist was present. Hard to get information to and from local First Nation communities. Information about culturally sensitive sites within the affected area of the spill location. Was hard to gather this information. Very frustrating for the local First nation Communities. My observation in this process needs to be addressed.
- Met with Two Chiefs from local First Nation Communities heard their issues and concerns.

It was a great experience for me to be a part this inspection of the Sumas Spill. Learning from local First Nations and to hear the history about the Sumas area, how the site was a lake at on time. Therefore the high potential of artifacts that could be found line disturbed areas. How different the provincial regulations are from Alberta is what I need to learn more of. The process and plan that I observed of the Trans Mountain Sumas Pump Station to me a great plan for them to move forward to get the site back.

Tool Used

No Tool Used