

**VIA ELECTRONIC SUBMISSION**

December 10, 2021

Canada Energy Regulator  
Suite 210, 517 Tenth Avenue S.W.  
Calgary, Alberta T2R 0A8

To: M. Jean-Denis Charlebois, Secretary of the Commission

Dear M. Charlebois:

**Re: Trans Mountain Pipeline ULC (“Trans Mountain”)  
Trans Mountain Expansion Project (“Project”)  
OC-065  
Condition 106: Construction Progress Reports - Updated  
CER File: OF-Fac-Oil-T260-2013-03 61**

Trans Mountain has become aware that a reportable spill was inadvertently omitted from the Condition 106: Construction Progress Report that was filed on December 7, 2021 [[C16593](#)]. A revised version of the November 2021 Construction Progress Report is attached to this letter. The updated information has been added to Section 21.3.1.

Should you have any questions or wish to discuss this matter further, please contact the undersigned at [regulatory@transmountain.com](mailto:regulatory@transmountain.com) or (403) 514-6400.

Yours truly,

*Original signed by*

Scott Stoness  
Vice President, Regulatory and Compliance  
Trans Mountain Canada Inc.

Enclosure:  
Construction Progress Report Monthly Update for November 2021 v1 dated 10 December 2021



**TRANS**MOUNTAIN

Trans Mountain Pipeline ULC

Monthly Update for November 2021

CER Condition 106

### TABLE OF CONCORDANCE

Condition 106 is applicable to the following legal instruments: OC-065, as amended (CPCN), AO-005-OC-2 (OC2), AO-004-OC-49 (OC49), AO-001-XO-T260-007-2016 (TEMP), AO-002-XO-T260-008-2016, as amended (Pump 1), AO-002-XO-T260-009-2016, as amended (Pump 2), AO-002-XO-T260-010-2016, as amended (Tanks) and AO-001-MO-015-2016 (Deact). Table 1 describes how this report addresses the Condition requirements applicable to Construction Progress Reports.

**TABLE 1 - LEGAL INSTRUMENT CONCORDANCE WITH CER CONDITION 106:  
CONSTRUCTION PROGRESS REPORTS**

CER Condition 106	OC-065 (CPCN)	AO-005-OC-2 (OC2)	AO-004-OC-49 (OC49)	AO-001-XO-T260-007-2016 (TEMP)	AO-002-XO-T260-008-2016 (PUMP1)	AO-002-XO-T260-009-2016 (PUMP2)	AO-001-XO-T260-010-2016 (TANKS)	AO-001-MO-015-2016 (DEACT)
Trans Mountain must file with the NEB, monthly construction progress reports from commencing construction until after commencing operations. The reports must include information on the progress of activities carried out during the reporting period, including:	See below.	N/A – No activities occurred during this reporting period.	N/A – No activities under this legal instrument occurred during this reporting period.	See below.	See below.	See below.	See below.	N/A – No activities occurred during this reporting period.
a) safety, environmental and security issues, or non-compliances that occurred during the reporting period;	Sections 1.0, 15.0, - 22.0 incl.	See above.	See above.	Section 23	N/A	Sections 5.0-14.0	Sections 2.0, 3.0, 4.0	See above.
b) measures undertaken to resolve safety and environmental issues or non-compliances identified in a);	Sections 1.1, 1.2, 15.1, 16.1, 16.2, 16.3, 17.1, 18.1, 19.1, 20.1, 21.1, 21.3	See above.	See above.	N/A	N/A	Section 13.1	Section 3.1, 3.2, 3.3, 4.1, 4.2	See above.
c) confirmation that security issues identified in a) have been addressed;	Sections 15.2, 19.2, 20.2, 21.2	See above.	See above.	Section 23.2.1	N/A	N/A	N/A	See above.
d) description and the location of any change made to geohazard mitigation measures pursuant to Condition 51; and	N/A to this reporting period	See above.	See above.	N/A	N/A	N/A	N/A	See above.
e) the location of any pressure tests carried out during the reporting period and a description of any unsuccessful pressure tests, including the reasons for the lack of success of each.	N/A	See above.	See above.	N/A	N/A	N/A	N/A	See above.


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Table 4 Environmental Events Reported in November 2021

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## Introduction

On June 18, 2019, the Governor General in Council, on the recommendation of the Minister of Natural Resources, directed the National Energy Board (“NEB” or “Board”) to issue CPCN OC-065, and various Amending Orders, to Trans Mountain to permit the Project to proceed, subject to 156 conditions.

Trans Mountain submits this Report pursuant to Condition 106, Construction Progress Reports, for the time period of November 1-30, 2021 (reporting period).

## Report Overview

This Report includes information on the progress of activities related to the active phases within the listed work areas carried out during the reporting period, inclusive of:

- Safety, environmental and security issues or non-compliance issues that occurred during the reporting period (Condition 106(a));
- Measures undertaken to resolve safety and environmental issues or non-compliances (Condition 106(b));
- Confirmation that security issues have been addressed (Condition 106(c));
- Description and location of any change made to geohazard mitigation measures pursuant to Condition 51 (Condition 106(d)); and
- The location of any pressure tests carried out during the reporting period and a description of any unsuccessful pressure tests, including the reasons for the lack of success of each (Condition 106(e)).

Trans Mountain confirms that no changes were made to geohazard mitigation measures pursuant to Condition 51 (Condition 106(d)). The first pressure tests were conducted on Spread 1 (Condition 106(e)) during the reporting period (see Section 15.2).


The number of safety, environmental, security, and non-compliance issues that occurred during the reporting period are provided in Table 2.

**TABLE 2: TOTAL NUMBER OF SAFETY, ENVIRONMENTAL, SECURITY AND NON-COMPLIANCE ISSUES FOR THIS REPORTING PERIOD**

Description	Total Number of Issues
Medical Aids	0
Lost Time Incidents	0
Higher Potential Near Miss	2
Property Damage (> \$5,000)	3
Other	22
Environmental Events	1
Security Issues	9
Non-Compliances	12

## Definitions

To meet the requirements of Condition 106 (a)-(d), Trans Mountain has developed criteria to define the nature and severity of the events reported to the CER in the course of construction. The following definitions are used throughout this report.

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**Safety issues**, as defined in the Trans Mountain Canada Inc. (TMC) Integrated Safety and Loss Management System (ISLMS), are reported in terms of:

- Medical aids – a work-related injury or illness that requires the attention of a physician or of a licensed medical practitioner under the direction of a physician, whereby an actual medical procedure was administered.
- Lost time incidents – incidents or medical aids that result in days away from work.
- Higher potential near miss – circumstances that could have resulted in a reportable serious event under a slightly different situation.
- Property damage >\$5000 – damage to company and/or third-party facilities (including pipelines and associated equipment), equipment, property, vehicles.
- Other – motor vehicle accidents, unintended fire or explosion, unauthorized activity (CER-reported).

These include safety reporting requirements set out in the Canada Energy Regulator Onshore Pipeline Regulations.


**Environmental matters are reported in three ways:**

- **Event** – an event is the occurrence of an unplanned environmental impact that has occurred either by accident or through non-conformance with a Trans Mountain Project requirement. Timely, appropriate corrective and preventative actions (CAPA) are evaluated, implemented and documented. Note - for the purposes of satisfying Condition 106, an event is equivalent to an issue as mentioned in the text of Condition 106. Examples of potential events include:
  - the release of sediment into a waterbody as a result of failure of an erosion control measure
  - failure to complete the appropriate level of biosecurity cleaning
  - topsoil stripping outside of approved footprints
  - mortality of a fish due to impact pile driving despite controls in place (e.g. bubble curtain, etc.)
  - Improper handling of historical contamination resulting in contamination of clean topsoil
  - Clearing activities proceeded ahead of schedule within riparian buffer zone
- **Deficiency** – sometimes also referred to as a near miss. A deficiency is the occurrence of a shortcoming to a Trans Mountain Project requirement that is identified through environmental management processes; appropriate corrective and preventative actions (CAPA) are evaluated and implemented, and environmental impacts are avoided or prevented. Examples of deficiencies include:
  - garbage on the ground
  - environmental signage not installed or requiring maintenance
  - damaged erosion and sediment control devices
  - siltation that does not impact a sensitive environmental receptor
  - clay spoil piled on topsoil without adequate separation
  - fuel Container not placed within secondary containment

Historical contamination found incidentally during construction and handled in accordance with the Contamination Discovery Contingency Plan will be recorded as an observation and addressed. It will not be reported in the C 106 monthly report.

- **Reportable Spill** – An unplanned release that exceeds a quantity reportable under provincial or federal law or regulation, an unplanned release of unknown quantity with the potential to exceed a reportable quantity, or a situation where an unplanned release enters a body of water.

**Non-Compliances** – when a notice of non-compliance is received from the CER or other federal and provincial regulators the event is described as a non-compliance and is reported along with its resolution. Non-compliances identified through regulatory inspections will only be reported following

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issuance to Trans Mountain of final inspection reports. Reporting of a non-compliance supersedes reporting of an environmental issue or deficiency. Where a non-compliance also involves an environmental issue or deficiency, it is only reported once as a non-compliance.

Security issues are related to potential or actual threats to facilities and construction activities by third-parties.

The actions taken to address, mitigate and resolve all issues are described herein.

## Work Areas and Phases

This report encompasses all construction activities completed during the reporting period. The layout includes each work area the construction pertains to, in alignment with Condition 10. Please note that Phases 7, 8 and 20 are no longer required for the Project and have been removed from CER Orders.

**TABLE 3: PROJECT WORK AREAS**

Phase #	Phased Construction Spreads, Regions, or Work Areas	Phase Activity
<b>Terminals</b>		
1	Westridge Marine Terminal	STARTED
2	Edmonton Terminal	STARTED
3	Sumas Terminal	STARTED
4	Burnaby Terminal	STARTED
<b>Line 1 Pumps</b>		
5	Jasper Pump Station	NOT STARTED
6	Black Pines Pump Station	STARTED
7	Kamloops Pump Station <sup>1</sup>	NOT APPLICABLE
8	Sumas Pump Station <sup>1</sup>	NOT APPLICABLE
<b>Line 2 Pumps</b>		
9	Edmonton Pump Station	NOT STARTED
10	Gainford Pump Station	STARTED
11	Wolf Pump Station	STARTED
12	Edson Pump Station	STARTED
13	Hinton Pump Station	STARTED
14	Blue River Pump Station	STARTED
15	McMurphy Pump Station	STARTED
16	Blackpool Pump Station	STARTED
17	Black Pines Pump Station	STARTED
18	Kamloops Pump Station	STARTED
19	Kingsvale Pump Station	STARTED
20	Niton Pump Station Reactivation <sup>2</sup>	NOT APPLICABLE

<sup>1</sup> Not applicable per amended Order AO-001-XO-T260-008-2016, issued July 6, 2018 (A92862).

<sup>2</sup> Not applicable, per Certificates of Public Convenience and Necessity AO-004-OC-2 and AO-003-OC-49, issued February 9, 2018 (A89926).



Phase #	Phased Construction Spreads, Regions, or Work Areas	Phase Activity
<b>Line 1 Reactivation / Deactivation / Other Activities</b>		
21	Line 1 (valves) <sup>3</sup>	NOT STARTED
22	Hinton to BC Border Reactivation	NOT STARTED
23	BC Border to Hargreaves Reactivation	NOT STARTED
24	Darfield to Black Pines Reactivation	NOT STARTED
25	Wolf Pump Station Deactivation <sup>2</sup>	NOT APPLICABLE
<b>Line 2 Work Areas</b>		
26	Spread 1	STARTED
27	Spread 2	STARTED
28	Spread 3	STARTED
29	Spread 4	STARTED
30	Spread 5	STARTED
31	Spread 5, Condition 39 Coldwater Hydrological	NOT APPLICABLE <sup>4</sup>
32	Spread 5, Condition 7 Ohamil	NOT STARTED
33	Spread 6	STARTED
34	Spread 6, Condition 7 Tzeachten	NOT STARTED
35	Spread 6, Condition 77 Lightning Rock	NOT STARTED
36	Spread 7	STARTED
37	Spread 7, Condition 7 Surrey Bend	NOT STARTED
38	Westridge Delivery Lines	NOT STARTED
39	Westridge Portal of Burnaby Tunnel	STARTED
39	Burnaby Tunnel	STARTED
39	Burnaby Portal of Burnaby Tunnel	STARTED
<b>Temporary Infrastructure: Pursuant to Condition 61 Filing <a href="#">(C15018)</a></b>		
	Spread 1	ACTIVE
	Spread 2	ACTIVE
	Spread 3	ACTIVE
	Spread 4	ACTIVE
	Spread 5	ACTIVE
	Spread 6	ACTIVE
	Spread 7	ACTIVE

<sup>3</sup> In relation to the Line 1 reactivation segments, the Line 1 valve installations have not started. At other locations along the existing Trans Mountain system (Line 1), the valve installations are being undertaken as an operational activity.

<sup>4</sup> CER Decision in MH-032-2020 and Order AO-008-OC-065 indicated that Trans Mountain was relieved of Condition 39 in respect of the Project.

## 1.0 PHASE 1: WESTRIDGE MARINE TERMINAL


<b>Construction Progress</b> Onshore: <ul style="list-style-type: none"> <li>Erosion and Sediment Control measures monitored and maintained;</li> <li>Water Treatment Equipment monitored and maintained;</li> <li>Cast-in place piles for delivery line sleepers completed;</li> <li>Underground utilities resumed; and</li> <li>GHAB casing for product, water and utility lines advanced.</li> </ul> Foreshore: <ul style="list-style-type: none"> <li>Turbidity curtains and foreshore sediment control measures maintained;</li> <li>Water Treatment Equipment monitored and maintained;</li> <li>Underground utilities continued;</li> <li>Soil Improvement continued; and</li> <li>Continued coping slab construction.</li> </ul> Marine Berth Piles: <ul style="list-style-type: none"> <li>Piling at Berthing Dolphin BD1;</li> <li>Piling at Mooring Dolphin MD8 continued; and</li> <li>Pile caps on Junction Platform Supports JP1 completed.</li> </ul> Marine Superstructure: <ul style="list-style-type: none"> <li>Girders set on Trestle Spans T10, T11 and T12;</li> <li>Top deck concrete works started at Loading Platform LP3 continued;</li> <li>Dolphin jackets set on Berthing Dolphins BD1 and BD4.</li> </ul> Loading Platforms: <ul style="list-style-type: none"> <li>Structural Steel and Piping at Loading Platform LP 1 / 2 continued; and</li> <li>Gangway Towers set on Loading Platform LP 1 / 2.</li> </ul>			
<b>Issues and Non-Compliances</b>			
<b>Safety Issue</b>	<b>Security Issue</b>	<b>Environment Event</b>	<b>Non-Compliance</b>
0	0	<ul style="list-style-type: none"> <li>4 reportable spills (Section 1.1.1)</li> <li>11 environmental deficiencies (Table 5)</li> </ul>	6 non-compliances (Section 1.2)

## 1.1 Environment Summary


### 1.1.1 Reportable Spills

A description of reportable spills and their resolution is provided below.

<b>ID # &amp; Date</b>	Loc.4.17.ENV.110421.00161118 November 3, 2021
<b>Description</b>	A contractor operating a skid steer in the Portal area punctured a 1000 L tote of MasterRoc SLF 419 (a ground conditioning agent used by tunnel boring machines) with the forks of the skid steer. Approximately 700 L of the material spilled to the ground and flowed towards a sump along the secant wall and the Portal settling pond.
<b>Requirement</b>	Westridge Marine Terminal, Spill Response Contingency Plan
<b>Measures Taken</b>	All pumps in the Portal area were disengaged to aid in containing the spill to the Portal area. (Complete) Prior to disengaging the pumps, some of the spilled material was pumped to the access road and conveyed to the East Water Treatment Plant (WTP). The East WTP discharge was then shut off to prevent release into the marine environment. (Complete) The spill was reported to BC Ministry of Environment Spill Reporting Hotline (BC MOE PEP/EMBC). (Complete)
<b>ID # &amp; Date</b>	Loc.4.17.ENV.110421.00161118 November 8, 2021

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Description	Isolation and clean-up of the Portal area from the November 3, 2021 release continued until night shift on November 8/9, when pumps being used to contain the affected water within the Portal area were disengaged. This allowed some affected water to flow out of the Portal area, down the main access road and into two sumps that pump to the West WTP. Approximately 7.5 cubic metres of treated effluent containing an unknown concentration of the MasterRoc SLF 419 were discharged from the West WTP to the marine environment via the West Outfall.
Requirement	Westridge Marine Terminal, Spill Response Contingency Plan
Measures Taken	<p>Upon identification of the release, the West WTP was immediately shut down. (Complete)</p> <p>Water samples were collected from the West WTP discharge and submitted to an accredited laboratory facility for a 96-hour Rainbow Trout toxicity test. The lab reported 0% fish mortality for this test. (Complete)</p> <p>The Portal area pumps were re-engaged to prevent further release of affected water. (Complete)</p> <p>The West WTP was fully dewatered using hydrovac trucks before it was put back into service. (Complete)</p> <p>The release was reported to the BC MOE PEP/EMBC hotline and Canada Energy Regulator. (Complete)</p>
ID # & Date	Loc.4.17.ENV.112321.00161727 November 23, 2021
Description	A hydraulic fitting came loose on the overhead crane on the MLT-1 barge, resulting in the release of approximately 15 mL of hydraulic oil to deck. A portion of the hydraulic fluid that was spilled to deck entered the marine environment (between 1 mL and 15 mL).
Requirement	Westridge Marine Terminal, Spill Response Contingency Plan
Measures Taken	<p>The scene was immediately frozen. Hydrocarbon absorbent spill booms were deployed to the marine environment around the affected area. Hydrocarbon absorbent spill pads were used on deck to absorb the hydraulic oil. (Complete)</p> <p>The hydraulic fitting was repaired and inspected prior to being returned to service. (Complete)</p> <p>The release was reported to the Canadian Coast Guard and BC MOE PEP/EMBC hotline. (Complete)</p>
ID # & Date	Loc.4.17.ENV.112921.00161967 November 29, 2021
Description	An estimated 10 mL of hydrocarbon was released to the marine environment from a damaged fuel can in a skiff box on board the DB Columbia.
Requirement	Westridge Marine Terminal, Spill Response Contingency Plan
Measures Taken	<p>Spill booms were deployed around the sheen on the water and the boom and pads were used on the deck to mitigate the risk of residual hydrocarbon entering the water. (Complete)</p> <p>The release was reported to the Canadian Coast Guard and BC MOE PEP/EMBC hotline. (Complete)</p>

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## 1.2 Non-Compliance Summary

A description of non-compliances and their resolution is provided below.

ID # & Date	Loc.4.17.ENV.110421.00161806 November 3, 2021
Description	The East Water Treatment Plant (WTP) was shut down due to contamination with water from the Tunnel Portal area. The East WTP was put back into service on the afternoon of November 17, 2021. Immediate notification of the shutdown was not provided to BC Ministry of Environment (MOE), contrary to Section 2.1 of the permit.
Requirement	BC Ministry of Environment Waste Discharge Permit 3678, Section 2.1
Measures Taken	Key permit requirements have been reinforced to TMEP personnel, including the requirement to ensure BC MOE is immediately notified in the event of an emergency or other condition which prevents normal operation of the Authorized Works or leads to an unauthorized discharge. (Complete)
ID # & Date	Loc.4.17.ENV.110921.00161811 November 9, 2021
Description	The West WTP was shut down due to contamination with water from the Tunnel Portal area. The West WTP was put back into service on the morning of November 13, 2021. Immediate notification of the shutdown was not provided to BC MOE, contrary to Section 2.1 of the permit.
Requirement	BC Ministry of Environment Waste Discharge Permit 3678, Section 2.1
Measures Taken	Key permit requirements have been reinforced to TMEP personnel, including the requirement to ensure BC MOE is immediately notified in the event of an emergency or other condition which prevents normal operation of the Authorized Works or leads to an unauthorized discharge. (Complete)
ID # & Date	Loc.4.17.ENV.111321.00161623 November 12, 2021
Description	During a period of heavy rainfall overnight between November 12 and 13, 2021, construction contact water flowing down the main access road bypassed a sump, entered the west CP Rail ditch and discharged to the marine environment within the turbidity curtain. The bypass occurred due to the West WTP remaining offline following the November 9, 2021 release. Total suspended solids in the discharged water measured 90.5 mg/L during the evening, which exceeded the BC MOE Waste Discharge Permit 3678 threshold of 75 mg/L. Follow-up samples taken later that evening/early morning were below permit threshold levels. Additional parameters were also sampled and did not exceed permit threshold values.
Requirement	BC Ministry of Environment Waste Discharge Permit 3678, Section 3.1.1
Measures Taken	The West WTP was dewatered using hydrovac trucks between November 9 and November 13 and the affected water was disposed of at approved waste disposal sites. (Complete) Water quality measurements were collected for the bypass water. (Complete) The West WTP was put back into service on the morning of November 13. (Complete)
ID # & Date	Loc.4.17.ENV.111421.00161808 November 14, 2021
Description	The Foreshore WTP became inoperable due to electrical issues stemming from pooling water on the Foreshore. The Foreshore WTP was put back into service on the morning of November 15, 2021; however, the capacity of the system was limited to approximately 60 gallons per minute (GPM) due to fouling of the filter elements. On November 17, 2021, the Foreshore WTP was cleaned to remove the fouling and the lead ionic exchange media vessels were replaced. This restored the capacity of the Foreshore WTP to 160 GPM. Immediate notification of the shutdown was not provided to BC MOE, contrary to Section 2.1 of the permit.
Requirement	BC Ministry of Environment Waste Discharge Permit 3678, Section 2.1

Measures Taken	Key permit requirements have been reinforced to TMEP personnel, including the requirement to ensure BC MOE is immediately notified in the event of an emergency or other condition which prevents normal operation of the Authorized Works or leads to an unauthorized discharge. (Complete)
ID # & Date	Loc.4.17.ENV.111421.00161510 November 14, 2021
Description	<p>During a period of sustained heavy rainfall, water accumulated throughout the Foreshore area, including a large pool of water along the north side of the central Foreshore from Cells 4 and 6 containing grout contact water. Some of this water leaked through small gaps in the sheet piles and entered the marine environment within the marine turbidity curtain that surrounds the Foreshore work area. On November 14 and 15, 2021, numerous leaks were observed along the seaward faces of Cells 4 to 6.</p> <p>On the afternoon of November 16, only one leak was observed on the seaward side of Cell 5A and by the morning of November 17, observations of the marine facing side of the sheet pile cells confirmed that no water was being released.</p>
Requirement	BC Ministry of Environment Waste Discharge Permit 3678, Section 3.1.1
Measures Taken	<p>The Foreshore WTP was serviced and returned to a functioning state. (Complete)</p> <p>The bypass was reported to BC MOE. (Complete)</p>
ID # & Date	Loc.4.17.ENV.111521.00161653 November 14, 2021
Description	<p>During a period of sustained heavy rainfall between November 14 and 15, 2021, construction contact water flowing down the Main Access Road and Manifold Road bypassed a sump, entered the west CP Rail ditch and discharged to the marine environment via the West Outfall. The bypass occurred due to the East WTP remaining offline following the November 3, 2021 release. During the heavy rainfall on November 14 and 15, all site runoff from upland areas flowed past the East WTP and entered two sumps that convey water to the West WTP. The volume of water entering these sumps exceeded the capacity of the West WTP (400 GPM), which resulted in the sump pumps shutting down intermittently leading to the bypass. The characteristics of the samples taken upstream of the sump for pH exceeded the threshold in the Waste Discharge Permit (equivalent or less than 8.7 pH). In-situ samples were collected from the sump and upstream of the sump.</p>
Requirement	BC Ministry of Environment Waste Discharge Permit 3678, Section 3.1.1
Measures Taken	<p>The East WTP was dewatered using vacuum trucks between November 14 and November 17. (Complete)</p> <p>Water removed from the East WTP was disposed of at approved waste disposal sites. (Complete)</p> <p>The East WTP was put back into service on the afternoon of November 17. (Complete)</p> <p>The bypass was reported to BC MOE. (Complete)</p>

## 2.0 PHASE 2: EDMONTON TERMINAL


<b>Construction Progress</b> <ul style="list-style-type: none"> <li>TK-1 Foam piping installation is nearing completion, other minor deficiency work ongoing.</li> <li>TK-2 Preparation almost complete for hydro-test of foam piping system.</li> <li>TK-3 Starting installation of foam piping system, ongoing minor deficiency work.</li> <li>TK-4 Foam piping system installation is complete, ongoing minor deficiency work.</li> <li>Pile installation in progress at West Tank Area (WTA) along with fireproofing on the sleeper rack and formwork for booster pump #3.</li> <li>Ongoing cable pulling in the Piperack area and MCCB/B1</li> <li>Continue tacking and welding large bore piping in interconnecting Piperack and LMA/DMA/WTA/WTUA</li> </ul>			
<b>Issues and Non-Compliances</b>			
<b>Safety Issue</b>	<b>Security Issue</b>	<b>Environment Event</b>	<b>Non-Compliance</b>
0	0	0	0

## 3.0 PHASE 3: SUMAS TERMINAL

<b>Construction Progress:</b> <ul style="list-style-type: none"> <li>Erosion and Sediment Control measures monitored and maintained;</li> <li>Earthworks and shoring wall construction within tank bay 104 completed;</li> <li>Completed installation of Tk 103/104 berm precast panels;</li> <li>Continued construction of Firewater pond; and</li> <li>Manifold area civil and mechanical construction continued</li> </ul>			
<b>Issues and Non-Compliances</b>			
<b>Safety Issue</b>	<b>Security Issue</b>	<b>Environment Event</b>	<b>Non-Compliance</b>
2 (Section 3.1)	0	<ul style="list-style-type: none"> <li>1 reportable spill (Section 3.2)</li> <li>24 environmental deficiencies (Table 5)</li> </ul>	3 non-compliances (Section 3.3)

### 3.1 Safety Summary

Date and Issue Type	November 04, 2021 Property Damage (Equip. Damage)		
Description			Measures Taken
Incident 1714 A piping crew was in the process of walking out a fusion machine after completing 16" butt fusion. While walking the machine out, one of the inserts contacted the trench wall causing damage to the clamp.			Workers involved in the incident were re-trained in spotter training.
Date and Issue Type	November 18, 2021 Property Damage		
Description			Measures Taken
Incident 1775 An electrical work crew was in the process of removing sections of backfilled and redcreted electrical trench encased around a junction box when it was noted that an anode wire was set within the redcrete. The crew was removing a small section when the anode cable broke as the redcrete split. The TMEP representative approval was given to backfill and redcrete at existing depth as it was not a new installation, without providing TMEP Damage Prevention Supervisor (DPS) notification (DPS was not part of email chain associated with			The broken cable was repaired and retested prior to being used again.

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work). TMEP representative then directed electrical group to preform rework to lower the elevation to project specifications.	
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### 3.2 Environment Summary

#### 3.2.1 Reportable Spill Summary

A description of reportable spills and their resolution is provided below.


ID # & Date	Loc.4.19.ENV.111421.00161475 November 14, 2021
Description	An electrical panel tripped which shutdown a pump in a sump in the northwest corner of the site. The sandbag berm and sediment fence also became overwhelmed, which resulted in the discharge of turbid water offsite.
Requirement	BC Ministry of Environment Waste Discharge Authorization 13418
Measures Taken	The electrical panel was reset and pumps were reinstated. (Complete) An additional pump was installed to dewater the area.. (Complete) Pumps feeding the sump were shut off to allow the sump to be drained by the following day. (Complete)

### 3.3 Non-Compliance Summary

A description of non-compliances and their resolution is provided below.

ID # & Date	Loc.4.19.ENV.111421.00161474 November 14, 2021
Description	During a period of intense and sustained rainfall, a small plume of turbid water was observed outside the fence line in the wetland receiving environment. The sump and pump continued to operate and the release of sediment-laden water appeared to be short in duration and minor in magnitude.
Requirement	BC Ministry of Environment Waste Discharge Authorization 13418
Measures Taken	The Contractor collected water samples from the bypass. (Complete) The bypass was reported to BC MOE. (Complete)
ID # & Date	Loc.4.19.ENV.111421.00161472 November 14, 2021
Description	During a period of intense and sustained rainfall, roadwash bypassed a manhole east of Tank 104, as well as the backup sump on the main east-west access road. The construction contact water overflowed water management measures and flowed into the Tank 101 bay (non-construction contact water area). A high capacity pump was installed to pump water from the catch basin and reduce the volume of water bypassing the authorized works. The contractor had installed additional sandbags in the area to contain the contact water, however, water was observed to continue to flow into the non-construction contact water area.
Requirement	BC Ministry of Environment Waste Discharge Authorization 13418
Measures Taken	The pump discharge was monitored for potential scouring. (Complete). The bypass was reported to the BC MOE. (Complete)
ID # & Date	Loc.4.19.ENV.112921.00161839 November 29, 2021
Description	Construction contact water overwhelmed the sandbag sump installed along the main east-west access road and the backup catch basin to the northeast of Tank Bay 101 during an intense rainfall event, resulting in construction contact water bypassing authorized works in Tank Bay 101.



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Requirement	BC Ministry of Environment Waste Discharge Authorization 13418
Measures Taken	Water samples were collected by the contractor. (Complete) The bypass was reported to the BC Ministry of Environment. (Complete)


#### 4.0 PHASE 4: BURNABY TERMINAL

<p>Construction Progress:</p> <p><b>East Area:</b></p> <ul style="list-style-type: none"> <li>TK-74: Completed floor plate installation; commenced erection of first ring shell plates;</li> <li>TK-75: Commenced installation of roof structural columns, girders and central roof support;</li> <li>TK-76: Commenced floor plate installation;</li> <li>TK-77: Preparation of roof structure columns and girder for installation;</li> <li>TK-78: Preparing installation of floor plates;</li> <li>TK-79: Commenced installation of ring 5 plates</li> </ul> <p><b>North Area:</b></p> <ul style="list-style-type: none"> <li>Installation and hydrotesting of fire water piping in progress; and</li> <li>Continued application of pond liner on New Fire Water Pond;</li> <li>TK-91: Continued installation of first ring shell plates;</li> <li>TK-93: Commenced installation of first ring shell plates;</li> <li>TK-95: Continuing shoring wall and secondary containment construction.</li> <li>TK-96-98: Continued construction of shoring wall.</li> </ul> <p><b>South Area:</b></p> <ul style="list-style-type: none"> <li>Continued installation of pile caps and foundation pads.</li> <li>Continued installation of piperack piles, cable trays and product piping</li> </ul> <p><b>Central Area:</b></p> <ul style="list-style-type: none"> <li>Continued the installation of below ground fire &amp; foam piping and electrical conduits in existing roadways;</li> <li>Continued the installation of the tank product lines;</li> <li>Continued the installation of piles and pile caps;</li> <li>Continued installation of shoring wall for Tanks 80, 86 &amp; 89;</li> </ul>			
<b>Issues and Non-Compliances</b>			
<b>Safety Issue</b>	<b>Security Issue</b>	<b>Environment Event</b>	<b>Non-Compliance</b>
1 (Section 4.1)	0	<ul style="list-style-type: none"> <li>3 reportable spills (Section 4.2.1)</li> <li>79 environmental deficiencies (Table 5)</li> </ul>	0

#### 4.1 Safety Summary

Date and Issue Type	November 24, 2021 Other (Vehicle)	
Description	Measures Taken	
Incident 1792 A driver pulled forward to see traffic coming on upper road. While the driver was paying attention to the traffic on the driver side, the driver pulled over to the right and the vehicle made contact with the jersey barrier on the passenger side. This caused damage to the passenger side of the vehicle. No one was in the line of fire and no one was injured.	The driver received a 3-day suspension.	



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## 4.2 Environment Summary

### 4.2.1 Reportable Spill Summary

A description of reportable spills and their resolution is provided below.

ID # & Date	Loc.4.18.ENV.112521.00161710 November 15, 2021
Description	Turbid water was released from the Tertiary Containment Area (TCA) to an unnamed tributary of Eagle Creek commencing on November 15 as a result of an extreme rainfall event. Onsite water treatment and available retention were used to minimize the volume of water released. The release ceased on November 22.
Requirement	BC Ministry of Environment Waste Discharge Permit 6945
Measures Taken	Water quality samples were taken throughout the discharge and analysed for turbidity over the duration of the discharge. (Complete) Additional pumps were deployed to support onsite water management. (Complete) Bypasses were installed to route water from the above-liner drain system past the TCA. (Complete) Onsite ditches were cleaned to prevent sediment-laden water from entering the TCA. (Complete) Additional water bars and riprap ditches were constructed to limit additional scouring and sediment transport to the TCA. (Complete) Additional crews were mobilised to support erosion and sediment control measures throughout the site. (Complete) The release was reported to BC MOE. (Complete)
ID # & Date	Loc.4.18.ENV.112621.00161737 November 26, 2021
Description	A two-inch pump was placed into a gravel bottom excavation and water was intermittently pumped to a manhole for the diversion of an unnamed tributary to Eagle Creek. Water inside the excavation was turbid and released to the culverted watercourse. Following identification of the issue, samples were taken from the contact water and from the upstream/downstream side of the watercourse. No downstream impacts were observed.
Requirement	BC Ministry of Environment Waste Discharge Permit 6945
Measures Taken	The hose and pump were removed. (Complete) The manhole was replaced. (Complete) The release was reported to BC MOE. (Complete) Manholes across site are being tack-welded closed to prevent unauthorized access. (In Progress) A tailgate meeting is being delivered to the construction foreman and contractor management. (In Progress)
ID # & Date	Loc.4.18.ENV.112621.00161738 November 26, 2021
Description	Turbid water was released from the TCA to an unnamed tributary of Eagle Creek as a result of intense rainfall and to maintain operating levels in anticipation of additional forecast rainfall. Onsite water treatment and available retention onsite were used to minimize the volume of water released.
Requirement	BC Ministry of Environment Waste Discharge Permit 6945
Measures Taken	Water quality samples were taken throughout the discharge. (Complete) The release was reported to BC MOE. (Complete) Tank bays will be assessed and actions taken to reduce the potential to discharge sediment to the TCA. (In Progress).

## 5.0 PHASES 6 AND 17: BLACK PINES PUMP STATION

<b>Construction Progress</b>			
<ul style="list-style-type: none"> <li>Ongoing installation of filter gravel on slopes/ditches and access road, as well as final grading on liner.</li> <li>Hydrotest complete and reinstatement ongoing for above ground piping for TK-57 piping.</li> <li>Backfill in progress for 36" &amp; 30" mainline piping.</li> <li>Ongoing EHT and piping insulation installation through out facility.</li> <li>Begin testing motors and verifying RTD wiring</li> <li>Ongoing cable terminations for instrumentation</li> </ul>			
<b>Issues and Non-Compliances</b>			
<b>Safety Issue</b>	<b>Security Issue</b>	<b>Environment Event</b>	<b>Non-Compliance</b>
0	0	<ul style="list-style-type: none"> <li>4 environmental deficiencies (Table 5)</li> </ul>	0

## 6.0 PHASE 10: GAINFORD PUMP STATION

<b>Construction Progress</b>			
<ul style="list-style-type: none"> <li>Installation in progress for 5kV tray supports, cable pulling and terminations in VFD area.</li> <li>Ongoing final grade at east side of pump house.</li> <li>Ongoing minor deficiency resolution throughout facility</li> </ul>			
<b>Issues and Non-Compliances</b>			
<b>Safety Issue</b>	<b>Security Issue</b>	<b>Environment Event</b>	<b>Non-Compliance</b>
0	0	0	0

## 7.0 PHASE 11: WOLF PUMP STATION

<b>Construction Progress</b>			
<ul style="list-style-type: none"> <li>Ongoing installation of tray covers and clearing punch items.</li> <li>Continue grout curing and cleaning the pump building.</li> <li>Continue relocating topsoil.</li> </ul>			
<b>Issues and Non-Compliances</b>			
<b>Safety Issue</b>	<b>Security Issue</b>	<b>Environment Event</b>	<b>Non-Compliance</b>
0	0	0	0

## 8.0 PHASE 12: EDSON PUMP STATION

<b>Construction Progress</b>			
<ul style="list-style-type: none"> <li>Begin mounting cathodic protection JB's, installing pipe clamps and PSV supports.</li> <li>Completing deficiencies and walkdowns for pump building.</li> </ul>			
<b>Issues and Non-Compliances</b>			
<b>Safety Issue</b>	<b>Security Issue</b>	<b>Environment Event</b>	<b>Non-Compliance</b>
0	0	0	0

## 9.0 PHASE 13: HINTON PUMP STATION

<b>Construction Progress</b>			
<ul style="list-style-type: none"> <li>Working to finish painting above ground and underground welds on tie-in piping.</li> <li>Start installation of EHT on eavestrough and gutters.</li> <li>Ongoing cleaning of pump station and clearing deficiencies.</li> </ul>			
<b>Issues and Non-Compliances</b>			
<b>Safety Issue</b>	<b>Security Issue</b>	<b>Environment Event</b>	<b>Non-Compliance</b>
0	0	0	0

## 10.0 PHASE 14: BLUE RIVER PUMP STATION

<b>Construction Progress</b>			
<ul style="list-style-type: none"> <li>Complete backfill of Line 2 - 36" &amp; 42" trenches as well as Line 1 - 24" for Tie-ins</li> <li>Continue installing cathodic protection JB's and conduit and EHT power cables.</li> <li>Finished grade completed over liner – North &amp; East</li> <li>Ongoing point to point testing of cables, terminating end devices and instrument install post hydrotest.</li> </ul>			
<b>Issues and Non-Compliances</b>			
<b>Safety Issue</b>	<b>Security Issue</b>	<b>Environment Event</b>	<b>Non-Compliance</b>
0	0	<ul style="list-style-type: none"> <li>1 environmental deficiency (Table 5)</li> </ul>	0

## 11.0 PHASE 15: MCMURPHY PUMP STATION

<b>Construction Progress</b>			
<ul style="list-style-type: none"> <li>Ongoing installation of pump building cladding and roofing.</li> <li>Ongoing field run tray installation to EHT boxes and EHT installation.</li> <li>Ongoing installation of field run tray to valves/Instruments/devices and lighting.</li> <li>Continue glanding and terminating JB field cables.</li> </ul>			
<b>Issues and Non-Compliances</b>			
<b>Safety Issue</b>	<b>Security Issue</b>	<b>Environment Event</b>	<b>Non-Compliance</b>
0	0	<ul style="list-style-type: none"> <li>9 environmental deficiencies (Table 5)</li> </ul>	0

## 12.0 PHASE 16: BLACKPOOL PUMP STATION

<b>Construction Progress</b>			
<ul style="list-style-type: none"> <li>Ongoing civil work to achieve final grade</li> <li>Continue terminations within buildings and for EHT</li> <li>Ongoing point to point testing of cables, megger testing, final torqueing and ITR completions.</li> </ul>			
<b>Issues and Non-Compliances</b>			
<b>Safety Issue</b>	<b>Security Issue</b>	<b>Environment Event</b>	<b>Non-Compliance</b>
0	0	<ul style="list-style-type: none"> <li>2 environmental deficiencies (Table 5)</li> </ul>	0

### 13.0 PHASE 18: KAMLOOPS PUMP STATION

<b>Construction Progress</b> <ul style="list-style-type: none"> <li>Ongoing installation of suction and discharge piping for 2INP-1001 (12" and 16")</li> <li>Ongoing glanding and terminating 5 kV cables in ESB, and 5kV cables at pumps.</li> <li>Ongoing installation and welding for 36" nozzle insert for TK-62</li> <li>Complete installing hoods over louvers and fans on buildings</li> </ul>			
<b>Issues and Non-Compliances</b>			
<b>Safety Issue</b>	<b>Security Issue</b>	<b>Environment Event</b>	<b>Non-Compliance</b>
1 (Section 13.1)	0	0	0

#### 13.1 Safety Summary

Date and Issue Type	November 06, 2021 Other (Vehicle)	
Description	Measures Taken	
Incident 1726 A worker attempted to exit the Tank Farm by performing a 3-point turn on the access road when they struck a "Non-Operational/dead" valve attached to the end of a culvert.	A post incident review was conducted during the Safety Meeting. The Contractor's senior management team completed a review of the incident report.  Senior Management completed a 3 page "Formal Coaching" letter and presented it to the worker.  The Safety Manager had a one-on-one phone-call review of the incident with the worker. The safety topics discussed included why the worker chose to proceed without a spotter, the importance of demonstrating patience when you perceive production pressure and how waiting ten minutes for a spotter can save the cost of a van replacement crew van door and approximately 10-hours of post incident investigation work.	

### 14.0 PHASE 19: KINGSDALE PUMP STATION


<b>Construction Progress</b> <ul style="list-style-type: none"> <li>No progress this period due to weather-related flooding</li> </ul>			
<b>Issues and Non-Compliances</b>			
<b>Safety Issue</b>	<b>Security Issue</b>	<b>Environment Event</b>	<b>Non-Compliance</b>
0	0	<ul style="list-style-type: none"> <li>2 environmental deficiencies (Table 5)</li> </ul>	0

## 15.0 PHASE 26: SPREAD 1 AND PHASE 27: SPREAD 2 (GCC – MIDWEST)

<b>Construction Progress</b> Spread 1 <ul style="list-style-type: none"> <li>Valve work: installation, leak detection installation, reclamation and mat removal</li> <li>Mat removal on shooflies</li> </ul>		Spread 2 <ul style="list-style-type: none"> <li>Access, stripping and grading work in Spread 2A</li> <li>Mainline construction in progress between KP 94 and KP 338</li> <li>Saskatchewan Avenue HDD pullback completed; Industrial Area HDD ongoing</li> <li>HDB road bores in Spreads 2A, 2B and 2C ongoing</li> </ul>	
<b>Issues and Non-Compliances</b>			
<b>Safety Issue</b>	<b>Security Issue</b>	<b>Environment Event</b>	<b>Non-Compliance</b>
5 (Section 15.1)	1 (Section 15.2)	<ul style="list-style-type: none"> <li>28 environmental deficiencies (Table 5)</li> </ul>	0

### 15.1 Safety Summary

Date and Issue Type	November 27 CER Reported Event		
Description	Measures Taken		
Event 1830 A void under HWY 16 at Rd 135 developed that required the westbound lanes to be closed and the traffic detoured to two-way on the eastbound lanes for a period of three days.	The GCC executed repairs of the roadway in collaboration with Alberta Transportation, and the road reopened on 29 November.		
Date and Issue Type	November 01, 2021 Other (Vehicle)		
Description	Measures Taken		
Incident 1684 A trail tractor operator heard a scraping sound and stopped the machine. The counterweight was still out and it had contacted a the mirror and window of a crew truck that was parked on the back side of the boom.	The requirements to walk around equipment and vehicles prior to putting into motion were reviewed with the crew at the tailgate meeting.		
Date and Issue Type	November 08, 2021 Other (Vehicle)		
Description	Measures Taken		
Incident 1737 A worker was driving to a right-of-way location when a deer came out of the ditch and ran in front of the truck. The truck hit the deer causing damage to the grill and headlights.	The Contractor reviewed driving in the dark and early mornings at the Tailgate meeting.		
Date and Issue Type	November 08, 2021 Other (Vehicle)		
Description	Measures Taken		
Incident 1738 A welder had a spotter backing them into an area. The spotter moved from the back of the truck to the front to watch the front end. The welder continued to back up and contacted another parked truck behind them.	The Contractor reviewed the use of spotters with all crews during a tailgate meeting. The Contractor focused the review of spotter training with the crew involved in the incident.		

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Date and Issue Type	November 15, 2021 Other (Vehicle)	
Description	Measures Taken	
Incident 1760 A pickup truck was travelling on the highway with their four-way flashers on because of poor visibility. While approaching an intersection, a semi-trailer pulled out in front of them, The pickup truck driver maneuvered to the right to try to avoid contact but ended up hitting the back of the semi-trailer. The pickup truck driver immediately stopped and pulled over to a safe location.	A review of extreme driving conditions was conducted on the daily communication tailgate.	
Date and Issue Type	November 24, 2021 Other (Vehicle)	
Description	Measures Taken	
Incident 1796 A worker was driving eastbound on the highway when a deer ran across the left lane of traffic and contacted the left front quarter of the truck then proceeded to hit the driver's side door causing the side air bags to deploy. The roads conditions were dry; however, it was still dark outside. The worker said he didn't see the deer until it was too late.	A daily tailgate bulletin was distributed that focused on driving and animal strikes for the Contractor's foremen to review with their crews.	

## 15.2 Security Summary


Date	Issue Type	Description	Measures Taken
Nov 27 2021	Theft of copper cable	A transport truck was enroute to Blue River camp and stopped at Wabamum Alberta for overnight rest. During this stop, 3 copper cable spools were stolen from rear of truck. No evidence that the theft was related to camp construction.	Reported to the Police.

## 16.0 PHASE 28: SPREAD 3 AND PHASE 29: SPREAD 4A (KP 610-690) [GCC – SLLP]

<b>Construction Progress</b> <ul style="list-style-type: none"> <li>Spawning deterrent removal</li> <li>Clearing ongoing</li> <li>Stripping and grading ongoing</li> <li>Ditching and backfill ongoing</li> <li>Mainline stringing, bending and welding ongoing</li> <li>One watercourse crossing completion</li> <li>North Thompson 6 HDD completion</li> <li>North Thompson 5 pad preparation and casing installation; Drilling rig mobilization</li> </ul>			
<b>Issues and Non-Compliances</b>			
<b>Safety Issue</b>	<b>Security Issue</b>	<b>Environment Event</b>	<b>Non-Compliance</b>
3 (Section 16.1)	0	<ul style="list-style-type: none"> <li>1 environmental event (Section 16.2.1, Table 4)</li> <li>1 reportable spill (Section 16.2.2)</li> <li>60 environmental deficiencies (Table 5)</li> </ul>	3 non-compliances (Section 16.3)

### 16.1 Safety Summary

Date and Issue Type	November 19, 2021 Other (Vehicle)	
Description	Measures Taken	
Incident 1772 A worker operating a vehicle failed to see a parked vehicle and made contact, causing damage to the parked vehicle. The worker got out of their vehicle, spoke with the owner of the vehicle they contacted, gathered insurance information, and left the scene. The worker reported the event to their supervisor when they arrived at the work location one hour after the event occurred. After reporting to supervision, the Field Level Hazard Assessment (FLHA) document was created.	The Driving and Working within Congested Areas Safe Work Practices were reviewed with the worker involved in the incident.	
Date and Issue Type	November 27, 2021 Other (Vehicle)	
Description	Measures Taken	
Incident 1810 A flagging crew light duty vehicle (LDV) was approaching a 90 degree corner when the vehicle slid due to the icy road conditions. As this occurred, a tractor trailer was approaching the corner from the opposite direction, resulting in contact between the tractor trailer and the LDV. This caused minor damage to both vehicles. No injuries or environmental spill occurred.	A Daily Bulletin was distributed and reviewed with the crew and focused on driving in winter/icy conditions.	
Date and Issue Type	November 29, 2021 Other (Vehicle)	
Description	Measures Taken	

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<b>Incident 1813</b> A worker was patrolling and installing sensors on the pipe. The worker had entered the right-of-way to survey the pipe to determine where sensors needed to be deployed. Once the worker reached the end of the line of pipe, he attempted to turn the truck around to return to the tower. The worker reversed the vehicle and made contact with the pipe. Damage to rear driver's side taillight and corner of bumper. No visible damage to pipe. No injuries reported.	The worker was subject to a Driver's Assessment performed by a qualified assessor before being allowed to drive a vehicle again.
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## 16.2 Environment Summary

### 16.2.1 Environmental Events

A description of environmental events and their resolution is provided below.


<b>ID # &amp; Date</b>	LOC.4.8.27.ENV.112921.00161846 November 29, 2021
<b>Description</b>	A water quality monitoring crew measured turbidity above the CCME guidelines within watercourse BC-67 (fish-bearing NCD) at KP 549.600 due to ongoing precipitation, saturated conditions, and construction traffic on adjacent soils. Instream watercourse crossing activities for BC-67 had not yet commenced.
<b>Requirement</b>	Oil and Gas Commission Section 11 Application 100100221, Approval Condition 6.(b)
<b>Measures Taken</b>	Construction and preparation activities for crossing watercourse BC-67 were suspended. (Complete) The environmental incident was reported through Emergency Management BC. (Complete) Water quality monitored continuously until turbidity returned to within CCME guidelines. (Complete) Pump turbid water pooling within the RoW to flocc tanks to limit overland flow resulting in exceedances in CCME guidelines for fish-bearing streams. (In progress). Additional drainage, erosion and sediment control measures implemented as required. (Complete)

### 16.2.2 Reportable Spills

A summary of reportable spills and their resolution is provided below.

<b>ID # &amp; Date</b>	LOC.4.9.63.ENV.110421.00161159 November 3, 2021
<b>Description</b>	A Contractor fuel truck travelled the right-of-way (RoW) to fuel equipment on the Project footprint. Due to recent precipitation, a low area of the RoW had pooled and concealed some large boulders. The fuel truck proceeded through the pooled area of the RoW and struck a submerged boulder which punctured the truck's engine supply fuel tank and released 150L of diesel from KP 671.600 to KP 672.100.
<b>Requirement</b>	Condition 72 Pipeline Environmental Protection Plan, Appendix B, 11.0 Spill Contingency Plan.
<b>Measures Taken</b>	Construction activities and use of the vehicle were suspended and spill kits deployed. (Complete) The release was reported to Emergency Management BC. (Complete) Diversion berms were installed to contain spilled material to the RoW. (Complete) Contaminated fluids were recovered through a hydrovac truck and contaminated soils were loaded to waste bins for removal to an approved facility. (Complete) Prepare toolbox talk to advise all equipment/vehicle operators of the hazards and potential mitigations regarding travelling through pooled areas. (In progress) Amend the Safe Work Practice for driving to include assessing and mitigating (e.g., dewatering, re-routing) pooled areas. (In progress)



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### 16.3 Non-Compliance Summary

A summary of non-compliances and their resolution is provided below.

ID # & Date	Loc.4.7.ENV.070721.00161864 November 9, 2021
Description	In the final inspection report received November 9, 2021, Trans Mountain received a corrected non-compliance (CV2122-108 CNC 1) identified on July 7, 2021 with respect to secondary containment having been filled with water with a visible sheen approximately 2 cm from the lip of the containment and located within 3 m of a fish-bearing watercourse.
Requirement	Condition 72 Pipeline Environmental Protection Plan, Appendix G. 3.0 Contaminated Sites and Waste Management.
Measures Taken	Trans Mountain completed the required corrective action(s): Remove accumulated water and dispose of appropriately. Provide photographs demonstrating this has been completed. The corrective actions were acknowledged by the CER Inspection Officers (Compliance Verification Report CV2122-108 pp. 17-19, 09 November, 2021)
ID # & Date	Loc.4.7.ENV.070721.00161864 November 9, 2021
Description	In the final inspection report received November 9, 2021, Trans Mountain received a corrected non-compliance (CV2122-108 CNC 2) identified July 7, 2021 with respect to signage for nesting birds missing in the downhill direction of a forestry service road.
Requirement	Environmental Field Guide - Nesting Bird Risk Assessment
Measures Taken	Trans Mountain completed the required corrective action(s): Install bird buffer signs that are visible when traveling down the Serpentine FSR and provide photographs demonstrating that this was completed. The corrective actions were acknowledged by the CER Inspection Officers (Compliance Verification Report CV2122-108 pp. 19-21, 09 November, 2021)
ID # & Date	Loc.4.7.ENV.070721.00161864 November 9, 2021
Description	The CER issued a notice of non-compliance (CVC2122-108 NNC 1) to Trans Mountain with respect to areas of erosion and sediment control identified July 8, 2021 requiring re-installation and/or repair per the EPP specification, as well an area requiring erosion and sediment control (ESC) installation.
Requirement	Condition 72 Pipeline EPP, Section 7.0, measure 117.
Measures Taken	Trans Mountain completed the required corrective actions: Trans Mountain provided confirmation that straw wattles installed along Spread 3/4A have been inspected and corrective actions were communicated with available crews onsite or entered into the Corrective Action Log. Trans Mountain provided record of communication (environmental bulletin) and confirmation of training to staff on how to install straw wattles as per EPP specification. Trans Mountain provided evidence of ESC installation along the access road at the watercourse at KP 550.850. Trans mountain provided the following information regarding the slope at KP 558.070: Date of installation of ESC measures observed during the inspection; The last Environmental inspection report available prior to the CER inspection; A documented interim ESC plan for the location; A list of installed ESC measures for continual construction and pipeline installation  The corrective actions were acknowledged by the CER Inspection Officers (Compliance Verification Report CV2122-108 pp. 22-26, 09 November, 2021).


## 17.0 PHASE 29: SPREAD 4B (KP ~ 690-764) GCC – BANISTER

<b>Construction Progress</b> <ul style="list-style-type: none"> <li>Hydrovac and utility sweeps throughout the Spread</li> <li>Clearing, grading and stripping throughout the Spread</li> <li>Pipe stringing throughout the Spread</li> <li>Road bore drilling continues</li> <li>Site preparation for Clearwater DPI continues</li> <li>BC-342 pipe crossing preparation commences</li> <li>Peavine Creek restoration work completed</li> <li>ML/ARD rock exploration continues</li> </ul>			
<b>Issues and Non-Compliances</b>			
<b>Safety Issue</b>	<b>Security Issue</b>	<b>Environment Event</b>	<b>Non-Compliance</b>
8 (Section 17.1)	0	<ul style="list-style-type: none"> <li>85 environmental deficiencies (Table 5)</li> </ul>	0

### 17.1 Safety Summary

Date and Issue Type	November 04 2021 Other (Vehicle)		
Description	Measures Taken		
<p>Incident 1709 A driver was attempting to exit the right-of-way when they noticed an oncoming vehicle approaching in the northbound lane of the highway. The driver believed their vehicle was too far out on the road and put the truck in reverse to back up off the road. In doing so the driver backed into a stack of rubber mats. The contact with the mats resulted in the driver's side corner of the bumper being damaged.</p>	<p>The driver's Supervisor re-communicated a clear task instruction regarding the procedures for accessing roads requiring additional traffic control.</p> <p>The incident was reviewed with the crew at the Weekly Safety Meeting.</p> <p>The worker received a written reprimand.</p>		
Date and Issue Type	November 06, 2021 Other (Vehicle)		
Description	Measures Taken		
<p>Incident 1730 A traffic control vehicle was driving northbound on the highway when the passenger side mirror contacted the driver side mirror of another traffic control vehicle parked on the northbound shoulder of the highway. The contact resulted in minor damage to both mirrors.</p>	<p>The incident details were reviewed at the Weekly Safety Meeting.</p> <p>The GCC is in the process of investigating programs to be implemented that will aid in the organization meeting its goals surrounding safe driving.</p> <p>The GCC conducted two additional Traffic meetings to ensure requirements and clarification to procedures was understood. The meeting conducted on the afternoon of November the 20th was with the GCC Foremen.</p> <p>Six GCC workers driving the traffic control trucks completed the online B.C. Knowledge &amp; Skills Safe Driving course.</p>		
Date and Issue Type	November 09, 2021 High Potential Near Miss		
Description	Measures Taken		
<p>Incident 1742 During a routine site inspection, workers were observed encroaching within four (4) feet of an unprotected excavation. Work was immediately stopped.</p>	<p>The Weekly Safety Meeting main topic will focused on Life Saving Rule (LSR) Working at Heights. The contractor reviewed incident details at the Weekly Safety Meeting.</p> <p>The Fall Protection Plan has been made available and Foremen have been made aware of how to access it.</p>		

		Concrete blocks with engineered tie-off points were acquired and will be allocated to the bore crews where the crew is working at heights.
Date and Issue Type	November 22, 2021 Other (Vehicle)	
Description	Measures Taken	
Incident 1784 A pickup truck traveling on a highway was contacted by a passing transport truck. The driver of the pickup truck had slowed down and had pulled into an intersection and when re-entering the highway was struck by the transport truck. The collision resulted in damage to the front passenger-side corner of the pickup truck as well as damage to the step of the transport truck.	A Group Communication was distributed. The subcontractor conducted a meeting with their employees to discuss the importance of being prepared for the workday, including travel plans, clear directions and reviewing safe driving practices. The GCC conducted a Traffic Control crew stand down led by the GCCs President, project Superintendent, project Traffic Manager, and the project Safety Manager with both GCC and sub-contractor's traffic control workers in attendance. The incident was reviewed, safe driving practices were reviewed and an open forum discussion was conducted followed by workers being provided a perception survey to complete. All Contractor drivers were required to complete the online knowledge & skills B.C. Safe Driving course. The driver was suspended on the day of the incident for the remainder of the day and received both a verbal and a written warning. The incident details were reviewed at the Weekly Safety Meeting.	
Date and Issue Type	November 26, 2021 Other (Vehicle)	
Description	Measures Taken	
Incident 1800 A worker was driving when a deer jumped onto the road from the right-hand side of the road and contacted the front passenger-side. No injuries reported.	A tool box talk was developed which focused on Wildlife Awareness Driving Tips.	
Date and Issue Type	November 27, 2021 Other (Vehicle)	
Description	Measures Taken	
Incident 1807 A General Inspector was driving and ran into fog. The inspector started to slow down, when a deer ran out in front of the truck while travelling about 80 km/hr and slowing. No personal injuries sustained. It was unsafe to stop in the fog to check on the status of the animal.	The learnings from the incident were reviewed with the project team.	
Date and Issue Type	November 27, 2021 Other (Vehicle)	
Description	Measures Taken	
Incident 1809 A GCC pilot truck became stuck and backed into the bucket of an excavator when the driver attempted to free the vehicle. There were no injuries as a result of this incident.	The contractor (GCC) reviewed the incident details at the weekly Safety Meeting. The driver received Safety Contravention Notices for not meeting project requirements.	
Date and Issue Type	November 27, 2021 Other (Vehicle)	
Description	Measures Taken	

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Incident 1811 A GCC traffic control vehicle was travelling southbound when it lost traction around a bend and slid into the ditch. There were no injuries.	Each of the Traffic Control 1-ton trucks is now equipped with sandbags for added weight. The GCC reviewed the incident at the Weekly Safety Meeting. The worker received a Safety Contravention Notice for traveling at an improper speed for the road conditions.
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## 18.0 PHASE 30: SPREAD 5A (KP 806 – 990) GCC - SMJV

<b>Construction Progress</b> Construction activities executed in Spread 5A during November 2021 included commencing Coldwater Crossing #4 HDD and continuing to progress mainline construction. Extreme rainfall and flooding mid-month shut down Expansion Project work in the southern most areas of the spread, with crews focusing on emergency response, assisting with cleanup and rescue efforts, and protection of the Trans Mountain Line 1 pipeline. TMEP continues to monitor and inspect the condition of the construction footprint in flooded areas when safe to do so. Should any reportable events be identified throughout the course of ongoing inspection that meet reportable criteria as define in section 1.2.1 these items will be reported in future Condition 106 reports.			
<b>Issues and Non-Compliances</b>			
<b>Safety Issue</b>	<b>Security Issue</b>	<b>Environment Event</b>	<b>Non-Compliance</b>
2 (Section 18.1)	0	<ul style="list-style-type: none"> <li>• 87 environmental deficiencies (Table 5)</li> </ul>	0

### 18.1 Safety Summary

Date and Issue Type	November 01, 2021	Other (Vehicle)
Description		Measures Taken
Incident 1683 The driver of a low bed hauling an excavator was attempting to go around a hairpin corner when the kingpin sheared causing the load to topple to the inside of the corner. The trailer and the excavator landed on their side.		This incident was reviewed in the weekly safety meeting memo on Nov. 3, 2021.  Travel with loaded trailers on Forestry Service Roads and Access Roads was assessed to determine if the road is banked too much with a tight corner that could cause the twisting of the trailer with the fifth wheel. If identified as a potential risk, then equipment will be walked around the corner.
Date and Issue Type	November 03, 2021	High Potential Near Miss
Description		Measures Taken
Incident 1711 Four crew members were conducting bear den sweeps extending 250 m from the right-of-way. The area consisted of steep slopes, standing snags (trees), hung snags and fallen trees either on the ground or suspended. The ground conditions were slippery. A crew member contacted a piece of deadfall resulting in it sliding downhill a short distance. Work continued until the crew lead stepped on a large branch 8-10 cm in diameter laying close to the ground. Immediately after stepping on the branch a standing snag approximately 5 m away fell about 2-3 m downhill across the intended travel path of the crew lead. Two workers were near the potential line of fire.		The Leadership of both Contractors involved in the incident reiterated the requirement to refuse unsafe work and that there will be no repercussions for doing so.  Contractors' leadership will address all safety concerns that are brought to their attention by field staff and ensure staff is adequately trained to perform the work expected. These communications will be documented on the Field Level Hazard Assessment prior to work commencing. This expectation was communicated to all leadership via the safety department.  The Contractor Lead is responsible to ensure the information documented on the work authorization form is accurate and mitigation to the hazards field workers may be exposed to are documented and adequate. Communication of the near miss incident, contributing

<p>Work was stopped immediately. It was confirmed that no contact occurred with any workers. The Environmental Inspector and was notified of the incident.</p>	<p>factors and root causes with the contractor's Project Managers will be performed at the weekly safety meeting by the Safety Manager.</p> <p>As an immediate corrective action, second contractor's safety department held an infield safety stand down to discuss the incident and challenges related to the field work being performed. This is to be an open forum for field staff to voice opinions and potential mitigations to ensure a safe environment. Documentation and sign off were requested at this session.</p>
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## 19.0 PHASE 30: SPREAD 5B (KP 990 – 1075) GCC – KIEWITT-BONATTI


<p><b>Construction Progress</b></p> <p>In the first half of the month, construction activities in Spread 5B continued to be focused on access road development, preparation and installation of pipeline and vehicle watercourse crossings, and deactivating pioneer tracks and implementing spring preparedness measures. Extreme rainfall and flooding mid-month shut down Expansion Project work in the spread, with crews focusing on emergency response, assisting with cleanup and rescue efforts, and protection of the Trans Mountain Line 1 pipeline. TMEP continues to monitor and inspect the condition of the construction footprint in flooded areas when safe to do so. Should any reportable events be identified throughout the course of ongoing inspection that meet reportable criteria as define in section 1.2.1 these items will be reported in future Condition 106 reports.</p>			
<p><b>Issues and Non-Compliances</b></p>			
<p><b>Safety Issue</b></p>	<p><b>Security Issue</b></p>	<p><b>Environment Event</b></p>	<p><b>Non-Compliance</b></p>
<p>1 (Section 19.1)</p>	<p>3 (Section 19.2)</p>	<ul style="list-style-type: none"> <li>103 environmental deficiencies (Table 5)</li> </ul>	<p>0</p>

### 19.1 Safety Summary

Date and Issue Type	November 01, 2021 Other (Vehicle)	
Description	Measures Taken	
<p>Incident 1690</p> <p>A truck was travelling westbound to a work area. The truck departed the lane of travel and went into the eastbound lane. An eastbound dump truck driver slowed down and at the last minute attempted to veer to the left; the truck also attempted to veer to avoid collision. The two vehicles ended up coming to rest in the ditch. The driver of the westbound vehicle stated they had begun to feel tired. No injuries were sustained in this incident.</p>	<p>The Contractors distributed a spread-wide safety flash in regards to fatigue management.</p> <p>The Contractor sent the safety flash message to the crews prior to traveling home on the long weekend.</p> <p>Contractors involved working together to build and distribute lessons learned to all employees and contractors.</p>	

### 19.2 Security Summary

Date	Issue Type	Description	Measures Taken
Nov 10, 2021	Missing Gate Lock	Missing gate lock. Security patrol found TM Medco pad lock missing from gate at Hope Station.	No suspects, no evidence of theft or unauthorized entry.
Nov 15, 2021	Break and Enter, Attempted Theft	At Coquihalla crossing, a work trailer was broken into, UTV parked at site was attempted to be stolen, however got stuck on site and was abandoned. This occurred during the first severe	Reported to police, on site cameras captured event, video provided to the police.

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		rain event when the site and area had been evacuated.	
Nov 28, 2021	Wilful Damage and Theft	Survey contractor vehicle parked at hotel in Hope, side window smashed and backpack with rain gear taken.	Police notified, no video evidence available.

## 20.0 PHASE 33: SPREAD 6 & PHASE 34: SPREAD 7A (KP ~1075 – 1165.2) GCC - MICHELS

<p><b>Pre-Construction Progress</b></p> <p>Spread 6 &amp; 7A continued with pre-construction activities including:</p> <ul style="list-style-type: none"> <li>Continued readiness at Sumas River DPI until spread shut-down due to flooding event.</li> <li>Primary salvage effort for Oregon Forestsnail continued throughout Spread 6.</li> <li>Auxiliary yard preparation and construction at CWP 45 with a focus on ESC mitigations and surface water management.</li> <li>Hand clearing continued in CWP's 19 and 57 and commenced in CWP 32, CWP 42, and 59A.</li> <li>Commenced pavement milling and borehole drilling for contamination investigation through S&amp;R Sawmills (CWP 34-36).</li> <li>Spread 6 and 7A Watercourse and wetland crossing field verification and planning</li> <li>Archaeological investigations continued ahead of planned pipeline construction.</li> <li>Continued with geotechnical investigation of the Salmon River HDD.</li> </ul> <p>Extreme rainfall and flooding mid-month shut down Expansion Project work in Spread 6. TMEP continues to monitor and inspect the condition of the construction footprint in flooded areas when safe to do so. Should any reportable events be identified throughout the course of ongoing inspection that meet reportable criteria as define in section 1.2.1 these items will be reported in future Condition 106 reports.</p>			
<b>Issues and Non-Compliances</b>			
<b>Safety Issue</b>	<b>Security Issue</b>	<b>Environment Event</b>	<b>Non-Compliance</b>
3 (Section 20.1)	2 (Section 20.2)	• 6 environmental deficiencies (Table 5)	0

### 20.1 Safety Summary

Date and Issue Type	November 02, 2021 Other (Vehicle)		
Description	Measures Taken		
Incident 1688 A security guard exited their vehicle to warn someone to not enter the area. The vehicle was not in park and began to roll backwards. The worker attempted to stop the vehicle unsuccessfully and it contacted a building.	The Contractor reviewed Operation of Motor Vehicle and Security Patrol Safety Work Practices with the employee involved in the incident.		
Date and Issue Type	November 05, 2021 Other (Vehicle)		
Description	Measures Taken		
Incident 1721 A worker driving a truck entered a dedicated left turn lane and waited as the flashing green advance light turned to amber then red. When the traffic light turned from red to green, the worker proceeded to make a left turn when they observed during mid-turn that there were two pedestrians walking in the crosswalk. The front left bumper of the vehicle made contact with one of the pedestrians. Approximate vehicle speed was < 10 kph.	The incident is under investigation.		



the worker left the vehicle to attend the pedestrian, who was uninjured and left the area, declining any aid.		
Date and Issue Type	November 26, 2021 Other (Vehicle)	
Description	Measures Taken	
Incident 1808 Workers were in the process of backfilling a hydro vac slot when the driver attempted to back a truck up onto the mats to gain better access to the area. As the driver began to back up onto the mats, the passenger side back tire slipped off the mats and damaged the running board on that side. The driver pulled ahead and repositioned the truck on the mat and completed the task. No injuries were reported.	This incident is under investigation.	

## 20.2 Security Summary

Date	Issue Type	Description	Measures Taken
Nov 8 2021	Breach of Injunction	4 females from Protect the Planet entered ROW while tree clearing was occurring. Work was stopped. 3 females left the area but 1 remained. Police were notified and the person was arrested for Disobeying a Court Order and Mischief. Work stopped for 1 hour	Police were notified and person was arrested for Disobeying a Court Order and Mischief. Work stopped for 1 hour
Nov 8 2021	Breach of Injunction	1 male and 1 female entered the ROW. Work was stopped. When police arrived they both fled but were arrested. Both were released on condition they not return to TM sites. Charges being held are: Disobeying a Court Order and Mischief, should they return. Work stopped for 1 hour	Police call, upon arrival, both subjects fled but were located and arrested. Both were released on condition, not to return to TM sites. Charges being considered, Disobeying a Court Order and Mischief. Work stopped for 1 hour

## 21.0 PHASE 36: SPREAD 7B (KP 1165.2 - 1180.15) GCC - KLTP

<b>Construction Progress</b>			
As of the end of November 2021, right of way preparation is ongoing on 24 work fronts, and 16 work fronts are in full pipeline construction. The work fronts are within the following KPs: 1165 to 1171, 1173 to 1176. The Fraser River HDD commenced in late October and is ongoing.			
<b>Issues and Non-Compliances</b>			
Safety Issue	Security Issue	Environment Event	Non-Compliance
1 (Section 21.1)	2 (Section 21.2)	<ul style="list-style-type: none"> <li>4 reportable spills (Section 21.3.1)</li> <li>28 environmental deficiencies (Table 5)</li> </ul>	0

## 21.1 Safety Summary

Date and Issue Type	November 28, 2021 Property Damage (Equip. Damage)	
Description	Measures Taken	
Incident 1814 Multiple pieces of equipment, including dozers and excavators, were being utilized to pull a section of pipe, when a 335 Excavator tipped over. A combination of hand signals, air horn and cell phones was used to communicate along the line of equipment, as there were not enough radios available. The dozers were moving faster than the excavators. The resulting tension caused the 335 Excavator to tip onto its side on top of the pipe. This resulted in minor scratches to the exterior of the pipe. The Operator was able to safely exit the cab and no other workers were in the line of fire.	Contractor must ensure that all parties involved in a major coordinated lift/pull have radio communication.	

## 21.2 Security Summary

Date	Issue Type	Description	Measures Taken
Nov 23 2021	Breach of Injunction	One known protestor accessed the right-of-way and installed a platform in a tree on the right-of-way. Clearing and civil work continued at a safe distance.	November 26 <sup>th</sup> , Police attended and extracted the tree sitter from the platform, Charged with Breach of Injunction, released on conditions not to return.
Nov 25 2021	Breach of Injunction	One female protestor climbed the construction fencing and situated herself in front of a piece of equipment. Work stopped for less than 1 hour.	Police called upon their arrival female left the area, Police did not arrest.

## 21.3 Environment Summary

### 21.3.1 Reportable Spills

A summary of reportable spills and their resolution is provided below.

ID # & Date	Loc.4.15.24.ENV.111521.00162211 November 15, 2021
Description	Inadvertent release of approximately 100L of bentonite drilling fluid-laden water within constructed ditch south of Fraser River HDD entry due to heavy rain event. No negative impact to fish-bearing habitats were observed.
Requirement	C 72 Pipeline EPP, Appendix B, Section 3.0
Measures Taken	Crews deployed sandbags and poly to contain the release. (Complete) The spill, along with impacted surface soils, was cleaned using hydrovac trucks. (Complete) Downstream portion of ditch was isolated to prevent bentonite-laden water from entering watercourse. (Complete) Pumps and hoses were placed in ditch, upstream of entry pit, to divert rainwater accumulation around isolated release area. (Complete) The release was reported to BC MOE. (Complete)
ID # & Date	Loc.4.15.24.ENV.112821.00161652 November 19, 2021
Description	Inadvertent release of approximately 1m <sup>3</sup> of bentonite drilling fluid to watercourse BC-780a1 within isolated area. Downstream flows were isolated from initial release area to contain bentonite-laden water from entering culvert which connects BC780a1 to the Fraser River.



	Upstream flows were diverted east of downstream isolation via pumps/hoses. No exceedances in turbidity or pH parameters were reported outside of isolation area.
Requirement	C 72 Pipeline EPP, Appendix B, Section 3.0
Measures Taken	Sheet piles were installed to ensure the containment of drilling fluid. (Complete) Release reported to BC MOE. (Complete) Isolation dams are being reinforced daily. (Ongoing) Crews are onsite to monitor and manage water 24 hours per day. (Ongoing) Pumps / HVACs are utilized to keep water levels down. (Ongoing) .
ID # & Date	Loc.4.15.24.ENV.112821.00161638 November 22, 2021
Description	Inadvertent release of approximately 25 m <sup>3</sup> drilling fluid to terrestrial environment at site of Fraser River HDD. No environmental features impacted.
Requirement	C 72 Pipeline EPP, Appendix B, Section 3.0
Measures Taken	Drilling activities were immediately halted and a sandbag berm was erected to contain the release. (Complete) The spill was cleaned using and hydrovac trucks and disposed of in mud tanks for mix-off/disposal. (Complete) The release was reported to BC MOE. (Complete) The area is being monitored for any further releases. (Ongoing)
ID # & Date	Loc.4.15.26.ENV.111921.00161782 November 28, 2021
Description	Inadvertent release of approximately 1 m <sup>3</sup> bentonite drilling fluid to ground during transfer of fluid between mixing tanks.
Requirement	C 72 Pipeline EPP, Appendix B, Section 3.0
Measures Taken	Mixing activities were immediately halted. (Complete) Absorbent materials were deployed and full clean-up was performed, including exterior of mixing tanks. (Complete) Spill was reported to BC MOE. (Complete)

## 22.0 PHASE 39: BURNABY TUNNEL

<b>Construction Progress</b>			
<b>Tunnel Portal:</b>			
<ul style="list-style-type: none"> <li>• Drilling at the 485m point; and</li> <li>• Barnet Highway crossing in progress.</li> </ul>			
<b>Issues and Non-Compliances</b>			
<b>Safety Issue</b>	<b>Security Issue</b>	<b>Environment Event</b>	<b>Non-Compliance</b>
0	0	0	0

## 23.0 TEMPORARY INFRASTRUCTURE

### 23.1 Spreads 1 and 2 – Temporary Infrastructure Sites

<b>Construction Progress</b> – stockpile storage as November 27 2021. <b>ENO055 Enoch Stockpile Site</b> –Ongoing pipe storage and yard security; Received 50,790 m of pipe or 101% of anticipated inventory. Released 50,414 m to Spread 1 GCC.
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<p><b>EDS003.2 Edson Stockpile Site</b> – Ongoing storage and yard security; Received 193,943 m of pipe. Released 170,194 m to Spread 2 GCC; 1832 m to Reactivation O&amp;M; 980 m to Facilities. Bends, valve assemblies and miscellaneous equipment received and released at site.</p> <p><b>ENO047 Northgate Stockpile Site</b> – Ongoing pipe storage and yard security; Received 98,880 m of pipe or 100% of anticipated inventory. Released 29,471 m to Spread 2 GCC, and 162 m to Facilities. Construction bends, valve assemblies and miscellaneous equipment received and released at site.</p>			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	0	0

### 23.2 Spread 3 – Temporary Infrastructure Sites

<p><b>Construction Progress</b> - stockpile storage as of November 27, 2021.</p> <p><b>VAL025 Valemount Stockpile Site</b> - Received 126,855 m of pipe or 101% of anticipated inventory. Released 48,823 m to Spread 3 GCC and 114 m to Facilities; Bends and miscellaneous equipment received and released at site.</p> <p><b>VAL026.1 Valemount Office/Yard</b> – Ongoing use as construction office and yard</p> <p><b>VAL028 Valemount Camp</b> – Camp is open and operating in compliance with COVID procedures and protocols. Daily occupancy varied in November from 104-461 camp residents (average 363).</p> <p><b>BLU007 Blue River Camp</b> – The site is currently being graded and fenced in preparation for camp installation.</p>			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	1 (Section 23.2.1)	<ul style="list-style-type: none"> <li>8 environmental deficiencies (Table 5)</li> </ul>	0

#### 23.2.1 Security Summary

Date	Issue Type	Description	Measures Taken
Nov 15th, 2021	Theft of Signs	Theft of traffic control signs directing vehicle traffic at the site entrance.	Reported to Police

### 23.3 Spread 4 – Temporary Infrastructure Sites

<p><b>Construction Progress</b> – as of November 27, 2021.</p> <p><b>Clearwater Camp (CLE011)</b> – camp is operating in compliance with COVID procedures and protocols; daily occupancy in November ranged from 399-453 camp residents (average 420).</p> <p><b>Vavenby Stockpile Site (VAV009)</b> - Received 156,339 m of pipe. Released 2107 m to Spread 4A, 6,369 m to Spread 4A, 14,475 m to support Spread 4B, and 461 m to Facilities. Bends and miscellaneous equipment received and released at site.</p>			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	0	0

### 23.4 Spread 5 – Temporary Infrastructure Sites


<p><b>Construction Progress</b> – stockpile storage as of November 27, 2021.</p> <p><b>KAM013</b> Cando Rail Stockpile Site – Ongoing pipe delivery, storage and security; Received 108,497 m of pipe. Released 74,578 m to Spread 5A (north) and 2,637 m to Spread 5A (south); 720 m released to Facilities. Bends and miscellaneous equipment received and released at site.</p> <p><b>HOP052</b> Hope Stockpile Site – Ongoing pipe delivery, storage and yard security; Received 97,783 m of pipe or 95% of anticipated inventory; 12,637 m released to support Spread 5B construction; 299 m released to Spread 6 and 84 m to Facilities. Bends and miscellaneous equipment received and released at site.</p> <p><b>MER015</b> Merritt Stockpile Site – Received 92,761 m of pipe or 83% of anticipated inventory; 8,090 m has been released to support Spread 5A (south) construction; 645 m was transferred to support Operations Line 1 flood repairs. Received 82 bends or 100% of anticipated inventory.</p> <p><b>MER015</b> Merritt Camp – camp is now occupied by Trans Mountain workers. Daily occupancy in November varied from 81-300 (average 178) in accordance with COVID protocols.</p> <p><b>HOP053</b> Ohamil Camp – camp opened 30 November 2020 for Trans Mountain occupancy in accordance with COVID protocols; daily occupancy in November ranged from 185-284 camp residents (average 238).</p> <p><b>POP065</b> Popkum Yard – ongoing use as main construction yard for Spread 5B.</p>			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	<ul style="list-style-type: none"> <li>1 environmental deficiency (Table 5)</li> </ul>	0

### 23.5 Spread 6 – Temporary Infrastructure Sites

<p><b>Construction Progress</b> – stockpile storage as of November 27, 2021</p> <p><b>LAC064</b> – Lackaway - Received 52,985 m of pipe or 90% of line pipe. The site is also receiving bend deliveries.</p>			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	<ul style="list-style-type: none"> <li>2 environmental deficiencies (Table 5)</li> </ul>	0

### 23.6 Sumas Terminal – Temporary Infrastructure Sites

<p><b>Construction Progress</b></p> <p><b>SUM061</b> Sumas Terminal Laydown Yard: The yard is in use supporting ongoing work at Sumas Terminal.</p> <p><b>SUM062</b> 37117 North Parallel Road : The lot is in service for crew parking</p>			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	<ul style="list-style-type: none"> <li>8 environmental deficiencies (Table 5)</li> </ul>	0

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## 23.7 Westridge Marine Terminal and Spread 7 – Temporary Infrastructure Sites

<p><b>Construction Progress:</b> .</p> <p><b>Canfor Laydown Site (NEW 044):</b> All pipe has been transferred to King Edward St. Trans Mountain's use of the site for material laydown and parking will continue on a month by month basis.</p> <p><b>2 King Edward St. (COQ060)</b> Received 43,432 m of pipe to date; 95% of anticipated inventory. Released 3,439 m to Spread 7 GCC. Bends and miscellaneous equipment received and released at site.</p> <p><b>Commissioner St. Yard (VAN 048) :</b> Site preparation and CCTV installation completed. Site is being used for assembly of marine loading arms and storage of permanent materials for WMT.</p> <p><b>Barnet Hwy (BUR 049):</b> ongoing parking, construction office, minor stockpile for construction materials</p> <p><b>150 Glacier, Coquitlam:</b> Office space and storage and maintenance shop leased on existing industrial property and in current use.</p> <p><b>4001 Remi Place, Burnaby (BUR057):</b> 21,000 ft<sup>2</sup> warehouse facility leased within existing industrial property; The building has been configured for use as a warehouse and is currently used as a warehouse and a training facility.</p> <p><b>88 Golden Drive (COQ061):</b> construction office occupied and material storage commenced; additional office trailers to be installed and site upgrades to security systems completed.</p> <p><b>Pitt River Road (PIT062):</b> Parking and material storage.</p> <p><b>Surrey 19298 98A Ave (SUR021):</b> ongoing equipment and material storage</p> <p><b>Surrey 19395 98A Ave (SUR022):</b> security installation completed. Lot is currently empty and will be used for parking Spread 7 craft</p> <p>1701 Lougheed Highway (COQ067): ongoing parking</p>			
<b>Issues and Non-Compliances</b>			
<b>Safety Issue</b>	<b>Security Issue</b>	<b>Environment Event</b>	<b>Non-Compliance</b>
0	0	<ul style="list-style-type: none"> <li>• 2 environmental deficiencies (Table 5)</li> </ul>	0

**TABLE 4: ENVIRONMENTAL EVENTS REPORTED IN NOVEMBER 2021 PHASES 1-23**

Phase		1	2	3	4	5	6	9	10	11	12	13	14	15	16	17 <sup>(a)</sup>	18	19	21	22	23	
Location		Westridge Marine Terminal	Edmonton Terminal	Sumas Terminal	Burnaby Terminal	Jasper Pump Station	Black Pines Pump Station	Edmonton Pump Station	Gainford Pump Station	Wolf Pump Station	Edson Pump Station	Hinton Pump Station	Blue River Pump Station	McMurphy Pump Station	Blackpool Pump Station	Black Pines Pump Station	Kamloops Pump Station	Kingsvale Pump Station	Line 1 (valves)	Hinton to BC Border Reactivation	BC Border to Hargreaves Reactivation	
Description	Land & Soil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0
	Vegetation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0
	Water	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0
	Air & Noise	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0
	Fish & Wildlife	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0
	Waste & Hazardous Materials	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0
	Heritage Resources	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0
	Trespass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0
	Biosecurity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0
	Totals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0

**TABLE 4: ENVIRONMENTAL EVENTS REPORTED IN NOVEMBER 2021 PHASES 24-39**

Phase		24	26 & 27	28 & 29	29	30	30	31	32	33 & 34	34	35	36	37	38	39	Temporary Infrastructure							
Location		Darfield to Black Pines Reactivation	Spread 1/2	Spread 3/4a	Spread 4b	Spread 5a	Spread 5b	Spread 5, C39 Coldwater Hydrological	Spread 5, C7 Ohamil	Spread 6/7a	Spread 6, C7 Tzeachten	Spread 6, C77 Lightning Rock	Spread 7b	Spread 7, C7 Surrey Bend	Westridge Delivery Lines	Burnaby Tunnel	Spread 1	Spread 2d	Spread 3	Spread 4	Spread 5	Spread 6	Sumas Terminal	Westridge Marine Terminal & Spread 7
Description	Land & Soil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Vegetation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Water	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Air & Noise	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Fish & Wildlife	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Waste & Hazardous Materials	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Heritage Resources	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Trespass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Biosecurity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Totals	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: Construction has started in Phases shaded blue. Non-compliances and reportable spills are not included in these tables. <sup>(a)</sup> Reported as part of Phase 6.

TABLE 5: ENVIRONMENTAL DEFICIENCIES REPORTED IN NOVEMBER 2021 PHASES 1-23																					
Phase		1	2	3	4	5	6	9	10	11	12	13	14	15	16	17 <sup>(a)</sup>	18	19	21	22	23
Location		Westridge Marine Terminal	Edmonton Terminal	Sumas Terminal	Burnaby Terminal	Jasper Pump Station	Black Pines Pump Station	Edmonton Pump Station	Gainford Pump Station	Wolf Pump Station	Edson Pump Station	Hinton Pump Station	Blue River Pump Station	McMurphy Pump Station	Blackpool Pump Station	Black Pines Pump Station	Kamloops Pump Station	Kingsvale Pump Station	Line 1 (valves)	Hinton to BC Border Reactivation	BC Border to Hargreaves Reactivation
Description	Land & Soil	2	0	5	23	0	1	0	0	0	0	0	0	3	0	–	0	2	0	0	0
	Vegetation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	0	0	0	0	0
	Water	3	0	2	9	0	0	0	0	0	0	0	0	0	0	–	0	0	0	0	0
	Air & Noise	0	0	2	0	0	0	0	0	0	0	0	0	0	0	–	0	0	0	0	0
	Fish & Wildlife	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	0	0	0	0	0
	Waste & Hazardous Materials	5	0	14	47	0	2	0	0	0	0	0	1	6	2	–	0	0	0	0	0
	Heritage Resources	0	0	0	0	0	1	0	0	0	0	0	0	0	0	–	0	0	0	0	0
	Trespass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	0	0	0	0	0
	Biosecurity	1	0	1	0	0	0	0	0	0	0	0	0	0	0	–	0	0	0	0	0
	Contamination	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	0	0	0	0	0
	Totals	11	0	24	79	0	4	0	0	0	0	0	0	1	9	2	–	0	2	0	0

TABLE 5: ENVIRONMENTAL DEFICIENCIES REPORTED IN NOVEMBER 2021 PHASES 24-39																								
Phase		24	26 & 27	28 & 29	29	30	30	31	32	33 & 34	34	35	36	37	38	39	Temporary Infrastructure							
Location		Darfield to Black Pines React.	Spread 1/2	Spread 3/4a	Spread 4b	Spread 5a	Spread 5b	Spread 5, C39 Coldwater Hydrological	Spread 5, C7 Ohamil	Spread 6/7a	Spread 6, C7 Tzeachten	Spread 6, C77 Lightning Rock	Spread 7b	Spread 7, C7 Surrey Bend	Westridge Delivery Lines	Burnaby Tunnel	Spread 1	Spread 2	Spread 3	Spread 4	Spread 5	Spread 6	Sumas Terminal	Westridge Marine Terminal & Spread 7
Description	Land & Soil	0	6	9	53	38	64	0	0	6	0	0	7	0	0	0	0	0	0	0	1	1	1	0
	Vegetation	0	0	1	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Water	0	13	38	12	27	11	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	3	1
	Air & Noise	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Fish & Wildlife	0	0	2	1	1	5	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
	Waste & Hazardous Materials	0	4	9	16	1	20	0	0	0	0	0	12	0	0	0	0	0	0	8	0	1	4	1
	Heritage Resources	0	3	0	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Trespass	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Biosecurity	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Contamination	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Totals	0	28	60	85	87	103	0	0	6	0	0	28	0	0	0	0	0	0	8	0	1	2	8

TABLE 5: ENVIRONMENTAL DEFICIENCIES REPORTED IN NOVEMBER 2021 PHASES 24-39																							
Phase	24	26 & 27	28 & 29	29	30	30	31	32	33 & 34	34	35	36	37	38	39	Temporary Infrastructure							
Location	Darfield to Black Pines React.	Spread 1/2	Spread 3/4a	Spread 4b	Spread 5a	Spread 5b	Spread 5, C39 Coldwater Hydrological	Spread 5, C7 Ohamil	Spread 6/7a	Spread 6, C7 Tzeachten	Spread 6, C77 Lightning Rock	Spread 7b	Spread 7, C7 Surrey Bend	Westridge Delivery Lines	Burnaby Tunnel	Spread 1	Spread 2	Spread 3	Spread 4	Spread 5	Spread 6	Sumas Terminal	Westridge Marine Terminal & Spread 7
Note: Construction has started in Phases shaded blue. Non-compliances and reportable spills are not included in these tables. <sup>(a)</sup> Reported as part of Phase 6.																							