

VIA ELECTRONIC SUBMISSION

July 8, 2022

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

To: Ms Ramona Sladic, Secretary of the Commission

Dear Ms. Sladic:

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

Please find enclosed Trans Mountain’s compliance filing in fulfillment of Condition 106 for the month of June 2022.

Condition 106: Construction progress reports

The text of Condition 106, as established by the Commission, is as follows:

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:

- (a) *safety, environmental and security issues or non-compliances that occurred during the reporting period;*
- (b) *measures undertaken to resolve safety and environmental issues or non-compliances identified in a);*
- (c) *confirmation that security issues identified in a) have been addressed;*
- (d) *a description and the location of any change made to geohazard mitigation measures pursuant to Condition 51; and*
- (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.*

The Construction Progress Report includes a concordance table that shows where each aspect of the Condition is addressed in the attached material.



Summary of Material Filed

Enclosed for submission is the following document:

- Construction Progress Report for Trans Mountain Expansion Project: Condition 106 (Monthly Update for June 2022), hereinafter the "Report"

The Report was prepared to address the requirements of Condition 106 and includes information on the progress of activities carried out during the reporting period at the Westridge Marine Terminal, Edmonton Terminal, Sumas Terminal, Burnaby Terminal, Burnaby Tunnel, pump stations, pipeline spreads 1-7, and temporary infrastructure sites in Spreads 1-7 inclusive. The Report also includes information on geohazard mitigation as required under C 106 d).

Should you have any questions or wish to discuss this matter further, please contact the undersigned at 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 June 2022



Trans Mountain Pipeline ULC

Monthly Construction Progress Update for June 2022

CER Condition 106

TABLE OF CONCORDANCE

Condition 106 is applicable to the following legal instruments: OC-065, as amended (CPCN), AO-006-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-006-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, 16.0 - 26.0 incl.	See above.	See above.	Section 27	N/A	Sections 5.0-15.0	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 16.1, 19.1, 20.1, 21.1, 21.2, 21.4, 22.1, 22.2, 23.1, 23.2, 24.1, 25.1	See above.	See above.	Section 27.2.1	N/A	Section 14.1	Sections 3.1, 3.1.1, 4.1	See above.
c) confirmation that security issues identified in a) have been addressed;	Sections 20.2, 21.3, 24.2, 25.2	See above.	See above.	Sections 27.2.2, 27.3.1, 27.4.1	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	Sections 20.3, 21.5, 22.3	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 5 Environmental Deficiencies Reported in June 2022

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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 June 1-30, 2022 (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)).

Geohazards described in Trans Mountain’s Condition 51: Field Changes Manual for Geohazards (the Manual) [C05736] are identified during pre-construction activities and, most often, during construction. Trans Mountain’s process for identifying geohazards and the suite of mitigation measures that Trans Mountain will employ to address these geohazards are described in the Manual. Tables are added in the following C 106 report to describe specific geohazards identified by spread and the manner in which Trans Mountain mitigated them.

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	6
Lost Time Incidents	1
Higher Potential Near Miss	13
Property Damage (> \$5,000)	10
Damage Prevention	0
Other	2
Environmental Events	2
Security Issues	17
Non-Compliances	2

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Definitions

To meet the requirements of Condition 106 (a)-(c), 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.

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 accidents¹, 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

¹ As of this report, minor motor vehicle incidents, included in 'Other', will no longer be reported in C 106.

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 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
Terminals		
1	Westridge Marine Terminal	STARTED
2	Edmonton Terminal	STARTED
3	Sumas Terminal	STARTED
4	Burnaby Terminal	STARTED
Line 1 Pumps		
5	Jasper Pump Station	STARTED
6	Black Pines Pump Station	STARTED
7	Kamloops Pump Station ²	NOT APPLICABLE
8	Sumas Pump Station ¹	NOT APPLICABLE
Line 2 Pumps		
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

² Not applicable per amended Order AO-001-XO-T260-008-2016, issued July 6, 2018 (A92862).

Phase #	Phased Construction Spreads, Regions, or Work Areas	Phase Activity
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 ³	NOT APPLICABLE

Line 1 Reactivation / Deactivation / Other Activities

21	Line 1 (valves) ⁴	SEE PHASES 22 & 23
22	Hinton to BC Border Reactivation	STARTED
23	BC Border to Hargreaves Reactivation	STARTED
24	Darfield to Black Pines Reactivation	STARTED
25	Wolf Pump Station Deactivation ²	NOT APPLICABLE

Line 2 Work Areas

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 ⁵
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

Temporary Infrastructure: Pursuant to Condition 61 Filing (C17345)

Spread 1	ACTIVE
Spread 2	ACTIVE
Spread 3	ACTIVE

³ Not applicable, per Certificates of Public Convenience and Necessity AO-004-OC-2 and AO-003-OC-49, issued February 9, 2018 (A89926).

⁴ New valves being installed on the Reactivation segments are addressed in Phases 22 and 23. At other locations along the existing Trans Mountain system (Line 1) outside the Reactivation segments, valve installations are being undertaken as an operational activity.

⁵ 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.

Phase #	Phased Construction Spreads, Regions, or Work Areas	Phase Activity
Spread 4		ACTIVE
Spread 5		ACTIVE
Spread 6		ACTIVE
Spread 7		ACTIVE

1.0 PHASE 1: WESTRIDGE MARINE TERMINAL

<p>Construction Progress</p> <p>Onshore</p> <ul style="list-style-type: none"> Erosion and Sediment Control measures monitored and maintained; Water Treatment Equipment monitored and maintained; Delivery line structural steel installation continued and piping progressed; Completed grading and concrete works in manifold area; and Underground utilities continued. <p>Foreshore</p> <ul style="list-style-type: none"> Turbidity curtains and foreshore sediment control measures maintained; Water Treatment Equipment monitored and maintained; Underground utilities continued; Continued installation of concrete and structural works for control building; Continued coping slab construction; and Continued MVCS and delivery line pipe rack concrete foundation works. Installed ESB1 and Pipe Racks 5 – 8. <p>Marine Berth Piles</p> <ul style="list-style-type: none"> Continued installation of the MD9 and BD11 piles. <p>Loading Platforms</p> <ul style="list-style-type: none"> Structural Steel and Piping at Loading Platform (LP) 1 / 2 / 3 continued. Set Operators Shelter on Loading Platform 3. 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	30 environmental deficiencies (Table 5)	0

2.0 PHASE 2: EDMONTON TERMINAL

Construction Progress			
<ul style="list-style-type: none"> TK-1 Tank coating ongoing: Floating roof coating is 95% complete, internal coating is 95% complete, and external tank walls are 80% complete. TK-2 Tank coating ongoing: Floating roof coating is 80% complete, internal coating is 0% complete, and external tank walls are 0% complete. TK-3 Tank coating ongoing: Floating roof coating is 0% complete, internal coating is 0% complete, and external tank walls are 50% complete. TK-4 Tank coating ongoing: Floating roof coating is 100% complete, internal coating is 100% complete, and external tank walls are 0% complete. Ongoing installation of containment wall in WTA Area. Ongoing structural steel installation weld, cut grind and buff structural steel WTA, WTUA, ETE, LMA, DMA, Pump Station, ETE Manifolds, TK-1,2,3,4, MB 5, TK-05 Continue to set, tack & cut 20", 24", 30" & 36" piping in the ETE, LMA, DMA, WTA, WTUA, TK-05, Heavy Oil Manifolds and Interconnecting Piperack. Continue fabricating and installing cable tray and supports and Pull/Gland/Terminate Cables at ESB4/VFD3 Continue to Pull/Gland/Terminate Cables – Install Tray/Grounding at VFD1/2, ESB1 Ongoing Demo EHT, planning/field verifications/measurements for Meter Bank 5 (MB5) Ongoing HIFI/AC mitigation installations on Line 2 Riser area. 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	0	0

3.0 PHASE 3: SUMAS TERMINAL

Construction Progress			
<ul style="list-style-type: none"> Erosion and Sediment Control measures monitored and maintained; Tank 103 final clean-out completed; Continued civil works within Tank 104/100 work area; Continued construction of Firewater pond; and Manifold area civil piling and mechanical construction continued. 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	<ul style="list-style-type: none"> 1 reportable spill (Section 3.1.1) 25 environmental deficiencies (Table 5) 	0

3.1 Environment Summary

3.1.1 Reportable Spill Summary

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

ID # & Date	Loc.4.19.ENV.060322.00169039 3 June 2022
Description	During a period of heavy rainfall, a plume of sediment was observed in the wetland ditch south of the fence line at Sumas Terminal. The release was investigated and the source was determined to be from a drain pipe that had been taken out of service when the pipe cap came loose and plugs in the drain pipe shifted or became ineffective.

Requirement	Facilities Environmental Protection Plan, Section 6, Measure 65
Measures Taken	<ul style="list-style-type: none"> The drain pipe was re-capped and containment was placed beneath the drain pipe outfall. (Complete) The pipe was fitted with new plugs. (Complete) Water quality sampling was undertaken. (Complete) The release was reported to the BC Ministry of Environment spill reporting hotline (DGIR# 220839). (Complete)

4.0 PHASE 4: BURNABY TERMINAL

<p>Construction Progress:</p> <p>East Area:</p> <ul style="list-style-type: none"> TK-74: Completed pontoon assemblies and continued roof installation works; TK-75: Completed hydrotest; Mobilizing for coating and piping. TK-76: Completed pontoon assemblies and roof structure; TK-77: Completed hydrotest; Mobilizing for coating and piping. TK-78: Completed and fitted pontoon plates; Started installation of roof columns, girders and rafters; TK-79: Hydrotesting in progress. <p>North Area:</p> <ul style="list-style-type: none"> FW Pond retesting in progress TK-91: Completed pontoon assemblies; commenced installation of roof columns girders and rafters; TK-93: Continued welding on pontoon assemblies and installed fixed roof columns; TK-95: Commenced installation of ring 2 plates; TK-96: Continued construction of shoring wall. TK-97: Commenced installation of ring 2 plates; TK-98: Excavating east berm. <p>South Area:</p> <ul style="list-style-type: none"> Continued installation of structural steel for manifold platform and bridge Continued installation of cable tray <p>Central Area:</p> <ul style="list-style-type: none"> Continued the installation of below ground fire & foam piping and electrical conduits in existing roadways; Continued the installation of the tank product lines; Continued the installation of piles and pile caps; TK-80: Continued works on Ring 4 and continued welding on pontoon assemblies; TK-89: Area turned over to tank sub-contractor. 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
1 (Section 4.1)	0	31 environmental deficiencies (Table 5)	0

4.1 Safety Summary

Date and Issue Type	June 29, 2022 Property Damage (>\$5K) (Equipment Damage)	
Description	Measures Taken	
Incident 3031 A crew was unloading a trailer of cone roof plate in the NW corner of Tank 91. The crew completed one lift prior to incident successfully, and during the second lift the load of deck plate began to spin and contacted the crane cab resulting in superficial damage. During the lift the crew utilized a single tag line, however, the load rotated in the same direction as the tagline, thus preventing the crew from stopping the load. There were no injuries to report. The load was secured and made safe, scene frozen and reported immediately.	The immediate corrective action implemented is that any load within a 35-lift radius, the crew has to utilize two tag lines to assist in controlling the load.	

5.0 PHASE 5: JASPER PUMP STATION

Construction Progress			
<ul style="list-style-type: none"> Begin mobilizing to site, receiving materials, connecting temporary power. Begin pre-shutdown activities and prep work, structural steel assembly. Begin removal of old VFD equipment from VFD building. 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	0	0

6.0 PHASES 6 AND 17: BLACK PINES PUMP STATION

Construction Progress			
<ul style="list-style-type: none"> Ongoing minor deficiency resolution throughout facility, and general site clean up. Ongoing pre-commissioning activities including: point to point testing, meggers, loop checks, installing tags for cables and equipment. 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	0	0

7.0 PHASE 10: GAINFORD PUMP STATION

Construction Progress			
<ul style="list-style-type: none"> Ongoing minor deficiency resolution throughout facility, and general site clean up. Minimal workforce on site during this period. 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	0	0

8.0 PHASE 11: WOLF PUMP STATION

Construction Progress			
<ul style="list-style-type: none"> Ongoing minor deficiency resolution throughout facility, and general site clean up. Minimal workforce on site during this period. 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	0	0

9.0 PHASE 12: EDSON PUMP STATION

Construction Progress			
<ul style="list-style-type: none"> Ongoing minor deficiency resolution and clearing punch items. Final cleanup and demobilization from site in progress. Minimal workforce on site during this period. 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	0	0

10.0 PHASE 13: HINTON PUMP STATION

Construction Progress			
Final cleanup and demobilization from site in progress. Minimal workforce on site during this period.			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	0	0

11.0 PHASE 14: BLUE RIVER PUMP STATION

Construction Progress			
Final cleanup and demobilization from site in progress. Minimal workforce on site during this period.			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	2 environmental deficiencies (Table 5)	0

12.0 PHASE 15: MCMURPHY PUMP STATION

Construction Progress			
<ul style="list-style-type: none"> Continue work clearing punches, grounding and bonding, terminations in ESB, at main gate and HKP. Ongoing QA/QC and pre-commissioning activities Minimal workforce on site during this period. 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	1 environmental deficiency (Table 5)	0

13.0 PHASE 16: BLACKPOOL PUMP STATION

Construction Progress			
<ul style="list-style-type: none"> Ongoing minor deficiency resolution and clearing punch items. Final cleanup and demobilization from site in progress. Minimal workforce on site during this period. 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	0	0

14.0 PHASE 18: KAMLOOPS PUMP STATION

Construction Progress			
<ul style="list-style-type: none"> Continue on final grade work, blend existing ground into edge of asphalt. Finish installing valve blankets and completing other insulation deficiencies. On-going pre-commissioning activities including point to point and loop checks site wide. On-going preservation checks in ESB/VFD buildings. 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
1 (Section 14.1)	0	0	0

14.1 Safety Summary

Date and Issue Type	June 28, 2022 Medical Aid		
Description	Measures Taken		
Incident 3019 A worker was using a 5 lb sledgehammer to install a stake for silt fencing in a ditch. As the worker swung the sledgehammer, they contacted the stake with a glancing blow causing the sledgehammer to continue past the top of the stake. The worker's hand contacted the stake, causing a laceration to the front side of the left index finger. The worker was taken to the on-site medic, then re-assessed at the local hospital where they received five stitches.	The contractor updated the Safe Work Procedure for barrier installation to include use of sledgehammers in the installation of barriers. A Hazard Alert was developed describing the incident, detailing the findings of the investigation, and recommended actions.		

15.0 PHASE 19: KINGSVALE PUMP STATION

Construction Progress <ul style="list-style-type: none"> Ongoing installation of EHT in pump building and re-instate MLPs. Ongoing general cleanup in the HKP area in preparation for walk downs. Continue completing punch items on HKP and in Pump Building. 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	0	0

16.0 PHASE 22: HINTON TO BC BORDER REACTIVATION (GCC – SIMPCW-LEDCOR LIMITED PARTNERSHIP - SLLP)

Construction Progress <ul style="list-style-type: none"> Completed backfill of K406 – Yellowhead Valve Started install of K353 – Jasper Lake South RMLBV. Nesting birds at K396 – Miette No 4 MLBV has paused progress Continued install of K369 – Jasper Pump Station 24-B MLBV Started excavation at K324 Overlander RMLBV Started installation of K333 Roche Miette MLBV 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
1 (Section 16.1)	0	1 environmental deficiency (Table 5)	0

16.1 Safety Summary

Date and Issue Type	June 24, 2022 High Potential Near Miss	
Description	Measures Taken	
<p>Incident 3003 A tandem hydrovac unit was driving over a steel mat air bridge when the right tire broke through the steel mat. The right-side frame of the back unit was sitting on the steel frame of the mat over the Safety Hot Zone (SHZ). A lift plan was put in place to remove the hydrovac unit from the SHZ. After the safe removal of the hydrovac unit, the damaged steel was removed. The GEO cloth was pulled back to confirm that there was no ground pressure from the right front tire on the back unit that broke through the steel mat. The GEO was put back in place and a replacement was put in place over the SHZ. Confirmed from witnesses that prior to the incident there was no visible damage to the air bridge matting. The 24" TM Line 1 was not jeopardized by the broken steel mat.</p> <p>There were no visual signs of excessive wear and tear. The air bridge had been used for some time and there was no visual information (damage) to support that the boards would fail.</p>	<p>The contractor will actively monitor the air bridges during heavy duty vehicle crossings to determine how the mats are reacting.</p>	

17.0 PHASE 23: BC BORDER TO HARGREAVES REACTIVATION

(GCC – SIMPCW-LEDCOR Limited Partnership - SLLP)

Construction Progress			
<ul style="list-style-type: none"> Continued installation and backfilling of K424 – Fraser River No 2 MLBV. Work at K433 Moose River on hold due to nesting birds Excavation started at K457 Fraser River 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	0	0

18.0 PHASE 24: DARFIELD TO BLACK PINES REACTIVATION


(GCC – SIMPCW-LEDCOR Limited Partnership)

Construction Progress			
<ul style="list-style-type: none"> Continued install of K757 Downstream Peterson Creek Check Valve Started installation of K771 Whitewood Creek MLBV 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	1 environmental deficiency (Table 5)	0

19.0 PHASE 26: SPREAD 1 AND PHASE 27: SPREAD 2

(GCC – MIDWEST)

Construction Progress			
Spread 1 <ul style="list-style-type: none"> Valve site powerline installation at valve locations that are currently being run on generators. Removal of remaining matting at line crossings. Leak detection system work to connect Edmonton Terminal and Spread 1. Fencing, right of way grading / landscaping, tree planting and vegetation management are ongoing. 		Spread 2 <ul style="list-style-type: none"> Spread 2A clearing by hand falling Road bores continuing in Spreads 2A and 2C Hunt Creek HDD and Amazon HDD started Nesting bird and wildlife sweeps and site-specific mitigation planning. Environmental inspectors continue to monitor the right of way at high, medium, and low risk environmental features following precipitation events. GCC environmental personnel and labour crews continue to address environmental corrective actions, including maintenance and upgrades to drainage, erosion and sediment control measures. Mainline pre-hydrostatic test planning including receiving land assessment and soil sampling/analysis. 	
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
1 (Section 19.1)	0	101 environmental deficiencies (Table 5)	0

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19.1 Safety Summary

Date and Issue Type	June 22, 2022 Property Damage (>\$5K) (Motor Vehicle)		
Description	Measures Taken		
Incident 2965 A Hydrovac truck was heading westbound towards Hinton. The driver fell asleep at the wheel, drifted across the left-hand lane into the ditch.	The Fatigue Management Training was updated, revised and reviewed and conducted with the crew. The Dispatcher attended the daily tailgate meeting and focused on fatigue management to ensure active participation from all levels, and how to monitor for signs of fatigue. A Safety Stand down was held to review fatigue management and identifying fatigue in ourselves and co-workers.		

20.0 PHASE 28: SPREAD 3 AND PHASE 29: SPREAD 4A (KP 610-690) (GCC – LSLP)

Construction Progress <ul style="list-style-type: none"> • Minor clearing and danger tree felling ongoing • Mainline, stovepipe, auger bore, welding and ditching ongoing • Watercourse crossing preparation • Three fish-bearing watercourse crossings completed 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
6 (Section 20.1)	2 (Section 20.2)	148 environmental deficiencies (Table 5)	0

20.1 Safety Summary

Date and Issue Type	June 02, 2022 Property Damage (>\$5K)		
Description	Measures Taken		
Incident 2846 A crew was tasked with transporting a trench box with a side boom to the next bell hole location. During the transport, the side boom needed to navigate a congested area where pipe and a pickup truck were staged. While passing the unoccupied pickup, the bottom corner of the trench box contacted the windshield causing damage to the windshield and seal. No workers were in line of fire. No injuries occurred.	The progressive discipline policy was applied to the operator for failing to maintain line of sight with a spotter while navigating a congested area. The progressive discipline policy was applied to the driver of crew truck for parking in the line of fire. The Supervisors completed the contractor's congestion focus inspection.		
Date and Issue Type	June 07, 2022 High Potential Near Miss		
Description	Measures Taken		

<p>Incident 2870 Two Light-Duty-Vehicles (LDV) traveling on an access road, approached a railroad crossing. The first LDV crossed the tracks and came to a stop on the other side of the tracks. The second LDV followed the first LDV and came to a stop with the box of the truck protruding onto the tracks. The track control worker observed a train coming and alerted the driver of the second LDV to get off the tracks. The vehicle cleared the tracks, and the train crossed the intersection shortly thereafter. No injuries or property damage occurred.</p>		<p>A railroad crossing safety bulletin and train collision video were communicated to the crews. The incident description was communicated Project-wide. Incident investigation is ongoing and additional corrective actions may be developed as required.</p>
Date and Issue Type	June 18, 2022 High Potential Near Miss	
Description	Measures Taken	
<p>Incident 2947 A welder and helper were travelling on the right-of-way towards the highway. The welding truck driver rolled through the railway crossing. While on the tracks, the helper shouted to the driver that a train was coming. The train blasted its horn and with no time to back off the tracks the driver accelerated across the tracks. Three to five seconds after the welding truck cleared the tracks, the train crossed the intersection travelling at an estimated 70-100 km/h.</p>	<p>The progressive discipline was applied to the driver.</p> <p>A Safety Bulletin was communicated to the crew about uncontrolled railroad crossings and the expectation to stop, look both ways prior to proceeding across the tracks. A Bulletin was developed to outline that only personnel working at road 39 are permitted to use the road 39 access. Other crews required to access the area through the right-of-way.</p> <p>The Safety personnel have been actioned to monitor compliance of personnel coming to a complete stop at uncontrolled railroad crossings. Unit numbers of any infractions are reported to project leadership for progressive discipline.</p> <p>Incident investigation is ongoing. Project-wide bulletin will be distributed.</p>	
Date and Issue Type	June 20, 2022 Property Damage (>\$5K) (Motor Vehicle)	
Description	Measures Taken	
<p>Incident 2951 A Light-Duty-Vehicle (LDV) driver and a passenger left their work location after completing their required work scope. The driver drove down the highway to connect with cell service to be able to contact the Supervisor to state the job scope was completed. While travelling northbound, the driver and passenger noticed the Supervisor parked at an access road but could not safely slow down and turn into the access road due to a third-party transport truck driving close behind them. The driver decided to use another access as a turn-a-round location to return to where the Supervisor was parked. The driver turned on the left signal light and began to slow down and was struck by the transport truck on the driver's side, pushing the LDV into the northbound bar ditch. The transport truck was attempting to pass the LDV when the incident occurred. Both the passenger and the driver's side airbags deployed on impact. Both occupants were wearing their seatbelts. There were no injuries resulting from this incident.</p>	<p>The learnings from the incident were reviewed during a safety meeting and the workers were reminded of the hazards associated with driving on public roadways. Also the supervisor reviewed the SafeWork Practice (SWP) for Driving On and Off Roads with the entire crew.</p>	


Date and Issue Type	June 24, 2022 Property Damage (>\$5K)	
Description	Measures Taken	
Incident 2979 An excavator working on rocky material backed up over a large rock that had not been removed from the work area. The rock rotated up into the excavator's rotary manifold causing damage.	The supervisor applied the Progressive Disciplinary Policy to the operator because the operator did not remove the rock and did not take the time to clear the path. Management sent a message to review the importance of planning paths of travel for equipment.	
Date and Issue Type	June 28, 2022 Medical Aid	
Description	Measures Taken	
Incident 3023 A crew was pulling out a piece of equipment that was stuck on the right-of-way. After recovery, the towing sling was wedged around the anchor point. The foreman attempted to loosen the sling by pushing on the sling loop. When the sling let go, the worker's forward momentum caused them to fall forward striking their face on the piece of equipment. The contact caused a 3 cm laceration above the worker's left eyebrow. The worker was assessed by an on-site medic and referred to the local hospital for further assessment. The worker received three stitches.	This incident is under investigation.	

20.2 Security Summary

Date	Issue Type	Description	Measures Taken
June 19, 2022	Suspicious Threatening Male	Individual in black truck pulled alongside Securiguard supervisor and began yelling. Guard did not engage and drove away. A few minutes later, believed to be the same black truck was spotted on the right-of-way and activated the Zedcor Camera alarm. Individual departed. Reported to RCMP.	Reported to police
June 19, 2022	Suspicious Persons	Suspicious persons. Two trucks spotted repeatedly near fuel sources.	Reported to RCMP.

20.3 Geohazard Mitigation

Construction managed typical geohazards such as erosion potential, cut and fill slope angles, and groundwater seepage by applying measures in Condition 51		
Site Specific Mitigation Measures		
Location	Description of Geohazard	Description of Mitigation Measures

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491+780 to 492+050	Cut slope instability	A grade cut was completed in high plastic clay through the winter months. Following spring melt, a portion of the cut slope failed. Temporary rockfill berms were recommended for this section to shore up the cut slope. Permanent mitigation options are being developed. Additional boreholes have been drilled at KP491+900, and slope inclinometers and vibrating wire piezometers have been installed to monitor existing movements and understand movements for final mitigation design.
493+300 (Fraser East Landslide)	Landslides/cut slope instability	A temporary berm has been constructed between KP 493+300 and 493+330 to buttress a slide in an area where a scarp intersects the Telus Fibre Optic line. Two additional boreholes are planned at KP 493+380 to install slope inclinometers and vibrating wire piezometers. The instruments will be used to monitor slope movements and provide input to the final mitigation design. A permanent mitigation plan is being developed for this area, which will be completed following the construction of the pipeline through this area
599+000 to 601+100 (Mt Cook Toe Slopes)	Landslide/cut slope instability	A skid trail was cut into the slope below the right-of-way between KP 599+600 to 599+700 to facilitate clearing. As a result of these cuts, and in addition to spring melt, tension cracks and sliding of the slope below the right-of-way have developed. Slope inclinometers (SI) in this area have been upgraded to allow more frequent readings of slope movement. An additional SI was installed at KP 600+050 to monitor slope movements through this area. An additional SI is being installed at 601+850 to aid in monitoring the stability of the slopes at the current time.

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

Construction Progress <ul style="list-style-type: none"> - Tie-ins ongoing - Road bore drilling continues - Clearwater River DPI ongoing - Lindquist Creek trenchless crossing complete - Site Preparation and casing installation for Clearwater Residential HDD ongoing - Wetland tie-ins ongoing (Wetland Complex 44, Wetland Complex 45 and Wetland 285) - Stripping and grading of Blackpool Slope 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
5 (Section 21.1)	2 (Section 21.3)	<ul style="list-style-type: none"> • 1 environmental event (Section 21.2.1, Table 4) • 78 environmental deficiencies (Table 5) 	2 non-compliances (Section 21.4)

21.1 Safety Summary

Date and Issue Type	June 02, 2022 Medical Aid	
Description	Measures Taken	
Incident 2843 A worker sustained a facial laceration while pounding t-posts. Supervision was notified and the scene was frozen. The worker was assessed by a medic and then taken to the local hospital where the worker received twelve stitches. The worker was given clearance to return to work at full duties.	The crew held a stand-down to review the Post Pounder Job Safety Assessment. The proper techniques of post pounder use to reduce likelihood of personal injury were demonstrated with crew. The incident details were reviewed at the Weekly Safety Meeting.	
Date and Issue Type	June 10, 2022 Medical Aid	
Description	Measures Taken	
Incident 2890 A worker was disconnecting a 6-inch water hose from a submersible water pump to clear a silt blockage. When the submersible pump was lifted out of the excavation and placed on the ground for the task, it was set at over a 90-degree angle in relation to the connected water hose. This caused the rigid hose to have a sharp curve and develop a kink near the disconnection point, creating stored energy. As the worker disconnected the hose, the worker was struck in the face by the hose. The incident was reported, and the worker was assessed and treated by the on-site medic and then taken to the local hospital where the worker received 5 stitches for a laceration on the lip. The worker was also taken to the dentist for assessment and treatment for damage to a tooth. The worker was cleared to return to full duties.	The Water Pumping Job Safety Assessment was revised to include proper placement of submersible pumps in relation to rigid hoses when disconnecting to diminish the amount of stored energy. The incident learnings were reviewed at the Weekly Safety Meeting.	
Date and Issue Type	June 14, 2022 Property Damage (>\$5K) (Motor Vehicle)	
Description	Measures Taken	
Incident 2915 A water truck and a pickup truck attempted to pass by one another on the road. The water truck edged too close to the soft shoulder, which gave way, and the water truck rolled once down an embankment of approximately 20 feet and stopped upright. There was no damage or contact with the pickup truck. Supervision was notified, and a medic and rescue team were dispatched to the scene. The worker was assessed by the medic but did not require any treatment.	The Procedures/Practices were updated to include radio-controlled roads and procedures to be added to Vehicle Safety, Driving, Backing Up, and Spotting Job Safety Assessment (TMPEP). The incident learnings were shared at the Toolbox meeting and the Weekly Safety meeting. The sub-contractor held a Safety Stand Down with all truck drivers at the site including gravel truck, water truck drivers and workers from the worksite. The contractor reviewed vehicle safety, backing up and spotting Job Safety Assessment with the sub-contractor personnel to ensure that they clearly understand the Road Radio protocol.	
Date and Issue Type	June 18, 2022 High Potential Near Miss	

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Description		Measures Taken	
Incident 2944 A TMEP Inspector observed a mechanic working on an excavator boom installing a hydraulic boom pin at an approximate height of 12 feet without fall protection. The TMEP inspector intervened and paused the work. The scene was immediately frozen and contractor management was contacted. This near miss is considered an LSR gap.		The Mechanic as well as additional members of the mechanic department attended on the job Fall Protection Training that was provided by a third-party company. The worker received a one-day suspension for not wearing proper PPE while conducting the task. The learnings from the incident were included within the June 6th Fall Protection Toolbox talk and the June 23rd Weekly Safety Meeting topic on Safety Intervention were reviewed with the worker and the foreman to reiterate the expectations.	
Date and Issue Type	June 27, 2022 Other (Fire)		
Description		Measures Taken	
Incident 3012 On June 27th a small grass fire started adjacent to tie-in welding activities. The fire was extinguished quickly by crew onsite with the use of a water can. Reported to the CER.		Immediate notification and review of initial incident investigation were shared with all the contractor's foremen at the following toolbox meeting and the weekly safety meeting. A planned general inspection of Fire Prevention and Mitigation was developed as well as a Focused Inspection form to be implemented in planned inspections at the work location.	

21.2 Environment Summary

21.2.1 Environmental Events

A summary of environmental events is provided in Table 4 and a description of the events and their resolution is provided below.

ID # & Date	Loc.4.10.18.ENV.062822.00170140 28 June 2022
Description	<p>On June 27, 2022 at KP 706.7 near Vavenby, BC, a Contractor labourer (Labourer) on the backfill crew located a nest with a single egg within a piece of construction equipment and took a picture of the nest and the egg. The equipment (ozzie padder) had been parked in an active work area for 2 weeks and had been tasked on June 27, 2022 to backfill an open ditch. The subject work area had been swept for nesting birds by a Resource Specialist on May 20, 2022 and had been in active construction since that date. An equipment inspection was performed by the Contract Equipment Operator (Operator) on June 27, 2022 with no noted defects or environmental concerns (i.e., bird nests) prior to using the equipment on that same day. At the end of the day on June 27, 2022, the Labourer was aiding the Operator to investigate a potential hydraulic leak on the equipment when the nest and egg were identified. The Labourer immediately reported the finding to the Contractor On-site Supervisor (Supervisor); however, the Supervisor did not report the observation to any Trans Mountain representative as required. The TM General Construction Inspector responsible for the crew and the TM Environmental Inspector (EI) were both available to the crew via phone throughout the day on June 27 to address concerns and respond to environmental issues.</p> <p>The backfill crew (Crew) returned to the site the following day on June 28, 2022, and the On-site Supervisor, when asked about the location of the nest by the Labourer, indicated that the nest was no longer on the equipment and to continue work. Later that day the Labourer reported the nest (which included showing the photo) to a TMEP General Inspector, and the TMEP General Inspector contacted the TMEP EI to investigate. The TMEP EI attended the site that same day and was not able to locate the nest on the piece of equipment or within the general area. A TMEP EI later returned to the site and located the nest approximately 7 metres away from the piece of equipment; however, could not locate the egg or any remnants of the egg.</p>

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	<p>An incident investigation was initiated by TMEP. Through the course of the investigation, it was determined that the Supervisor had removed the nest and egg and placed it to the side of the right-of-way. It was also determined that the Supervisor and Crew confirmed receipt and review of the "Environment Bulletin – Potential for Birds to Nest on Project Equipment, Materials and Infrastructure". This environment bulletin was developed to outline the risk of discovering bird nests on project equipment and the appropriate protocol for dealing with the discovery of a nest on a piece of equipment, which included immediately reporting the discovery to TMEP so that appropriate protection actions could be implemented. The bulletin was distributed to all parties working on the Trans Mountain Expansion Project on June 22, 2022 and relayed to the Supervisor during the weekly safety meeting on June 23, 2022. During the incident investigation the Supervisor confirmed he was aware of the requirement to immediately report nest discoveries to TMEP. The site remained buffered until July 7 when after consultation with ECCC the equipment was released back to work and the location where the nest was placed to the side of the right of way remains excluded from active work areas.</p> <p>The incident was reported to ECCC via the BC Interagency Wild Bird Mortality hotline.</p>
Requirement	C 72 Pipeline EPP, Section 7.0, General Pipeline Construction Mitigation Measures 8-11
Measures Taken	<p>Trans Mountain took the following actions</p> <ol style="list-style-type: none"> 1. Work in the area was immediately stopped and the work area was secured. (Complete) 2. The incident was reported to ECCC via the BC Interagency Wild Bird Mortality hotline. (Complete) 3. The Contractor on-site supervisor was released from the Project as a result of not following TMEP protocols for discovery of nesting birds. (Complete) 4. An investigation is underway and further corrective actions may be assigned based on the results of the investigation. (In progress)


21.3 Security Summary

Date	Issue Type	Description	Measures Taken
June 16, 2022	Suspicious Activity	Crane operator discovered boom had been moved. Crane left unlocked with key in ignition. (Spread 4b, SF38)	No damage or theft and not reported to RCMP. Reminded to lock and remove the keys nightly.
June 18, 2022	Trespassing	Two males entered the site and were confronted by Zedcor alarm. L1 locates a short distance away and they enter the on-call yard. (Spread 4b, SF38)	Police were called and suspects apprehended.

21.4 Non-Compliance Summary

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

ID # & Date	Loc.4.10.76.ENV.022322.00170237 23 February 2022
Description	On June 21, 2022, Trans Mountain received the final copy of the compliance verification report for CV2122-110 wherein the CER issued a corrected non-compliance for missing and or downed snow fences surrounding three excavations visited during the inspection. Sites noted included a bellhole at Lindquist Creek, Mann Creek HDD entry hole subsidence, and School Creek ESC drainage basin.
Requirement	C 72 Pipeline EPP, Section 11.0, Measure 15
Measures Taken	The missing or downed snow fence was immediately installed/repared. (Complete)
ID # & Date	Loc.4.10.33.ENV.022422.00170238 24 February 2022
Description	On June 21, 2022, Trans Mountain received the final copy of the compliance verification report for CV2122-110 wherein the CER issued a notice of non-compliance for drainage erosion and sediment control measures on a fully stripped steep slope adjacent to the Clearwater River DPI.

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Requirement	C 72 Pipeline EPP, Section 7.0, Measures 95
Measures Taken	Trans Mountain developed a site-specific Drainage, Erosion and Sediment Control (DESC) Plan for the Clearwater River DPI slope and provided it to the CER. (Complete) DESC measures were implemented as described in the plan. (Complete) Control measures will be inspected at reasonable intervals to ensure functionality and repairs will be completed as required (i.e., after rain events) as described in the Pipeline EPP and as outlined in the Soil Erosion and Sediment Control Contingency Plan. (In progress)

21.5 Geohazard Mitigation

Construction managed typical geohazards such as erosion potential, cut and fill slope angles, and groundwater seepage by applying measures in Condition 51		
Site Specific Mitigation Measures		
Location	Description of Geohazard	Description of Mitigation Measures
697+500 to 697+700	Slope Instability (Groundwater Seepage)	To address slope instability in the creek valley slopes, the cut slopes were shallowed to 2.5H:1V. A series of pumping wells were installed for water management. The alignment was revised within the right-of-way and the excavation depth of the trench shallowed. Slope restoration included subsurface trench breakers and subdrains, and surface gravel lined swales.
738+380	Relict Landslide (geohazard)	A slope inclinometer was installed within the body of relict landslide. Data will be collected before, during and after construction.
738+550	Landslide (geohazard)	The alignment within the right-of-way was adjusted to increase the offset distance between TMEP and a landslide. A drainage plan was implemented to reduce water contributing to slope instability within the area.


22.0 PHASE 30: SPREAD 5A (KP 806 – 990) (GCC – SMJV)

Construction Progress			
Construction activities executed in Spread 5A during June 2022 included mainline construction activities (849 to 984); clearing, stripping, grading trenching, welding, lowering, and backfilling are in progress, CW#4 HDD casing removal and installation in progress. HWY 1 Micro Tunnel, Pembina Direct Pipe Installation, and Jacko Lake Micro Tunnel progress ongoing..			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
4 (Section 22.1)	0	<ul style="list-style-type: none"> 2 environmental events (Section 22.2.1, Table 4) 80 environmental deficiencies (Table 5) 	0

22.1 Safety Summary

Date and Issue Type	June 07, 2022 High Potential Near Miss	
Description	Measures Taken	
Incident 2877 A two-person drilling and blasting crew finished a blast and were waiting for the okay from the Confined Space Monitor to enter the shaft to remove the blasting mats. Before entering, an air quality test was conducted to make sure the shaft was safe to enter. The initial test	The Job Safety Assessment was revised and reviewed with the workers involved. A description of the incident was shared across the Project.	

<p>was conducted after the 30-minute wait period and showed the gas monitor reading at 30 ppm of carbon monoxide (CO). The support crew added a fresh air supply via the air mover. The drilling and blasting crew entered the shaft with the man basket that was attached to a boom truck, without getting permission from the confined space monitor or an additional air quality test being done. As the crew was getting out of the man basket their personal gas monitors went off reading >30 ppm, and the drilling and blasting supervisor quickly signaled the crane operator to lift the crew out of the shaft. The crane operator did not identify the emergency and waited for the riggers to return to the area to give the signal to get the drilling and blasting crew out of the shaft. The drilling and blasting crew were in the shaft approximately 1 to 2 minutes. The incident was not reported until the following morning by either subcontractor on site.</p>		<p>The confined space monitor and the gas detection monitor tube were relocated to the opposite side of the shaft to get away from the fresh air supply. A second gas monitor was added to the shaft to have more of the shaft floor accurately monitored. This monitor is mobile.</p> <p>The contractor ensured that all the corrective actions, and revisions to the Job Safety Assessment were implemented in the work site.</p> <p>The item is still under review and additional corrective actions may be required.</p>
Date and Issue Type	June 08, 2022 Lost Time	
Description	Measures Taken	
<p>Incident 2878</p> <p>A rock truck operator was cleaning the mirrors on the driver's side of the rock truck. A shovel was strapped to the handrail and the fire extinguisher was on the platform besides the mirrors. While attempting to clean the side mirrors, the worker slipped and fell to the ground, losing consciousness. The worker instead of grabbing the handrail on top of the truck cab, grabbed the edge of a shovel blade and fell.</p> <p>Inspectors found the worker on the ground, attended to the fallen worker and called for the on-site medic. The medic arrived at the location, requested an ambulance, and the worker was transported to the local hospital for care and assessment.</p> <p>The worker suffered the following: Small laceration to side of head; broken right shoulder blade; broken right collar bone; 13 rib fractures (5 broken ribs); broken left hand. Reported to the CER.</p>	<p>An alert was issued by the contractor that no tools are to be strapped to a safety hand rail. Rock truck operators were to ensure any hand tool strapped to a hand rail was removed.</p> <p>Fire extinguishers were relocated on rock trucks to an area that will not pose a hazard to any personnel doing maintenance/cleaning.</p> <p>A Procedure was developed for cleaning rock truck side mirrors, involving folding the mirror frames inward for safety and all rock truck operators will be trained in this procedure.</p> <p>An equipment Hazard Assessment Form was developed and a hazard assessment must be completed on any new models of equipment that arrive on the project. This hazard assessment is in conjunction with the mechanical inspection. Any findings of hazardous items (i.e.: fire extinguisher mounting locations) will be discussed with mechanics to eliminate or mitigate any hazard. If the mitigation or elimination is not possible then a hazard awareness document will be developed with which equipment operators will be advised and trained in the best way that they can protect themselves from the known hazard.</p>	
Date and Issue Type	June 13, 2022 High Potential Near Miss	
Description	Measures Taken	
<p>Incident 2908</p> <p>A worker noticed an undetonated explosive in the muck pile after it had been removed by an excavator from a shaft. Upon noticing the explosive, the supervisor was notified, and the Blaster in Charge was called to return to the site.</p> <p>The root cause was inadequate evaluation of changes; however, the blaster could not anticipate the fractured rock shifting prior to the blast.</p>	<p>The Blaster in Charge immediately removed fragmented explosives and secured them in the magazine.</p>	

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Date and Issue Type		June 27, 2022 High Potential Near Miss	
Description		Measures Taken	
Incident 3009 A TMEP Subcontractor entered a confined space containing levels of CO that violated their Confined Space Entry Policy. No injuries occurred, the scene was frozen, work was shut down and the contractor's Safety was notified.		This incident is under investigation.	

22.2 Environment Summary

22.2.1 Environmental Events

A summary of environmental events is provided in Table 4 and a description of the events and their resolution is provided below.

ID # & Date	Loc.4.12.ENV.060122.00168942 1 June 2022
Description	Incidental take (road strike) of one Yellowed-bellied Racer snake on access road along McQueen Lake (KP 839.40) (5-A-14.1-A.1.2).
Requirement	C 72 Pipeline EPP, Section 9.0, Access Road - Mitigation Measures 15
Measures Taken	<ul style="list-style-type: none"> • Work was stopped and the Wildlife Species of Concern Discovery and Encounter Contingency Plan was implemented. (Complete) • The TMEP Environmental Inspector documented and recorded the incident as per Appendix E Record of Wildlife Hunted, Trapped, or Killed based on the Provincial Reptile Permit KA21-296635. (Complete) • Trans Mountain raised wildlife awareness by discussing seasonal snake migrations to summer foraging areas from overwintering dens with workers. (Complete) • Trans Mountain implemented additional cautionary wildlife signage. (Complete) • Trans Mountain deployed a Wildlife Resource Specialist to assess the mortality location and determine if additional mitigation measures are required. (Complete)
ID # & Date	Loc.4.12.35.ENV.061522.00169975 15 June 2022
Description	Incidental take (road strike) of one Great Basin Gopher snake on the eastern edge of the right-of-way (KP 837.65).
Requirement	C 72 Pipeline EPP, Section 9.0, Access Road- Mitigation Measures 15
Measures Taken	<ul style="list-style-type: none"> • Work was stopped and the Wildlife Species of Concern Discovery and Encounter Contingency Plan was implemented. (Complete) • The TMEP Environmental Inspector documented and recorded the incident as per Appendix E Record of Wildlife Hunted, Trapped, or Killed based on the Provincial Reptile Permit KA21-296635. (Complete) • Trans Mountain raised wildlife awareness by discussing seasonal snake migrations to summer foraging areas from overwintering dens with workers. (Complete) • Trans Mountain implemented additional cautionary wildlife signage. (Complete) • Trans Mountain deployed a Wildlife Resource Specialist to assess the mortality location and determine if additional mitigation measures are required. (Complete)

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22.3 Geohazard Mitigation

Construction managed typical geohazards such as erosion potential, cut and fill slope angles, and groundwater seepage by applying measures in Condition 51		
Site Specific Mitigation Measures		
Location	Description of Geohazard	Description of Mitigation Measures
895+070 to 895+110	Groundwater seepage	A granular drainage blanket was proposed and constructed along the grade cut between approximately KP895+070 and 895+110 to address persistent seepage. A non-woven geotextile was placed on the surface of the slope to minimize erosion of finer material into the granular blanket. The drainage blanket was tied into a cross-drain (French drain) to discharge the flow beneath restoration fill and off the right-of-way.
963+750 to 963+800	Rockfall / land slide	To mitigate the landslide / rockfall risk, 2 m high HESCO barriers were placed on a bench, up-slope of the right-of-way and 2 m by 2 m earthen berms were constructed at the toe of the slope adjacent to the right-of-way.

23.0 PHASE 30: SPREAD 5B (KP 990 – 1075) (GCC – KIEWITT-BONATTI)


Construction Progress Construction activities focused on clearing, right-of-way preparation, access road development, installation of pipe, and installing and maintaining watercourse vehicle crossings throughout the spread. Reclamation is being completed in some areas. Planning and site preparation for multiple isolated/open-cut Coquihalla River crossings and the HDD of Dry Gulch is underway. The geotechnical drill at the Mountain 3 crossing is ongoing.			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
10 (Section 23.1)	0	<ul style="list-style-type: none"> 1 reportable spill (Section 23.2.2) 114 environmental deficiencies (Table 5) 	0

23.1 Safety Summary

Date and Issue Type	June 01, 2022 Property Damage (>\$5K) (Motor Vehicle)		
Description	Measures Taken		
Incident 2829 A truck driver was unable to access the highway and made the decision to turn around in the Chevron parking lot. When pulling through under the canopy the arm of the excavator that was being hauled contacted the soffits of the canopy, causing damage to the soffit on the underside of the canopy. No Injuries occurred.	The contractor developed a safety bulletin on proper loading of all equipment including checking the heights of the load. A mechanic was dispatched to equipment location to assess excavator prior to releasing it for work. The operator of the low boy was removed from transporting equipment and was contained to only operating a fuel truck, a highboy, a water truck and general supplies. The sub-contractor logistics manager ordered height sticks for all sub-contractor's trucks and had a meeting with all their drivers reviewing the use of the height sticks and the regulations of over height loads.		

Date and Issue Type	June 03, 2022 High Potential Near Miss	
Description	Measures Taken	
Incident 2857 It was observed by a member of a work crew that there was an electrical storm nearing the work area. The worker observed a flash-bang of less than 30 seconds and relayed that information to the TMEP General Inspector on location. The TMEP General Inspector directed the Crew Foreman to shut-down work activity in that area. There was some delay in shutting down all work with that crew. Automatic welding was in process and this took some time to shut down the operation, safe-out the area so that the crew could then shelter in vehicles as directed by Inspection and Foreman. The delay in shutting down the work activity and sheltering in vehicles was reported as a near miss.	The Team reviewed the Severe Weather Safe Work Practice with the crew, and a severe weather safety bulletin was issued. The 30/30 rule was reviewed at the Foreman's Morning Meeting to ensure that Foremen understand that when a flash/bang event occurs that should stop work/shelter in place, it is their responsibility to ensure that everyone in their crew is alerted by radio or walking the line quickly and communicating to all to minimize the time it takes to shelter in place.	
Date and Issue Type	June 07, 2022 High Potential Near Miss	
Description	Measures Taken	
Incident 2864 A driver of a van was pulling out of a Project construction yard onto the highway and was observed by an inspector talking on their cell phone. The driver merged onto the highway at a slow rate of speed, cutting off other vehicles driving at highway speed. The driver continued speaking on their cell phone until they merged off the highway.	The driver was re-assessed for competency to operate a light vehicle. Disciplinary action was applied to the driver as per company and project requirements.	
Date and Issue Type	June 02, 2022 Property Damage (>\$5K)	
Description	Measures Taken	
Incident 2865 During lowering-in activities at a road crossing, it was observed that the pipe contacted the fibre optic sensor causing damage that will require it to be spliced. During the operation, directions to the Foreman to adjust the approach were ignored.	A performance discussion was held with the worker by the Assistant Project Director and the Health and Safety Manager to ensure expectations are clear moving forward. The Foreman attended a Supervisor Training session addressing hotline reporting requirements.	
Date and Issue Type	June 03, 2022 Property Damage (>\$5K)	
Description	Measures Taken	
Incident 2866 During lowering in activities at road 28, it was observed that the pipe's rock guard was damaged when it made contact with the side of the ditch. During this operation, the Inspector and Supervisors request to adjust or stop was ignored.	A performance discussion was conducted with the employee, led by the Assistant Project Director and Health and Safety Manager, to ensure that expectations are clearly set moving forward.	
Date and Issue Type	June 15, 2022 High Potential Near Miss	
Description	Measures Taken	
Incident 2926 An excavator operator was directed to muck out a blast area to prove the face as per the next blast requirements. As the excavator operator started digging out the blast area, they noticed an	The Blaster in Charge adjusted for faster timing on blasts with hole patterns of .6 x.6 m or smaller.	

<p>undetoned stick of product. The operator stopped work immediately and notified the Blaster in Charge and the crew. The scene was frozen, and the misfire procedure was enacted. The Blaster in Charge retrieved the undetonated product and removed it from the area and placed it in the powder truck storage box. The Blaster in Charge then directed the excavator operator to slowly clear the area of debris to ensure that no other product was found. Blaster in Charge determined that the area was clear of undetonated product. The area was then backfilled for the next blast. Upon investigation, it was determined that the blasting cap went off but there may have been a bridge between the sticks of powder causing the cap stick to blast but the top stick to be un-blasted.</p>		<p>The Blaster in Charge will be adding DET cord to every stick - Tracing all sticks to be sure that all sticks are still connected even if there is a column shift.</p>
Date and Issue Type	June 16, 2022 High Potential Near Miss	
Description	Measures Taken	
<p>Incident 2928 A worker was in their parked truck when they observed a tractor-trailer with two occupants driving through the laydown parking lot area. The driver of the truck was observed holding their cell phone up and focused on the device. The observer drove to where the tractor-trailer driver had parked and had a conversation with the driver about this being a Life Saving Rule Gap. Both occupants of the tractor-trailer were respectful about the discussion and did not deny the LSR Gap that was observed.</p>	<p>The driver was issued a written warning and received a 3-day suspension.</p> <p>The sub-contractor developed a communication for review at the Foreman meeting</p> <p>The logistics group changed practice of texting the driver changes to work fronts, so that the swamper who isn't in control of the vehicle receives them and can communicate changes to the driver.</p> <p>A Lessons Learned Bulletin was developed and issued.</p>	
Date and Issue Type	June 16, 2022 High Potential Near Miss	
Description	Measures Taken	
<p>Incident 2932 A Morooka unit was carrying a welding shack. The welding shack twisted while climbing a hill. Several workers were assigned to straighten the shack and re-tie it to the Morooka. During this task, one of the workers walked under the shack to tie it to the Morooka. A TMEP representative was passing by and pointed out to the foreman that a worker was under the suspended welding shack while tying it to the Morooka. The worker was called out from under the shack, and work was stopped.</p>	<p>A safety stand-down with crew was held to review the hazards associated with suspended loads.</p> <p>The crew reviewed the Rigging and Hoisting and Pipe Gang Job Hazard Assessments (JHA) with the work crew.</p> <p>A lessons learned bulletin was developed and shared.</p>	
Date and Issue Type	June 16, 2022 Property Damage (>\$5K) (Motor Vehicle)	
Description	Measures Taken	
<p>Incident 2933 A pipe-hauling tractor-trailer unit left the right-of-way, and the trailer was damaged. The trailer in tow had the steering axle uncoupled to assist with the tight turns on the right-of-way. After completing the turn, the steering axle first steered to the right then hard left and caught the shoulder of the road ditch and followed it in.</p>	<p>The driver was removed from the worksite.</p> <p>It was communicated that the site inspection form should be used while hauling in challenging areas.</p> <p>The incident was reviewed at the tailgate meeting.</p> <p>Axels will only be unlocked once the tractor-trailer has reached the turn-around location</p>	
Date and Issue Type	June 21, 2022 High Potential Near Miss	
Description	Measures Taken	

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<p>Incident 2953 Traffic was stopped at an intersection for off-loading equipment. The traffic team had all three roads (east, south, north) leading into the intersection blocked with Automatic Flagger Assistance Devices (AFADs) until equipment and workers were clear. An Inspector exited the highway and approached the intersection heading east. The inspector did not stop behind the traffic that was stopped at the AFAD but instead put on their hazard lights, pulled to the left of the stopped traffic and proceeded slowly through the intersection and back onto the eastbound on-ramp and back onto the highway.</p>	<p>The TMEP inspector retook the TMEP 0005 Internal driving training module.</p> <p>TMEP Supervision issued a written progressive disciplinary action to the Inspector for the Life Saving Rule (LSR) violation</p> <p>TMEP prepared a safety moment to be presented at an Inspection meeting.</p>
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23.2 Environment Summary

23.2.1 Reportable Spills

ID # & Date	Loc.4.13.76.ENV.061022.00169345 10 June 2022
Description	Approximately 5 m ³ of non-toxic bentonite drilling fluid was inadvertently released into a flowing S6 non-fish bearing watercourse near the Mountain 3 entry drill pad during the casing leak test.
Requirement	C 72 Pipeline EPP, Appendix B, Section 3.0 Bentonite Fluid Release Contingency Plan
Measures Taken	<ul style="list-style-type: none"> • The on-site crew immediately halted adding drilling fluid and began searching for surface releases once a loss of pressure was identified. (Complete) • Sandbags were used to isolate and contain the drilling fluid. (Complete) • A hydrovac removed the released drilling fluid and temporarily stored it in a shale bin until it was removed from site and disposed of at a TMEP-approved facility. (Complete) • The inadvertent fluid release area was contained and the watercourse was isolated with a pump around to facilitate cleanup of the release. The isolation remained in place until corrective measures to stabilize the cased entry point was complete (cementing of the HDD entry point). (Complete) • The release was reported to the CER (INC 2022-102) and Emergency Management BC (#220926). (Complete)

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

<p>Construction Progress</p> <p>Spread 6 & 7A continued with construction activities including:</p> <ul style="list-style-type: none"> ▪ Focused on clearing, right-of-way access preparation, access development, topsoil stripping, grading, ditch excavation and pipe installation (i.e., stringing, prep, welding, blasting, coating, and lower in) and tie-ins – including road and infrastructure crossings. ▪ Spread 6 work continued to focus on work within the Kinkora and Ledgeview Golf Courses. ▪ Spread 7A commenced activity within the Redwoods Golf Course – preparing the major trenches crossing work pads for the 217a St HDD and Hope Redwoods DPI. ▪ Watercourse crossing installation and planning continued in both spreads 6 and 7A. ▪ Spread 6 Clayburn Nursery DPI entry pad is being prepared for the major trenchless crossing. ▪ Right-of-way and auxiliary yard maintenance with a focus on ESC mitigations and surface water management. ▪ Continued resource specialist field work including environmental feature staking and flagging, wildlife surveys/sweeps and salvages, fish salvage and water quality monitoring, raptor and migratory bird nest sweeps, soil assessments, contamination investigation, and archaeological investigations.
Issues and Non-Compliances

Safety Issue	Security Issue	Environment Event	Non-Compliance
1 (Section 24.1)	5 (Section 24.2)	24 environmental deficiencies (Table 5)	0

24.1 Safety Summary

Date and Issue Type	June 10 , 2022 Medical Aid		
Description	Measures Taken		
<p>Incident 2893</p> <p>A worker was removing the cutting edge from a skid steer bucket. As the last bolt was being removed with an impact gun and the worker placed their hand on the bottom of the bolt (under the bucket), the bolt spun free resulting in the threads causing a laceration to the tip of the worker's finger. The on-site medics were called for an assessment. The medics recommended the worker be transported to a hospital for further assessment.</p>	<p>The Supervisor reviewed the Job Hazard Assessment with the workers.</p> <p>The worker was re-evaluated using the competency evaluation for their role.</p> <p>A Hand Injury Prevention Focus Inspections was developed and shared with the crew.</p>		

24.2 Security Summary

Date	Issue Type	Description	Measures Taken
June 1, 2022	Theft of fuel Under \$5000	500L of fuel was taken from an excavator. Approximate value of \$1000.00. <i>Bridal Falls Golf Course, KP 1078</i>	No suspects, Reported to RCMP. In the future equipment is to be left at a location with cameras and recommended locking fuel caps.
June 9, 2022	Male with Shotgun	Male with shotgun spotted by nest surveyors. Determined to be an individual who was given permission by the landowner to hunt coyotes nearby. (Spread 7A, KP1108)	Security engaged and landowner agreed to advise individual not to hunt during construction hours.
June 18, 2022	Suspicious Male	Suspicious male/vehicle on right-of-way. Guard asked the man what he was doing there and he indicated he was doing a safety risk assessment. No TM work of the sort was scheduled. When asked for TM ID he had none, when asked for drivers licence, he could not produce. When the guard indicated he would be advising TM Security Manager the individual indicated "his work was done" and he departed the area. (Spread 7A, Telegraph Trail, Langley, KP 1148)	Pictures of the individual and vehicle were given to police who indicated they would have a discussion with this person.
June 19, 2022	Theft Under \$5000	Individual on scooter removed 1 of 3, 50' copper cables from pump/power system. Estimated value of cable is approx. \$1500.00. (Spread 7A, Langley, KP1155)	Security footage supplied to RCMP. Police investigation ongoing.
June 20, 2022	Theft Under \$5000	Theft of Traffic Signs. Camera footage shows individual removing 12 signs and placing them in a vehicle. Approximate value \$700.00. (Spread 7A, Surrey)	Footage unable to provide clear image. Reported to RCMP visual for identification purposes.

25.0 PHASE 36: SPREAD 7B (KP 1165.2 - 1180.15)

(GCC – KLTP)

Construction Progress As of the end of June 2022, right of way preparation is ongoing on 22 work fronts, and 22 work fronts are in full pipeline construction and 6 work fronts have been completed and are being reclaimed. The work fronts are within the following KPs: 1165 to 1179.85			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
2 (Section 25.1)	1 (Section 25.2)	58 environmental deficiencies (Table 5)	0

25.1 Safety Summary

Date and Issue Type	June 22, 2022 High Potential Near Miss		
Description	Measures Taken		
<p>Incident 3006</p> <p>A subcontractor trailer truck pulled onto a road with upcoming traffic and backed down to site access without having traffic control present. The truck was backed into site without incident. The trailer truck fully occupied a lane and a half of the travelled portion of the roadway.</p> <p>The contractor failed to communicate and coordinate with Traffic Control that they would be needed for the arrival of the semi-truck.</p>	<p>The Foreman provided training on traffic control expectations, communication and set up prior to commencing work.</p> <p>An interactive activity for the involved crew was held. The activity gives the worker, a scenario that requires the worker and the crew to use decision making to create an adequate plan to execute. This activity was documented and handed in for review.</p>		
Date and Issue Type	June 23, 2022 High Potential Near Miss		
Description	Measures Taken		
<p>Incident 2977</p> <p>A 40-ton rock truck was tasked with moving soil. A typical procedure would include having a lane closure on government streets to allow for the rock truck to use the public road to reverse and turn into the work location under a traffic control plan. The permit for lane closure ends at 3pm and therefore, the traffic control person on site took down the lane closure. The traffic control person notified one of the ground spotters but failed to notify the foremen of the areas and left the site at 3 pm. The rock operator was having equipment issues and had trouble moving the equipment. The operator asked for the foreman's help to troubleshoot the issue and was able to move the truck forward. The foreman stayed in the vehicle to supervise the gauges for any abnormalities. The rock truck operator drove onto the road using ground spotters to ensure the road was clear. The crew failed to recognize there were no traffic management plan, lane closures, or traffic personnel available at this time. A TMEP Construction Manager observed this and stopped the work once the truck was off the road.</p>	<p>The contractor communicated to the Foremen/Lead Hands to put up a barrier (i.e. delineators/blue fence/barrier) between the road and entrance to visually indicate that there is no longer a lane closure in place for areas requiring traffic control plans.</p> <p>The rock truck operator completed refresher training on the traffic control requirements.</p> <p>The manager has to communicate/coach their workers to inform the foreman that the lane closure is being taken down.</p>		

25.2 Security Summary

Date	Issue Type	Description	Measures Taken
June 27, 2022	Vandalism to Fence	Male entered right-of-way carrying incendiary devices, threatening/attempting to light equipment on fire. Security intervened (Spread 7B).	Police attended and subject was taken into custody.

26.0 PHASE 39: BURNABY TUNNEL

Construction Progress			
Mining at the 2034 metre point			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	5 environmental deficiencies (Table 5)	0


27.0 TEMPORARY INFRASTRUCTURE

27.1 Spreads 1 and 2 – Temporary Infrastructure Sites

<p>Construction Progress Stockpile storage as June 30, 2022.</p> <p>ENO055 Enoch Stockpile Site Ongoing yard security. Received 50,414 m of pipe. Released 50,414 m to Spread 1 GCC.</p> <p>EDS003.2 Edson Stockpile Site Ongoing storage and yard security; Received 195,945 m of pipe. Released 188,058 m to Spread 2 GCC; 2,725 m to Reactivation; 1,019 m to Facilities; 24 m to Operations. Bends, valve assemblies and miscellaneous equipment received and released at site.</p> <p>ENO047 Northgate Stockpile Site Ongoing pipe storage and yard security; Received 103,988 m of pipe or 104% of anticipated inventory. Released 75,567 m to Spread 2 GCC, and 239 m to Facilities. 100% of construction bends, valve assemblies and miscellaneous equipment received and will be released as required.</p>			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	0	0

27.2 Spread 3 – Temporary Infrastructure Sites

<p>Construction Progress Stockpile storage as of June 30, 2022</p> <p>VAL025 Valemount Stockpile Site Received 130,815 m of pipe or 105% of anticipated inventory. Released 81,126 m to Spread 3 GCC and 150 m to Facilities; Bends and miscellaneous equipment received and released at site. Gate valve deliveries are ongoing.</p> <p>VAL026.1 Valemount Office/Yard Ongoing use as construction office and yard</p> <p>VAL028 Valemount Camp is open and operating in compliance with COVID procedures and protocols. Daily occupancy varied in June from 95 - 443 camp residents (average 402).</p> <p>BLU007 Blue River Camp The accommodation trailers are now open and operating in compliance with COVID procedures and protocols. Daily occupancy varied in June from 157 - 336 camp residents (average of 277).</p> <p>BLU008 Blue River Yard - ongoing construction office and yard</p> <p>VAL078 Cedar Side Parking - ongoing parking</p>			
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Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
1 (Section 27.2.1)	1 (Section 27.2.2)	12 environmental deficiencies (Table 5)	0

27.2.1 Safety Summary

Date and Issue Type	June 07, 2022 Medical Aid	
Description	Measures Taken	
Incident 2873 A worker was about to exit a camp in a vehicle (Toyota Rav-4) near a work location. The worker reported that they had their feet on the ground outside and was turned facing the vehicle with the driver's door open. Holding the radio in the left hand, a gust of wind caught the door and swung it closed. The worker reached out with the right hand to try to catch the door, but the force of the wind caused the door to strike the top of the right hand. The worker did not seek medical attention or report the incident to a supervisor at the time and described the area as a bit sore. The worker visited the onsite medic the following morning. The Medic examination revealed swelling and soreness. The medic suggested to follow-up with x-rays.	The worker signed off on the Toolbox Talks on Hazard Identification and Pinch Points. Reporting requirements were reviewed with the worker and signed off on reporting memo document.	

27.2.2 Security Summary

Date	Issue Type	Description	Measures Taken
June 5, 2022	Found Cannabis	Bag of marijuana found in boot room. Bag delivered to security and upon investigation determined individual who dropped the bag. Individual resigned. (Valemount Camp)	Camp privileges revoked. Matter referred to GCC to determine fit-for-duty.

27.3 Spread 4 – Temporary Infrastructure Sites

Construction Progress as of June 30, 2022 CLE011 Clearwater Camp Camp is operating in compliance with COVID procedures and protocols. Daily occupancy in June ranged from 389 - 421 camp residents (average 405). VAV009 Vavenby Stockpile Sit Received 157,599 m of pipe. Released 32,472m to Spread 4A, 72,651m to Spread 4B, and 618 m to Facilities. Bends and miscellaneous equipment received and released at site. Gate Valves deliveries are ongoing. CLE081 Johnson Pit – ongoing parking MC078 McMurphy Pump Station Laydown – ongoing trailer storage			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	4 (Section 27.3.1)	2 environmental deficiencies (Table 5)	0

27.3.1 Security Summary

Date	Issue Type	Description	Measures Taken
June 1, 2022	Possession of Cocaine	Cocaine found in dorm room. Cleaning staff found bag with residue. Tested positive for cocaine. (Clearwater Camp)	Camp privileges revoked. Matter referred to GCC to determine fit-for-duty and grounds for dismissal.
June 3, 2022	Possession of Cannabis	Smoking marijuana in dorm room. Guest in another room reported the smell of cannabis and upon investigation, room occupant admitted to possessing and smoking. (Clearwater Camp)	Camp privileges revoked. Matter referred to GCC to determine fit-for-duty.
June 5, 2022	Possession of Cannabis	Found Shatter (Marijuana). Staff found black package in the middle of the floor and NIK tested positive for THC. (Clearwater Camp)	Guest who dropped package was identified and camp privileges revoked. Matter referred to GCC to determine fit-for-duty.
June 21, 2022	Possession of Cannabis	Individual spotted in parking lot smoking marijuana in his vehicle. When approached by guard, he admitted and showed the package labelled "THC". (Clearwater Camp)	Camp privileges revoked. Matter referred to GCC to determine fit-for-duty. Matter referred to GCC to determine fit-for-duty.

27.4 Spread 5 – Temporary Infrastructure Sites

<p>Construction Progress stockpile storage as of June 30, 2022</p> <p>KAM013 Cando Rail Stockpile Site – Ongoing pipe delivery, storage and security; Received 136,111m of pipe. Released 75,028m to Spread 5A (north) and 9,647m to Spread 5A (south); 831 m released to Facilities. Bends and miscellaneous equipment received and released at site. Gate valve deliveries are ongoing. miscellaneous equipment continues to be received and released as required. The KAM013 Site is being used to stockpile Project Contingency line pipe, as well as most of the Jindal NTP4 deliveries, which will be released to various Spreads as requested by Trans Mountain.</p> <p>KAM014 Caledonia – ongoing construction yard and office</p> <p>HOP052 Hope Stockpile Site – Ongoing pipe delivery, storage and yard security; Received 87,371m of pipe or 97% of anticipated inventory; 27,307m released to support Spread 5B; 299m released to Spread 6 and 84 m to Facilities. Bends and miscellaneous equipment received and released at site. Material continues to be released from site and brought for off-site assessment in conjunction with ongoing material salvage efforts following the November 2021 flooding event.</p> <p>MER015 Merritt Stockpile Site – Received 90,153m of pipe or 96% of anticipated inventory; 35,784m has been released to support Spread 5A (south) construction; Bends and miscellaneous equipment received and released at site. Line pipe will be provided to Bonatti to support Spread 5B.</p> <p>MER015 Merritt Camp – Camp is operating in accordance with COVID protocols. Daily occupancy in June varied from 127 - 220 (average 186).</p> <p>MER070 TOLKO Yard – ongoing construction yard and office</p> <p>HOP053 Ohamil Camp – Camp is operating in accordance with COVID protocols. Daily occupancy in June ranged from 243 - 278 camp residents (average 261).</p> <p>POP065 Popkum Yard – ongoing use as main construction yard for Spread 5B.</p> <p>HOP071 Emil Anderson Shop – ongoing use as construction yard and mechanical shop</p> <p>TWS 1020 and TWS 1020.6 – ongoing use as construction offices</p> <p>HOP073 Hockin Pit Yard – trailers installed</p> <p>HOP075 Skagit Yard – ongoing use as construction office and yard</p>			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	2 (Section 27.4.1)	1 environmental deficiency (Table 5)	0

27.4.1 Security Summary

Date	Issue Type	Description	Measures Taken
June 14, 2022	Possession of Cocaine	Cocaine residue found in dorm room. Cleaning staff found white residue under sink in dorm room which tested positive for cocaine. Individual's camp privileges revoked. (Ohamil Camp)	Camp privileges revoked. Matter referred to GCC to determine fit-for-duty and grounds for dismissal.
June 15, 2022	Possession of Cannabis	Cocaine found in dorm room. Cleaning staff unfolded an information card and powder sprayed onto workers face. NIK tested positive for cocaine. (Ohamil Camp)	Camp privileges revoked. Matter referred to GCC to determine fit-for-duty.

27.5 Spread 6 – Temporary Infrastructure Sites

Construction Progress stockpile storage as of June 30, 2022 LAC064 Lackaway - Received 64,907 m of pipe or 92% of line pipe; 3,042m has been released to Spread 6 construction. Bends and miscellaneous equipment received and released at site.			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	2 environmental deficiencies (Table 5)	0

27.6 Sumas Terminal – Temporary Infrastructure Sites

Construction Progress SUM068 Sumas Terminal Laydown Yard - The yard is in use supporting ongoing work at Sumas Terminal. SUM069 37117 North Parallel Road - The lot is in service for crew parking			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	0	0

27.7 Westridge Marine Terminal and Spread 7 – Temporary Infrastructure Sites

Construction Progress June 30, 2022 NEW044 Canfor Laydown Site - 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. COQ060 2 King Edward St. - Received 46,497 m of pipe to date; 103% of anticipated inventory. Released 11,647m to Spread 7 construction and 124 m released to support Westridge construction. Bends and miscellaneous equipment received and released at site. VAN048 Commissioner St. Yard - Site is being used for assembly of marine loading arms and storage of permanent materials for WMT. BUR049 Barnet Hwy - ongoing parking, construction office, minor stockpile for construction materials COQ056 150 Glacier, Coquitlam - Office space and storage and maintenance shop leased on existing industrial property and in current use. BUR057 4001 Remi Place, Burnaby - 21,000 ft ² 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.			
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COQ061 88 Golden Drive - construction office occupied and material storage commenced; additional office trailers installed and site upgrades to security systems completed
PIT062 Pitt River Road - Parking and material storage
SUR021 Surrey 19298 98A Ave - ongoing equipment and material storage
SUR022 Surrey 19395 98A Ave - security installation completed. Lot is currently empty and will be used for parking Spread 7 craft
COQ067 1701 Lougheed Highway - ongoing parking

Issues and Non-Compliances

Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	10 environmental deficiencies (Table 5)	0

TABLE 4: ENVIRONMENTAL EVENTS REPORTED IN JUNE 2022 PHASES 1-23																					
Phase		1	2	3	4	5	6	9	10	11	12	13	14	15	16	17 ^(a)	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
	Vegetation	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
	Air & Noise	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
	Waste & Hazardous Materials	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
	Trespass	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
	Totals	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 JUNE 2022 PHASES 24-39																								
Phase		24	26 & 27	28 & 29	29	30	30	31	32	33 & 36	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	0	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	1	2	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	0	1	2	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. ^(a) Reported as part of Phase 6.

TABLE 5: ENVIRONMENTAL DEFICIENCIES REPORTED IN JUNE 2022 PHASES 1-23																						
Phase		1	2	3	4	5	6	9	10	11	12	13	14	15	16	17 ^(a)	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	6	0	4	4	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	3	0	2	8	0	0	0	0	0	0	0	1	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	1	0	10	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Waste & Hazardous Materials	20	0	9	16	0	0	0	0	0	0	0	1	1	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	1	0
	Biosecurity	0	0	0	0	0	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	0	0
Totals		30	0	25	31	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	

TABLE 5: ENVIRONMENTAL DEFICIENCIES REPORTED IN JUNE 2022 PHASES 24-39

Phase		24	26 & 27	28 & 29	29	30	30	31	32	33 & 36	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	47	31	39	48	64	0	0	11	0	0	21	0	0	0	0	0	1	1	1	1	0	3
	Vegetation	0	5	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	Water	0	40	73	8	14	11	0	0	2	0	0	8	0	0	1	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	6	2	6	7	0	0	2	0	0	6	0	0	0	0	0	1	0	0	0	0	0
	Waste & Hazardous Materials	0	8	35	29	10	21	0	0	5	0	0	19	0	0	4	0	0	10	1	0	1	0	6
	Heritage Resources	0	1	2	0	2	8	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
	Trespass	1	0	0	0	0	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Biosecurity	0	0	1	0	0	1	0	0	1	0	0	2	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	0	0	0	0
Totals	0	101	148	78	80	114	0	0	24	0	0	58	0	0	5	0	0	12	2	1	2	0	10	

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