

VIA ELECTRONIC SUBMISSION

August 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 July 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 July 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.

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 July 2022



Trans Mountain Pipeline ULC

Monthly Construction Progress Update for July 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 - 27.0 incl.	See above.	See above.	Section 28	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 1.1, 1.3, 20.1, 21.1, 22.1, 23.1, 23.2, 24.1, 24.3, 25.1, 26.1	See above.	See above.	N/A	N/A	N/A	Sections 2.1	See above.
c) confirmation that security issues identified in a) have been addressed;	Sections 21.2, 22.2, 24.2, 25.2, 27.1	See above.	See above.	Sections 28.2.1, 28.4.1, 28.5.1	N/A	N/A	N/A	See above.
d) description and the location of any change made to geohazard mitigation measures pursuant to Condition 51; and	N/A	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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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	4
Lost Time Incidents	1
Higher Potential Near Miss	6
Property Damage (> \$5,000)	9
Damage Prevention	0
Other	0
Environmental Events	5
Security Issues	18
Non-Compliances	1

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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 equipment, property, vehicles.
- Damage prevention - damage to company and/or third-party facilities (including pipelines and associated equipment)
- 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	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; 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. Continued structural steel erection; and Started installation of MVCS equipment. <p>Marine Berth Piles</p> <ul style="list-style-type: none"> Continued Completed installation of MD9 piles Continued works on installation of BD11 and BD12 piles. <p>Loading Platforms</p> <ul style="list-style-type: none"> Structural Steel and Piping at Loading Platform (LP) 1 / 2 / 3 continued. 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
1 (Section 1.1)	0	<ul style="list-style-type: none"> 21 environmental deficiencies (Table 5) 1 reportable spill (Section 1.2.1) 	1 (Section 1.3)

1.1 Safety Summary

Date and Issue Type	July 29, 2022 Property Damage (> \$5,000)	
Description	Measures Taken	
Incident 3199 While lifting a precast concrete stormwater tank section with the Deck Barge Olympia, the block free-spoiled and dropped the load onto the MLT2000-2 barge. The tank segment is damaged beyond repair, but the barge received minimal damage. No one was injured or in the line of fire. The site was visited by WorkSafe BC and had a meeting with the CER on August 2 nd to discuss the incident in detail.	This incident is under investigation.	

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1.2 Environment Summary

1.2.1 Reportable Spills

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

ID # & Date	Loc.4.17.ENV.072722.00171072 July 27, 2022
Description	Approximately 100 mL of gasoline spilled to water when a skiff overturned during towing of a barge northwest of Loading Platform 3.
Requirement	Westridge Marine Terminal EPP, Spill Contingency Plan
Measures Taken	Absorbent booms were installed around the skiff. (Complete) The skiff was righted and lifted onto the barge deck. (Complete) The spill was reported to the Canadian Coast Guard. (Complete)

1.3 Non-Compliance Summary

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

ID # & Date	Loc.4.17.ENV.071622.00170815 July 16, 2022
Description	A pile driving analysis on pile BD11-C. When underwater noise levels reached approximately 205 dB on the lower hydrophone, the construction superintendent directed the hammer operator to shut down the hammer to avoid exceeding the 207 dB threshold. After the hammer was shut down, the two final impulses from the impacting sequence registered on the monitoring laptop at 208.1 dB and 207.4 dB.
Requirement	<i>Fisheries Act</i> Authorization 19-HPAC-00753, Condition 2.2.9.3.
Measures Taken	Follow-up investigation confirmed that the primary and secondary bubble curtains were in place and operating. All requirements related to impact pile driving, including requirements in Trans Mountain's <i>Fisheries Act</i> Authorization, Environmental Protection Plan and relevant Standard Operating Procedures were adhered to. There was no evidence of impacts to fish. (Complete) The exceedance was reported to Fisheries and Oceans Canada. (Complete)

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 100% complete, and external tank walls are 80% complete. TK-2 Tank coating ongoing: Floating roof coating is 90% complete, internal coating is 100% 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 100% 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, prepping walls for liner. 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 WTUATM/BP/ESB4/VFDB3 Ongoing Demo EHT, Cable Pull/Glanding/Terminations for Meter Bank 5 Outage Scope (MB5) 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance

1 (Section 2.1)	0	1 environmental event (Section 2.2.1; Table 4)	0
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2.1 Safety Summary

Date and Issue Type	July 09, 2022 High Potential Near Miss		
Description	Measures Taken		
Incident 3070 A roof vent cover was noticed on the ground near a tank. High winds caused the vent to come loose and fall to the ground. The vent had bolts installed but they were not fully torqued. All vents have now been inspected, torqued and secured.	This incident is under investigation. The contractor inspected and secured all the remaining vents. (closed) Contractor supervision completed several "Stop the Drop" focus inspections. (closed) The contractor developed a safety bulletin on "Stop the Drop" and shared it with the workers onsite. (closed)		

2.2 Environment Summary

2.2.1 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.4.20.ENV.070722.00170440 July 7, 2022
Description	Workers lifted a plywood cover to a hydrovac excavation to begin work and spotted a dead snowshoe hare in the excavation. The excavation was approximately 2 feet deep and had not been active for several days. The cover remained secured while the area was inactive.
Requirement	C78 Facilities EPP Section 9.0 Facility Construction
Measures Taken	Communication has been issued to crews regarding the importance of covering hydrovac holes while not active to reduce the potential of wildlife related incidents. (Complete)

3.0 PHASE 3: SUMAS TERMINAL

Construction Progress <ul style="list-style-type: none"> Erosion and Sediment Control measures monitored and maintained; Tank 100 excavation completed; ring beam pour in progress; Continued civil works within Tank 104/100 work area; Continued construction of Firewater pond and pumphouse; and Manifold area civil piling and mechanical construction continued. 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	6 environmental deficiencies (Table 5)	0

4.0 PHASE 4: BURNABY TERMINAL

Construction Progress: East Area: <ul style="list-style-type: none"> TK-74: Welding floating roof plates; started installation of air raise equipment; TK-75: Coating and piping installation in progress; TK-76: Welding floating roof plates; started installation of air raise equipment; TK-77: Coating and piping installation in progress; TK-78: Roof plate installation completed; NDT on roof in progress; TK-79: Coating and piping installation in progress. North Area: <ul style="list-style-type: none"> FW Pond fill completed; integrity testing and walk-downs in progress TK-91: Commenced installation of roof plates and floating roof deck plates; TK-93: Completed air raise of floating roof; fit and welded fixed roof plates; TK-95: Completed installation of ring 2 plates; TK-96: Continued construction of shoring wall; commenced works on ring beam foundation; TK-97: Commenced installation of ring 3 plates; TK-98: Excavating east berm. South Area: <ul style="list-style-type: none"> Continued installation of structural steel for manifold platform and bridge Continued installation of cable tray Central Area: <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: Completed works on Ring 4 and pontoon assemblies; commenced works on ring 5; TK-89: Completed ring 1 shell plate installation. 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	69 environmental deficiencies (Table 5)	0

5.0 PHASE 5: JASPER PUMP STATION

Construction Progress <ul style="list-style-type: none"> Continue receiving electrical material and organizing laydown area Continue completing high voltage terminations in ESB and VFD buildings 			
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 demobilization activities, including site clean up and trailer/wash car removals. 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	2 environmental deficiencies (Table 5)	0

7.0 PHASE 9: EDMONTON PUMP STATION

Construction Progress			
<ul style="list-style-type: none"> concrete form work and pours for the sump tank vault and the pump building slab. backfill around the sump vault. grout and machining work in preparation for the setting of the pumps and motors. 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	0	0

8.0 PHASE 10: GAINFORD PUMP STATION

Construction Progress			
<ul style="list-style-type: none"> Ongoing minor deficiency resolution throughout facility, and general site clean up. Completing touch ups on coating site wide Placing topsoil over line 2 and removing unsuitable material from site. 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	0	0

9.0 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

10.0 PHASE 12: EDSON PUMP STATION

Construction Progress			
<ul style="list-style-type: none"> Ongoing minor deficiency resolution including touch up painting and final grading touch ups. 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 13: HINTON PUMP STATION

Construction Progress			
<ul style="list-style-type: none"> Final cleanup and demobilization from site in progress. Cleaned the House keeping Pad and prepped structure steel for painting touch ups. Minimal workforce on site during this period. 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	0	0

12.0 PHASE 14: BLUE RIVER PUMP STATION

Construction Progress			
Final cleanup and demobilization from site in progress. Completing final grade & compaction work, the rip rap at the retention pond, and touch up coating site wide.			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	1 environmental deficiency (Table 5)	0

13.0 PHASE 15: MCMURPHY PUMP STATION

Construction Progress			
<ul style="list-style-type: none"> Continue work clearing punches, touching up site grading as required. 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	0	0

14.0 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. Completed final grade under the ESB & VFD buildings and prepping for hydro seeding. 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	0	0

15.0 PHASE 18: KAMLOOPS PUMP STATION

Construction Progress			
<ul style="list-style-type: none"> On-going preservation checks in ESB/VFD buildings. Minimal workforce on site during this period. 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	0	0

16.0 PHASE 19: KINGSDALE PUMP STATION

Construction Progress			
<ul style="list-style-type: none"> Working on completing final grade at site & removing rig mats. Continue with coating touch ups site wide. Continue installing cable tray covers, glanding and terminating cables. 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	0	0

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

Construction Progress			
<ul style="list-style-type: none"> Completed install of K353 – Jasper Lake South RMLBV. Nesting birds at K396 – Miette No 4 MLBV has paused progress Completed install of K369 – Jasper Pump Station 24-B MLBV Continued excavation at K324 Overlander RMLBV Nesting birds at K333 Roche Miette MLBV have paused progress 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	0	0

18.0 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

19.0 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	0	0

20.0 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 clean-up / landscaping, tree planting and vegetation management are ongoing. Completing cathodic protection deficiencies 		Spread 2 <ul style="list-style-type: none"> Spread 2A clearing, stripping and grading Road bores continuing in Spreads 2A and 2C Amazon HDD in progress. Hunt Creek HDD completed. 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 set-up underway in Spread 2B. 	
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
1 (Section 20.1)	0	60 environmental deficiencies (Table 5)	0

20.1 Safety Summary

Date and Issue Type	July 22, 2022 High Potential Near Miss		
Description	Measures Taken		
Incident 3153 During a site assessment a supervisor identified that a slide rail had pushed inwards and deemed it unsafe for use. Upon further assessment, it was determined that several bolts used to connect two flanges of the horizontal structural member running the length of the shoring wall, had failed. All other work areas (two) using slide rail were paused as a result of the initial findings.	This incident is under investigation. Project-wide safety flash issued to assess other similar slide rail while incident is being investigated.		

21.0 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 Ongoing watercourse crossing preparation; 11 fish-bearing watercourse crossings completed 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
2 (Section 21.1)	1 (Section 21.2)	<ul style="list-style-type: none"> 2 environmental events (Section 21.3.1; Table 4) 131 environmental deficiencies (Table 5) 	0

21.1 Safety Summary

Date and Issue Type	July 13, 2022 Medical Aid		
Description	Measures Taken		
Incident 3094 A flagger was tasked with setting up an Automatic Flagger Assistance Device (AFAD) unit on the highway to control traffic within the work zone. While setting up the unit, the frame's locking mechanism didn't lock, and the frame collapsed and fell onto the flagger's right hand causing a laceration to the middle finger. A medic was dispatched to the location and performed an assessment of the worker and referred them to the local clinic where sutures were administered and an x-ray was performed. A chip in the first knuckle of the middle finger was observed on the x-ray. The physician splinted the finger and cleared the flagger to return to full duties.	The contractor will create a Job Hazard Assessment (JHA) for assembly and teardown of AFADs specific to models used on the TMEP project. (open) The contractor held a meeting with the manufacturer and provided feedback regarding engineering design to eliminate pinch point. (closed) The Progressive Discipline Policy was applied for not following the instructions provided during training, the Safe Work Practice (SWP), Field Level Hazard Assessment (FLHA) or adhering to warning signage. (closed) An investigation is underway and further corrective actions may be assigned based on the results of the investigation. (In progress)		
Date and Issue Type	July 13, 2022 High Potential Near Miss		
Description	Measures Taken		

<p>Incident 3097</p> <p>An operator was moving an excavator to the laydown yard. The operator walked the excavator forward past the side boom and turned the tracks at a 45-degree angle to walk forward toward the road's edge (toward the powerline). Once on the edge of the road, the operator wanted to maneuver the tracks parallel with the road's edge and park the excavator, so the bucket was between the excavator and the side boom to reduce the hazard of the equipment to road users. The operator looked in the mirrors but did not have good visibility due to the sun's positioning and instinctively swung the housing to the good side of the excavator to perform an ape hop maneuver. The spotter was waving their arms and yelling at the operator, attempting to warn them of the powerline adjacent to the excavator but was unsuccessful in getting the operator's attention. While swinging the housing, the excavator boom came in close proximity of the overhead powerline and an arc was observed from the powerline to the boom of the excavator. There were no injuries, the excavator did not sustain any damage nor did the powerline. The transformer didn't trip when the arc occurred and there were no interruptions to the electrical services.</p>	<p>The progressive discipline policy will be applied as per the contractor's program, upon investigation it was determined that the worker was aware of the hazards. (open)</p> <p>The goal posts were erected on road 1 where powerline parallels the right-of-way. (closed)</p> <p>Additional signage to be added on Road 1 outlining mandatory spotter with air horn requirements when operating equipment within 10 m of paralleling power line. (open)</p> <p>A Safety Bulletin was communicated out to project personnel re-educating crews about the requirements associated with the 30M33 BC Hydro permit. The bulletin was reviewed at the weekly Safety Meeting.(closed)</p> <p>An investigation is underway and further corrective actions may be assigned based on the results of the investigation. (In progress)</p>
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21.2 Security Summary

Date	Issue Type	Description	Measures Taken
July 1, 2022	Land Owner	Landowner reports shots fired on his property, alleging TMEP workers attempting to intimidate. Security investigation completed, there were no TMEP workers on or near property. Landowner has not reported to RCMP, does not trust police.	Investigation completed, no TMEP worker involved, consultation with landowner continuing.

21.3 Environment Summary

21.3.1 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.4.8.39.ENV.071122.00170550 July 10, 2022
Description	Turbid waters were observed flowing off footprint at KP 561.240 into a non-fish bearing watercourse, BC-88 (S6). The event resulted from inadequate use and monitoring of grey water pumping equipment during watercourse crossing construction activities. A flocc tank and filter bags were in use; however, turbid water continued to enter the downstream side of the watercourse resulting in an exceedance above CCME water quality guidelines. No direct sediment loading or quantifiable sediment deposition was observed in the channel of the watercourse. Water quality was verified to be within compliance on July 16, 2022 following backfilling of the watercourse crossing.
Requirement	C 72 Pipeline EPP, Section 11.0, Conditions 54, 55, 57, 58 C 72 Pipeline EPP, Section 14.3, Conditions 20
Measures Taken	The pump intake was suspended above the ditch bottom. (Complete)

	The pump-off location was revised and filter bags changed. (Complete) Trans Mountain met with the Contractor to discuss pump use, pump-off and turbidity monitoring, and equipment set up. (Complete) Tailgate discussions to be conducted regarding pump-off mitigation. (In progress) Pump-off mitigations with to be discussed with General Inspectors. (In progress)
ID # & Date	LOC.4.6.9.ENV.072822.00171185 July 29, 2022
Description	Flow was not maintained at a fish-bearing (S3) watercourse (BC-8) after initial equipment set-up of an isolated crossing where fish salvage had not been completed. Pumping bypass restricted flow to the work area except for a few isolated pools. Assessments determined there was inadequate communication between crews regarding the status of fish-salvage resulting in inadvertent isolation and subsequent fish mortality (one rainbow trout) within the work area.
Requirement	C 72 Pipeline EPP, Section 14.1, Condition 24 C 72 Pipeline EPP, Section 14.3, Conditions 13 and 14
Measures Taken	Completed fish-salvage to isolated pools within the work area. (Complete) Re-established flow to inadvertent isolated area. (Complete) Meeting to be held with all foremen to review the communication requirements for shift handover and the use of 3-way communication. (In Progress) Meeting to be held to discuss fish salvage timing and completion. (In Progress) An investigation of the event has been initiated and is ongoing. (In Progress)

22.0 PHASE 29: SPREAD 4B (KP ~ 690-764)


(GCC – BANISTER)

Construction Progress <ul style="list-style-type: none"> Mainline excavation and pipe installation throughout the Spread Mainline tie-ins ongoing Road bore drilling continues Drilling for Clearwater River DPI ongoing Lindquist Creek trenchless crossing complete Drilling 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
4 (Section 22.1)	1 (Section 22.2)	37 environmental deficiencies (Table 5)	0

22.1 Safety Summary

Date and Issue Type	July 07, 2022 High Potential Near Miss		
Description	Measures Taken		
Incident 3055 A worker was observed standing above an excavation deeper than 1.83 m (6 feet) without fall protection in place. The worker had been standing on a horizontal I-beam used as an external support on the perimeter of a slide rail excavation. The height from where the worker was standing directly downwards to meet a	A Toolbox Talk was issued regarding Mindlessness vs. Mindfulness in the construction workplace. (closed) The worker received progressive discipline for exposing themselves to a fall from heights. (closed) The incident details were reviewed at the Weekly Safety Meeting. (closed)		

<p>sloped area was approximately 8-9 feet. The deepest part of the excavation was approximately 15 feet. An inspector intervened, the worker immediately moved from the unsafe location, and supervision was contacted.</p>		<p>An investigation is underway and further corrective actions may be assigned based on the results of the investigation. (In progress)</p>
Date and Issue Type	July 10, 2022 Property Damage (>\$5,000) (Equipment Damage)	
Description	Measures Taken	
<p>Incident 3069 A dump truck's cab was damaged when the hydraulic ram snapped and entered the cab as the truck was dumping a load of material. The driver of the vehicle was not injured. The scene was frozen, and supervision was immediately notified.</p>	<p>The contractor will assign only gravel trucks equipped with load measurement devices for site hauls. The contractor's dispatch will determine which trucks meet this requirement. (open)</p> <p>A post-incident review between the prime contractor and the sub-contractor management will be organized to review additional corrective actions. (open)</p> <p>The learnings from the incident were reviewed at the Weekly Safety Meeting. (closed)</p> <p>An investigation is underway and further corrective actions may be assigned based on the results of the investigation. (In progress)</p>	
Date and Issue Type	July 11, 2022 Lost Time	
Description	Measures Taken	
<p>Incident 3079 A worker pinched their right thumb in the load line block of a side boom while attempting to maneuver the block for line up during assembling. The worker received first aid treatment from the on-site medic when the wound was cleaned and dressed. The worker was directed to have x-rays to determine if the thumb was fractured and was seen by a specialist. The worker was permitted to return to work with restrictions on duties of the use of their right hand and was prescribed medication.</p>	<p>The Rigging Upside Boom Tractor Job Safety Analysis was updated and distributed to the crew Foreman. The update included the requirement to lower the dog-ear (swivel) into rested position prior to handling if minor hand adjustments are required. (closed).</p> <p>The incident details were reviewed at the Weekly Safety meeting. (closed)</p> <p>An investigation is underway and further corrective actions may be assigned based on the results of the investigation. (In progress).</p>	
Date and Issue Type	July 17, 2022 Medical Aid	
Description	Measures Taken	
<p>Incident 3114 A rig crew was preparing to install an anchor tank and was in the process of removing a ladder secured by T-bar posts. During the removal of the ladder, one of the protective mushroom caps came off of the top of the T-bar posts and the edge top of the T-bar post struck the worker's forearm causing a laceration.</p>	<p>The contractor's Field HSE Superintendent completed a review to ensure that the worker was provided adequate first aid as well as determine causes and corrective actions. (closed)</p> <p>The Contractor's Senior Management team will travel to site to discuss the incident and reaffirm the contractor's value and expectations regarding safety. (open)</p> <p>The contractor's HSE Manager created a Job Safety Assessment (JSA) for the installation and removal of ladders from trenches that includes requirements to remove T-bar posts prior to removing the ladder from the trench. (closed)</p> <p>The contractor's HSE Manager created and distributed a Safety Alert. (closed)</p>	

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	An investigation is underway and further corrective actions may be assigned based on the results of the investigation. (In progress)
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22.2 Security Summary


Date	Issue Type	Description	Measures Taken
July 4, 2022	Mischief	Food was thrown at a Traffic Supervisor's truck while directing traffic. Male in F-150 threw a food container at driver side door of Supervisors truck. No damage to truck.	Reported to the RCMP

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

Construction Progress Construction activities executed in Spread 5A during July 2022 included mainline construction activities (849 to 984); clearing, stripping, grading trenching, welding, lowering, and backfilling are in progress, CW#4 HDD pilot hole and pipe installation in progress. Jacko Lake Micro Tunnel preparation continue.			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
3 (Section 23.1)	0	<ul style="list-style-type: none"> • 1 environmental event (Section 23.2.1, Table 4) • 65 environmental deficiencies (Table 5) 	0

23.1 Safety Summary

Date and Issue Type	Jul 08, 2022 Property Damage (\$5,000) (Vehicle)		
Description	Measures Taken		
Incident 3064 A pilot truck driver, travelling northbound in the left lane on the Coquihalla Highway, had to slow down and move over to the other lane because a police vehicle was stopped in the left shoulder and partial left lane. Due to heavy traffic, the pilot truck driver could not safely move over, so they stopped behind one of the police cruisers and waited for a chance to merge. While waiting for a break in traffic, the pilot truck was rear-ended by a third-party motorist who had slowed down but failed to stop. Police were already on the scene, and RCMP took statements and released the pilot truck driver stating that they were not at fault and had acted as required by law. There were no injuries to the truck driver or third-party driver. The pilot truck had minor damage to the rear bumper and the driver continued their travel. The third-party vehicle was towed as it had front-end damage.	The contractor reviewed the incident in the Weekly Safety Meeting with project personnel and stressed the need to always driving defensively and be prepared for the unexpected on roadways. (closed) An investigation is underway and further corrective actions may be assigned based on the results of the investigation. (In progress)		
Date and Issue Type	July 09, 2022 Medical Aid		
Description	Measures Taken		

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Incident 3068 An inspector noticed a bullseye-shaped bite on their arm and went to the local hospital for assessment of a potential tick bite. The physician prescribed medication for a tick bite. The worker returned to regular duties.		Details of the incident were reviewed at the weekly meeting. The meeting focused on general awareness on ticks and how to spot or assess potential bites. (closed)
Date and Issue Type	July 12, 2022 Property Damage (\$5,000)	
Description	Measures Taken	
Incident 3082 A dump truck was in the process of unloading material with the box in the air. The load became unbalanced, and the truck tipped over, resting on its side. No injuries.	The incident was reviewed at the weekly safety meeting with the project crews. (closed) The subcontractor reviewed the incident with the driver and reviewed the need to confirm that the truck is on level ground to unload. (closed) An investigation is underway and further corrective actions may be assigned based on the results of the investigation. (In progress)	

23.2 Environment Summary

23.2.1 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.4.12.101.ENV.072622.00171187 July 26, 2022
Description	Incidental take of 2000 Western Toad (toadlets) at WILD-378-2.1 at KP 903+400. During a mass migration event, an additional amphibian passage was installed to provide an alternative egress corridor from the amphibian breeding pond to upland terrestrial habitat, however, three pitfall traps were unintentionally left opened overnight by the Resource Specialist within the alternative egress corridor which resulted in the amphibian mortality event due to overcrowding. Over 74,000 individual amphibians have been successfully captured and relocated at this wildlife feature in 2022.
Requirement	C 72 RSMT Spread 5A, Table 4.1-2, Wildlife Habitat Features in British Columbia
Measures Taken	Work was stopped and the Wildlife Species of Concern Discovery and Encounter Contingency Plan was implemented. (Complete) Courtesy notification was provided to FLNRORD. (Complete) The Environmental Inspector conducted an environmental investigation. (Complete) The Environmental Inspector documented the wildlife incident in a report and recorded the incident as per Appendix E Record of Wildlife Hunted, Trapped, or Killed based on the Provincial Amphibian Permit KA22-278622. The Environmental Inspector record was according to Condition 1 of the permits reporting requirements and will be submitted within 21 days of the permit's expiry or annually. (Ongoing) All incidental mortalities will be deposited at the Royal BC Museum in good condition. (Ongoing) Resource Specialists to document locations of pit fall traps installed at each feature and will close all traps within migration passages. (Ongoing) An investigation is underway and further corrective actions may be assigned based on the results of the investigation. (In progress)

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24.0 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 the HDD of Dry Gulch and isolated/open-cut watercourse crossings (multiple Coquihalla River crossings, Patterson Creek, Wahleach Creek) are underway. The geotechnical drill at the Mountain 3 crossing is ongoing.			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
3 (Section 24.1)	1 (Section 24.2)	<ul style="list-style-type: none"> • 1 environmental event (Section 24.3.1, Table 4) • 1 reportable spill (Section 24.3.2) • 152 environmental deficiencies (Table 5) 	0

24.1 Safety Summary

Date and Issue Type	July 11, 2022 Property Damage (>\$5,000) (Vehicle)
Description	Measures Taken
Incident 3078 A worker was travelling southbound on the highway in a pickup truck. A member of the public (third-party) was parked at the edge of a roadside turn out. As the worker got closer to the parked vehicle, the third-party vehicle unexpectedly pulled out in front of their truck. The worker braked hard and swerved to the left in an attempt to change lanes and avoid a collision. The worker's truck was hit in the rear passenger side door and box by the third-party vehicle which caused the worker's truck to spin 180 degrees before coming to stop against a roadside jersey barrier. Side airbags of the worker's vehicle were deployed. The worker phoned safety to report the incident and within minutes Safety arrived on site. EMS services was called and upon arrival they checked out both people involved in the incident. No injuries occurred.	The contractor distributed a site-wide communication on driving safety. (closed) The contractor developed a Lessons Learned Bulletin. (closed) The contractor had a toolbox discussion on driving and working this specific section of the highway (closed).
Date and Issue Type	July 21, 2022 Medical Aid
Description	Measures Taken
Incident 3143 Two workers picked up a drill pipe and walked it to the pipe rack for storage. One worker placed the pipe in the stacked pipe and then the second worker pushed the pipe onto the stacked pipe in the rack. The first worker walked to the back of the pipe rack as they thought the pipe was binding on the rack center beam and went to grab the end of the pipe without communicating with the other worker. The other worker pushed the pipe in at the same time causing the first worker's	The crew reviewed and signed a safety bulletin on hand safety(closed) The crew was actioned to place visual aids for crush points and pinch points for pipe racks. (closed) The sub-contractor communicated the safety bulletin to third party contactors. (closed) The incident was reviewed with the crews at the weekly meeting (closed)

left index finger to be crushed between the pipe and the pipe rack. The worker received stitches.		The contractor team built and distributed the lessons learned document to the site crews. (closed) An investigation is underway and further corrective actions may be assigned based on the results of the investigation. (In progress)	
Date and Issue Type	July 25, 2022 Property Damage (>\$5,000) (Unauthorized Activity)		
Description	Measures Taken		
Incident 3170 A third-party contractor needed to remove a drill rig from a work location and mobilize it to a new location. The contractor supervisor accessed the work area without informing the area foreman of the work scope and without signing onto the area paperwork. The supervisor proceeded to move equipment to the access of the road where a lowboy was arriving to transport the equipment. The equipment was moved under overhead utility lines contacting them with the drill arm. The transport crew saw the equipment contact the overhead line and signalled for the equipment to stop. Equipment was stopped and backed up to relieve tension on the overhead line. The third-party foreman did not follow procedure and had no spotters in place when moving equipment under the overhead lines in the area. The utility foreman assessed the lines and contacted Shaw as well as BC Hydro to inspect the lines.	The subcontractor crew cut back overgrowth and/or moved the signage up on poles for overhead power lines and utilities at the worksite. (closed) The subcontractor hosted a Safety Meeting to review the Job Safety Assessment (JHA) and the Safe Work Practice (SWP) for loading and unloading equipment with the crews along with the overhead requirements for workers and supervisors. (closed) The subcontractor reviewed the Spotter Training with the crews and requested a sign-off from all operators for understanding of when a spotter is required. (closed) The third-party foreman was suspended indefinitely for violating 3 TMEP/contractor and subcontractor policies in one incident - No equipment inspection/No Field Level Assessment (FLHA)/ and for not using Spotters under overhead powerlines. (closed) The goal post was reassessed for heights around overhead lines and dropped when required. (closed) An investigation is underway and further corrective actions may be assigned based on the results of the investigation. (In progress)		

24.2 Security Summary

Date	Issue Type	Description	Measures Taken
July 6, 2022	Theft under \$5000	Padlock was cut on the door of a utility trailer storing tools. Various power tools were taken from the trailer, and a number were found in the bush near by. Approx. value \$3000.	Reported to police, no suspects.

24.3 Environment Summary

24.3.1 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.4.13.82.ENV.072322.00171022 July 23, 2022
Description	During the isolation and successful salvage of almost 500 fishes being carried out over several days at BC-690 (Patterson Creek), a mortality of juvenile fishes occurred as a result of activities other than electrofishing. During the salvage of 493 fish, 44 mortalities occurred (449 safely relocated). The mortalities can be grouped as follows: <ul style="list-style-type: none"> 17 rainbow trout fry and a single chinook juvenile were found impinged between sandbags used to hold down amphibian exclusion fencing occurring as part of the salvage of coastal tailed frogs;

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	<ul style="list-style-type: none"> A mortality of 13 juvenile fishes (mix of rainbow, coho, and sculpin) occurred as a result of overnight dewatering activities where water was drawn down in the remaining residual pool; Incidental mortality of approximately 14 fishes occurred across multiple days of fishing effort required at the site. Of these, five were a result of exposure to electrofishing, nine from the activity of carrying out the electrofishing (e.g., impingement of mobile cobble/boulder substrate). <p>No threatened or species of management concern were impacted.</p>
Requirement	DFO Letter of Advice: 22-HPAC-00772
Measures Taken	<p>Provided reminder to all resource specialists to report all fish and wildlife mortalities immediately to the Environmental Inspection team. (Complete)</p> <p>Review fish salvage procedures and awareness of the potential causes of incidental mortalities with fish salvage crews as per Resource Specialist's incident report: installation of exclusion fencing to reduce the potential for impingement; leaving adequate time between electrofishing passes to reduce fish stress; consideration of alternative methods such as dip-netting and supervised dewatering when fish are sheltering in large boulders/cobble; potential for impingement of sheltering fish when walking on loose cobble/boulders. (Ongoing)</p> <p>Fish salvage crews will remain on site until a fish salvage is complete, or will work with construction teams to produce a plan for maintaining water where overnight pumping is occurring. (Ongoing)</p> <p>All fish captures, including mortalities, will be reported to FLNRORD as per permit conditions. (In progress)</p> <p>An investigation is underway and further corrective actions may be assigned based on the results of the investigation. (In progress)</p>

24.3.2 Reportable Spills


ID # & Date	Loc.4.13.82.ENV.072222.00171010 July 23, 2022
Description	A 4" submersible pump was being used to pump down pooling water in the isolated area of BC-690 (Patterson Creek) watercourse. The pump failed causing an estimated 1.5 litres of "White Oil" hydraulic oil (food-grade, biodegradable mineral oil) to be released to the pooling water within the isolation.
Requirement	C 72 Pipeline EPP, Section 7.0 General Pipeline Construction Mitigation Measures – Spill Prevention; Appendix B – Contingency Plans – Spill Contingency Plan
Measures Taken	<p>Crews deployed a spill boom and placed spill pads in the isolated pool to absorb oil. The pump was turned off and removed in containment as to not release any more mineral oil. Materials used in the cleanup were collected and disposed of in the contaminated materials bin at the construction yard. (Complete)</p> <p>Review incident with watercourse crossing crew. (Ongoing)</p> <p>Schedule pump checks. (Ongoing)</p> <p>Review project reporting procedures with subcontractors. (Ongoing)</p> <p>An investigation is underway and further corrective actions may be assigned based on the results of the investigation. (In progress)</p>

25.0 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 6 access, stripping, and grade has expanded into the Sumas Prairie area – installing vehicle crossings over man made canals and roadside ditches. ▪ Spread 7A continued activity within the Redwoods Golf Course – preparing the major trenchless 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 readiness for the major trenchless crossing continued. ▪ 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 investigation. 			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
3 (Section 25.1)	10 (Section 25.2)	29 environmental deficiencies (Table 5)	0

25.1 Safety Summary


Date and Issue Type	July 06, 2022 Property Damage (>\$5,000) (Vehicle)		
Description	Measures Taken		
Incident 3057 A driver was leaving a public parking plaza and continued to exit towards an intersection. The light was green. As the driver approached the intersection, an oncoming vehicle was preparing to make a left turn. The driver expecting the vehicle to yield, continued to enter the intersection as the light was still green. The oncoming vehicle did not yield and attempted to make a dangerous left turn. The driver immediately hit the brakes to avoid a collision but was unable to stop in time. The driver's vehicle was struck in the front left side of the vehicle, resulting in damage to the front bumper. The driver had minor jaw soreness but did not require any medical attention. The third-party driver was issued a violation for the dangerous left turn (failure to yield) and the vehicles were being towed for repair. The worker was shaken up and sent home as a precaution. The driver did not sustain further injuries and was returned to regular duties. Police file #22-22060.	Although there weren't any corrective actions required, a toolbox talk on defensive driving strategies was shared with the team to raise awareness and serve as a reminder for driving practice. (closed)		
Date and Issue Type	July 17, 2022 Property Damage (>\$5,000)		
Description	Measures Taken		
Incident 3116 A subcontractor hydro vac operator was placing a spill tray under hydrovac by hand. Operator tossed spill tray under hydrovac which contacted another contractor's tripod connected to a Theodolite (survey instrument) causing tripod to tip over and the transit instrument to fall to the	The contractor reviewed the Incident Reporting Protocols with the crew. (closed) A safety meeting was held to review hazard identification, focusing on the controls for the work		

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ground. The instrument was sent for recalibration and assessment. The unit will have to be replaced.	<p>activities. Emphasis was placed on worksite hazards. (closed)</p> <p>The subcontractor supervision followed on risk assessment audits to ensure the workplace hazards were identified. (closed)</p> <p>The incident learnings were reviewed at the safety weekly meeting. (closed)</p> <p>An investigation is underway and further corrective actions may be assigned based on the results of the investigation. (In progress)</p>
Date and Issue Type	July 25, 2022 High Potential Near Miss
Description	Measures Taken
<p>Incident 3182</p> <p>A contractor skid steer with a mulcher attachment was working on top of Line 1 mulching blueberry bushes without a required Damage Prevention Inspector present as per the approved project wide variance.</p>	This incident is under investigation.

25.2 Security Summary

Date	Issue Type	Description	Measures Taken
July 11, 2022	Road rage, attempted assault	Male approached security guard/vehicle and attempted to enter the locked vehicle, yelling at the guard. Individual reached into back window and grabbed the guards hat, punched the side window and bent the radio antenna. It is believed guard made a driving error and individual was reacting to that.	Reported to RCMP.
July 20, 2022	Attempted Theft	TMEP inspector working on site locked his truck with computer and equipment inside. Upon returning the lock was scratched and pieces of chrome from the door lay nearby. No items were taken.	Not reported to RCMP. No suspects.
July 21, 2022	Theft Under \$5000	Theft of catalytic converter. Converter taken while vehicle was parked at the Heritage Parking Lot for GCC employees.	Reported to police, no suspects.
June 29, 2022	Drone flight over working crew	Drone spotted over crews at Kincona Golf Course. Patrolled with negative results.	Reported to RCMP and Transport Canada
July 7, 2022	Vandalism	Vandalized porta potty. Area inactive for approx. 8 weeks and security discovered porta potty toilet seat glued to base. \$200 repair.	Reported to RCMP, no suspects
July 8, 2022	Suspicious Person	Two males entered the right-of-way late at night, triggering the Zedcor alarm and loud speaker. Roving patrol did not locate these individuals, and they were again spotted on Zedcor a second time, coming from the bush through the right-of-way. Individuals did not go near any equipment.	Not reported to police.
July 19, 2022	Suspicious Surveillance	Individual conducting surveillance. Security tower detected individual conducting surveillance on the Redwoods Meadow HDD, triggering alarm and audible message to depart was activated. Individual departed the area.	No further action
July 21, 2022	Suspicious Male	Suspicious Male on ROW. Individual detected by security tower on ROW late at night, touching equipment. Appeared to be intoxicated. Alarm and audible message triggered and individual departed.	Roving security patrol could not locate suspect. Not reported to RCMP.

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July 26, 2022	Theft under \$5000	Theft of diesel fuel and canopy. Crews discovered a canopy and 540 L of diesel missing from an excavator. Site was not entirely fenced and no surveillance equipment was on site. Approx Value: \$1200 Diesel, \$200 Canopy.	Reported to the police.
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26.0 PHASE 36: SPREAD 7B (KP 1165.2 - 1180.15) (GCC – KLTP)

Construction Progress			
As of the end of July 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
1 (Section 26.1)	0	50 environmental deficiencies (Table 5)	0

26.1 Safety Summary

Date and Issue Type	July 14, 2022 Property Damage (>\$5,000) (Unauthorized Activity)
Description	Measures Taken
Incident 3098 A fiber optic line was severed while using a walk-behind saw.	<p>The documentation from this incident was placed in the ground disturbance package folder on SharePoint for each utility identifier associated with the City of Coquitlam fiber optic line. (closed)</p> <p>The contractor will update the Safe Work Practice (SWP) to include direction that saw cutting over fiber optic lines for the City of Coquitlam is not allowed without Segment Manager approval. (open)</p> <p>The contractor will create a variance to the ground disturbance potholing protocol to require potholes on either side of driveways in Coquitlam to verify the elevation of shallow buried fiber optic lines. (open)</p> <p>Disciplinary action was given to the superintendent and foreman as per the contractor's Accountability Matrix. (closed)</p> <p>An investigation is underway and further corrective actions may be assigned based on the results of the investigation. (In progress)</p>

27.0 PHASE 39: BURNABY TUNNEL

Construction Progress			
Mining at the 2287 m point; completed installation of tunnel eye at BT Portal.			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	1 (Section 27.1)	3 environmental deficiencies (Table 5)	0

27.1 Security Summary

Date	Issue Type	Description	Measures Taken
July 12, 2022	Protest blocking access	Protest group blocked access to terminal by obstructing use of a crosswalk on Underhill Avenue. One worker bus was stopped for approximately 20 minutes; the rest of the worker transports were re-directed to alternate access. All protestors were in costume and masks, unable to identify participants.	Police called, protestors departed upon RCMP arrival.


28.0 TEMPORARY INFRASTRUCTURE

28.1 Spreads 1 and 2 – Temporary Infrastructure Sites

<p>Construction Progress as of July 31, 2022.</p> <p>ENO55 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; 3,056 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 76,046 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

28.2 Spread 3 – Temporary Infrastructure Sites

<p>Construction Progress as of July 31, 2022</p> <p>VAL025 Valemount Stockpile Site Received 130,815 m of pipe or 105% of anticipated inventory. Released 86,346 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 July from 98 - 413 camp residents (average 303).</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 July from 115 - 410 camp residents (average of 295).</p> <p>BLU008 Blue River Yard - ongoing construction office and yard</p> <p>VAL078 Cedar Side Parking - ongoing parking</p>			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	1 (Section 28.2.1)	4 environmental deficiencies (Table 5)	0

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28.2.1 Security Summary


Date	Issue Type	Description	Measures Taken
July 26, 2022	Theft Under \$100	Individual left a bag in the parking lot of Blue River Camp while loading his vehicle following their shift. Unidentified person was seen on video picking up the bag.	Remains under investigation, not reported to police.

28.3 Spread 4 – Temporary Infrastructure Sites

<p>Construction Progress as of July 31, 2022</p> <p>CLE011 Clearwater Camp Camp is operating in compliance with COVID procedures and protocols. Daily occupancy in July ranged from 74 - 422 camp residents (average 374).</p> <p>VAV009 Vavenby Stockpile Sit Received 158,883 m of pipe. KAM013 through inter-yard transfer released 1,320 m of line pipe to Spread 4B. Released 35,598 m to Spread 4A, 74,044m to Spread 4B, and 618 m to Facilities. Bends and miscellaneous equipment received and released at site. Gate Valves deliveries are ongoing.</p> <p>CLE081 Johnson Pit – ongoing parking</p> <p>MC078 McMurphy Pump Station Laydown – ongoing trailer storage</p>			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	1 environmental deficiencies (Table 5)	0

28.4 Spread 5 – Temporary Infrastructure Sites

<p>Construction Progress as of July 31, 2022</p> <p>KAM013 Cando Rail Stockpile Site – Ongoing pipe delivery, storage and security; Received 134,791m of pipe. Inter-yard transfer to VAV009 of 1,320m of line pipe was released to Spread 4B. 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 88,605m of pipe or 100% of anticipated inventory; 30,214m 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 89,575m of pipe or 95% of anticipated inventory; 41,794m 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 July ranged from 109 - 205 (average 170).</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 July ranged from 230 - 306 camp residents (average 269).</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>
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HOP073 Hockin Pit Yard – Ongoing use as construction office and yard HOP075 Skagit Yard – Ongoing use as construction office and yard HOP054 Hope Laydown Yard – Ongoing use as construction office and yard			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	2 (Section 28.4.1)	2 environmental deficiencies (Table 5)	0

28.4.1 Security Summary

Date	Issue Type	Description	Measures Taken
July 5, 2022	Possession THC	K9 detected a gym bag in a dorm room and a vial of THC discovered inside.	Camp privileges revoked.
July 27, 2022	Possession THC	Cleaning staff found a Vap/THC pen in a guest's room. Guest admitted to owning.	Camp privileges revoked.

28.5 Spread 6 – Temporary Infrastructure Sites

Construction Progress as of July 31, 2022 LAC064 Lackaway - Received 65,130 m of pipe or 92% of line pipe; 4,083m 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	1 (Section 28.5.1)	0	0

28.5.1 Security Summary

Date	Issue Type	Description	Measures Taken
July 1, 2022	Low Flying Helicopter	Guard observed a helicopter intentionally flying over yard at approx. 40-50 feet.	Reported to RCMP, Transport Canada and PAC (Pacific Aviation Services).

28.6 Sumas Terminal – Temporary Infrastructure Sites

Construction Progress as of July 31, 2022 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
1 (Section 28.6.1)	0	0	0

28.6.1 Safety Summary

Date and Issue Type	July 22, 2022 High Potential Near Miss	
Description	Measures Taken	
<p>Incident 3154 A concrete crew was working on a retaining wall, pouring concrete into vertical forms for the first section of the wall. As the pour reached 1.7 cubic metres volume, a She-Bolt at ground level failed, causing the formwork to deflect outwards approximately 6-10 in. During the investigation process, it was determined that these particular She-Bolts had been sent back to the manufacturer by the concrete crew as they believed they were not compatible with the system in use. The manufacturer replied stating that these She-Bolts and associated hardware were compatible and suitable to be used with the forms that they were installing. The crew installed these She-Bolts and were able to secure them to the dywidag without issue as instructed by the manufacturer. A manufacturer's technician visited the site on July 25th and during their inspection they identified that the She-Bolts were internally stripped and could no longer fasten to the dywidag and were in fact, not compatible with the system the concrete crew was installing.</p> <p>Dywidag is a system primarily used to hold shuttering firmly in place when constructing concrete walls. The dywidag bar itself has a coarse thread making it idea for use on construction sites. This thread runs along the whole length of the bar allowing it to be cut or coupled at any point.</p>	<p>This incident is under investigation.</p>	

28.7 Westridge Marine Terminal and Spread 7 – Temporary Infrastructure Sites

<p>Construction Progress July 31, 2022</p> <p>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.</p> <p>COQ060 2 King Edward St. - Received 46,496 m of pipe to date; 103% of anticipated inventory. Released 13,987m to Spread 7 construction and 124 m released to support Westridge construction. Bends and miscellaneous equipment received and released at site.</p> <p>VAN048 Commissioner St. Yard - Site is being used for assembly of marine loading arms and storage of permanent materials for WMT.</p> <p>BUR049 Barnet Hwy - ongoing parking, construction office, minor stockpile for construction materials</p> <p>COQ056 150 Glacier, Coquitlam - Office space and storage and maintenance shop leased on existing industrial property and in current use.</p> <p>BUR057 4001 Remi Place, Burnaby - 21,000 ft² warehouse facility leased within existing industrial property; The building has been configured for use as a warehouse and is currently used as a warehouse and a training facility.</p> <p>COQ061 88 Golden Drive - construction office occupied and material storage commenced; additional office trailers installed and site upgrades to security systems completed</p> <p>PIT062 Pitt River Road - Parking and material storage</p> <p>SUR021 Surrey 19298 98A Ave - ongoing equipment and material storage</p> <p>SUR022 Surrey 19395 98A Ave - security installation completed. Lot is currently empty and will be used for parking Spread 7 craft</p> <p>COQ067 1701 Lougheed Highway - ongoing parking</p>			
Issues and Non-Compliances			
Safety Issue	Security Issue	Environment Event	Non-Compliance
0	0	6 environmental deficiencies (Table 5)	0

TABLE 4: ENVIRONMENTAL EVENTS REPORTED IN JULY 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	1	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	1	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0

TABLE 4: ENVIRONMENTAL EVENTS REPORTED IN JULY 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	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Air & Noise	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Fish & Wildlife	0	0	1	0	1	1	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	2	0	1	1	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 JULY 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	28	44	22	45	61	0	0	13	0	0	16	0	0	2	0	0	0	0	1	0	0	5
	Vegetation	0	7	1	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
	Water	0	24	54	4	11	38	0	0	6	0	0	9	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	13	0	5	11	0	0	3	0	0	3	0	0	1	0	0	1	0	0	0	0	0
	Waste & Hazardous Materials	0	1	19	10	4	27	0	0	5	0	0	17	0	0	0	0	0	4	1	0	1	0	1
	Heritage Resources	0	0	0	1	0	2	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0
	Trespass	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Biosecurity	0	0	0	0	0	2	0	0	1	0	0	2	0	0	0	0	0	0	0	1	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	60	131	37	65	152	0	0	29	0	0	50	0	0	3	0	0	4	1	2	1	0	6	

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.