Monitoring Report: SV-2021-04-22

Trans Mountain Expansion Project – Westridge Marine Terminal (WMT) Compliance Verification Activity (CVA) Report

Date	April 22, 2021	**Call start time:**	1:30 PM	**Call end time:**	3:10 PM
Format	Web-based conference call with Trans Mountain presenting photographs, documents and/or videos relevant to the expansion of the WMT.				
Fisheries and Oceans Canada (DFO) attendees	W.B. (Senior Biologist), K.J. (Biologist) and I.M. (Biologist)				
Indigenous Advisory Monitoring Committee (IAMC) attendees	Musqueam Nation: R.K. (Environmental Stewardship Coordinator) and B.G. (Environmental Monitor) Tsleil-Waututh Nation: A.S. (Referrals Analyst – Environmental Assessments) and W.G. (Environmental Monitor) IAMC – Monitoring Subcommittee: C.T. (IAMC representative – Burrard Inlet and Lower Fraser River, from Tsleil-Waututh Nation) and R.C. (IAMC representative – Alberta First Nations)				
Other attendees	Trans Mountain Corporation (TMC): K.M. (Senior Regulatory Lead), S.D. (Lead Environmental Inspector), B.J. (Chief Environmental Inspector), T.A. (Construction Manager) and L.B. (Senior Field Regulatory Advisor) Kwikwetlem First Nation (KFN): M.J. (Project IM)				

On-site contractor/equipment	**Role**
Trans Mountain Corporation	Site Management
Kiewit Ledcor Trans Mountain Partnership (KLTP)	Prime construction contractor
JASCO Applied Sciences	Underwater noise monitoring during vibratory and impact pile driving.
Triton Environmental Consultants (Triton)	Marine mammal monitoring and water quality testing.
Keller	Deep soil mixing (DSM) and jet grouting works on the foreshore.

IAMC Indigenous Monitor/IMSC Representative Questions and Comments

During a discussion about the east outfall construction, RC asked if there had been an archaeological monitor onsite, because archaeological impacts are important from a community standpoint.

- SD responded that an archaeological overview assessment was previously completed and the east outfall area was deemed to have low potential for archaeological resources. Below depth of the foreshore and Canadian Pacific rail tracks may be areas of higher probability of finding artifacts, thus an archaeological monitor will be on site, as well as MJ. TMC does have a 'chance find' contingency plan in place.
- RC asked to be notified in advance of when higher probability work is to be conducted (i.e., where an archaeological monitor is required). TA responded that TMC potentially will be starting preparatory work in mid-August 2021.
- AS inquired about the 'chance find' procedure and if it is possible for Indigenous Monitors to review this procedure. SD responded that TMC has a 'historical resource contingency plan' which is a public document and can be reviewed. KM offered to send a link to the document. TMC indicated that they would discuss with appropriate TMC staff, and provide a response to the CVA monitoring team.
- CT asked about consultation regarding archaeological resources and other groups that may have provided input. CT stated that there will probably be no consultation records between TMC and TWN on this issue.

During discussion about offshore works, CT asked how close ships and tankers typically get to the works.

- TA responded that there is a 30 m exclusion zone, and whenever there is a ship coming in or out equipment can be moved to give space for ships and tugs.
- SD stated that there is still access to the existing loading platform, so TMC ensures vessels and tugs will have enough space.

WG asked TMC to describe the marine mammal exclusion zones and marine mammal monitoring involved in works in and around the water.

- SD responded that marine mammal monitoring occurs around the time of impact pile driving and TMC monitors two exclusion zones (one for harbour seals and a larger exclusion zone for all other marine mammals). Continuous visual assessment of exclusion zones is conducted by Triton monitors at these times.

KJ asked in support of AS's suggestion if TMC could provide a more detailed construction schedule for the WMT, so that monitors can request videos or photos of specific activities in advance (e.g., installation of the east outfall on the foreshore, pile driving, fish salvage activities, and concrete top-deck pours).

- KM responded that it is hard to know a schedule much in advance, but can provide a tentative schedule when KJ requests the next CVA meeting.
- CT asked why more detail cannot be provided.
- KM responded that the schedule can change daily. SD added that all activities over the next five months will be very similar.

AS mentioned that during the last CVA, the marine mammal spotting program and scope were discussed. The scope manual provided by TMC following the meeting covers a different model than the one being used, which may actually be stronger.

- SD to reach out to Triton to retrieve the appropriate manual, which could then be shared.

AS referenced the discussion from the last CVA regarding live streaming of on-site video and asked if a camera or webcam could be installed with the ability to stream to a safe web link, enabling real-time monitoring without health and safety risk.

- TMC team responded that this would not likely be feasible due to privacy concerns, and that they could return a list of reasons why this isn't likely feasible.
- AS asked that TMC, instead of compiling a list of reasons why they cannot meet this request, instead focus on providing a list of ways on *how they can* complete this request.
- CT stated that where compliance verification is required, we need to get creative to complete monitoring.
- SD responded that more videos of specific works can be provided and BJ stated that this question will be taken to TMC for further discussion or direction.

Call Overview

- Introductions
- CT opened the meeting, welcoming participants, speaking of the lands and people of the Tsleil-Waututh Nation, and giving thanks in both Hən̓q̓əmin̓əm̓ (Halkomelem, downriver dialect) and English.
- Review scope of monthly CVAs
    - KJ: This call is in place of a typical in-person joint DFO-IAMC Indigenous Monitor CVA site visit given the current situation of the COVID-19 pandemic. This compliance monitoring is to verify conditions of the *Fisheries Act* Authorization for the WMT and also verifying general compliance with the *Fisheries Act*.

- Agenda
  - Overview of recent construction activities

Works undertaken at Westridge

SD provided an overview of construction activities:

- **Foreshore** – Continued ground improvement works (pre-drilling and installing columns), grout spoils taken offsite for disposal, and outfall installed/completed by March 15 (within work window required by Authorization conditions).
- **Marine** – Loading Platform 1/2 works (concrete pours and installation of steel modules for piping), trestle support works (concrete pours for pile caps), vibratory and impact pile driving, girder installation, and building forms for various concrete pours.

SD showed photos of east outfall works on the foreshore and provided details regarding mitigation measures associated with them:

- East outfall pipe extends out of east end of foreshore – ultimately surface storm water will be discharged from the pipe to the ocean (sediment filters or water oil separators will be used as appropriate).
- East outfall installation involved excavation, backfilling, and placement of geotextile fabric covered by riprap. Works were completed before the end of the least risk window.
- WB asked about whether there had been sedimentation of water during the outfall works. SD responded that there have been no releases outside of the turbidity curtain.
- WB also inquired about the rockweed-covered riprap that was excavated.
  - SD responded that it was stockpiled and replaced after installation. New clean granitic rock was also added, particularly along the upper shoreline for armouring.

SD described and showed videos of pre-drilling and installation of columns on the expanded foreshore by deep soil mixing (DSM) and jet grouting. Grout returns at the surface are contained by a berm and a 4' sheet-pile wall is in place around perimeter of expanded foreshore. Surface water that collects in the grout curing pits is moved to foreshore water treatment plants and cured solid spoils are loaded via a conveyor onto a barge for transport to Summit Earthworks in Mission for disposal.

- RK on behalf of JH (Musqueam IM) asked about whether there was a turbidity curtain around the barge. SD responded that there is no turbidity curtain around the spoils barge, but that lock blocks on the barge are sealed with spray foam, silicone and grouting, which are watertight. Catch containment is also in place beneath the conveyor belt during loading of spoils onto the barge.
- CT asked if the spoils barge is covered while being towed. SD responded that it is not. Spoils are not completely dry and are heavy so there are no issues with being blown off the barge, thus no covering is needed.
- CT noted that seeing a video of the conveyor loading spoils onto the barge would be helpful.

SD showed photos of offshore works and provided details regarding mitigation measures associated with them:

- Welding works included trestle piles and shear lugs to attach dolphin jackets to piles.
- Girders have been lifted into place and there has been ongoing rebar work for girder lock-in concrete pours.
- Approximately 12 concrete pours have taken place since the last CVA, including pours on the loading platform and pile cap pours. Mitigation measures in place include spill trays beneath trucks, spill kits on barges, sandbags protecting drains, netting used as splatter guards when pouring curbs and pedestals, bagging the end of the hose in case of any leftover concrete, and tarps placed over fresh concrete to avoid surface water contact.

- WB asked if the spotting scope is now being used for monitoring marine mammals and how it has been working.
    - SD responded that they are only using maximum of four seal deterrents at the moment and the exclusion zone is 1.7 km, so they have not had to expand to larger exclusion zones. The spotting scope is being used sometimes, but it is not needed given the ability of other binoculars to monitor the 1.7 km exclusion zone.
- Piles were installed for Loading Platform 3 via vibratory hammer and impact. Bubble curtains were used during impact pile driving.
    - KJ asked if underwater noise from impact and vibratory pile driving stayed within the underwater noise threshold. SD responded that the levels have stayed below the threshold. The highest peak sound pressure level recorded was 205 dB per 1 µPa, but levels were mostly between 202 and 204 dB per 1 µPa. Works are moving onto larger breasting dolphin piles for impacting, which been associated with higher noise levels in the past.
    - Following a question from WB, SD noted that larger breasting dolphin pile diameters (1.98 m) will be impacted in the coming weeks.

SD mentioned that they are starting to see schools of out-migrating juvenile chum and pink salmon, since the middle of March.

- KJ asked if fish are being seen offshore where pile driving is taking place and whether they are moving away from pile driving activities through the use of fish acoustic deterrent.
    - SD stated that they have started seeing the odd school offshore by the barges and have previously seen fish in and around the fish acoustic deterrent areas. The deterrents don't have a major affect on salmon, as they are hearing generalists and don't move away as opposed to herring which are hearing specialists. SD stated that lack of movement when the deterrent is in use aligns with findings of JASCO report. Salmon are closer to the surface than herring and the bubble curtain pushes them away.

SD described eagle presence on the east side of the site within Barnet Marine Park. Eagles have been present at this location for four years with nests in the same tree for the past three years. He provided photos from as recently as April 6.

KM stated that following the meeting, meeting slides will be uploaded onto Firmex, and WG will be provided access.

GENERAL AND MISCELLANEOUS MITIGATION MEASURES

Measures specified within the Westridge Marine Terminal Fisheries Act Authorization Conditions:

Schedule			
2.2.6 All nearshore in-water Project construction activities (within a 50-m horizontal distance seaward of the higher high water large tide level) at the Westridge Marine Terminal shall only be carried out during a work timing window from August 16 to March 15 each year.			
Discussed/ observed: ☒ Yes ☐ No	Issue(s) identified: ☐ Yes ☒ No	Issue(s) unresolved: ☐ Yes ☐ No	Not applicable ☐
Comments			
TMC stated that nearshore works were completed prior to March 15th.			
Action Items			
None.			

Monitoring			
3.1 A qualified environmental professional must be on-site during the carrying on of in-water works, undertakings and activities, and shall monitor the works, undertakings or activities on a systematic and on-going basis to ensure that standards and avoidance measures to avoid impacts to fish and fish habitat are effective, and that unauthorized impacts to fish and fish habitat are avoided.			
Discussed/ observed: ☒ Yes ☐ No	Issue(s) identified: ☐ Yes ☒ No	Issue(s) unresolved: ☐ Yes ☐ No	Not applicable ☐
Comments			
The Lead Environmental Inspector spoke throughout the meeting about their experiences at the WMT during construction since the last compliance verification meeting on March 2nd. Qualified environmental professionals are conducting monitoring of construction activities at the WMT and erosion and sediment control measures were monitored and maintained during this reporting period.			
Action Items			
None.			

Marine Mammal Observations			
2.2.7 In-water construction activities must cease if any marine mammal is observed adjacent to or within the project area such that there is risk of direct physical harm to the marine mammal. Construction activities may only resume once the marine mammal has been confirmed to have left the immediate area or has not been sighted for 30 minutes.			
Discussed/ observed: ☒ Yes ☐ No	Issue(s) identified: ☐ Yes ☒ No	Issue(s) unresolved: ☐ Yes ☐ No	Not applicable ☐
Comments			
TMC noted that harbour seals were observed within and around the 150 m exclusion zone prior to commencement of impact pile driving. This condition was adhered to.			
Action Items			
None.			

Temporary Structures and Decommissioning of Existing Structures			
The application for a *Fisheries Act* authorization states that a floating debris boom will be secured around the work area to collect drifting debris during demolition of the existing utility dock (page 3.1).			
Discussed: ☐ Yes ☒ No	Issue(s) identified: ☐ Yes ☐ No	Issue(s) unresolved: ☐ Yes ☐ No	Not applicable ☒

2.2.5 Temporary structures installed below the high-water mark shall be decommissioned and removed when they are no longer being used for construction purposes.			
Discussed/ observed: ☐ Yes ☒ No	Issue(s) identified: ☐ Yes ☐ No	Issue(s) unresolved: ☐ Yes ☐ No	Not applicable ☒
Comments			
No structures are currently being decommissioned.			
Action Items			
None.			
Pump Intake Screening			
2.2.2 Water intakes of any pumps shall be designed and screened in accordance with specifications outlined in the Addendum, Fisheries and Oceans Canada's *Freshwater Intake End-of-Pipe Fish Screen Guidelines* (Fisheries and Oceans Canada 1995), and Fisheries and Oceans Canada's *Guidelines for Minimizing Entrainment and Impingement of Aquatic Organisms at Marine Intakes in British Columbia* (Fisheries and Oceans Canada 1991).			
Discussed/ observed: ☐ Yes ☒ No	Issue(s) identified: ☐ Yes ☐ No	Issue(s) unresolved: ☐ Yes ☐ No	Not applicable ☒
Comments			
Screens for known water intakes have been discussed during previous site inspections. No issues were reported.			
Action Items			
None.			
Fish Salvage			
2.2.3 Fish salvage and relocation shall be conducted, as appropriate, prior to the start of construction activities so as to avoid and minimize adverse impacts to fish.			
Discussed/ observed: ☐ Yes ☒ No	Issue(s) identified: ☐ Yes ☐ No	Issue(s) unresolved: ☐ Yes ☐ No	Not applicable ☒
Comments			
No further fish salvage has occurred since the compliance verification activity call on January 26, 2021.			
Action Items			
None.			
Integrity of Habitat Offsets			
4.7 The Proponent shall not carry on any works, undertakings or activities that will adversely disturb or impact the offsetting measures.			
Discussed/ observed: ☐ Yes ☒ No	Issue(s) identified: ☐ Yes ☒ No	Issue(s) unresolved: ☐ Yes ☐ No	Not applicable ☒
Comments			
Offsetting measures have yet to be installed. Offsetting construction cannot occur until the foreshore expansion is complete.			
Action Items			
None.			

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MITIGATION MEASURES SPECIFIC TO PILE DRIVING

Measures specified within the Westridge Marine Terminal Fisheries Act Authorization Conditions:

Underwater Sound Pressure Level Reduction			
2.2.8 A vibratory hammer will be used for pile driving where practical and feasible, and all in-water pile driving activities will be monitored via hydrophone to ensure underwater peak pressures do not result in adverse impacts to fish.			
Discussed/ observed: ☒ Yes ☐ No	Issue(s) identified: ☐ Yes ☒ No	Issue(s) unresolved: ☐ Yes ☐ No	Not applicable ☐
2.2.9.1 To avoid death of fish, mitigation measures (e.g., bubble curtain around the full wetted length of the pile, fish exclusion, etc.) must be implemented.			
Discussed/ observed: ☒ Yes ☐ No	Issue(s) identified: ☐ Yes ☒ No	Issue(s) unresolved: ☐ Yes ☐ No	Not applicable ☐
Comments			
Mitigation measures used to deter fish from the area prior to pile driving were described (e.g., noise monitoring via hydrophones, pre-drive inspection of bubble curtain, flow monitoring for hoses, and fish acoustic deterrent deployed).			
Action Items			
None.			
Underwater Sound Pressure Level Monitoring			
2.2.9.2 Monitoring via underwater noise recordings must be conducted continuously and within 10 meters of the pile being driven to verify that underwater sounds do not exceed the 30 kPa (209.5 dB re: 1 µPa) threshold for injury to finfish.			
Discussed/ observed: ☒ Yes ☐ No	Issue(s) identified: ☐ Yes ☒ No	Issue(s) unresolved: ☐ Yes ☐ No	Not applicable ☐
2.2.9.3. Outside of the least risk window for Burrard Inlet (August 16 – February 28), a more conservative underwater sound threshold of 22.5 kPa (207 dB re: 1 µPa) will be adhered to, and monitored, to prevent injury to finfish. If sound levels exceed this threshold, or a fish kill is observed despite mitigation measures being in place, pile driving activities are to cease immediately and mitigation methods are to be reviewed and modified in consultation with DFO.			
Discussed/ observed: ☒ Yes ☐ No	Issue(s) identified: ☐ Yes ☒ No	Issue(s) unresolved: ☐ Yes ☐ No	Not applicable ☐
2.2.9.4 If underwater noise recordings indicate that sound levels are likely to exceed the applicable threshold defined in conditions 2.2.9.2 or 2.2.9.3, the Proponent will take appropriate action with the goal of preventing the exceedance from occurring. These actions may include adjusting the force of the hammer, adjusting the mitigation measures already in place to increase their effectiveness, or implementing additional mitigation measures.			
Discussed/ observed: ☒ Yes ☐ No	Issue(s) identified: ☐ Yes ☒ No	Issue(s) unresolved: ☐ Yes ☐ No	Not applicable ☐
2.2.9.5 Upon commencement of pile driving, or recommencement after a delay of 30 minutes or more, pile installation shall ramp-up by starting with less frequent impact strikes of lower force. This ramp-up period is designed to enable any fish that may be in the area time to leave the area prior to the generation of peak pressure and noise levels for pile installation.			
Discussed/ observed: ☒ Yes ☐ No	Issue(s) identified: ☐ Yes ☒ No	Issue(s) unresolved: ☐ Yes ☐ No	Not applicable ☐
Comments			
TMC described mitigation measures employed during impact pile driving. The highest noise level recorded was approximately 205 dB re: 1µPa.			
Action Items			

None.							
Marine Mammal Monitoring							
2.2.9.6 Prior to commencement of pile driving, or recommencement after a delay of 30 minutes or more, visual monitoring must be conducted to determine if marine mammals are present within an exclusion zone of 1 km (except for harbor seals, which will have an exclusion zone of 150 m).							
Discussed/ observed:	☒ Yes ☐ No	Issue(s) identified:	☐ Yes ☒ No	Issue(s) unresolved:	☐ Yes ☐ No	Not applicable ☐	
2.2.9.7 Work may only commence if marine mammals and harbour seals are not observed in their respective exclusion zones for 30 minutes.							
Discussed/ observed:	☒ Yes ☐ No	Issue(s) identified:	☐ Yes ☒ No	Issue(s) unresolved:	☐ Yes ☐ No	Not applicable ☐	
2.2.9.8 Exclusion zones must be monitored continuously during impact pile driving. If a marine mammal or marine mammals are observed within their respective exclusion zone, pile driving activities must cease until all marine mammals leave their respective exclusion zone or they have not been sighted for 30 minutes within their respective exclusion zone.							
Discussed/ observed:	☒ Yes ☐ No	Issue(s) identified:	☐ Yes ☒ No	Issue(s) unresolved:	☐ Yes ☐ No	Not applicable ☐	
2.2.9.9 If underwater noise recordings reveal that the threshold of 160 dB is exceeded at the 1 km exclusion zone boundary, the exclusion zone radius must be widened to a new outer limit, where sound recordings demonstrate that the 160 dB threshold is not exceeded. Conditions 2.2.9.6 to 2.2.9.8 will need to be complied with within this new exclusion zone.							
Discussed/ observed:	☒ Yes ☐ No	Issue(s) identified:	☐ Yes ☒ No	Issue(s) unresolved:	☐ Yes ☐ No	Not applicable ☐	
2.2.9.10 Pile driving may only be carried out during daylight hours to enable effective visual monitoring of marine mammal exclusion zones.							
Discussed/ observed:	☒ Yes ☐ No	Issue(s) identified:	☐ Yes ☒ No	Issue(s) unresolved:	☐ Yes ☐ No	Not applicable ☐	
Comments							
Prior and during impact pile driving, and only when needed, TMC is using four seal acoustic deterrents within the 150 m seal-specific exclusion zone as a mitigation measure to avoid adverse impacts (e.g., auditory injury) to 'fish' (which includes marine mammals such as seal) (Condition 2.2.8 of the *Fisheries Act* Authorization). Since completing the Seal Deterrent Sound Source Characterization Study Report produced by JASCO Applied Sciences, TMC is now monitoring a larger marine mammal exclusion zone (1,700 m radius) prior to and during the deployment of four seal acoustic deterrent devices. Only harbour seals have been observed since the previous CVA on March 2, 2021.							
Action Items							
None.							

Measures specified within the Westridge Marine Terminal Environmental Protection Plan:

Fish Salvage							
35. Immediately following the installation of each sheet pile cell, and prior to excavation and infilling of that cell, conduct a salvage of commercial, recreational and Aboriginal (CRA) fishery species via crab and fish trapping/netting and seines (where appropriate). Release captured CRA fishery species in a suitable habitat at least 500 m away from marine construction activities.							
Discussed/	☐ Yes	Issue(s)	☐ Yes	Issue(s)	☐ Yes	Not applicable ☒	

observed: ☒ No	identified: ☐ No	unresolved: ☐ No	
Comments			
No further fish salvage has occurred since the compliance verification activity call on January 26, 2021.			
Action Items			
None.			
Turbidity Monitoring			
43. Should visual monitoring during in-water pile installation indicate concern regarding turbidity levels, the Environmental Inspector will arrange for in situ sampling of turbidity (nephelometric turbidity units). Should turbidity levels exceed specified thresholds, pile driving will temporarily be halted.			
Discussed/ observed: ☐ Yes ☒ No	Issue(s) identified: ☐ Yes ☒ No	Issue(s) unresolved: ☐ Yes ☐ No	Not applicable ☐
Comments			
No water quality issues were reported during in-water pile installation.			
Action Items			
None.			

MITIGATION MEASURES SPECIFIC TO FORESHORE CONSTRUCTION

Riparian Planting and Material Handling			
Westridge Marine Terminal Fisheries Act Authorization Conditions			
2.2.4 Disturbed riparian areas shall be replanted as appropriate, with native non-invasive species of vegetation.			
Discussed/ observed: ☐ Yes ☒ No	Issue(s) identified: ☐ Yes ☐ No	Issue(s) unresolved: ☐ Yes ☐ No	Not applicable ☒
Westridge Marine Terminal Environmental Protection Plan Commitments			
30. Unless otherwise approved by DFO, retain all excavated [marine] material and dispose at a land-based facility in accordance with applicable regulations.			
Discussed/ observed: ☐ Yes ☒ No	Issue(s) identified: ☐ Yes ☐ No	Issue(s) unresolved: ☐ Yes ☐ No	Not applicable ☒
Comments			
Not applicable.			
Action Items			
None.			

Water Quality Maintenance and Monitoring			
Westridge Marine Terminal Fisheries Act Authorization Conditions			
2.2.1 Effective sediment and erosion control measures (e.g., a turbidity curtain, etc.) shall be implemented before starting construction and shall be maintained during construction activities, as appropriate, to avoid the deposit and dispersion of sediment into the marine environment.			
Discussed/ observed: ☒ Yes ☐ No	Issue(s) identified: ☐ Yes ☒ No	Issue(s) unresolved: ☐ Yes ☐ No	Not applicable ☐
2.2.10 A turbidity curtain must be used to isolate the work area during the excavation of riprap in order to contain marine sediment suspended in the water column and limit the extent of sediment dispersion. During severe weather conditions that may reduce the effectiveness of, or impede the visual monitoring of, the turbidity curtain (e.g., > 70 km/h			

winds, or dense fog), works, undertakings or activities that may increase suspended sediment concentrations within the turbidity curtain or adversely affect the integrity of the turbidity curtain, must be suspended.			
Discussed/ observed: ☐ Yes ☒ No	Issue(s) identified: ☐ Yes ☐ No	Issue(s) unresolved: ☐ Yes ☐ No	Not applicable ☒
Westridge Marine Terminal Environmental Protection Plan Commitments			
29. During in-water excavation or rip rap, conduct water quality monitoring (WQM) as per the Water Quality Management Plan during Rip Rap Removal (Appendix H of this EPP). Conduct WQM to assess the effectiveness of the turbidity curtain and modify turbidity curtain deployment, if required.			
Discussed/ observed: ☐ Yes ☒ No	Issue(s) identified: ☐ Yes ☐ No	Issue(s) unresolved: ☐ Yes ☐ No	Not applicable ☒
Westridge Marine Terminal Sediment and Erosion Control Plan Commitments			
The in-water sediment curtain will remain intact during Foreshore construction activities to ensure sediment laden water is not discharged into Burrard inlet.			
Discussed/ observed: ☒ Yes ☐ No	Issue(s) identified: ☐ Yes ☒ No	Issue(s) unresolved: ☐ Yes ☐ No	Not applicable ☐
Comments			
A turbidity curtain remains in place around the sheet-pile cells encompassing the foreshore. The turbidity curtain also encompasses the foreshore where the east outfall was installed in the high intertidal zone. There has been slight elevated turbidity within the curtain when there is a tidal change. Water quality tests were completed during times when works were closest to the water – no concerns were identified.			
Action Items			
None.			

Additional comments or action items
• TMC to provide manual specific to spotting scope used during marine mammal monitoring. • TMC to internally review possibility of live streaming of on-site video of specific construction works.