



**INSPECTION OFFICER ORDER NO. SLM - 001 - 2017**

IN THE MATTER OF THE *NATIONAL ENERGY BOARD ACT*, AN ORDER UNDER SECTION 51.1

\_\_\_\_\_  
Full name of the recipient

is employed by Westcoast Energy Inc., carrying on business as Spectra Energy Transmission (Westcoast), and/or is a person conducting

*Company Name*

an excavation or construction on or near a facility located at Chetwynd, British Columbia.

On 22 & 23 August 2017, the undersigned *National Energy Board* Inspection Officer conducted

*Date*

an inspection High Pine Expansion Project (Project): North Loop from Latitude 56.787800 Longitude -122.329285 to 56.723275 -122.265153 and South Loop from 55.882697 -122.122504 to 55.814522 -122.165859.

*Location on R.O.W*

The Inspection Officer has reasonable grounds to believe: that a hazard to the safety of the public and employees, and that a detriment to the environment has been caused, and will be caused by the construction of the pipeline at watercourse crossings and wetlands identified in the Environmental Protection Plan and the Environmental Alignment sheets for the Project. There is total of 51 watercourses identified for the Project, there will be 39.2 km of 1067 mm (NPS 42) pipeline constructed. The potential non-compliances observed on the Project can be summarized as:

1. The access bridges over watercourse crossings may not be safe for large equipment, pipe and people to cross;
2. The "Riparian Management Areas" have not been adequately protected from rutting and general disturbance;
3. Sediment and erosion control measures at watercourse crossings and wetlands is not adequate; and
4. The sediment and erosion control measures on steep slopes on both the North and South Loop is not adequate.

Further, the weather has transitioned from a long period of very dry, windy conditions to heavy rainfall, thereby increasing the risk of deleterious material entering wetlands and watercourses.

*the inspection officer shall describe the grounds for making the order*

*Based on the above mentioned, the inspection officer has reasonable grounds to believe that a hazard to the safety or security of the public, or employees of a company or a detriment to property or the environment is being or will be caused by the construction, operation, maintenance or abandonment of the pipeline, or excavation activity or construction of a facility as per 49(2)(a).*

Therefore, \_\_\_\_\_ is HEREBY ORDERED,

*Full name of the recipient*

pursuant to subsections 51.1(1) and 51.1(2) of the *National Energy Board Act*, to

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|--|---|
| <input checked="" type="checkbox"/> take measures specified below for guarding the safety or security of the public or employees or protecting property or the environment | <input type="checkbox"/> Suspend work until the hazard or detrimental situation has been remedied to the satisfaction of the inspection officer; or the order is stayed or rescinded by the Board |
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**Specified Measures:** Westcoast shall comply with the *National Energy Board Onshore Pipeline Regulations*, including and not limited to sections 4(1)(2), 6, 6.1, 18, 19 and 21. Westcoast shall also comply with condition 1



of Order XG-W102-024-2016 (Authorization) that states “Westcoast shall comply with all of the conditions contained in this Order unless the Board otherwise directs”. Specifically Westcoast shall:

- a) Comply with condition 2 of the Authorization and ensure that each access bridge of watercourses and wetlands on the Project is constructed safely for the transportation of equipment and pipe;
- b) Comply with condition 3 of the Authorization by minimizing disturbance in riparian areas as described in the High Pine Expansion Project Environmental Protection Plan dated 2 August 2017 (EPP) and provide a plan for how this will be achieved with a schedule;
- c) Comply with condition 3 of the Authorization by installing sediment and erosion control measures on steep slopes, watercourse crossings and wetlands for both the North and South Loop. These measures will minimize erosion during construction and ensure deleterious material does not enter watercourses;
- d) Comply with condition 3 of the Authorization by submitting a detailed description, supported with photos, of all corrective actions taken at each watercourse and wetland.
- f) Comply with condition 3 of the Authorization by providing a site specific sediment and erosion control plan to the Board for approval for each slope on the North and South Loops, and confirmation that they will be implemented during reclamation of the right-of-way; and
- g) Comply with condition 3 of the Authorization by providing written confirmation that a site specific reclamation plan to restore conditions and function will be submitted to the Board for approval for each watercourse and wetland listed on Table 7-7 and Environmental Alignment Sheet of the EPP.
- h) As required by the *National Energy Board Onshore Pipeline Regulations (OPR)*, Management System section 6.5(1) (d) Westcoast shall submit to the Board an inventory of the identified hazards and potential hazards for the Project;
- i) As required by the OPR, s. 6.5(1)(e) provide the process for evaluating and managing the risks associated with the identified hazards, including the risks related to normal and abnormal operating conditions;
- j) As required by the OPR, s. 6.5(1)(i) provide an explanation of how Westcoast has established and implemented a process for identifying and managing any change that could affect safety, security or the protection of the environment, including any new hazard or risk, any change in a design, specification, standard or procedure and any change in the company’s organizational structure or the legal requirements applicable to the company for the Project;
- k) As required by the OPR, s. 6.5(1)(j) provide an explanation of how Westcoast has established and implemented a process for developing competency requirements and training programs that provide employees and other persons working with or on behalf of the company with the training that will enable them to perform their duties in a manner that is safe, ensures the security of the pipeline and protects the environment;
- l) As required by the OPR, s. 6.5(1)(k) provide an explanation of how Westcoast has established and implemented a process for verifying that employees and other persons working with or on behalf of the company are trained and competent and for supervising them to ensure that they perform their duties in a manner that is safe, ensures the security of the pipeline and protects the environment;
- m) As required by the OPR, s. 6.5(1)(m) provide an explanation of how Westcoast has established and implemented a process for the internal and external communication of information relating to safety, security and protection of the environment;
- n) As required by the OPR, s. 6.5(1)(r) provide an explanation of how Westcoast has established and implemented a process for the internal reporting of hazards, potential hazards, incidents and near-misses and for taking corrective and preventive actions, including the steps to manage imminent hazards;
- o) As required by the OPR, s. 6.5(1)(t) provide an explanation of how Westcoast has established and implemented a process for developing contingency plans for abnormal events that may occur during construction and emergency situations;



- p) As required by the OPR, s. 6.5(1)(u) provide an explanation of how Westcoast has established and implemented a process for inspecting and monitoring the company's activities to evaluate the adequacy and effectiveness of the programs referred to in section 55 and for taking corrective and preventive actions if deficiencies are identified;
- q) As required by the OPR, s. 6.5(1)(v) provide an explanation of how Westcoast has established and implemented a process for evaluating the adequacy and effectiveness of the company's management system and for monitoring, measuring and documenting the company's performance in meeting its obligations under section 6; and
- r) As required by the OPR, s. 6.5(1)(w) provide documentation for the Project that confirms the quality assurance program is being implemented on the Project and specify what corrective and preventive actions have been taken for deficiencies that have been identified.

**23 August 2017 Inspection- South Pipeline Loop Watercourses**  
**Reference: EPP, Table 7-7 & Environmental Alignment Sheets**

#	KP	Name	Riparian Management Area M	Resources, Requirements and Hazards	Observed Non-Compliances
WCS-1	0.7	Tributary to Coalbed Creek	0	<ul style="list-style-type: none"> <li>• Caribou herd range</li> <li>• Ramp and culvert vehicle access</li> </ul>	<ul style="list-style-type: none"> <li>• Ramp and culvert vehicle crossing has not been constructed as per Drawing 21</li> </ul>
WCS-2	1	Tributary to Coalbed Creek	20	<ul style="list-style-type: none"> <li>• Caribou herd range</li> <li>• Clear span bridge</li> <li>• Riparian set-back</li> <li>• Disturbance and clearing minimized</li> <li>• RAP from July 15 to August 15</li> <li>• Avoid harm to fish and fish habitat</li> <li>• Discharge water 50 m away from watercourse and prevent erosion</li> <li>• Install clear span bridge vehicle crossing</li> <li>• For bank stabilization, soft engineering is preferred over riprap armoring to facilitate natural channel processes. On steep banks utilize brush layering or geo-grid system to stabilize soil. If stream banks must be armored, install live dormant posts of willow or dogwood between riprap and through an underlying geotextile cloth at a prescribed density.</li> </ul>	<ul style="list-style-type: none"> <li>• Riparian vegetation has not been conserved to the watercourse</li> <li>• Clear span bridge as per Drawing 22 has not been installed, rather a poorly constructed ramp is in place that does not meet the requirements of Drawing 21</li> <li>• Highly erodible soil has been used for the vehicle access ramp and if there is a significant rain event sediment laden water will enter the watercourse</li> <li>• Broken swamp mats are on site</li> <li>• Silt fences have not been adequately maintained as per Drawing 1</li> <li>• Evidence of equipment driving through the watercourse and there has been damage to the well-defined channel</li> </ul>



WCS-3	1.8	Tributary to Coalbed Creek	30	<ul style="list-style-type: none"> <li>• Blue listed plant community</li> <li>• Caribou herd range</li> <li>• Install clear span bridge</li> <li>• Riparian set-back</li> <li>• Fish bearing watercourse</li> <li>• Avoid harm to fish and fish habitat</li> <li>• Rescue fish if present before crossing</li> <li>• Keep RoW clearing as narrow as possible within the riparian zone and disturbance in the riparian area disturbance should be minimized</li> <li>• Apply seed mix to minimize erosion</li> <li>• Install soft engineering erosion control</li> <li>• High water erosion risk</li> <li>• Weed management required</li> </ul>	<ul style="list-style-type: none"> <li>• The vehicle access has not been constructed as per Drawing 21, nor does it have granular material to reduce deleterious material from entering the blue listed plant community</li> <li>• There is a lot of highly erodible soil on the ramp and if there was a significant rain event sediment laden water would enter the watercourse</li> <li>• Riparian vegetation has been cut to the watercourse and there is evidence of soil material in the watercourse, likely from equipment driving through it</li> <li>• Silt fences have not been adequately maintained as per Drawing 1</li> <li>• There are steep slopes above the watercourse and if there was a significant rain event sediment laden water would run down the slope and likely enter the watercourse</li> <li>• Riparian management zone and area requirements have not been met</li> </ul>
WCS-4	3	Tributary to Coalbed Creek	0	<ul style="list-style-type: none"> <li>• Blue listed wetland</li> <li>• Caribou herd range</li> <li>• Install ramp and culvert access</li> <li>• High water erosion risk</li> <li>• Avoid the use of deleterious materials near wetland</li> <li>• Avoid placing work areas in or around wetlands</li> <li>• Do not cause erosion or sedimentation of wetlands</li> <li>• Minimize temporary workspace, narrow RoW if possible, use blade width clearing where practical</li> <li>• Restore wetlands to baseline conditions and function</li> <li>• Avoid wetland or permit required</li> <li>• Lessen disturbance to</li> </ul>	<ul style="list-style-type: none"> <li>• All of the riparian vegetation has been removed from the channel</li> <li>• Riparian area is heavily disturbed on either side of the watercourse</li> <li>• The vehicle access has not been constructed as per Drawing 21, nor does it have granular material to reduce deleterious material from entering the blue listed wetland</li> <li>• Silt fences have not been adequately maintained as per Drawing 1</li> </ul>



				<p>vegetation, wildlife habitat and sensitive areas</p> <ul style="list-style-type: none"> <li>• Install erosion control to stabilize banks</li> <li>• Replant log decks and TWS with trees</li> </ul>	
WCS-5	3.5	Tributary to Burnt Trail Creek	20	<ul style="list-style-type: none"> <li>• Blue listed plant community</li> <li>• Same notes as above</li> </ul>	<ul style="list-style-type: none"> <li>• Silt fences have not been adequately maintained and are broken at multiple locations</li> <li>• Clean granular material has not been used for the vehicle access ramp, rather highly erodible soil has been used</li> <li>• The vehicle access does not comply with Drawing 21 and the line pipe that has been used for the culvert is blocked at one end</li> <li>• Riparian management zone and area requirements have not been met</li> </ul>
WCS-6	4.4	Tributary to Burnt Trail Creek	20	<ul style="list-style-type: none"> <li>• Blue listed plant community</li> <li>• Same notes as above</li> </ul>	<ul style="list-style-type: none"> <li>• Silt fences have not been adequately maintained</li> <li>• Clean granular material has not been used for the vehicle access ramp, rather highly erodible soil has been used</li> <li>• The vehicle access does not comply with Drawing 21</li> <li>• Riparian management zone and area requirements have not been met</li> </ul>
WCS-7	4.5	Tributary to Burnt Trail Creek	20	<ul style="list-style-type: none"> <li>• Blue listed plant community</li> <li>• Same notes as above</li> </ul>	<ul style="list-style-type: none"> <li>• Sediment laden water being transported across the RoW</li> <li>• Severe rutting observed on the "brown field" portion of the RoW</li> <li>• Silt fences have not been adequately maintained</li> <li>• Clean granular material has not been used for the vehicle access ramp, rather highly erodible soil has been used</li> <li>• The vehicle access does not comply with Drawing 21, a 10" pipe is being used for the culvert and is blocked at one end – there is no plan for a new vehicle access</li> </ul>



					<ul style="list-style-type: none"> <li>• Riparian management zone and area requirements have not been met</li> <li>•</li> </ul>
WCS-8	5.3	Tributary to Burnt Trail Creek	30	<ul style="list-style-type: none"> <li>• Wetland</li> <li>• Amphibian breeding habitat (Western Toad)</li> <li>• Install clear span bridge</li> <li>• Avoid wetland or permit required</li> <li>• Same notes as above</li> </ul>	<ul style="list-style-type: none"> <li>• Wetland has been de-watered and channels are dry thereby potentially taking out the amphibian habitat for an extended period of time</li> <li>• Rutting to 1 m depth in the riparian management zone and area causing sedimentation and erosion within the wetland</li> <li>• 3 trucks creating air emissions by idling at the watercourse</li> <li>• Topsoil pile not labelled</li> <li>• Ramp and culvert have not been installed as per Drawing 21</li> <li>• Blade width clearing has not been applied where practical in the wetland</li> <li>• Disturbance has not been reduced for the amphibian breeding habitat</li> <li>• Sediment and erosion control has not been installed as per Drawing 1, nor does it reduce sedimentation and erosion of the wetland</li> </ul>
WCS-9	6.1	Burnt Trail Creek	30	<ul style="list-style-type: none"> <li>• Wetland</li> <li>• Amphibian breeding habitat (Western Toad)</li> <li>• Install clear span bridge</li> <li>• Avoid wetland or permit required</li> <li>• Same notes as above</li> </ul>	<ul style="list-style-type: none"> <li>• Broken swamp mats nearby</li> <li>• Observed many amphibians on the work side of the exclusion fencing</li> <li>• Span bridge not in place, rather a sub-optimal ramp is in place</li> <li>• The location for the span bridge is marked to be installed beside the location where the amphibians were observed</li> <li>• The curb on the ramp did not ensure that fill material would not spill into the watercourse</li> <li>• Clean granular fill has not been used to construct the ramp, and a culvert has not been installed to handle 150%</li> </ul>



					<p>of maximum anticipated flow as per Drawing 21</p> <ul style="list-style-type: none"> <li>• Ramp deck was not clean and had highly erodible soil for the entire length</li> </ul>
WCS-10	8.9	Tributary to Moberly River	40	<ul style="list-style-type: none"> <li>• Caribou herd range</li> <li>• Install clear span bridge</li> <li>• Fish bearing watercourse</li> <li>• RAP from July 15 to August 15</li> <li>• Avoid harm to fish and fish habitat</li> <li>• Rescue fish prior to crossing</li> <li>• Keep RoW clearing as narrow as possible within the riparian zone and disturbance in the riparian area disturbance should be minimized</li> <li>• Disturbance and clearing minimized</li> <li>• Discharge water 50 m away from watercourse and prevent erosion</li> <li>• Apply seed mix to minimize erosion</li> <li>• For bank stabilization, soft engineering is preferred over riprap armoring to facilitate natural channel processes. On steep banks utilize brush layering or geo-grid system to stabilize soil. If stream banks must be armored, install live dormant posts of willow or dogwood between riprap and through an underlying geotextile cloth at a prescribed density</li> <li>• High or severe erosion risk and priority area for installation of sediment barriers</li> <li>• Weed management required</li> <li>• Lessen disturbance to vegetation, wildlife habitat and sensitive areas</li> <li>• Avoid and minimize caribou habitat loss and restore on-site</li> </ul>	<ul style="list-style-type: none"> <li>• Silt fence does not meet compliance to specification Drawing 1</li> <li>• Disturbance with the riparian zone and disturbance in the riparian area has not been minimized</li> <li>• Disturbance and clearing has not been adequately minimized</li> <li>• Clean granular fill has not been used to construct the temporary bridge as required by specification Drawing 22</li> <li>• The curb on the bridge did not ensure that fill material would not spill into the watercourse</li> <li>• The bridge deck was not clean and had highly erodible soil for the entire length</li> <li>• Disturbance to the bed and bank was observed and rocks from the bed of the watercourse had been removed</li> <li>• Garbage removal required</li> </ul>



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<b>Inspection Officer</b>		_____ Signature
	IO Designation <b>#1680</b>	
	Date <b>24 August 2017</b>	
517 10th Avenue SW Calgary AB T2R 0A8		