

**Westcoast Energy Inc., carrying on business as Spectra Energy Transmission (Westcoast)
Wyndwood Pipeline Expansion Project (Project)
Application under Section 58 of the National Energy Board Act,
Filed: 21 October 2016
File No.: OF-Fac-Gas-W102-2016-12 01**

Response to Information Request No. 1

Economics Matters

1.1 Economics

- Reference:** Westcoast, Application, EC1-EC8, Economics, Pages 5-6 (PDF pages 5-6 of 9), [A80172-1](#)
- Preamble:** In the reference, Westcoast selected the criteria which reflects the economic information for the applied for facilities.
- Request:** File descriptive and numerical information supporting the criteria selected in EC1 to EC8.

Response

EC1 - There is or there will be adequate supply to support the use of the applied for facilities.

Supply for the Project will come from the Montney Formation, which has been successfully commercialized with the application of horizontal drilling and multi-stage hydraulic fracturing. The Montney Formation holds one of the largest unconventional gas resources, and is one of the most economic formations, in North America. Based on estimates developed jointly by the National Energy Board, the British Columbia Oil and Gas Commission (OGC), the Alberta Energy Regulator and the British Columbia Ministry of Natural Gas Development, the total gas in place for the Montney Formation within British Columbia is 1,965 Tcf (In-Place Expected) with a corresponding marketable reserve estimate of 271 Tcf (Marketable Expected) (The Ultimate Potential for Unconventional Petroleum from the Montney Formation of British Columbia and Alberta – [Energy Briefing Note](#), November 2013).

EC2 - The applied-for facilities are likely to be used at a reasonable level over their economic life.

The Project has been designed so that its capacity matches the increased contract demands under the firm transportation service agreements that underpin the Project. The minimum contract term under the Wyndwood open season was 10 years, and the expansion service agreements have a weighted average contract term of 12 years. Shippers awarded expansion service who held existing firm service in Zone 3 were required under the terms of the open season to extend the term of such existing service, up to an amount equal to the volume of expansion service awarded, to match the minimum 10 year open season term requirement for expansion service. This resulted in a term extension being applied to 566.6 $10^3 \text{ m}^3/\text{d}$ (20 MMcf/d) of existing firm service. Moreover, under the open season Westcoast offered existing firm shippers the opportunity to relinquish existing service in Zone 3 back to Westcoast to potentially reduce or even eliminate the need for new facilities to

meet the expansion shipper service requests. No existing shippers took advantage of this opportunity to relinquish existing firm service in Zone 3. These factors, together with the significant gas resources and markets that support the Project, demonstrate that the Project facilities are likely to be used at a reasonable level over their economic life.

EC3 - Adequate markets exist for the volumes that would be available as a result of the applied-for facilities.

The Project will enable Westcoast to provide $1,416.4 \times 10^3 \text{ m}^3/\text{d}$ (50 MMcf/d) of incremental firm transportation service from receipt points along the Fort St. John Mainline, for gas deliveries of $991.5 \times 10^3 \text{ m}^3/\text{d}$ (35 MMcf/d) to the Westcoast T-South system at Compressor Station No. 2 and $424.9 \times 10^3 \text{ m}^3/\text{d}$ (15MMcf/d) to the NGTL system at Compressor Station 16 (Sunset). The Westcoast T-South system provides access to markets in British Columbia, the U.S. Pacific Northwest and California. The NGTL system provides access to markets in Alberta and other Canadian provinces and the United States, including the Pacific Northwest, California, the US Northeast and the Midwest.

EC 5 - The Applicant is able to finance the applied-for facilities and to safely operate, maintain and abandon the facilities.

Westcoast will finance the Project through a combination of internally generated funds, short term financing through the issuance of commercial paper and, if necessary, bank lines and long term debt financing. Additionally, Westcoast has access to financing through its parent, Spectra Energy Corp (Spectra), a Fortune 500 company with significant financial resources and sizable access to equity and credit markets. Please refer to EC8 for information regarding funding for abandonment.

EC6 & EC7 - The applicant has notified third party shippers about the project and they do not have any outstanding concerns about the impact of the project on tolls, tariffs, access or service. & The applicant has notified commercial third parties about the project and they do not have any outstanding concerns about its impact.

Westcoast conducted a public open season process for the Project to provide all potential shippers with an opportunity to contract for service on the Project. The open season documents were posted as a critical notice on Westcoast's public Customer Interface website, which is available to anyone, a notice of the open season was sent to Westcoast's Toll and Tariff Task Force (TTTF), and Westcoast's Customer Interface automatically sends email notifications to parties interested in receiving critical notices. On completion of the open season information about the project, including project scope, contractual commitments, expected capital cost and toll impacts, was shared at various TTTF meetings. As noted in the Application, the TTTF voted to unanimously support "Westcoast's proposal for the cost of the Project to be included in the Zone 3 cost of service and tolled on a rolled-in basis." The TTTF membership includes shippers (producers, marketers, utilities, and industrial consumers), upstream and downstream industry associations and other interested parties.

The public open season and TTTF processes allowed shippers and commercial third parties to be notified and apprised of the Project. No party has indicated they have outstanding concerns.

EC8 - The Applicant has undertaken an assessment to determine the impact the proposed facilities will have on its Abandonment Cost Estimate total for its NEB-regulated pipelines.

The abandonment cost estimate for the Project, using the methodology prescribed in the Board's MH-001-2012 Reasons for Decision and the same assumptions and unit costs set out in Westcoast's original system abandonment cost estimate filed on April 16, 2013 and approved by the Board on December 27, 2013, is \$3.9MM. Following completion of construction of the Project, any impact that the Project has on Westcoast's overall system abandonment cost estimate and annual contribution amount will be reflected in the periodic reviews and updates of Westcoast's abandonment cost estimate and annual contribution amount.

Transportation Matters

1.2 Capacity

Reference: Westcoast, Application, Project Purpose, Pages 1-2 (PDF pages 1-2 of 9), [A80172-1](#)

Preamble: The reference provides high level information on the Project's purpose, including details on the open season and related expansion service agreements.

Request: Provide:

- a) the design capacity of the applied-for facilities under maximum operating pressure in both the International System of Units (SI units) and MMcf/d; and
- b) the increase in design capacity of the system along the corridor of the applied-for loop once the loop is integrated with the existing facilities, if different from the response to question a).

Response

a) and b)

Although the applied-for 914 mm (NPS 36) pipeline loop will have a design maximum operating pressure of 9930 kPag (1440 psig) (see Section 2 – Technical Description, Table 2-1 Pipeline Technical Information, Adobe page 3), the Project will be fully integrated with the existing Fort St. John Mainline which currently has a maximum overall design operating pressure of 6450 kPag (936 psig). Changes to existing facilities such as additional compression and pipe replacement would be required to operate the integrated system above 6450 kPag (936 psig). The increase in the design capacity of the system along the corridor of the applied-for loop once the loop is integrated with the existing facilities will be $1,416.4 \times 10^3 \text{ m}^3$ (50 MMcf/d).

1.3 Pipeline Sizing and Design Philosophy

Reference: Westcoast, Application, Brief description of work, Page 2 (PDF page 2 of 9), [A80172-1](#)

Preamble: Westcoast states that the Project consists of the construction and operation of approximately 28 kilometres of 914 mm (NPS 36) outside diameter natural gas pipeline to loop the existing 762 mm (NPS 30) MML1 Fort St. John Mainline, including pig sending and receiving facilities.

Request:

- a) Did Westcoast consider an alternative pipe size to the applied-for facilities? If yes, provide details of the alternative(s) and explain why the alternative(s) were not retained as an option;
- b) If Westcoast did not consider alternative pipe size(s) for the applied-for facilities, explain why; and
- c) Provide an overview of Westcoast's design philosophy with regard to: the basis for facility selection; the role of shipper transportation service agreements; and the forecast demand for capacity.

Response

a) and b)

The existing Ft. St John mainline consists of the original 762 mm (NPS 30) pipeline and approximately 37 km of 914 mm (NPS 36) pipeline loop constructed in 1977. In July, 2016 Westcoast received Board approval for the Jackfish Lake expansion project which will add two additional 914 mm (NPS 36) loops to the Ft St John mainline totalling approximately 37 km in length. Westcoast did not consider an alternative pipe size for the applied-for 914 mm (NPS 36) pipeline loop because that pipe size is consistent with the existing loop installed in 1977 and the Jackfish Lake facilities. Using the same pipe size for the Project will minimize different pipeline sizes in the same corridor and thereby enhance the efficient operation and maintenance of the facilities. Moreover, from a long term planning perspective, using the same size pipeline loop would enable the entire Ft. St John mainline to be looped with a contiguous 914 mm (NPS 36) pipeline if warranted by future demand.

c) When Westcoast receives requests for firm service on its transmission facilities in Zones 3 and 4 in circumstances where there is insufficient existing capacity to accommodate the requests, Westcoast conducts an open season process to provide all potential shippers with an opportunity to contract for service. As part of the open season process, in order to minimize the need for expansion facilities, Westcoast provides existing firm shippers with an opportunity to relinquish existing service back to Westcoast to be used by Westcoast, together with the required expansion facilities, to meet the total requirements of all shippers. Under the open season process, expansion shippers are required to sign binding long term firm service agreements and to demonstrate that they meet certain minimum credit requirements. On completion of the open season, Westcoast undertakes the necessary facility design work and applies to the Board for approval of the expansion

facilities, which are designed and sized to match the total capacity requirements of all shippers under the existing and expansion firm transportation service agreements.

1.4 Westcoast's Tolling Methodology for Sales Gas Transmission in Zone 3

Reference: Westcoast, Application, Project Purpose, Page 2 (PDF page 2 of 9), [A80172-1](#)

Preamble: In the reference, Westcoast states that at a meeting held on 20 October 2016, the Westcoast Toll and Tariff Task Force unanimously supported Westcoast's proposal for the cost of the Project to be included in the Zone 3 cost of service and tolled on a rolled-in basis.

Request: Provide the following:

a) a summary of the tolling methodology employed by Westcoast in Zone 3. This summary should address:

- a.1) Policies and guidelines regarding the use of rolled-in tolls or stand-alone tolls for facility expansions; and
- a.2) Risks borne by Westcoast and by shippers for the building and utilization of facility expansions.

Note: Treat facility expansions as those facilities occurring within the existing Westcoast footprint;

- b) the impact on Zone 3, Shorthaul and Longhaul tolls in ¢/Mcf and \$/10³m³, for the first five years of contracted service, should the applied-for toll treatment and facilities be approved; and
- c) the expected change in Westcoast's Zone 3 cost of service as a result of the Project facilities for the first five years of contracted service, should the applied-for facilities be approved.

Response

a) Following is the requested summary.

Zonal Cost of Service and Separate Cost Pools

Westcoast's tolls for its sales gas transmission facilities in both Zone 3 (T-North) and Zone 4 (T-South) are determined based on separate costs of service or cost pools for each zone and the contract demand allocation units (or billing determinants) for service in each zone. The Zone 3 and 4 tolls have been determined on this basis since 1986 following the Board's April 1985 Toll Methodology Decision regarding Westcoast (RH-5-83). The cost of service and tolls in Zone 3 and 4 have been established for many years under negotiated toll settlements between Westcoast and its stakeholders.

The main components of the cost of service for each of Zone 3 and 4 are as follows:

Rate Base:	Each zone has a separate rate base based on the pipeline, compressor and ancillary facilities in the zone.
------------	--

Return on Rate Base:	Return on rate base is calculated for each zone based on a deemed capital structure of 40% common equity/60% debt, a common rate of return on equity (10.1% for 2016) and the weighted system average cost of debt.
Depreciation:	Depreciation expense is calculated separately for each zone based on depreciation rates for the rate base sections in the zone.
Income Taxes:	Income tax expense is calculated separately for each zone based on the income, CCA tax pools and other tax adjustments applicable to the facilities in the zone.
O&M Expenses:	O&M expenses are determined separately for each zone based on the direct O&M expenses incurred in the zone and an allocation of common costs (e.g. Calgary and Vancouver office and departmental expenses and G&A costs) using cost drivers.
Other Taxes (Property Taxes):	Property taxes are directly assigned to each zone based on the property taxes payable in respect of the facilities in the zone.

Tolling Methodology

The Zone 3 cost of service is allocated on the basis of contract demand volumes only (i.e., a “postage stamp” methodology). There are two postage stamp tolls in Zone 3, namely, a Short Haul Toll for deliveries to distribution utilities connected to Zone 3 that serve northern communities and for gas movements of 75 kilometers or less other than to the Alliance or NGTL systems, and a Long Haul Toll for all other gas movements in Zone 3.

In its RHW-1-2005 Reasons for Decision, the Board approved the introduction of term differentiated firm service tolls in Zones 3 and 4 commencing January 1, 2006 to provide an incentive to shippers in each zone to contract for firm service over longer terms. Term differentiated tolls are established for firm service in Zones 3 and 4 using the fixed premium or discounts shown in Table 2-1 of the RHW-1-2005 Reasons for Decision, expressed in percentage terms relative to a base toll with a two-year term. Westcoast also provides interruptible (IT) and authorized overrun (AOS) services in Zones 3 and 4, with the tolls for these services being based on a load factor equivalent of the one-year firm service tolls.

Facility Expansions and Extensions and Tolling Methodologies

Westcoast does not have written expansion policies or tariff provisions for its transmission facilities in Zones 3 and 4. As noted above, when Westcoast receives requests for firm service in Zones 3 and 4 in circumstances where there is insufficient existing capacity to accommodate the requests, Westcoast conducts an open season process to provide all potential shippers with an opportunity to contract for service. As part of the open season process, in order to minimize the need for expansion facilities Westcoast provides existing firm shippers with an opportunity to relinquish existing service back to Westcoast to be used by Westcoast, together with the required expansion facilities, to meet the total requirements of all shippers. Under the open season process, expansion shippers are required to sign binding long term firm service agreements and to demonstrate that they meet certain minimum credit requirements. On completion of the open season, Westcoast undertakes the necessary facility design work and applies to the Board for approval of the

expansion facilities, which are designed and sized to match the total capacity required by all shippers.

Westcoast's current and historical capital expenditure and tolling policy for expansions in Zones 3 and 4 (by looping or compression) is to roll-in the cost of the expansion facilities into the Zone 3 or 4 cost of service, as the case may be, and to toll the expansion service under the existing Zone 3 or 4 tolling methodology. Under Westcoast's toll design, the annual cost of service for each zone is allocated to the firm shippers in that zone.

The policies described above would apply to future expansions (by looping or compression) of Westcoast's existing Zone 3 facilities. However, any new sales gas pipeline extensions built by Westcoast to connect gas supply to the existing Zone 3 facilities would be tolled on a stand-alone basis.

Zone 3 Footprint

Zone 3 is not a geographical area or region, but rather consists of Westcoast's sales gas pipelines and compressor facilities upstream of CS-2. As noted above, any expansion of the existing Zone 3 facilities (by looping or compression) would be tolled on a rolled-in basis. Any new sales gas pipeline extensions built by Westcoast to connect gas supply to the existing Zone 3 facilities would be tolled on a stand-alone basis.

Risks Borne by Westcoast and its Shippers

As noted above, under the existing Zone 3 toll design the annual Zone 3 cost of service is allocated to the firm shippers in Zone 3 based on the Zone 3 contract demand allocation units (or billing determinants). Under this toll design, cost and utilization risk for both the base and expansion facilities are therefore borne by the Zone 3 shippers.

The cost of gas pipeline extensions built by Westcoast to connect gas supply to the existing Zone 3 facilities would not form part of the Zone 3 cost of service or cost pool and therefore the Zone 3 shippers would not bear cost and utilization risk for the extensions. The extensions would have their own cost pool and Westcoast and the shippers on the extensions (based on the outcome of the commercial negotiations between Westcoast and the shippers on the extensions) would bear the cost and utilization risk for the extensions.

b) and c)

The following table provides the expected toll impact and the expected change in Westcoast's Zone 3 cost of service, based on the final 2016 Zone 3 tolls, for the first five years of contracted service should the Project be approved:

		2018	2019	2020	2021	2022
T-North Long Haul Toll Impact	¢/mcf	1.370	1.216	1.186	1.229	1.231
	\$/10 ³ m ³	14.33	12.68	12.77	12.82	12.85
T-North Short Haul Toll Impact	¢/mcf	0.095	0.084	0.082	0.085	0.085
	\$/10 ³ m ³	1.00	0.88	0.89	0.89	0.89
Expected increase in Zone 3 cost of service (\$000)		15,038	13,665	13,742	13,791	13,813

Environment Matters

1.5 Project Impacts to Fish and Fish Habitat

- Reference:** Westcoast, Environmental and Socio-Economic Assessment (ESA), Section 8.4, Fish and Fish Habitat, Mitigation, Page 8.14 (PDF page 127 of 153), [A80172-19](#)
- Preamble:** The reference states that the current construction schedule may require instream works at the proposed Commotion Creek crossing to occur outside of the least risk timing window, and that due to the potential spawning habitat for Mountain Whitefish identified at the proposed crossing, an authorization under paragraph 35(2)(b) of the *Fisheries Act* may be required.
- Request:** Provide a fish and fish habitat assessment for the Commotion Creek crossing that includes the following:
- a) the fish species and habitat that may be present and a discussion on whether fish spawning is likely to occur within the immediate area;
 - b) upstream, downstream and Project footprint photos;
 - c) detailed crossing-specific drawings;
 - d) site-specific mitigation and habitat enhancement measures to be used that would minimize impacts to fish;
 - e) type and area (m²) of current habitat that will be permanently altered and/or destroyed below the 2-year high water mark;
 - f) the estimated amount of fish mortality;
 - g) a discussion of how any residual effects will impact localized commercial, recreational, and/or Aboriginal fisheries, or fish that support such a fishery; and
 - h) a discussion on whether the proposed works are likely to require an Authorization under paragraph 35(2)(b) of the *Fisheries Act*.

Response

- a) Fish known to inhabit Commotion Creek include mountain whitefish (*Prosopium williamsoni*), Arctic grayling (*Thymallus arcticus*), rainbow trout (*Oncorhynchus mykiss*) and cutthroat trout (*Oncorhynchus clarki*). Overwintering habitat ranges from “limited” to “absent”, given the mean bankfull depths (~0.5 m) and geographical location of the watercourse (55.62°N at 650 m altitude east of the Rocky Mountains) at the proposed crossing location. Rearing habitat is moderate, provided mainly in slower flowing edge water areas and behind larger substrates. Fish cover is limited and supplied primarily by boulders, along with the occasional shallow pool. Spawning habitat at this location is poor for cutthroat trout and rainbow trout, due to the large size substrates (cobbles, boulder, and large gravels). The large, coarse substrates are suitable for Arctic grayling and mountain whitefish spawning.

The channel at the proposed crossing location is prone to flash flooding and displays evidence of these flows with an abnormally wide channel, and large boulders and debris deposited along the channel. The June 2016 flood event provides further evidence of the flood prone nature of the channel. Frequent large flows may limit the suitability of the watercourse for spawning. Also, the shallow bankfull depths and low late summer flows suggest that the watercourse may freeze over or have extremely limited flows during the winter months when fall spanner eggs are in the substrates.

As a result of the proposed crossing location local conditions, fish spawning habitat is unlikely to be present in the immediate area of the proposed crossing.

b) See upstream, downstream and Project location photos here:



Photo 1: Project crossing location



Photo 2: Upstream from crossing location



Photo 3: Downstream from crossing location

c) See the detailed crossing-specific drawings in Attachment 1.

- d) Site-specific mitigation and habitat enhancement measures to be used that would minimize impacts to fish include:
- Riparian clearing will be minimized within the Riparian Reserve Zone (RRZ) immediately next to the watercourse (30 m).
 - No temporary use workspace will be cleared within the RRZ.
 - Trees will be felled away from watercourses or wetlands. Trees, debris or soil inadvertently deposited below the high watermark of a watercourse will be removed immediately.
 - Trees, shrubs or herbaceous vegetation will not be removed between the top of bank and high watermark area unless otherwise necessary during construction.
 - Grubbing, stripping and grading on approach slopes of watercourses will be limited to an amount required for safe passage of equipment, excavation of the trench and installation of the pipeline.
 - Grading of the primary banks of watercourses will be delayed until immediately before construction of the crossing. Appropriate temporary erosion and sediment control structures will be installed at the discretion of the environmental monitor.
 - Erosion and sediment control at all watercourses and waterbodies will be installed as directed by the environmental monitor.
 - Grading will be directed away from waterbodies. Fill material will not be placed in a waterbody during grading.
 - Where water erosion is evident, and there is potential for runoff from the right-of-way (ROW) to flow into a watercourse, the Soil Erosion Contingency Plan in the project-specific Environmental Protection Plan will be followed.
 - Water quality monitoring plans will be developed to monitor for sediment events during in-stream construction activities as required by the applicable regulatory approvals. If monitoring reveals total suspended solids (TSS) values are approaching threshold values, the environmental monitor will alert construction personnel and work with them to develop corrective actions. If corrective actions are not successful, construction activities will be temporarily suspended until environmentally effective solutions are identified.
 - To reduce the length of time of in-stream activity, every effort will be made to excavate, lower-in pipe sections, and backfill watercourse crossings during the same working day.
 - The upper 0.5 m (minimum) of granular material will be salvaged, if present. Salvaged, native granular material will be used to cap the upper portion of the trench.
 - Parked or stationary vehicles or equipment that contain petroleum, oil or lubricants below high water mark in a watercourse will be avoided at any time except for equipment that is required for that immediate phase of construction.
- e) No habitat will be permanently altered or destroyed below the 2-year high water mark. All substrates will be removed and stockpiled before trenching activities occur. Substrates will

be reinstated after installation and burial of the pipe. Banks will be re-contoured and reinforced after crossing installation and a revegetation plan will be developed with identified stakeholders prior to final reclamation. The revegetation plan will take into account species composition and quantifiable success targets.

- f) Fish mortality is predicted to be low. The crossing location will be isolated and fish rescued prior to dewatering of the work area and released unharmed upstream or downstream of the crossing location. Flows will be maintained around the crossing location at all times during construction through standard construction practices of isolated crossings. Erosion and sediment control measures will be used to limit the release of sediments into downstream waters. All work will occur in the dry and the isolated portion of watercourse will be reinstated only once all construction activities have been completed.

There is the potential for eggs of mountain whitefish that have previously spawned at the crossing location to be destroyed by trenching activity. The potential for spawning fish in the stream is low, however, due to the reasons described above in a). In the event spawning does occur, the density of spawning fish in the potentially affected areas is expected to be low.

- g) There are no predicted residual effects to fish or fish habitat as all habitat alteration will be temporary. Fish mortality is predicted to be low (see f)). As a result, the proposed crossing is not predicted to have a measurable effect on commercial, recreational or Aboriginal fisheries, or fish that support such fishery.
- h) Given the conclusions above, it is not expected that the crossing of Commotion Creek will require an Authorization under paragraph 35(2)(b) of the *Fisheries Act*.

1.6 Old Growth Forests and Old Growth Management Areas (OGMAs)

- Reference:**
- i) Westcoast, ESA, Section 9.5, Vegetation and Wetlands, Residual Effects, Page 9.27 (PDF page 27 of 216), [A80172-5](#)
 - ii) Westcoast, ESA, Appendix A - Environmental Protection Plan, Table 6-3, Mitigation Measures for Vegetation Resources, Page 6.13 (PDF page 39 of 132), [A80172-6](#)

Preamble: Reference i) states that vegetation clearing for Project construction assumes a direct loss of 13.5 ha of old forest area in the Project Development Area (PDA). Reference ii) provides specific mitigation measures for the Upper Moberly 12 OGMA and the Upper Moberly 19 OGMA.

The Board notes that the mitigation provided by Westcoast within OGMAs is listed as flagging and staking the boundaries of area, limiting clearing and grading to the extent practical and avoiding the felling of trees.

- Request:** Provide the following:
- a) the length of the pipeline and width of RoW that intersects both old growth forests and OGMAs;
 - b) a discussion of opportunities, including minimizing the width of the RoW,

to avoid or reduce effects within the old growth forests and OGMAs in the PDA;

- c) a summary of consultation with all relevant agencies regarding old growth forests and OGMAs, including:
 - c.1) any issues or concerns that were raised;
 - c.2) any recommendations that were made;
 - c.3) any steps that Westcoast has taken, or will take, to address the issues, concerns or recommendations; and
- d) a discussion of the measures that are to be taken during construction to avoid and/or mitigate impacts in both old growth forests and OGMAs in the PDA.

Response

- a) The following tables provide summaries of Project intersections with old growth as defined by OGC Area Based Analysis data (Table 1) and OGMAs (Table 2).

The large majority of old growth areas intersected by the Project consist of edges of old forest polygons that occur along the existing disturbance (eg., the existing Westcoast pipeline ROW).

Table 1 - Old Growth Areas Intersected

Project Feature	KP (Start)	Type of Old Growth	Description	Approximate Dimensions (length x width in meters)	Area (ha)
Proposed Right of Way	1.7	Deciduous	adjacent to ROW	540 x 18	0.93
Proposed Workspace	1.7	Deciduous	adjacent to Workspace	545 x 20	1.35
Proposed Workspace, Log Deck	2.0	Deciduous	adjacent to Log Deck	49 x 27	0.14
Proposed Right of Way	2.3	Deciduous	adjacent to ROW	247 x 5	0.11
Proposed Right of Way	4.1	Deciduous	adjacent to ROW	98 x 22	0.13
Proposed Workspace	4.1	Deciduous	adjacent to Workspace	233 x 20	0.65
Proposed Right of Way	5.3	Deciduous	adjacent to ROW	68 x 20	0.11
Proposed Workspace	5.3	Deciduous	adjacent to Workspace	108 x 20	0.22
Proposed Workspace, Log Deck	5.4	Deciduous	adjacent to Log Deck	60 x 35	0.20
Proposed Right of Way	5.5	Deciduous	adjacent to ROW	50 x 26	0.11
Proposed Workspace	5.5	Deciduous	adjacent to Workspace	50 x 30	0.19
Proposed Right of Way	7.2	Deciduous	adjacent to ROW	162 x 13	0.22
Proposed Workspace	7.2	Deciduous	adjacent to Workspace	137 x 20	0.29

Proposed Right of Way	7.3	Deciduous	adjacent to ROW	192 x 12	0.23
Proposed Workspace	7.3	Deciduous	adjacent to Workspace	185 x 20	0.37
Proposed Right of Way	7.8	Deciduous	adjacent to ROW	160 x 13	0.21
Proposed Workspace	7.8	Deciduous	adjacent to Workspace	187 x 20	0.37
Proposed Workspace, Log Deck	8.3	Deciduous	adjacent to Log Deck	38 x 36	0.12
Proposed Right of Way	12.9	Deciduous	adjacent to ROW	77 x 20	0.40
Proposed Workspace	12.9	Deciduous	adjacent to Workspace	296 x 20	0.60
Proposed Workspace	13.0	Deciduous	adjacent to Workspace	215 x 20	0.71
Proposed Workspace, Log Deck	13.1	Deciduous	adjacent to Log Deck	40 x 33	0.13
Proposed Workspace	13.1	Deciduous	adjacent to Workspace	100 x 40	0.41
Proposed Right of Way	13.3	Mixed	adjacent to ROW	410 x 20	0.82
Proposed Right of Way	17.4	Deciduous	adjacent to ROW	80 x 20	0.14
Proposed Right of Way	17.5	Deciduous	adjacent to ROW	117 x 20	0.23
Proposed Right of Way	22.7	Deciduous	adjacent to ROW	700 x 20	1.29
Proposed Workspace, Log Deck	22.7	Deciduous	adjacent to Log Deck	48 x 40	0.19
Proposed Workspace	22.7	Deciduous	adjacent to Workspace	52 x 30	0.15
Proposed Workspace	22.8	Deciduous	adjacent to Workspace	620 x 20	1.55
Proposed Workspace, Log Deck	23.1	Deciduous	adjacent to Log Deck	50 x 25	0.13
Proposed Workspace	23.4	Deciduous	adjacent to Workspace	54 x 18	0.10
Numerous slivers merged (considered together)	along length of ROW	0.63 ha Deciduous 0.04 ha Mixed	polygons < 0.1 ha merged	NA	0.67
Total					13.46

The Project intersects OGMA Upper Moberly 12 in nine locations (See Table 2 below). A total of approximately 0.8 ha of this OGMA is affected; however, if the existing cleared areas within the OGMA are removed from the analysis, only approximately 0.2 ha of treed area is affected. Only one of the forested intersections (at KP 3.7) is over 0.1 ha in size. The largest incursion (0.53 ha) occurs within an existing cleared area. One small intersection occurs within OGMA Upper Moberly 19 at KP 21, which measures approximately 27 m by 8 m (Table 2).

Table 2 - OGMA Intersects

Feature	KP (Start)	Type	Description	Approximate Dimensions (length x width in meters)	Area (ha)
Existing Cleared, Proposed Workspace	3.3	Upper Moberly 12	Existing cleared area - road	534 x 10	0.53
Existing Cleared, Proposed Workspace	3.6	Upper Moberly 12	Existing cleared area - road	100 x 10	0.08
Proposed Right of Way	3.7	Upper Moberly 12	Adjacent to ROW	45 x 1.5	0.01
Proposed Right of Way	3.7	Upper Moberly 12	Adjacent to ROW	57 x 19	0.11
Proposed Workspace	3.7	Upper Moberly 12	Adjacent to Workspace	30 x 10	0.03
Proposed Workspace	3.7	Upper Moberly 12	Adjacent to Workspace	26 x 7	0.02
Proposed Workspace	3.7	Upper Moberly 12	Adjacent to Workspace	6 x 5	<0.01
Existing Cleared, Proposed Workspace	3.9	Upper Moberly 12	Existing cleared area - road	15 x 10	0.02
Proposed Workspace	4.1	Upper Moberly 12	Adjacent to Workspace	52 x 5	0.03
Proposed Workspace	21.0	Upper Moberly 19	Adjacent to Workspace	27 x 8	0.02

- b) The disturbance of old growth areas and OGMA's has been minimized by following an existing Westcoast ROW for most of the proposed route. Only small incremental areas of old forest will be disturbed along the edge of this existing ROW during construction. In addition, temporary work space (TWS) will be reduced and/or located outside of old growth areas, to the extent practical for safe construction. Revegetation activities on TWS and log decks (approximately 8.5 ha) in old forest are planned as part of the revegetation plan. Other mitigations include felling trees into the ROW, keeping stumps and root masses where practical, and top soil salvage and replacement to support revegetation. Additional mitigation measures around general vegetation and specific ecosystems can be found in the Environmental Protection Plan (EPP), including those noted in the preamble.

The Area-based Analysis for Northeastern British Columbia (BC Oil and Gas Commission, 2014) indicates that the current condition for old forest is normal (above the old forest target) in both the Boreal Plains and Boreal Foothills natural disturbance units (NDUs); therefore, no additional mitigations (beyond those discussed above) are planned since the Project effect is low.

No additional mitigations are planned for the incursions in the OGMA's because of the size of the Project disturbances; the reduction in the Upper Moberly 12 OGMA is about 0.2 ha (0.2% of the OGMA) while the reduction in the Upper Moberly 19 OGMA is less than 0.1 ha (<0.1 % of the OGMA). The reductions are not expected to affect the sustainability of the two OGMA's.

- c) Westcoast will consult with the appropriate government agencies (e.g., OGC) during the permitting phase of the Project prior to construction.

d) See b) above.

1.7 Wetlands

Reference: Westcoast, ESA, Section 9.5, Vegetation and Wetlands, Residual Effects, Page 9.28 and 9.29 (PDF page 28 and 29 of 216), [A80172-5](#)

Preamble: The reference states that construction activities will result in the disturbance of 1.4 ha of wetland area including 0.5 ha of marsh, 0.9 ha of shrub swamp and less than 0.1 ha of shallow open water wetlands.

The reference also states that the change in loss of wetland habitat will be limited by paralleling the existing RoW, limiting vegetation clearing within wetlands associated with stream crossings and by encouraging natural revegetation in wetlands following disturbance.

Request: Provide the following:

- a) a description of the activities that will be used to encourage natural revegetation in disturbed wetlands;
- b) a description of what post-construction monitoring is proposed to determine the effectiveness of mitigation measures on potential wetland change and/or loss; and
- c) a summary of what corrective actions are proposed should post-construction monitoring determine mitigation measures are not effective.

Response

- a) The following measures, as described in the EPP, will be implemented to encourage natural revegetation of wetlands disturbed by the Project.

Table 6-3 Mitigation Measures for Vegetation Resources

- Snow bridges will be used over rare plant populations and ecosystems of interest (e.g., wetlands) when conditions allow in order to maintain native species that are currently present in order to act as propagules of disturbed areas during natural revegetation
- Clearing will only be conducted to the extent necessary; leave the shrub and/or herb layer when practical and is safe to do so in order to act as propagules and native seed sources during natural revegetation.
- Follow the mitigations for wetlands in the Environmental Manual for Construction Projects in Canada (EMCPC) (Spectra 2014) Section 6.7.
- ROW matting or corduroy will be used (swamp matting/rig mats) when working during non-frozen conditions, where practical in order to prevent compaction and rutting to help facilitate natural revegetation.
- Tree clearing will be reduced to the greatest extent possible in wetlands.

- Shrubs, stumps, and root systems will be left in place when practical. The root network will be retained within salvaged soil when practical to encourage recruitment of native species at reclamation.
- If mulch or erosion control structures are required in or around riparian areas or wetlands certified weed seed free straw or coconut husk will be used. Hay will not be used to prevent the spread of invasive species which would hamper natural revegetation.

Table 7-1 Environmental Protection Measures for Clearing and Grubbing

- Grubbing width will be limited through wet areas during construction to reduce disturbance and facilitate the restoration of shrub communities.
- Grubbing will be reduced in ecosystems of interest (blue- or red-listed species and ecosystems, wetlands, old forest) whenever practical.

Table 7-17 Environmental Protection Measures for Clean-Up and Reclamation

- Within identified wetlands, original contours and drainage patterns will be restored as practical to promote natural revegetation success.
- Wetlands, wet areas, and ecosystems at-risk will be allowed to naturally revegetate with native plant species (e.g., no seeding) where soil stability conditions permit, as specified in the Environmental Alignment Sheets (Appendix A). Natural recovery (e.g., no seeding) will be undertaken in wetland areas. Mitigation measures to supplement wetland function reclamation along the ROW will be conducted within these areas if during the post construction monitoring, wetland function is not returning to pre-disturbance levels.
- If reseeded becomes necessary in wetlands, and in areas where plant species or ecosystems at-risk occur, then only non-competitive species, native to the region, will be used. Seeding densities will be low to allow for native plant encroachment. This will be in accordance with the BC Peace Liard Revegetation Manual (NEIPC 2010).
- A revegetation plan will be initiated along the ROW and in other work areas as designated by Westcoast as soon as practical after construction. See section 6.4.2 of Spectra's EMCPC for further details.

These and other measures identified in the EPP are designed to reduce the amount of land disturbed (grubbing) by construction practices and retain shrub and herb layers in workspaces to allow for regeneration of native species following clean-up. Placement of salvaged soils (and regrading to re-establish drainage patterns) is also expected to provide for native species establishment because of propagules present in the soil. Limiting the extent of seeding within wetlands to that required for erosion control is also intended to limit the establishment of introduced plants and promote the establishment of native species via propagules present in the seed bed or transported to the site through natural processes (e.g., drift from adjacent undisturbed areas). Consultation and discussions with pertinent land owners and affected Aboriginal communities will also be undertaken by Westcoast, where practical and appropriate, in order to provide input into the PCEM and revegetation plan developed prior to construction.

- b) Westcoast will prepare a Post Construction Environmental Monitoring Plan (PCEM) prior to the start of construction activities. Post-construction monitoring will be conducted to evaluate the effectiveness of mitigation measures and to verify that identified wetlands are reclaimed to achieve no net-loss of wetland functions. This plan will be developed with quantifiable targets to measure against during post construction monitoring.
- c) The PCEM will describe the potential practical corrective actions (such as revegetation activities or corrective measures to site drainage or grading) should post-construction monitoring determine mitigation measures are not effective in restoring wetland functions (which includes species composition).

1.8 Migratory Birds

Reference:	<ul style="list-style-type: none"> i) Westcoast, ESA, Section 10.4, Wildlife and Wildlife Habitat, Mitigation, Table 10-7, Page 10.19 (PDF page 69 of 216), A80172-5 ii) Westcoast, ESA, Appendix A – Environmental Protection Plan, Appendix G – Active Migratory Bird Nest Survey Program, Pages G.1 and G.2 (PDF pages 47 and 48 of 52), A80172-7 iii) NEB Filing Manual, Section A.2.5 Filing Requirements and Guidance, Table A-2 Filing Requirements for Biophysical Elements – Wildlife and Wildlife Habitat, Page 4A-52 (PDF page 108 of 279) iv) Environment and Climate Change Canada (ECCC), Technical Information, Specific Considerations: Related to Determining the Presence of Nests
Preamble:	<p>Reference i) states that a nest survey will be done prior to clearing to identify and apply a buffer to any active nests until chicks have fledged.</p> <p>Reference ii), Westcoast's Active Migratory Bird Nest Survey Program, states that pre-clearing nest surveys will be completed within seven days of the proposed activity start and includes personnel walking transects along the proposed areas for clearing.</p> <p>Reference iii) provides guidance with regards to wildlife and wildlife habitat (including migratory birds), noting that ECCC and its divisions are sources of relevant information.</p> <p>Reference iv) states that in most cases nest search techniques are not recommended because in most habitats the ability to detect nests remains very low while the risk of disturbing active nests is high. ECCC recommends an area search for evidence of nesting (e.g., presence of birds in breeding habitat through observation of singing birds, alarm calls, distraction displays) using non-intrusive search methods to prevent disturbance to migratory birds.</p>
Request:	<p>Describe how Westcoast's methods to determine the presence of nesting migratory birds within the Project footprint will prevent disturbance of any active nests, and how the methods align with ECCC's current guidance for determining the presence of nests.</p>

Response

ECCC provides guidance on the *Avoidance of Detrimental Effects to Migratory Birds (Incidental Take)* to facilitate compliance with the *Migratory Birds Convention Act* (ECCC 2017a). Westcoast Energy Inc. (Westcoast) has adopted this guidance in the development of Project mitigation measures to prevent the inadvertent harming, killing, disturbance or destruction of migratory birds, nests and eggs.

Consistent with ECCC's guidance on avoiding harm to migratory birds, their nests, and eggs, Westcoast currently plans to avoid clearing activities within the regional primary nesting period, which is defined for the Peace Region as April 25 through August 8, using ECCC's *General Nesting Periods of Migratory Birds in Canada* (ECCC 2017b). Where appropriate, Westcoast will modify the clearing schedule to avoid harm to migratory birds, their nests, and eggs of other migratory birds (e.g., trumpeter swan) whose nesting period extends (April 1st to August 31st) beyond the regional primary nesting period.

If clearing becomes required during the primary nesting period, a pre-clearing survey will be completed to identify breeding activity for migratory birds. The nest search survey referred to in Table 10-7 of the ESA and Appendix G of the ESA Appendix A –EPP is intended to apply non-intrusive (e.g., passive) monitoring and search methods to identify breeding activity while limiting disturbance to breeding migratory birds, consistent with recommendations from ECCC (2017a). To the extent feasible, breeding activity will be determined using passive survey methods (e.g., point counts) to support discovery of an actual nest, or behavioural observations that suggest evidence of nesting activity (e.g., territorial behaviour, carrying nesting material). As noted by ECCC (2017a), more systematic nest survey approaches (e.g., transects with passive monitoring along each) are appropriately applied in simple habitats, including previously cleared areas consistent with those occurring within the existing ROW. Appropriate methodology would be applied based on the habitat type and with professional judgement of the qualified biologist performing the survey.

ECCC recommends that “*Any nest found should be protected with a buffer zone determined by a setback distance appropriate to the species, the level of the disturbance and the landscape context, until the young have permanently left the vicinity of the nest*” (ECCC 2017a). Consistent with this recommendation, Table 10-7 of the ESA and Appendix G of Appendix A (EPP) indicates that active nests identified prior to clearing will be flagged and/or fenced off in the field and a buffer (minimum 30m, per Appendix G of Appendix A of the ESA) will be maintained until the nest is no longer active. Buffer distances will be based on direction from provincial and federal guidance and species-specific disturbance thresholds, in the context of site conditions (e.g., habitat type; type of construction activity). Evidence of nesting activity (and professional judgment) is sufficient to recommend mitigation measures (e.g., setbacks), even if a nest is not found.

References

Environment and Climate Change Canada (ECCC). 2017a. *Avoidance of Detrimental Effects to Migratory Birds (Incidental Take)*. Available at: <http://www.ec.gc.ca/paom-itmb/default.asp?lang=En&n=C51C415F-1>. Accessed: January 12, 2017.

Environment and Climate Change Canada (ECCC). 2017b. *General Nesting Periods of Migratory Birds in Canada*. Available at: <http://www.ec.gc.ca/paom-itmb/default.asp?lang=En&n=4F39A78F-1>. Accessed: January 12, 2017.

Consultation Matters

1.9 Consultation with Canadian National Railway (CN Rail)

- Reference:** Westcoast, Application, Section 3, Consultation and Aboriginal Matters, Industry, Page 5 (PDF page 6 of 52), [A80172-18](#)
- Preamble:** Reference i) states that permits for crossings will be acquired as necessary from each company. The reference further states that “to date, there has been one response from Canadian Natural Railway advising that if Westcoast intends to cross its right of way, a formal “Utility Application” will need to be approved in advance. Westcoast will work with Canadian National Rail to obtain required permits prior to commencing construction.”
- Request:** Provide an update of the consultation activities that have taken place with CN Rail for the proposed Project. The update should include:
- a) date and method of each contact (for example telephone, personal meeting, email, letter email);
 - b) a summary of any issues and concerns that have been raised since the Application was filed, the steps Westcoast has taken or will take to address these issues and concerns, or an explanation of why steps will not be taken to address any particular concerns; and
 - c) a summary of Westcoast’s alternate plan, if the necessary permits from CN Rail are not obtained.

Response

- a) Please refer to the consultation log (Attachment 2) for an update on consultation activities that have taken place with CN Rail.
- b) CN Rail has not raised any issues or concerns since the Application was filed.
- c) There are currently no feasible alternative plans to crossing CN Rail. Westcoast is confident that the necessary permits from CN Rail will be obtained prior to construction.

1.10 Consultation with British Columbia’s Ministry of Transportation and Infrastructure (MoTI)

- Reference:**
- i) Westcoast, Application, Section 3, Consultation and Aboriginal Matters, Government Ministries and Departments, Page 6 (PDF page 7 of 52), [A80172-18](#)
 - ii) Westcoast, Application, Section 3, Consultation and Aboriginal Matters, Attachment Consultation Record, Pages 32-33 (PDF pages 40-41 of 52), [A80172-18](#)
- Preamble:** Reference i) states that MoTI responded to the Project Information Packages sent to them with a concern in respect of the potential impact of the Project

on certain gravel quarries and tenures. Discussions between Westcoast and MoTI to address those concerns are ongoing.

Reference ii) shows that the last consultation log entry for engagement with MoTI, dated 16 September 2016, states that the Ministry did approve the proposed angled crossing, but they do not support temporary workspace within Ministry RoW and require additional time to review routing through reserve areas. It further states that a follow up response from the Ministry can be expected in the coming weeks.

Request: Provide an update of the consultation activities that have taken place with MoTI for the proposed Project. The update should include:

- a) date and method of each contact (for example telephone, personal meeting, email, letter email);
- b) a summary of any new issues and concerns that have been raised since the Application was filed;
- c) any steps Westcoast has taken or will take to address any new issues and concerns, as well as any issues and concerns that were identified as outstanding in Reference ii), or an explanation of why steps will not be taken to address any particular concerns; and
- d) a summary of Westcoast's alternate plan, if the necessary approvals from MoTI are not obtained.

Response

- a) Please refer to the Consultation Log (Attachment 2) for an update on consultation activities that have taken place with MoTI.

- b) and c)

The main concerns that MoTI has raised with Westcoast are that a portion of the proposed Wyndwood ROW will overlap (i) with an existing ROW held by MoTI, and (ii) with a number of undeveloped MoTI quarry reserves.

On the issue of overlapping ROW, Westcoast has been discussing a proposed shared ROW agreement with MoTI. Westcoast has provided an example of a shared ROW agreement to MoTI that outlines shared responsibilities and liabilities in respect of the overlapping area. MoTI is reviewing that shared ROW example.

On the issue of the quarry reserves, Westcoast has provided its rationales to MoTI for routing a portion of the Wyndwood ROW through the quarry reserves, including a desire to maintain the proposed ROW contiguous to the existing pipeline ROW and spacing constructability constraints (e.g., CN Rail ROW, steep cliffs, private landowner). MoTI has responded that Westcoast will have to undertake pit testing on all affected reserves and that if useable material is found, Westcoast will have to mine and stockpile it for future use by MoTI. Westcoast submitted a letter to MoTI on January 17, 2017 declining these requirements and requesting further discussions to pursue more reasonable alternatives.

- d) Westcoast does not currently have an alternate plan if the necessary approvals are not obtained from MoTI given the benefits of the proposed ROW routing. As a result, Westcoast intends to continue to work with MoTI in the near term, however if an acceptable resolution to their outstanding concerns cannot be quickly achieved, to engage the BC Oil & Gas Commission with a request to facilitate discussions with FLNRO. FLNRO would then review the status of the quarry reserves and engage the three ministries for resolution as it has the ability to amend the reserve notations if it deems MoTI's conditions to be unreasonable.

1.11 Noise and Landowners in Hasler Flat Town and Near the Project's Right-of-Way (RoW)

- Reference:**
- i) Westcoast, ESA, Section 3.2.1, Public Consultation, Page 6.1 (PDF page 74 of 153), [A80172-19](#)
 - ii) Westcoast, ESA, Section 6, Acoustic Environment, Pages 6.12 and 6.13 (PDF pages 85-86 of 153), [A80172-19](#)
 - iii) Westcoast, ESA, Section 3.2.1, Public Consultation, Page 6.8 (PDF page 81 of 153), [A80172-19](#)

Preamble: Reference i) states that the assessment for the acoustic environment focuses on potential noise effects on human receptors at residential locations during the construction phase only.

Reference ii) states that receptors located within the minimum buffer distances may experience noise levels which exceed the noise level recommendation. It further states that review of the Project RoW indicates there are receptors in Hasler Flat Town and residences on private land located less than 350 m from the RoW, which is the minimum buffer zone for land-based pipeline construction.

Reference iii) lists the mitigation measures to reduce potential noise from the Project's construction.

Request: Provide an update on consultation activities that have been conducted with receptors in Hasler Flat Town and residences on private land located less than 350 m from the RoW (Receptors). Include any potential concerns regarding potential noise disturbance during construction and proposed mitigation measures, including:

- a) a description of the information provided to Receptors;
- b) a summary of all issues and concerns raised;
- c) an explanation as to how the proposed mitigation measures outlined in reference iii) address any issues or concerns that may have been raised by Receptors;
- d) if the measures listed in c) above do not address any specific concerns, a detailed description of the company's response for addressing these concerns; and

- e) a summary of any outstanding concerns or issues with respect to noise arising from the Project.

Response

- a) Westcoast representatives have consulted with directly impacted landowners and have notified Hasler Flat Town Receptors along the proposed route. Westcoast has provided Receptors with a Wyndwood Project Information Letter, Wyndwood Fact Sheet, NEB Brochure "Information for Proposed Pipeline or Power Line Project – No Hearing" and a Consultation and Notification Mapping package provided by its survey consultant (WSP). In addition, Westcoast conducts work in the area throughout the year and has ongoing discussions with the Hasler Flats Receptors regarding current operations and upcoming work. Westcoast has not received any Project specific concerns from the Receptors during these discussions.
- b) Westcoast received two noise complaints stemming from hydrovac activity associated with February 2016 geotech work. Both complainants called and inquired about the noise source and its duration. A Westcoast representative spoke with the complainants and explained the hydrovac activity, the location, duration and operational hours. Both complainants appreciated the feedback.

Other than the above, no specific noise related issues or concerns have been raised regarding the Project.

- c) Although no specific concerns have been raised with respect to construction noise, prior to construction Westcoast will meet with directly impacted Receptors to review construction scope and schedule, and noise mitigation measures. Westcoast will also host an open house to update the community at large.

Additionally, on top of the mitigation measures in the ESA, Westcoast highlights the following:

- Base line sound monitoring will take place prior to the start of the construction phase with additional monitoring during the construction phase.
- Should there be any noise concerns raised due to Westcoast's activity, a Westcoast representative will investigate the noise complaint and source to ensure noise compliance.
- Regular construction hours will be limited to 6 days a week and 12 hours a day within the vicinity of Receptors.
- Noise suppression will be a factor considered in the selection of construction equipment.
- Shutting off equipment that is not in use and operating equipment at minimum speeds will be standard practice.
- With respect specifically to HDD activities, the Project will include two separate HDD drills. Drilling operations in respect of these will potentially run 24 hours, 7 days a week. A Westcoast representative will consult with directly impacted Receptors throughout

the HDD process, including specifically to discuss loud noise levels anticipated from hydrovac operations and casing installation prior to the start of drilling operations. Westcoast will procure low noise drilling equipment for drilling operations. Ancillary activities related to HDD drilling will be limited to daytime hours only.

- d) Westcoast will respond to and seek to address any noise related issues or concerns that may be raised by Receptors during the course of the Project notwithstanding the above mitigation measures.
- e) There are no outstanding issues or concerns with respect to noise arising from the Project.

1.12 Sample s. 86 Land Acquisition Agreements

- Reference:**
- i) NEB Filing Manual, A.4.4 Filing Requirements – Land Acquisition Agreements, pages 4A-74 and 4A-75 (PDF page 130-131 of 279)
 - ii) Westcoast, Application, Section 5, Land Matters (PDF pages 1-14 of 14), [A80172-20](#)
- Preamble:**
- In reference i) the NEB lists the filing requirements for land acquisition agreements for section 58 and 52 applications.
- In reference ii), Westcoast provides information on land matters. It does not appear to have a sample copy of a land acquisition agreement proposed to be used for the Project in the form required by subsection 86(2) of the NEB Act.
- Request:**
- Provide a sample copy of each form of land acquisition agreement proposed to be used (including option and easement) in the form required by subsection 86(2) of the NEB Act.

Response

Please see Attachment 3 for a sample copy of the only form of land acquisition agreement proposed to be used.

ATTACHMENT 1
DETAILED SITE-SPECIFIC DRAWINGS FOR COMMOTION CREEK

ATTACHMENT 2
CONSULTATION LOG

Cross reference	Recipient Type	Summary of Consultation	Outstanding Concerns
Interest Holders			
1018, 1022, 2012, 2013, 2015, 3019, 3020, 3023, 3024, 3025, 3026, 4015, 4016, 4017, 4018, 4019, 4022, 4023	Ministry of Transportation and Infrastructure (MoTI)	<p>Oct 28/16 – MoTI emailed Westcoast stating MoTI received notification that Westcoast Energy is anticipating to file the NEB application this fall.</p> <p>Oct 31/16 – Westcoast called MoTI to schedule a meeting.</p> <p>Nov 1/16 – Westcoast emailed MoTI suggesting possible dates for a face to face meeting in Fort St. John. MoTI to respond with a date that works for their team.</p> <p>Nov 2/16 – Westcoast confirmed meeting for Nov. 22/16 in Fort St. John via email with MoTI.</p> <p>Nov 16/16 – MoTI emailed Westcoast stating the main obstacle to the proposed Project is that the ROW route will be traveling through a number of MoTI quarry reserves. It was stated that not all quarry reserves have a development plan or pit testing data. MoTI stated if Westcoast wants to pursue the proposed route, Westcoast will need to conduct pit testing on all affected reserves. If usable material is found, Westcoast will be required to mine it and stockpile it for MoTI. If usable material is not found, MoTI will remove these areas from the quarry reserves. MoTI stated it is willing to pursue strategies that Westcoast may believe to be more beneficial to both parties.</p> <p>Nov 16/16 – Westcoast emailed and responded to the Nov. 16 email advising Westcoast will discuss and review internally and follow up next week.</p> <p>Nov 22/16 – Westcoast representatives and survey consultant met with MoTI's representatives in the Fort St. John Office. The meeting focused on explaining and showing the reasons for the location of the proposed Project ROW. Elevation maps and construction plans were reviewed. MoTI's major concern at this meeting was stated to be the content of the ROW agreement between Westcoast and MoTI for ongoing operational activity. Westcoast committed to set up an additional meeting to address questions and discuss a shared ROW Agreement.</p> <p>Nov 23/16 – MoTI emailed Westcoast with thanks for the further clarification of impacts of having Westcoast's ROW overlapping MoTI's ROW. Further discussion with MoTI is required and a separate meeting will be held to review this in more detail.</p> <p>Dec 16/16 – Westcoast provided additional information regarding line of sight, pipeline material and depth of</p>	Overlap of MOTI ROW and quarry reserves with proposed Project

Cross reference	Recipient Type	Summary of Consultation	Outstanding Concerns
Interest Holders			
		<p>cover pertaining to crossings, construction access re: Old Highway 97, copy of hydrology assessment for creek crossing and an example of a shared ROW agreement for consideration.</p> <p>Jan 4/17 –Westcoast representative sent via express mail to MoTI a copy of the Wyndwood project update letter and Consultation and Notification mapping provided by its survey consultant (WSP).</p> <p>Jan 4/17 – MoTI emailed Westcoast stating that MoTI Development & Approvals team where reviewing the shared ROW example agreement and would be in touch with Westcoast shortly.</p> <p>Jan. 4/17 – Westcoast responded to MoTI stating that Westcoast would be contacting MoTI to set up a meeting to review shared ROW questions locally.</p> <p>Jan 6/17 – MoTI emailed Westcoast stating MoTI will schedule a meeting to discuss how the Ministry would like to move forward.</p> <p>Jan 17/17 – Westcoast emailed MoTI a letter declining the “requirements” to pit test, mine and stockpile with respect to undeveloped quarry reserves. Supporting shapefiles and mapping were included.</p>	
33, 43, 49, 53, 63, 65 79, 81, 85, 91, 97, 103, 133, 136, 139, 140, 142, 149, 156, 162, 168, 182, 183, 185, 187, 190, 196, 199, 200, 207, 208	Adjacent Landowner (CN Rail)	<p>Oct 19/16 – Westcoast representative emailed CN a crossing request letter, a letter requesting approval to conduct geophysics work within the rail right of way and associated engineered drawings.</p> <p>Oct 20/16 – Westcoast representative received email from CN advising that CN does not accept crossing applications via email at this time, they must be mailed in. Westcoast representative compiled a hard copy crossing request package and sent to CN via courier.</p> <p>Oct 27/16 - Westcoast representative sent via express mail the Wyndwood project update letter, updated WSP Consultation and Notification mapping, Wyndwood updated fact sheet and NEB submission letter.</p> <p>Nov 22/16 – Westcoast representative received an email from CN, advising that a new work permit application would need to be submitted by Westcoast to complete geophysics work within the rail right of way.</p> <p>Dec 20/16 - Westcoast representative received an email from CN advising that the drawings provided with the crossing request application are at a scale too large for their review. CN also requested a google map showing the location of the crossing points in relation to the nearest town/city.</p>	None noted

Cross reference	Recipient Type	Summary of Consultation	Outstanding Concerns
Interest Holders			
		<p>Jan 4/17 - Westcoast representative sent via express mail the Wyndwood project update letter and WSP Consultation and Notification mapping.</p> <p>Jan 5/17 – Westcoast representative sent via courier updated drawings and google maps as requested to CN.</p>	

ATTACHMENT 3

SAMPLE SECTION 86 ACQUISITION AGREEMENT

TERMS OF INSTRUMENT - PART 2

WHEREAS:

- A. The Transferor is registered or entitled to become registered as owner(s) of an estate in fee simple, subject to such encumbrances, liens and interests as are endorsed on the registered title of the lands described in Item 2 on Form C, (the "Lands of the Transferor");
- B. The Transferor has agreed to grant the Transferee a non-exclusive Statutory Right of Way upon the terms and conditions hereinafter set forth;
- C. The Transferor acknowledges that the Transferee has offered the Transferor the option of choosing a lump sum payment or annual payments or periodic payments; and
- D. The Statutory Right of Way hereby granted is made pursuant to Section 218 of the *Land Title Act* (British Columbia) and the rights hereby granted are necessary for the construction, operation and maintenance of the Transferee's undertaking.

NOW THEREFORE the parties hereto agree as follows:

1. The Transferor does hereby grant, convey, set over and transfer unto the Transferee, its successors, assigns, licensees, agents, contractors and subcontractors the right, license, liberty, privilege and easement to use so much of the Lands of the Transferor as may be necessary in perpetuity for a non-exclusive, uninterrupted statutory right of way (such right, license, liberty, privilege and easement, together with all other rights granted by the Transferor to the Transferee in this Agreement, being collectively referred to as the "Statutory Right of Way") on, over, under and through the Lands of the Transferor, to lay down, construct, operate, maintain, inspect, test, patrol (including aerial patrol), alter, remove, replace, reconstruct and repair one or more pipelines, together with all the facilities of the Transferee useful in connection with or incidental to its undertaking including but without limiting the generality of the foregoing, valves, fittings, meters and other equipment and appurtenances, whether or not similar to the foregoing, as may be useful or convenient in connection therewith or incidental thereto for the carriage, conveyance and transportation of natural and artificial gas, oil and other gaseous or liquid hydrocarbons and any products or by-products thereof (collectively the "Works").
2. The Transferee shall pay to the Transferor compensation for the grant of the Statutory Right of Way:
 - (a) one lump sum of _____
(\$_____) Cdn Dollars (hereinafter referred to as the "Lump Sum Payment");
 - or
 - (b) annual or periodic payments of equal or different amounts over a period of time as set forth in Schedule 1 attached hereto and forming part thereof.

The Lump Sum Payment or the first annual or periodic payment shall be made before construction of the Works is commenced on the Lands of the Transferor. In the event that this payment has not been made on or before _____, then this Agreement shall terminate and be at an end for all purposes and the Transferee shall forthwith execute and register such documents as may be necessary to discharge this Agreement from the title for the said Lands of the Transferor and shall notify the Transferor of the registration of the discharge.

3. As soon as the Transferee shall have laid down the Works in the exercise of the foregoing authority, the Statutory Right of Way hereby granted shall, except as hereinafter otherwise specified, thereupon and thereafter be confined and restricted to the following portion of the Lands of the Transferor;

A strip of land not more than _____ meters in perpendicular width, as may be designated and located by the Transferee in connection with its undertaking, and shown in the survey referred to in Clause 4 herein, (the "SRW Area").

4. The Transferor and the Transferee mutually agree that when and so soon as the Transferee shall deposit a plan of the SRW Area, based upon a survey in accordance with the requirements of the *Land Title Act* (British Columbia), as amended and regulations of the Surveyor General, in the appropriate Land Title Office, such plan and the survey upon which it is based defining the SRW Area hereinabove referred to shall in all respects thereafter establish, govern and define the SRW Area, and the remaining Lands of the Transferor shall, save as aforesaid, thereupon be released and discharged from the Statutory Right of Way hereby granted.

The Registrar of the Land Title Office is authorized to make such entries in the register as may be necessary to give effect to the foregoing.

The Transferor accepts the accuracy of the said survey and the plan so deposited without examination or further approval and authorizes the appropriate Registrar of the Land Title Office to accept the plan for deposit without his signature thereon.

5. In the event the Transferee shall not have either deposited a plan of the SRW Area, as provided for in Clause 4 herein, or shall not have commenced operations upon the Lands of Transferor for the laying of the Works within three years from the date hereof, the Statutory Right of Way hereby granted shall thereupon terminate, and the Transferee agrees thereupon to execute and file such documents as may be necessary to effect its termination.

6. The Transferee shall have and is hereby given the rights to:

- (a) use such of the Lands of the Transferor as may reasonably be required by the Transferee immediately adjacent to either side of the SRW Area in connection with the exercise of the rights hereby granted; and
- (b) ingress to and egress from the SRW Area over the remaining Lands of the Transferor for the Transferee's servants, agents, contractors and sub-contractors with vehicles, supplies and equipment for all purposes useful or

convenient in connection with or incidental to the exercise and enjoyment of the rights and privileges hereby granted.

7. Should the Transferee at any time wish to construct an additional pipeline and/or facilities (other than those specifically contemplated in Clause 8 herein, with respect to which the specific provisions of such Clause 8 shall apply) within the SRW Area in accordance with its rights under Clause 1 herein, the Transferee shall obtain the consent of the Transferor prior to commencing construction thereof, such consent not to be unreasonably withheld.

8. If at any time the Transferee shall require the SRW Area for installation of facilities to be located above ground (other than pipeline warning markers installed at fence lines or test lead posts) the Transferee shall consult with the Transferor as to the appropriate location of such facilities and shall locate such facilities, insofar as may be practicable to do so, in such a fashion as to provide a minimum of inconvenience to the Transferor. Upon furnishing to the Transferor a plan of the intended location of the above ground facilities and paying additional compensation therefor, as agreed upon by the parties hereto or, failing agreement, as determined by arbitration pursuant to the provisions of the *National Energy Board Act* (Canada) (the "Act"), the Transferee shall have the right to install such above ground facilities and, if it so desires, fence the portion of the SRW Area required for such above ground facilities, without registration of any further documentation.

9. Except in respect of facilities installed by the Transferee pursuant to Clause 8, the Transferee (insofar as it is practicable so to do) shall bury and maintain all pipe and other installations so as not to interfere unreasonably with the drainage or ordinary cultivation of the Lands of the Transferor.

10. Notwithstanding any provision in this Agreement (other than the last paragraph of Clause 2) and notwithstanding any rights the Transferor may have at law or in equity, should the Transferee fail to pay any amount payable hereunder, the Transferor's sole remedy shall be to recover from the Transferee such amount payable hereunder and any interest payable thereon, and the Transferor shall in no event, for whatever reason, interfere with, hinder, molest or interrupt the Transferee in its enjoyment of the Statutory Right of Way hereby granted.

11. The Transferor shall not, unless so permitted in writing by the Transferee, excavate, drill, install, erect, plant or permit to be excavated, drilled, installed, erected or planted on or under the SRW Area, any building, foundation, pipe, drain, culvert, road, ditch, pavement, tree, any other vegetation except as specifically permitted by the Transferee's vegetation guidelines in effect from time to time, well, swimming pool, pond, sewage lagoon, pit, pile of material, obstruction, equipment or any other structure, thing or installation, but otherwise the Transferor shall have the right fully to use and enjoy the SRW Area subject always to and so as not to interfere with the Statutory Right of Way hereby granted to the Transferee.

12. The Transferee shall compensate the Transferor for all damages suffered as a result of the construction and operations of the Transferee, including damages done to

any buildings, crops, pasture, fences, drains, timber, livestock, or other improvements on the Lands of the Transferor by reason of the exercise of the Statutory Right of Way hereby granted.

13. Notwithstanding any rule of law or equity, the Works brought on to, and/or erected upon or buried in or under the SRW Area by the Transferee shall remain the property of the Transferee notwithstanding that the same may be annexed or affixed to the freehold and shall at any time and from time to time be removable in whole or in part by the Transferee, its successors and assigns.

14. Subject always to Clause 15 herein, the Transferee may at any time for any reason whatsoever, at its election on notice in writing to the Transferor, terminate this Agreement and the same thereafter shall be of no further effect and the Transferee shall stand relieved of all obligations with respect to the payment of compensation and/or damages other than accrued to the date of termination; always provided, however, that upon any such termination, the Transferee, if this Agreement shall then have been registered, shall forthwith at its expense procure a discharge thereof.

15. The Transferee may at any time abandon all or any part of the Works. In such case the Transferee shall provide written notice to the Transferor and shall, in its sole discretion however after consultation with the Transferor, be entitled either:

- (a) to remove such Works from the SRW Area and restore the surface of the SRW Area to the same condition, so far as may be practicable to do so, as it was prior to entry thereon and use thereof by the Transferee. In such case, the Transferee will discharge this Agreement from title to the affected Lands of the Transferor; or
- (b) to leave such Works or any part thereof in place. In such case the Transferee will:
 - (i) continue to be obligated to maintain the Works so they do not interfere unreasonably with the drainage or ordinary cultivation of the Lands of the Transferor;
 - (ii) continue to have the right, at any time, to remove all or any part of the Works from the SRW Area in accordance with subclause 15(a) herein; and
 - (iii) upon written request by the Transferor, register a modification to this Agreement deleting the words "lay down, construct, operate," and "replace, reconstruct" from Clause 1 herein.

16. The Transferee performing and observing the covenants and conditions on its part to be performed and observed, shall and may peaceably hold and enjoy the Statutory Right of Way hereby granted without hindrance, molestation or interruption on the part of the Transferor or of any person claiming by, through, under or in trust for the Transferor.

17. All notices to be given hereunder may be given by registered letter addressed to the Transferor at:

and to the Transferee at:

Westcoast Energy Inc.
2600, 425 1st St SW
Calgary, AB T2P 3L8
Attn.: Lands

or such other address as the Transferor and the Transferee may respectively from time to time designate in writing, and any such notice shall be deemed to have been given to and received by the addressee three (3) days after the mailing thereof, postage prepaid and registered.

18. Neither this Agreement nor anything herein contained shall affect or prejudice the Transferee's statutory rights, present or future, to acquire the Statutory Right of Way or any other portion or portions of the Lands of the Transferor as may be provided for by law, which rights the Transferee may exercise in its discretion.

19. Nothing herein contained shall be deemed to vest in the Transferee any title to mines, ores, metals, coal, slate, oil, gas or other minerals in or under the Lands of the Transferor comprising the SRW Area, except only the parts thereof that are necessary to be dug, carried away or used in the construction of the Works.

20. If at the date hereof the Transferor is not the sole owner of the Lands of the Transferor, this Agreement shall nevertheless bind the Transferor to the full extent of his interest therein, and if he shall later acquire a greater or the entire interest, the Agreement shall likewise extend to such after-acquired interests.

21. The Transferee covenants and agrees to indemnify and save harmless the Transferor from any and all liabilities, liens, damages, costs, claims, suits or actions arising by reason of the exercise of the rights hereby granted to the Transferee save and except liabilities, damages, costs, claims, suits or actions arising through the gross negligence or willful misconduct of the Transferor.

22. The Statutory Right of Way hereby granted is and shall be of the same force and effect to all intents and purposes as a covenant running with the land and this Agreement, including all the covenants and conditions herein contained, shall extend to, be binding upon and enure to the benefit of the heirs, executors, administrators, successors-in-title and assigns of the parties hereto respectively and wherever the singular or masculine is used, it shall be construed as if the plural or the feminine or the neuter, as the case may be, had been used, where the context or the party or parties hereto so require, and the rest of the sentence shall be construed as if the grammatical and

terminological changes thereby rendered necessary had been made.

23. The Transferor acknowledges receipt, prior to the entering into of this Agreement, of a notice given pursuant to Section 87(1) of the Act, setting out or accompanied by:

- (a) a description of the portion of the Lands of the Transferor required by the Transferee for a section or part of the Works;
- (b) details of the compensation offered by the Transferee for such lands required;
- (c) a detailed statement made by the Transferee of the value of such lands required in respect of which compensation was offered;
- (d) a description of the procedure available for approval of the detailed route of the Transferee's Works; and
- (e) a description of the procedure available for negotiation and arbitration under Part V of the Act in the event that the Transferor and the Transferee are unable to agree on any matter respecting the compensation payable.

24. All rights and obligations of the parties hereto shall at all times be subject to laws and regulations applicable from time to time to such parties and to the Lands of the Transferor.

IN WITNESS WHEREOF, the parties hereto hereby acknowledge that this Agreement has been duly executed and delivered by the party(ies) executing Form C (page 1) attached hereto.

Schedule 1

1.) The annual consideration for this Agreement shall be the sum of _____ (\$_____) Cdn Dollars, to be paid by the Transferee for a term of _____ years (the "Term"). The first annual payment shall be made before construction is commenced on the said Lands of the Transferor. Each remaining annual payment shall be made on or before the anniversary date of the first annual payment.

2.) The periodic consideration for this Agreement shall be the sum of _____ (\$_____) Cdn Dollars, to be paid by the Transferee for each _____ period, for a term of _____ years (the "Term"). The first periodic payment shall be made before construction is commenced on the said Lands of the Transferor. Each remaining periodic payment shall be made on or before the start of the next _____ period.

3.) In the case of a Term longer than five years, the Transferee shall serve a notice on the Transferor at least (60) days prior to the end of the first five year period requesting the Transferee to accept a new annual or periodic payment(s) for the remainder of the Term based upon the then market value of the Lands of the Transferor of which the SRW Area forms a part. The Transferee shall either accept or reject the new payment within fourteen (14) days of receipt of the Transferee's notice.

END OF DOCUMENT