

Line No.	For Working Group Use				For Proponent Use
	Issue Ref.	Comment Date	Reviewer Name / Agency	Comment	Proponent Response
1	SN-056	24-Aug-16	Squamish Nation	The Application makes no mention of Squamish Nation's Wildlife Focus Area for Elk in West Howe Sound, within which the Project is located. This is described in the Agreement on Land Use Planning Between The Squamish First Nation and The Province of British Columbia (2007). The management intent of this focus area for elk is "To expand the provincial elk reintroductions within Squamish Territory in order restore naturally occurring populations, and, provided conservation needs have been met, to provide future opportunities for Squamish Nation hunting of social and ceremonial purposes" [sic]. This objective should be recognized in the assessment and the Project should be evaluated against this objective to understand whether the Project will help or hinder this objective for the Squamish Nation.	The Squamish Nation's Wildlife Focus Area for Elk in West Howe Sound is located entirely within the Terrestrial RSA. Therefore, conclusions of the effects assessment for Roosevelt elk are considered applicable to the Squamish Nation's Wildlife Focus Area for Elk in West Howe Sound. The Project does not introduce any restrictions on reintroductions of elk into the Squamish Territory.  The management of elk populations is the responsibility of the Province of BC and the release of hunting permits will not be affected by the Proposed Project. Hunting will be restricted within the active Project area due to safety concerns and to avoid mortality associated with the Project. BURNCO will work with the Squamish Nation to develop a practical communication protocol to enable safe use of Project areas for terrestrial harvesting activities (C-3.3 of Table 19-1 of Part F).
2	SN-057	24-Aug-16	Squamish Nation	The title should be clear that this is winter habitat suitability	Figure 19 of Volume 2, Section 5.3 refers to winter habitat suitability.
3	SN-058	24-Aug-16	Squamish Nation	For the ungulate camera observations, it is important to report the abundance between seasons at each location. These bar charts could show the relative abundance for each season. Please provide this breakdown for deer and elk.	The primary purpose of the remote camera program was to determine the presence and distribution of medium and large mammals present in the Terrestrial LSA. Determining species abundance using remote camera data is beyond the scope of the wildlife baseline study. Estimates of abundance require individual recognition of animals, which is difficult for free-ranging unmarked or uncollared elk or deer. For camera surveys the use of photographic rate (i.e., photographs per sampling time) is an appropriate approach describing presence and distribution in the Terrestrial LSA.
4	SN-059	24-Aug-16	Squamish Nation	Regarding the remote camera survey, the baseline report says that "Data from such studies can be particularly helpful in assessing the presence of wildlife in the landscape, and in assessing wildlife activity and movement patterns, on a seasonal basis." (s.2.2.6.1). Interpretations of the camera data in 3.6.5.1 and 3.6.7.2 does not attempt to describe potential movement patterns on a seasonal basis for elk and deer. What do the data tell us about important movement routes? It appears that the preferred routes are along the main road (elk observations high at camera locations 18, 14 and 20; deer observations highest at 18). This interpretation is important to understand how the project will affect seasonal movements of ungulates along this route and to determine how mitigation measures may be applied. Please describe what we know and don't know about seasonal movement patterns of elk and deer in and around the LSA.	The primary purpose of the remote camera program was to determine presence and distribution of medium and large mammals in the Terrestrial LSA. Quantifying landscape level movement routes and seasonal movement patterns was not the intent of the camera program. However, remote camera data were reviewed to provide insights into wildlife use of the Terrestrial LSA. The seasons when elk and deer were most frequently recorded and the habitat types most frequently utilized are described in Section 3.6.5.1 of the Wildlife Baseline Report.
5	SN-060	24-Aug-16	Squamish Nation	The Application should recognize the importance of wildlife planning and management objectives such as the provincial Management Plan for Roosevelt Elk in British Columbia (draft 2014). How does the Project help or hinder the objectives for elk populations in this plan?	BURNCO recognizes the importance of wildlife planning and management objectives stated in the provincial draft Management Plan for Roosevelt Elk (BC FLNRO 2015). The first objective is to "maintain self-sustaining populations of Roosevelt elk throughout their current range" in the South Coast region (BC FLNRO 2015). The proposed Project aims to achieve this through appropriate mitigation, reclamation, and compensation of elk habitat as described in Section 5.3 of Volume 2.  The fourth objective is to "provide opportunities for consumptive and non-consumptive use" (BC FLNRO 2015). See response to SN-056 for more information on hunting within the Terrestrial LSA.  The fifth objective is to "mitigate public safety risk of vehicle collisions" (BC FLNRO 2015). This will be achieved by not constructing new roadways, restricting traffic to designated access roads and daytime hours, restricting traffic volumes, restricting traffic speeds to below 40km/hr, and taking extra caution when driving during dawn and dusk. Elk crossing signs will also be posted on access roads if necessary and defensive driving techniques will be followed. This information is summarized in Section 5.3.1.5.4.3.3.
6	SN-061	24-Aug-16	Squamish Nation	The Application says that 36 ha of high and moderate suitability winter elk habitat will be directly lost. Also, 128 ha (52 ha of high + 76 ha of moderate) will be indirectly affected by disturbance. Overall, 164 ha of high/moderate suitability winter habitat will be effectively lost to elk during the project operations. This is about half (48%) of the suitable winter elk habitat in the LSA. The Application argues that the direct habitat loss is "Low" in context of the RSA (3% of high/moderate habitat). What is the % effective habitat loss (direct+indirect) in the RSA? What is the effective loss in the McNab Creek watershed?	Overall, construction and operations of the Project is predicted to affect 165 ha (36 ha direct and 128 ha indirect due to sensory disturbance) of high and moderate suitability winter elk habitat in the Terrestrial RSA, which represents 3.9% of the suitable habitat in the Terrestrial RSA. However, habituation by elk to sensory disturbance is expected, and much of the habitat conservatively estimated to be indirectly affected will be available to elk over time. The area of suitable Roosevelt elk habitat affected represents approximately 2.5% of the McNab Creek watershed, which covers an area of approximately 6,498 ha.  Loss of suitable Roosevelt elk winter habitat will be limited to the Proposed Project Area and is expected to be fully reversible through progressive reclamation and replanting after Project completion, with the exception of the area that will become the pit-lake at the end of the life of the Project.
7	SN-062	24-Aug-16	Squamish Nation	The Application states: "If the Proposed Project is determined to be having an effect on listed species for which adequate data are available, BURNCO will work with regulators to determine appropriate methods for applying additional mitigation or avoidance measures or to reduce these effects, where possible." Please also include Squamish Nation in these discussions regarding mitigation options.	BURNCO will work with the Squamish Nation to develop a mechanism for their involvement in the development and implementation of wildlife mitigation measures.

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8	SN-063	24-Aug-16	Squamish Nation	Regarding the mitigation measures proposed: "Habitat clearing within Roosevelt elk winter range during winter months (November to March [Nyberg and Janz 1999]) will be minimized to the extent practical", this is not specific enough to ensure effectiveness. The effect we want to avoid is beginning significant clearing during the winter occupancy by elk and forcing them to find winter habitat elsewhere during a stressful period of their life cycle. It would be preferable to ensure that clearing activities begin prior to elk arrival at low elevations which would allow them to move elsewhere for suitable winter habitat while they are . Prior to the finalization of the proposed Elk Management Plan, we propose that BURNCO use monitors or cameras to estimate the beginning of winter use of the LSA by elk and specify a mitigation measure that ensures that clearing will not begin after the winter arrival of elk in the LSA.	Habitat clearing within elk winter range will be minimized during winter months (November to March) to the extent practical and clearing will be avoided during calving periods (mid-May to mid-July). The population of Roosevelt elk within the Terrestrial RSA has been re-introduced and is predicted to be stable or increasing (Quayle and Brunt 2003). The available evidence suggests that the Roosevelt elk population in the RSA is self-sustaining and maintaining its ecological function. Therefore, the Roosevelt elk population within the RSA is determined to be resilient to imposed stresses (Section 5.3.1.5.6.1.7 of Volume 2, Section 5.3). Roosevelt elk are expected to avoid areas where clearing activities are occurring or to habituate to those areas over time. Given the availability of habitat in the LSA and elsewhere in the RSA, it is unlikely that construction of the Project would represent a measureable impact on the population of Roosevelt elk. Forage is relatively abundant in the LSA outside of the Project Area, and snow interception cover is much more abundant outside the LSA, which is mostly composed of early seral forest.  A detailed wildlife mitigation and monitoring plan has not yet been developed but will be developed as part of the Wildlife Management (Protection) Plan to minimize impacts on terrestrial resources and to collect data that will help evaluate the effectiveness of implemented mitigations. BURNCO will work with the Squamish Nation to develop a mechanism for their involvement in the development and implementation of the Habitat Compensation Plan for Roosevelt elk at closure/reclamation.
9	SN-064	24-Aug-16	Squamish Nation	This section describes habitat fragmentation as entirely a positive outcome for elk. There are certainly negative aspects that should be recognized, such as the potential reduction of shelter that occurs when a large contiguous tract is fragmented into smaller pieces and forest edges are exposed leading to further loss of mature trees from windthrow. Please describe the negative effects for elk from habitat fragmentation.	BURNCO acknowledges negative effects can occur due to habitat fragmentation and carried this forward in the effects assessment. However, once mitigation measures are applied, residual effects from Roosevelt elk habitat fragmentation are not expected. Vegetation in the Terrestrial LSA is in various stages of regeneration following historical rock quarrying and clear cut logging activities on site. Elk are expected to adapt and be resilient to existing natural and human-related disturbances and associated changes in habitat availability (Section 5.3.1.5.6.1.7 of Volume 2, Section 5.3).  Habitat clearing will be minimized and vegetation buffers will be maintained to facilitate elk movement. Progressive reclamation will include planting native species to result in forest for cover in winter and riparian species and forest edges for forage. Existing disturbed areas, roads and right-of-ways will be used and no new roads are planned. Habitat clearing within elk winter range will be minimized during winter months (November to March) to the extent practical and clearing will be avoided during calving periods (mid-May to mid-July). The pit-lake will be designed to allow for wildlife escape routes and travel. Mitigation measures are described further in Table 5.3-15 of Volume 2, Section 5.3.  Please see response to SN-072 for more information on habitat fragmentation and barriers to movement.
10	SN-065	24-Aug-16	Squamish Nation	Regarding the mitigation measure proposed: "Maintain/provide habitat linkages and vegetation buffers to minimize habitat fragmentation between winter ranges for elk. These buffer areas act as travel corridors for wildlife", please explain the specific actions and timing that will take place to ensure this will be implemented and effective. This is an important measures to ensure that elk can continue to persist undisturbed during the winter. The planning should include identification of winter no-go zones to contain the disturbance effects. The prolonged use of wildlife cameras will also help to monitor the use of protected travel corridors.	The Project is predicted to affect 165 ha (or 3.9%) of high and moderate suitability habitat in the Terrestrial RSA. That includes 36 ha of suitable habitat that will be directly lost to clearing, and 128 ha that are predicted to be affected by sensory disturbance. However, the prediction of habitat affected due to sensory disturbance is a conservative estimate because Roosevelt elk are expected to habituate to sensory disturbance. Habitat lost due to clearing will be reclaimed and replanted, which will occur progressively over the life of the Project. The creation of the pit lake will result in the loss of 36 ha or 0.8% of suitable winter habitat for elk in the RSA.  Please see response to SN-072 for more information on habitat fragmentation and barriers to movement.
11	SN-066	24-Aug-16	Squamish Nation	Regarding the mitigation measure proposed: "Efforts will be made to restrict noises to below 50dBA within 500m from the Proposed Project Area (i.e., within the ZOI for elk, see Section 5.3.1.5.3.7.1.1)", please commit to monitoring noise effects to ensure that disturbance to elk is contained within the 500m ZOI, and specify the measures that will be taken should there be a detectable effect beyond the ZOI.	Noise monitoring will be included as part of the noise management plan, which will be developed as part of the requirements for the Project. The sources of noise above 50dBA within 500 m of the Proposed Project Area will be evaluated and noise levels will be mitigated, where feasible.
12	SN-067	24-Aug-16	Squamish Nation	Regarding mitigation for barriers to wildlife movement, please commit to ensuring safe passage of elk herds across roads or past operating equipment should elk be moving through the project area. This should include a temporary stop-work to permit undisturbed passage.	Please see response to SN-063  Road upgrades beyond the Proposed Project area are not planned. Crews and equipment will be moved to the site via boat or barge. The speed of vehicle movement on site will be limited to minimize the risk of collisions with elk or other wildlife, and vehicles will yield to wildlife to permit safe passage.
13	SN-068	24-Aug-16	Squamish Nation	Regarding the mitigation measure proposed: "All employees and contractors will be prohibited from hunting, including Roosevelt elk and grizzly bear, within the LSA", we request that employees and contractors should be prohibited from hunting in the entire McNab Creek watershed. This is a reasonable measure to limit the added effects of hunting on the populations that will already be impacted by the development and operations of the project.	Please see response to SN-056. Workers will be prohibited from using Project-related access to the site to hunt in the LSA, the McNab Creek watershed, or elsewhere in the RSA or beyond.

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14	SN-069	24-Aug-16	Squamish Nation	Regarding the mitigation measure proposed: "A Habitat Compensation Plan for Roosevelt elk will be developed and implemented prior to and during the reclamation and closure phase of the Project, with specific recommendations to address habitat compensation for Roosevelt elk": elk habitat compensation plan should be provided to Squamish Nation for approval prior to construction with implementation underway within 2 years of construction beginning. The permanent removal of habitat needs to be replaced reasonably quickly to offset the impact; it can't wait for the reclamation phase 16 years later. Squamish Nation will require this, with further details to be discussed during ongoing deep consultation, as per commitments in Volume 3 in the Application.	See the response to SN-065 for a description of the predicted effects of the Project on Roosevelt elk habitat. Development of the Habitat Compensation Plan for Roosevelt elk will occur early in the life of the Project, as reclamation will be progressive (i.e., occur throughout the life of the Project as areas are no longer needed for operation). BURNCO will work with the Squamish Nation to develop a mechanism for their involvement in the development and implementation of the Habitat Compensation Plan at closure/reclamation.
15	SN-070	24-Aug-16	Squamish Nation	What does the camera data tell us about important elk travel routes? it appears that the preferred routes are along the road (elk observations high at 18, 14 and 20; deer observations highest at 18). How will the project affect the movement of ungulates along this route? It may be expected that the project activities will disrupt the use of this route by ungulates.	Please see responses to SN-059
16	SN-071	24-Aug-16	Squamish Nation	The Application states: "The net effect of loss of Roosevelt elk habitat, barriers to movement and change in Roosevelt elk mortality are predicted to result in low and negligible magnitude. Therefore the magnitude of net effects of the Proposed Project on Roosevelt elk is also predicted to be low." This conclusion is based on very vague expectations of mitigation success and very simplified reductive reasoning. No convincing rationale is provided that considers the population needs for elk in the McNab valley and particularly the unique qualities of the river delta and shoreline area. Please discuss the importance of the McNab river valley for the local elk population, and in particular the value of the low elevation river delta winter habitat and travel corridors.	<p>Please see the response to SN-075. The assessment of the effects of the Proposed Project on Roosevelt elk was based on known Roosevelt elk ecology; known habitat associations, life history requirements, and behavioural and demographic sensitivities, available information on population demographics, as well as known effects of anthropogenic disturbances on Roosevelt elk and other wildlife species. The population of Roosevelt elk within the Terrestrial RSA is predicted to be stable or increasing (Quayle and Brunt 2003), and therefore likely to be resilient to the predicted loss of 0.8% of the suitable habitat in the RSA due to clearing and the 3% of suitable habitat in the RSA predicted to be temporarily affected due to sensory disturbance. Elk are predicted to habituate to sensory disturbance due to the Project over time, and sensory disturbance will cease at the end of the life of the Project. The Proposed Project will not result in a measureable increase in the risk of mortality to Roosevelt elk or to barriers to movement. Project infrastructure will be removed and habitat reclaimed during the reclamation and closure phase of the project.</p> <p>The McNab valley has a long history of mining and logging activities (Section 2.4.2.1 of Volume 1 Part A). There was no evidence collected during three years of field studies to suggest that the habitat in the Terrestrial LSA is unique in the RSA, with the exception of the long history of industrial use and extensive anthropogenic disturbance that characterizes the existing conditions of the Project area.</p> <p>The McNab Creek and riparian areas will not be affected by the proposed Project. Travel corridors for elk along the McNab Creek will remain intact. Crushing, screening and washing facilities will be enclosed above ground in the Proponent's proprietary enclosures to avoid and limit fugitive dust and noise emissions. The installation of a clamshell will also limit fugitive dust and noise emissions. Sensory disturbance will also be limited through vegetation buffers, minimized clearing, noise BMP, controlling traffic and speed, minimizing fugitive dust, and limiting operational activities to daylight hours (Table 5.3-15).</p>
17	SN-072	24-Aug-16	Squamish Nation	The Application argues that the project will have a "Negligible" barrier to movement for elk. Please provide a rationale for this determination, based on what is known about elk travel corridors in this area. Please note that any non-significant conclusion of the Project's effects on Squamish Nation's Aboriginal Rights caused by impacts to terrestrial resources is contingent on clear and defensible conclusions on this topic, as outlined in Section 11.3 (particularly 11.3.3.2.1, 11.3.3.2.3.1, 11.3.5.1.1, 11.3.6, and 11.3.8) (Volume 3 of the Application).	The McNab Creek and riparian areas will not be affected by the proposed Project. Travel corridors for elk along the McNab Creek will remain intact. Existing disturbed areas, roads and right-of-ways will be used and no new roads are planned. Vegetation buffers will be maintained or planted to minimize habitat fragmentation between winter range for elk. Roosevelt elk will no longer be able to move directly between the high suitability habitats north of the Proposed Project Area to high suitability habitat in the marine foreshore, and will need to travel around the Proposed Project Area to the east or west to access these areas. However, typical elk range is 5 to 10 km <sup>2</sup> (500 to 1,000 ha) on the mainland coast (Blood 2000; Brunt et al. 1989; Quayle and Brunt 2003) and elk are expected to travel around the Proposed Project Area with negligible effects to movement patterns given the small area affected (see response to SN-071).
18	SN-073	24-Aug-16	Squamish Nation	The Application argues that the project's effect from direct habita loss will be "Fully Reversible", even though there will be a pit-pond replacing high/moderate suitability elk habitat. Please provide a rationale for this determination, or acknowledge that this is "Partially Reversible". Please indicate how much area (ha) of habitat will be lost by the pit-pond.	Direct habitat loss due to the Proposed Project is fully reversible. To be not fully reversible would suggest that the habitat lost could not be reclaimed with current technology. However, the reclamation plan involves creation of a pit lake, which will provide additional habitat for wildlife species such as waterfowl and amphibians. Suitable winter habitat loss for Roosevelt elk in the Terrestrial RSA covers 165 ha (or 3.9%) and will mostly be reclaimed and replanted during the reclamation and closure phase of the Project. Creation of the pit lake will affect 36 ha of habitat for elk, the pit lake affects habitat predicted to be moderate suitability, but no high suitability habitat.
19	SN-074	24-Aug-16	Squamish Nation	The Application argues that the population of Roosevelt Elk in the McNab Creek area is "Resilient" because, "The available evidence suggests that the Roosevelt elk population in the RSA is self-sustaining and maintaining its ecological function. Therefore, the Roosevelt elk population within the RSA is determined to be resilient to imposed stresses." What evidence exists that this population is resilient to the stresses of industrial development within key winter habitat? Please provide a rationale for this determination, considering that there may be ~100 individuals of a relatively recently reintroduced population of a Blue-listed species.	The population of Roosevelt elk in the Terrestrial RSA is predicted to be stable or increasing (Quayle and Brunt 2003). Therefore, this self-sustaining population is considered resilient to imposed stresses. Net residual effects from habitat loss, barriers to movement, and changes in mortality are considered to be not significant for Roosevelt elk in the Terrestrial RSA (Table 5.3-54 of Volume 2, Section 5.3).

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20	SN-075	24-Aug-16	Squamish Nation	The determination that the project will not have a significant effect on Roosevelt Elk is based on the prediction that there is enough suitable habitat elsewhere in the RSA, which comprises several adjacent watersheds. If the project does inhibit the ability of a self-sustaining population to persist in the McNab watershed, what evidence exists that elk can access and thrive in the other watersheds, considering the impacts and stresses existing in those locations?	Roosevelt elk in the Terrestrial RSA are considered resilient to imposed stresses (Quayle and Brunt 2003) and the magnitude of net cumulative effects to elk is predicted to be moderate. Reasonably foreseeable developments (RFDs), such as Eagle Mountain Woodfibre Gas Pipeline Project, Woodfibre LNG Project and logging activities, are estimated to affect 16% of suitable Roosevelt elk habitat in the Terrestrial RSA. Net cumulative effects are not considered significant for Roosevelt elk (Section 5.3.3.7.2 of Volume 2, Section 5.3). Approximately 84% (3,560 ha) of the Roosevelt elk habitat ranked as high and moderate suitability in the Terrestrial RSA under existing conditions will remain available. However, the conclusion that the Project will not have a significant effect on Roosevelt elk is not based solely on the prediction that there is enough suitable habitat available elsewhere in the RSA. The project will also not increase access to the Roosevelt elk population for hunters and poachers, will not introduce or increase other sources of mortality to the population, and direct habitat losses are predicted to affect only 0.8% of suitable habitat in the Terrestrial RSA during construction and operations. These combined impacts are not predicted to be significant for the Roosevelt elk population in the Terrestrial RSA, which is likely to be either stable or increasing (Quayle and Brunt 2003).
21	SN-076	24-Aug-16	Squamish Nation	The Application proposes that "Communication and planning with other proponents within McNab Valley" will manage cumulative effects on elk. Please explain this commitment in more detail, including the objectives for the planning and how it will link with monitoring studies. Further, BURNCO's conclusion that the cumulative effect on elk is not significant relies on there being enough habitat in the rest of the RSA, so BURNCO should commit to communicating and planning with land users more broadly than the McNab Valley to ensure that the elk population is resilient enough to be self-sustaining. Please commit to broader coordination, and provide a conceptual plan for how that coordination will achieve success.	BURNCO will develop and implement a Wildlife Management (Protection) Plan. BURNCO will work with Squamish First Nation and stakeholders (i.e., proponents, landowners, and government representatives) in the development of the Habitat Compensation Plan, as appropriate. A detailed wildlife mitigation and monitoring plan has not yet been developed but will be developed as part of the Wildlife Management (Protection) Plan to minimize impacts on terrestrial resources and to collect data that will help evaluate the effectiveness of implemented mitigations.
22	SN-077	24-Aug-16	Squamish Nation	Overall, 164 ha of high/moderate suitability winter habitat will be effectively lost to elk during the project operations. Yet, the cumulative effects assessment only focuses on the 36 ha of directly impacted habitat. Likewise, the other projects are only considered in terms of the direct habitat lost that is projected to be lost. This is a narrow view of the overall cumulative impact on the elk population. The cumulative effect assessment should consider how all stressors (direct habitat loss, indirect effects, impacts to movement etc) from all land uses may affect the population. This would boil down to a much more meaningful and descriptive (albeit complex) assessment than merely stating that 16% of the RSA winter habitat will be impacted, and that "The magnitude of the potential cumulative residual effects on Roosevelt elk winter habitat loss, mortality, and barriers to movement are predicted to be medium, negligible and negligible, respectively" with virtually no evidence or rationale to explain these determinations of the cumulative effect within the RSA. Please provide a thorough discussion and analysis of the cumulative risks to sustaining this elk population, considering all stressors on this vulnerable population.	This assessment used a combination of quantitative and qualitative mean to assess cumulative effects of the Project combined with other reasonably foreseeable developments (RFDs). Direct elk winter habitat loss was quantified using the defined project footprints for RFDs and the predicted amount of forest harvest in the foreseeable future. Effects to changes in mortality and barriers to movement were assessed qualitatively using a reasoned narrative approach because there is some uncertainty around the exact location, geographic extent, and feasibility of the RFDs and forestry activities. The potential effects of RFDs on Roosevelt elk habitat, mortality and barriers to movement are discussed in detail in Section 5.3.3.5.1. The cumulative effects of RFDs on habitat were assessed without considering their reclamation to result in a conservative assessment of cumulative effects on Roosevelt elk and other terrestrial wildlife species. It is expected that RFDs will be required to implement standard mitigations to limit cumulative effects on habitat loss, changes in mortality, and barriers to movement for elk.
23	SN-078	24-Aug-16	Squamish Nation	In the context of the cumulative effects on this population, please provide a science-based comparison of the value of the high/moderate suitability habitat in the low-elevation McNab river shoreline and delta with the high/moderate suitability habitat in other areas (e.g., hillsides, higher elevation, etc) for the current elk population. The assessment treats all habitat modelled as high as having equal value when in reality there is likely a difference in the importance of high suitability habitat for the elk population if distinguishing features are considered. How may the high/moderate habitat in the McNab Creek delta be of different value to the high/moderate suitability habitat in other types of landscapes? What did the field data tell us about the difference in elk use between high suitability winter habitat that may indicate preferences or unique qualities of the McNab delta and shoreline? We believe that this is worthy of examination to understand the importance of the McNab Creek shoreline and fan to the population, rather than simply dismissing it as equivalent to other areas nearby that are assumed to be adequate to sustain and grow the population.	See the response to SN-071 and SN-075.
24	SN-079	24-Aug-16	Squamish Nation	The Application states that the future Wildlife Protection Plan will include "Procedures on how to minimize habitat fragmentation between winter elk ranges". What options exist for this project to implement habitat fragmentation reductions strategies? Please describe the actions that will be undertaken to achieve this.	Please see response to SN-064 and SN-074. The Project footprint has been sited in a location with a long history of anthropogenic disturbance to minimize the fragmentation of undisturbed areas and mature forest. In addition, the Project footprint will be progressively reclaimed throughout the life of the Project.
25	SN-080	24-Aug-16	Squamish Nation	The Application states that the future Wildlife Protection Plan will include "A Roosevelt elk habitat compensation plan will also be developed and implemented prior to and during the reclamation and closure phase of the Proposed Project." The elk habitat compensation plan should be provided to Squamish for review/comment prior to construction with implementation underway within 2 years of construction beginning. The permanent removal of habitat needs to be replaced reasonably quickly to offset the impact; it can't wait for the reclamation phase 16 years later. Please commit to this. Considering the sensitivity of this species, a careful consideration of the compensation commitments is required at the Application stage. Please provide a terms of reference for the compensation plan that describes the specific objectives of the plan (what is it compensating for?) so that compensation planning will be targeted and potentially effective in replacing some of what will be lost.	Please see response to SN-069

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26	SN-081	24-Aug-16	Squamish Nation	The monitoring and follow-up is far too vague (2 paragraphs for all wildlife) for there to be any confidence that monitoring will be sufficient to judge compliance and detect unanticipated effects. Furthermore, the Application lacks sufficient detail for EAO to articulate effective certificate conditions for monitoring requirements. We request a complete explanation of the monitoring commitments for the specific effectiveness monitoring required. What specific monitoring will be done for elk and deer? (who, what, when, where, how) How will this monitoring ensure that project effects on the elk population are being adequately managed?	Please see response to SN-063
27	SN-082	24-Aug-16	Squamish Nation	The Application states that "The results of the wildlife monitoring program will be evaluated annually to determine if changes in abundance for wildlife VCs are within acceptable limits." This implies that monitoring will be done for wildlife VCs at a frequency and extent to monitor abundance for each wildlife VC population with reasonable statistical power. Please confirm.	A detailed wildlife mitigation and monitoring plan has not yet been developed but will be developed as part of the Project Wildlife Protection Plan to minimize impacts on terrestrial resources and to collect data that will help evaluate the effectiveness of implemented mitigations.
28	SN-083	24-Aug-16	Squamish Nation	How will elk monitoring contribute to the population monitoring for the Squamish – BC Land Use Agreement (2007) and the provincial elk management plan?	Where appropriate, BURNCO will be pleased to share elk monitoring data with the Squamish Nation and BC FLNRO biologists for the Squamish – BC Land Use Agreement (2007) and the provincial elk management plan.
29	SN-084	24-Aug-16	Squamish Nation	In general, as detailed in the preceding comments, the Application fails to provide sufficient detail to convey the expected effects on ungulates at a local or regional study level. Consequently we find the residual effects characterization is not adequately supported by the evidence in the Application. Furthermore, Squamish Nation must re-iterate that any non-significant conclusion of the Project's effects on Squamish Nation's Aboriginal Rights caused by impacts to terrestrial resources is contingent on clear and defensible conclusions on this topic, as outlined in Section 11.3 (particularly 11.3.3.2.1, 11.3.3.2.3.1, 11.3.5.1.1, 11.3.6, and 11.3.8) (Volume 3 of the Application).	As noted in Section 11.3.8, the conclusions on "acceptable impacts" on Skwxwú7mesh Nation's Aboriginal Rights are contingent on mitigation described in the EAC Application/EIS. With respect to potential effects on the exercise of Skwxwú7mesh Nation's Aboriginal Rights related to ungulates, the relevant mitigation measures are described in Volume 2, Part B - Section 5.3 Terrestrial Wildlife and Vegetation and in Volume 3, Part C - Section 11.3.4. The mitigation measures specific to Skwxwú7mesh Nation are ongoing consultation between BURNCO and Skwxwú7mesh Nation during the regulatory review of the EAC Application/EIS and involvement in the development and implementation of mitigation, management and monitoring plans related to deer and elk.
92	TWN-116	15-Sep-16	Tsleil-Waututh Nation	We would like to note, in the interest of time management, that having a blank tracking document is quite time consuming - when an appropriately filled out tracking table is provided it makes entering comments much faster. We encourage the use of tracking tables where the sections and subjects have already been entered, leaving us space for comments.	Acknowledged. BCEAO / CEAA to advise.
93	TWN-117	15-Sep-16	Tsleil-Waututh Nation	We would also like to comment that the overall geographic expanse of the LSA and RSA is continually insufficient in terms of providing a proper assessment area to look at Project outcomes; the sizes/areas chosen in this EA, in addition, to others, do not provide the holistic perspective that represents Tsleil-Waututh Nation.	The scope of assessment of the marine shipping component of the Proposed Project, as defined by the CEA Agency and by the BCEAO, consists of the barge traffic in Howe Sound to south of Passage Island. The scope does not include shipping from where the barges meet the existing shipping lanes in the Strait of Georgia and in the Fraser River to BURNCO's existing facilities in Burnaby and Langley. Incremental increases to marine traffic as a result of the Proposed Project are anticipated only for Ramillies Channel, Thornbrough Channel and Queen Charlotte Channel in Howe Sound where the barges would intersect with existing BURNCO shipping routes.
94	TWN-118	15-Sep-16	Tsleil-Waututh Nation	Human and Terrestrial Wildlife Health require baseline reports in order to properly assess potential project effects on humans and wildlife. Assessing these components through pathways, such as water quality, do not provide a holistic view of impacts. TWN strongly believes that when data - qualitative or quantitative - is not available for a particular project location that it is up to the Proponent and BC EAO to ensure that any data required is created through studies and research. In addition, we encourage the use of both qualitative and quantitative methods for all baseline reports. An insufficient baseline report may result in cumulative effects that have not been properly mitigated.	Baseline information to support the human health and wildlife assessment are provided in Volume 2, Part B - Section 9.1 and Section 5.3 as well as the appendices provided in Volume 4, Part G - Section 22.0: Appendix 9.1-A through 9.1-E and 5.3-A. We look at the pathways that could lead to potential effects to understand the potential effects of the Proposed Project on identified receptors.  Potential effects on Aboriginal Rights, including Current Use, are provided in Part C of the EAC Application/EIS.
95	TWN-119	15-Sep-16	Tsleil-Waututh Nation	We disagree with the evaluation that one VC can be better represented by another VC, especially in regards to species as each and every one is different and requires different ecological resources, whether minor or great in the project area, to sustainably thrive.	The selection of VCs for the Proposed Project is consistent with the guidance provided by the Province (BCEAO 2013). This includes narrowing down the selection of VCs by asking a number of questions including, but not limited to, the following: - Is the candidate VC better represented by another VC? Can the potential VC be effectively considered within the assessment of another VC? (e.g., is it already duplicated by another species, economic activity).  In addition, identified Aboriginal groups were consulted with and involved in VC selection during the development of the AIR/EISg.
96	TWN-120	15-Sep-16	Tsleil-Waututh Nation	TWN disagrees with the exclusion of shipping lanes in the assessment as this decreases project effects related to water quality, marine resources, marine mammals, air quality and climate change. We would like to see the shipping lanes and all associated outcomes of marine vessels in the shipping lanes to be included in the assessment and most importantly, cumulative effects.	The scope of assessment of the marine shipping component of the Proposed Project, as defined by the CEA Agency and by the BCEAO, consists of the barge traffic in Howe Sound to south of Passage Island. The scope does not include shipping from where the barges meet the existing shipping lanes in the Strait of Georgia and in the Fraser River to BURNCO's existing facilities in Burnaby and Langley. Incremental increases to marine traffic as a result of the Proposed Project are anticipated only for Ramillies Channel, Thornbrough Channel and Queen Charlotte Channel in Howe Sound where the barges would intersect with existing BURNCO shipping routes.

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97	TWN-121	15-Sep-16	Tsleil-Waututh Nation	Tsleil-Waututh does not agree with the cumulative effects assessment method that considers only residual effects of the project that have the potential to interact with other projects and activities as scoped by the EA. Tsleil-Waututh assesses cumulative effects from a holistic perspective, inclusive of past (pre-contact baseline), present and future impacts on its members, culture, economy, and the environment from all projects across the territory. Tsleil-Waututh requests that all effects, including those generated by mitigatory and adaptive measures, be included in the cumulative effects assessment. We would like to discuss appropriate methods with the EAO and Proponent accordingly.	The cumulative effects assessment methodology was based on guidance provided by the BCEAO and the following guidelines and standards: Operational Policy Statement: Addressing Cumulative Environmental Effects under the Canadian Environmental Assessment Act (CEA Agency 2007), Addressing Cumulative Environmental Effects, A Reference Guide for the Canadian Environmental Assessment Act (CEA Agency 1994), Cumulative Effects Practitioners Guide (CEA Agency 1999), and Guideline for the Selection of Valued Components and Assessment of Potential Effects (BCEAO 2013).  If the Proposed Project is able to implement widely used mitigation techniques that are known to be effective in minimizing potential environmental effects then the resulting residual effect may be considered negligible. A negligible residual effect is defined, for the purposes of this assessment, as a residual effect that will result in no change or an incremental change to the indicator that is not measureable or within the natural variability of the system. If the effect is considered to be incremental or within the natural variability of the system then it is unlikely to act cumulatively with other current or reasonably foreseeable future projects.
98	TWN-122	15-Sep-16	Tsleil-Waututh Nation	We find this table to be lacking in listing Aboriginal interest of components, in addition to stakeholder importance. For example, as TWN looks at our environment with a holistic perspective we believe that all aspects of that system to be equally important and thus we have an interest in all aspects - we may be interested in Elk for example because it is hunted by TWN members, however, we are equally interested in the ecosystems and environment that supports the health and biology of that Elk. Another example would include Climate Change - this is not only an interest for Aboriginal groups, but all stakeholders, including the public and the provincial and federal levels of the Canadian government.	Table 4-2 as well as Table 4-3 were provided within AIR/EISg. The Identified Aboriginal groups were consulted with and involved in VC selection during the development of the AIR/EISg. When assessing the potential effects on VCs, the potential effects on their habitat and food sources were also considered.  Climate change was considered as a stand-alone VC as is presented in Table 4-2.
99	TWN-123	15-Sep-16	Tsleil-Waututh Nation	Even though chinook salmon and rainbow trout were seen infrequently in the project area, they are relevant to be VCs. Not only are they extremely important species to Tsleil-Waututh, but are decreasing in many areas due to development and thus should be paid attention to accordingly.	BURNCO agrees that chinook salmon and rainbow trout are important species that may infrequently be present within the LSA of the Project. The project design measures and mitigation measures incorporated into the Project are expected to be effective in avoiding effects on the salmonid species considered as VCs. Because the habitat requirements for the more common salmonid species are generally similar to those of chinook salmon and rainbow trout (clean water, adequate flow, instream cover, benthic invertebrate food supply and suitable substrate) it is expected that potential effects on these species will also be avoided.
100	TWN-124	15-Sep-16	Tsleil-Waututh Nation	The "timeline" column needs to be updated throughout - please have this updated for the next review phase	The timelines presented in Table 4-7 were based on those available at the time of writing the cumulative effects assessment. As timelines for projects can change suddenly and often, the cumulative effects assessment conservatively assumed that for current or reasonably foreseeable future project with unknown timelines, the Proposed Project would overlap with both construction and operations phases of that project.
101	TWN-125	15-Sep-16	Tsleil-Waututh Nation	TWN finds the pit lake to be of great concern - environmentally and ecologically - especially in relation to the fact that it will spill over and into adjacent watercourses. We believe this to be an adverse effect to fish and fish habitat and would like to understand how this will be mitigated?	During operation of the pit no surface water connection between the pit lake and downslope watercourses will exist. The downslope watercourses will be fed only by ground water. Only after the dredging activity has ceased will a spill structure be operational. The water quality and temperature of surface water spilt from the pit lake is predicted to meet water quality guidelines for aquatic life and it will be monitored to confirm the predictions.
102	TWN-126	15-Sep-16	Tsleil-Waututh Nation	Please advise whether the cement will be cured on or off land? Any additional information in regards to this process would be appreciated.	Concrete will be cast in place via an on-site batch plant or by truck delivery. Certain pre-cast elements may be used depending on final engineering details.
103	TWN-127	15-Sep-16	Tsleil-Waututh Nation	With a) increased activity within Howe Sound and b) the high potential for the pit lake containment to fail, how would there not be any cumulative impacts? Please explain.	The pit lake containment berm will be designed and built to appropriate design criteria, which include seismic stability considerations.
104	TWN-128	15-Sep-16	Tsleil-Waututh Nation	Please indicate the size of the pit lake and where it will be located? It is hard to gain this information from the maps provided.	The pit lake developed progressively over the 16 year life of the Project. The location of the pit lake is presented in Figure 2-2 of the EAC Application/EIS. At closure the pit lake will be 600 m by 500 m and approximately 35 m deep.
105	TWN-129	15-Sep-16	Tsleil-Waututh Nation	There is mention of removing creosote piles during reclamation and closure. However, are creosote piles being installed during construction? Please provide further information.	There is no plan to install creosote piles during construction. During construction, pile installation (to support the elevated walkway conveyor system and load-out jetty) will be limited to 10 steel piles in the subtidal and 8 steel piles in the intertidal.
106	TWN-130	15-Sep-16	Tsleil-Waututh Nation	We would like to state that once the creosote piles are removed, we do not consent to them being reused in Tsleil-Waututh traditional territory.	There is no plan to install creosote piles during construction. During construction, pile installation (to support the elevated walkway conveyor system and load-out jetty) will be limited to 10 steel piles in the subtidal and 8 steel piles in the intertidal.
107	TWN-131	15-Sep-16	Tsleil-Waututh Nation	There is a lot of woody debris in the subtidal area from a previous log dump. Is any of the debris to be cleaned up or will it be left in place? We believe in capturing net gain through all project outcomes and effects and encourage Proponents and the EAO to improve areas accordingly through current development projects.	There is no current plan to remove woody debris in the subtidal area associated with a previous log dump given this area still represents an active log sort area (log handling activities will continue to occur in this area in the future).

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108	TWN-132	15-Sep-16	Tsleil-Waututh Nation	Are there any glass sponges located in the marine area of the LSA and RSA? Please provide further information.	Glass sponges are known to occur throughout Howe Sound, in water depths below -20 m (chart datum). As part of marine baseline investigations, detailed underwater biophysical surveys were conducted in the proposed subtidal footprints of the proposed marine infrastructure (as well as adjacent areas) using SCUBA and towed video survey methods, with detailed information recorded on existing habitat and species present in these areas. This included systematic surveys targeting potential sponge reef habitats. The field surveys concluded that no glass sponge reefs were present in the proposed marine infrastructure (load-out jetty or walkway/conveyor) footprint. This information agrees with known habitat preferences of these organisms (i.e., water depths in the proposed marine infrastructure footprint are shallower than the depth range in which glass sponge reefs occur). In terms of interaction of glass sponge reef habitat with shipping activities, known sponge reefs occur in proximity to the proposed shipping route in several locations, with the closest occurring at the mouth of Ramillies Channel (Volume 4, Part G - Section 22.0 - Appendix 5.2-A, Figure 3). However, water depths at these locations along the proposed shipping route are below -25 m (chart datum). As such, potential impacts from shipping would be limited to propeller wash effects at the corresponding depths of these glass sponge reef occurrences. To assess this potential impact, propeller scour impacts on the seabed were assessed at a modelled depth of -20 m (chart datum) to correspond with the uppermost depths of glass sponge habitat. Jet velocities generated by the tug propeller at -20 m were compared to natural velocities derived from wave and tidal activity in Howe Sound. Estimates of maximum horizontal velocity associated with wind waves were developed from wave hindcasts from available wind data for the Strait of Georgia using the Halibut Bank Ocean Buoy (Environment Canada Station 46146) and are summarized in Table 5.2-12. At -20 m depth, the jet velocities of the proposed tug-assisted barge movements were shown to be within the same magnitude as tidal currents present at this depth, and below the velocity threshold (0.25 m/s) required for seabed particle mobilization (USACE 1989). Given that water depths along the proposed shipping route in the RSA are typically below -20 m (chart datum), the potential effects of tug propeller scour on glass sponge assemblages in the proposed shipping corridors were considered negligible and were not carried forward in the assessment.
109	TWN-133	15-Sep-16	Tsleil-Waututh Nation	Will there be a monitor for underwater noise during construction? The thresholds mentioned for dB that could cause harm to fish and marine mammals is hypothetical, which is a study method that we do not agree with. It's important that current qualitative and quantitative studies support all EA applications and Projects.	A qualified Environmental Monitor (EM) will be on-site during the construction phase to monitor underwater sound and pressure levels in the field using a hydrophone and a real-time sound monitor to confirm that pile driving noise levels at the established safety zone radius are below the established acoustic injury thresholds for fish (30 kPa or 210 dB re 1 µPa SPLpeak), as well as for marine mammals (based on three established injury threshold criteria for pinnipeds and cetaceans respectively: 190/180 dB re 1 µPa SPLrms; 210/230 dB re 1 µPa SPLpeak; and 186/198 dB re 1 µPa SEL). These acoustic injury thresholds, as referenced in the EAC application, are not hypothetical – they are based on a synthesis of best available science with respect to the effects of anthropogenic sound on marine fish and mammals, as determined through controlled experimentation including species-specific physiological and behavioral response studies. For fish, if underwater noise generated during pile driving is shown to exceed 30 kPa at a distance of 10 m from the source, measures will be taken to reduce either the intensity of the sound generated or the level of sound propagation through the water column (via installation of bubble curtains around the wetted pile and/or the alternate use of a vibratory hammer in place of an impact hammer). For marine mammals, if sound levels are shown to exceed the acoustic injury thresholds at the safety zone radius, the safety zone will be adjusted accordingly, and marine mammal monitoring will resume using the revised safety distance (with shut-down of piling when marine mammals enter the safety zone).
110	TWN-134	15-Sep-16	Tsleil-Waututh Nation	The Project will cause a loss of red-legged frog aquatic breeding sites and adult upland habitat. Can this loss be avoided and/or how will this loss be mitigated? TWN believes first and foremost, in avoiding habitat loss. Please explain.	Approximately 0.12 ha of habitat in Pond 2 and 6 that may be providing breeding habitat for amphibians is predicted to be lost during the construction phase. However, to compensate for this loss of wetland habitat, a total of 0.125 ha of amphibian breeding habitat will be established during the construction phase of the Project in four shallow ponds. Additional information is provided in Section 5.3.1.5.5.1.1.1 (Volume 2, Section 5.3)
111	TWN-135	15-Sep-16	Tsleil-Waututh Nation	The Project will cause habitat fragmentation between breeding sites of red-legged frogs. What will be done to decrease this effect? Again, TWN believes in avoiding any effect on habitats. Please provide further information and mitigation plans on how net gain will be achieved.	See response to TWN-134.
112	TWN-136	15-Sep-16	Tsleil-Waututh Nation	The loss of any habitat, whether terrestrial or marine, will require not only mitigation, but an increase in functional habitat. TWN believes in net gain through our holistic perspective and our Stewardship Policy (2009), and views mitigation as the only acceptable means of replacing what was destroyed. We expect that efforts will be made to ensure the Project improves the environment and ecology in the area. Please provide details as to how this will occur.	The Proposed Project footprint was sited in an area with a long history of anthropogenic disturbance to minimize impacts to undisturbed habitat (including mature forest) and to generally minimize adverse effects on terrestrial resources. A Reclamation and Effective Closure Plan will be developed and will outline the goals associated with wildlife habitat restoration, methods of rehabilitating wildlife habitat, and parameters to gauge the success of reclamation. Habitat reclamation will occur progressively over the life of the Proposed Project to return habitat to a functional capability for supporting wildlife as soon as possible. A detailed wildlife mitigation and monitoring plan has not yet been developed but will be developed as part of the Wildlife Management (Protection) Plan to minimize impacts on terrestrial resources and to collect data that will help evaluate the effectiveness of implemented mitigations.
113	TWN-137	15-Sep-16	Tsleil-Waututh Nation	TWN would like to know if, during reclamation and closure, the pit lake will become a permanent fixture? Please provide further information.	Confirming the Project involves the formation of a permanent pit lake.
114	TWN-138	15-Sep-16	Tsleil-Waututh Nation	Please provide further information on if there were any traditional use vegetation seen in the LSA? And if so, please explain how these areas will be avoided, or provide rationale if they will not be avoided?	Data were collected on all plant species observed during vegetation surveying in the Project area, including traditional use plant species. Species considered to be rare (provincially or federally listed species at-risk) will be avoided. Many traditional use species, such as those listed in Volume 2, Section 5.3.2.4.1 of the EAC Application/EIS, are common on the landscape. Mitigation measures to reduce potential effects to vegetation are provided in Section 5.3.2. and summarized in Table 18-1 of the EAC Application/EIS.

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115	TWN-139	15-Sep-16	Tsleil-Waututh Nation	Please list if there are any red-listed ecosystems to be avoided during construction and operation in the area?	Volume 2, Section 5.3.2.5.2.3 of the Application discusses effects of the Project on red-listed ecosystems. Red-listed ecosystems were avoided as much as possible during Project design. Impacts to the Tufted hairgrass - Douglas' aster estuarine meadow (GS/Ed02) located along the shoreline were minimized by construction of a raised marine loading conveyer, which will minimize soil and vegetation disturbance.
116	TWN-140	15-Sep-16	Tsleil-Waututh Nation	TWN disagrees with the pit lake being considered as mitigation for the Project. The pit lake is simply a means to an end and should not qualify as mitigation, especially if the effects can not be determined until after Project closure. For example, the pit lake may provide a habitat, and thus a food source for grizzly bears, but the pit lake is strictly created for the project and not a habitat for grizzly bears; TWN does not see the pit lake as a mitigation measure, nor does it help to achieve net gain within a sensitive environmental area. Please provide further information and measures as to how the pit lake will be decommissioned.	The pit lake is not being designed as habitat compensation. However, vegetation will be planted around the freshwater pit lake perimeter to establish wildlife habitat. The fish habitat compensation channel is expected to improve the overall productivity of the McNab system and may provide an increased food source for grizzly bear within the Terrestrial LSA following decommissioning. Mitigation measures are described further in Section 5.3.1.5.4 of Volume 2, Section 5.3.
117	TWN-141	15-Sep-16	Tsleil-Waututh Nation	We disagree that mitigation for wildlife and vegetation be considered post-operation. For example, how would its functionality be evaluated after project closure? All mitigation measures should occur prior to the effect occurring, in order to best decrease the effect overall. Please provide further information on how this will be done in relation to wildlife and vegetation effects.	Wildlife and vegetation mitigation measures have been considered since Project design and will be applied during all subsequent Project stages. Please see response to TWN-136.
118	TWN-142	15-Sep-16	Tsleil-Waututh Nation	Given the amount of earthquakes that occur on a regular basis, and of all sizes, along the BC Coastal region, we do not find the LSA and RSA for the assessment of Geotechnical Boundaries to be sufficient. There is a high probability of an earthquake occurring outside of the LSA or RSA that would impact the Project area, causing detrimental ecological effects. We would like to see a more realistic LSA and RSA in relation to Geotechnical Boundaries based on BC Coastal ranges of Earthquake effects.	The assessment of potential effects of earthquakes on the project consider seismic events that might occur throughout the region including local events. Existing earthquake data are used to assess seismic hazard, including potential earthquakes associated with the Cascadia Subduction zone.
119	TWN-143	15-Sep-16	Tsleil-Waututh Nation	We find a desktop review and mapping to be insufficient to properly assess terrain stability in the area. Aboriginal groups that frequent that area, including TWN community members, field crews, hunters and other groups that know the land, should be consulted as they can provide data that includes real life experiences of the environment. From our own experience, terrain stability within the RSA is extremely unstable and landslides occur often. Please provide information on how such data gathering will occur.	Field confirmation of desktop terrain mapping will be conducted as per the requirements of the Mines Act Permit Application.
120	TWN-144	15-Sep-16	Tsleil-Waututh Nation	Please provide further rationale and explanation to the pasted text below (page 5-4-28 and 5.4-29) - it states that further studies are required, yet will not be done - if further studies have not occurred, how are you able to state that there is no evidence: " Further investigation and assessment will be required to evaluate the debris flood/debris flow potential and determine if engineering designs are required to mitigate potential risks. There is no evidence for debris flood/debris flows that could potentially impact the Project area. Therefore no further investigations or assessments for debris floods / flows are required and engineering designs are expected to mitigate the potential risk"	It is acknowledged that there is a conflict in the cited text. The lack of evidence for significant, historical debris floods or debris flows in McNab Creek both upstream and downstream of the Project Area indicate that the risk of impacts to the Project Area can be considered low. Proposed geotechnical and natural hazards mitigation, which includes construction of the flood protection dyke, will further reduce the potential for impacts to the Project Area.
121	TWN-145	15-Sep-16	Tsleil-Waututh Nation	We disagree with the assessment that there are no cumulative effects in relation to Earthquakes and Terrain Stability. Within a holistic perspective, we believe that even if there will be a low occurrence or likelihood of an event occurring, it needs to be assessed as the outcome could be devastating.	Based on the ratings for residual effects, none were carried forward into a Cumulative Effects Assessment. Potential residual effects on the geotechnical hazards and terrain stability conditions were considered negligible (and not significant) because (summarized from Vol 2 - Section 5.4.5.5): (1) Mass wasting events such as landslides and avalanches occur within the McNab Creek valley (RSA), however there is no evidence of terrain stability concerns within or adjacent to the LSA. Submarine landslide conditions were deemed not present in the LSA (2) With mitigation measures, site geotechnical conditions will not diverge from baseline conditions; and (3) Anticipated engineering designs and mitigation measures would minimize and manage for potential adverse effects.
122	TWN-146	15-Sep-16	Tsleil-Waututh Nation	Please explain what guarantee, after the Project closure and with the pit lake remaining, there is that baseline level flows will remain in McNab Creek?	The rate of loss of flow from McNab Creek to the groundwater system is proportional to the gradient of the groundwater surface between the creek and the Site. The gradient of the groundwater surface under baseline conditions was monitored using monitoring well data located on the Site. During the construction phase of the project the existing groundwater channel will be blocked, resulting in an increase in the local groundwater levels, a flattening of the groundwater gradient between McNab Creek and the Site and a reduction in the rate of flow from McNab Creek to the groundwater system. During the later phases of the operational phase of the project as the pit lake is expanded in a northern direction the groundwater gradient will start to trend towards the baseline conditions. Throughout the operational phase of the project the owner shall monitor the groundwater gradient and the water levels within the pit lake. These monitored groundwater and pit lake water levels shall be used to refine the analysis of the closure groundwater gradient and pit lake water level. These analysis shall be used to inform the progressive planning of the mine. After closure, if necessary, the groundwater gradient can be altered (varying the rate of loss from McNab Creek) by adjusting the height of the weir at the outlet of the pit lake.
123	TWN-147	15-Sep-16	Tsleil-Waututh Nation	Please provide us with a new version of this appendix as the second page of the letter is cut off and text is missing, making it difficult to assess the information in the letter.	Revised version of this Appendix has been provided with these responses.
124	TWN-148	15-Sep-16	Tsleil-Waututh Nation	TWN would like to know if the documents submitted to BCMOE are available to view? And if not what is the rationale for not disclosing these documents?	The BCMOE approved detailed model plan that summarizes the MOE comments and the agreed solutions has been provided as Appendix 5.7-E.



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125	TWN-149	15-Sep-16	Tsleil-Waututh Nation	We disagree in the calculation of Tugboat Emissions - Tugboat Emissions need to be calculated, using the entire vessel route for shipping. Calculating within the Project area (which as stated before is not sufficient) does not capture the entire cumulative effects of the Project. It states in the Appendix that this calculation is based on conversations with Health Canada - we would like to understand why emissions will only be calculated in such a small area.	Underway shipping emissions have been considered, but not modelled, between the Project and Golden Ears Bridge.  Aggregate material will be shipped from Project to existing processing facilities in Burnaby and Langley. These facilities are currently supplied by: - Polaris Material Corp.'s Orca Quarry at Port McNeil located on northern Vancouver Island, BC; - Jack Cewe Ltd.'s Treat Creek Operations located in Jervis Inlet, BC; and - Construction Aggregates Ltd.'s gravel mine located in Sechelt, BC.  The development of the Project would result a reduction in barge tow distance of up to 280 km between current aggregate sources and processing facilities, thereby improving the environmental impacts.  Furthermore, the BC EAO and CEAA (November 12, 2013) confirmed that the scope of assessment include only shipping activities within Howe Sound.
126	TWN-150	15-Sep-16	Tsleil-Waututh Nation	We would like to see a comprehensive greenhouse gas emissions analysis (upstream and downstream) of the Project.	The federal requirement for quantification of upstream GHG emission sources is limited to oil and gas facilities undergoing federal environmental assessments (Government of Canada. 2016. Canada Gazette Vol. 150 No. 12), therefore this requirement does not apply to the Project.
127	TWN-151	15-Sep-16	Tsleil-Waututh Nation	Looking at climate trends between 1971/1981 to 2010 is insufficient as it does not incorporate 2010 up to current day. Please provide rationale and/or another area where current day baseline conditions are discussed in relation to current goals mandated by the Government of Canada.	According to Environment Canada "Climate Normals and Averages are used to summarize or describe the average climatic conditions of a particular location. At the completion of each decade, Environment Canada updates its Climate Normals for as many locations and as many climatic characteristics as possible." (Government of Canada. 2014. Canadian Climate Normals. Electronic resources. <a href="http://climate.weather.gc.ca/climate_normals/index_e.html">http://climate.weather.gc.ca/climate_normals/index_e.html</a> )  At the time of the assessment the most up-to-date climate normal datasets generated by Environment Canada are for the 1981 to 2010 period. These datasets were used in the assessment.
128	TWN-152	15-Sep-16	Tsleil-Waututh Nation	All resources and regulations that the Government of Canada and Government of BC use in regards to Climate Change should be utilized to assess this VC. For example, Canada participates in the United Nations Framework Convention on Climate Change and is required to "enact policies and measures" to address greenhouse gases; this framework needs to be added, in addition to the Climate Leadership Plan of August 2016 produced by the Government of BC. We also encourage Proponents to utilize easily accessible studies on such topics from the Canadian Council for Policy Alternatives and the C.D. Howe Institute.	Relevant guidelines and reference documents available at the time of preparation of the assessment were used in the GHG and climate change assessment. Most notably these include Incorporating Climate Change Considerations in Environmental Assessment (The Federal-Provincial-Territorial Committee on Climate Change and Environmental Assessment 2003) and guidance on the quantification of GHG emissions provided by the BCMOE.
129	TWN-153	15-Sep-16	Tsleil-Waututh Nation	We would like the Proponent to explain how they understand and define sustainable economic development? In addition, how does this definition fit into Provincial and Federal policies and frameworks within sustainable economic development? Please provide further information.	Section 2.5.2.3 describes the construction and operations practices that comprise BURNCO's sustainable development framework for the Proposed Project.  The Sustainable Economy assessment (Section 6.1) addresses the economic pillar of the Environmental Assessment Office's five pillars. Several valued components and measureable indicators listed in Section 6.1.3.1 form the basis for assessing the Proposed Project's economic effects. These valued components and indicators were selected in conformance with the BC EAO's guidance laid out in the publication entitled "Guideline for the Selection of Valued Components and Assessment of Potential Effects".
130	TWN-154	15-Sep-16	Tsleil-Waututh Nation	This section states: "This contribution to economic development is valued by local governments and communities as it provides opportunities for income and wealth creation and contributes to a community's economic stability." Tsleil-Waututh also values project contributions based on its role in enhancing economic participation and integration of new market entrants and existing business. It would be interesting to understand the dynamics of the Project in respect of market participation and integration measures. Please provide further information and resources used.	Several valued components and measureable indicators listed in Section 6.1.3.1 form the basis for assessing the Proposed Project's economic effects. These valued components and indicators were selected in conformance with the BC EAO's guidance laid out in the publication entitled "Guideline for the Selection of Valued Components and Assessment of Potential Effects". The potential effects of the Proposed Project are presented by four valued components (Labour Market, Regional Economic Development, Local Government Revenue and Real Estate) in Section 6.1.5.
131	TWN-155	15-Sep-16	Tsleil-Waututh Nation	Tsleil-Waututh was not consulted on the development or implementation of the New West Partnership Trade Agreement or Agreement on Internal Trade. These Agreements do not reflect Tsleil-Waututh's principles for economic development in our territory. We will be pursuing appropriate consultation with the Province and Government of Canada on all future trade agreements.	Comment acknowledged. Information is noted as being present. No further information required.
132	TWN-156	15-Sep-16	Tsleil-Waututh Nation	Why is Tsleil-Waututh Nation excluded in mention from the Administrative Boundaries section? Please explain.	The reference in Section 6.1.2.3 (Administrative Boundaries) is to the traditional territory Skwxwú7mesh (Squamish) Nation in which the Project site is located. This section also cites the local government entity (Electoral Area F of the SCR) in which the Project location is situated within.  Project-related shipping activities occur within the consultative boundary of the Tsleil-Waututh Nation. Potential effects on Aboriginal Rights, including current use, are addressed in Part C of the EAC Application/EIS.
133	TWN-157	15-Sep-16	Tsleil-Waututh Nation	In reference to Aboriginal peoples data, this section states: "The extent and quality of this information is limited to the level of participation within and by First Nations communities..." To date, an MOU and capacity funding agreement has not yet been reached between Tsleil-Waututh and the Proponent, which would permit full and comprehensive engagement of our offices in this Projects review going forwards. We are committed to full engagement if the Proponent will enable it.	Comment acknowledged. Discussions between the Tsleil-Waututh and BURNCO are ongoing. Since the EAC Application/EIS was submitted, BURNCO and Tsleil-Waututh Nation have met and agreed to complete a traditional use study for the Project. The study is expected to be completed by December 2016. BURNCO and Tsleil-Waututh will discuss whether it is appropriate to submit the study to EAO and CEAA as an addendum to the EAC Application/EIS.

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134	TWN-158	15-Sep-16	Tsleil-Waututh Nation	Please explain if the Sunshine Coast Regional District was approached for information on real estate conditions? If not, why?	Secondary source information was collected from several organizations, including Sunshine Coast Regional District. A Sunshine Coast Regional representative has participated in this assessment as a member of the assessment's Working Group. Primary information was also collected through an interview with a Gambier Island Local Trustee and communications with a representative of McNab Strata.
135	TWN-159	15-Sep-16	Tsleil-Waututh Nation	Tsleil-Waututh would appreciate a list of the private sector research reports and academic research used in this section. Please provide.	All documents referenced in this report are included in Section 21.0 (References).
136	TWN-160	15-Sep-16	Tsleil-Waututh Nation	It is very likely that the statistics on the Howe Sound Pulp and Paper Mill require updating given recent changes. Please have these updated for the next review stage.	The years in which the data are relevant are provided in Section 6.1. The Howe Sound Pulp and Paper Mill employment cited in the report is current as of 2014. A considerable amount of data is provided in the documents of the EAC Application/EIS.
137	TWN-161	15-Sep-16	Tsleil-Waututh Nation	Reference to non-trade based employment is made in section 6.1.5.2.2, but this section focuses exclusively on trades. What is the rationale for this? Please explain.	Table 2-12 lists the skills required for the operation of the Proposed Project. No labourer requirements are anticipated at this time.  Section 6.1.4.1 provides baseline conditions for the Labour Market VC. Section 6.1.4.2 focuses on the Education and Skill Base baseline, and includes information on a range of industry-related training.  Section 6.1.5.2.1 provides estimated direct, indirect and induced employment effects of the Potential Project. Section 6.1.5.2.2 assesses the Potential Project's anticipated affect on the Regional Economic Development VC, and focuses on new business supply opportunities as measured by incremental business revenues.
138	TWN-162	15-Sep-16	Tsleil-Waututh Nation	Is any business disruption anticipated as a result of this projects construction or operation? What elements were considered in determining this (i.e. BC ferries, Howe Sound recreation / tourism, etc.)? Please provide further information.	Business disruption is not anticipated due to the Project.  Labour market balance was assessed as part of Sustainable Economy Assessment. Based on foreseen labour supply and capacity condition in the LSA, there is expected to be sufficient capacity within the LSA to meet BURNCO's hiring demands.  Potential effects to Outdoor Recreation and Tourism through Project associated changes in the quality of the environmental setting were considered not significant during both construction and operations stages.
139	TWN-163	15-Sep-16	Tsleil-Waututh Nation	Why is the Woodfibre LNG project not considered here in light of cumulative shipping impacts to real estate values? Woodfibre based shipping will transit through Burnco's RSA.	As described in the Application Information Requirements (AIR) document (issued by the BC Environmental Assessment Office on December 16, 2014), the RSA for real estate includes the LSA, the west shore of Howe Sound along Thornbrough Channel and extends across Thornbrough Channel to the northwest portion of Gambier Island. The Woodfibre LNG Project was not included in the cumulative effects assessment of real estate because the activities of this project lie outside of the RSA for real estate in the BURNCO Project assessment. The proposed Woodfibre LNG facility lies several kilometres north of the BURNCO Project site along the west shore of Howe Sound. After leaving the Woodfibre processing facility and loading jetty on the west side of Howe Sound, the proposed shipping route for the Woodfibre LNG Project is on the east side of Howe Sound, i.e. through Montagu Channel and Queen Charlotte Channel. The Woodfibre LNG shipping route is situated several kilometres to the east of the northern areas of Gambier Island, and views to the east from this part of Gambier Island are largely shielded by Anvil Island. The Woodfibre LNG shipping route lies to the east of Anvil Island.  In addition, potential effects on real estate value due to LNG carrier shipping associated with the Woodfibre LNG Project were identified in neither the Application Information Requirements document nor the environmental assessment application for this project. Potential effects on real estate values due to marine shipping associated with this project were not identified in the Woodfibre LNG Project Assessment Report (dated August 19, 2015) that was prepared and issued by the BC Environmental Assessment Office. The BC Ministers of Environment and Natural Gas Development signed an environmental assessment certificate for the Woodfibre LNG Project on October 26, 2015.  Woodfibre LNG projects 80 LNG carrier movements per year (approximate average of 7 per month), which would represent an increase of 1% in larger vessel traffic in Howe Sound.
140	TWN-164	15-Sep-16	Tsleil-Waututh Nation	Even though an assessment on the social indicators of health was not completed due to the conclusion that there are negligible interactions between the proposed Project and community health VCs or sub-components for the general population (which TWN does not agree with), why does the proponent also exclude an assessment on the cultural health of Aboriginal peoples? The adverse cultural health effects from yet another Project in the territory, potentially impacting the marine environment, sacred sites and waters, and disconnecting Aboriginal peoples from their culture is far more cumulative and holistic in scope than an assessment on air, noise, and contaminated foods. TWN expects an assessment on the cultural health of Aboriginal peoples at the very least.	Part C - Aboriginal Information Requirements addresses potential Project related interactions on Aboriginal Rights and Interests, including current use of lands and resources for traditional purposes and intangible cultural heritage which can contribute to cultural health.  The assessment presented in Section C found Project associated changes in access to locations of transmission of Aboriginal culture and history to be negligible during construction and operations stages, and positive at closure.  Also found to be negligible during construction and operations were Project associated changes in quality of experience in connection with the sensory environment and environmental setting at locations of transmission of Aboriginal culture and heritage. At closure, no effects are anticipated in regard to quality of experience in connection with the sensory environment and environmental setting.

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141	TWN-165	15-Sep-16	Tsleil-Waututh Nation	The response provided from the Screening was unclear (TWN-099), as it simply referred back to Sections 9.1.2 and Section C. Please directly respond to the question: Have local Aboriginal policies/guidelines related to health been considered? For example, the BC First Nations Health Authority.	Health Canada considers Aboriginal health within its risk assessment guidance (e.g., wild game consumption rates are published in Health Canada 2012). We are not aware of any local guidelines related to risk assessment and chemical exposure for local Aboriginal populations. The First Nations Health Authority provides guidance on healthy eating and food safety factsheets, so we did not identify guidance that was applicable to health risk assessment. If such guidance is available, please provide Golder with the reference and will review and provide comment.  Health Canada. 2012. Federal Contaminated Sites Risk Assessment in Canada Part I: Guidance on Preliminary Quantitative Risk Assessment (PQRA), Version 2.0. September 2010, Revised 2012. Health Canada, Minister of Health: Ottawa, ON.
142	TWN-166	15-Sep-16	Tsleil-Waututh Nation	The response provided from the Screening, which indicated that human health would be a suitable VC name, is not accurate as this VC does not consider the social, mental or cultural aspects of human health. "Physical human health" is a more accurate name for the VC compared to "human health" or "people", if biophysical is not acceptable to the authors. We would like to see this changed.	As stated previously, 'People' were indicated as the Valued Component (VC) for the human health risk assessment, consistent with the methods described in the AIR. This is typical practice for human health risk assessments conducted in support of Environmental Assessments.  The selection of VCs for the Proposed Project is consistent with the guidance provided by the Province (BC EAO 2013). In addition, the Identified Aboriginal groups were consulted with and involved in VC selection during the development of the AIR/EISg.
143	TWN-167	15-Sep-16	Tsleil-Waututh Nation	The boundaries of both the LSA and RSA for the public health assessment are too limited, particularly to assess water quality, air quality, and country foods, as they relate to physical human health. Please provide a rationale for the determination of the LSA and RSA. Overall, we would like to see the areas increased to better assess impacts.	The boundaries for the LSA and RSA are extensive. The RSA is an 80km by 80km grid centered around the proposed Project. There are no health risks identified with contaminants of potential concern in air or water within the LSA or RSA, so extending the LSA and RSA boundaries would not change the conclusions of the human health risk assessment. The LSA and RSA boundaries are also harmonized with those from the air and water quality teams who provide predictions for use in the human health risk assessment.  We provided the RSA and LSA boundaries to Health Canada for discussion in the problem formulation stage of the assessment and the RSA includes the incorporation of additional receptor locations based on their comments. In addition, the Identified Aboriginal groups were consulted with and involved in development of the AIR/EISg which included a definition of the LSA and RSA for each discipline.
144	TWN-168	15-Sep-16	Tsleil-Waututh Nation	The Assessment indicates that "it was not possible to conduct a quantitative cumulative effects assessment for human health, as there is insufficient information available to conduct water and air quality modelling of other past, present and reasonably foreseeable projects and activities and this modelling has therefore, not been carried out." Please clarify this statement and provide suggestions on how this could be addressed for future assessments. TWN believes that the lack of information is not a good enough reason to not provide proper data. If data for assessing Project effects is required, the Proponent and EAO should ensure it is gathered in all ways possible.	The data are available to assess the Project effects; what is limited is the amount of available quantitative data for future projects (they may not be fully developed yet and/or quantitative information on air or water emissions may not be available). In order to assess the cumulative effects case quantitatively for the purposes of a human health risk assessment, the same level of information as that available for the Project needs to be available for the future projects and this is not always the case.  A qualitative assessment of cumulative effects associated with changes in air quality (effects from water quality were negligible) was made to support the risk assessment cumulative effects assessment by the air quality team. The air quality team indicated that a qualitative assessment of cumulative effects was appropriate in this case as the Project is an aggregate facility that relies heavily on electrical equipment. Emission sources of concern (stockpiles, screens, crushers, etc.) are low lying, emissions of concern are particulate matter and emission releases are not buoyant. As a result, air quality effects (offsite particulate matter concentrations) will be limited to close proximity to the facility (see Figures 5.7-2 to 5.7-6). Since air quality effects are limited to close proximity of the Facility, and because there are not reasonably foreseeable projects in close proximity to the Facility, a qualitative cumulative effects assessment was undertaken.
145	TWN-169	15-Sep-16	Tsleil-Waututh Nation	TWN finds issue with this table and the inclusion of the traditional information. The sections that are listed in the application do not mirror the TEK information, making the TEK information to be irrelevant for the VC Sections. One of the sentences in every box is: "TEK/CK sources available at the time of writing provided no specific information on (VC Section)." We disagree with this statement. If appropriate consultation occurs, the Proponent will be able to engage with Aboriginal groups, such as TWN, and gain the information needed in order to properly assess VC's, in addition to incorporating the information provided during each stage of the EA process. Further, we encourage the Proponent to request a TUS from Aboriginal groups, such as TWN, and consequently apply that information into the VC selection and application. Until an appropriate study and application of that information occurs, we do not agree with this table or the statements. We would like to know how the Proponent is going to attain TUS information from TWN, and apply it to the application. Indeed, we have provided a study scoping document for discussion.	Since the EAC Application/EIS was submitted, BURNCO and Tsleil-Waututh Nation have met and agreed to complete a traditional use study for the Project. The study is expected to be completed by December 2016. BURNCO and Tsleil-Waututh will discuss whether it is appropriate to submit the study to EAO and CEAA as an addendum to the EAC Application/EIS.
146	TWN-170	15-Sep-16	Tsleil-Waututh Nation	TWN disagrees that there will not be any effects, residual or otherwise, to Fisheries, during the Construction, Operations, Closing and post-closure stages. As mandated in our Stewardship Policy (2009) and TWN culture, we believe that the LSA/RSA are insufficient to holistically capture effects. Community members hunt, fish and harvest in the area near and around the Project; therefore, the Project will have an effect on TWN.	Comment acknowledged. The LSA for the assessment on Aboriginal and/or Treaty Rights is the area in which potential Project-related effects are anticipated to occur. The RSA is a broader area that is intended to provide further context for the assessment. The assessment identified potential Project-related effects on the exercise of Tsleil-Waututh Nation's Aboriginal Rights and provides recommendations for mitigation measures to address those potential effects.

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147	TWN-171	15-Sep-16	Tsleil-Waututh Nation	We disagree that even though effects to the transmission of culture and history (access to the Project area from a holistic perspective) will cease, that they are acceptable. TWN discourages any Project effects that will have an impact on TWN culture. Though the Proponent states that there will be beneficial effects at the time of decommissioning, this is from the Perspective of the Proponent and not from Aboriginal Groups, such as TWN that utilize the area for cultural and sacred purposes. The idea that there will be positive effects at the time of decommission clearly outlines that the Project itself will have a negative effect overall. TWN would prefer to see such positive effects occur now, with a purpose to always return our land to the way it was time out of mind, in order to support our right to desired use of our land. From page 11-91: "Changes in access to locations associated with transmission of culture and history: All Proposed Project effects identified in construction and operations are anticipated to cease. Reclamation during decommissioning is anticipated to have beneficial effects on terrestrial resources, which in turn may have a positive effect on harvesting quantities. Positive effects are not carried forward."	<p>BURNCO based the effects assessment on information provided by Aboriginal Groups or from publicly-available sources. As Tsleil-Waututh Nation did not provide specific information on potential Project-related effects on Tsleil-Waututh Nation culture, BURNCO relied on publicly-available information. The information included in the EAC Application/EIS was provided to Tsleil-Waututh Nation for review and comment prior to submission.</p> <p>BURNCO is committed to ongoing consultation with Tsleil-Waututh Nation to better understand their perspectives on potential Project-related effects and to discuss mitigation measures to address those potential effects. BURNCO has proposed the following mitigation measures to address effects on the exercise of Aboriginal Rights by Tsleil-Waututh in addition to those described in Part B of the EAC Application/EIS:</p> <ul style="list-style-type: none"> <li>- Barge movements would occur mostly during weekdays from Monday to Friday, but there may be infrequent movements during weekends depending on the operational requirements of the mine. However, loading of barges during operations would not occur on weekends when peak recreational activity occurs.</li> <li>- As part of the Marine Transportation Management Plan outlined in Volume 3, Part E - Section 16.0, the Proponent would also develop and implement strategies, best management practices and guidelines to avoid and minimize Proposed Project-related disruption of marine-based activities during construction and operations. As part of the development of this plan, the Proponent would consult with Tsleil-Waututh Nation to discuss strategies (including but not limited to routing options) to manage the interaction of Proposed Project vessel traffic with users during times of harvesting or other cultural use.</li> <li>- To address the expected incremental effects on quality of experience for Tsleil-Waututh Nation, the following additional mitigation measures are recommended:</li> <li>- Provide Tsleil-Waututh Nation with opportunities to review and provide input to the Access Management Plan described in Volume 3, Part E - Section 16.0. Based on provisions of the Access Management Plan, develop a communications plan with Tsleil-Waututh Nation to provide Tsleil-Waututh Nation with real-time information on construction and operations activities, including movement of Proposed Project-associated vessels, that may affect quality of experience when using fishing and harvesting locations or locations associated with transmission of culture and history.</li> <li>- Consult with Tsleil-Waututh Nation to identify locations within Howe Sound where members may conduct practices related to intangible culture heritage, timing of such practices, if relevant, and measures that would reduce effects from the Proposed Project on the ability to conduct those practices.</li> </ul>
148	TWN-172	15-Sep-16	Tsleil-Waututh Nation	TWN would like to better understand mitigation plans for areas of concern in regards to fisheries and cultural heritage. It states that mitigation will result in no residual effects, however we do not agree with this statement.	<p>BURNCO requires more information on the specific concerns related to fisheries and cultural heritage to fully respond to this comment.</p> <p>BURNCO is committed to ongoing consultation with Tsleil-Waututh Nation to provide additional information and to discuss potential Project-related effects and potential mitigation measures .</p> <p>BURNCO has proposed the following mitigation measures to address potential Project-related effects on the exercise of Aboriginal Rights by Tsleil-Waututh related to fishing and cultural heritage.</p> <p>To address potential changes in access to freshwater resources, the Proponent proposes:</p> <ul style="list-style-type: none"> <li>- As part of the Marine Transportation Management Plan outlined in Volume 3, Part E - Section 16.0, the Proponent would also develop and implement strategies, best management practices and guidelines to avoid and minimize Proposed Project-related disruption of marine-based activities during construction and operations. As part of the development of this plan, the Proponent would consult with Tsleil-Waututh Nation to discuss strategies (including but not limited to routing options) to manage the interaction of Proposed Project vessel traffic with users during times of harvesting or other cultural use.</li> </ul> <p>To address potential effects on quality of experience related to fishing and using locations associated with the transmission of culture and history, the Proponent recommends:</p> <ul style="list-style-type: none"> <li>- Providing Tsleil-Waututh Nation with opportunities to review and provide input to the Access Management Plan described in Volume 3, Part E - Section 16.0. Based on provisions of the Access Management Plan, develop a communications plan with Tsleil-Waututh Nation to provide Tsleil-Waututh Nation with real-time information on construction and operations activities, including movement of Proposed Project-associated vessels, that may affect quality of experience when using fishing and harvesting locations or locations associated with transmission of culture and history.</li> </ul> <p>To address potential effects on practice of cultural heritage, the Proponent recommends:</p> <ul style="list-style-type: none"> <li>- Consult with Tsleil-Waututh Nation to identify locations within Howe Sound where members may conduct practices related to intangible culture heritage, timing of such practices, if relevant, and measures that would reduce effects from the Proposed Project on the ability to conduct those practices.</li> </ul>
267	MET-002	3-Oct-16	Chris Gall, Métis Nation BC	All Aboriginal people hold inherent, constitutionally protected rights. Further, there is no hierarchy of Aboriginal rights within Section 35. Métis are a distinct Aboriginal peoples with equal but unique Aboriginal rights as other Section 35 Aboriginal peoples. This was highlighted recently in Ministerial Special Representative Thomas Isaac's Report on Métis' Rights.	A summary of the regulatory context for Métis Aboriginal rights is provided in Section 11.1 Regulatory Overview. This section does not present a hierarchy of Aboriginal rights within Section 35.

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268	MET-003	3-Oct-16	Chris Gall, Métis Nation BC	Like other Aboriginal peoples, the Métis existed prior to Canada's inception as a nation. As noted in the EIS, however, the Métis emerged out of relationships between First Nations women and European men. Thus the Métis are a mixed-race people, (but not any mixed-race people) with their own unique government, culture, language, communities and history. The ethnogenesis or birth of the Métis as a distinct people is connected to the fur-trade. As recognized by the Métis National Council, their kinship networks, past and present, span from Ontario in the east to British Columbia in the west.	The EAC Application/EIS presents the following information on Métis Nation BC as it relates to the Project and the Project area:  - Background information in Section 10.1.10 - Regulatory overview of Métis Aboriginal rights in Section 11.1 - Existing conditions in Section 11.4.2.9
269	MET-004	3-Oct-16	Chris Gall, Métis Nation BC	In terms of fish and wildlife issues with respect to the EIS beyond those identified in the original application. We see the proposed channel offsetting as likely to increase fish habitat in a very positive way.	Comment acknowledged.
270	MIB-001	3-Oct-16	Dianne Sparrow, Musqueam Indian Band	Our review of the Application/EIS concludes that the proposed Project would result in a significant increase in the barge traffic throughout Musqueam's territorial waters, including Howe Sound, the Salish Sea and the Fraser River.	In response to Musqueam Indian Bands comments related to potential effects on their current use due to an increase in Project-related barge traffic, BURNCO notes that on October 2, 2013, BURNCO submitted a Marine Shipping Scoping Rationale for the Proposed BURNCO Aggregate Project to CEA Agency. The shipping analysis indicated that the Project would result in an incremental change in tug/barge traffic of: - 92% increase along Ramillies Channel; - 9.6% increase along Thornbrough Channel; - 12.3% increase along Queen Charlotte Channel to south of Passage Island; - 0% net change from south of Passage Island, along the Strait of Georgia, to the North and South Arms of the Fraser River; and - 0% net change along the Fraser River to the load-out facilities in Burnaby and Langley.  Consequently, shipping lanes in the Strait of Georgia and the Fraser River were not included in the spatial boundary for the assessment. As Project-related shipping or barging would not occur in Burrard Inlet, it was also not included in the assessment.
271	MIB-002	3-Oct-16	Dianne Sparrow, Musqueam Indian Band	The Musqueam people exercise their Aboriginal rights, including fishing and other marine activity related rights, in the aforementioned waters.	In response to Musqueam Indian Bands comments related to potential effects on their current use due to an increase in Project-related barge traffic, BURNCO notes that on October 2, 2013, BURNCO submitted a Marine Shipping Scoping Rationale for the Proposed BURNCO Aggregate Project to CEA Agency. The shipping analysis indicated that the Project would result in an incremental change in tug/barge traffic of: - 92% increase along Ramillies Channel; - 9.6% increase along Thornbrough Channel; - 12.3% increase along Queen Charlotte Channel to south of Passage Island; - 0% net change from south of Passage Island, along the Strait of Georgia, to the North and South Arms of the Fraser River; and - 0% net change along the Fraser River to the load-out facilities in Burnaby and Langley.  Consequently, shipping lanes in the Strait of Georgia and the Fraser River were not included in the spatial boundary for the assessment. As Project-related shipping or barging would not occur in Burrard Inlet, it was also not included in the assessment.  In response to Musqueam's comments related to current use, the LSA was selected to include the immediate freshwater and terrestrial footprint of the Project and adjacent areas. These areas are where potential Project-related disturbances could occur during the construction, operation, reclamation and closure phases. The RSA was selected to be larger in scope, encompassing an area broader than the immediate footprint of the Project. RSA boundaries were selected to represent an appropriate scale that provides relevant context for consideration of the Project effects, offer useful and meaningful data, and neither over-emphasizes nor under-emphasizes the scale of the Project effects. The scope of the assessment does not include shipping from where the barges meet the existing shipping lanes in the Strait of Georgia and in the Fraser River or Burrard Inlet.  In response to Musqueam's comments related to the information presented regarding Musqueam's current use of aquatic and marine resources in Howe Sound, the sources relied on for this assessment did not specify the fish and marine values at the locations indicated: - Halibut and cod fishing from the eastern shores of Howe Sound in RSA; - Capelin/smelt caught at low water along beaches of Howe Sound in RSA; - Clam digging in RSA; and - Sea mammal harvesting in RSA.
272	MIB-003	3-Oct-16	Dianne Sparrow, Musqueam Indian Band	The proposed route for barge traffic passes directly through Musqueam's traditional fishing extents in Howe Sound, the Salish Sea and the Fraser River. Given the significant constraints already imposed upon fishing with Musqueam's marine use territories, including existing shipping activities, legacy impacts (i.e., long-lasting effects from past projects and activities), and current fishery conservation restrictions, the increased barge traffic posed by this Project will cumulatively pose an adverse impact on Musqueam's ability to meaningfully exercise constitutionally protected fishing activities recognized in the Sparrow decision.	Please refer to the Proponent's response for MIB-002.

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273	MIB-004	3-Oct-16	Dianne Sparrow, Musqueam Indian Band	The Application/EIS does not accurately characterize Musqueam's rights-based traditional use activities and how these activities will be affected by the increased barge traffic associated with the Project.	Please refer to the Proponent's response for MIB-002.  Several of Musqueam's comments noted concern regarding the information relied upon for the assessment of potential effects from the Project on Musqueam current use and the characterization of Musqueam's rights-based traditional use activities based on that information. As directed by CEA Agency, BURNCO relied on publicly-available sources for the effects assessment, including Musqueam Indian Band's own Musqueam Comprehensive Land Claim: Preliminary Report on Musqueam Land Use and Occupancy and We Are of One Heart and One Mind: A Comprehensive Sustainable Community Development Plan, as well as regulatory documents for other projects in proximity to the Project Area. BURNCO provided Musqueam Indian Band with a preliminary draft of the background information prepared from publicly-available sources to be included in the EAC Application/EIS for review and comment on November 9, 2015. BURNCO also provided Musqueam Indian Band with the draft effects assessment and First Nations Consultation Report for review and comment on January 8, 2016 prior to finalizing the EAC Application/EIS. BURNCO did not receive responses to either request.
274	MIB-005	3-Oct-16	Dianne Sparrow, Musqueam Indian Band	The proposed transport of processed aggregate material by barges to BURNCO's existing facilities in Burnaby or Langley, will pass directly through Musqueam territorial waters at the eastern entrance to Howe Sound, the Salish Sea and the Fraser River, and as such, potentially poses a hazard to Musqueam's recognized and constitutionally protected priority fishing activities that take place in these areas.	Please refer to the Proponent's response for MIB-002.
275	MIB-006	3-Oct-16	Dianne Sparrow, Musqueam Indian Band	This is a sizable increase in vessel movements through Musqueam's fishing areas; such an increase will pose new daily hazards and potential adverse effects to the spaces in Musqueam practices their constitutionally protected rights. Any potential adverse effect on Musqueam's affirmed rights requires the Crown to consult with, and accommodate Musqueam.	Please refer to the Proponent's response for MIB-002.
276	MIB-007a	3-Oct-16	Dianne Sparrow, Musqueam Indian Band	In order for Musqueam to understand the full extent of potential impacts on Musqueam rights and interests, the following critical information gaps on key Project components and activities must be substantiated by the Proponent: a. The quantity and type of waste and fuel that will be transported by barge, including the kind of hazardous waste, if applicable;	a. The quantity of waste expected for the Project that will be transported by barge is currently unknown. Expected waste resulting from the Proposed Project includes industrial waste, domestic waste and sewage effluent. Other hazardous materials expected to be on-site includes fuels and lubricants, paints and solvents, and other chemicals. The quantity of waste expected for the Project is currently unknown. Tugs and barges for the Project will be operated by Seaspan. Seaspan has implemented and maintained an Environmental Management System that conforms to ISO 14001:2004 and includes the following in-house best management practices (BMPs) relevant to the removal of waste from site: - BMP – 01: Hazardous Materials Management - BMP – 02: Waste Management and Recycling - BMP – 03: Spill Prevention and Response - BMP – 04: Site Management and Housekeeping  The BMPs are provided in Volume 4, Part G – Section 22.0: Appendix 16-A of the EAC Application/EIS.
277	MIB-007b	3-Oct-16	Dianne Sparrow, Musqueam Indian Band	b. Details on how these materials will be handled;	b. A Material Storage, Handling and Waste Management Plan will be developed to ensure appropriate collection, storage, transportation and/or disposal of waste and hazardous materials to minimize environmental effects and meet appropriate regulations. Expected waste resulting from the Proposed Project includes industrial waste, domestic waste and sewage effluent. Other hazardous materials expected to be on-site includes fuels and lubricants, paints and solvents, and other chemicals. Wastes will be reduced, re-used and recycled as much as feasibly possible. Additional information on the Plan is provided in Section 16.2.2.3.
278	MIB-007c	3-Oct-16	Dianne Sparrow, Musqueam Indian Band	c. The frequency of barge trips during construction and the routes that these materials will travel, including as it relates to the Salish Sea and the Fraser River;	c. Information on the numbers of Project-related vessels and routes that they would travel during construction is provided in Section 7.2.5.2.1.1.2 Interference with Navigation Use and Navigability due to Project-related Vessel Traffic.
279	MIB-007d	3-Oct-16	Dianne Sparrow, Musqueam Indian Band	d. What measures will be in place to avoid spills, and emergency measures (including securities) to address spills if they were to occur; and	d. A Spill Prevention and Emergency Response Plan (SERP) will be developed and implemented for the Project. The SERP will set measures and controls in place to (i) prevent release of toxic or deleterious substances into the environment as a result of an accidental event and (ii) contain and clean up spills and leaks in cases where a release (accidental event) has occurred. More information on the SERP is provided in Section 16.6.  A Marine Transport Management Plan will also be prepared (see Section 16.2.2.11), which will provide details on safety procedures for vessels calling and loading at the terminal. The Proposed Project's mined aggregate, materials and wastes will be shipped via Seaspan tugs and barges that are operated by highly experienced mariners who are familiar with the navigational routes in Howe Sound and regularly service the forestry industry. Project-related tugs and barges will be required to adhere to regulations for preventing collisions at sea. Seaspan has implemented and maintained an Environmental Management System that conforms to ISO 14001:2004, which includes a Spill Prevention and Response Best Management Plan.

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280	MIB-007e	3-Oct-16	Dianne Sparrow, Musqueam Indian Band	e. The degree of increase in barge traffic on the Fraser River that is presented by the Project.	e. In excluding marine shipping from where the barges meet the existing shipping lanes in the Strait of Georgia and in the Fraser River to BURNCO's existing facilities in Burnaby and Langley, CEAA considered the following analysis of the incremental change in tug/barge traffic of associated with the Proposed Project: <ul style="list-style-type: none"> <li>▪ 0% net change from south of Passage Island, along the Strait of Georgia, to the North and South Arms of the Fraser River; and</li> <li>▪ 0% net change along the Fraser River to the load-out facilities in Burnaby and Langley.</li> </ul>
281	MIB-008	3-Oct-16	Dianne Sparrow, Musqueam Indian Band	The effects of the barging component on Musqueam's rights based activities and Current Use of Lands and Resources for Traditional Purposes (CULRTP) have not been adequately characterized or assessed due to the following gaps: a. Inadequately scoped project that excludes existing barge routes in the Strait of Georgia and Fraser River; and b. Missing information on Musqueam use in the currently defined Local Study Area (LSA) and Regional Study Area (RSA). Once these gaps are filled, effects from barge shipping, and subsequent increase in marine traffic on Musqueam rights and interests will need to be assessed.	Please refer to the Proponent's response for MIB-004.
282	MIB-009	3-Oct-16	Dianne Sparrow, Musqueam Indian Band	Where there are admitted potential effects to Musqueam's rights-based practices, the Proponent inaccurately claims that these practices are limited to the Fraser River (e.g., see Section 11.4.2.3 of the Application/EIS), and subsequently excludes this area from the scope of the assessment. Additional traffic on the Fraser River during fishing seasons is an adverse impact on Musqueam fishing rights.	Please refer to the Proponent's response for MIB-004.
283	MIB-010	3-Oct-16	Dianne Sparrow, Musqueam Indian Band	Where the spatial boundaries of the EA overlap with Musqueam's traditional territory, such as within Howe Sound, Burrard Inlet, and the Salish Sea, the Proponent fails to provide any information regarding our members' use of these areas.	Please refer to the Proponent's response for MIB-004.  In response to Musqueam's comments related to current use, the LSA was selected to include the immediate freshwater and terrestrial footprint of the Project and adjacent areas. These areas are where potential Project-related disturbances could occur during the construction, operation, reclamation and closure phases. The RSA was selected to be larger in scope, encompassing an area broader than the immediate footprint of the Project. RSA boundaries were selected to represent an appropriate scale that provides relevant context for consideration of the Project effects, offer useful and meaningful data, and neither over-emphasizes nor under-emphasizes the scale of the Project effects. The scope of the assessment does not include shipping from where the barges meet the existing shipping lanes in the Strait of Georgia and in the Fraser River or Burrard Inlet.
284	MIB-011	3-Oct-16	Dianne Sparrow, Musqueam Indian Band	The absence of potential interactions between the Project and Musqueam's rights-based practices (in either Part C or under the CULRTP VC) is a notable gap in the assessment that the Agency and EAO must require the Proponent to address. Any sizable increase in barge traffic through Musqueam's territorial waters has the potential to adversely impact Musqueam's rights-based activities. To this effect, Musqueam requests: a. The Proponent be required to provide an assessment of Musqueam current and future rights-based harvesting activities in and around the eastern entrance to Howe Sound and the Salish Sea, subject to direct engagement with Musqueam on information provided herein, and a thorough assessment of effects; b. The EAO's section 11 Order and CEA Agency's scope of review be revised to include the barge traffic in the Strait of Georgia and the Fraser River; and c. The Local and Regional Assessment Areas for CULRTP be expanded accordingly.	Please refer to the Proponent's response for MIB-010.
285	MIB-012	3-Oct-16	Dianne Sparrow, Musqueam Indian Band	Documented fish and marine values for these location include, but are not limited to: <ul style="list-style-type: none"> <li>▪ Herring in Burrard Inlet, part of RSA and adjacent LSA;</li> <li>▪ Halibut and cod fishing from the eastern shores of Howe Sound in RSA;</li> <li>▪ Sturgeon fishing upstream from Burrard Inlet likely in LSA;</li> <li>▪ Capelin/smelt caught at low water along beaches of Howe Sound in RSA;</li> <li>▪ Clam digging in RSA; and</li> <li>▪ Sea mammal harvesting in RSA.</li> </ul>	In response to Musqueam's comments related to the information presented regarding Musqueam's current use of aquatic and marine resources in Howe Sound, the sources relied on for this assessment did not specify the fish and marine values at the locations indicated: - Halibut and cod fishing from the eastern shores of Howe Sound in RSA; - Capelin/smelt caught at low water along beaches of Howe Sound in RSA; - Clam digging in RSA; and - Sea mammal harvesting in RSA.  The Proponent did note in Section 11.4.2.3.1 of the EAC Application/EIS that sources indicated that herring was harvested by Musqueam in Howe Sound; however, no specific locations within Howe Sound were identified. As noted in Section 5.2.4.6, no sensitive fish habitats overlap with the Project Area, including no known spawning sites for key forage fish species, such as herring or capelin.  The potential effects of the Project were assessed for marine resources in Section 5.2 and no significant residual effects are predicted for this VC. The Proponent is of the view that the Project does not have the potential to affect marine resources that are relevant to Musqueam's current use.

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286	MIB-013	3-Oct-16	Dianne Sparrow, Musqueam Indian Band	Documented terrestrial values for the eastern shore of Howe Sound and islands within the Sound include: <ul style="list-style-type: none"> <li>▪ Mountain goat;</li> <li>▪ Camping;</li> <li>▪ Hunting deer; and</li> <li>▪ Gathering medicines - root gathering, berry picking, cedar bark and other trees.</li> </ul>	The Proponent did note in Section 11.4.2.3.2 of the EAC Application/EIS that Musqueam harvested birds on Bowen and Passage islands; however, the sources relied on for this assessment did not provide specific information for Musqueam use of Howe Sound for these terrestrial values, such as species harvested or specific locations. No potential interactions between the Project and terrestrial values were identified on the eastern shore of Bowen and Passage islands; therefore, these areas were not included in the spatial boundaries for the effects assessment for the Terrestrial Wildlife and Vegetation VC. Further, the potential effects of the Project were assessed for terrestrial resources in Section 5.3 and no significant residual effects are predicted for this VC. The Proponent is of the view that the Project does not have the potential to affect terrestrial resources that are relevant to Musqueam's current use.
287	MIB-014	3-Oct-16	Dianne Sparrow, Musqueam Indian Band	Musqueam requests that the Proponent be required to provide the following additional information: <ul style="list-style-type: none"> <li>▪ Traditional use information on current use in Howe Sound and Burrard Inlet is added to the Application/EIS, subject to direct engagement with Musqueam on information provided herein, and a thorough re-assessment of effects is completed; and</li> <li>▪ Assessment of potential effects of accidents and malfunctions on terrestrial use and values on Bowen Island and Passage Island in relation to Musqueam rights, including current use.</li> </ul>	Please refer to the Proponent's response for MIB-004.
288	MIB-015	3-Oct-16	Dianne Sparrow, Musqueam Indian Band	Prior to this EA process proceeding further, we request that CEAA and the EAO provide Musqueam with a plan for consulting with Musqueam regarding the potential adverse effects posed by additional barge traffic on Musqueam's Aboriginal rights throughout Musqueam territory in a manner that includes a meaningful assessment of effects and potential accommodation mechanisms.	Please refer to the Proponent's response for MIB-002.  BURNCO provided Musqueam Indian Band with a preliminary draft of the background information prepared from publicly-available sources to be included in the EAC Application/EIS for review and comment on November 9, 2015. BURNCO also provided Musqueam Indian Band with the draft effects assessment and First Nations Consultation Report for review and comment on January 8, 2016 prior to finalizing the EAC Application/EIS. BURNCO did not receive responses to either request. It is also our understanding that on December 19, 2011, the CEA Agency shared a proposed consultation plan with the Musqueam Indian Band to outline opportunities for consultation for the assessment.
289	CT-005	3-Oct-16	Larry George, Cowichan Tribes	While the majority of project activities will be taking place in Howe Sound, the marine shipping activities will bring increased traffic to the South Arm of the Fraser River, which is within Cowichan Tribes traditional territory and Statement of Intent. This will affect, whether directly or through cumulative impacts, Cowichan Tribes traditional, current and future use in the area.	On October 2, 2013, BURNCO submitted a Marine Shipping Scoping Rationale for the Proposed BURNCO Aggregate Project to CEAA Agency. The shipping analysis indicated that the proposed Project would result in an incremental change in tug/barge traffic of: <ul style="list-style-type: none"> <li>▪ 92% increase along Ramillies Channel;</li> <li>▪ 9.6% increase along Thornbrough Channel;</li> <li>▪ 12.3% increase along Queen Charlotte Channel to south of Passage Island;</li> <li>▪ 0% net change from south of Passage Island, along the Strait of Georgia, to the North and South Arms of the Fraser River; and</li> <li>▪ 0% net change along the Fraser River to the load-out facilities in Burnaby and Langley.</li> </ul> CEA Agency responded to BURNCO's submission on November 12, 2013. CEA Agency updated the scope of the assessment marine shipping for the purposes of the comprehensive study to continue to include barge traffic in Howe Sound, Ramillies Channel, Thornbrough Channel and Queen Charlotte Channel (south of Passage Island). Shipping from where the barges meet the existing shipping lanes in the Strait of Georgia and in the Fraser River to BURNCO's existing facilities in Burnaby and Langley were no longer included for the assessment of marine shipping.
290	CT-006	3-Oct-16	Larry George, Cowichan Tribes	It is of great concern that the cumulative effects of increased industrial activity and of marine shipping in particular are not addressed in any meaningful way.	An assessment of cumulative effects has been undertaken for all VCs where residual effects were identified.  In excluding marine shipping from where the barges meet the existing shipping lanes in the Strait of Georgia and in the Fraser River to BURNCO's existing facilities in Burnaby and Langley, CEAA considered the following analysis of the incremental change in tug/barge traffic of associated with the Proposed Project: <ul style="list-style-type: none"> <li>▪ 0% net change from south of Passage Island, along the Strait of Georgia, to the North and South Arms of the Fraser River; and</li> <li>▪ 0% net change along the Fraser River to the load-out facilities in Burnaby and Langley.</li> </ul>
291	CT-007	3-Oct-16	Larry George, Cowichan Tribes	While we understand the impacts of the Project are being confined within the parameters of the EIS, to the McNab estuary, the nature of environmental assessment should be more holistic.	Comment acknowledged. The scope of the assessment goes beyond McNab Creek and the McNab estuary, and does include the potential effects of Project-related barge traffic in Howe Sound, Ramillies Channel, Thornbrough Channel and Queen Charlotte Channel (south of Passage Island). In excluding marine shipping from where the barges meet the existing shipping lanes in the Strait of Georgia and in the Fraser River to BURNCO's existing facilities in Burnaby and Langley, CEAA considered the following analysis of the incremental change in tug/barge traffic of associated with the Proposed Project: <ul style="list-style-type: none"> <li>▪ 0% net change from south of Passage Island, along the Strait of Georgia, to the North and South Arms of the Fraser River; and</li> <li>▪ 0% net change along the Fraser River to the load-out facilities in Burnaby and Langley.</li> </ul>



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292	CT-008	3-Oct-16	Larry George, Cowichan Tribes	Additionally, we also realize that the issue of marine shipping is delegated to Transport Canada, but there should still be a more in-depth assessment of marine shipping and the cumulative impacts therein, especially as they pertain to Cowichan Tribes territory and rights.	<p>Section 7.2 of the EAC Application/EIS presents a marine transportation assessment, including potential wake effects from the Proposed Project-related vessel traffic on shoreline infrastructure, and potential interference with navigation use and navigability due to Proposed Project-related infrastructure and vessel traffic. In excluding marine shipping from where the barges meet the existing shipping lanes in the Strait of Georgia and in the Fraser River to BURNCO's existing facilities in Burnaby and Langley, CEAA considered the following analysis of the incremental change in tug/barge traffic of associated with the Proposed Project:</p> <ul style="list-style-type: none"> <li>▪ 0% net change from south of Passage Island, along the Strait of Georgia, to the North and South Arms of the Fraser River; and</li> <li>▪ 0% net change along the Fraser River to the load-out facilities in Burnaby and Langley.</li> </ul> <p>There is no potential interaction between potential wake effects and shoreline infrastructure, therefore the nature of this interaction was determined to be negligible. The potential effects of the Proposed Project on navigation use and navigability associated with Project-related infrastructure was determined to be negligible following the implementation of proposed mitigation.</p> <p>Potential effects of the Proposed Project on navigation use and navigability due to Project associated vessel traffic during construction and operations was determined to be not significant as the frequency of small vessels changing direction and speed to move out of the paths of larger vessels is expected to increase only slightly.</p> <p>Proposed Project-related barging may interact with Woodfibre LNG carriers along a small section of the Project's barging route. However, potential interactions between vessels would occur infrequently and potential cumulative residual effects are expected to be not significant following implementation of mitigation measures which include marine transportation management planning involving Canada Coast Guard, Pacific Pilotage Authority, the selected tug operator, BURNCO and other key maritime stakeholders – including Woodfibre LNG – to identify mutually agreeable operating practices.</p> <p>Marine shipping is not a component of the Project. Please see response to comment CT-001.</p>
293	CT-009	3-Oct-16	Larry George, Cowichan Tribes	Please note that in past correspondence between Cowichan Tribes and the BC Environmental Assessment Office (EAO), Cowichan Tribes was determined through a preliminary assessment to be unlikely to notice any significant adverse effects on our indigenous rights from the Project. We responded to this assessment with confusion, as Cowichan Tribes, along with our partners in the Cowichan Nation Alliance (Halalt, Penelakut, and Stz'uminus) had made very clear our strength of claim to aboriginal rights and title on the lower South Arm of the Fraser River.	<p>Comment acknowledged. Section 11.4.2 Existing Conditions summarizes Cowichan Nation Alliance member First Nations' use of the Fraser River, based on publicly available sources.</p> <p>In excluding marine shipping from where the barges meet the existing shipping lanes in the Strait of Georgia and in the Fraser River to BURNCO's existing facilities in Burnaby and Langley, CEAA considered the following analysis of the incremental change in tug/barge traffic of associated with the Proposed Project:</p> <ul style="list-style-type: none"> <li>▪ 0% net change from south of Passage Island, along the Strait of Georgia, to the North and South Arms of the Fraser River; and</li> <li>▪ 0% net change along the Fraser River to the load-out facilities in Burnaby and Langley.</li> </ul>
294	CT-010	3-Oct-16	Larry George, Cowichan Tribes	In an e-mail dated February 9, 2012, we stated our concerns, including "route alternatives, spill contamination, spillage risk and prevention, marine traffic, fisheries and fish habitat, wildlife and wildlife habitat, and air/noise impacts".	<p>BURNCO has no record of the described correspondence dated February 9, 2012. Notwithstanding, each of the stated concerns are addressed in the following sections of the EAC Application/EIS:</p> <ul style="list-style-type: none"> <li>- Route Alternatives - Section 2.8.2.2 Alternative Transportation Options</li> <li>- Spill Contamination/Spillage Risk and Prevention - Section 5.2.5.2.5.4 Marine Resources Accidents and Malfunctions</li> <li>- Marine Traffic - Section 7.2 Marine Transportation</li> <li>- Fisheries and Fish Habitat - Section 5.1 Fisheries and Freshwater Habitat</li> <li>- Wildlife and Wildlife Habitat - Section 5.3 Terrestrial Wildlife and Vegetation</li> <li>- Air Quality - Section 5.7 - Air Quality</li> <li>- Noise - Section 9.2 Noise</li> </ul>
295	CT-011	3-Oct-16	Larry George, Cowichan Tribes	There was an established, year-round village in use by the Cowichan Nation within the South Arm of the Fraser River. This should be reflected in the profile of all Cowichan Nation Alliance members in Volume 3, Part C of the EIS.	<p>The Proponent has included information on the village site of Tl'uq̓tinus in the summaries presented for each Cowichan Nation Alliance member First Nations under Section 11.4.2 Existing Conditions.</p> <p>In excluding marine shipping from where the barges meet the existing shipping lanes in the Strait of Georgia and in the Fraser River to BURNCO's existing facilities in Burnaby and Langley, CEAA considered the following analysis of the incremental change in tug/barge traffic of associated with the Proposed Project:</p> <ul style="list-style-type: none"> <li>▪ 0% net change from south of Passage Island, along the Strait of Georgia, to the North and South Arms of the Fraser River; and</li> <li>▪ 0% net change along the Fraser River to the load-out facilities in Burnaby and Langley.</li> </ul>

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573	TWN-117.1	24-Nov-16	Tsleil-Waututh Nation	Thank you for the comment - we understand what the scope does and does not include, hence our comment that disagrees with the scope. We strongly believe that by not assessing marine shipping on a cumulative level, ensuring the full travel length of the vessel is included, that this project will be approved without fully knowing the environmental impacts, especially Climate Change. We would like to see this included in the assessment.	<p>TWN's comment is acknowledged and documented. Rationale is provided for LSA and RSA boundaries which we consider extensive and suitable for the assessment of the proposed Project. No further revisions are proposed.</p> <p>On October 2, 2013, BURNCO submitted a Marine Shipping Scoping Rationale for the Proposed BURNCO Aggregate Project to CEAA Agency. The shipping analysis indicated that the proposed Project would result in an incremental change in tug/barge traffic of:</p> <ul style="list-style-type: none"> <li>92% increase along Ramillies Channel;</li> <li>9.6% increase along Thornbrough Channel;</li> <li>12.3% increase along Queen Charlotte Channel to south of Passage Island;</li> <li>0% net change from south of Passage Island, along the Strait of Georgia, to the North and South Arms of the Fraser River; and</li> <li>0% net change along the Fraser River to the load-out facilities in Burnaby and Langley.</li> </ul> <p>CEA Agency responded to BURNCO's submission on November 12, 2013. CEA Agency updated the scope of the assessment marine shipping for the purposes of the comprehensive study to continue to include barge traffic in Howe Sound, Ramillies Channel, Thornbrough Channel and Queen Charlotte Channel (south of Passage Island). Shipping from where the barges meet the existing shipping lanes in the Strait of Georgia and in the Fraser River to BURNCO's existing facilities in Burnaby and Langley were no longer included for the assessment of marine shipping.</p> <p>Notwithstanding, Underway shipping emissions have been considered, but not modelled, between the Project and Golden Ears Bridge.</p> <p>Aggregate material will be shipped from Project to existing processing facilities in Burnaby and Langley. The current plants are supplied with aggregate from a combination of the following locations:</p> <ul style="list-style-type: none"> <li>- Polaris Material Corp.'s Orca Quarry at Port McNeil located on northern Vancouver Island, BC;</li> <li>- Jack Cewe Ltd.'s Treat Creek Operations located in Jervis Inlet, BC; and</li> <li>- Construction Aggregates Ltd.'s gravel mine located in Sechelt, BC</li> </ul> <p>Gravel from proposed Project will replace the gravel that is currently transported by barge from these facilities. In addition, the development of the Project would result a reduction in barge transport distance of up to 280 km, thereby reducing the associated environmental impacts (including potential Climate Change effects).</p>
574	TWN-118.1	24-Nov-16	Tsleil-Waututh Nation	If there is baseline information to support human health and wildlife, please explain the following text from 4.1 that regarded our first comment. Please note that we do not include pathway components to be baseline data unless directly collected from humans and/or wildlife as this does not support our belief in the equal importance of both qualitative and quantitative data: "Unlike other components, field data is not used to directly measure existing risks to human and terrestrial wildlife health. Instead, existing risks must be estimated using the same risk assessment approach and methods used to evaluate how the Proposed Project may affect human and terrestrial wildlife health. As such, there is no baseline report for human and terrestrial wildlife health. Baseline data and information from the other disciplines are used in the assessment of human and terrestrial wildlife health."	<p>The risk assessment uses baseline data from multiple discipline teams (air, water, fish etc.) in addition to the soil and vegetation data that were collected specifically to support the human health risk assessment. The sources of baseline data have been provided in the previous response.</p> <p>The baseline data and/or baseline predictions using the baseline data from the various teams are screened for the protection of human health in the problem formulation stage of the risk assessment as part of the process to identify contaminants of potential concern. Risk estimates (e.g., mathematical calculations) for both base case (baseline) and project case are provided in the EA application (Section 9.1) for these contaminants of potential concern, so that the results can be easily compared. The presentation of baseline risk estimates in the EA report is unique to the human health risk assessment because the base case results provide context to the project risks and allow for the incremental comparison which results from the project, which is required by several regulatory agencies.</p>
575	TWN-119.1	24-Nov-16	Tsleil-Waututh Nation	We appreciate that the VC selection is inline with BCEAO requirements, however, we consistently disagree with this particular methodology in regards to BCEAO requirements. TWN strongly urges Proponents to go beyond the requirements, as well as encourages BCEAO to strengthen their requirements.	TWN's comment is acknowledged and documented. VC selection was done in accordance with the relevant guidance and is consistent with EA practice in BC. No further analysis is proposed.
576	TWN-120.1	24-Nov-16	Tsleil-Waututh Nation	Please refer to our response for TWN-117	<p>TWN's comment is acknowledged and documented. In excluding marine shipping from where the barges meet the existing shipping lanes in the Strait of Georgia and in the Fraser River to BURNCO's existing facilities in Burnaby and Langley, BCEAO and CEAA considered the following analysis of the incremental change in tug/barge traffic of associated with the Proposed Project:</p> <ul style="list-style-type: none"> <li>0% net change from south of Passage Island, along the Strait of Georgia, to the North and South Arms of the Fraser River; and</li> <li>0% net change along the Fraser River to the load-out facilities in Burnaby and Langley.</li> </ul>
577	TWN-121.1	24-Nov-16	Tsleil-Waututh Nation	TWN understands your use of mitigation measures to create effective negligible effects; however, this is completely hypothetical, hence are disagreement with the methodology. How can an effect be considered negligible if there is no way to no if the mitigation measure will work? Many, if not most projects produce negative effects and outcomes that were "mitigated" on paper, but unsuccessful in real life once it's too late. TWN focuses on ensuring that these unplanned effects stop occurring in order to improve the conditions of our land, water and resources.	<p>The effectiveness and uncertainty of mitigation measures were also considered as part of the characterization of residual effects. If mitigation measures are known to be effective based on previous experience and widely used mitigation measures, in the industry for example marine mammal monitoring for safety zones and underwater noise monitoring, then the certainty of the measure being effective is considered high. In general, mitigation measures that had higher certainty were evaluated have lower (negligible, not-significant) significance ratings [taking into consideration the other residual effect characteristics (e.g., magnitude, geographic extent etc.)]. This is in line with the current guidance documents provided by the federal and provincial government. In addition, the compliance with mitigation measures will be monitored throughout the Proposed Project. This is achieved through the implementation of the environmental management system. Environmental management during the Proposed Project will include the reporting of all non-compliance events to the relevant regulators and the subsequent development of adaptive management techniques to address these events. This system will also allow for arising issues to be dealt with up front and for plans to be adapted to manage mitigation measures that may not be proving effective as they are currently being used.</p>

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578	TWN-122.1	24-Nov-16	Tsleil-Waututh Nation	TWN does not find the response to be relevant to the comment. We find the "Importance to First Nations Groups" column to be lacking in relation to the items that are marked off as considered important, in addition to the correlation between Climate Change and Stakeholders. Please advise how this table will be revised to show all correlating factors that are important to these respective groups.	Tables 4-2 and Table 4-3 were meant to present a summary of the VCs selected and the rationale for their selection. Additional information regarding the selection of VCs and their importance to stakeholders and First Nations groups may also be provided in the discipline specific sections of the EAC Application/EIS. BURNCO understands the climate change is likely of importance to all stakeholders, including the public and the provincial and federal levels of the Canadian government. Thus, it was selected as a stand-alone VC. If a VC was noted as "-" within the Importance to First Nations Groups column it does not mean that it is not important to First Nations groups, rather those indicated as "Component known to be of interest to First Nations."  The EAC Application/EIS will not be re-issued, however, this information request and our response form part of the formal record of the Technical Working Group's review of the assessment. Review comments provided by First Nations and others during the Application Review - and associated Proponent responses - are being tracked and submitted to the BCEAO and the CEA Agency for their consideration in preparing their assessment reporting.
579	TWN-123.1	24-Nov-16	Tsleil-Waututh Nation	Please see comments above regarding a) using common species and b) regarding hypothetical information to assess potential effects. TWN strongly disagrees with both.	TWN's comment is acknowledged and documented. The project design measures and mitigation measures incorporated into the Project are expected to be effective in avoiding effects on the salmonid species considered as VCs. Because the habitat requirements for the more common salmonid species are generally similar to those of chinook salmon and rainbow trout (clean water, adequate flow, instream cover, benthic invertebrate food supply and suitable substrate) it is expected that potential effects on these species will also be avoided.  The effectiveness and uncertainty of mitigation measures were also considered as part of the characterization of residual effects. If mitigation measures are known to be effective based on previous experience and widely used mitigation measures, in the industry for example marine mammal monitoring for safety zones and underwater noise monitoring, then the certainty of the measure being effective is considered high. In general, mitigation measures that had higher certainty were evaluated have lower (negligible, not-significant) significance ratings [taking into consideration the other residual effect characteristics (e.g., magnitude, geographic extent etc.)]. This is in line with the current guidance documents provided by the federal and provincial government.  In addition, the compliance with mitigation measures will be monitored throughout the Proposed Project. This is achieved through the implementation of the environmental management system. Environmental management during the Proposed Project will include the reporting of all non-compliance events to the relevant regulators and the subsequent development of adaptive management techniques to address these events. This system will also allow for arising issues to be dealt with up front and for plans to be adapted to manage mitigation measures that may not be proving effective as they are currently being used.
580	TWN-144.1	24-Nov-16	Tsleil-Waututh Nation	Thank you - please confirm that the conflicting text will be revised.	The EAC Application/EIS will not be re-issued, however, this information request and our response form part of the formal record of the Technical Working Group's review of the assessment. Therefore, the conflicting text has effectively been corrected through this process.
581	TWN-147.1	24-Nov-16	Tsleil-Waututh Nation	Received from EAO 16 Nov, 2016 - Thank you	No response required.
582	TWN-148.1	24-Nov-16	Tsleil-Waututh Nation	Thank you for this appendix. We have reviewed the report and have follow up questions: 1. Section 3.2 states, "In the conceptual model plan submitted to BCMOE (Golder 2013), it was stated that due to the limited use of diesel combustion equipment, emissions such as SO2 and NO2 will be quantified and their impacts to the surrounding environment will be qualitatively discussed; while the particulate matters emissions, TSP, PM10, and PM2.5 will be assessed using dispersion modelling. However, based on a conversation with Health Canada tugboat exhaust effects will be modelled and assessed at sensitive receptors in the local and regional study areas." Is this tugboat modelling in addition to what was proposed in the conceptual model plan?	1. The initial conceptual model plan (Golder Associates Ltd. 2013. BURNCO McNab Creek Aggregate Project Conceptual Air Dispersion Model Plan, Technical Memorandum Reference No. 1114220046-517-TM-Rev0-4700) did not include assessing NO2 and SO2 emissions from tugboats; however, TSP, PM10 and PM2.5 emissions from tugboats were included. In the final (approved) detailed model plan, NO2 and SO2 emissions from tugs in the vicinity of the Project, including emissions associated with maneuvering were included in the model and assessed at sensitive receptors (the sensitive receptors identified in the human and ecological health risk assessment).
583	TWN-148.10	24-Nov-16	Tsleil-Waututh Nation	10. TWN would find it more useful to combine and expand Table 18 and 19 so that it is easier to compare the MM5 results to the observed data at Port Mellon.	10. TWN's comment is acknowledged and documented, however, no additional updates to the detailed model plan are proposed.
584	TWN-148.11	24-Nov-16	Tsleil-Waututh Nation	11. TWN disagrees with the statement: "... there will be no combustion or cooling tower stack emissions from this Project. Therefore, there will be no concerns for the effect on visibility around the Project site." Particulate matter could potentially have a visual impact, especially for the seasonal residences which are approximately 1 km away. Please explain how concerns for the effect on visibility will be assessed.	11. The text that is being referenced refers specifically to fogging and icing, and the potential of fogging and icing to affect visibility, as indicated by the section heading. There are no expected concerns regarding visibility related to fogging and icing associated with the project because there are no stationary combustion sources or cooling towers associated with the project. Please refer to Chapter 7.4 regarding Project visual resources assessment, which includes consideration of suspended particulates (dust).
585	TWN-148.12	24-Nov-16	Tsleil-Waututh Nation	12. Please better explain this statement: "In addition to comparing MM5 data to observation additional another QA/QC procedure will be undertaken and results will be included in the Environmental Assessment." (section 7.1).	12. The additional quality checks were at the request of the BCMOE. The additional quality checks can be found in Appendix 5.7-B Section 2.2.4.5 and 2.2.4.6.

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586	TWN-148.13	24-Nov-16	Tsleil-Waututh Nation	13. Have there been any additional results or studies since this document? If so, please provide and if not, please indicate when we might expect them.	13. The only additional investigation related to air quality was in response to BCMOE comment MOE-051. BCMOE's comment and BURNCO's response are summarized below:  MOE-051 BCMOE: Section 2.1.3.2 Data Processing: The limited data sets (2 TSP samples and 1 Dustfall sample) are insufficient to determine, with any confidence, representative background metals concentrations and deposition rates. Also, sampling occurred in November when particulate concentrations and any associated metals are likely to be low.  BURNCO: Background metal concentrations using the limited metals data within the National Air Pollution Surveillance (NAPS) dataset was investigated. The updated metal background concentrations were added to model predictions and the application case's concentrations (project plus background) screened through the human health assessment. The updated background metal concentrations and human health screening are presented in 16-Nov-16 Technical Memo entitled BURNCO Aggregate Project: Response to Information Request MOE-051.
587	TWN-148.2	24-Nov-16	Tsleil-Waututh Nation	2. Regional background was to be established using three established air quality monitoring stations. MOE later instructed Golder to use just one of the sites (Langdale elementary) as the baseline. Please provide information as to how and why MOE made that decision. Additionally, only the most recent year's data (2013) was used - TWN recommends running the model for various years to check it is a good representative of the background.	2. The guidance provided by the MOE at the time was that monitoring data from Langdale Elementary was considered to be the most representative of air quality in the vicinity of the Project. However, based on a brief assessment it was found that the use of monitoring data from Langdale Elementary did not necessarily result in the most conservative (highest) background concentrations (Table 8 in Appendix 5.7-E), therefore all three stations were used to determine existing concentrations.
588	TWN-148.3	24-Nov-16	Tsleil-Waututh Nation	3. SO2 and NO2 are not modeled for anything other than tugboat operation. However, there would be SO2 and NO2 emissions from bulldozing, excavating, forklifts, loaders. Please provide a rationale as to why they were not modeled.	3. As discussed in Section 5.7.5.2.1, the use of onsite vehicles will be limited at most to 3 onsite vehicles per year during normal operations. In addition, for 30 days of the year (at a maximum of 14 hours per day) the pit will be expanded and four additional vehicles (one excavator, three rock trucks and one loader) will operate onsite. Due to the limited onsite combustion activities, NO2 and SO2 from onsite vehicles were not modelled. This is consistent with the approach agreed with the Ministry of Environment within the detailed model plan (Section 4.0, Appendix 5.7-E)
589	TWN-148.4	24-Nov-16	Tsleil-Waututh Nation	4. Figure 1 –TWN would like to see the list of source descriptions located to the bottom or side of the figure, rather than on top of the location of the seasonal residences.	4. Requested information is presented in supplemental Figure TWN-148.4
590	TWN-148.5	24-Nov-16	Tsleil-Waututh Nation	5. TWN questions whether 1 hour of use per day of the Tug Boat is an accurate assumption? Please provide further information.	5. Tug boats will bring the barge to the Project dock, and move the loaded barge from the Project. Tug boats will not be idle at the facility. The time it takes to maneuver the barge into the facility has been estimated at 10% of total transport time.
591	TWN-148.6	24-Nov-16	Tsleil-Waututh Nation	6. The report references the BC Air Quality Dispersion Modelling Guidelines, 2008. But there has since been an update (November 2015). Will the model be updated to reflect current guidelines?	6. At the time of the assessment the BCMOE (2008) was the relevant guidance document. No updates to the model or modelling plan is anticipated.
592	TWN-148.7	24-Nov-16	Tsleil-Waututh Nation	7. TSP was calculated from a 24 hour average and the annual average of PM10 – using US EPA procedures. TWN would like to see these calculations - please indicate where we can find them.	7. US EPA 1986. Procedures for Estimating Probability of Nonattainment of a PM10 NAAQS Using Total Suspended Particulate or PM10 Data. Electronic resource last accessed April 24, 2014. <a href="http://nepis.epa.gov/EPA/html/DLwait.htm?url=/Exe/ZyPDF.cgi/2000N9B4.PDF?Dockey=2000N9B4.PDF">http://nepis.epa.gov/EPA/html/DLwait.htm?url=/Exe/ZyPDF.cgi/2000N9B4.PDF?Dockey=2000N9B4.PDF</a>
593	TWN-148.8	24-Nov-16	Tsleil-Waututh Nation	8. Could you please provide a rationale as to why in the CALMET/CALPUFF models you use a 100 by 100m grid? In addition, was a sensitivity analysis completed?	8. Model developer guidance instructs that ideally 10 grid cells should be between major geographic features in order to resolve terrain (Exponent Engineering and Scientific Consulting, 2014. CALPUFF FAQs Answers. Electronic Resource last accessed 5 December 2016. <a href="http://www.src.com/calpuff/FAQ-answers.htm#2.1.4">http://www.src.com/calpuff/FAQ-answers.htm#2.1.4</a> .  McNab valley is approximately 4 km wide at the Project (mouth of the valley), and the mouth of the McNab Valley is about 3 km north of Gambier Island. A grid size of 100 m (0.1 km) will allow for more than 10 grid cells between the major geographic features. Furthermore, 100 m grid spacing is considered fine resolution for long range dispersion models (CALMET/CALPUFF) and the fine grid spacing has been accepted by the MOE in the detailed model plan (Appendix 5.7-E). Therefore, no additional sensitivity assessments were undertaken.
594	TWN-148.9	24-Nov-16	Tsleil-Waututh Nation	9. Please explain the use of the 1:250,000 DEM instead of the BC Guideline's suggested 1:20,000?	9. The 1:250,000 data at the project site has a resolution of about 90 m at the project location. The resolution is better than (less than) the CALMET resolution (100 m). Therefore, the difference between the 1:250,000 and 1:20,000 data when resampled at 100 m is not expected to affect the CALMET terrain resolution.
595	TWN-150.1	24-Nov-16	Tsleil-Waututh Nation	TWN understands this, however, we still believe that a comprehensive GHG emission analysis should occur with every project in regards to current provincial and federal targets.	TWN's comment is acknowledged and documented. The GHG assessment was undertaken using the guidance provided by both the federal and provincial government for an aggregate facility (non oil and gas facility). No further analysis is proposed.
596	TWN-151.1	24-Nov-16	Tsleil-Waututh Nation	As stated in prior comments, as well as above, TWN does not see the lack of data to be a strong enough reason to either not use data, or to use outdated data. It needs to be the responsibility of the Proponent and regulatory body to create the data required to properly assess project effects. We would like to see more current data in this regard.	TWN's comment is acknowledged and documented. Describing existing climate using climate normals ending in 2010 are consistent with guidance from the federal government. No additional analysis is proposed.
597	TWN-152.1	24-Nov-16	Tsleil-Waututh Nation	Some of the mentioned items in our comment are relevant and were available at the time of preparation, such as the UN framework, in addition, we believe that if new information becomes available while the EA process is ongoing is should be accepted and incorporated in order to ensure the least impacts possible. We would like to see the most current (now) policies and documents incorporated into this EA.	TWN's comment is acknowledged and documented. Relevant guidelines and reference documents available at the time of preparation of the assessment were used in the GHG and climate change assessment. No additional updates are proposed.

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598	TWN-153.1	24-Nov-16	Tsleil-Waututh Nation	Section found in 2.5.3.2 - thank you. TWN finds a disconnection between this framework and the Project plans. Especially in regards to Pitt Lake, as the land will not be returned to the state in which it was found. Please explain how this framework is thus being followed?	Section 2.5.2.3 presents a Sustainable Development Framework, and the handling of individual situations on the landscape are guided by this framework. Frameworks of this type do not typically anticipate every situation on the landscape. However, many of the concepts presented in the framework align with the Environmental Management Program and the component plans described in Volume 3, Part E, Section 16 of the EAC Application/EIS. The Reclamation and Effective Closure Plan (see Volume 4, Part G - Section 22: Appendix 4), for example, provides additional information about the various reclamation activities and outcomes within the Project area.
599	TWN-154.1	24-Nov-16	Tsleil-Waututh Nation	The response does not answer our questions or relate to the comment made.	The potential effects of the proposed Project are presented by four valued components (Labour Market, Regional Economic Development, Local Government Revenue and Real Estate) in Section 6.1.5. This section itemizes specific indicators for these valued components and the potential Project effects associated with each, and mitigation and benefits enhancement measures that the Project proponent has committed to implement (See Sec. 6.1.5.3). The benefit enhancement measures include measures to enhance employment of local and First Nations workers and Project procurement of materials, goods and services from local and First Nations owned and operated businesses.
600	TWN-156.1	24-Nov-16	Tsleil-Waututh Nation	This response again, does not answer our question, but re-states the facts to which we were commenting on. Please respond to our question.	TWN's comment is acknowledged and documented. We have reviewed the earlier response provided (see TWN-156) and consider it to be responsive to the original question. Section 6.1.2.3 (Administrative Boundaries) includes reference to the traditional territory of the Skwxwú7mesh (Squamish) Nation as the Project site is located within the traditional territory of the Skwxwú7mesh (Squamish) Nation.
601	TWN-158.1	24-Nov-16	Tsleil-Waututh Nation	Again, we would like our questions answered, rather than being provided additional information that weaves around the actual question.	We have reviewed the earlier response provided (see TWN-158) and consider it to be responsive to the original question. The SCRDR continues to participate on the Technical Working Group and is involved in the review of the EAC Application/EIS.
602	TWN-159.1	24-Nov-16	Tsleil-Waututh Nation	Section 21 is a list of references for the entirety of the report - we would appreciate, as stated, a list for this section in particular.	Section 6.1.3.3.1 of the EAC Application/EIS describes the methods for preparing the baseline conditions of the assessment against which potential project effects are compared. The baseline conditions for each Valued Component are presented in Section 6.1.4. Citations are included that refer to references presented in Section 21. Section 21 is broken into subheadings for each component of the assessment. Reference material for the economic assessment is listed in Section 21.2.3 which beings on page 21-47.
603	TWN-160.1	24-Nov-16	Tsleil-Waututh Nation	We understood the years and that there is a lot of data in the EIS; this is why we flagged this set of data in particular as it's not current, and has changed significantly and therefore, we expect it to be updated.	TWN's comment is acknowledged and documented. A more up to date employment figure for the Howe Sound Pulp and Paper mill will not result in a material change of the understanding of existing conditions such that an alteration of potential Project effects would be considered. No update to the data cited in Section 6.1 is proposed.
604	TWN-161.1	24-Nov-16	Tsleil-Waututh Nation	Our question was not answered, rather we were told what various sections represent. Please answer the question.	TWN's comment is acknowledged and documented. Section 6.1.5.2.2 of the EAC Application/EIS focusses on the anticipated effects on the Regional Economic Development, including on new business supply opportunities as measured by incremental business revenues. Section 6.1.4.1.3, which was the subject of the earlier question (TWN-161), does not focus exclusively on "trades", but rather on local training opportunities that are relevant to the anticipated Project-related jobs as described in Section 2.5.4.
605	TWN-163.1	24-Nov-16	Tsleil-Waututh Nation	TWN strongly encourages this to occur.	<p>We assume this comment is in relation to our 20-Oct-2016 response which stated that "A Technical Memo is being considered to include the Woodfibre LNG Project into the cumulative effects assessment of the real estate values component". On 17-Nov-2016, the following response was submitted to the BCEAO and to the CEA Agency:</p> <p>As described in the Application Information Requirements (AIR) document (issued by the BC Environmental Assessment Office on December 16, 2014), the RSA for real estate includes the LSA, the west shore of Howe Sound along Thornbrough Channel and extends across Thornbrough Channel to the northwest portion of Gambier Island. The Woodfibre LNG Project was not included in the cumulative effects assessment of real estate because the activities of this project lie outside of the RSA for real estate in the BURNCO Project assessment. The proposed Woodfibre LNG facility lies several kilometres north of the BURNCO Project site along the west shore of Howe Sound. After leaving the Woodfibre processing facility and loading jetty on the west side of Howe Sound, the proposed shipping route for the Woodfibre LNG Project is on the east side of Howe Sound, i.e. through Montagu Channel and Queen Charlotte Channel. The Woodfibre LNG shipping route is situated several kilometres to the east of the northern areas of Gambier Island, and views to the east from this part of Gambier Island are largely shielded by Anvil Island. The Woodfibre LNG shipping route lies to the east of Anvil Island.</p> <p>In addition, potential effects on real estate value due to LNG carrier shipping associated with the Woodfibre LNG Project were identified in neither the Application Information Requirements document nor the environmental assessment application for this project. Potential effects on real estate values due to marine shipping associated with this project were not identified in the Woodfibre LNG Project Assessment Report (dated August 19, 2015) that was prepared and issued by the BC Environmental Assessment Office. The BC Ministers of Environment and Natural Gas Development signed an environmental assessment certificate for the Woodfibre LNG Project on October 26, 2015.</p> <p>Woodfibre LNG projects 80 LNG carrier movements per year (approximate average of 7 per month), which would represent an increase of 1% in larger vessel traffic in Howe Sound.</p>

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606	TWN-164.1	24-Nov-16	Tsleil-Waututh Nation	Part C does not constitute an Aboriginal cultural health assessment - we stand by our original comment. In addition, TWN strongly disagrees with the methodology that states project associated changes will be positive at closure in relation to Aboriginal culture and history. We also strongly disagree with this statement in the response: "At closure, no effects are anticipated in regard to quality of experience in connection with the sensory environment and environmental setting." As the Pitt Lake is not planned to be cleaned up and the lands will not return to their original, or improved state, the experience in connection to the environment will significantly change.	TWN's comment is acknowledged and documented. BURNCO agrees that a standalone assessment of Aboriginal cultural health was not included in the scope of the assessment. Part C considers potential effects on the exercise of Aboriginal rights that relate to the transmission of culture and history, which in turn may affect cultural health and wellbeing. No further analysis is proposed.  To further clarify our earlier response, no impacts to surface water quality were identified in Pitt Lake from a human health perspective following closure.
607	TWN-165.1	24-Nov-16	Tsleil-Waututh Nation	To confirm, the First Nations Health Authority was not contacted? And outside of Health Canada gaming consumption data, no Aboriginal policies or guidelines were used? Please explain the rationale for this. To note: FNHA provides much more than healthy eating tips and food safety factsheets, such as the First Nations Regional Health Survey posted on their website. <a href="http://www.fnha.ca/Documents/RHS_Report.pdf">http://www.fnha.ca/Documents/RHS_Report.pdf</a>	Thank you for providing this reference. We have reviewed the document, however it does not include reported consumption rates for country foods or environmental guidelines for water, soil, air, or food items.  Site-specific consumption rates were not available for local First Nations at the time of the assessment. Therefore, the Health Canada fish consumption rates for 'high-consumers' was used to derive screening values for fish tissue. The First Nations Food Nutrition and Environment Study (Chan et al 2010) reports consumption rates for a number of First Nations groups in BC broken down by 'ecozone/culture area'; however, First Nations local to the study area were not represented in the report. The closest regional data are from Pacific Maritime/Subarctic/Northwest Coast and the Pacific Maritime/Plateau ecozones, which included 9 participating First Nations communities in coastal BC. The reported average daily ingestion rates for fish/shellfish consumption (including salmon, halibut, lingcod, mussels, and crab) was 33.8 g/day (96.5 g/day corrected for consumers only) for the Subarctic/Northwest Coast ecozone and 18.9 g/day (67.5 g/day for consumers only). The high-consumer rate reported in Health Canada (2007) is equivalent to the 90th percentile consumption rate of 45 g/day (49 g/day for consumers only) from a Canadian dietary survey. Therefore, use of the Health Canada high-consumer value of 49 g/day (fish and shellfish combined) was considered reasonable for preliminary screening purposes for coastal BC First Nations. It should also be noted that changes in fish/shellfish tissue are not predicted to occur as a result of the project; therefore the fish/shellfish consumption pathway was not retained for the risk assessment.  Health Canada. 2007. Human Health Risk Assessment of Mercury in Fish and Health Benefits of Fish Consumption. Bureau of Chemical Safety. March 2007. Laurie Chan, Olivier Receveur, Harold Schwartz, Amy Ing and Constantine Tikhonov. 2011. First Nations Food, Nutrition, and Environment Study. Results from British Columbia (2008/2009). Prince George: University of Northern British Columbia, 2011.
608	TWN-166.1	24-Nov-16	Tsleil-Waututh Nation	We did have the opportunity to provide comments during the development of the AIR, which is stated several times here in the Proponent Responses. However, we would like to note that as per BC EAO guidelines, comments and questions are allowed and invited at each stage (ie. pre-app, Screening, application Review); these can be recurring comments or new comments. These stages are not static, but fluid with the attempt to make the application and thus the Project better with each stage. Comments at each stage are as equal and important as comments received in previous stages. The lack of mentioning a comment at an earlier stage should in no way deflect from the importance of that comment. We would hope that our comments at each stage are excepted and regarded as ways to inform decision making and improve the project overall.	TWN's comment is acknowledged and documented. We also acknowledge the iterative nature of the assessment process. Notwithstanding, we maintain that 'People' is a suitable VC for the human health risk assessment, consistent with the methods described in the approved EAC Application Information Requirements which guided the assessment. No further revisions are proposed.
609	TWN-167.1	24-Nov-16	Tsleil-Waututh Nation	Our comment still stands.	TWN's comment is acknowledged and documented. Rationale is provided for LSA and RSA boundaries for the public health assessment, which we consider extensive and suitable for the assessment of the proposed Project. No further revisions are proposed.
610	TWN-168.1	24-Nov-16	Tsleil-Waututh Nation	Please provide us with the document(s)/reports that showcase the qualitative assessment used in the absence of quantitative data required for this assessment.	The Air Quality Cumulative Effects Assessment is presented in Section 5.7.5.7 of the EAC Application/EIS.
611	TWN-169.1	24-Nov-16	Tsleil-Waututh Nation	Thank you for the response. We look forward, and expect to work with the Proponent on ways to incorporate the information into the application and Project.	No response required.
612	TWN-172.1	24-Nov-16	Tsleil-Waututh Nation	Thank you for the reponse. We look forward to these future meetings and discussions.	No response required.
613	SN-085	2-Dec-16	Squamish Nation	Confidential Skwxwú7mesh Nation Revisions to BURNCO FN Consultation Report.	Confidential review comments discussed with Skwxwú7mesh Nation and incorporated into revised draft report.

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668	SN-086	15-Dec-16	Ratcliffe & Company representing Squamish Nation	Confidential Skwxwú7mesh Nation Revisions to BURNCO FN Consultation Report.	Confidential review comments discussed with Skwxwú7mesh Nation and incorporated into final report.
669	TWN-173	15-Dec-16	Tsleil-Waututh Nation	TWN will aim to provide comments as early as we can within the first two weeks of January.	Acknowledged. BURNCO is committed to continuing consulting with Tsleil-Waututh Nation in a meaningful way throughout remainder of Application Review and beyond.
670	TWN-174	13-Jan-17	Tsleil-Waututh Nation	<p>TWN has had time now to review the draft report and at this time does not have any further comments. We appreciate the opportunity to review the report and found that our previous comments were well integrated into this new version. We look forward to continued correspondence and communication in regards to the Project as this may not be an exhaustive list of our comments and concerns.</p> <p>In the same email from December 14, we also received your responses to our Round 1 comments (October 20). I am wondering if there will be a Round 2 occurring, or as it seems from the correspondence from EAO re: the suspension, that the next round will move directly to the Draft Assessment Report?</p>	<p>Acknowledged and thank you.</p> <p>In response to your inquiry about BURNCO responses to Round 2 comments, these have been provided to BCEAO and CEA Agency and were also included in Appendix A of the Draft Consultation Report dated December 12 (Application Review ID Nos. 573-612, pages 30-34 of the Appendix).</p> <p>Updated Appendix A resent for information.</p>

end.