APPENDIX 33-A

Proposed Draft Follow-up Program Elements

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Predicted Residual Effect	Follow-Up Program Objective(s)	Summary Description of Potential Follow-up Monitoring Parameters	Proposed Timing			Plan to be Developed in Consultation With	Reporting to
			Pre-Construction (to establish baseline)	Construction	Operation (as necessary)		
Marine Vegetation							
Changes in biofilm assemblage composition during freshet during construction and operation phases	Verify the anticipated change in biofilm assemblage composition. Verify future productivity predictions.	Water salinity monitoring in LAA, in conjunction with biofilm productivity sampling.		•	•	EC/CWS DFO, Aboriginal groups as appropriate.	EC/CWS, DFO
		Biofilm productivity and assemblage composition monitoring: quantify and spatially describe productivity and assemblage composition of biofilm in LAA.		•	•		
		Changes in sediment erosion and deposition patterns: installation of sediment deposition and erosion monitoring devices (e.g., depth of deposition (DoD) rods) at fixed locations on the tidal flats north of Roberts Bank causeway.	•	•	•		
Marine Invertebrates							
Productivity loss for bivalve shellfish, Dungeness crabs, and orange sea pens during construction and operation phases	Verify the anticipated change in marine invertebrate productivity. Verify mitigation effectiveness.	Dungeness crab monitoring in LAA.	•	•	•	EC/CWS, DFO, Aboriginal groups as appropriate.	EC/CWS, DFO
		Orange sea pen monitoring at transplant sites.		•			
		Bivalve monitoring in LAA.		•	•		
Marine Fish							
Productivity loss for forage fish and flatfish during construction and operation phases	Verify the anticipated change in marine fish productivity. Verify mitigation effectiveness.	Forage fish monitoring in LAA.		•	•	DFO, Aboriginal groups as appropriate.	DFO
		Flat fish monitoring in LAA.		•	•		
Marine Mammals							
Change in acoustic environment resulting in behavioural effects or acoustic masking during operation phase	Verify mitigation effectiveness.	Monitoring of marine mammal distribution and abundance in LAA using trained marine mammal observers and underwater hydrophones (or suitable equivalent).	•	•	•	DFO, Aboriginal groups as appropriate.	DFO
		Monitoring of SRKW behaviour in LAA.	•	•	•		
		Monitoring of underwater noise levels in LAA..	•	•	•		

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Coastal Birds							
Productivity loss for diving birds during construction and operation phases	Verify the anticipated change in coastal birds productivity. Verify mitigation effectiveness.	Diving bird surveys to verify diving bird distribution, abundance, and diversity within LAA.		•	•	EC/CWS, Aboriginal groups as appropriate.	EC/CWS
Light							
Change in sky glow and light trespass	Verify the anticipated change in light trespass and sky glow.	Field measurements of sky glow (indicated by sky quality - measured in mag/arcsec2).	•	•	•	EC/CWS, Aboriginal groups as appropriate.	EC/CWS
		Field measurements of light trespass (measured in lux) levels at selected PORs within the LAA.	•	•	•		
Human Health (Noise and Air)							
Health effects related to noise	Verify the anticipated change in noise levels.	Field measurements of day, night, and day-night average noise levels (measured by Ld, Ln, and Ldn).	•	•	•	Metro Vancouver, HC, Aboriginal groups as appropriate.	HC
		Community complaints analysis to identify potential health effects related to noise exposure during construction activities (sleep disturbance, %HA) and to determine the need for additional mitigation.		•	•		
Health effects related to air emissions	Verify the air quality predictions of 'expected conditions'.	Field measurements of PM10 and PM 2.5 at air quality monitoring station T39.	•	•	•		
		Air quality monitoring results analysis to identify potential health effects related to air quality and to determine the need for additional mitigation.		•	•		