

Section 3.3.1 Estuary (Wharf) Survey Summary Tables V3.0.doc
Pulp Mill Project Environmental Monitoring Program



Table 3.3.1 Summary of Baseline Operational Estuary (Wharf) – Sub Programs

Sub Program	Objective	Period	Frequency	Location(s)	Methodology	Parameters	Interpretation & reporting	Other details
Wharf Monitoring	Assess extent, if any, of scouring around pylons and rock retaining walls.	Commence at completion of wharf construction, continuing at discretion of The Director.	6 monthly for 2 years then annually thereafter.	Pylons and rock retaining walls at mill wharf facility.	Underwater inspection by diver at installed reference points. Semi-quantitative assessment of scouring patterns	Photographic records if practicable	Return within 2 months of completion of each survey.	
	Assessment of scouring associated with ship movements	As above	6 monthly for 2 years then annually thereafter.	General area associated with berthing of vessels at mill wharf facility	Underwater inspection by diver Semi-quantitative assessment of scouring patterns	Photographic records if practicable	As above	
	Assessment of release of contaminants from the hulls/props of ships.	As above	Annually	50m grid pattern radiating out to 100m from the wharf.	Benthic sediment samples Samples must only include the top 50 mm of sediment.	Tributyl tin (mg/kg) Cu (mg/kg) Pb (mg/kg) Zn (mg/kg)	As above	
	Assess ecological recovery and continued health of the estuarine areas adjacent to the wharf.	Refer Construction Environmental Monitoring Program for protocols.	Annually	At sites defined in Construction Environmental Monitoring Program – Appendix H.	Various methods associated with:- <ul style="list-style-type: none"> • Intertidal habitat surveys • Dinoflagellate surveys • Intertidal epifauna survey • Sub tidal habitat flora/fauna survey • Benthic infauna survey. 	As defined by Aqueal in the Construction Environmental Monitoring Program – Appendix H, and Aqueal report (2006) titled 'Ecological monitoring program for marine and estuarine habitats during the construction of Gunns Limited proposed pulp mill'.	As above	
	Assess extent of Introduced Marine Pest (IMP) levels in the vicinity of the wharf facility.	As above.	Annually	As required by the Director.	As required by The Director – at a minimum using guidelines for port monitoring developed by NIMPCG	As required by The Director	As above.	The Director to be notified immediately if any previously non-resident taxa are observed.



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