

## Appendix 3 – Surface Water & Leachate Monitoring Program

			Surface Water and Leachate Monitoring Locations		
			SWB	SWC	LD
			Active Tip Face		
			Face		
Parameter	Unit	Trigger Value <sup>6</sup> (SWC)	Frequency		
<b>Field Measurements</b>					
pH	-	6.0 – 8.0 <sup>2</sup>	Quarterly		
Electrical Conductivity (EC)	µs/cm	20 - 250 <sup>2</sup>			
Dissolved Oxygen (DO)	% Saturation	85 - 120 <sup>2</sup>			
Temperature	°C	-			
<b>Major Ions</b>					
Alkalinity (CaCO <sub>3</sub> )	mg/L	-	Quarterly		
Sulfate (SO <sub>4</sub> )		400 <sup>3</sup>			
Chloride (Cl)		-			
Calcium (Ca)		500 <sup>3</sup>			
Sodium (Na)		300 <sup>3</sup>			
Magnesium (Mg)		-			
Potassium (K)		400 <sup>3</sup>			
<b>Nutrients</b>					
Total Nitrogen (TN)	µg/L	200 - 300 <sup>2</sup>	Quarterly		
Total Phosphorus (TP)		-			
Nitrate		-			
Ammonia (NH <sub>4</sub> )		10 <sup>2</sup>			
<b>Metals and Metalloids</b>					
Aluminium (Al)	µg/L	-	Quarterly		
Cadmium (Cd)		0.2 <sup>1</sup>			
Chromium (CrIII)		3.3 <sup>4</sup>			
Chromium (CrVI)		1.0 <sup>1</sup>			
Copper (Cu)		1.4 <sup>1</sup>			
Iron (Fe)		300 <sup>3</sup>			
Lead (Pb)		3.4 <sup>1</sup>			
Manganese (Mn)		1900 <sup>1</sup>			
Nickel (Ni)		11 <sup>1</sup>			
Selenium (Se)		5 <sup>5</sup>			
Zinc (Zn)		8.0 <sup>1</sup>			
<b>Other Leachate Indicators</b>					
Total Organic Carbon (TOC)	mg/L	-	Quarterly		
Total Dissolved Solids (TDS)		-			
Chemical Oxygen Demand (COD)		-			
Biological Oxygen Demand (BOD)		-			
Volatile acids as acetic acid (VFA)		-			

## Appendix 3 – Surface Water & Leachate Monitoring Program

Parameter	Unit	Trigger Value <sup>6</sup> (SWC)	Frequency
<b>Other</b>			
Total Recoverable Hydrocarbons (TRH)	µg/L	-	Annually
Polycyclic Aromatic Hydrocarbons (PAH)		16	
Benzene, toluene, ethylbenzene and xylene and Naphthalene (BTEXN)		950	
Polychlorinated biphenyls (PCB)		-	
PFAS/PFOS (in any form)		-	
<p><b>Key:</b></p> <p><sup>1</sup> – ANZECC default guideline values for toxicants at 95% species protection applying to typical slightly – moderately disturbed systems.</p> <p><sup>2</sup> – ANZECC default guideline values for physical and chemical stressors for tropical Australia for slightly disturbed ecosystems.</p> <p><sup>3</sup> – ANZECC default guidelines for recreational purposes: general chemicals.</p> <p><sup>4</sup> – ANZECC freshwater low reliability trigger value. These figures should only be used as an indicative interim working level.</p> <p><sup>5</sup> – ANZECC default guidelines 99% species protection level recommended for slightly to moderately disturbed systems.</p> <p><sup>6</sup> – Trigger Values to be applied at SWC only.</p> <p><b>Quarterly</b> – nominally January, April, July and October. If not flowing at the time of attempted sampling, further attempts should be made within that quarter to obtain a sample at the same location.</p> <p><b>Annually</b> – nominally February/March, towards the end of the wet season.</p>			