Water Monitoring - Teralba Quarry - 2015 - EPA Point No.4 - Adit Overflow

	Sample No.	111		112		113		114		115		116		
	Dates	January 2015.		Febrary 2015.		March 2015.		April 2015.		May 2015.		June 2015.		
0		Total (Unfiltered)	Dissolved (Filtered)	Total (Unfiltered)	Dissolved (Filtered)	Total (Unfiltered)	Dissolved (Filtered)	Total (Unfiltered)	Dissolved (Filtered)	Total (Unfiltered)	Dissolved (Filtered)	Total (Unfiltered)	Dissolved (Filtered)	Guidelines
Sample	Units													
pH	ph Unit	7.34		7.34		7.35		7.39		7.12		7.15		6.5 to 8.5 units
Conductivity	µS/cm	1840		1820		1850		1900		1460		1770		125 - 2200[b]
TSS	mg/L	11		<5		19		<5		11		<5		<50
Oil & Grease	mg/L	<5		<5		<5		<5		<5		<5		5
Aluminium	mg/L	0.07	<0.01	0.03	<0.01	0.02	<0.01	0.02	<0.01	0.019	0.01	0.06	<0.01	0.2
Ammonia as N	mg/L			0.03		0.02		0.06		0.06		0.01		0.01
Antimony	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA
Arsenic	mg/L	0.001	<0.001	0.001	0.001	<0.001	<0.001	0.011	0.008	<0.001	<0.001	0.001	0.002	0.05
Barium	mg/L	0.034	0.032	0.035	0.033	0.026	0.030	0.034	0.029	0.023	0.022	0.033	0.031	1
Beryllium	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA
Boron	mg/L	0.19	0.15	0.14	0.16	0.18	0.17	0.18	0.18	0.14	0.14	0.17	0.16	1
Cadmium	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.005
Calcium	mg/L			43		40		40			36	45		1000[c]
Chromium	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.05
Cobalt	mg/L	0.001	0.001	0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	1000
Copper	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	1
Iron	mg/L	0.44	<0.05	0.32	0.07	0.41	0.06	0.30	<0.05		<0.05	0.26	0.08	0.3
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.05
Lithium	mg/L	0.044	0.034	0.038	0.038	0.039	0.038	0.042	0.042	0.031	0.033	0.041	0.038	0.075[d]
Magnesium	mg/L			46	46	41	42	50	45	32	38	48	46	NA
Manganese	mg/L	0.263	0.25	0.291	0.277	0.233	0.219	0.229	0.218	0.183	0.189	0.295	0.244	0.1
Mercury	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.001
Molybdenum	mg/L	0.003	0.001	0.004	0.002	0.004	0.002	0.003	0.002	0.003	0.002	0.003	0.002	0.15[c]
Nickel	mg/L	0.005	0.005	0.005	0.005	0.005	0.004	0.004	0.004	0.002	0.003	0.004	0.003	0.1
Phosphorous as P	mg/L	<0.01		0.02		<0.01		<0.01		<0.01		0.02		NA
Potassium	mg/L			8		7					6	8		NA
Selenium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01
Silica as SiO2	mg/L			15.4	13.9	13.9	14.3	14.5	15.4	12.5		14.8	14.4	NA
Silver	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.05
Sulfur as S	mg/L			69	70			58			53		71	NA
Tin	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA
Titanium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NA
Vanadium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.01	0.02	0.01	<0.01	<0.01	NA
Zinc	mg/L	<0.005	<0.005	<0.005	<0.005		0.006	<0.005	<0.005	<0.005	0.014	<0.005	<0.005	NA

Indicates result Indicates results that varied between filtered and unfiltered samples

ND = Not Determined

NA = Not Applicable

[a] Based on ANZECC Guidelines for Fresh and Marine Water Quality - Recreational Water Quality (ANZECC 2000) except where indicated

[b] Based on ANZECC Guidelines slighlly disturbed lowland river ecosystems in south-east Australia (ANZECC 2000)

[c] Based on ANZECC Guidelines for Fresh and Marine Water Quality -Livestock Water Quality (ANZECC 2000)

[d] Based on ANZECC Guidelines for Fresh and Marine Water Quality -Irrigation Water Quality (ANZECC 2000)

Water Monitoring - Teralba Quarry - 2015 - EPA Point No.4 - Adit Overflow

	Sample No.	117		118		119		120		121		122		
	Dates	July 2015.		August 2015.		September 2015.		October 2015.		November 2015.		December 2015.		
		Total (Unfiltered)	Dissolved (Filtered)	Total (Unfiltered)	Dissolved (Filtered)	Total (Unfiltered)	Dissolved (Filtered)	Total (Unfiltered)	Dissolved (Filtered)	Total (Unfiltered)	Dissolved (Filtered)	Total (Unfiltered)	Dissolved (Filtered)	Guidelines
Sample	Units													
pH	ph Unit	7.28		7.23		7.37		7.37		7.03		7.03		6.5 to 8.5 units
Conductivity	µS/cm	1780		2200		2400		2480		2140		2030		125 - 2200[b]
TSS	mg/L	6		<5		<5		<5		12		8		<50
Oil & Grease	mg/L	<5		<5		<5		<5		<5		<5		5
Aluminium	mg/L	0.02	<0.01	0.05	<0.01	0.05	<0.01	0.06	<0.01	0.1	<0.01	0.02	<0.01	0.2
Ammonia as N	mg/L	0.01		0.04				0.03		0.06		0.04		0.01
Antimony	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA
Arsenic	mg/L	0.002	0.001	0.001	<0.001	<0.001	0.001	<0.001	<0.001	0.002	0.003	0.002	0.002	0.05
Barium	mg/L	0.030	0.030	0.031	0.029	0.028	0.026	0.026	0.027	0.033	0.034	0.036	0.036	1
Beryllium	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA
Boron	mg/L	0.17	0.16	0.23	0.21	0.25	0.25	0.2	0.24	0.18	0.18	0.16	0.17	1
Cadmium	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.005
Calcium	mg/L	40		54			54	57			49		59	1000[c]
Chromium	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.022	<0.001	<0.001	<0.001	<0.001	0.05
Cobalt	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.001	<0.001	<0.001	1000
Copper	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	1
Iron	mg/L	0.21	<0.05	0.028	<0.05	0.19	<0.05	0.11	0.11	0.67	0.25	0.29	<0.05	0.3
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.05
Lithium	mg/L	0.042	0.042	0.049	0.043	0.045	0.048	0.041	0.048	0.047	0.048	0.045	0.047	0.075[d]
Magnesium	mg/L	41	39	59	57	68	65	65	65	52	51	47	54	NA
Manganese	mg/L	0.27	0.260	0.25	0.246	0.194	0.184	0.118	0.129	0.367	0.376	0.217	0.212	0.1
Mercury	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.001
Molybdenum	mg/L	0.003	0.002	0.003	0.002	0.002	0.002	0.002	0.002	0.003	0.002	0.003	0.003	0.15[c]
Nickel	mg/L	0.004	0.005	0.005	0.005	0.006	0.005	0.003	0.027	0.005	0.005	0.005	0.006	0.1
Phosphorous as P	mg/L	<0.01				0.01		0.01		0.01		<0.01		NA
Potassium	mg/L	6		10		12		11			8		8	NA
Selenium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01
Silicon as SiO2	mg/L	14.8	15.1	14.0	14.6	14.1	13.8	13.8	14.5	15.8	15.4	15.6	15.3	NA
Silver	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.05
Sulfur as S	mg/L			88			115				84		71	NA
Tin	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA
Titanium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NA
Vanadium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NA
Zinc	mg/L	<0.005	<0.005	<0.005	0.005	<0.005	0.005	<0.005	<0.005	<0.005	<0.005	0.006	0.007	NA

Water Monitoring - Teralba Quarry - 2015 - EPA Point No.5 - Overflow Dam B

	Sample No.			209		210		211		212		213		
	Dates	January 2015.		Febrary 2015.		March 2015.		April 2015.		May 2015.		June 2015.		
0		Total (Unfiltered)	Dissolved (Filtered)	Total (Unfiltered)	Dissolved (Filtered)	Total (Unfiltered)	Dissolved (Filtered)	Total (Unfiltered)	Dissolved (Filtered)	Total (Unfiltered)	Dissolved (Filtered)	Total (Unfiltered)	Dissolved (Filtered)	Guidelines
Sample	Units													
pH	ph Unit	No Discharge		7.73		7.9		7.74		7.44		7.89		6.5 to 8.5 units
Conductivity	µS/cm			839		1130		874		929		1390		125 - 2200[b]
TSS	mg/L			<5		<5		<5		6		<5		<50
Oil & Grease	mg/L			<5		<5		<5		<5		<5		5
Aluminium	mg/L			0.79	<0.01	0.4	0.02	0.78	<0.01	0.48	0.02	0.12	<0.01	0.2
Ammonia as N	mg/L			0.01		<0.01		0.02		0.08		0.02		0.01
Antimony	mg/L			<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.001	NA
Arsenic	mg/L			0.004	0.003	0.002	0.002	0.006	0.004	0.002	0.002	0.001	0.002	0.05
Barium	mg/L			0.033	0.027	0.029	0.027	0.030	0.019	0.032	0.029	0.030	0.028	1
Beryllium	mg/L			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA
Boron	mg/L			0.07	0.07	0.09	0.11	0.07	0.06	0.06	0.06	0.10	0.09	1
Cadmium	mg/L			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.005
Calcium	mg/L			23		24			25		33	36		1000[c]
Chromium	mg/L			0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.05
Cobalt	mg/L			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	1000
Copper	mg/L			0.002	0.002	0.002	0.001	0.002	<0.001	0.002	0.001	0.001	<0.001	1
Iron	mg/L			1.00	<0.05	0.43	0.14	0.88	<0.05	0.71	0.06	0.14	<0.05	0.3
Lead	mg/L			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.05
Lithium	mg/L			0.011	0.011	0.018	0.017	0.012	0.011	0.012	0.012	0.023	0.021	0.075[d]
Magnesium	mg/L			24	25	28	30	31	26	28	32	46	44	NA
Manganese	mg/L			0.110	0.093	0.05	0.029	0.074	0.046	0.209	0.211	0.029	0.019	0.1
Mercury	mg/L			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001			0.001
Molybdenum	mg/L			0.003	0.002	0.004	0.003	0.002	0.002	0.002	0.002	0.003	0.002	0.15[c]
Nickel	mg/L			0.004	0.003	0.006	0.004	0.003	0.002	0.003	0.003	0.004	0.003	0.1
Phosphorous as P	mg/L			0.03		0.02		0.02		0.03		<0.01		NA
Potassium	mg/L			7		7			5		6	8		NA
Selenium	mg/L			<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01
Silica as SiO2	mg/L			22.8	11.7	10.4	8.7	13.9	11.4	14.0	13.1	9.3	7.8	NA
Silver	mg/L			0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.05
Sulfur as S	mg/L			32	34			32	39		42		69	NA
Tin	mg/L			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA
Titanium	mg/L			<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NA
Vanadium	mg/L			<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NA
Zinc	mg/L			0.008	<0.01	<0.01	<0.01	<0.005	<0.005	0.006	0.011	0.012	<0.005	NA

Indicates results that varied between filtered and unfiltered samples

ND = Not Determined

NA = Not Applicable

[a] Based on ANZECC Guidelines for Fresh and Marine Water Quality - Recreational Water Quality (ANZECC 2000) except where indicated

[b] Based on ANZECC Guidelines slightly disturbed lowland river ecosystems in south-east Australia (ANZECC 2000)

[c] Based on ANZECC Guidelines for Fresh and Marine Water Quality -Livestock Water Quality (ANZECC 2000)

[d] Based on ANZECC Guidelines for Fresh and Marine Water Quality -Irrigation Water Quality (ANZECC 2000)

Water Monitoring - Teralba Quarry - 2015 - EPA Point No.5 - Overflow Dam B

	Sample No.	214												
	Dates	July 2015.		August 2015.		September 2015.		October 2015.		November 2015.		December 2015.		
0		Total (Unfiltered)	Dissolved (Filtered)	Total (Unfiltered)	Dissolved (Filtered)	Total (Unfiltered)	Dissolved (Filtered)	Total (Unfiltered)	Dissolved (Filtered)	Total (Unfiltered)	Dissolved (Filtered)	Total (Unfiltered)	Dissolved (Filtered)	Guidelines
Sample	Units													
pH	ph Unit	7.33		No Discharge		No Discharge		No Discharge		No Discharge		No Discharge		6.5 to 8.5 units
Conductivity	µS/cm	1050												125 - 2200[b]
TSS	mg/L	<5												<50
Oil & Grease	mg/L	<5												5
Aluminium	mg/L	0.02	<0.01											0.2
Ammonia as N	mg/L	0.02												0.01
Antimony	mg/L	<0.001	<0.001											NA
Arsenic	mg/L	0.001	<0.001											0.05
Barium	mg/L	0.028	0.025											1
Beryllium	mg/L	<0.001	<0.001											NA
Boron	mg/L	0.10	0.10											1
Cadmium	mg/L	<0.0001	<0.0001											0.005
Calcium	mg/L	30												1000[c]
Chromium	mg/L	<0.001	<0.001											0.05
Cobalt	mg/L	<0.001	<0.001											1000
Copper	mg/L	<0.001	<0.001											1
Iron	mg/L	0.34	0.09											0.3
Lead	mg/L	<0.001	<0.001											0.05
Lithium	mg/L	0.012	0.011											0.075[d]
Magnesium	mg/L	33	30											NA
Manganese	mg/L	0.212	0.188											0.1
Mercury	mg/L	<0.0001	<0.0001											0.001
Molybdenum	mg/L	0.001	0.001											0.15[c]
Nickel	mg/L	0.003	0.002											0.1
Phosphorous as P	mg/L	<0.01												NA
Potassium	mg/L	5												NA
Selenium	mg/L	<0.01	<0.01											0.01
Silica as SiO2	mg/L	19.2	20.4											NA
Silver	mg/L	<0.001	<0.001											0.05
Sulfur as S	mg/L													NA
Tin	mg/L	<0.001	<0.001											NA
Titanium	mg/L	<0.01	<0.01											NA
Vanadium	mg/L	<0.01	<0.01											NA
Zinc	mg/L	<0.005	<0.005											NA

[ ] Indicates results that varied between filtered and unfiltered samples

ND = Not Determined

NA = Not Applicable

[a] Based on ANZECC Guidelines for Fresh and Marine Water Quality - Recreational Water Quality (ANZECC 2000) except where indicated

[b] Based on ANZECC Guidelines slightly disturbed lowland river ecosystems in south-east Australia (ANZECC 2000)

[c] Based on ANZECC Guidelines for Fresh and Marine Water Quality -Livestock Water Quality (ANZECC 2000)

[d] Based on ANZECC Guidelines for Fresh and Marine Water Quality -Irrigation Water Quality (ANZECC 2000)

Date	Metromix Sample No.	pH	Suspended Solids (mg/L)	Comments
Jan-15	**No Water Discharge at EPA Point 6**			
Feb-15	**No Water Discharge at EPA Point 6**			
Mar-15	**No Water Discharge at EPA Point 6**			
Apr-15	**No Water Discharge at EPA Point 6**			
May-15	**No Water Discharge at EPA Point 6**			
Jun-15	**No Water Discharge at EPA Point 6**			
Jul-15	**No Water Discharge at EPA Point 6**			
Aug-15	**No Water Discharge at EPA Point 6**			
Sep-15	**No Water Discharge at EPA Point 6**			
Oct-15	**No Water Discharge at EPA Point 6**			
Nov-15	**No Water Discharge at EPA Point 6**			
Dec-15	**No Water Discharge at EPA Point 6**			

Date	Metromix Sample No.	pH	Suspended Solids (mg/L)	Comments
Jan-15	No Water Discharge at EPA Point 7			
Feb-15	No Water Discharge at EPA Point 7			
Mar-15	No Water Discharge at EPA Point 7			
Apr-15	No Water Discharge at EPA Point 7			
May-15	No Water Discharge at EPA Point 7			
Jun-15	No Water Discharge at EPA Point 7			
Jul-15	No Water Discharge at EPA Point 7			
Aug-15	No Water Discharge at EPA Point 7			
Sep-15	No Water Discharge at EPA Point 7			
Oct-15	No Water Discharge at EPA Point 7			
Nov-15	No Water Discharge at EPA Point 7			
Dec-15	No Water Discharge at EPA Point 7			