Metromix Teralba Quarry Water Quality Monitoring 2013

Metromix Adit (EPA Point 3)

		September		October		November		December		Guidelines
Sample	**Unit**	Total (Unfiltered)	Dissolved (Filtered)	Total (Unfiltered)	Dissolved (Filtered)	Total (Unfiltered)	Dissolved (Filtered)	Total (Unfiltered)	Dissolved (Filtered)	
pH	**ph Unit**	7.7	7.7	7.76	7.76	7.3	7.3	7.1	7.1	**6.5 to 8.5**
Conductivity	**µS/cm**	2180	2180	2410	2410	2210	2210	1890	1890	**1 000 000**
TSS	**mg/L**	<5	<5	<5	<5	<5	<5	26	26	**<50**
Aluminium	**mg/L**	ND	ND	0.04	0.01	0.05	<0.01	0.11	<0.01	**200**
Ammonia as N	**mg/L**	0.03	0.03	ND	ND	<0.01	<0.01	<0.01	<0.01	**10**
Antimony	**mg/L**	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	**NA**
Arsenic	**mg/L**	ND	ND	0.002	0.001	0.001	0.001	0.002	0.001	**50**
Barium	**mg/L**	ND	ND	0.025	0.024	0.029	0.030	0.030	0.029	**1000**
Beryllium	**mg/L**	ND	ND	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	**NA**
Boron	**mg/L**	ND	ND	0.21	0.22	0.23	0.18	0.17	0.17	**1000**
Cadmium	**mg/L**	ND	ND	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	**5**
Calcium	**mg/L**	52	55	60	60	56	53	43	43	**1000[2]**
Chromium	**mg/L**	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	**50**
Cobalt	**mg/L**	ND	ND	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	**1[2]**
Copper	**mg/L**	ND	ND	0.003	0.001	<0.001	<0.001	<0.001	<0.001	**1000**
Iron	**mg/L**	ND	ND	0.06	0.05	0.07	<0.05	0.45	0.13	**300**
Lead	**mg/L**	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	**50**
Lithium	**mg/L**	ND	ND	0.044	0.037	0.042	0.039	0.048	0.045	**-**
Magnesium	**mg/L**	ND	ND	71	74	66	62	46	46	**NA**
Manganese	**mg/L**	ND	ND	0.054	0.038	0.12	0.086	0.303	0.316	**100**
Mercury	**mg/L**	ND	ND	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.001	**1**
Molybdenum	**mg/L**	ND	ND	0.003	0.002	0.002	0.002	0.003	0.003	**0.15[2]**
Nickel	**mg/L**	0.006	0.006	0.005	0.004	0.004	0.005	0.004	0.004	**100**
Phosphorous as P	**mg/L**	<0.01	<0.01	ND	ND	<0.01	<0.01	<0.01	<0.01	**NA**
Potassium	**mg/L**	9	9	11	9	10	8	7	6	**NA**
Selenium	**mg/L**	<0.01	<0.01	0.02	0.01	<0.01	<0.01	<0.01	<0.01	**10**
Silicon as SiO2	**mg/L**	14.1	14.3	14.4	14.8	15.3	14.7	14.5	14.2	**NA**
Silver	**mg/L**	<0.001	0.001	0.001	0.001	<0.001	0.001	<0.001	<0.001	**50**
Sulfur as S	**mg/L**	82	85	101	113	94	79	65	68	**NA**
Sulfate as SO4 2-	**mg/L**	247	256	ND	ND					**1000[2]**
Tin	**mg/L**	<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	**NA**
Vanadium	**mg/L**	<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	**5000**

Indicates results that varied between filtered and unfiltered samples

ND = Not Determined

Metromix Teralba Quarry Water Monitoring 2013
EPA No. 4

		September		October		November		December		Guidelines
Sample	Unit	Total (Unfiltered)	Dissolved (Filtered)	Total (Unfiltered)	Dissolved (Filtered)	Total (Unfiltered)	Dissolved (Filtered)	Total (Unfiltered)	Dissolved (Filtered)	
pH	ph Unit					8.0	8.0	7.7	7.7	6.5 to 8.5
Conductivity	µS/cm	NO DISCHARGE		NO DISCHARGE		1600	1600	1660	1660	1 000 000
TSS	mg/L					25	25	6	6	<50
Aluminium	mg/L					0.67	0.02	0.10	<0.01	200
Ammonia as N	mg/L					<0.01	<0.01	<0.01	<0.01	10
Antimony	mg/L					0.002	0.002	0.001	0.002	NA
Arsenic	mg/L					0.006	0.005	0.004	0.005	50
Barium	mg/L					0.027	0.023	0.034	0.032	1000
Beryllium	mg/L					<0.001	<0.001	<0.001	<0.001	NA
Boron	mg/L					0.15	0.10	0.13	0.12	1000
Cadmium	mg/L					<0.0001	<0.0001	<0.0001	<0.0001	5
Calcium	mg/L					33	27	35	34	1000[2]
Chromium	mg/L					<0.001	<0.001	<0.001	<0.001	50
Cobalt	mg/L					0.001	<0.001	<0.001	<0.001	1[2]
Copper	mg/L					0.002	<0.001	0.002	0.001	1000
Iron	mg/L					0.76	<0.05	0.21	0.06	300
Lead	mg/L					<0.001	<0.001	<0.001	<0.001	50
Lithium	mg/L					0.026	0.026	0.031	0.028	-
Magnesium	mg/L					47	41	45	46	NA
Manganese	mg/L					0.079	<0.001	0.184	0.151	100
Mercury	mg/L					<0.001	<0.001	<0.001	<0.001	1
Molybdenum	mg/L					0.009	0.009	0.006	0.006	0.15[2]
Nickel	mg/L					0.008	0.006	0.004	0.004	100
Phosphorous as P	mg/L					<0.01	<0.01	<0.01	<0.01	NA
Potassium	mg/L					10	10	8	7	NA
Selenium	mg/L					<0.01	<0.01	<0.01	<0.01	10
Silicon as SiO2	mg/L					10.1	6.5	8.6	8.2	NA
Silver	mg/L					<0.001	<0.001	<0.001	<0.001	50
Sulfur as S	mg/L					76	71	60	68	NA
Sulfate as SO4 2-	mg/L									1000[2]
Tin	mg/L					<0.001	<0.001	<0.001	<0.001	NA
Titanium	mg/L					0.01	<0.01	<0.01	<0.01	NA
Vanadium	mg/L					<0.01	<0.01	<0.01	<0.01	NA
Zinc	mg/L					<0.005	<0.005	<0.005	<0.005	5000

Indicates results that varied between filtered and unfiltered samples

ND = Not Determined

Metromix Teralba Quarry Water Quality Monitoring

EPA Point 4 - Daily Discharge

Date	Metromix Sample No.	pH	Suspended Solids (mg/L)	Comments
Sep-13	**No Water Discharge at EPA Point 4**			
Oct-13	**No Water Discharge at EPA Point 4**			
13/11/2013.	EPA No. 4 - 1A	8.0	25	First Flow from Dam B in 3 months
14/11/2013.	EPA No. 4 - 2A	7.6	6	
15/11/2013.	EPA No. 4 - 3A	7.6	<5	
18/11/2013.	EPA No. 4 - 4A	7.2	293	Rainfall Event - 132 mm - Water from Dam D went over spillway
19/11/2013.	EPA No. 4 - 5A	7.2	228	Rainfall Event - 29mm - Water from Dam D went over spillway
25/11/2013.	EPA No. 4 - 6A	7.3	6	
26/11/2013.	EPA No. 4 - 7A	7.3	9	
27/11/2013.	EPA No. 4 - 8A	7.4	14	
28/11/2013.	EPA No. 4 - 9A	7.4	7	
29/11/2013.	EPA No. 4 - 10A	7.3	6	
3/12/2013.	EPA No. 4 - 11A	7.3	9	