

SIA sampling results for two sites sampled November 2 2016

Parameter	Units	Weir	SW-1	Water Quality Guidelines (approved and working) for the Protection of Aquatic Life WEIR HARDNESS		Water Quality Guidelines (approved and working) for the Protection of Aquatic Life BACKGROUND HARDNESS	
				Chronic	Acute	Chronic	Acute
EMS Site Number							
Sample Date		02-Nov-16	02-Nov-16	Chronic	Acute	Chronic	Acute
Depth / Duplicate							
Conductivity	µS/cm	518	591				
Turbidity	NTU	37.1	12.8				Change of 5
Total Suspended Solids	mg/L	21	6	25**		Change of 5	Change of 25
Hardness - Total	mg/L	169	212				
Anions							
Chloride -Dissolved	mg/L	64.1	65.3	150	600	150	600
Sulphate	mg/L	96.3	126	218		218	
Total Metals							
Aluminum	µg/L	1620	342				
Antimony	µg/L	0.4	0.5		20		20
Arsenic	µg/L	0.5	<0.5		5		5
Barium	µg/L	20	19	1000	5000	1000	5000
Beryllium	µg/L	<0.1	<0.1	5.3		5.3	
Bismuth	µg/L	<0.1	<0.1				
Boron	µg/L	36	36		1200		1200
Cadmium	µg/L	0.02	0.01				
Calcium	mg/L	54.7	68.1				
Chromium	µg/L	<1	<1		1		1
Cobalt	µg/L	1.05	0.48	4	110	4	110
Copper*	µg/L	4.9	2.5	7	18	2	7
Iron	µg/L	1970	390		1000		1000
Lead*	µg/L	1	0.3	10	159	4.6	33.5
Magnesium	mg/L	10.2	11.7				
Manganese*	µg/L	43.4	36.3	1349	2402	800	1100
Molybdenum	µg/L	0.9	1.4	1000	2000	1000	2000

Parameter	Units	Weir	SW-1	Water Quality Guidelines (approved and working) for the Protection of Aquatic Life WEIR HARDNESS		Water Quality Guidelines (approved and working) for the Protection of Aquatic Life BACKGROUND HARDNESS	
Nickel*	µg/L	3.4	1.3		142		25
Phosphorus	µg/L	70	50				
Potassium	mg/L	1.93	2.01		373		373
Selenium	µg/L	<0.5	<0.5	2		2	
Silicon	µg/L	5300	4400				
Silver*	µg/L	<0.05	<0.05	3	1.5	0.05	0.1
Sodium	mg/L	37.5	36.2				
Strontium	µg/L	201	231				
Sulfur	mg/L	31	40				
Thallium	µg/L	<0.02	<0.02		0.3		0.3
Tin	µg/L	0.2	<0.2				
Titanium	µg/L	83	15		2000		2000
Uranium	µg/L	0.62	0.86		300		300
Vanadium	µg/L	6	2		6		6
Zinc*	µg/L	7	<4	67	92	7.5	33
Dissolved Metals							
Aluminum	µg/L	21	11	50	100	50	100
Antimony	µg/L	0.3	0.2				
Arsenic	µg/L	<0.5	<0.5				
Barium	µg/L	12	17				
Beryllium	µg/L	<0.1	<0.1				
Bismuth	µg/L	<0.1	<0.1				
Boron	µg/L	22	27				
Cadmium*	µg/L	0.04	0.02	0.31	1.01	0.06	0.09
Calcium	mg/L	52.3	65.9				
Chromium	µg/L	<0.5	<0.5				
Cobalt	µg/L	0.14	0.13				
Copper	µg/L	0.9	1.3				
Iron	µg/L	11	<10		350		350

Parameter	Units	Weir	SW-1	Water Quality Guidelines (approved and working) for the Protection of Aquatic Life WEIR HARDNESS		Water Quality Guidelines (approved and working) for the Protection of Aquatic Life BACKGROUND HARDNESS	
Lead	µg/L	<0.1	<0.1				
Magnesium	mg/L	9.34	11.6				
Manganese	µg/L	17.1	14.4				
Molybdenum	µg/L	0.8	1.4				
Nickel	µg/L	1	0.8				
Phosphorus	µg/L	<20	<20				
Potassium	mg/L	1.7	1.93				
Selenium	µg/L	<0.5	<0.5				
Silicon	µg/L	2900	4000				
Silver	µg/L	<0.05	<0.05				
Sodium	mg/L	36.3	35.6				
Strontium	µg/L	188	226				
Sulfur	mg/L	30	38				
Thallium	µg/L	<0.02	<0.02				
Tin	µg/L	<0.2	<0.2				
Titanium	µg/L	<5	<5				
Uranium	µg/L	0.55	0.86				
Vanadium	µg/L	<1	<1				
Zinc	µg/L	17	6				

*Hardness dependent WQG

Water Quality Guideline exceedance

Detection Limits are above WQGs

Requires background hardness

Permit exceedance

** this is a permit limit requirement