

SIA sampling results for two sites sampled November 5 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		05-Nov-16	05-Nov-16	Chronic	Acute	Chronic	Acute
Depth / Duplicate							
Conductivity	µS/cm	393	518				
Turbidity	NTU	82.4	19.6				Change of 5
Total Suspended Solids	mg/L	63	20	25**		Change of 5	Change of 25
Hardness - Total	mg/L	126	186				
<b>Anions</b>							
Chloride -Dissolved	mg/L	0.37	47.3	150	600	150	600
Sulphate	mg/L	2.2	92.6	218		218	
<b>Total Metals</b>							
Aluminum	µg/L	5680	1520				
Antimony	µg/L	0.3	0.3		20		20
Arsenic	µg/L	1.3	<0.5		5		5
Barium	µg/L	35	22	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	26	30		1200		1200
Cadmium	µg/L	0.03	0.01				
Calcium	mg/L	42	58.5				
Chromium	µg/L	<1	<1		1		1
Cobalt	µg/L	3.02	0.86	4	110	4	110
Copper*	µg/L	12.1	4.6	5	14	2	7
Iron	µg/L	6340	1610		1000		1000
Lead*	µg/L	3.1	0.8	8	110	4.6	33.5
Magnesium	mg/L	8.49	10.4				
Manganese*	µg/L	116	34.4	1159	1929	800	1100
Molybdenum	µg/L	0.7	1.1	1000	2000	1000	2000

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Nickel*	µg/L	9.1	2.8		114		25
Phosphorus	µg/L	100	<20				
Potassium	mg/L	1.82	1.78		373		373
Selenium	µg/L	<0.5	<0.5	2		2	
Silicon	µg/L	11300	6600				
Silver*	µg/L	<0.05	<0.05	3	1.5	0.05	0.1
Sodium	mg/L	26	28.7				
Strontium	µg/L	161	216				
Sulfur	mg/L	25	35				
Thallium	µg/L	0.02	<0.02		0.3		0.3
Tin	µg/L	0.3	0.2				
Titanium	µg/L	280	83		2000		2000
Uranium	µg/L	0.55	0.68		300		300
Vanadium	µg/L	16	5		6		6
Zinc*	µg/L	18	6	35	60	7.5	33
<b>Dissolved Metals</b>							
Aluminum	µg/L	15	7	50	100	50	100
Antimony	µg/L	0.3	0.3				
Arsenic	µg/L	<0.5	<0.5				
Barium	µg/L	9	14				
Beryllium	µg/L	<0.1	<0.1				
Bismuth	µg/L	<0.1	<0.1				
Boron	µg/L	19	26				
Cadmium*	µg/L	<0.01	<0.01	0.25	0.75	0.06	0.09
Calcium	mg/L	39.5	58.3				
Chromium	µg/L	1	0.9				
Cobalt	µg/L	0.13	0.1				
Copper	µg/L	0.6	1.1				
Iron	µg/L	<10	<10		350		350

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Lead	µg/L	<0.1	<0.1				
Magnesium	mg/L	6.69	9.85				
Manganese	µg/L	9.1	6.4				
Molybdenum	µg/L	0.6	1.2				
Nickel	µg/L	1	0.8				
Phosphorus	µg/L	<20	<20				
Potassium	mg/L	1.27	1.61				
Selenium	µg/L	<0.5	<0.5				
Silicon	µg/L	2500	4200				
Silver	µg/L	<0.05	<0.05				
Sodium	mg/L	25.6	28.2				
Strontium	µg/L	151	210				
Sulfur	mg/L	25	36				
Thallium	µg/L	<0.02	<0.03				
Tin	µg/L	<0.2	<0.2				
Titanium	µg/L	<5	<5				
Uranium	µg/L	0.4					
Vanadium	µg/L	<1	<1				
Zinc	µg/L	<4	<4				

\*Hardness dependent WQG

Water Quality Guideline exceedance

Detection Limits are above WQGs

Requires background hardness

Permit exceedance

\*\* this is a permit limit requirement