242 MINING AREA –WATER QUALITY ASSESSMENT FOLLOWING RECLAMATION

QUINSAM COAL

April 2018

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Operations/Water Management

Mining commenced at 242 Mine in July 1996 and operations were suspended in November 1996, due to permit issuance delays. This area was developed as an underground room and pillar mining operation; accessing the number 4 coal seam reserves (4-Seam), approximately 5km southwest of the 2-North mining area. Although plans were made to return to this operation, it was not accessed again due to difficult mining conditions.

The 4-Seam is hosted in the Dunsmuir member and is confined between layers of sandstone. This sandstone is known to be arsenic bearing and is a common parameter of interest (POI) in this sedimentary stratum. In addition to arsenic, sulphate and iron are other POIs that are typically associated with coal seams.

There were numerous water management structures designed for this operation as dewatering of this mine (via underground sumps) was necessary to access the coal seam and maintain operations. The main POI for underground sump(s) was total suspended solids (TSS) as capacity of these sumps were very limited with highly variable inflows. Sump waters were brought to surface as needed via intermittent pumping systems to a primary settling pond (Settling Pond #1) later know as the 242 Portal Sump with a capacity of 2,300m^3. Excess waters from this primary pond were pumped with an automated pumping system to a secondary pond (Settling Pond #2) for further settling. Discharges from this secondary pond overflowed into a polishing pond and were released to the land via an intermittent creek bed that often seeped into the ground before reaching the Iron River. Figure 1 below displays the historic water management system when mining operations were active.

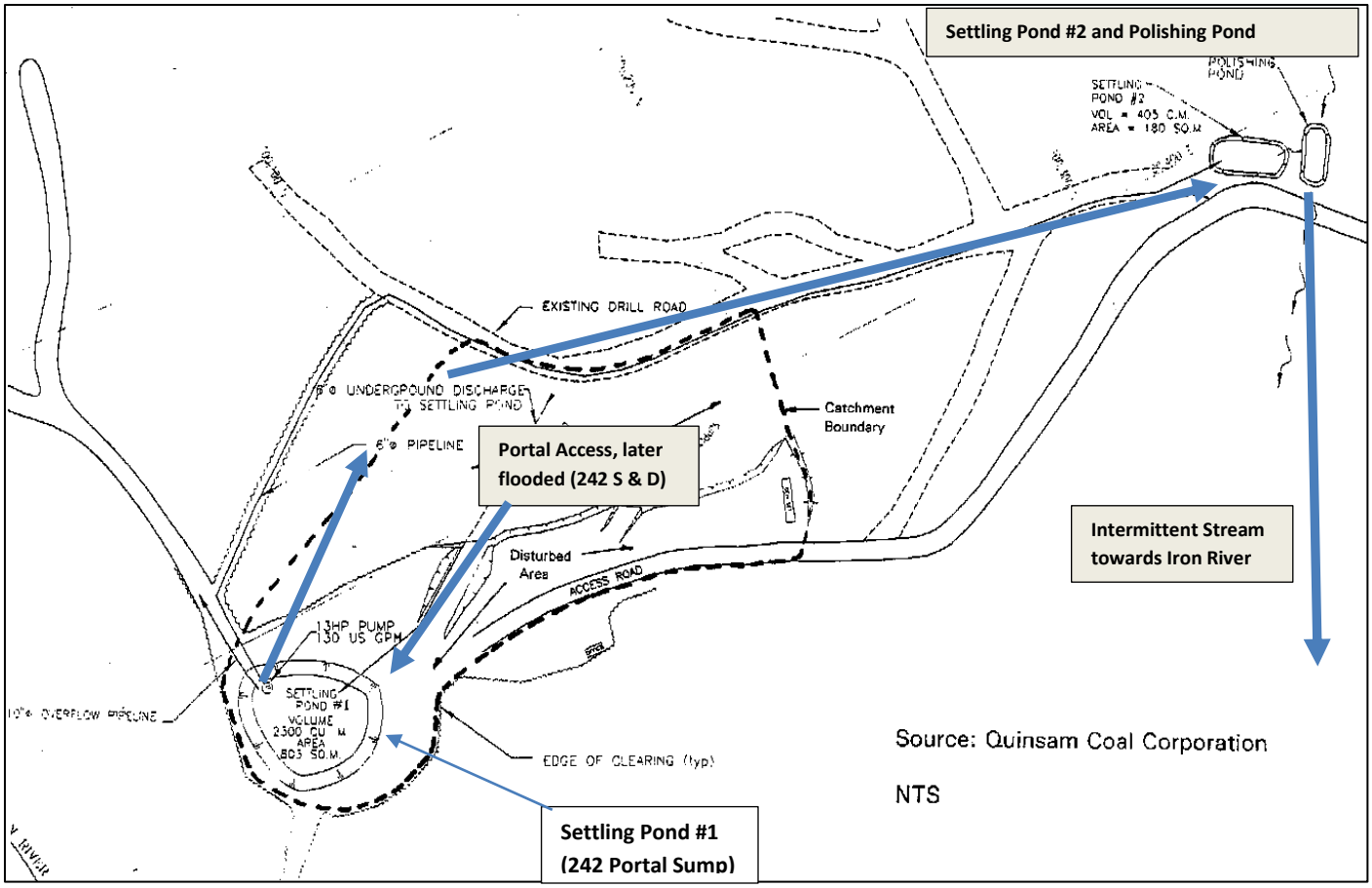

Figure 1: 242 Water Management System

Water Quality

Some historic water quality data has been recovered for the portal sump (interchangeable with Settling Pond #1), polishing pond and sites upstream and downstream of the discharge point into the Iron River sampled throughout mining operations in 1996. Historical data is quite limited due to the short duration of mining and sampling along with dated laboratory techniques where detection limits were set higher than present water quality guidelines; therefore, comparisons are not appropriate. Additional samples have been taken in recent years at various locations in and around 242 and have been used for comparison to historic data. While TSS was a main POI during operations, its relative short-term effects and residence times are not useful for evaluating any chronic impacts on the receiving environment. Sulphate has been a useful parameter to use as reference for mining impacts as it is often found in abundant concentrations and reliable laboratory detection limits with little change in analytical techniques over the years.

During operations, underground water was pumped into Settling Pond #1. There was a coal pad that remained after operations ceased with remanence of raw coal left on the pad. As displayed in Figure 2, sulphate concentrations in Settling Pond #1 have been found in notable concentrations but always below

current WQG. A sample taken in March 2017 exhibits a markedly lower concentration of sulphate when compared to past results. This is most likely due to the removal of the raw coal pad and reclamation work performed on site. Additional sampling will provide more clarity on the effects reclamation has had on Settling Pond #1.

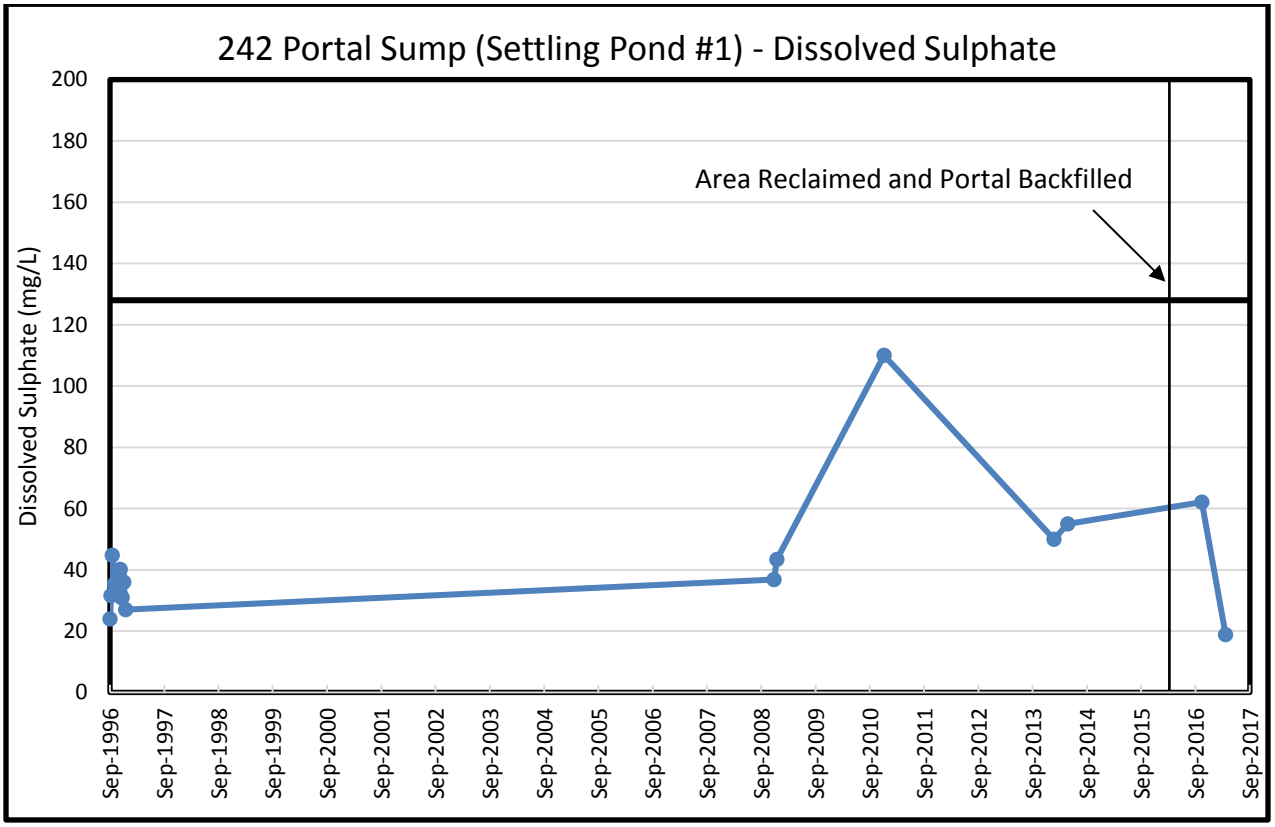

Figure 2: Settling Pond #1 - Dissolved Sulphate

Table 1: Groundwater Quality Results in 242 and Vicinity

Groundwater Quality Results						
All results displayed in mg/L		**As-D**	**As-T**	**Fe-D**	**Fe-T**	**SO4-D**
CSR Guideline		**0.05**				**1000**
242 Flooded Portal Deep Sample	29-Apr-14	0.00081	0.148	<0.0050	7.29	76.9
242 Flooded Portal Deep Sample	11-Aug-14	0.00245		<0.010		60.1
242 Flooded Portal Deep Sample	08-Oct-14	0.00242	0.0146	<0.0050	0.654	63.1
242 Flooded Portal Deep Sample	26-Nov-14	0.00077	0.00090	<0.0050	0.011	61.4
242 Flooded Portal Deep Sample	17-Dec-14	0.00076	0.00711	0.0123	0.393	61.2
242 Flooded Portal Deep Sample	26-Mar-15	0.00061	0.00206	<0.0050	0.167	58.8
242 Flooded Portal Deep Sample	23-Apr-15	0.00057		<0.0050		66.5
242 Flooded Portal Deep Sample	09-Jul-15	0.00192		<0.0050		70.4
242 Flooded Portal Deep Sample	13-Aug-15	0.00085		<0.0050		54.9
242 Flooded Portal Deep Sample	10-Sep-15	0.00081		<0.0050		56.8
242 Flooded Portal Deep Sample	29-Oct-15	0.00064		<0.0050		56.6
242 Flooded Portal Deep Sample	26-Nov-15	0.00062		<0.0050		53.4
242 Flooded Portal Deep Sample	22-Dec-15	0.00042		<0.0050		76.5
242 Flooded Portal Deep Sample	14-Jan-16	0.00035		<0.0050		68.1
242 Flooded Portal Deep Sample	02-Mar-16	0.00037		<0.0050		59.1
Drill hole into deepest portion of mine pool (242MW)	7-Feb-18	0.00065		1.46		67.7
Shallow Groundwater Well	19-Nov-12	0.0173	0.274	0.270	11.2	9.66
QU1136S	16-Jul-13					
QU1136S	27-Feb-13	0.0134	0.426	0.161	17.3	8.80
QU1136S	28-Feb-13					
QU1136S	27-Nov-13	0.0145	0.895	0.322	31.0	9.59
QU1136S	16-Sep-14	0.0125		0.326		11.3
QU1136S	25-Nov-14	0.00488		0.057		9.69
QU1136S	8-Feb-18	0.00933		0.0383		7.1
Deep Groundwater Well						
QU1136D	19-Nov-12	1.15	1.19	0.611	0.796	14.4
QU1136D	01-Mar-13	1.08	1.05	0.588	0.679	14.0
QU1136D	18-Sep-13	1.08	1.06	0.588	1.18	13.5
QU1136D	13-Dec-13	1.09	1.09	0.612	0.725	12.6
QU1136D	07-Feb-14	1.20	1.15	0.651	0.715	12.8
QU1136D	11-Aug-14	1.03		0.602		13.1
QU1136D	21-May-14	1.04	1.06	0.628	0.776	13.6
QU1136D	25-Nov-14	0.965		0.327		12.8
QU1136D	23-Mar-15	1.00		0.563		11.7
QU1136D	8-Feb-18	0.889		0.713		11.6

Upon review of sampling results from local surface and groundwater, it was determined that water quality remains in good standing in the area. Arsenic and sulphate concentrations in the receiving environment (Iron River) are key in evaluating any effects from mining disturbance due to mobilization and water transport. Due to its small footprint and mining strategy, there was very little impact on the local watershed (Iron River and groundwater) from operations at 242. Sampling in the Iron River will continue to play a vital role in evaluating any effects of past and upcoming (7-South Area 5) mining activities.

In late 2017 after the reclamation activities were completed a borehole was drilled into the deepest portion of the mine pool to continue assessing the 242-water quality. The results were returned favorable with almost all results found in low concentration including arsenic, resulting in 0.00065 mg/L. Sulphate was also found in moderate concentrations resulting in 67.7 mg/L. Dissolved iron was the only parameter that was elevated resulting in 1.46 mg/L. The sample was obtained from 1 foot above bottom and was expected to result in elevated parameters as heavy metals and sulphate will accumulate at depth. This drill hole will be monitored on a quarterly schedule in 2018.

The upper Iron river and lower Iron river were sampled historically from 1996 through present. Additional sample locations on the Iron river were added to the receiving environment monitoring program during 2014 resulting from the 7-South Area 5 mine permit approval. The 7 South Area 5 development was postponed until late 2018 when the demand for thermal coal increased. Monitoring results observed that the system experiences naturally elevated concentrations (above water quality guidelines) of dissolved aluminum and total arsenic; aluminum is present throughout the system (i.e. from IR1 through IR8) whereas arsenic is primarily detected below the sandstone unit of the Dunsmuir member contact, represented by monitoring location Iron River Site 6 (IR6). This area has naturally elevated arsenic due to the host rock formation of the Dunsmuir sandstone. The main intention of the monitoring program was to develop water quality objectives reflective of baseline conditions.

Dissolved aluminum and arsenic are two parameters identified as displaying an inverse relationship to each other based on flow. Dissolved aluminum is elevated during high flows and dissolved arsenic is elevated during low flows as displayed in figures 3 and 4 below. These parameters have continued to be observed throughout monitoring of the Iron River.

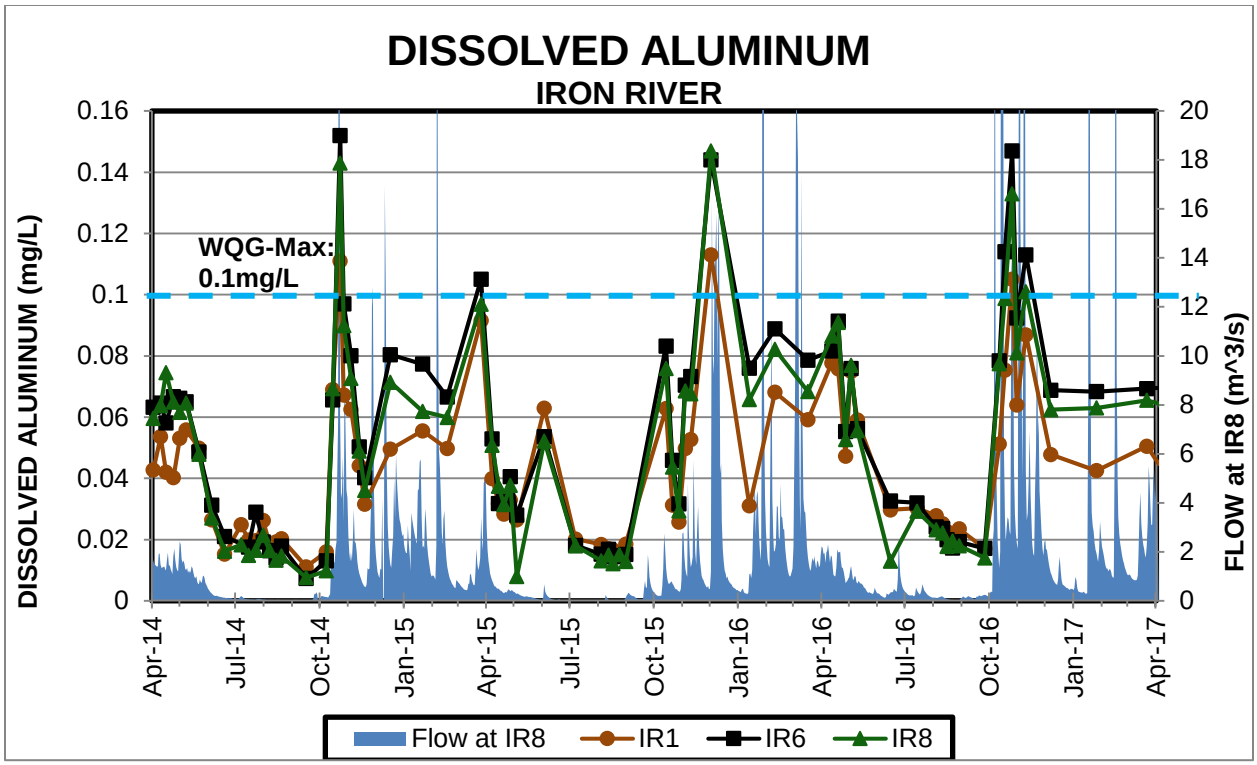

Figure 3: Dissolved Aluminum versus Flow

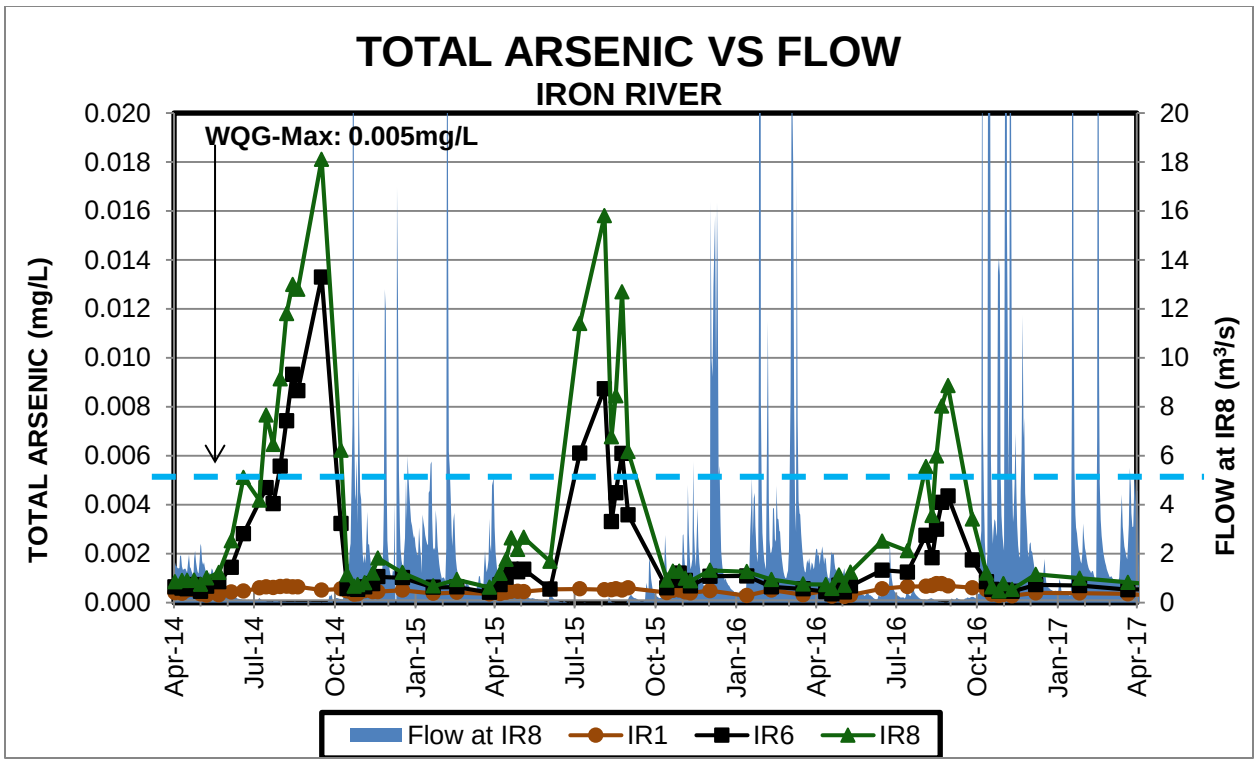

Figure 4: Total Arsenic versus Flow

Reclamation and Future Activities

During the spring of 2016, a boulder dense till (salvaged from the 7-South overburden dump) was recovered from the 2-South area and used to infill the portals. The high wall was resloped using till and other local stockpiled material, and then topsoiled using 3,500 m^3 of material from the 7-South topsoil stockpile. The 242 surface reclamation area (0.44 hectares) was seeded using Coastal Native Bunch grass seed at a rate of 15 kg/ha, and Coastal Native sodgrass seed at a rate of 20 kg/ha. Broadcasted with the grass seed was an 11-33-11 fertiliser at a rate of 250 kg/ha. A before and after photograph of the area is displayed below in figures 5 and 6, respectively.

Figure 5: 242 exploration adit, prior to reclamation

Figure 6: 242 exploration adit, after reclamation

Quinsam Coal intends to remove permit requirements in PE 7008 for Block 242 as access through the reclaimed portal and associated water management structures will not be used in future operations. Quinsam does intend to retrieve water samples in Spring 2018 at Settling Pond #1 to ascertain acceptable and consistent water quality. Sediment samples will be collected to compliment water quality results to understand any cumulative contamination at this site. These results will be included in the permit amendment application requesting to remove the 242 authorised works and discharge locations from the permit. Tree planting has occurred during April 2018 at rate of 1400 stems per hectare and a mixture of Red Alder and Douglas Fir. Once the area sustains vegetation for one year it is considered reclaimed. Periodic monitoring will occur at the site to assess the health of vegetation and monitor for invasive plants.

Tables 1 - 7 display the water quality results historically to present.

Quinsam trust this report meets the expectations of the Ministry for surface water quality. Further groundwater monitoring will be carried out with the commencement of mining in Area 5.

Sincerely,

Environmental Department

QUINSAM COAL

Quinsam Coal Corporation

Ph: (250) 286-3224 ext. 225

E-mail: kar@quinsam.com

Appendix I

Water Quality Tables

TABLE 1
242 Water Quality

242 Flooded Portal Deep Sample (242D)																
Date		29-Apr-14	11-Aug-14	08-Oct-14	26-Nov-14	17-Dec-14	26-Mar-15	23-Apr-15	09-Jul-15	13-Aug-15	10-Sep-15	29-Oct-15	26-Nov-15	22-Dec-15	14-Jan-16	02-Mar-16
Acidity45	mg/L			<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Acidity83	mg/L			<0.50		4.45	0.69	1.27	9.32	<0.50	2.44	<0.50	8.88	7.73	1.01	3.27
Alk-T	mg/L	61.6	89.6	89.0	88.0	65.9	44.7	70.4	73.0	82.1	84.8	89.3	90.9	65.4	61.5	68.7
Al-D	mg/L	<0.0030	0.0014	0.0039	<0.0030	0.0090	0.0162	<0.0030	0.0035	0.0047	<0.0030	<0.0030	<0.0030	0.0084	0.0043	0.0042
Al-T	mg/L	0.394		0.0411	<0.0030	0.0309	0.0438									
As-D	mg/L	0.00081	0.00245	0.00242	0.00077	0.00076	0.00061	0.00057	0.00192	0.00085	0.00081	0.00064	0.00062	0.00042	0.00035	0.00037
As-T	mg/L	0.148		0.0146	0.00090	0.00711	0.00206									
Ba-D	mg/L	0.0389	0.0649	0.0628	0.0597	0.0552	0.0538	0.0620	0.0513	0.0548	0.0546	0.0621	0.0595	0.0650	0.0559	0.0625
Ba-T	mg/L	0.0521		0.0650	0.0584	0.0648	0.0483									
B-D	mg/L	0.125	0.145	0.174	0.158	0.092	0.085	0.123	0.139	0.148	0.177	0.196	0.181	0.129	0.105	0.140
B-T	mg/L	0.117		0.173	0.161	0.122	0.075									
Ca-D	mg/L	47.8	47.1	43.0	45.6	42.6	35.0	43.4	43.1	42.1	46.2	45.0	44.6	43.8	40.5	40.9
Carb	mg/L	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Ca-T	mg/L	44.9		42.4	48.5	50.0	35.7									
Cd-D	mg/L	0.0000065	<0.000010	<0.0000050	0.000005	0.0000110	0.0000120	0.0000126	0.0000080	0.0000070	<0.000005	<0.000005	0.0000050	0.0000150	0.0000110	0.0000110
Cd-T	mg/L	0.000030		<0.000010	0.000012	0.000014	0.000013									
Cl-D	mg/L							0.86	5.6	0.59	0.93	1.2	0.93	1.3	<0.50	0.90
Co-D	mg/L	<0.00050	0.00011	<0.00050	<0.00050	0.00068	0.00076	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00121	0.00079	0.00051
Co-T	mg/L	0.00296		<0.00050	<0.00050	0.00073	0.00069									
Cr-D	mg/L	<0.0010	0.00023	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cr-T	mg/L	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010									
Cu-D	mg/L	<0.00020	0.00022	<0.00020	0.00023	0.00039	0.00025	<0.00020	0.00099	<0.00020	<0.00020	<0.00020	0.00022	0.00036	0.00026	0.00021
Cu-T	mg/L	0.00473		0.00072	<0.00050	<0.00050	0.00066									
DOC	mg/L		<0.50		2.06		<0.50	1.18	<0.50	<0.50	<0.50	<0.50	0.52	<0.50	1.29	<0.50
F-D	mg/L							0.150	0.160	0.180	0.200	0.200	0.190	0.160	0.130	0.120
Fe-D	mg/L	<0.0050	<0.010	<0.0050	<0.0050	0.0123	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fe-T	mg/L	7.29		0.654	0.011	0.393	0.167									
Hard-D	mg/L	137		127	134	122	99.2	126	124	123	135	131	132	127	117	119
Hard-T	mg/L	129	138	127	142	143	102									
Hg-D	mg/L	<0.000002	<0.000010	<0.0000020	<0.0000020	<0.000002	<0.0000020	<0.0000020	<0.0000020	0.0000026	0.0000041	0.0000029	0.0000035	0.0000021	0.0000055	0.0000054
Hg-T	mg/L	<0.000002		<0.0000020	<0.0000020	<0.000002	<0.0000020									
K-D	mg/L	0.682	0.80	0.788	0.807	0.606	0.485	0.705	0.759	0.625	0.707	0.766	0.790	0.634	0.602	0.639
K-T	mg/L	0.635		0.758	0.841	0.648	0.468									
Li-D	mg/L	0.0115	0.0141	0.0158	0.0149	0.0090	0.0086	0.0120	0.0113	0.0119	0.0142	0.0153	0.0158	0.0114	0.0092	0.0106
Li-T	mg/L	0.0112		0.0160	0.0152	0.0112	0.0080									
Mg-D	mg/L	4.18	4.85	4.76	4.97	3.75	2.85	4.37	4.01	4.38	4.79	4.53	5.12	4.15	3.98	3.95
Mg-T	mg/L	3.97		5.17	5.19	4.46	3.00									
Mn-D	mg/L	0.0120	0.0225	0.0104	<0.0010	0.0698	0.0589	0.0446	0.0016	0.0068	0.0055	<0.0010	<0.0010	0.0884	0.0675	0.0519
Mn-T	mg/L	0.140		0.0313	<0.0010	0.0809	0.0567									
Na-D	mg/L	5.22	7.26	7.20	7.57	4.82	3.30	5.64	5.47	6.62	7.24	7.01	7.71	5.23	4.64	4.83
Na-T	mg/L	5.22		7.68	7.74	5.44	3.26									
N-D	mg/L							0.047	0.094	0.080	0.038	0.142	0.042	0.053	0.124	0.145
Ni-D	mg/L	<0.0010	0.00931	<0.0010	<0.0010	0.0018	0.0022	0.0013	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0026	0.0022	0.0016
Ni-T	mg/L	0.0031		0.0017	<0.0010	0.0021	0.0022									
N-NH3	mg/L			0.012	0.039	<0.0050	<0.0050									
N-NO2	mg/L					<0.0050	<0.0050									
N-NO23	mg/L			<0.020	<0.020	<0.020	<0.020									
N-NO3	mg/L					<0.020	<0.020									
Pb-D	mg/L	<0.00020	<0.000050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Pb-T	mg/L	0.00027		<0.00020	<0.00020	<0.00020	<0.00020									
P-D	mg/L		<0.050		<0.0050	0.0093	0.0095	0.0086	0.0020	0.0024	<0.0020	<0.0020	0.0025	0.0027	<0.0020	<0.0020
P-T	mg/L			0.0061		0.0073	0.0101									
pH-L	pH Unit	7.69	7.54													
S2-T	mg/L	0.0052	<0.0020	0.0051		0.0086	0.0058	0.0086	<0.0050	***0.0338***	0.0115	0.0072	<0.0050	0.0075	0.0104	0.0079
H2S	mg/L								<0.0050	0.036	0.012	0.0080		0.0080	0.011	0.0080
Sb-D	mg/L	<0.00050	0.00031	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Sb-T	mg/L	0.00062		<0.00050	<0.00050	<0.00050	<0.00050									
S-D	mg/L	29.0	20.5	18.6	21.6	20.9	21.3	22.7	22.2	18.2	19.9	20.3	18.8	24.2	23.0	22.9
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Se-T	mg/L	<0.00010		<0.00010	<0.00010	<0.00010	<0.00010									
Si-D	mg/L	3.07	3.09	3.00	3.08	3.28	2.89	3.45	3.22	3.09	3.37	3.96	3.45	3.57	3.40	3.37
Si-T	mg/L	3.61		2.68	3.19	3.78	3.12									
SO4-D	mg/L	76.9	60.1	63.1	61.4	61.2	58.8	66.5	70.4	54.9	56.8	56.6	53.4	76.5	68.1	59.1
Sr-D	mg/L	0.119	0.152	0.155	0.149	0.0923	0.0765	0.111	0.114	0.134	0.139	0.148	0.159	0.120	0.0904	0.100
Sr-T	mg/L	0.116		0.161	0.147	0.113	0.0716									
S-T	mg/L	28.3		17.9	19.8	28.2	17.8									
Tl-D	mg/L	0.000071	0.000089	0.000072	0.000066	0.000129	0.000162	0.000100	0.000068	<0.000050	0.000057	0.000074	0.000064	0.000156	0.000142	0.000111
Tl-T	mg/L	0.000151		0.000092	0.000068	0.000162	0.000136									
TOC	mg/L					0.85	<0.50									
TSS	mg/L	15.3		<4.0		<4.0	<4.0				<4.0	<4.0	<4.0	<4.0	<4.0	5.3
Zn-D	mg/L	<0.0050	0.0047	<0.0050	<0.0050	0.0157	0.0139	0.0064	0.0071	0.0054	<0.0050	<0.0050	<0.0050	0.0104	0.0099	0.0474
Zn-T	mg/L	0.0243		<0.0050	<0.0050	0.0190	0.0178									

Bolded Red indictaes parameter is above CSR-AW for Dissolved Arsenic (0.05mg/L) and Sulphide (0.02 mg/L)

TABLE 2
242 Water Quality

242 Flooded Portal Shallow Sample (242S)					
Date		22-Jan-14	21-Jan-15	17-Feb-15	27-Jan-16
Acidity45	**mg/L**		<0.50	<0.50	<0.50
Acidity83	**mg/L**		1.80	3.84	<0.50
Alk-T	**mg/L**	69.1	40.3	59.2	54.2
Al-D	**mg/L**	<0.0030	0.0650	0.0053	0.0435
Al-T	**mg/L**	0.0461	0.191	0.0314	
As-D	**mg/L**	0.00078	0.00058	0.00038	0.00091
As-T	**mg/L**	0.0119	0.00307	0.00596	
Ba-D	**mg/L**	0.0597	0.0479	0.0610	0.0532
Ba-T	**mg/L**	0.0619	0.0495	0.0684	
B-D	**mg/L**	0.122	0.083	0.090	0.120
B-T	**mg/L**	0.137	0.073	0.105	
Ca-D	**mg/L**	40.3	29.5	39.7	36.9
Carb	**mg/L**	<0.50	<0.50	<0.50	<0.50
Ca-T	**mg/L**	41.0	31.2	38.6	
Cd-D	**mg/L**	0.000220	0.0000240	0.0000120	0.0000890
Cd-T	**mg/L**	0.0000140	0.000030	0.000013	
Cl-D	**mg/L**				<0.50
Co-D	**mg/L**	0.00069	0.00204	0.00071	0.00099
Co-T	**mg/L**	0.00065	0.00246	0.00072	
Cr-D	**mg/L**	<0.0010	<0.0010	<0.0010	<0.0010
Cr-T	**mg/L**	<0.0010	<0.0010	<0.0010	
Cu-D	**mg/L**	0.00266	0.00022	0.00025	0.00062
Cu-T	**mg/L**	0.00040	0.00080	0.00201	
DOC	**mg/L**				1.39
F-D	**mg/L**				0.078
Fe-D	**mg/L**	<0.0050	<0.0050	<0.0050	0.0061
Fe-T	**mg/L**	0.580	0.386	0.273	
Hard-D	**mg/L**	118	86.1	114	106
Hard-T	**mg/L**	118	91.4	113	
Hg-D	**mg/L**	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Hg-T	**mg/L**	<0.0000020	<0.0000020	<0.0000020	
K-D	**mg/L**	0.738	0.472	0.551	0.615
K-T	**mg/L**	0.618	0.471	0.568	
Li-D	**mg/L**	0.0118	0.0077	0.0096	0.0092
Li-T	**mg/L**	0.0109	0.0076	0.0096	
Mg-D	**mg/L**	4.22	3.04	3.52	3.42
Mg-T	**mg/L**	3.75	3.24	3.94	
Mn-D	**mg/L**	0.0720	0.0796	0.0766	0.0703
Mn-T	**mg/L**	0.0707	0.0877	0.0792	
Na-D	**mg/L**	5.61	3.31	3.77	3.95
Na-T	**mg/L**	5.29	3.71	4.34	
N-D	**mg/L**				0.051
Ni-D	**mg/L**	0.0019	0.0032	0.0020	0.0023
Ni-T	**mg/L**	0.0018	0.0040	0.0022	
N-NH3	**mg/L**	0.0058	0.0067	0.0057	
N-NO2	**mg/L**		<0.0050	<0.0050	
N-NO23	**mg/L**	0.022	<0.020	<0.020	
N-NO3	**mg/L**		<0.020	<0.020	
Pb-D	**mg/L**	<0.00020	<0.00020	<0.00020	<0.00020
Pb-T	**mg/L**	<0.00020	<0.00020	0.00026	
P-D	**mg/L**	<0.0050	<0.0050	<0.0050	<0.0020
P-T	**mg/L**	0.0065	0.0048	0.0026	
pH-L	**pH Units**	7.76			
S2-T	**mg/L**		<0.0050	0.0065	<0.0050
H2S	**mg/L**				
Sb-D	**mg/L**	<0.00050	<0.00050	<0.00050	<0.00050
Sb-T	**mg/L**	<0.00050	<0.00050	<0.00050	
S-D	**mg/L**	22.6	20.7	20.7	20.5
Se-D	**mg/L**	<0.00010	<0.00010	<0.00010	<0.00010
Se-T	**mg/L**	<0.00010	<0.00010	<0.00010	
Si-D	**mg/L**	3.04	2.70	3.07	3.18
Si-T	**mg/L**	3.21	2.87	3.32	
SO4-D	**mg/L**	68.8	54.5	61.1	57.7
Sr-D	**mg/L**	0.112	0.0703	0.0879	0.0854
Sr-T	**mg/L**	0.118	0.0734	0.0875	
S-T	**mg/L**	22.0	21.4	22.9	
Tl-D	**mg/L**	0.000124	0.000218	0.000121	0.000136
Tl-T	**mg/L**	0.000120	0.000239	0.000131	
TOC	**mg/L**		<0.50	<0.50	
TSS	**mg/L**	<4.0	<4.0	<4.0	<4.0
Zn-D	**mg/L**	0.0093	0.0296	0.0100	0.407
Zn-T	**mg/L**	0.0103	0.0484	0.0110	

Bolded Red indictaes parameter is above CSR-AW for Dissolved Arsenic (0.05mg/L) and Sulphide (0.02 mg/L)

TABLE 3
242 Water Quality

		Settling Pond # 1 (242 Portal Sump)						
Date		25-Nov-08	15-Dec-08	06-Dec-10	22-Jan-14	25-Apr-14	12-Oct-16	22-Mar-17
Acidity45	**mg/L**			<0.5			<0.50	<0.50
Acidity83	**mg/L**			1.4			1.12	2.87
Alk-T	**mg/L**	77.8	73.8	43	22.3	61.7	11.1	5.60
Al-D	**mg/L**	0.0055	0.0054	0.053	0.0288	0.0091	0.0473	0.0070
Al-T	**mg/L**	0.0576	<0.20	0.024	0.0866	0.0421	0.116	0.0112
As-D	**mg/L**	<0.00050	<0.00050	0.0006	0.00174	0.00130	0.00282	0.00048
As-T	**mg/L**	***0.00562***	<0.20	0.0017	0.00223	***0.00590***	0.00399	0.00055
Ba-D	**mg/L**	0.063	0.067	0.067	0.0359	0.0688	0.0354	0.0126
Ba-T	**mg/L**	0.065	0.068	0.063	0.0334	0.0571	0.0363	0.0125
B-D	**mg/L**	0.11	0.12	0.11	0.083	0.117	0.063	<0.050
B-T	**mg/L**	0.11	0.12	0.10	0.059	0.096	0.070	<0.050
Ca-D	**mg/L**	35.3	36.1	48.3	21.5	36.7	21.8	8.87
Carb	**mg/L**			<0.5	<0.50	<0.50	<0.50	<0.50
Ca-T	**mg/L**	35.1	36.7	47.8	19.5	37.3	22.8	8.35
Cd-D	**mg/L**	0.000020	0.000028	0.00020	0.0000770	0.0000123	0.0000400	0.0000200
Cd-T	**mg/L**	0.000208	<0.010	0.00004	0.000089	0.000012	0.000042	0.000022
Cl-D	**mg/L**							
Co-D	**mg/L**	0.00071	0.00115	0.0029	0.00248	<0.00050	0.00077	0.00142
Co-T	**mg/L**	0.00072	<0.010	0.0030	0.00236	<0.00050	0.00139	0.00141
Cr-D	**mg/L**	<0.0010	<0.0010	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Cr-T	**mg/L**	<0.0010	<0.010	<0.001	<0.0010	<0.0010	<0.0010	<0.0010
Cu-D	**mg/L**	<0.0010	0.0047	0.0010	0.00069	0.00069	0.00114	0.00024
Cu-T	**mg/L**	<0.0010	<0.010	0.0012	0.00125	0.00061	0.00154	<0.00050
DOC	**mg/L**							
F-D	**mg/L**							
Fe-D	**mg/L**	<0.030	<0.030	0.972	0.0140	0.0100	0.0229	0.0346
Fe-T	**mg/L**	0.498	0.395	1.15	0.264	0.364	0.100	0.093
Hard-D	**mg/L**			137	64.0	107	65.4	26.1
Hard-T	**mg/L**	104	107	135	57.4	108	68.1	24.5
Hg-D	**mg/L**	<0.000020	<0.000020	<0.00002	<0.0000020	<0.000002	<0.0000020	<0.0000020
Hg-T	**mg/L**	<0.000020		<0.00002	<0.0000020	<0.000002	0.0000029	<0.0000020
K-D	**mg/L**	<2.0	<2.0	0.63	0.547	0.563	0.540	0.232
K-T	**mg/L**	<2.0	<2.0	0.61	0.500	0.573	0.557	0.226
Li-D	**mg/L**	0.0106	0.0117	0.011	<0.0050	0.0098	<0.0050	<0.0020
Li-T	**mg/L**	0.0106	0.011	0.007	<0.0050	0.0101	<0.0050	<0.0020
Mg-D	**mg/L**	3.89	4.04	3.91	2.50	3.77	2.64	0.950
Mg-T	**mg/L**	3.92	3.97	3.79	2.09	3.74	2.73	0.882
Mn-D	**mg/L**	0.0431	0.0589	0.176	0.237	0.0435	0.123	0.151
Mn-T	**mg/L**	0.0427	0.0679	0.169	0.224	0.0492	0.162	0.153
Na-D	**mg/L**	5.7	5.9	4.05	2.79	4.53	2.32	0.763
Na-T	**mg/L**	5.8	5.9	4.18	2.51	4.73	2.32	0.727
N-D	**mg/L**							
Ni-D	**mg/L**	0.0022	0.0024	0.007	0.0022	0.0015	0.0019	<0.0010
Ni-T	**mg/L**	0.0019	<0.050	0.008	0.0031	0.0015	0.0021	<0.0010
N-NH3	**mg/L**	<0.0050		<0.05	0.018			
N-NO2	**mg/L**			<0.005				
N-NO23	**mg/L**	0.0119	0.0117	<0.02	0.165			
N-NO3	**mg/L**			<0.02				
Pb-D	**mg/L**	<0.00050	<0.00050	<0.0002	<0.00020	<0.00020	<0.00020	<0.00020
Pb-T	**mg/L**	<0.00050	<0.050	<0.0002	<0.00020	<0.00020	<0.00020	<0.00020
P-D	**mg/L**				0.0108			
P-T	**mg/L**		<0.30		0.0111			
pH-L	**pH Units**	7.80	7.45	7.37	6.77	7.69		
S2-T	**mg/L**					0.0085		
H2S	**mg/L**							
Sb-D	**mg/L**	<0.00050	<0.00050	<0.0005	<0.00050	<0.00050	<0.00050	<0.00050
Sb-T	**mg/L**	<0.00050	<0.20	<0.0005	<0.00050	<0.00050	<0.00050	<0.00050
S-D	**mg/L**			35	16.1	19.1	21.1	7.3
Se-D	**mg/L**	<0.0010	<0.0010	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010
Se-T	**mg/L**	<0.0010	<0.20	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010
Si-D	**mg/L**			3.2	3.05	2.91	3.16	1.40
Si-T	**mg/L**		2.90	3.1	3.06	2.97	3.39	1.18
SO4-D	**mg/L**	36.8	43.4	110	50.0	55.0	62.1	18.9
Sr-D	**mg/L**			0.107	0.0624	0.0940	0.0585	0.0243
Sr-T	**mg/L**		0.103	0.099	0.0557	0.0920	0.0615	0.0234
S-T	**mg/L**			35	13.8	20.1	20.8	6.7
Tl-D	**mg/L**	<0.00020	<0.00020	0.00031	<0.000050	0.000092	<0.000050	<0.000010
Tl-T	**mg/L**	<0.00020	<0.20	0.00028	<0.000050	0.000122	<0.000050	<0.000010
TOC	**mg/L**							
TSS	**mg/L**	<3.0	<3.0		<4.0	<4.0	<4.0	<4.0
Zn-D	**mg/L**	0.0110	0.0138	0.024	0.0116	0.0102	0.0326	<0.0050
Zn-T	**mg/L**	0.0131	0.0147	0.026	0.0150	0.0146	0.0384	<0.0050

Bolded blue indicates exceedance of BCWQG for Arsenic -Total (0.005 mg/L)

TABLE 4
242 Water Quality

		242 Secondary Settling Pond Inflow (242 SSPI)	242 Secondary Settling Pond Outflow (242 SSPO)
Date		22-Jan-14	22-Jan-14
Acidity45	mg/L		
Acidity83	mg/L		
Alk-T	mg/L	8.76	8.48
Al-D	mg/L	0.0663	0.0441
Al-T	mg/L	0.154	0.177
As-D	mg/L	0.00015	<0.00010
As-T	mg/L	0.00022	0.00020
Ba-D	mg/L	0.0100	0.0062
Ba-T	mg/L	0.0107	0.0104
B-D	mg/L	<0.050	<0.050
B-T	mg/L	<0.050	<0.050
Ca-D	mg/L	2.95	1.80
Carb	mg/L	<0.50	<0.50
Ca-T	mg/L	3.05	2.76
Cd-D	mg/L	<0.0000050	<0.0000050
Cd-T	mg/L	<0.000010	<0.000010
Cl-D	mg/L		
Co-D	mg/L	<0.00050	<0.00050
Co-T	mg/L	<0.00050	<0.00050
Cr-D	mg/L	<0.0010	<0.0010
Cr-T	mg/L	<0.0010	<0.0010
Cu-D	mg/L	0.00053	0.00028
Cu-T	mg/L	0.00099	0.00096
DOC	mg/L		
F-D	mg/L		
Fe-D	mg/L	0.0677	0.0280
Fe-T	mg/L	0.183	0.139
Hard-D	mg/L	11.2	6.79
Hard-T	mg/L	11.4	10.1
Hg-D	mg/L	<0.0000020	<0.0000020
Hg-T	mg/L	<0.0000020	<0.0000020
K-D	mg/L	0.118	0.058
K-T	mg/L	0.091	0.099
Li-D	mg/L	<0.0050	<0.0050
Li-T	mg/L	<0.0050	<0.0050
Mg-D	mg/L	0.942	0.557
Mg-T	mg/L	0.927	0.789
Mn-D	mg/L	0.0642	0.0187
Mn-T	mg/L	0.0723	0.0340
Na-D	mg/L	0.935	0.616
Na-T	mg/L	0.931	0.841
N-D	mg/L		
Ni-D	mg/L	<0.0010	<0.0010
Ni-T	mg/L	<0.0010	<0.0010
N-NH3	mg/L	0.027	0.019
N-NO2	mg/L		
N-NO23	mg/L	0.098	0.084
N-NO3	mg/L		
Pb-D	mg/L	<0.00020	<0.00020
Pb-T	mg/L	<0.00020	<0.00020
P-D	mg/L	0.0142	0.0054
P-T	mg/L	0.0210	0.0093
pH-L	pH Units	6.87	7.02
S2-T	mg/L		
H2S	mg/L		
Sb-D	mg/L	<0.00050	<0.00050
Sb-T	mg/L	<0.00050	<0.00050
S-D	mg/L	<3.0	<3.0
Se-D	mg/L	<0.00010	<0.00010
Se-T	mg/L	<0.00010	<0.00010
Si-D	mg/L	3.17	2.19
Si-T	mg/L	3.26	3.48
SO4-D	mg/L	2.10	1.54
Sr-D	mg/L	0.0139	0.0084
Sr-T	mg/L	0.0146	0.0131
S-T	mg/L	<3.0	<3.0
Tl-D	mg/L	<0.000050	<0.000050
Tl-T	mg/L	<0.000050	<0.000050
TOC	mg/L		
TSS	mg/L	<4.0	<4.0
Zn-D	mg/L	<0.0050	<0.0050
Zn-T	mg/L	<0.0050	<0.0050

Bolded Red indictaes parameter is above CSR-AW for Dissoved Arsenic (0.05mg/L) and Sulphide (0.02 mg/L)

TABLE 5
242 WATER QUALITY

QU1136D		Deep Groundwater Well - Located between 242 and Iron River in the 4B Coal Seam and Sandstone									
Date		19-Nov-12	01-Mar-13	18-Sep-13	13-Dec-13	07-Feb-14	11-Aug-14	21-May-14	25-Nov-14	23-Mar-15	08-Feb-18
Acidity45	mg/L	<1.0	1.3	2.8	<1.0	2.0		2.2		<0.50	<1.0
Acidity83	mg/L									<0.50	<1.0
Ag-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010		<0.000010	<0.000010	<0.000020	<0.00010
Ag-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010					
Al-D	mg/L	0.0038	0.0020	0.0025	0.0031	0.0033	0.0021	0.0026	0.0011	<0.0030	<0.015
Alk-T	mg/L		168	171	163	170	167	161	151	159	168
Al-T	mg/L	0.233	0.138	0.574	0.142	0.0571		0.201			
As-D	mg/L	***1.15***	***1.08***	***1.08***	***1.09***	***1.20***	***1.03***	***1.04***	***0.965***	***1.00***	***0.889***
As-T	mg/L	1.19	1.05	1.06	1.09	1.15		1.06			
Ba-D	mg/L	0.126	0.114	0.120	0.118	0.128	0.113	0.120	0.108	0.114	0.114
Ba-T	mg/L	0.125	0.112	0.121	0.117	0.122		0.121			
B-D	mg/L	0.574	0.592	0.577	0.587	0.579	0.632	0.589	0.587	0.725	0.63
B-T	mg/L	0.598	0.600	0.570	0.647	0.650		0.602			
Ca-D	mg/L	49.8	46.7	47.6	49.2	48.6	47.3	47.1	46.2	44.8	43.5
Ca-T	mg/L	50.6	47.0	47.4	50.3	49.6		46.9			
Cd-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.0000050	<0.000025
Cd-T	mg/L	<0.000010	<0.000010	0.000028	<0.000010	<0.000010		0.000016			
Cl-D	mg/L	0.65	0.65	0.63	0.61	0.60		0.67		0.89	<1.0
Co-D	mg/L	0.00011	<0.00010	0.00015	0.00010	0.00010	<0.00010	0.00013	<0.00010	<0.00050	<0.0010
Cond	uS/cm	323	2270	314	320	1088		309	359	314	
Co-T	mg/L	0.00022	0.00013	0.00060	0.00018	0.00014		0.00030			
Cr-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.0010	<0.0050
Cr-T	mg/L	0.00019	0.00016	0.00060	0.00014	<0.00010		0.00031			
Cu-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.0010
Cu-T	mg/L	0.00079	0.00057	0.00163	<0.00050	<0.00050		0.00078			
DOC	mg/L	<0.50	<0.50	<0.50	0.63	<0.50	<0.50	0.68	<0.50	0.53	<0.50
DO-F	mg/L		3.01								
F-D	mg/L	0.698	0.707	0.714	0.666	0.714		0.686		0.660	0.730
Fe-D	mg/L	0.611	0.588	0.588	0.612	0.651	0.602	0.628	0.327	0.563	0.713
Fe-T	mg/L	0.796	0.679	1.18	0.725	0.715		0.776			
Hardness	mg/L	163	154	155	161	158	156	155	151	151	146
Hg-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.0000020	<0.0000020
Hg-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010		<0.000010			
K-D	mg/L	0.95	0.91	0.86	0.95	0.87	0.89	1.00	0.88	0.879	1.00
K-T	mg/L	0.99	0.89	0.97	1.00	0.89		1.02			
Li-D	mg/L	0.0534	0.0502	0.0511	0.0502	0.0508	0.0531	0.0536	0.0508	0.0541	0.050
Li-T	mg/L	0.0512	0.0487	0.0505	0.0537	0.0548		0.0497			
Mg-D	mg/L	9.40	9.07	8.70	9.21	8.97	9.14	9.13	8.80	9.55	9.13
Mg-T	mg/L	9.74	9.10	8.96	9.54	9.07		9.16			
Mn-D	mg/L	0.128	0.115	0.128	0.108	0.117	0.0903	0.110	0.0791	0.0693	0.0663
Mn-T	mg/L	0.136	0.118	0.134	0.112	0.115		0.115			
Mo-D	mg/L	0.0162	0.0140	0.0111	0.00920	0.00893	0.00815	0.00889	0.00785	0.0068	<0.0050
Mo-T	mg/L	0.0168	0.0146	0.0103	0.0101	0.0103		0.00833			
Na-D	mg/L	10.3	10.8	11.0	11.1	12.1		10.9	11.9	12.4	12.6
Na-T	mg/L	10.7	10.7	10.8	11.6	12.0		11.0			
Ni-D	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.0010	<0.0050
Ni-T	mg/L	<0.00050	<0.00050	0.00071	<0.00050	<0.00050		0.00110			
N-NH3	mg/L	0.133	0.128	0.0659	0.123	0.124		0.118			
N-NO2	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		<0.0010			
N-NO3	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050		0.0112			
N-T	mg/L	0.080	0.116	0.175	0.149	0.144		0.156			
Pb-D	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.00020	<0.0010
Pb-T	mg/L	0.000082	0.000067	0.000298	0.000059	0.000059		<0.00040			
P-D	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.0055	0.275
pH-L	pH Units	8.30	8.25	8.15	8.27	8.12	7.45	8.09	7.58	7.11	7.35
P-T(LL)	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050		<0.050			
S2-T	mg/L	0.0029	0.0043	<0.0020	***0.024***	0.0146	<0.0020	***0.046***	<0.020	***0.0313***	0.0068
Sb-D	mg/L	0.00027	0.00029	0.00018	0.00011	0.00014	0.00023	<0.00010	0.00028	<0.00050	<0.0025
Sb-T	mg/L	0.00040	0.00045	0.00053	0.00033	0.00028		0.00023			
S-D	mg/L	4.98	4.61	4.51	5.35	5.08	4.59	5.67	4.05	5.1	<15
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00026	<0.00010	<0.00010	<0.00050
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		<0.00010			
Si-D	mg/L	4.57	4.39	4.56	4.63	4.78	4.60	4.82	4.76	5.44	4.71
Si-T	mg/L	5.34	4.77	5.86	5.04	5.02		5.24			
Sn-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.0050	<0.025
Sn-T	mg/L	<0.00010	<0.00010	0.00034	0.00015	0.00013		0.00018			
SO4-D	mg/L	14.4	14.0	13.5	12.6	12.8	13.1	13.6	12.8	11.7	11.6
Sr-D	mg/L	0.388	0.400	0.402	0.361	0.377	0.414	0.387	0.391	0.417	0.418
Sr-T	mg/L	0.409	0.403	0.374	0.393	0.419		0.400			
S-T	mg/L	5.10	4.83	4.45	4.64	4.80		4.85			
TDS-L	mg/L	190	186	194	194	188		204			
Ti-D	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.0050	<0.025
Ti-T	mg/L	<0.010	<0.010	0.021	<0.010	<0.010		<0.010			
Tl-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000050	<0.000050
Tl-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010		<0.000010			
TOC	mg/L	0.57	<0.50	1.09	0.98	0.89		1.10			
TSS	mg/L	4.7	3.8	8.9	8.4	<3.0		7.2			
Turb	NTU	8.86	7.65	18.6	8.31	7.05		9.30			26.6
U-D	mg/L	0.000122	0.000116	0.000121	0.000112	0.000094	0.000074	0.000100	0.000064	<0.00010	<0.00050
U-T	mg/L	0.000149	0.000136	0.000187	0.000161	0.000119		0.000124			
Zn-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0032	<0.0010	<0.0050	<0.025
Zn-T	mg/L	<0.0030	<0.0030	0.0044	0.0033	<0.0030		0.0055			

Bolded Red indictaes parameter is above CSR-AW for Dissolved Arsenic (0.05mg/L) and Sulphide (0.02 mg/L)

TABLE 6
242 WATER QUALITY

QU1136S		Shallow Groundwater Well - Located between 242 and Iron River in Sandstone						
Date		27-Feb-13	28-Feb-13	19-Nov-12	27-Nov-13	16-Sep-14	25-Nov-14	08-Feb-18
Acidity45	mg/L			5.0	3.0			<1.0
Acidity83	mg/L							1.1
Ag-D	mg/L	<0.000010		<0.000010	<0.000010	<0.000010	<0.000010	<0.000020
Ag-T	mg/L	0.000039		0.000022	0.000050			
Al-D	mg/L	0.0035		<0.0010	<0.0010	<0.0010	<0.0010	<0.0030
Alk-T	mg/L				85.9	105	98.2	71.8
Al-T	mg/L	6.55		3.47	8.76			
As-D	mg/L	0.0134		0.0173	0.0145	0.0125	0.00488	0.00933
As-T	mg/L	0.426		0.274	0.895			
Ba-D	mg/L	0.0983		0.107	0.108	0.113	0.103	0.0967
Ba-T	mg/L	0.147		0.141	0.239			
B-D	mg/L	0.011		0.013	0.012	0.022	0.013	<0.050
B-T	mg/L	0.017		0.020	0.021			
Ca-D	mg/L	27.9		33.0	33.0	39.6	34.2	25.2
Ca-T	mg/L	29.0		32.9	36.5			
Cd-D	mg/L	0.000047		0.000032	0.000021	0.000023	0.000017	0.0000230
Cd-T	mg/L	0.000316		0.000124	0.000323			
Cl-D	mg/L	0.53		0.53	0.68			<1.0
Co-D	mg/L	0.00124		0.00074	0.00139	0.00108	0.00049	0.00129
Cond	uS/cm		163	179	186	224	205	
Co-T	mg/L	0.00982		0.00504	0.0124			
Cr-D	mg/L	<0.00010		<0.00010	<0.00010	<0.00010	<0.00010	<0.0010
Cr-T	mg/L	0.00589		0.00363	0.00652			
Cu-D	mg/L	<0.00020		<0.00020	<0.00020	<0.00020	<0.00020	0.00034
Cu-T	mg/L	0.0186		0.00882	0.0251			
DOC	mg/L			<0.50	<0.50	<0.50	<0.50	1.07
DO-F	mg/L		1.38					
F-D	mg/L	0.037		0.025	0.022			0.038
Fe-D	mg/L	0.161		0.270	0.322	0.326	0.057	0.0383
Fe-T	mg/L	17.3		11.2	31.0			
Hardness	mg/L	82.0		96.5	96.1	115	99.5	73.9
Hg-D	mg/L	<0.000010		<0.000010	<0.000010	<0.000010	<0.000010	<0.0000020
Hg-T	mg/L	0.000057		0.000023	0.000027			
K-D	mg/L	0.19		0.21	0.20	0.20	0.20	0.197
K-T	mg/L	0.85		0.58	1.33			
Li-D	mg/L	0.00523		0.00462	0.00503	0.00511	0.00458	0.0042
Li-T	mg/L	0.0118		0.00790	0.0116			
Mg-D	mg/L	2.98		3.44	3.34	4.00	3.43	2.65
Mg-T	mg/L	4.20		3.81	5.43			
Mn-D	mg/L	0.186		0.102	0.192	0.140	0.0608	0.126
Mn-T	mg/L	0.369		0.176	0.430			
Mo-D	mg/L	0.000152		0.000166	0.000117	0.000106	0.000095	<0.0010
Mo-T	mg/L	0.000721		0.00100	0.000796			
Na-D	mg/L	1.07		1.33	1.33	1.40	1.15	1.00
Na-T	mg/L	1.14		1.32	1.38			
Ni-D	mg/L	0.00127		0.00102	0.00081	0.00090	0.00071	<0.0010
Ni-T	mg/L	0.0104		0.00679	0.0126			
N-NH3	mg/L			<0.0050	<0.0050			
N-NO2	mg/L	<0.0010		<0.0010	<0.0010			
N-NO3	mg/L	<0.0050		0.0144	0.0106			
N-T	mg/L	<0.050		<0.050	<0.10			
Pb-D	mg/L	<0.000050		<0.000050	<0.000050	<0.000050	<0.000050	<0.00020
Pb-T	mg/L	0.00273		0.00131	0.00618			
P-D	mg/L	<0.050		<0.050	<0.050	<0.050	<0.050	0.0024
pH-L	pH Units		6.13	7.70	7.70	6.49	6.37	
P-T(LL)	mg/L	0.054		<0.050	0.102			
S2-T	mg/L	<0.0020		<0.0020	0.0031	<2.0	<0.020	<0.0050
Sb-D	mg/L	0.00224		0.00334	0.00153	0.00099	0.00141	0.00205
Sb-T	mg/L	0.0139		0.0119	0.0160			
S-D	mg/L	2.80		3.29	3.20	3.84	3.39	<3.0
Se-D	mg/L	<0.00010		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Se-T	mg/L	0.00011		<0.00010	0.00014			
Si-D	mg/L	2.77		2.87	2.90	2.92	2.81	3.12
Si-T	mg/L	15.7		8.53	24.6			
Sn-D	mg/L	<0.00010		<0.00010	<0.00010	<0.00010	<0.00010	<0.0050
Sn-T	mg/L	0.00026		<0.00010	0.00030			
SO4-D	mg/L	8.80		9.66	9.59	11.3	9.69	7.1
Sr-D	mg/L	0.0304		0.0354	0.0360	0.0453	0.0406	0.0270
Sr-T	mg/L	0.0355		0.0404	0.0457			
S-T	mg/L	2.99		3.30	3.42			
TDS-L	mg/L			111	114			
Ti-D	mg/L	<0.010		<0.010	<0.010	<0.010	<0.010	<0.0050
Ti-T	mg/L	0.271		0.136	0.226			
Tl-D	mg/L	0.000012		0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tl-T	mg/L	0.000087		0.000051	0.000130			
TOC	mg/L	<0.50		1.58	3.50			
TSS	mg/L	226		97.3	442			
Turb	NTU	308		172	521			307
U-D	mg/L	0.000028		0.000032	0.000041	0.000043	0.000027	<0.00010
U-T	mg/L	0.000601		0.000342	0.00162			
Zn-D	mg/L	0.0049		0.0043	0.0025	0.0022	0.0017	<0.0050
Zn-T	mg/L	0.0323		0.0197	0.0474			

Bolded Red indictaes parameter is above CSR-AW for Arsenic (0.05mg/L) and Sulphide (0.02 mg/L)

TABLE 7
242 WATER QUALITY

242MW	242 Borehole into Mine Pool	
Date		07-Feb-18
Acidity45	mg/L	<1.0
Acidity83	mg/L	19.3
Ag-D	mg/L	<0.000020
Ag-T	mg/L	
Al-D	mg/L	0.0255
Alk-T	mg/L	33.7
Al-T	mg/L	
As-D	mg/L	0.00065
As-T	mg/L	
Ba-D	mg/L	0.0376
Ba-T	mg/L	
B-D	mg/L	0.074
B-T	mg/L	
Ca-D	mg/L	35.8
Ca-T	mg/L	
Cd-D	mg/L	0.0000207
Cd-T	mg/L	
Cl-D	mg/L	<1.0
Co-D	mg/L	0.00254
Cond	uS/cm	
Co-T	mg/L	
Cr-D	mg/L	<0.0010
Cr-T	mg/L	
Cu-D	mg/L	0.00044
Cu-T	mg/L	
DOC	mg/L	<0.50
DO-F	mg/L	
F-D	mg/L	0.051
Fe-D	mg/L	1.46
Fe-T	mg/L	
Hardness	mg/L	98.9
Hg-D	mg/L	<0.0000020
Hg-T	mg/L	
K-D	mg/L	0.459
K-T	mg/L	
Li-D	mg/L	0.0050
Li-T	mg/L	
Mg-D	mg/L	2.31
Mg-T	mg/L	
Mn-D	mg/L	0.341
Mn-T	mg/L	
Mo-D	mg/L	<0.0010
Mo-T	mg/L	
Na-D	mg/L	2.32
Na-T	mg/L	
Ni-D	mg/L	0.0044
Ni-T	mg/L	
N-NH3	mg/L	
N-NO2	mg/L	
N-NO3	mg/L	
N-T	mg/L	
Pb-D	mg/L	<0.00020
Pb-T	mg/L	
P-D	mg/L	0.0022
pH-L	pH Units	6.54
P-T(LL)	mg/L	
S2-T	mg/L	0.0108
Sb-D	mg/L	<0.00050
Sb-T	mg/L	
S-D	mg/L	24.2
Se-D	mg/L	<0.00010
Se-T	mg/L	
Si-D	mg/L	4.06
Si-T	mg/L	
Sn-D	mg/L	<0.0050
Sn-T	mg/L	
SO4-D	mg/L	67.7
Sr-D	mg/L	0.0593
Sr-T	mg/L	
S-T	mg/L	
TDS-L	mg/L	
Ti-D	mg/L	<0.0050
Ti-T	mg/L	
Tl-D	mg/L	0.000251
Tl-T	mg/L	
TOC	mg/L	
TSS	mg/L	
Turb	NTU	2.88
U-D	mg/L	<0.00010
U-T	mg/L	
Zn-D	mg/L	0.0125
Zn-T	mg/L	