



MEMORANDUM

TO: Byron O'Connor, Project Manager; Eric Domingue, Project Manager
DATE: November 19th, 2013
FROM: Tracey Parkin; Environmental Coordinator
SUBJECT: Rose Creek Additional Monitoring 2

Background

During periods of Cross Valley Pond (CVP) discharge, samples are collected from the compliance point X5 and from Rose Creek at sampling location X14 on a daily basis. For each sample, the field parameters of Temperature, pH and Conductivity (EC) are recorded. The samples are also analysed for total and dissolved Zinc at the Faro Mine Complex (FMC) Laboratory to ensure that X5 is not exceeding the effluent water quality standard limit of 0.500 mg/L as outlined in Appendix C of the Care and Maintenance contract. An unofficial Zinc limit of 0.150 mg/L has been applied to X14 to prevent loading.

During 2013, X5 experienced Turbidity fluctuations resulting in sporadic discharge events. On October 22nd, 2013, the X5 siphon was opened and since the Turbidity results were compliant discharge took place. Daily analysis, however, revealed that Zinc levels at X14 were above the internal trigger level of 0.100 mg/L and the X5 discharge values resulting in the X5 siphon being turned off. On October 23rd, 2013, the X5 siphon was again turned on and allowed to discharge. Daily analysis once again returned high Zinc levels at X14 which were again above the internal trigger and X5 discharge values. The siphon was turned off and an investigation into potential sources of increased zinc began.

Details of the investigation and subsequent results have been summarized in a memorandum, "Elevated Zinc Levels in Rose Creek" (Parkin, T. 2013), and submitted to the Yukon Government (YG) on November 4th, 2013. On November 6th, 2013, YG requested a one off additional monitoring program to take place around the NF1 Pond and NF2

Monitoring Program

Additional monitoring was to include the following:

- Sample collection at three (3) groundwater wells, SRK08-P13A, SRK08-P13B and P96-6;
- Sample collection at one (1) seepage location, SRK-FD08; and
- Sample collection at 17 surface water locations, NF1, upstream of NF1 pond (R10B), NF1 pond shore samples (NF1 – A – NF1 – J), NF2 and upstream of NF2 (NF2 – A and NF2 – B).

The field parameters of Temperature, pH and Conductivity (EC) were to be recorded.

UTM coordinates of each new location were to be taken.

Photos were to be taken at each location.

All samples were to be sent to Maxxam Analytics and analysed in accordance with Appendix C of the Care and Maintenance contract. Results were to have a one (1) day turnaround reporting time.



MEMORANDUM

Methodology

All samples were collected accordance with “Standard Methods for the Examination of Water and Waste Water.”

The field parameters, temperature, pH and Conductivity, were measured with a Hanna combo meter.

Coordinates were taken with recreational grade Garmin GPS units.

Results

All sampling locations are illustrated in Appendix A.

A summary of all field parameters and GPS coordinates are located in Appendix B. Conductivity was not recorded at four (4) sampling locations as a high range Hanna Combo pen was used and Conductivity values were too low to register.

A photo log of monitoring locations is located in Appendix C.

Analytical results are located in Appendix D.

Appendix A

Maps



Map Sheet 1: Additional Monitoring Locations



Appendix B

Tables



Table 1: Field Parameters

Table 1: Field Parameters

Site	Time	Temperature (°C)	pH	EC (µS/cm)	Comments
SRK08-P13A	10:30 AM				Well frozen. No sample collected.
SRK08-P13B	10:29 AM				Well frozen. No sample collected.
P96-6	11:17 AM	5.7	6.30	2600	
SRK-FD08	11:56 AM				Dry. No sample collected.
R10B	3:46 PM	<0.0	7.22	280	
NF1	2:58 PM	<0.0	6.83	0	High range meter used therefore EC value did not register.
NF1 - October	3:28 PM	<0.0	5.53	0	High range meter used therefore EC value did not register.
NF1 - A	3:43 PM	<0.0	7.35	0	High range meter used therefore EC value did not register.
NF1 - B	3:17 PM	<0.0	7.45	0	High range meter used therefore EC value did not register.
NF1 - C	3:03 PM	<0.0	7.62	225	
NF1 - D	3:17 PM	<0.0	7.70	198	
NF1 - E	3:28 PM	<0.0	7.76	198	
NF1 - F	3:14 PM	<0.0	7.20	223	
NF1 - G	3:24 PM	0.3	7.21	231	
NF1 - H	3:46 PM	0.5	7.25	250	
NF1 - I	3:58 PM	<0.0	7.58	229	
NF1 - J	4:10 PM	<0.0	7.01	164	
NF2	10:08 AM	<0.0	7.42	245	
NF2 - A	10:19 AM	<0.0	7.15	283	
NF2 - B	10:54 AM	<0.0	7.54	219	



Table 2: UTM Coordinates

Table 2: UTM Coordinates

Site	Northing	Easting
SRK08-P13A	6913447	585102
SRK08-P13B	6913450	585096
P96-6	6913313	584906
SRK-FD08	6913423	584943
R10B	6913250	585064
NF1	6913261	584898
NF1 - October	6913270	584975
NF1 - A	6913255	585015
NF1 - B	6913270	584930
NF1 - C	6913260	584870
NF1 - D	6913255	584844
NF1 - E	6913235	584827
NF1 - F	6913201	584846
NF1 - G	6913187	584865
NF1 - H	6913194	584895
NF1 - I	6913205	584930
NF1 - J	6913212	584990
NF2	6913014	584693
NF2 - A	6913027	584729
NF2 - B	6913033	584706

Appendix C
Photo Log



Photo Log:
Rose Creek Additional Monitoring 2
November 7, 2013



Photo 1: November 7, 2013 – SRK08-P13A



Photo Log:
Rose Creek Additional Monitoring 2
November 7, 2013



Photo 2: November 7, 2013 – SRK08-P13B



Photo Log:
Rose Creek Additional Monitoring 2
November 7, 2013



Photo 3: November 7, 2013 – P96-6



Photo Log:
Rose Creek Additional Monitoring 2
November 7, 2013



Photo 4: November 7, 2013 – SRK-FD08



Photo Log:
Rose Creek Additional Monitoring 2
November 7, 2013



Photo 5: November 7, 2013 – R10B



Photo Log:
Rose Creek Additional Monitoring 2
November 7, 2013

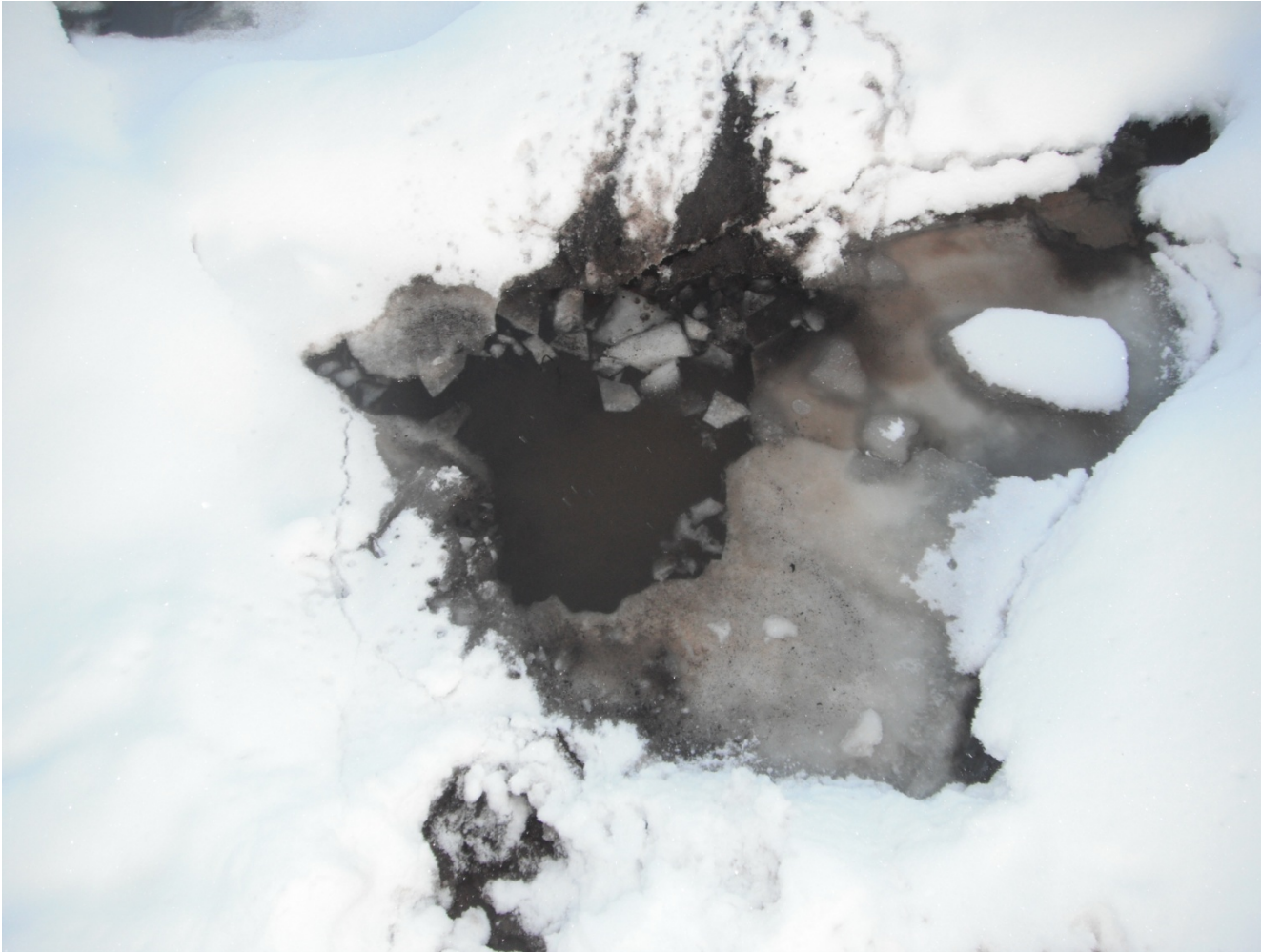


Photo 6: November 7, 2013 – NF1 - October



Photo Log:
Rose Creek Additional Monitoring 2
November 7, 2013



Photo 7: November 7, 2013 – NF1 - A



Photo Log:
Rose Creek Additional Monitoring 2
November 7, 2013

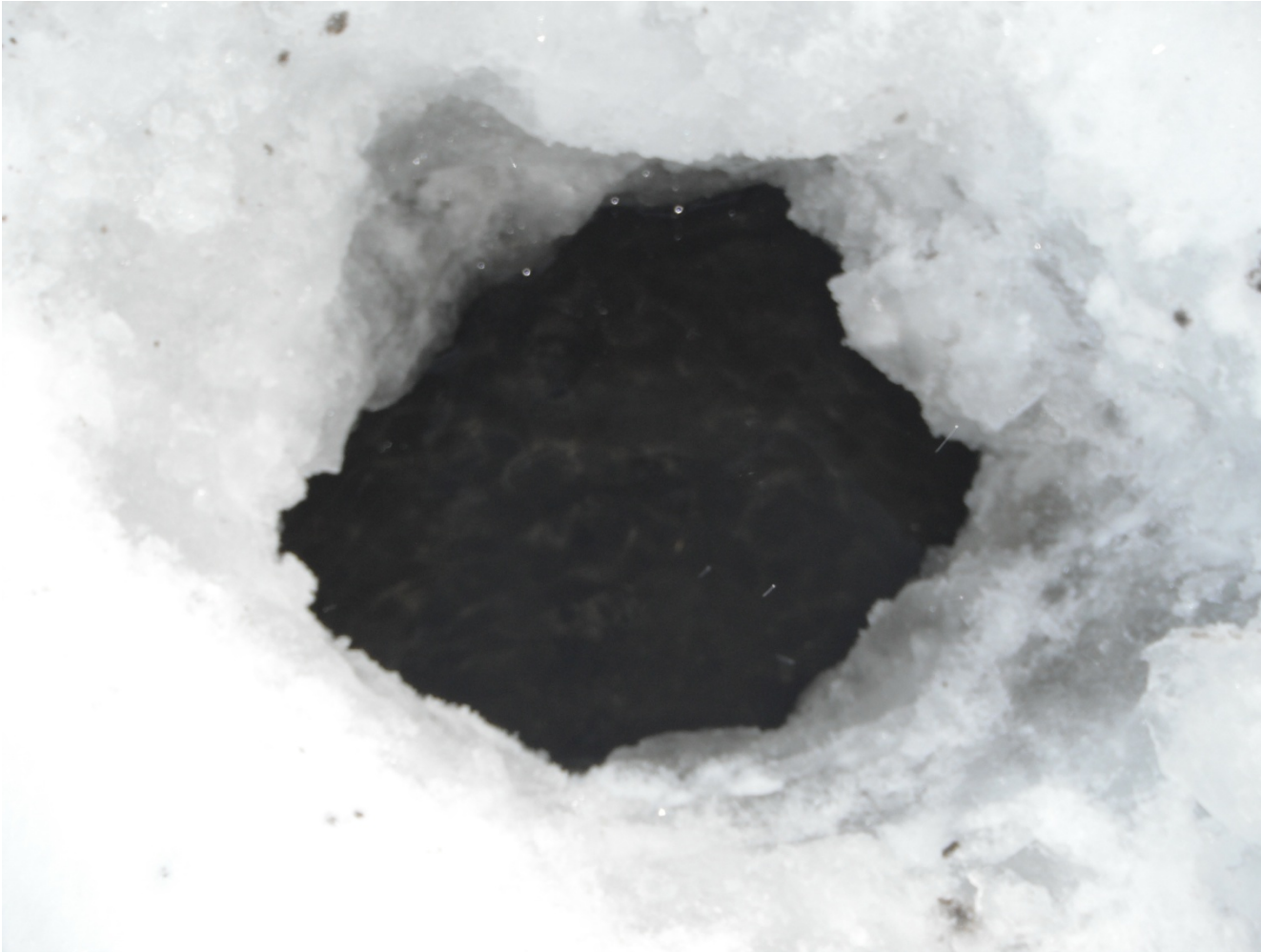


Photo 8: November 7, 2013 – NF1 - B



Photo Log:
Rose Creek Additional Monitoring 2
November 7, 2013



Photo 9: November 7, 2013 – NF1 - F



Photo Log:
Rose Creek Additional Monitoring 2
November 7, 2013



Photo 10: November 7, 2013 – NF1 – G



Photo Log:
Rose Creek Additional Monitoring 2
November 7, 2013



Photo 11: November 7, 2013 – NF1 – H



Photo Log:
Rose Creek Additional Monitoring 2
November 7, 2013



Photo 12: November 7, 2013 – NF1 – I



Photo Log:
Rose Creek Additional Monitoring 2
November 7, 2013



Photo 13: November 7, 2013 – NF1 – J



Photo Log:
Rose Creek Additional Monitoring 2
November 7, 2013



Photo 14: November 7, 2013 – NF2 – A



Photo Log:
Rose Creek Additional Monitoring 2
November 7, 2013



Photo 15: November 17, 2013 – NF2 - B

Appendix D

Analytical Results



Rose Creek Additional Monitoring 2 - Maxxam Analytics Results General Chemistry

Station	Date	Sample Type	Acid(pH4.5) mg/L	Acid(pH8.3) mg/L	ALK mg/L	ALKPP mg/L	CaCO3 mg/L	CaCO3-d mg/L	Chloride mg/L	CO3 mg/L	COND µmho/cm	CONDf µS/cm	DOC mg/L	HCO3 mg/L as CaCO3	Ion Balance	NH3 mg/L	NO2 mg/L	NO2/3 mg/L	NO3 mg/L	OH mg/L	pH	pHF	SO4-d mg/L	TDS mg/L	TEMP-F °C	TOC mg/L	TSS mg/L
P96-6	11/7/2013	Ground	<0.50	24.1	249.00	<0.5	111	115	0.70	<0.5	2360.0	2600.0		304.0	0.92					<0.5	7.66	6.30	1400.0		5.70		120
R10B	11/7/2013	Surface			94.00	<0.5	111	115	0.51	<0.5	216.0	280.0	2.1	115.0	1.10	0.02	<0.50	<2.0	<2.0	<0.5	7.84	7.22	17.0	122.00	<0.00	2.15	3
NF1	11/7/2013	Surface			113.00	<0.5	166	168	0.67	<0.5	316.0	0.0	2.3	138.0	1.10	0.03	<0.50	<2.0	<2.0	<0.5	7.61	6.83	44.5	204.00	0.00	3.34	188
NF1 - October	11/7/2013	Surface			317.00	<0.5	580	454	1.10	<0.5	1030.0	0.0	4.5	387.0	1.00	0.27	<0.50	<2.0	<2.0	<0.5	6.16	5.53	214.0	770.00	<0.00	6.98	615
NF1 - A	11/7/2013	Surface			95.50	<0.50	125	119	<0.5	<0.5	226.0	0.0	1.9	117.0	1.10	0.03	<0.50	<2.0	<2.0	<0.5	7.87	7.35	18.8	142.00	<0.00	3.55	327
NF1 - B	11/7/2013	Surface			93.80	<0.50	117	119	<0.5	<0.5	218.0	0.0	2.1	114.0	1.10	0.02	<0.50	<2.0	<2.0	<0.5	7.94	7.45	17.0	142.00	<0.00	2.13	9
NF1 - C	11/7/2013	Surface			96.40	<0.50	121	119	<0.5	<0.5	224.0	225.0	2.0	118.0	1.10	0.02	<0.50	<2.0	<2.0	<0.5	7.98	7.62	18.0	144.00	<0.00	2.38	122
NF1 - D	11/7/2013	Surface			95.40	<0.50	116	117	<0.5	<0.5	222.0	198.0	2.0	116.0	1.10	0.02	<0.50	<2.0	<2.0	<0.5	7.97	7.70	16.9	138.00	<0.00	2.02	26
NF1 - E	11/7/2013	Surface			93.30	<0.50	118	117	<0.5	<0.5	220.0	218.0	2.1	114.0	1.10	0.01	<0.50	<2.0	<2.0	<0.5	7.93	7.76	16.9	144.00	<0.00	2.28	35
NF1 - F	11/7/2013	Surface			101.00	<0.50	117	125	0.53	<0.5	236.0	223.0	2.2	124.0	1.10	0.02	<0.50	<2.0	<2.0	<0.5	7.96	7.20	19.5	160.00	<0.00	2.47	3
NF1 - G	11/7/2013	Surface			98.20	<0.50	139	123	<0.5	<0.5	230.0	231.0	2.9	120.0	1.10	0.10	<0.50	<2.0	<2.0	<0.5	7.93	7.21	16.8	140.00	0.30	3.91	1300
NF1 - H	11/7/2013	Surface			94.50	<0.50	114	117	<0.5	<0.5	223.0	250.0	2.4	115.0	1.10	0.02	<0.50	<2.0	<2.0	<0.5	7.99	7.25	16.5	142.00	0.50	2.51	5
NF1 - I	11/7/2013	Surface			94.90	<0.50	119	118	0.78	<0.5	220.0	229.0	2.9	116.0	1.10	0.05	<0.50	<2.0	<2.0	<0.5	7.93	7.58	16.7	138.00	<0.00	3.86	1080
NF1 - J	11/7/2013	Surface			95.10	<0.5	116	110	<0.5	<0.5	217.0	164.0	2.4	116.0	1.00	0.02	<0.50	<2.0	<2.0	<0.5	8.01	7.01	16.6	120.00	<0.00	2.64	<1
NF2	11/7/2013	Surface			95.70	<0.5	122	124	0.58	<0.5	251.0	245.0	1.6	117.0	1.10	0.02	<0.5	<2.0	<2.0	<0.5	7.96	7.42	28.5	166.00	<0.00	1.67	4
NF2-A	11/7/2013	Surface			92.40	<0.5	141	152	<0.5	<0.5	281.0	283.0	1.9	113.0	1.10	0.02	<0.5	<2.0	<2.0	<0.5	7.45	7.15	50.6	178.00	<0.00	2.14	3
NF2-B	11/7/2013	Surface			99.30	<0.5	113	116	<0.5	<0.5	218.0	219.0	2.1	121.0	1.10	0.03	<0.5	<2.0	<2.0	<0.5	7.97	7.45	16.7	130.00	<0.00	2.03	4



Rose Creek Additional Monitoring 2 - Maxxam Analytics Results
Dissolved Metals

Station	Date	Sample Type	Ag-d µg/L	Al-d µg/L	As-d µg/L	Ba-d µg/L	B-d µg/L	Be-d µg/L	Bi-d µg/L	Ca-d mg/L	Cd-d µg/L	Co-d µg/L	Cr-d µg/L	Cu-d µg/L	Fe-d µg/L	K-d mg/L	Li-d mg/L	Mg-d mg/L	Mn-d µg/L	Mo-d µg/L	Na-d mg/L	Ni-d µg/L	Pb-d µg/L	Sb-d µg/L	S-d mg/L	Se-d µg/L	Si-d µg/L	Sn-d µg/L	Sr-d µg/L	Ti-d µg/L	Tl-d µg/L	U-d µg/L	V-d µg/L	Zn-d µg/L	Zr-d µg/L
P96-6	11/7/2013	Ground	<0.02	3.60	0.35	16.80	<50	<0.1	<1.0	357.00	0.29	<0.5	<1.0	0.48	8.40	4.70	33.50	160.00	1.70	<1.0	5.65	13.30	<0.2	<0.5	447.00	3.24	8670.00	<5.0	905.00	<5.0	<0.05	60.30	<5.0	433.00	<0.5
R10B	11/7/2013	Surface	<0.005	5.54	0.46	57.20	<50	<0.01	<0.005	34.10	0.02	0.11	<0.1	0.45	93.70	0.84	5.18	7.33	29.50	0.60	2.50	0.46	0.18	0.06	5.90	0.37	6530.00	>0.2	141.00	<0.5	<0.002	1.66	<0.2	9.23	<0.1
NF1	11/7/2013	Surface	<0.005	10.90	0.74	76.10	<50.0	<0.01	<0.005	47.60	0.15	2.70	<0.1	0.40	1350.00	1.20	0.01	11.90	428.00	0.54	3.48	6.93	1.00	0.09	17.80	0.38	7220.00	<0.2	200.00	<0.5	0.01	1.95	<0.2	338.00	<0.1
NF1 - October	11/7/2013	Surface	<0.005	84.90	1.01	134.00	<50.0	0.06	<0.005	113.00	1.65	98.10	0.23	0.31	29400.00	3.84	44.00	42.00	6540.00	0.10	12.80	49.20	0.70	0.04	91.60	0.07	13500.00	<0.2	699.00	0.65	0.09	0.97	0.24	2220.00	0.22
NF1 - A	11/7/2013	Surface	<0.005	5.56	0.43	56.00	<50.0	<0.01	<0.005	34.30	0.03	0.77	<0.1	0.42	207.00	0.84	4.88	7.63	107.00	0.60	2.72	0.96	0.47	0.07	6.30	0.36	6530.00	<0.2	141.00	<0.5	0.00	1.60	<0.2	15.60	<0.1
NF1 - B	11/7/2013	Surface	<0.005	5.25	0.56	59.30	<50.0	<0.01	<0.005	35.40	0.02	0.28	<0.1	0.48	387.00	0.88	5.05	7.56	94.90	0.64	2.69	0.82	0.62	0.07	6.50	0.32	6920.00	<0.2	139.00	<0.5	0.00	1.67	<0.2	17.60	<0.1
NF1 - C	11/7/2013	Surface	<0.005	6.41	0.81	65.30	<50.0	<0.01	<0.005	35.00	0.03	0.24	0.21	0.82	146.00	0.90	5.18	7.68	59.80	0.68	2.85	0.94	3.39	0.10	6.60	0.39	6710.00	<0.2	149.00	<0.5	0.00	1.85	<0.2	15.00	<0.1
NF1 - D	11/7/2013	Surface	<0.005	11.50	0.71	63.00	<50.0	<0.01	<0.005	33.60	0.02	0.22	<0.1	0.65	246.00	0.92	5.33	7.89	72.70	0.65	2.83	0.75	1.59	0.08	6.90	0.35	6290.00	<0.2	144.00	<0.5	0.00	1.74	<0.2	12.90	<0.1
NF1 - E	11/7/2013	Surface	<0.005	5.27	0.64	60.10	<50.0	<0.01	<0.005	34.20	0.04	0.25	<0.1	0.58	277.00	0.91	5.15	7.68	77.40	0.63	2.70	0.77	0.81	0.08	5.90	0.33	6580.00	<0.2	141.00	<0.5	0.00	1.65	<0.2	12.60	<0.1
NF1 - F	11/7/2013	Surface	<0.005	7.09	0.62	66.00	<50.0	<0.01	<0.005	36.60	0.02	0.26	<0.1	0.53	290.00	0.93	5.24	8.07	109.00	0.65	2.87	0.84	0.89	0.08	6.20	0.39	7110.00	<0.2	152.00	<0.5	0.00	1.85	<0.2	12.70	<0.1
NF1 - G	11/7/2013	Surface	<0.005	12.70	1.29	79.00	<50.0	<0.01	<0.005	35.90	0.01	0.63	<0.1	0.96	188.00	0.98	4.77	7.98	542.00	1.16	2.89	1.35	2.00	0.11	6.30	0.35	6840.00	<0.2	151.00	0.60	0.00	2.41	0.43	5.92	<0.1
NF1 - H	11/7/2013	Surface	<0.005	5.70	0.54	59.30	<50.0	<0.01	<0.005	34.70	0.01	0.10	<0.1	0.56	102.00	0.85	4.88	7.36	37.60	0.67	2.63	0.57	0.30	0.07	6.30	0.31	6590.00	<0.2	145.00	<0.5	<0.002	1.73	<0.2	9.24	<0.1
NF1 - I	11/7/2013	Surface	<0.005	5.38	0.55	62.90	<50	<0.01	<0.005	35.00	0.02	0.16	<0.1	0.48	99.70	0.89	4.75	7.49	122.00	0.83	2.64	0.92	0.53	0.07	4.90	0.33	6570.00	<0.2	144.00	<0.5	0.00	1.70	<0.2	7.30	<0.1
NF1 - J	11/7/2013	Surface	<0.005	5.67	0.50	56.30	<50	<0.01	<0.005	32.10	0.02	0.10	<0.1	0.49	92.40	0.85	4.92	7.17	27.60	0.63	2.69	0.49	0.21	0.07	6.00	0.32	6130.00	<0.2	136.00	<0.5	<0.002	1.69	<0.2	8.54	<0.1
NF2	11/7/2013	Surface	<0.005	7.37	0.49	62.40	<50.0	<0.01	<0.005	34.00	0.35	3.43	<0.1	0.44	221.00	0.86	0.01	9.42	221.00	0.60	2.73	5.64	1.01	0.08	10.80	0.36	6270.00	<0.2	142.00	<0.5	0.00	1.58	<0.2	718.00	<0.1
NF2-A	11/7/2013	Surface	<0.005	14.60	0.48	64.20	<50	<0.01	<0.005	39.00	1.11	10.60	<0.1	0.53	374.00	0.97	6.03	13.20	518.00	0.64	3.00	15.80	1.02	0.08	18.50	0.37	7140.00	<0.2	150.00	<0.5	0.01	1.62	<0.2	2290.00	<0.1
NF2-B	11/7/2013	Surface	<0.005	4.73	0.48	59.30	<50	<0.01	<0.005	34.30	0.02	0.09	<0.1	0.44	98.80	0.82	4.64	7.42	38.50	0.63	2.59	0.52	0.29	0.07	7.40	0.40	6320.00	<0.2	143.00	<0.5	0.00	1.63	<0.2	7.69	<0.1



Rose Creek Additional Monitoring 2 - Maxxam Analytics Results
Total Metals

Station	Date	Sample Type	Ag µg/L	Al µg/L	As µg/L	B µg/L	Ba µg/L	Be µg/L	Bi µg/L	Ca mg/L	Cd µg/L	Co µg/L	Cr µg/L	Cu µg/L	Fe µg/L	K mg/L	Li mg/L	Mg mg/L	Mn µg/L	Mo µg/L	Na mg/L	Ni µg/L	Pb µg/L	S mg/L	Sb µg/L	Se µg/L	Si µg/L	Sn µg/L	Sr µg/L	Ti µg/L	Tl µg/L	U µg/L	V µg/L	Zn µg/L	Zr µg/L
R10B	11/7/2013	Surface	<0.005	66.60	0.65	<50.0	59.20	<0.01	<0.005	32.40	0.03	0.18	0.23	0.75	265.00	0.88	4.88	7.29	38.60	0.71	2.71	0.70	1.26	6.90	0.06	0.39	6310.00	<0.20	141.00	2.99	0.003	1.55	0.28	12.60	<0.10
NF1	11/7/2013	Surface	0.04	1040.00	3.76	<50.0	128.00	0.18	0.06	46.10	0.59	3.75	2.04	8.36	3790.00	1.38	0.01	12.40	466.00	0.47	3.40	11.00	59.90	16.30	0.13	0.39	8040.00	<0.2	194.00	21.80	0.03	2.57	4.13	458.00	0.33
NF1 - October	11/7/2013	Surface	0.02	1870.00	4.58	<50.0	171.00	0.28	0.02	156.00	2.85	107.00	2.43	9.72	44900.00	4.13	46.00	46.30	6930.00	0.10	14.00	60.60	38.70	96.60	0.07	0.10	19200.00	<0.20	687.00	38.30	0.14	2.22	4.62	2460.00	0.50
NF1 - A	11/7/2013	Surface	0.04	1270.00	4.00	<50.0	127.00	0.15	0.06	35.80	0.23	2.81	3.07	7.14	4110.00	1.16	7.41	8.54	405.00	0.33	2.83	5.64	50.10	6.70	0.13	0.37	8130.00	<0.2	156.00	41.80	0.04	2.27	4.48	51.90	0.21
NF1 - B	11/7/2013	Surface	0.01	67.90	0.75	<50.0	62.30	<0.010	<0.005	34.50	0.30	0.36	0.20	1.00	576.00	0.88	4.88	7.57	96.80	0.62	2.68	1.02	5.57	7.10	0.07	0.27	6740.00	<0.2	139.00	3.37	0.01	1.64	0.31	19.60	<0.1
NF1 - C	11/7/2013	Surface	0.03	478.00	2.71	<50.0	88.70	0.07	0.06	35.60	0.19	0.92	1.41	5.71	1680.00	0.95	5.90	7.91	98.70	0.39	2.77	3.13	80.40	6.10	0.14	0.35	7120.00	<0.2	151.00	22.50	0.04	1.98	2.10	41.40	0.13
NF1 - D	11/7/2013	Surface	0.01	223.00	1.29	<50.0	74.50	0.02	0.03	33.90	0.10	0.44	0.54	2.53	818.00	0.94	5.18	7.65	82.80	0.57	2.73	1.49	21.30	7.20	0.09	0.33	6690.00	<0.2	157.00	11.30	0.01	1.82	0.92	17.50	<0.1
NF1 - E	11/7/2013	Surface	<0.025	100.00	1.48	<250	61.40	<0.05	<0.025	33.20	0.08	0.31	<0.5	1.29	562.00	0.96	5.10	8.61	84.00	0.74	2.99	1.29	7.92	2160.00	0.11	0.32	6320.00	<1	148.00	7.10	0.02	1.72	<1.0	16.40	<0.5
NF1 - F	11/7/2013	Surface	0.01	51.50	0.81	<50.0	62.70	<0.01	<0.005	34.00	0.25	0.29	0.16	0.77	439.00	0.91	4.94	7.70	107.00	0.64	2.76	0.96	4.75	6.60	0.07	0.35	6490.00	<0.2	144.00	2.17	0.01	1.73	0.23	12.40	<0.1
NF1 - G	11/7/2013	Surface	0.03	2800.00	8.66	<50.0	231.00	0.48	0.14	40.90	0.81	5.50	5.84	21.80	8410.00	1.40	10.20	8.93	854.00	0.55	2.70	13.90	150.00	6.60	0.15	0.38	9990.00	<0.2	168.00	52.10	0.10	4.19	10.90	101.00	0.55
NF1 - H	11/7/2013	Surface	0.01	31.20	0.57	<50.0	61.60	<0.01	<0.005	32.80	0.02	0.14	0.14	0.65	190.00	0.90	4.50	7.83	39.20	0.59	2.75	0.58	0.95	7.50	0.07	0.37	6180.00	<0.2	143.00	1.51	0.01	1.70	<0.2	9.22	<0.1
NF1 - I	11/7/2013	Surface	0.02	688.00	2.23	<50.0	92.00	0.10	0.05	34.60	0.13	1.05	1.60	4.31	2250.00	1.00	5.47	7.86	187.00	0.48	2.66	3.23	22.10	5.40	0.09	0.34	7150.00	<0.2	150.00	24.90	0.02	1.94	2.23	28.20	0.20
NF1 - J	11/7/2013	Surface	<0.005	19.50	0.55	<50.0	58.70	<0.01	<0.005	33.70	0.02	0.11	0.10	0.49	146.00	0.86	4.81	7.76	28.90	0.66	2.62	0.56	0.46	5.70	0.06	0.35	6500.00	<0.2	137.00	0.80	0.00	1.61	<0.2	10.70	<0.1
NF2	11/7/2013	Surface	0.01	68.60	0.78	<50.0	63.20	<0.01	0.01	33.20	0.41	3.73	0.21	0.98	536.00	0.90	0.01	9.46	234.00	0.59	2.79	5.94	9.54	9.90	0.08	0.34	6200.00	<0.2	141.00	3.75	0.01	1.67	0.27	757.00	<0.1
NF2-A	11/7/2013	Surface	0.01	76.20	0.80	<50	56.50	0.02	<0.005	36.10	1.16	10.20	0.19	0.95	794.00	0.97	5.66	12.15	511.00	0.58	2.87	15.70	9.65	16.90	0.08	0.41	6480.00	<0.2	154.00	3.02	0.01	1.69	0.28	2140.00	<0.1
NF2-B	11/7/2013	Surface	<0.005	23.40	0.57	<50	58.80	<0.01	<0.005	33.30	0.02	0.12	0.13	0.53	183.00	0.89	4.77	7.12	42.60	0.63	2.49	0.53	1.27	7.00	0.06	0.35	6500.00	<0.2	141.00	1.13	0.00	1.63	<0.2	7.78	<0.1