

Appendix E

Baseline Groundwater Monitoring at Big Hurrah

Baseline Groundwater Monitoring
at Big Hurrah

Data

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	SGS Work Order #	Status	Elevation of well collar (Ground Surface) (ft)	Depth to static water level (ft)	Elevation of static water (ft asl)	Lab pH pH units	Lab Cond umhos/cm	TDS mg/L	TSS mg/L	Alk mg/L	SO4 mg/L	Cl mg/L	F mg/L
Detection Limits (PQL)							0.1	1	10	0.5	10	0.1	0.1	0.1
HMW-1A	10/27/05								440	3.8	319	103	2.71	0.136
HMW-1A	11/30/05								436	4.1	315	102	2.88	0.079
HMW-1A	02/06/06								379	3.4	284	91.7	2.95	0.051
HMW-1A	04/12/06								361	7.3	290	86.9	2.95	0.051
	Minimum						0	0	361	3.4	284	86.9	2.71	0.051
	Maximum						0	0	440	7.3	319	103	2.95	0.136
	Average						#DIV/0!	#DIV/0!	404	4.7	302	96	2.87	0.08
	Median						#NUM!	#NUM!	408	4.0	303	97	2.92	0.065
	Count						0	0	4	4	4	4	4	4

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Br	Sulphide	Ammonia	NO3+NO2	CN-T	CN-WAD	Calc. Hardness	Al-T	Sb-T	As-T	Ba-T	Be-T	Cd-T	Ca-T	Cr-T	Co-T	Cu-T
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L
Detection Limits (PQL)		0.05	0.1	0.1	0.1	0.005	0.005		20	1	5	3	0.4	0.5	0.1	2	4	1
HMW-1A	10/27/05		0.05	0.072	0.05	0.0025	0.0025	447	10	0.5	2.5	20.4	0.2	0.25	90.6	0.5	2	0.331
HMW-1A	11/30/05		0.05	0.0361	0.05	0.0025	0.0025	439	10	0.5	2.92	20.5	0.2	0.25	89.3	0.5	2	0.726
HMW-1A	02/06/06		0.05	0.174	0.05	0.0025	0.0025	388	7.39	0.5	2.5	20.2	0.2	0.25	77.9	0.5	2	0.516
HMW-1A	04/12/06		0.05	0.092	0.0495	0.0025	0.0025	386	10	0.5	1.72	22.4	0.2	0.25	78.9	0.5	2	0.5
	Minimum	0	0.05	0.0361	0.0495	0.0025	0.0025	386	7.39	0.5	1.72	20.2	0.2	0.25	77.9	0.5	2	0.331
	Maximum	0	0.05	0.174	0.05	0.0025	0.0025	447	10	0.5	2.92	22.4	0.2	0.25	90.6	0.5	2	0.726
	Average	#DIV/0!	0.05	0.09	0.05	0.003	0.003	415	9	0.5	2	20.9	0.2	0.25	84.2	0.50	2.00	0.52
	Median	#NUM!	0.05	0.082	0.05	0.0025	0.0025	414	10	0.5	2.5	20.5	0.2	0.25	84.1	0.5	2	0.508
	Count	0	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Fe-T	Pb-T	Mg-T	Mn-T	Hg-T	Mo-T	Ni-T	P-T	K-T	Se-T	Si-T	Ag-T	Na-T	Sr-T	Tl-T	Sn-T	Ti-T	V-T
Units		mg/L	ug/L	mg/L	ug/L	ng/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L
Detection Limits (PQL)		0.02	0.2	0.1	1	1	10	2	200	500	5	200	1	500	0.005	1	1	5	20
HMW-1A	10/27/05	2.38	0.1	53.6	47		5	1.3	100	641	2.5	2560	0.5	2250	0.33	0.5	0.5	98.9	10
HMW-1A	11/30/05	2.47	0.1	52.6	53.4		5	1.98	100	617	2.5	2380	0.5	2330	0.33	0.5	0.5	63.9	7.98
HMW-1A	02/06/06	2.16	0.09	47.1	46.8	0.2	5	2.83	100	587	2.5	2430	0.5	2440	0.293	0.5	0.622	82.2	10
HMW-1A	04/12/06	2.6	0.169	45.9	43.2	0.7	5	2.93	100	610	2.5	2840	0.5	2850	0.312	0.5	0.5	63.2	10
	Minimum	2.16	0.09	45.9	43.2	0.2	5	1.3	100	587	2.5	2380	0.5	2250	0.293	0.5	0.5	63.2	7.98
	Maximum	2.6	0.169	53.6	53.4	0.7	5	2.93	100	641	2.5	2840	0.5	2850	0.33	0.5	0.622	98.9	10
	Average	2.40	0.11	49.8	48	0.5	5.00	2.26	100	614	2.5	2553	0.5	2468	0.316	0.50	0.53	77.1	9
	Median	2.43	0.10	49.85	47	0.45	5	2.41	100	613.5	2.5	2495	0.5	2385	0.321	0.5	0.5	73	10
	Count	4	4	4	4	2	4	4	4	4	4	4	4	4	4	4	4	4	4

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Zn-T	Al-D	Sb-D	As-D	Ba-D	Be-D	Cd-D	Ca-D	Cr-D	Co-D	Cu-D	Fe-D	Pb-D	Mg-D	Mn-D	Hg-D	Mo-D	Ni-D
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L	ug/L	ng/L	ug/L	ug/L
Detection Limits (PQL)		5	20	1	5	3	0.4	0.5	0.1	2	4	1	0.02	0.2	0.1	1	1	10	2
HMW-1A	10/27/05	1.71	10	0.5	2.5	19.5	0.2	0.25	90.8	0.5	2	0.311	2.36	0.1	53.6	43.9		5	1.27
HMW-1A	11/30/05	2.44	13.2	0.5	2.5	20.6	0.2	0.235	89.8	0.5	2	0.461	2.31	0.1	53.8	44.7		5	2.52
HMW-1A	02/06/06	2.5	10	0.388	2.72	18.2	0.235	0.25	76.3	0.5	2	0.554	0.0752	0.192	45.6	46		3.4	2.6
HMW-1A	04/12/06	2.5	10	0.5	2.21	25.3	0.2	0.25	77.9	0.5	2	0.683	0.381	0.102	45.2	47.4		5.24	1.73
	Minimum	1.71	10	0.388	2.21	18.2	0.2	0.235	76.3	0.5	2	0.311	0.0752	0.1	45.2	43.9	0	3.4	1.27
	Maximum	2.5	13.2	0.5	2.72	25.3	0.235	0.25	90.8	0.5	2	0.683	2.36	0.192	53.8	47.4	0	5.24	2.6
	Average	2.3	10.8	0.5	2.5	20.9	0.2	0.25	83.7	0.50	2	0.50	1.28	0.12	49.6	46	#DIV/0!	4.7	2.03
	Median	2.47	10	0.5	2.5	20.05	0.2	0.25	83.9	0.5	2	0.5075	1.3455	0.101	49.6	45.35	#NUM!	5	2.13
	Count	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	0	4	4

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	P-D	K-D	Se-D	Si-D	Ag-D	Na-D	Sr-D	Tl-D	Sn-D	Ti-D	V-D	Zn-D	Anion Sum meq	Cation Sum meq	Ion Balance
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L			
Detection Limits (PQL)		200	500	5	200	1	500	0.005	1	1	5	20	5			
HMW-1A	10/27/05	100	558	2.5	2550	0.5	2190	0.326	0.5	0.5	98.7	10	1.8	8.61	9.50	-5%
HMW-1A	11/30/05	100	566	2.5	2690	0.5	1980	0.326	0.5	0.5	71.7	10	5.75	8.51	9.48	-5%
HMW-1A	02/06/06	100	571	2.5	2580	0.5	2380	0.288	0.5	2.67	81.7	10	2.5	7.68	8.05	-2%
HMW-1A	04/12/06	100	533	2.5	2980	0.5	2970	0.309	0.5	1.59	81.5	10	2.5	7.70	8.19	-3%
Minimum		100	533	2.5	2550	0.5	1980	0.288	0.5	0.5	71.7	10	1.8			
Maximum		100	571	2.5	2980	0.5	2970	0.326	0.5	2.67	98.7	10	5.75			
Average		100	557	2.5	2700	0.5	2380	0.31	0.5	1.3	83	10	3.14			
Median		100	562	2.5	2635	0.5	2285	0.318	0.5	1.045	82	10	2.5			
Count		4	4	4	4	4	4	4	4	4	4	4	4			

Notes:

The sampling reference point was not recorded for the wells during sampling. Caution should therefore be applied when comparing water elevations in other wells.

 Datapoints to be excluded from analyses due to unexplained contamination.

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	SGS Work Order #	Status	Elevation of well collar (Ground Surface) (ft)	Depth to static water level (ft)	Elevation of static water (ft asl)	Lab pH pH units	Lab Cond umhos/cm	TDS mg/L	TSS mg/L	Alk mg/L	SO4 mg/L	Cl mg/L	F mg/L
Detection Limits (PQL)							0.1	1	10	0.5	10	0.1	0.1	0.1
HMW-2A	09/29/06								368	5.2	248	61	2.94	0.091
	Minimum						0	0	368	5.2	248	61	2.94	0.091
	Maximum						0	0	368	5.2	248	61	2.94	0.091
	Average						#DIV/0!	#DIV/0!	368	5.2	248	61	2.94	0.091
	Median						#NUM!	#NUM!	368	5.2	248	61	2.94	0.091
	Count						0	0	1	1	1	1	1	1

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Br	Sulphide	Ammonia	NO3+NO2	CN-T	CN-WAD	Calc. Hardness	Al-T	Sb-T	As-T	Ba-T	Be-T	Cd-T	Ca-T	Cr-T	Co-T	Cu-T
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L
Detection Limits (PQL)		0.05	0.1	0.1	0.1	0.005	0.005		20	1	5	3	0.4	0.5	0.1	2	4	1
HMW-2A	09/29/06		0.05	0.116	0.05	0.0025	0.0025	318	52	11	4.46	26.2	0.2	0.25	83.8	0.697	2	0.578
Minimum		0	0.05	0.116	0.05	0.0025	0.0025	318.415	52	11	4.46	26.2	0.2	0.25	83.8	0.697	2	0.578
Maximum		0	0.05	0.116	0.05	0.0025	0.0025	318.415	52	11	4.46	26.2	0.2	0.25	83.8	0.697	2	0.578
Average		#DIV/0!	0.05	0.116	0.05	0.0025	0.0025	318.415	52	11	4.46	26.2	0.2	0.25	83.8	0.697	2	0.578
Median		#NUM!	0.05	0.116	0.05	0.0025	0.0025	318.415	52	11	4.46	26.2	0.2	0.25	83.8	0.697	2	0.578
Count		0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Fe-T	Pb-T	Mg-T	Mn-T	Hg-T	Mo-T	Ni-T	P-T	K-T	Se-T	Si-T	Ag-T	Na-T	Sr-T	Tl-T	Sn-T	Ti-T	V-T
Units		mg/L	ug/L	mg/L	ug/L	ng/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L
Detection Limits (PQL)		0.02	0.2	0.1	1	1	10	2	200	500	5	200	1	500	0.005	1	1	5	20
HMW-2A	09/29/06	1.1	0.178	26.5	37.6		3.7	2.47	100	987	2.5	3490	0.5	2340	0.545	0.652	5.74	93.3	10
	Minimum	1.1	0.178	26.5	37.6	0	3.7	2.47	100	987	2.5	3490	0.5	2340	0.545	0.652	5.74	93.3	10
	Maximum	1.1	0.178	26.5	37.6	0	3.7	2.47	100	987	2.5	3490	0.5	2340	0.545	0.652	5.74	93.3	10
	Average	1.1	0.178	26.5	37.6	#DIV/0!	3.7	2.47	100	987	2.5	3490	0.5	2340	0.545	0.652	5.74	93.3	10
	Median	1.1	0.178	26.5	37.6	#NUM!	3.7	2.47	100	987	2.5	3490	0.5	2340	0.545	0.652	5.74	93.3	10
	Count	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Zn-T	Al-D	Sb-D	As-D	Ba-D	Be-D	Cd-D	Ca-D	Cr-D	Co-D	Cu-D	Fe-D	Pb-D	Mg-D	Mn-D	Hg-D	Mo-D	Ni-D
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L	ug/L	ng/L	ug/L	ug/L
Detection Limits (PQL)		5	20	1	5	3	0.4	0.5	0.1	2	4	1	0.02	0.2	0.1	1	1	10	2
HMW-2A	09/29/06	2.5	7.97	10.8	2.5	26.1	0.2	0.25	85.3	0.5	2	0.578	0.903	0.1	26	36.2		5	2.58
	Minimum	2.5	7.97	10.8	2.5	26.1	0.2	0.25	85.3	0.5	2	0.578	0.903	0.1	26	36.2	0	5	2.58
	Maximum	2.5	7.97	10.8	2.5	26.1	0.2	0.25	85.3	0.5	2	0.578	0.903	0.1	26	36.2	0	5	2.58
	Average	2.5	7.97	10.8	2.5	26.1	0.2	0.25	85.3	0.5	2	0.578	0.903	0.1	26	36.2	#DIV/0!	5	2.58
	Median	2.5	7.97	10.8	2.5	26.1	0.2	0.25	85.3	0.5	2	0.578	0.903	0.1	26	36.2	#NUM!	5	2.58
	Count	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	P-D	K-D	Se-D	Si-D	Ag-D	Na-D	Sr-D	TI-D	Sn-D	Ti-D	V-D	Zn-D	Anion Sum	Cation Sum	Ion Balance
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	meq	meq	
Detection Limits (PQL)		200	500	5	200	1	500	0.005	1	1	5	20	5			
HMW-2A	09/29/06	100	978	2.5	3520	0.5	2420	0.541	0.5	0.825	93.8	10	3.09	6.32	7.06	-6%
Minimum		100	978	2.5	3520	0.5	2420	0.541	0.5	0.825	93.8	10	3.09			
Maximum		100	978	2.5	3520	0.5	2420	0.541	0.5	0.825	93.8	10	3.09			
Average		100	978	2.5	3520	0.5	2420	0.541	0.5	0.825	93.8	10	3.09			
Median		100	978	2.5	3520	0.5	2420	0.541	0.5	0.825	93.8	10	3.09			
Count		1	1	1	1	1	1	1	1	1	1	1	1			

Notes:

The sampling reference point was not recorded for the wells during sampling. Caution should therefore be applied when comparing water elevations in other wells.

 Datapoints to be excluded from analyses due to unexplained contamination.

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	SGS Work Order #	Status	Elevation of well collar (Ground Surface) (ft)	Depth to static water level (ft)	Elevation of static water (ft asl)	Lab pH pH units	Lab Cond umhos/cm	TDS mg/L	TSS mg/L	Alk mg/L	SO4 mg/L	Cl mg/L	F mg/L
Detection Limits (PQL)							0.1	1	10	0.5	10	0.1	0.1	0.1
HMW-2B	09/29/06								221	0.3	156	33.4	2.77	0.036
	Minimum						0	0	221	0.3	156	33.4	2.77	0.036
	Maximum						0	0	221	0.3	156	33.4	2.77	0.036
	Average						#DIV/0!	#DIV/0!	221	0.3	156	33.4	2.77	0.036
	Median						#NUM!	#NUM!	221	0.3	156	33.4	2.77	0.036
	Count						0	0	1	1	1	1	1	1

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Br	Sulphide	Ammonia	NO3+NO2	CN-T	CN-WAD	Calc. Hardness	Al-T	Sb-T	As-T	Ba-T	Be-T	Cd-T	Ca-T	Cr-T	Co-T	Cu-T
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L
Detection Limits (PQL)		0.05	0.1	0.1	0.1	0.005	0.005		20	1	5	3	0.4	0.5	0.1	2	4	1
HMW-2B	09/29/06		0.05	0.084	0.05	0.0025	0.0025	185	8.61	1.43	2.5	46.1	0.2	0.25	55.7	0.5	2	0.553
Minimum		0	0.05	0.084	0.05	0.0025	0.0025	185.282	8.61	1.43	2.5	46.1	0.2	0.25	55.7	0.5	2	0.553
Maximum		0	0.05	0.084	0.05	0.0025	0.0025	185.282	8.61	1.43	2.5	46.1	0.2	0.25	55.7	0.5	2	0.553
Average		#DIV/0!	0.05	0.084	0.05	0.0025	0.0025	185.282	8.61	1.43	2.5	46.1	0.2	0.25	55.7	0.5	2	0.553
Median		#NUM!	0.05	0.084	0.05	0.0025	0.0025	185.282	8.61	1.43	2.5	46.1	0.2	0.25	55.7	0.5	2	0.553
Count		0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Fe-T	Pb-T	Mg-T	Mn-T	Hg-T	Mo-T	Ni-T	P-T	K-T	Se-T	Si-T	Ag-T	Na-T	Sr-T	Tl-T	Sn-T	Ti-T	V-T
Units		mg/L	ug/L	mg/L	ug/L	ng/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L
Detection Limits (PQL)		0.02	0.2	0.1	1	1	10	2	200	500	5	200	1	500	0.005	1	1	5	20
HMW-2B	09/29/06	0.01	0.07	11.2	1.38		5	1.89	100	208	1.76	2760	0.5	2070	0.134	0.573	2.92	60.1	10
Minimum		0.01	0.07	11.2	1.38	0	5	1.89	100	208	1.76	2760	0.5	2070	0.134	0.573	2.92	60.1	10
Maximum		0.01	0.07	11.2	1.38	0	5	1.89	100	208	1.76	2760	0.5	2070	0.134	0.573	2.92	60.1	10
Average		0.01	0.07	11.2	1.38	#DIV/0!	5	1.89	100	208	1.76	2760	0.5	2070	0.134	0.573	2.92	60.1	10
Median		0.01	0.07	11.2	1.38	#NUM!	5	1.89	100	208	1.76	2760	0.5	2070	0.134	0.573	2.92	60.1	10
Count		1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Zn-T	Al-D	Sb-D	As-D	Ba-D	Be-D	Cd-D	Ca-D	Cr-D	Co-D	Cu-D	Fe-D	Pb-D	Mg-D	Mn-D	Hg-D	Mo-D	Ni-D
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L	ug/L	ng/L	ug/L	ug/L
Detection Limits (PQL)		5	20	1	5	3	0.4	0.5	0.1	2	4	1	0.02	0.2	0.1	1	1	10	2
HMW-2B	09/29/06	7.12	6.64	1.13	2.5	45.1	0.2	0.25	59.4	0.5	2	0.46	0.01	0.1	10.9	0.493		5	2.07
	Minimum	7.12	6.64	1.13	2.5	45.1	0.2	0.25	59.4	0.5	2	0.46	0.01	0.1	10.9	0.493	0	5	2.07
	Maximum	7.12	6.64	1.13	2.5	45.1	0.2	0.25	59.4	0.5	2	0.46	0.01	0.1	10.9	0.493	0	5	2.07
	Average	7.12	6.64	1.13	2.5	45.1	0.2	0.25	59.4	0.5	2	0.46	0.01	0.1	10.9	0.493	#DIV/0!	5	2.07
	Median	7.12	6.64	1.13	2.5	45.1	0.2	0.25	59.4	0.5	2	0.46	0.01	0.1	10.9	0.493	#NUM!	5	2.07
	Count	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	P-D	K-D	Se-D	Si-D	Ag-D	Na-D	Sr-D	TI-D	Sn-D	Ti-D	V-D	Zn-D	Anion Sum	Cation Sum	Ion Balance
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	meq	meq	
Detection Limits (PQL)		200	500	5	200	1	500	0.005	1	1	5	20	5			
HMW-2B	09/29/06	100	188	2.5	2710	0.5	2080	0.135	0.5	0.5	65.5	10	8.48	3.90	4.34	-5%
Minimum		100	188	2.5	2710	0.5	2080	0.135	0.5	0.5	65.5	10	8.48			
Maximum		100	188	2.5	2710	0.5	2080	0.135	0.5	0.5	65.5	10	8.48			
Average		100	188	2.5	2710	0.5	2080	0.135	0.5	0.5	65.5	10	8.48			
Median		100	188	2.5	2710	0.5	2080	0.135	0.5	0.5	65.5	10	8.48			
Count		1	1	1	1	1	1	1	1	1	1	1	1			

Notes:

The sampling reference point was not recorded for the wells during sampling. Caution should therefore be applied when comparing water elevations in other wells.

 Datapoints to be excluded from analyses due to unexplained contamination.

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	SGS Work Order #	Status	Elevation of well collar (Ground Surface) (ft)	Depth to static water level (ft)	Elevation of static water (ft asl)	Lab pH pH units	Lab Cond umhos/cm	TDS mg/L	TSS mg/L	Alk mg/L	SO4 mg/L	Cl mg/L	F mg/L
Detection Limits (PQL)							0.1	1	10	0.5	10	0.1	0.1	0.1
HMW-3A	11/27/05								340	0.8	298	58	2.78	0.076
HMW-3A	04/12/06								345	2.2	288	58.3	2.82	0.048
HMW-3A	10/24/07	1075845	Accepted				7.35	550	351	5.1	296	54.4	2.7	0.059
	Minimum						7.35	550	340	0.8	288	54.4	2.7	0.048
	Maximum						7.35	550	351	5.1	298	58.3	2.82	0.076
	Average						7.35	550	345	2.7	294	57	2.77	0.06
	Median						7.35	550	345	2.2	296	58	2.78	0.059
	Count						1	1	3	3	3	3	3	3

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Br	Sulphide	Ammonia	NO3+NO2	CN-T	CN-WAD	Calc. Hardness	Al-T	Sb-T	As-T	Ba-T	Be-T	Cd-T	Ca-T	Cr-T	Co-T	Cu-T
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L
Detection Limits (PQL)		0.05	0.1	0.1	0.1	0.005	0.005		20	1	5	3	0.4	0.5	0.1	2	4	1
HMW-3A	11/27/05		0.05	0.139	0.0545	0.0025	0.0025	365	6.79	1.34	2.5	37.1	0.2	0.25	84	0.5	2	0.387
HMW-3A	04/12/06		0.05	0.084	0.056	0.0025	0.0025	358	8.56	0.851	2.5	35.4	0.2	0.25	82.4	0.5	2	0.5
HMW-3A	10/24/07		0.05	0.107	0.05	0.0025	0.0025	367	54.6	0.458	2.5	38.7	0.2	0.25	85.8	1	2	0.5
	Minimum	0	0.05	0.084	0.05	0.0025	0.0025	358	6.79	0.458	2.5	35.4	0.2	0.25	82.4	0.5	2	0.387
	Maximum	0	0.05	0.139	0.056	0.0025	0.0025	367	54.6	1.34	2.5	38.7	0.2	0.25	85.8	1	2	0.5
	Average	#DIV/0!	0.05	0.11	0.05	0.003	0.003	363	23	0.9	3	37.1	0.2	0.25	84.1	0.67	2.00	0.46
	Median	#NUM!	0.05	0.107	0.0545	0.0025	0.0025	365	8.56	0.851	2.5	37.1	0.2	0.25	84.0	0.5	2	0.5
	Count	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Fe-T	Pb-T	Mg-T	Mn-T	Hg-T	Mo-T	Ni-T	P-T	K-T	Se-T	Si-T	Ag-T	Na-T	Sr-T	Tl-T	Sn-T	Ti-T	V-T
Units		mg/L	ug/L	mg/L	ug/L	ng/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L
Detection Limits (PQL)		0.02	0.2	0.1	1	1	10	2	200	500	5	200	1	500	0.005	1	1	5	20
HMW-3A	11/27/05	0.742	0.088	37.6	11.1		5	3.25	100	1510	2.5	4310	0.5	2640	0.491	0.5	0.5	33.8	10
HMW-3A	04/12/06	0.807	0.1	37	9	0.2	5	4.13	100	1580	2.5	4750	0.5	2930	0.5	0.5	0.5	59.1	10
HMW-3A	10/24/07	0.895	0.1	37.1	9.59	0.5	5	2.06	100	1760	2.5	4820	0.5	2960	0.484	0.356	0.5	79.2	10
	Minimum	0.742	0.088	37	9	0.2	5	2.06	100	1510	2.5	4310	0.5	2640	0.484	0.356	0.5	33.8	10
	Maximum	0.895	0.1	37.6	11.1	0.5	5	4.13	100	1760	2.5	4820	0.5	2960	0.5	0.5	0.5	79.2	10
	Average	0.81	0.10	37.2	10	0.4	5.00	3.15	100	1617	2.5	4627	0.5	2843	0.492	0.45	0.50	57.4	10
	Median	0.81	0.10	37.1	10	0.35	5	3.25	100	1580	2.5	4750	0.5	2930	0.491	0.5	0.5	59	10
	Count	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Zn-T	Al-D	Sb-D	As-D	Ba-D	Be-D	Cd-D	Ca-D	Cr-D	Co-D	Cu-D	Fe-D	Pb-D	Mg-D	Mn-D	Hg-D	Mo-D	Ni-D
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L	ug/L	ng/L	ug/L	ug/L
Detection Limits (PQL)		5	20	1	5	3	0.4	0.5	0.1	2	4	1	0.02	0.2	0.1	1	1	10	2
HMW-3A	11/27/05	5.43	34.3	1.17	2.38	37.5	0.2	0.127	86.8	0.5	2	0.446	0.752	0.1	38.7	11		5	3.98
HMW-3A	04/12/06	2.5	10	0.977	2.5	39.8	0.2	0.25	84.1	0.5	2	0.459	0.0134	0.1	37.6	9.82		5	2.75
HMW-3A	10/24/07	2.5	6.62	0.385	2.5	38.4	0.2	0.25	84.5	1	2	0.5	0.182	0.1	36.5	9.19		5	1.93
	Minimum	2.5	6.62	0.385	2.38	37.5	0.2	0.127	84.1	0.5	2	0.446	0.0134	0.1	36.5	9.19	0	5	1.93
	Maximum	5.43	34.3	1.17	2.5	39.8	0.2	0.25	86.8	1	2	0.5	0.752	0.1	38.7	11	0	5	3.98
	Average	3.5	17.0	0.8	2.5	38.6	0.2	0.21	85.1	0.67	2	0.47	0.32	0.10	37.6	10	#DIV/0!	5.0	2.89
	Median	2.5	10	0.977	2.5	38.4	0.2	0.25	84.5	0.5	2	0.459	0.182	0.1	37.6	9.82	#NUM!	5	2.75
	Count	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0	3	3

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	P-D	K-D	Se-D	Si-D	Ag-D	Na-D	Sr-D	Tl-D	Sn-D	Ti-D	V-D	Zn-D	Anion Sum	Cation Sum	Ion Balance
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	meq	meq	
Detection Limits (PQL)		200	500	5	200	1	500	0.005	1	1	5	20	5			
HMW-3A	11/27/05	100	1560	2.5	4650	0.5	2520	0.507	0.5	0.5	70.1	10	2.14	7.25	8.36	-7%
HMW-3A	04/12/06	100	1670	2.5	4860	0.5	2760	0.512	0.5	0.5	81.7	10	1.61	7.06	8.15	-7%
HMW-3A	10/24/07	100	1770	2.5	4720	0.5	2830	0.479	0.5	0.5	85.4	10	9.31	7.14	8.07	-6%
Minimum		100	1560	2.5	4650	0.5	2520	0.479	0.5	0.5	70.1	10	1.61			
Maximum		100	1770	2.5	4860	0.5	2830	0.512	0.5	0.5	85.4	10	9.31			
Average		100	1667	2.5	4743	0.5	2703	0.50	0.5	0.5	79	10	4.35			
Median		100	1670	2.5	4720	0.5	2760	0.507	0.5	0.5	82	10	2.14			
Count		3	3	3	3	3	3	3	3	3	3	3	3			

Notes:

The sampling reference point was not recorded for the wells during sampling. Caution should therefore be applied when comparing water elevations in other wells.

 Datapoints to be excluded from analyses due to unexplained contamination.

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	SGS Work Order #	Status	Elevation of well collar (Ground Surface) (ft)	Depth to static water level (ft)	Elevation of static water (ft asl)	Lab pH pH units	Lab Cond umhos/cm	TDS mg/L	TSS mg/L	Alk mg/L	SO4 mg/L	Cl mg/L	F mg/L
Detection Limits (PQL)							0.1	1	10	0.5	10	0.1	0.1	0.1
HMW-3B	03/09/05						7.26	600	346	16	287	59.5	2.91	0.068
HMW-3B	04/21/05						7.3	650	351	222	312	58.5	2.96	0.042
HMW-3B	11/30/05								348	1.6	292	56.5	2.76	0.07
HMW-3B	02/06/06								360	14	302	59	3.37	0.048
HMW-3B	04/11/06								347	2.4	72	59.3	2.86	0.047
	Minimum						7.26	600	346	1.6	72	56.5	2.76	0.042
	Maximum						7.3	650	360	222	312	59.5	3.37	0.07
	Average						7.28	625	350	51.2	253	59	2.97	0.06
	Median						7.28	625	348	14	292	59	2.91	0.048
	Count						2	2	5	5	5	5	5	5

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Br	Sulphide	Ammonia	NO3+NO2	CN-T	CN-WAD	Calc. Hardness	Al-T	Sb-T	As-T	Ba-T	Be-T	Cd-T	Ca-T	Cr-T	Co-T	Cu-T
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L
Detection Limits (PQL)		0.05	0.1	0.1	0.1	0.005	0.005		20	1	5	3	0.4	0.5	0.1	2	4	1
HMW-3B	03/09/05		0.05	0.05	0.27	0.004	0.003	369	328	0.5	2.5	29.6	0.2	0.25	95.3	0.62	2	1.57
HMW-3B	04/21/05		0.05	0.044	0.5	0.0025	0.0025	338	4670	1.13	4.78	64.3	0.209	0.25	83.7	5.46	3.43	15.8
HMW-3B	11/30/05		0.05	0.0699	0.05	0.0025	0.0025	369	9.08	0.5	2.18	24.5	0.179	0.25	92.2	0.5	1.72	0.573
HMW-3B	02/06/06		0.05	0.152	0.05	0.0025	0.0025	350	129	0.516	2.97	29.8	0.2	0.25	87.2	2.48	2	3.73
HMW-3B	04/11/06		0.05	0.211	0.05	0.0025	0.0025	353	7.3	0.5	2.5	26.8	0.2	0.25	87.6	0.5	2.47	0.34
	Minimum	0	0.05	0.044	0.05	0.0025	0.0025	338	7.3	0.5	2.18	24.5	0.179	0.25	83.7	0.5	1.72	0.34
	Maximum	0	0.05	0.211	0.5	0.004	0.003	369	4670	1.13	4.78	64.3	0.209	0.25	95.3	5.46	3.43	15.8
	Average	#DIV/0!	0.05	0.11	0.18	0.003	0.003	356	1029	0.6	3	35.0	0.2	0.25	89.2	1.91	2.32	4.40
	Median	#NUM!	0.05	0.0699	0.05	0.0025	0.0025	353	129	0.5	2.5	29.6	0.2	0.25	87.6	0.62	2	1.57
	Count	0	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Fe-T	Pb-T	Mg-T	Mn-T	Hg-T	Mo-T	Ni-T	P-T	K-T	Se-T	Si-T	Ag-T	Na-T	Sr-T	Tl-T	Sn-T	Ti-T	V-T
Units		mg/L	ug/L	mg/L	ug/L	ng/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L
Detection Limits (PQL)		0.02	0.2	0.1	1	1	10	2	200	500	5	200	1	500	0.005	1	1	5	20
HMW-3B	03/09/05	1.87	0.306	31.9	56.2		5	2.58	100	1260	2.5		0.5	2480	0.257	0.5	0.5	91.5	10
HMW-3B	04/21/05	10.3	3.18	31.4	162		5	12.9	189	1820	2.5	2630	0.5	2640	0.242	0.5	12.7	115	6.21
HMW-3B	11/30/05	1.07	0.099	33.8	42.3		5	2.62	100	1200	2.5	3210	0.5	2740	0.28	0.5	0.5	36.4	10
HMW-3B	02/06/06	1.62	1.46	32.2	41.9	24.8	5	4.29	100	1300	2.5	3480	0.5	3270	0.282	0.5	3.44	102	10
HMW-3B	04/11/06	1.02	0.088	32.5	33.7	0.3	5	3.28	100	1170	2.5	3590	0.5	2670	0.285	0.5	0.5	60.6	10
	Minimum	1.02	0.088	31.4	33.7	0.3	5	2.58	100	1170	2.5	2630	0.5	2480	0.242	0.5	0.5	36.4	6.21
	Maximum	10.3	3.18	33.8	162	24.8	5	12.9	189	1820	2.5	3590	0.5	3270	0.285	0.5	12.7	115	10
	Average	3.18	1.03	32.4	67	12.6	5.00	5.13	118	1350	2.5	3228	0.5	2760	0.269	0.50	3.53	81.1	9
	Median	1.62	0.31	32.2	42	12.55	5	3.28	100	1260	2.5	3345	0.5	2670	0.28	0.5	0.5	92	10
	Count	5	5	5	5	2	5	5	5	5	5	4	5	5	5	5	5	5	5

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Zn-T	Al-D	Sb-D	As-D	Ba-D	Be-D	Cd-D	Ca-D	Cr-D	Co-D	Cu-D	Fe-D	Pb-D	Mg-D	Mn-D	Hg-D	Mo-D	Ni-D
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L	ug/L	ng/L	ug/L	ug/L
Detection Limits (PQL)		5	20	1	5	3	0.4	0.5	0.1	2	4	1	0.02	0.2	0.1	1	1	10	2
HMW-3B	03/09/05	4.28	10	0.5	2.5	24.6	0.2	0.25	90.8	1.33	2	0.691	1.09	0.1	31.8	42.1		5	1.81
HMW-3B	04/21/05	37.8	10	0.5	2.5	25.5	0.2	0.25	87.6	0.5	2	0.453	1.14	0.1	31.6	44.1		5	2.31
HMW-3B	11/30/05	9.23	13.3	0.5	2.5	26	0.2	0.337	94.6	0.5	2	0.366	1.06	0.1	34.6	37.8		5	3.18
HMW-3B	02/06/06	16.1	10	0.5	1.9	26.6	0.2	0.25	88.5	0.5	2	0.637	0.125	0.1	33.6	38.7		5	3.66
HMW-3B	04/11/06	2.5	10	0.5	2.5	30	0.2	0.242	89.3	0.5	2	0.471	0.517	0.071	33.2	36.6		4.58	2.22
	Minimum	2.5	10	0.5	1.93	24.6	0.2	0.242	87.6	0.5	2	0.366	0.125	0.071	31.6	36.6	0	4.58	1.81
	Maximum	37.8	13.3	0.5	2.5	30	0.2	0.337	94.6	1.33	2	0.691	1.14	0.1	34.6	44.1	0	5	3.66
	Average	14.0	10.7	0.5	2.4	26.5	0.2	0.27	90.2	0.67	2	0.52	0.79	0.09	33.0	40	#DIV/0!	4.9	2.64
	Median	9.23	10	0.5	2.5	26	0.2	0.25	89.3	0.5	2	0.471	1.06	0.1	33.2	38.7	#NUM!	5	2.31
	Count	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	0	5	5

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	P-D	K-D	Se-D	Si-D	Ag-D	Na-D	Sr-D	TI-D	Sn-D	Ti-D	V-D	Zn-D	Anion Sum	Cation Sum	Ion Balance
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	meq	meq	
Detection Limits (PQL)		200	500	5	200	1	500	0.005	1	1	5	20	5			
HMW-3B	03/09/05	100	1080	2.5	3430	0.5	2230	0.25	0.5	0.5	85.9	10	2.24	7.08	7.80	-5%
HMW-3B	04/21/05	100	1090	2.5	7170	0.5	2240	0.247	0.5	0.5	66.1	10	2.63	7.58	8.16	-4%
HMW-3B	11/30/05	100	1130	2.5	3440	0.5	2340	0.279	0.5	0.5	72.4	10	10.5	7.10	8.23	-7%
HMW-3B	02/06/06	100	1260	2.5	3900	0.5	3220	0.278	0.5	0.911	87.5	10	11.8	7.37	7.91	-4%
HMW-3B	04/11/06	100	1250	2.5	3620	0.5	2650	0.29	0.5	1.56	83.8	10	2.5	2.76	7.87	-48%
Minimum		100	1080	2.5	3430	0.5	2230	0.247	0.5	0.5	66.1	10	2.24			
Maximum		100	1260	2.5	7170	0.5	3220	0.29	0.5	1.56	87.5	10	11.8			
Average		100	1162	2.5	4312	0.5	2536	0.27	0.5	0.8	79	10	5.93			
Median		100	1130	2.5	3620	0.5	2340	0.278	0.5	0.5	84	10	2.63			
Count		5	5	5	5	5	5	5	5	5	5	5	5			

Notes:

The sampling reference point was not recorded for the wells during sampling. Caution should therefore be applied when comparing water elevations in other wells.

[REDACTED] Datapoints to be excluded from analyses due to unexplained contamination.

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	SGS Work Order #	Status	Elevation of well collar (Ground Surface) (ft)	Depth to static water level (ft)	Elevation of static water (ft asl)	Lab pH pH units	Lab Cond umhos/cm	TDS mg/L	TSS mg/L	Alk mg/L	SO4 mg/L	Cl mg/L	F mg/L	
Units															
Detection Limits (PQL)							0.1	1	10	0.5	10	0.1	0.1	0.1	
HMW-4A	11/30/05								231	1	156	56.5	2.69	0.093	
HMW-4A	02/06/06								207	1.4	138	53.6	2.73	0.078	
HMW-4A	04/12/06								209	1.2	136	52	2.8	0.071	
HMW-4A	10/23/07	1075845	Accepted				7.47	360	5	3.4	127	69.2	2.95	0.087	
	Minimum						7.47	360	5	1	127	52	2.69	0.071	
	Maximum						7.47	360	231	3.4	156	69.2	2.95	0.093	
	Average						7.47	360	163	1.8	139	58	2.79	0.08	
	Median						7.47	360	208	1.3	137	55	2.77	0.083	
	Count						1	1	4	4	4	4	4	4	

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Br	Sulphide	Ammonia	NO3+NO2	CN-T	CN-WAD	Calc. Hardness	Al-T	Sb-T	As-T	Ba-T	Be-T	Cd-T	Ca-T	Cr-T	Co-T	Cu-T
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L
Detection Limits (PQL)		0.05	0.1	0.1	0.1	0.005	0.005		20	1	5	3	0.4	0.5	0.1	2	4	1
HMW-4A	11/30/05		0.05	0.0411	0.05	0.0025	0.0025	224	10	0.732	3.5	17.8	0.137	0.25	62.8	0.5	2	0.965
HMW-4A	02/06/06		0.05	0.093	0.05	0.0025	0.0025	195	9.14	1.09	3.44	19	0.2	0.25	54.4	0.5	2	0.5
HMW-4A	04/12/06		0.05	0.044	0.308	0.0025	0.0025	186	10	0.799	2.5	19.3	0.2	0.25	52.4	0.5	2	0.5
HMW-4A	10/23/07		0.05	0.05	0.0435	0.0025	0.0025	201	16.2	1.82	2.5	22.4	0.2	0.295	57.1	1	2	0.5
	Minimum	0	0.05	0.0411	0.0435	0.0025	0.0025	186	9.14	0.732	2.5	17.8	0.137	0.25	52.4	0.5	2	0.5
	Maximum	0	0.05	0.093	0.308	0.0025	0.0025	224	16.2	1.82	3.5	22.4	0.2	0.295	62.8	1	2	0.965
	Average	#DIV/0!	0.05	0.06	0.11	0.003	0.003	201	11	1.1	3	19.6	0.2	0.26	56.7	0.63	2.00	0.62
	Median	#NUM!	0.05	0.047	0.05	0.0025	0.0025	198	10	0.9445	2.97	19.2	0.2	0.25	55.8	0.5	2	0.5
	Count	0	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Fe-T	Pb-T	Mg-T	Mn-T	Hg-T	Mo-T	Ni-T	P-T	K-T	Se-T	Si-T	Ag-T	Na-T	Sr-T	Tl-T	Sn-T	Ti-T	V-T
Units		mg/L	ug/L	mg/L	ug/L	ng/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L
Detection Limits (PQL)		0.02	0.2	0.1	1	1	10	2	200	500	5	200	1	500	0.005	1	1	5	20
HMW-4A	11/30/05	1.05	0.1	16.3	80.8		5	1.37	100	357	2.5	3700	0.5	2310	0.352	0.5	0.5	35.6	10
HMW-4A	02/06/06	0.888	0.1	14.3	80	0.5	5	2.28	100	317	2.5	3560	0.5	2270	0.31	0.5	0.745	55.6	10
HMW-4A	04/12/06	0.908	0.1	13.4	68.5	0.2	5	2.3	100	287	2.5	3860	0.5	2570	0.304	0.5	0.5	45.7	10
HMW-4A	10/23/07	1.22	0.1	14.2	108	0.5	5	1.8	100	399	2.5	3690	0.5	2420	0.319	0.5	0.5	53.9	10
	Minimum	0.888	0.1	13.4	68.5	0.2	5	1.37	100	287	2.5	3560	0.5	2270	0.304	0.5	0.5	35.6	10
	Maximum	1.22	0.1	16.3	108	0.5	5	2.3	100	399	2.5	3860	0.5	2570	0.352	0.5	0.745	55.6	10
	Average	1.02	0.10	14.6	84	0.4	5.00	1.94	100	340	2.5	3703	0.5	2393	0.321	0.50	0.56	47.7	10
	Median	0.98	0.10	14.25	80	0.5	5	2.04	100	337	2.5	3695	0.5	2365	0.3145	0.5	0.5	50	10
	Count	4	4	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Zn-T	Al-D	Sb-D	As-D	Ba-D	Be-D	Cd-D	Ca-D	Cr-D	Co-D	Cu-D	Fe-D	Pb-D	Mg-D	Mn-D	Hg-D	Mo-D	Ni-D
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L	ug/L	ng/L	ug/L	ug/L
Detection Limits (PQL)		5	20	1	5	3	0.4	0.5	0.1	2	4	1	0.02	0.2	0.1	1	1	10	2
HMW-4A	11/30/05	2.5	9.28	0.809	1.73	19.7	0.2	0.272	63.4	0.5	2	0.324	1.05	0.1	16.4	74.1		5	2.1
HMW-4A	02/06/06	2.5	10	1.19	2.29	18.1	0.2	0.25	53.7	0.5	2	0.5	0.0229	0.1	14.1	82.9		5	2.4
HMW-4A	04/12/06	1.53	10	1.07	2.5	20.7	0.2	0.25	52.9	0.5	2	0.404	0.0134	0.1	13.5	77.3		5	1.57
HMW-4A	10/23/07	2.98	10	1.15	2.5	21.5	0.2	0.25	57.8	1	2	0.5	0.01	0.1	14.5	109		5	1.38
	Minimum	1.53	9.28	0.809	1.73	18.1	0.2	0.25	52.9	0.5	2	0.324	0.01	0.1	13.5	74.1	0	5	1.38
	Maximum	2.98	10	1.19	2.5	21.5	0.2	0.272	63.4	1	2	0.5	1.05	0.1	16.4	109	0	5	2.4
	Average	2.4	9.8	1.1	2.3	20.0	0.2	0.26	57.0	0.63	2	0.43	0.27	0.10	14.6	86	#DIV/0!	5.0	1.86
	Median	2.5	10	1.11	2.395	20.2	0.2	0.25	55.8	0.5	2	0.452	0.0182	0.1	14.3	80.1	#NUM!	5	1.84
	Count	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	0	4	4

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	P-D	K-D	Se-D	Si-D	Ag-D	Na-D	Sr-D	Tl-D	Sn-D	Ti-D	V-D	Zn-D	Anion Sum	Cation Sum	Ion Balance
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	meq	meq	
Detection Limits (PQL)		200	500	5	200	1	500	0.005	1	1	5	20	5			
HMW-4A	11/30/05	100	320	2.5	3720	0.5	2270	0.361	0.5	0.5	48.7	10	3.81	4.38	5.19	-8%
HMW-4A	02/06/06	100	332	2.5	3430	0.5	2370	0.307	0.5	0.5	58.5	10	2.5	3.96	4.44	-6%
HMW-4A	04/12/06	100	298	2.5	4070	0.5	2510	0.309	0.5	0.5	48.4	10	2.5	3.91	4.45	-6%
HMW-4A	10/23/07	100	388	2.5	3810	0.5	2510	0.324	0.5	0.5	54	10	6.67	4.07	4.74	-8%
Minimum		100	298	2.5	3430	0.5	2270	0.307	0.5	0.5	48.4	10	2.5			
Maximum		100	388	2.5	4070	0.5	2510	0.361	0.5	0.5	58.5	10	6.67			
Average		100	335	2.5	3758	0.5	2415	0.33	0.5	0.5	52	10	3.87			
Median		100	326	2.5	3765	0.5	2440	0.317	0.5	0.5	51	10	3.155			
Count		4	4	4	4	4	4	4	4	4	4	4	4			

Notes:

The sampling reference point was not recorded for the wells during sampling. Caution should therefore be applied when comparing water elevations in other wells.

 Datapoints to be excluded from analyses due to unexplained contamination.

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	SGS Work Order #	Status	Elevation of well collar (Ground Surface) (ft)	Depth to static water level (ft)	Elevation of static water (ft asl)	Lab pH pH units	Lab Cond umhos/cm	TDS mg/L	TSS mg/L	Alk mg/L	SO4 mg/L	Cl mg/L	F mg/L
Detection Limits (PQL)							0.1	1	10	0.5	10	0.1	0.1	0.1
HMW-4B	10/27/05								96.3	42	56	24.8	3.45	0.048
HMW-4B	12/01/05								83.8	127	65	24.2	2.85	0.041
	Minimum						0	0	83.8	42	56	24.2	2.85	0.041
	Maximum						0	0	96.3	127	65	24.8	3.45	0.048
	Average						#DIV/0!	#DIV/0!	90	84.5	61	25	3.15	0.04
	Median						#NUM!	#NUM!	90.1	84.5	61	25	3.15	0.045
	Count						0	0	2	2	2	2	2	2

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Br	Sulphide	Ammonia	NO3+NO2	CN-T	CN-WAD	Calc. Hardness	Al-T	Sb-T	As-T	Ba-T	Be-T	Cd-T	Ca-T	Cr-T	Co-T	Cu-T
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L
Detection Limits (PQL)		0.05	0.1	0.1	0.1	0.005	0.005		20	1	5	3	0.4	0.5	0.1	2	4	1
HMW-4B	10/27/05		0.05	0.074	0.11	0.0025	0.0025	85	1350	0.5	2.5	55.8	0.2	0.25	27.1	0.5	2	1.57
HMW-4B	12/01/05		0.05	0.05	0.103	0.0025	0.0025	94	2800	0.497	6.82	100	0.2	1.34	28.8	1.56	1.89	7.07
Minimum		0	0.05	0.05	0.103	0.0025	0.0025	85	1350	0.497	2.5	55.8	0.2	0.25	27.1	0.5	1.89	1.57
Maximum		0	0.05	0.074	0.11	0.0025	0.0025	94	2800	0.5	6.82	100	0.2	1.34	28.8	1.56	2	7.07
Average		#DIV/0!	0.05	0.06	0.11	0.003	0.003	90	2075	0.5	5	77.9	0.2	0.80	28.0	1.03	1.95	4.32
Median		#NUM!	0.05	0.062	0.1065	0.0025	0.0025	90	2075	0.4985	4.66	77.9	0.2	0.795	28.0	1.03	1.945	4.32
Count		0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Fe-T	Pb-T	Mg-T	Mn-T	Hg-T	Mo-T	Ni-T	P-T	K-T	Se-T	Si-T	Ag-T	Na-T	Sr-T	Tl-T	Sn-T	Ti-T	V-T
Units		mg/L	ug/L	mg/L	ug/L	ng/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L
Detection Limits (PQL)		0.02	0.2	0.1	1	1	10	2	200	500	5	200	1	500	0.005	1	1	5	20
HMW-4B	10/27/05	1.75	1.92	4.16	20.7		5	2.05	100	364	2.5	2290	0.5	2860	0.129	0.5	0.5	28.8	10
HMW-4B	12/01/05	6.03	5.73	5.45	127		5	11.6	91.3	410	2.5	2010	0.5	2430	0.125	0.5	1.48	59	10
	Minimum	1.75	1.92	4.16	20.7	0	5	2.05	91.3	364	2.5	2010	0.5	2430	0.125	0.5	0.5	28.8	10
	Maximum	6.03	5.73	5.45	127	0	5	11.6	100	410	2.5	2290	0.5	2860	0.129	0.5	1.48	59	10
	Average	3.89	3.83	4.8	74	#DIV/0!	5.00	6.83	96	387	2.5	2150	0.5	2645	0.127	0.50	0.99	43.9	10
	Median	3.89	3.83	4.805	74	#NUM!	5	6.83	95.65	387	2.5	2150	0.5	2645	0.127	0.5	0.99	44	10
	Count	2	2	2	2	0	2	2	2	2	2	2	2	2	2	2	2	2	2

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Zn-T	Al-D	Sb-D	As-D	Ba-D	Be-D	Cd-D	Ca-D	Cr-D	Co-D	Cu-D	Fe-D	Pb-D	Mg-D	Mn-D	Hg-D	Mo-D	Ni-D
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L	ug/L	ng/L	ug/L	ug/L
Detection Limits (PQL)		5	20	1	5	3	0.4	0.5	0.1	2	4	1	0.02	0.2	0.1	1	1	10	2
HMW-4B	10/27/05	52	10.4	0.5	2.5	42	0.2	0.25	27.2	0.5	2	0.5	0.02	0.1	4.03	0.913		5	0.958
HMW-4B	12/01/05	40.2	14.6	0.5	2.5	41.9	0.2	0.347	29.6	0.5	2	0.5	0.02	0.1	5.39	1.54		5	1.41
	Minimum	40.2	10.4	0.5	2.5	41.9	0.2	0.25	27.2	0.5	2	0.5	0.02	0.1	4.03	0.913	0	5	0.958
	Maximum	52	14.6	0.5	2.5	42	0.2	0.347	29.6	0.5	2	0.5	0.02	0.1	5.39	1.54	0	5	1.41
	Average	46.1	12.5	0.5	2.5	42.0	0.2	0.30	28.4	0.50	2	0.50	0.02	0.10	4.7	1	#DIV/0!	5.0	1.18
	Median	46.1	12.5	0.5	2.5	41.95	0.2	0.299	28.4	0.5	2	0.5	0.02	0.1	4.71	1.2265	#NUM!	5	1.18
	Count	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	2	2

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	P-D	K-D	Se-D	Si-D	Ag-D	Na-D	Sr-D	Tl-D	Sn-D	Ti-D	V-D	Zn-D	Anion Sum	Cation Sum	Ion Balance
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	meq	meq	
Detection Limits (PQL)		200	500	5	200	1	500	0.005	1	1	5	20	5			
HMW-4B	10/27/05	100	254	2.5	5930	0.5	2310	0.123	0.5	0.5	20.7	6.4	27.3	1.74	2.64	-20%
HMW-4B	12/01/05	63.8	188	2.5	9620	0.5	2280	0.125	0.5	0.5	25.6	10	27.8	1.89	3.40	-28%
Minimum		64	188	2.5	5930	0.5	2280	0.123	0.5	0.5	20.7	6.4	27.3			
Maximum		100	254	2.5	9620	0.5	2310	0.125	0.5	0.5	25.6	10	27.8			
Average		82	221	2.5	7775	0.5	2295	0.12	0.5	0.5	23	8	27.55			
Median		81.9	221	2.5	7775	0.5	2295	0.124	0.5	0.5	23	8.2	27.55			
Count		2	2	2	2	2	2	2	2	2	2	2	2			

Notes:

The sampling reference point was not recorded for the wells during sampling. Caution should therefore be applied when comparing water elevations in other wells.

 Datapoints to be excluded from analyses due to unexplained contamination.

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	SGS Work Order #	Status	Elevation of well collar (Ground Surface) (ft)	Depth to static water level (ft)	Elevation of static water (ft asl)	Lab pH pH units	Lab Cond umhos/cm	TDS mg/L	TSS mg/L	Alk mg/L	SO4 mg/L	Cl mg/L	F mg/L
Detection Limits (PQL)							0.1	1	10	0.5	10	0.1	0.1	0.1
HMW-5A	10/26/05								290	1.7	205	60.8	2.82	0.146
HMW-5A	11/27/05								279	0.7	202	56.8	2.85	0.104
HMW-5A	02/06/06								239	1.7	190	53.7	2.88	0.088
HMW-5A	04/11/06								235	1.5	174	50.4	2.92	0.08
HMW-5A	10/23/07	1075845	Accepted				7.59	400	248	1.44	187	46	2.94	0.086
	Minimum						7.59	400	235	0.7	174	46	2.82	0.08
	Maximum						7.59	400	290	1.7	205	60.8	2.94	0.146
	Average						7.59	400	258	1.4	192	54	2.88	0.10
	Median						7.59	400	248	1.5	190	54	2.88	0.088
	Count						1	1	5	5	5	5	5	5

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Br	Sulphide	Ammonia	NO3+NO2	CN-T	CN-WAD	Calc. Hardness	Al-T	Sb-T	As-T	Ba-T	Be-T	Cd-T	Ca-T	Cr-T	Co-T	Cu-T
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L
Detection Limits (PQL)		0.05	0.1	0.1	0.1	0.005	0.005		20	1	5	3	0.4	0.5	0.1	2	4	1
HMW-5A	10/26/05		0.05	0.127	0.041	0.0025	0.0025	268	10	3.55	47.2	32.6	0.2	0.25	70.4	0.5	2	0.381
HMW-5A	11/27/05		0.05	0.0479	0.0425	0.0025	0.0025	264	10	4.08	44.7	31.1	0.248	0.25	68.7	0.5	2	0.5
HMW-5A	02/06/06		0.05	0.097	0.05	0.0025	0.0025	245	7.78	3.13	47.6	30.3	0.2	0.25	63.7	0.5	2	0.334
HMW-5A	04/11/06		0.05	0.042	0.05	0.0025	0.0025	230	10	2.24	32.8	27.4	0.2	0.25	59.6	0.5	2	0.508
HMW-5A	10/23/07		0.05	0.047	0.05	0.0025	0.0025	238	10	3.38	24.4	28.7	0.2	0.25	61.3	1	2	0.5
	Minimum	0	0.05	0.042	0.041	0.0025	0.0025	230	7.78	2.24	24.4	27.4	0.2	0.25	59.6	0.5	2	0.334
	Maximum	0	0.05	0.127	0.05	0.0025	0.0025	268	10	4.08	47.6	32.6	0.248	0.25	70.4	1	2	0.508
	Average	#DIV/0!	0.05	0.07	0.05	0.003	0.003	249	10	3.3	39	30.0	0.2	0.25	64.7	0.60	2.00	0.44
	Median	#NUM!	0.05	0.0479	0.05	0.0025	0.0025	245	10	3.38	44.7	30.3	0.2	0.25	63.7	0.5	2	0.5
	Count	0	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Fe-T	Pb-T	Mg-T	Mn-T	Hg-T	Mo-T	Ni-T	P-T	K-T	Se-T	Si-T	Ag-T	Na-T	Sr-T	Tl-T	Sn-T	Ti-T	V-T
Units		mg/L	ug/L	mg/L	ug/L	ng/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L
Detection Limits (PQL)		0.02	0.2	0.1	1	1	10	2	200	500	5	200	1	500	0.005	1	1	5	20
HMW-5A	10/26/05	1.01	0.1	22.3	104		11.8	13.3	100	561	2.5	3940	0.5	3420	0.455	0.5	0.5	94.9	10
HMW-5A	11/27/05	1.04	0.1	22.4	87.8		12.8	11.5	100	500	2.5	3880	0.5	3360	0.442	0.5	0.5	40.4	10
HMW-5A	02/06/06	0.995	0.1	20.8	77.8	0.3	13.2	11.9	100	475	2.5	3670	0.5	3190	0.413	0.5	0.5	65.7	10
HMW-5A	04/11/06	0.907	0.073	19.8	59.2	0.3	13.4	7.53	100	417	2.5	3660	0.5	3480	0.412	0.5	0.5	46.5	10
HMW-5A	10/23/07	0.882	0.1	20.7	61.1	0	7.7	5.8	100	519	2.5	4070	0.5	3700	0.425	0.5	0.5	56.2	10
	Minimum	0.882	0.073	19.8	59.2	0	7.7	5.8	100	417	2.5	3660	0.5	3190	0.412	0.5	0.5	40.4	10
	Maximum	1.04	0.1	22.4	104	0.3	13.4	13.3	100	561	2.5	4070	0.5	3700	0.455	0.5	0.5	94.9	10
	Average	0.97	0.09	21.2	78	0.2	11.78	10.01	100	494	2.5	3844	0.5	3430	0.429	0.50	0.50	60.7	10
	Median	1.00	0.10	20.8	78	0.3	12.8	11.50	100	500	2.5	3880	0.5	3420	0.425	0.5	0.5	56	10
	Count	5	5	5	5	3	5	5	5	5	5	5	5	5	5	5	5	5	5

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Zn-T	Al-D	Sb-D	As-D	Ba-D	Be-D	Cd-D	Ca-D	Cr-D	Co-D	Cu-D	Fe-D	Pb-D	Mg-D	Mn-D	Hg-D	Mo-D	Ni-D
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L	ug/L	ng/L	ug/L	ug/L
Detection Limits (PQL)		5	20	1	5	3	0.4	0.5	0.1	2	4	1	0.02	0.2	0.1	1	1	10	2
HMW-5A	10/26/05	2.55	8.39	3.63	44.4	32.9	0.2	0.25	70.5	0.5	2	0.5	0.946	0.1	22.3	98.2		11.9	12.4
HMW-5A	11/27/05	2.5	21.1	3.11	45.6	32.3	0.2	0.178	69.3	0.5	2	0.421	1.04	0.1	22.5	86.8		13.3	11.7
HMW-5A	02/06/06	1.9	10	4.05	35.6	29.2	0.2	0.25	63.5	0.5	2	0.311	0.329	0.1	20.7	78.4		13.4	12.1
HMW-5A	04/11/06	1.87	10	3.73	27.8	30.3	0.2	0.135	58.7	0.5	2	0.376	0.237	0.1	19.4	65		15.1	7.59
HMW-5A	10/23/07	2.5	10	2.99	17.1	28.5	0.2	0.25	60.8	1	2	2.51	0.213	0.1	20.5	63.5		7.69	5.85
	Minimum	1.87	8.39	2.99	17.1	28.5	0.2	0.135	58.7	0.5	2	0.311	0.213	0.1	19.4	63.5	0	7.69	5.85
	Maximum	2.55	21.1	4.05	45.6	32.9	0.2	0.25	70.5	1	2	2.51	1.04	0.1	22.5	98.2	0	15.1	12.4
	Average	2.3	11.9	3.5	34.1	30.6	0.2	0.21	64.6	0.60	2	0.82	0.55	0.10	21.1	78	#DIV/0!	12.3	9.93
	Median	2.5	10	3.63	35.6	30.3	0.2	0.25	63.5	0.5	2	0.421	0.329	0.1	20.7	78.4	#NUM!	13.3	11.70
	Count	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	0	5	5

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	P-D	K-D	Se-D	Si-D	Ag-D	Na-D	Sr-D	Tl-D	Sn-D	Ti-D	V-D	Zn-D	Anion Sum	Cation Sum	Ion Balance
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	meq	meq	
Detection Limits (PQL)		200	500	5	200	1	500	0.005	1	1	5	20	5			
HMW-5A	10/26/05	100	496	2.5	3890	0.5	3390	0.445	0.5	0.5	89.4	7.26	3.51	5.46	6.10	-6%
HMW-5A	11/27/05	100	470	2.5	3820	0.5	3170	0.442	0.5	0.5	59.1	10	3.1	5.31	6.04	-6%
HMW-5A	02/06/06	100	477	2.5	3810	0.5	3280	0.41	0.5	0.5	65.6	10	2.47	5.01	5.58	-5%
HMW-5A	04/11/06	100	390	2.5	4010	0.5	3290	0.403	0.5	0.575	53.8	10	2.5	4.62	5.26	-6%
HMW-5A	10/23/07	100	585	2.5	3930	0.5	3690	0.42	0.5	0.5	56.7	10	11.2	4.79	5.47	-7%
Minimum		100	390	2.5	3810	0.5	3170	0.403	0.5	0.5	53.8	7.26	2.47			
Maximum		100	585	2.5	4010	0.5	3690	0.445	0.5	0.575	89.4	10	11.2			
Average		100	484	2.5	3892	0.5	3364	0.42	0.5	0.5	65	9	4.56			
Median		100	477	2.5	3890	0.5	3290	0.420	0.5	0.5	59	10	3.1			
Count		5	5	5	5	5	5	5	5	5	5	5	5			

Notes:

The sampling reference point was not recorded for the wells during sampling. Caution should therefore be applied when comparing water elevations in other wells.

 Datapoints to be excluded from analyses due to unexplained contamination.

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	SGS Work Order #	Status	Elevation of well collar (Ground Surface) (ft)	Depth to static water level (ft)	Elevation of static water (ft asl)	Lab pH pH units	Lab Cond umhos/cm	TDS mg/L	TSS mg/L	Alk mg/L	SO4 mg/L	Cl mg/L	F mg/L	
Units															
Detection Limits (PQL)							0.1	1	10	0.5	10	0.1	0.1	0.1	
HMW-6B	03/17/05						7.79	440	295	0.8	138	131	3.3	0.08	
HMW-6B	04/25/05						7.7	430	266	3.7	142	96.5	3.39	0.083	
HMW-6B	12/01/05								235	15	133	84.8	2.8	0.087	
HMW-6B	04/12/06								268	3.9	144	105	3.44	0.075	
	Minimum						7.7	430	235	0.8	133	84.8	2.8	0.075	
	Maximum						7.79	440	295	15	144	131	3.44	0.087	
	Average						7.75	435	266	5.9	139	104	3.23	0.08	
	Median						7.745	435	267	3.8	140	101	3.35	0.082	
	Count						2	2	4	4	4	4	4	4	

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Br	Sulphide	Ammonia	NO3+NO2	CN-T	CN-WAD	Calc. Hardness	Al-T	Sb-T	As-T	Ba-T	Be-T	Cd-T	Ca-T	Cr-T	Co-T	Cu-T
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L
Detection Limits (PQL)		0.05	0.1	0.1	0.1	0.005	0.005		20	1	5	3	0.4	0.5	0.1	2	4	1
HMW-6B	03/17/05		0.05	0.05	0.05	0.0025	0.0025	221	7.41	0.41	2.22	28	0.2	0.25	49.6	1.66	2	0.656
HMW-6B	04/25/05		0.05	0.05	0.5	0.0025	0.0025	235	14.6	0.41	4.25	27.2	0.2	0.25	53.2	0.5	2	0.945
HMW-6B	12/01/05		0.05	0.05	0.0385	0.0025	0.0025	211	283	0.589	3.36	27.7	0.2	0.25	48.2	1.13	2	1.06
HMW-6B	04/12/06		0.05	0.046	0.0815	0.0025	0.0025	231	33.7	0.5	2.84	31.4	0.2	0.25	52.6	0.5	2	0.5
	Minimum	0	0.05	0.046	0.0385	0.0025	0.0025	211	7.41	0.41	2.22	27.2	0.2	0.25	48.2	0.5	2	0.5
	Maximum	0	0.05	0.05	0.5	0.0025	0.0025	235	283	0.589	4.25	31.4	0.2	0.25	53.2	1.66	2	1.06
	Average	#DIV/0!	0.05	0.05	0.17	0.003	0.003	224	85	0.5	3	28.6	0.2	0.25	50.9	0.95	2.00	0.79
	Median	#NUM!	0.05	0.05	0.06575	0.0025	0.0025	226	24.15	0.455	3.1	27.9	0.2	0.25	51.1	0.815	2	0.8005
	Count	0	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Fe-T	Pb-T	Mg-T	Mn-T	Hg-T	Mo-T	Ni-T	P-T	K-T	Se-T	Si-T	Ag-T	Na-T	Sr-T	Tl-T	Sn-T	Ti-T	V-T
Units		mg/L	ug/L	mg/L	ug/L	ng/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L
Detection Limits (PQL)		0.02	0.2	0.1	1	1	10	2	200	500	5	200	1	500	0.005	1	1	5	20
HMW-6B	03/17/05	0.485	0.1	23.5	62.9		5	1.17	100	304	2.5	2940	0.5	6210	0.527	0.5	0.5	33.8	10
HMW-6B	04/25/05	0.559	0.238	24.8	67.8		5	1.47	100	364	2.5	3100	0.5	6650	0.569	0.5	0.5	77.1	10
HMW-6B	12/01/05	1.28	0.527	21.9	85.5		5	2.86	100	349	2.5	3140	0.5	5910	0.489	0.5	0.5	66.2	10
HMW-6B	04/12/06	0.633	0.142	24.2	65.5	0.7	5	1.94	100	326	2.5	3510	0.5	6920	0.528	0.5	0.5	47.9	10
	Minimum	0.485	0.1	21.9	62.9	0.7	5	1.17	100	304	2.5	2940	0.5	5910	0.489	0.5	0.5	33.8	10
	Maximum	1.28	0.527	24.8	85.5	0.7	5	2.86	100	364	2.5	3510	0.5	6920	0.569	0.5	0.5	77.1	10
	Average	0.74	0.25	23.6	70	0.7	5.00	1.86	100	336	2.5	3173	0.5	6423	0.528	0.50	0.50	56.3	10
	Median	0.60	0.19	23.85	67	0.7	5	1.71	100	337.5	2.5	3120	0.5	6430	0.5275	0.5	0.5	57	10
	Count	4	4	4	4	1	4	4	4	4	4	4	4	4	4	4	4	4	4

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Zn-T	Al-D	Sb-D	As-D	Ba-D	Be-D	Cd-D	Ca-D	Cr-D	Co-D	Cu-D	Fe-D	Pb-D	Mg-D	Mn-D	Hg-D	Mo-D	Ni-D
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L	ug/L	ng/L	ug/L	ug/L
Detection Limits (PQL)		5	20	1	5	3	0.4	0.5	0.1	2	4	1	0.02	0.2	0.1	1	1	10	2
HMW-6B	03/17/05	2.5	10	0.329	3.24	29.5	0.2	0.25	51.1	1.32	2	0.5	0.457	0.1	23.8	71.2		5	1.95
HMW-6B	04/25/05	2.5	10	0.426	3.10	29.5	0.2	0.25	51.8	0.5	2	0.952	0.485	0.1	23.6	70		5	1.58
HMW-6B	12/01/05	1.62	7.95	0.5	4.11	23.6	0.2	0.187	49.4	0.5	2	0.5	0.499	0.1	22.7	61.6		5	1.4
HMW-6B	04/12/06	2.5	10	0.5	2.5	30.2	0.2	0.25	52.5	0.5	2	0.605	0.02	0.1	24.1	78.9		5	1.05
	Minimum	1.62	7.95	0.329	2.5	23.6	0.2	0.187	49.4	0.5	2	0.5	0.02	0.1	22.7	61.6	0	5	1.05
	Maximum	2.5	10	0.5	4.11	30.2	0.2	0.25	52.5	1.32	2	0.952	0.499	0.1	24.1	78.9	0	5	1.95
	Average	2.3	9.5	0.4	3.2	28.2	0.2	0.23	51.2	0.71	2	0.64	0.37	0.10	23.6	70	#DIV/0!	5.0	1.50
	Median	2.5	10	0.463	3.17	29.5	0.2	0.25	51.5	0.5	2	0.5525	0.471	0.1	23.7	70.6	#NUM!	5	1.49
	Count	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	0	4	4

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	P-D	K-D	Se-D	Si-D	Ag-D	Na-D	Sr-D	Tl-D	Sn-D	Ti-D	V-D	Zn-D	Anion Sum meq	Cation Sum meq	Ion Balance
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L			
Detection Limits (PQL)		200	500	5	200	1	500	0.005	1	1	5	20	5			
HMW-6B	03/17/05	100	319	2.5	3190	0.5	6680	0.537	0.5	0.5	40.7	10	3.32	5.59	5.28	3%
HMW-6B	04/25/05	100	382	2.5	2650	0.5	6930	0.549	0.5	0.5	56.9	10	2.5	4.98	5.23	-2%
HMW-6B	12/01/05	100	274	2.5	4280	0.5	5110	0.484	0.5	0.5	38.9	10	1.53	4.51	5.19	-7%
HMW-6B	04/12/06	100	324	2.5	3710	0.5	7090	0.529	0.5	0.5	61.1	10	2.5	5.17	5.45	-3%
Minimum		100	274	2.5	2650	0.5	5110	0.484	0.5	0.5	38.9	10	1.53			
Maximum		100	382	2.5	4280	0.5	7090	0.549	0.5	0.5	61.1	10	3.32			
Average		100	325	2.5	3458	0.5	6453	0.52	0.5	0.5	49	10	2.46			
Median		100	322	2.5	3450	0.5	6805	0.533	0.5	0.5	49	10	2.5			
Count		4	4	4	4	4	4	4	4	4	4	4	4			

Notes:

The sampling reference point was not recorded for the wells during sampling. Caution should therefore be applied when comparing water elevations in other wells.

 Datapoints to be excluded from analyses due to unexplained contamination.

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	SGS Work Order #	Status	Elevation of well collar (Ground Surface) (ft)	Depth to static water level (ft)	Elevation of static water (ft asl)	Lab pH pH units	Lab Cond umhos/cm	TDS mg/L	TSS mg/L	Alk mg/L	SO4 mg/L	Cl mg/L	F mg/L
Detection Limits (PQL)							0.1	1	10	0.5	10	0.1	0.1	0.1
HMW-6C	03/09/05						7.28	270	153	159	78	57.6	2.67	0.061
HMW-6C	04/21/05						7.1	270	166	582	88	60.3	2.65	0.053
	Minimum						7.1	270	153	159	78	57.6	2.65	0.053
	Maximum						7.28	270	166	582	88	60.3	2.67	0.061
	Average						7.19	270	160	371	83	59	2.66	0.06
	Median						7.19	270	160	371	83	59	2.66	0.057
	Count						2	2	2	2	2	2	2	2

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Br	Sulphide	Ammonia	NO3+NO2	CN-T	CN-WAD	Calc. Hardness	Al-T	Sb-T	As-T	Ba-T	Be-T	Cd-T	Ca-T	Cr-T	Co-T	Cu-T
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L
Detection Limits (PQL)		0.05	0.1	0.1	0.1	0.005	0.005		20	1	5	3	0.4	0.5	0.1	2	4	1
HMW-6C	03/09/05		0.05	0.085	0.09	0.006	0.003	137	3490	1.85	12.7	99.3	0.38	1.12	35.1	3.76	9.93	44.3
HMW-6C	04/21/05		0.05	0.079	0.5	0.0025	0.0025	150	16100	8.52	60.3	287	1.13	7.5	36.9	15.1	48.7	239
	Minimum	0	0.05	0.079	0.09	0.0025	0.0025	137	3490	1.85	12.7	99.3	0.38	1.12	35.1	3.76	9.93	44.3
	Maximum	0	0.05	0.085	0.5	0.006	0.003	150	16100	8.52	60.3	287	1.13	7.5	36.9	15.1	48.7	239
	Average	#DIV/0!	0.05	0.08	0.30	0.004	0.003	144	9795	5.2	36.5	193	0.8	4.31	36.0	9.43	29.3	142
	Median	#NUM!	0.05	0.082	0.295	0.00425	0.00275	144	9795	5.185	36.5	193	0.755	4.31	36.0	9.43	29.3	142
	Count	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Fe-T	Pb-T	Mg-T	Mn-T	Hg-T	Mo-T	Ni-T	P-T	K-T	Se-T	Si-T	Ag-T	Na-T	Sr-T	Tl-T	Sn-T	Ti-T	V-T
Units		mg/L	ug/L	mg/L	ug/L	ng/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L
Detection Limits (PQL)		0.02	0.2	0.1	1	1	10	2	200	500	5	200	1	500	0.005	1	1	5	20
HMW-6C	03/09/05	27.9	5.7	12	900		3.75	113	208	869	2.5		0.364	3750	0.168	0.5	0.411	48.7	10
HMW-6C	04/21/05	80.2	21.5	14.1	4300		13.6	632	1010	1490	5	2010	1.86	4910	0.179	10	1	83.8	19.6
	Minimum	27.9	5.7	12	900	0	3.75	113	208	869	2.5	2010	0.364	3750	0.168	0.5	0.411	48.7	10
	Maximum	80.2	21.5	14.1	4300	0	13.6	632	1010	1490	5	2010	1.86	4910	0.179	10	1	83.8	19.6
	Average	54.1	13.6	13.1	2600	#DIV/0!	8.68	373	609	1180	3.8	2010	1.1	4330	0.174	5.25	0.71	66.3	15
	Median	54.1	13.6	13.1	2600	#NUM!	8.68	373	609	1180	3.75	2010	1.11	4330	0.174	5.25	0.706	66.3	14.8
	Count	2	2	2	2	0	2	2	2	2	2	1	2	2	2	2	2	2	2

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Zn-T	Al-D	Sb-D	As-D	Ba-D	Be-D	Cd-D	Ca-D	Cr-D	Co-D	Cu-D	Fe-D	Pb-D	Mg-D	Mn-D	Hg-D	Mo-D	Ni-D
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L	ug/L	ng/L	ug/L	ug/L
Detection Limits (PQL)		5	20	1	5	3	0.4	0.5	0.1	2	4	1	0.02	0.2	0.1	1	1	10	2
HMW-6C	03/09/05	96.1	10	0.5	2.5	36.2	0.2	0.25	35.5	0.5	2	0.53	0.283	0.1	11.2	157		5	4.46
HMW-6C	04/21/05	512	10	0.5	2.45	44.9	0.2	0.25	36	0.5	2	0.5	0.255	0.069	11.3	160		5	4.69
	Minimum	96.1	10	0.5	2.45	36.2	0.2	0.25	35.5	0.5	2	0.5	0.255	0.069	11.2	157	0	5	4.46
	Maximum	512	10	0.5	2.5	44.9	0.2	0.25	36	0.5	2	0.53	0.283	0.1	11.3	160	0	5	4.69
	Average	304.1	10.0	0.5	2.5	40.6	0.2	0.25	35.8	0.5	2	0.52	0.27	0.08	11.3	159	#DIV/0!	5	4.58
	Median	304.1	10	0.5	2.48	40.6	0.2	0.25	35.8	0.5	2	0.52	0.269	0.085	11.3	159	#NUM!	5	4.58
	Count	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	2	2

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	P-D	K-D	Se-D	Si-D	Ag-D	Na-D	Sr-D	TI-D	Sn-D	Ti-D	V-D	Zn-D	Anion Sum	Cation Sum	Ion Balance
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	meq	meq	
Detection Limits (PQL)		200	500	5	200	1	500	0.005	1	1	5	20	5			
HMW-6C	03/09/05	100	366	2.5	5470	0.5	3280	0.164	0.5	0.5	33.1	10	2.58	2.84	3.64	-12%
HMW-6C	04/21/05	100	366	2.5	14600	0.5	3370	0.164	0.5	0.5	31	10	2.06	3.13	4.97	-23%
Minimum		100	366	2.5	5470	0.5	3280	0.164	0.5	0.5	31	10	2.06			
Maximum		100	366	2.5	14600	0.5	3370	0.164	0.5	0.5	33.1	10	2.58			
Average		100	366	2.5	10035	0.5	3325	0.164	0.5	0.5	32	10	2.32			
Median		100	366	2.5	10035	0.5	3325	0.164	0.5	0.5	32	10	2.32			
Count		2	2	2	2	2	2	2	2	2	2	2	2			

Notes:

The sampling reference point was not recorded for the wells during sampling. Caution should therefore be applied when comparing water elevations in other wells.

 Datapoints to be excluded from analyses due to unexplained contamination.

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	SGS Work Order #	Status	Elevation of well collar (Ground Surface) (ft)	Depth to static water level (ft)	Elevation of static water (ft asl)	Lab pH pH units	Lab Cond umhos/cm	TDS mg/L	TSS mg/L	Alk mg/L	SO4 mg/L	Cl mg/L	F mg/L
Detection Limits (PQL)							0.1	1	10	0.5	10	0.1	0.1	0.1
HMW-6D	10/26/05								173	2.5	90	57.5	3.19	0.091
HMW-6D	12/05/05								141	16.9	94	37.2	3.25	0.052
HMW-6D	02/07/06								156	9.9	90	56.4	3.29	0.036
	Minimum						0	0	141	2.5	90	37.2	3.19	0.036
	Maximum						0	0	173	16.9	94	57.5	3.29	0.091
	Average						#DIV/0!	#DIV/0!	157	9.8	91	50.4	3.24	0.06
	Median						#NUM!	#NUM!	156	9.9	90	56.4	3.25	0.052
	Count						0	0	3	3	3	3	3	3

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Br	Sulphide	Ammonia	NO3+NO2	CN-T	CN-WAD	Calc. Hardness	Al-T	Sb-T	As-T	Ba-T	Be-T	Cd-T	Ca-T	Cr-T	Co-T	Cu-T
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L
Detection Limits (PQL)		0.05	0.1	0.1	0.1	0.005	0.005		20	1	5	3	0.4	0.5	0.1	2	4	1
HMW-6D	10/26/05		0.05	0.087	0.08	0.0025	0.0025	150	34.4	0.5	2.5	36.4	0.2	0.25	42.7	0.5	2	0.65
HMW-6D	12/05/05		0.05		0.0505	0.0025	0.0025	127	433	0.5	2.5	46.4	0.2	0.681	37.1	1.04	2	2.87
HMW-6D	02/07/06		0.05	0.05	0.0935	0.0025	0.0025	142	238	0.34	2.5	46.1	0.2	0.25	41.6	0.5	2	1.55
	Minimum	0	0.05	0.05	0.0505	0.0025	0.0025	127	34.4	0.34	2.5	36.4	0.2	0.25	37.1	0.5	2	0.65
	Maximum	0	0.05	0.087	0.0935	0.0025	0.0025	150	433	0.5	2.5	46.4	0.2	0.681	42.7	1.04	2	2.87
	Average	#DIV/0!	0.05	0.07	0.07	0.003	0.003	140	235	0.4	3	43.0	0.2	0.39	40.5	0.68	2.00	1.69
	Median	#NUM!	0.05	0.0685	0.08	0.0025	0.0025	142	238	0.5	2.5	46.1	0.2	0.25	41.6	0.5	2	1.55
	Count	0	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Fe-T	Pb-T	Mg-T	Mn-T	Hg-T	Mo-T	Ni-T	P-T	K-T	Se-T	Si-T	Ag-T	Na-T	Sr-T	Tl-T	Sn-T	Ti-T	V-T
Units		mg/L	ug/L	mg/L	ug/L	ng/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L
Detection Limits (PQL)		0.02	0.2	0.1	1	1	10	2	200	500	5	200	1	500	0.005	1	1	5	20
HMW-6D	10/26/05	0.301	0.1	10.6	50.3		5	5.11	100	527	2.5	2260	0.5	3250	0.192	0.5	0.5	57.1	10
HMW-6D	12/05/05	1.36	0.875	8.32	144		5	7.34	100	471	2.5	2290	0.5	2990	0.168	0.5	0.625	50.1	10
HMW-6D	02/07/06	1.13	0.51	9.24	107	18.6	5	5.57	100	333	2.5	2120	0.5	3090	0.17	0.5	0.437	47.6	10
	Minimum	0.301	0.1	8.32	50.3	18.6	5	5.11	100	333	2.5	2120	0.5	2990	0.168	0.5	0.437	47.6	10
	Maximum	1.36	0.875	10.6	144	18.6	5	7.34	100	527	2.5	2290	0.5	3250	0.192	0.5	0.625	57.1	10
	Average	0.93	0.50	9.4	100	18.6	5.00	6.01	100	444	2.5	2223	0.5	3110	0.177	0.50	0.52	51.6	10
	Median	1.13	0.51	9.24	107	18.6	5	5.57	100	471	2.5	2260	0.5	3090	0.17	0.5	0.5	50	10
	Count	3	3	3	3	1	3	3	3	3	3	3	3	3	3	3	3	3	3

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	Zn-T	Al-D	Sb-D	As-D	Ba-D	Be-D	Cd-D	Ca-D	Cr-D	Co-D	Cu-D	Fe-D	Pb-D	Mg-D	Mn-D	Hg-D	Mo-D	Ni-D
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L	ug/L	ng/L	ug/L	ug/L
Detection Limits (PQL)		5	20	1	5	3	0.4	0.5	0.1	2	4	1	0.02	0.2	0.1	1	1	10	2
HMW-6D	10/26/05	6.41	12.3	0.5	2.5	34.9	0.2	0.25	42.3	0.5	2	0.5	0.129	0.1	10.6	47.2		5	4.92
HMW-6D	12/05/05	8.65	9.11	0.5	2.5	33.9	0.2	0.25	40.3	0.5	2	0.5	0.0888	0.088	9.04	121		5	4.21
HMW-6D	02/07/06	8.42	10	0.333	1.8	38.4	0.2	0.207	42.1	0.5	2	0.5	0.02	0.131	9.59	80		3.62	3.91
	Minimum	6.41	9.11	0.333	1.8	33.9	0.2	0.207	40.3	0.5	2	0.5	0.02	0.088	9.04	47.2	0	3.62	3.91
	Maximum	8.65	12.3	0.5	2.5	38.4	0.2	0.25	42.3	0.5	2	0.5	0.129	0.131	10.6	121	0	5	4.92
	Average	7.8	10.5	0.4	2.3	35.7	0.2	0.24	41.6	0.50	2	0.50	0.08	0.11	9.7	83	#DIV/0!	4.5	4.35
	Median	8.42	10	0.5	2.5	34.9	0.2	0.25	42.1	0.5	2	0.5	0.0888	0.1	9.59	80	#NUM!	5	4.21
	Count	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0	3	3

BIG HURRAH BASELINE GROUNDWATER MONITORING

Station ID	Date	P-D	K-D	Se-D	Si-D	Ag-D	Na-D	Sr-D	TI-D	Sn-D	Ti-D	V-D	Zn-D	Anion Sum meq	Cation Sum meq	Ion Balance
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L			
Detection Limits (PQL)		200	500	5	200	1	500	0.005	1	1	5	20	5			
HMW-6D	10/26/05	100	500	2.5	2420	0.5	3110	0.187	0.5	0.5	51.8	10	7.54	3.10	3.48	-6%
HMW-6D	12/05/05	100	359	2.5	2910	0.5	3080	0.171	0.5	0.5	35.4	10	3.85	2.75	3.32	-9%
HMW-6D	02/07/06	100	271	2.5	2530	0.5	3100	0.174	0.5	2.1	33.1	10	4.34	3.08	3.39	-5%
Minimum		100	271	2.5	2420	0.5	3080	0.171	0.5	0.5	33.1	10	3.85			
Maximum		100	500	2.5	2910	0.5	3110	0.187	0.5	2.1	51.8	10	7.54			
Average		100	377	2.5	2620	0.5	3097	0.18	0.5	1.0	40	10	5.24			
Median		100	359	2.5	2530	0.5	3100	0.174	0.5	0.5	35	10	4.34			
Count		3	3	3	3	3	3	3	3	3	3	3	3			

Notes:

The sampling reference point was not recorded for the wells during sampling. Caution should therefore be applied when comparing

Baseline Groundwater Monitoring
at Big Hurrah

Lab Reports



**SGS Environmental Services
Alaska Division
Level II Laboratory Data Report**

Project: Big Hurrah
Client: AK Gold Company
SGS Work Order: 1075845

Released by:

Contents:

Cover Page
Case Narrative
Final Report Pages
Quality Control Summary Forms
Chain of Custody/Sample Receipt Forms

Note:
Unless otherwise noted, all quality assurance/quality control criteria is in compliance with the standards set forth by the proper regulatory authority, the SGS Quality Assurance Program Plan, and the National Environmental Accreditation Conference.

Case Narrative

Customer: AKGOLDC **AK Gold Company**
Project: 1075845 **Big Hurrah**

Refer to the sample receipt form for information on sample condition.

1075845001 PS **HMW-3A**
4500CNWAD - Weak Acid Dissociable Cyanide - The sample and the duplicate RPD does not meet QC goals. Both the sample and the duplicate are below the method detection limit.

803755 UDUP **1075823003UDUP**

804114 DUP **1075845001DUP**
4500CNWAD - Weak Acid Dissociable Cyanide - The sample and the duplicate RPD does not meet QC goals. Both the sample and the duplicate are below the method detection limit.

803774 CB **WIC/4122**
300.0 - Anions - Detectable amount of chloride in the calibration blank; the concentration of chloride in the sample is 10X greater.

803778 CB **WIC/4122**
300.0 - Anions - Detectable amount of chloride in the calibration blank; the concentration of chloride in the sample is 10X greater.



Laboratory Analytical Report

Client: **AK Gold Company**

P.O. Box 640
115 6th Ave West
Nome, AK 997620640

Attn: **Brent Murphy**

T: (907)443-4622 F:(907)443-4661
brent.murphy@novagold.net

Project: **Big Hurrah**

Workorder No.: **1075845**

Certification:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, other than the conditions noted on the sample data sheet(s) and/or the case narrative. This certification applies only to the tested parameters and the specific sample(s) received at the laboratory.

If you have any questions regarding this report, or if we can be of further assistance, please contact your SGS Project Manager.

Stephen Ede
Stephen.Ede@sgs.com
Technical Director

Enclosed are the analytical results associated with this workorder.

As required by the state of Alaska and the USEPA, a formal Quality Assurance/Quality Control Program is maintained by SGS. A copy of our Quality Assurance Plan (QAP), which outlines this program is available at your request.

The laboratory certification numbers are AK971-05 (DW), UST-005 (CS) and AK00971 (Micro) for ADEC and 001582 for NELAP (RCRA methods: 1010/1020, 1311, 6000/7000, 9040/9045, 9056, 9060, 9065, 8015B, 8021B, 8081A/8082, 8260B, 8270C).

Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP, the National Environmental Laboratory Accreditation Program and, when applicable, other regulatory authorities.

If you have any questions regarding this report or if we can be of any assistance, please contact your SGS Project Manager at 907-562-2343.

The following descriptors may be found on your report which will serve to further qualify the data.

MDL	Method Detection Limit
PQL	Practical Quantitation Limit (reporting limit).
CL	Control Limit
U	Indicates the analyte was analyzed for but not detected.
F	Indicates value that is greater than or equal to the MDL.
J	The quantitation is an estimation.
ND	Indicates the analyte is not detected
B	Indicates the analyte is found in a blank associated with the sample.
*	The analyte has exceeded allowable regulatory or control limits.
GT	Greater Than
LT	Less Than
Q	QC parameter out of acceptance range.
M	A matrix effect was present.
E	The analyte result is above the calibrated range.
DF	Analytical Dilution Factor
JL	The analyte was positively identified, but the quantitation is a low estimation.
<Surr>	Surrogate QC spiked standard

Note: Soil samples are reported on a dry weight basis unless otherwise specified



SAMPLE SUMMARY

Print Date: 11/19/2007

Client Name: AK Gold Company
Project Name: Big Hurrah
Workorder No.: 1075845

Analytical Methods

<u>Method Description</u>	<u>Analytical Method</u>
Alkalinity as CaCO3 QC	SM20 2320B
Ammonia-N (W) SM4500-F	SM20 4500-NH3 F
Conductivity SM2510B	SM20 2510B
Ion Chromatographic Analysis (W)	EPA 300.0
Low Level Mercury EPA 1631	EPA 1631 E
Metals in Drinking Water by ICP DISSOLVE	EP200.7
Metals in Drinking Water by ICP-MS DISSO	EP200.8
Metals in Water by 200.7 ICP	EP200.7
Metals in Water by 200.8 ICP-MS	EP200.8
Nitrate/Nitrite Flow injection Pres.	SM20 4500NO3-F
pH Analysis	SM20 4500-H B
Sulfide by Colorimetric	SM20 4500S D
Total Cyanide SM4500 (W) Kone Lab	SM20 4500-CN C,E
Total Dissolved Solids SM18 2540C	SM20 2540C
Total Suspended Solids SM20 2540D	SM20 2540D
Weak Acid Disassociable Cyanide Kone	SM20 4500-CN I

Sample ID Cross Reference

<u>Lab Sample ID</u>	<u>Client Sample ID</u>
1075845001	HMW-3A
1075845002	HMW-4A
1075845003	HMW-5A
1075845004	HMW-3A
1075845005	HMW-4A
1075845006	HMW-5A



AK Gold Company

Print Date: 11/19/2007

Client Sample ID: **HMW-3A**
SGS Ref. #: 1075845001
Project ID: Big Hurrah
Matrix: Water (Surface, Eff., Ground)

All Dates/Times are Alaska Local Time
Collection Date/Time: 10/24/07 14:00
Receipt Date/Time: 10/30/07 08:50

Metals Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Calcium	85.8	0.400	0.124	mg/L	4	MIP5413	MXX19724	
Iron	0.895	0.0200	0.00620	mg/L	1	MIP5413	MXX19724	
Magnesium	37.1	0.100	0.0310	mg/L	1	MIP5413	MXX19724	
Strontium	0.484	0.00500	0.00150	mg/L	1	MIP5413	MXX19724	
Mercury	ND	1.00	0.500	ng/L	1	MCV3760	MXX19756	

Batch Information

Analytical Batch: MCV3760 Analytical Method: EPA 1631 E Analysis Date/Time: 11/09/07 13:44 Dilution Factor: 1	Prep Batch: MXX19756 Prep Method: METHOD Prep Date/Time: 11/08/07 10:15	Initial Prep Wt./Vol.: 50 mL Prep Extract Vol.: 50 mL Container ID:1075845001-I Analyst: AFH
Analytical Batch: MIP5413 Analytical Method: EP200.7 Analysis Date/Time: 11/08/07 15:34 Dilution Factor: 1	Prep Batch: MXX19724 Prep Method: E200.2 Prep Date/Time: 10/31/07 17:30	Initial Prep Wt./Vol.: 50 mL Prep Extract Vol.: 25 mL Container ID:1075845001-F Analyst: NRB
Analytical Batch: MIP5413 Analytical Method: EP200.7 Analysis Date/Time: 11/08/07 15:39 Dilution Factor: 4	Prep Batch: MXX19724 Prep Method: E200.2 Prep Date/Time: 10/31/07 17:30	Initial Prep Wt./Vol.: 50 mL Prep Extract Vol.: 25 mL Container ID:1075845001-F Analyst: NRB



Client Sample ID: **HMW-3A**
SGS Ref. #: 1075845001
Project ID: Big Hurrah
Matrix: Water (Surface, Eff., Ground)

All Dates/Times are Alaska Local Time
Collection Date/Time: 10/24/07 14:00
Receipt Date/Time: 10/30/07 08:50

Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Aluminum	54.6	20.0	6.20	ug/L	5	MMS5178	MXX19723	
Antimony	0.458 J	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Arsenic	ND	5.00	2.50	ug/L	5	MMS5178	MXX19723	
Barium	38.7	3.00	0.940	ug/L	5	MMS5178	MXX19723	
Beryllium	ND	0.400	0.130	ug/L	5	MMS5178	MXX19723	
Cadmium	ND	0.500	0.150	ug/L	5	MMS5178	MXX19723	
Chromium	ND	2.00	0.620	ug/L	5	MMS5178	MXX19723	
Cobalt	ND	4.00	1.20	ug/L	5	MMS5178	MXX19723	
Copper	ND	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Lead	ND	0.200	0.0620	ug/L	5	MMS5178	MXX19723	
Manganese	9.59	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Molybdenum	ND	10.0	3.10	ug/L	5	MMS5178	MXX19723	
Nickel	2.06	2.00	0.620	ug/L	5	MMS5178	MXX19723	
Phosphorus	ND	200	62.0	ug/L	5	MMS5178	MXX19723	
Potassium	1760	500	150	ug/L	5	MMS5178	MXX19723	
Selenium	ND	5.00	1.50	ug/L	5	MMS5178	MXX19723	
Silicon	4720	200	100	ug/L	5	MMS5178	MXX19723	
Silver	ND	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Sodium	2960	500	150	ug/L	5	MMS5178	MXX19723	
Thallium	0.356 J	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Titanium	79.2	5.00	1.50	ug/L	5	MMS5178	MXX19723	
Vanadium	ND	20.0	6.20	ug/L	5	MMS5178	MXX19723	
Tin	ND	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Zinc	ND	5.00	2.50	ug/L	5	MMS5178	MXX19723	

Batch Information

Analytical Batch: MMS5178
Analytical Method: EP200.8
Analysis Date/Time: 11/01/07 17:35
Dilution Factor: 5

Prep Batch: MXX19723
Prep Method: E200.2
Prep Date/Time: 10/31/07 17:30

Initial Prep Wt./Vol.: 50 mL
Prep Extract Vol.: 25 mL
Container ID:1075845001-F
Analyst: MH



Client Sample ID: **HMW-3A**
SGS Ref. #: 1075845001
Project ID: Big Hurrah
Matrix: Water (Surface, Eff., Ground)

All Dates/Times are Alaska Local Time
Collection Date/Time: 10/24/07 14:00
Receipt Date/Time: 10/30/07 08:50

Waters Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Chloride	2.70	0.100	0.0310	mg/L	1	WIC4122	WXX6225	
Fluoride	0.0590 J	0.100	0.0310	mg/L	1	WIC4122	WXX6225	
Total Nitrate/Nitrite-N	ND	0.100	0.0310	mg/L	5	WFI1523		
Sulfate	54.4	0.200	0.0620	mg/L	2	WIC4123	WXX6230	
Alkalinity	296	10.0	3.10	mg/L	1	WTI2897		
Total Suspended Solids	5.10	0.510	0.153	mg/L		STS3096		
Ammonia-N	0.107	0.100	0.0310	mg/L	1	WDA1192	WXX6224	
Conductivity	550	1.00	0.477	umhos/cm		WAT6644		
Cyanide	ND	0.0050	0.0015	mg/L	1	WDA1193	WXX6231	
Weak Acid Dissociable CN	ND	0.0050	0.0015	mg/L	1	WDA1194	WXX6232	
pH	7.35	0.100	0.100	pH units		WPH5283		
Sulfide	ND	0.100	0.100	mg/L		WAT6638		
Total Dissolved Solids	351	10.0	3.10	mg/L	1	WAT6639		



Client Sample ID: **HMW-3A**
 SGS Ref. #: 1075845001
 Project ID: Big Hurrah
 Matrix: Water (Surface, Eff., Ground)

All Dates/Times are Alaska Local Time
 Collection Date/Time: 10/24/07 14:00
 Receipt Date/Time: 10/30/07 08:50

Waters Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Batch Information								
Analytical Batch: STS3096							Initial Prep Wt./Vol.: 980 mL	
Analytical Method: SM20 2540D								
Analysis Date/Time: 10/30/07 15:30							Container ID:1075845001-H Analyst: CLS	
Analytical Batch: WAT6638							Initial Prep Wt./Vol.: 1 mL	
Analytical Method: SM20 4500S D								
Analysis Date/Time: 10/30/07 13:00							Container ID:1075845001-C Analyst: TRM	
Analytical Batch: WAT6639							Initial Prep Wt./Vol.: 80 mL	
Analytical Method: SM20 2540C								
Analysis Date/Time: 10/30/07 17:00							Container ID:1075845001-G Analyst: JDH	
Dilution Factor: 1								
Analytical Batch: WAT6644							Initial Prep Wt./Vol.: 1 mL	
Analytical Method: SM20 2510B								
Analysis Date/Time: 11/05/07 12:00							Container ID:1075845001-G Analyst: JDH	
Analytical Batch: WDA1192			Prep Batch: WXX6224				Initial Prep Wt./Vol.: 50 mL	
Analytical Method: SM20 4500-NH3 F			Prep Method: EXT/4500F1				Prep Extract Vol.: 50 mL	
Analysis Date/Time: 11/02/07 12:09			Prep Date/Time: 11/02/07 09:30				Container ID:1075845001-E Analyst: TRM	
Dilution Factor: 1								
Analytical Batch: WDA1193			Prep Batch: WXX6231				Initial Prep Wt./Vol.: 6 mL	
Analytical Method: SM20 4500-CN C,E			Prep Method: EXT/CN4500				Prep Extract Vol.: 6 mL	
Analysis Date/Time: 11/06/07 14:29			Prep Date/Time: 11/05/07 10:00				Container ID:1075845001-D Analyst: HP	
Dilution Factor: 1								
Analytical Batch: WDA1194			Prep Batch: WXX6232				Initial Prep Wt./Vol.: 6 mL	
Analytical Method: SM20 4500-CN I			Prep Method: EXT/WAD1				Prep Extract Vol.: 6 mL	
Analysis Date/Time: 11/06/07 15:40			Prep Date/Time: 11/05/07 10:00				Container ID:1075845001-D Analyst: HP	
Dilution Factor: 1								
Analytical Batch: WFI1523							Initial Prep Wt./Vol.: 5 mL	
Analytical Method: SM20 4500NO3-F								
Analysis Date/Time: 11/01/07 16:01							Container ID:1075845001-A Analyst: LCP	
Dilution Factor: 5								
Analytical Batch: WIC4122			Prep Batch: WXX6225				Initial Prep Wt./Vol.: 10 mL	
Analytical Method: EPA 300.0			Prep Method: H2O/EP300				Prep Extract Vol.: 10 mL	
Analysis Date/Time: 11/02/07 19:55			Prep Date/Time: 11/02/07 14:45				Container ID:1075845001-B Analyst: LCP	
Dilution Factor: 1								



Client Sample ID: **HMW-3A**
SGS Ref. #: 1075845001
Project ID: Big Hurrah
Matrix: Water (Surface, Eff., Ground)

All Dates/Times are Alaska Local Time
Collection Date/Time: 10/24/07 14:00
Receipt Date/Time: 10/30/07 08:50

Waters Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Analytical Batch: WIC4123 Analytical Method: EPA 300.0 Analysis Date/Time: 11/05/07 15:11 Dilution Factor: 2			Prep Batch: WXX6230 Prep Method: H2O/EP300 Prep Date/Time: 11/05/07 12:29				Initial Prep Wt./Vol.: 10 mL Prep Extract Vol.: 10 mL Container ID:1075845001-B Analyst: LCP	
Analytical Batch: WPH5283 Analytical Method: SM20 4500-H B Analysis Date/Time: 10/30/07 14:45							Initial Prep Wt./Vol.: 1 mL Container ID:1075845001-G Analyst: HP	
Analytical Batch: WTI2897 Analytical Method: SM20 2320B Analysis Date/Time: 11/05/07 13:49 Dilution Factor: 1							Initial Prep Wt./Vol.: 100 mL Container ID:1075845001-G Analyst: JDH	



AK Gold Company

Print Date: 11/19/2007

Client Sample ID: **HMW-4A**
SGS Ref. #: 1075845002
Project ID: Big Hurrah
Matrix: Water (Surface, Eff., Ground)

All Dates/Times are Alaska Local Time
Collection Date/Time: 10/23/07 14:20
Receipt Date/Time: 10/30/07 08:50

Metals Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Calcium	57.1	0.200	0.0620	mg/L	2	MIP5413	MXX19724	
Iron	1.22	0.0400	0.0124	mg/L	2	MIP5413	MXX19724	
Magnesium	14.2	0.200	0.0620	mg/L	2	MIP5413	MXX19724	
Strontium	0.319	0.0100	0.00300	mg/L	2	MIP5413	MXX19724	
Mercury	ND	1.00	0.500	ng/L	1	MCV3760	MXX19756	

Batch Information

Analytical Batch: MCV3760
Analytical Method: EPA 1631 E
Analysis Date/Time: 11/09/07 13:52
Dilution Factor: 1

Prep Batch: MXX19756
Prep Method: METHOD
Prep Date/Time: 11/08/07 10:15

Initial Prep Wt./Vol.: 50 mL
Prep Extract Vol.: 50 mL
Container ID:1075845002-I
Analyst: AFH

Analytical Batch: MIP5413
Analytical Method: EP200.7
Analysis Date/Time: 11/08/07 15:50
Dilution Factor: 2

Prep Batch: MXX19724
Prep Method: E200.2
Prep Date/Time: 10/31/07 17:30

Initial Prep Wt./Vol.: 50 mL
Prep Extract Vol.: 25 mL
Container ID:1075845002-F
Analyst: NRB



AK Gold Company

Print Date: 11/19/2007

Client Sample ID: **HMW-4A**
 SGS Ref. #: 1075845002
 Project ID: Big Hurrah
 Matrix: Water (Surface, Eff., Ground)

All Dates/Times are Alaska Local Time
 Collection Date/Time: 10/23/07 14:20
 Receipt Date/Time: 10/30/07 08:50

Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Aluminum	16.2 J	20.0	6.20	ug/L	5	MMS5178	MXX19723	
Antimony	1.82	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Arsenic	ND	5.00	2.50	ug/L	5	MMS5178	MXX19723	
Barium	22.4	3.00	0.940	ug/L	5	MMS5178	MXX19723	
Beryllium	ND	0.400	0.130	ug/L	5	MMS5178	MXX19723	
Cadmium	0.295 J	0.500	0.150	ug/L	5	MMS5178	MXX19723	
Chromium	ND	2.00	0.620	ug/L	5	MMS5178	MXX19723	
Cobalt	ND	4.00	1.20	ug/L	5	MMS5178	MXX19723	
Copper	ND	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Lead	ND	0.200	0.0620	ug/L	5	MMS5178	MXX19723	
Manganese	108	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Molybdenum	ND	10.0	3.10	ug/L	5	MMS5178	MXX19723	
Nickel	1.80 J	2.00	0.620	ug/L	5	MMS5178	MXX19723	
Phosphorus	ND	200	62.0	ug/L	5	MMS5178	MXX19723	
Potassium	399 J	500	150	ug/L	5	MMS5178	MXX19723	
Selenium	ND	5.00	1.50	ug/L	5	MMS5178	MXX19723	
Silicon	3810	200	100	ug/L	5	MMS5178	MXX19723	
Silver	ND	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Sodium	2420	500	150	ug/L	5	MMS5180	MXX19723	
Thallium	ND	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Titanium	53.9	5.00	1.50	ug/L	5	MMS5178	MXX19723	
Vanadium	ND	20.0	6.20	ug/L	5	MMS5178	MXX19723	
Tin	ND	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Zinc	2.98 J	5.00	2.50	ug/L	5	MMS5178	MXX19723	

Batch Information

Analytical Batch: MMS5178
 Analytical Method: EP200.8
 Analysis Date/Time: 11/01/07 18:19
 Dilution Factor: 5

Prep Batch: MXX19723
 Prep Method: E200.2
 Prep Date/Time: 10/31/07 17:30

Initial Prep Wt./Vol.: 50 mL
 Prep Extract Vol.: 25 mL
 Container ID:1075845002-F
 Analyst: MH

Analytical Batch: MMS5180
 Analytical Method: EP200.8
 Analysis Date/Time: 11/02/07 12:21
 Dilution Factor: 5

Prep Batch: MXX19723
 Prep Method: E200.2
 Prep Date/Time: 10/31/07 17:30

Initial Prep Wt./Vol.: 50 mL
 Prep Extract Vol.: 25 mL
 Container ID:1075845002-F
 Analyst: MH



Client Sample ID: **HMW-4A**
SGS Ref. #: 1075845002
Project ID: Big Hurrah
Matrix: Water (Surface, Eff., Ground)

All Dates/Times are Alaska Local Time
Collection Date/Time: 10/23/07 14:20
Receipt Date/Time: 10/30/07 08:50

Waters Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Chloride	2.95	0.100	0.0310	mg/L	1	WIC4122	WXX6225	
Fluoride	0.0870 J	0.100	0.0310	mg/L	1	WIC4122	WXX6225	
Total Nitrate/Nitrite-N	0.0435 J	0.100	0.0310	mg/L	5	WFI1523		
Sulfate	69.2	0.200	0.0620	mg/L	2	WIC4123	WXX6230	
Alkalinity	127	10.0	3.10	mg/L	1	WTI2897		
Total Suspended Solids	3.40	0.500	0.150	mg/L		STS3096		
Ammonia-N	ND	0.100	0.0310	mg/L	1	WDA1192	WXX6224	
Conductivity	360	1.00	0.477	umhos/cm		WAT6644		
Cyanide	ND	0.0050	0.0015	mg/L	1	WDA1193	WXX6231	
Weak Acid Dissociable CN	ND	0.0050	0.0015	mg/L	1	WDA1194	WXX6232	
pH	7.47	0.100	0.100	pH units		WPH5283		
Sulfide	ND	0.100	0.100	mg/L		WAT6638		
Total Dissolved Solids	ND	10.0	3.10	mg/L	1	WAT6639		



Client Sample ID: **HMW-4A**
SGS Ref. #: 1075845002
Project ID: Big Hurrah
Matrix: Water (Surface, Eff., Ground)

All Dates/Times are Alaska Local Time
Collection Date/Time: 10/23/07 14:20
Receipt Date/Time: 10/30/07 08:50

Waters Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Batch Information								
Analytical Batch: STS3096						Initial Prep Wt./Vol.: 1000 mL		
Analytical Method: SM20 2540D								
Analysis Date/Time: 10/30/07 15:30						Container ID:1075845002-H Analyst: CLS		
Analytical Batch: WAT6638						Initial Prep Wt./Vol.: 1 mL		
Analytical Method: SM20 4500S D								
Analysis Date/Time: 10/30/07 13:00						Container ID:1075845002-C Analyst: TRM		
Analytical Batch: WAT6639						Initial Prep Wt./Vol.: 80 mL		
Analytical Method: SM20 2540C								
Analysis Date/Time: 10/30/07 17:00						Container ID:1075845002-G Analyst: JDH		
Dilution Factor: 1								
Analytical Batch: WAT6644						Initial Prep Wt./Vol.: 1 mL		
Analytical Method: SM20 2510B								
Analysis Date/Time: 11/05/07 12:00						Container ID:1075845002-G Analyst: JDH		
Analytical Batch: WDA1192		Prep Batch: WXX6224		Initial Prep Wt./Vol.: 50 mL				
Analytical Method: SM20 4500-NH3 F		Prep Method: EXT/4500F1		Prep Extract Vol.: 50 mL				
Analysis Date/Time: 11/02/07 12:09		Prep Date/Time: 11/02/07 09:30		Container ID:1075845002-E		Analyst: TRM		
Dilution Factor: 1								
Analytical Batch: WDA1193		Prep Batch: WXX6231		Initial Prep Wt./Vol.: 6 mL				
Analytical Method: SM20 4500-CN C,E		Prep Method: EXT/CN4500		Prep Extract Vol.: 6 mL				
Analysis Date/Time: 11/06/07 14:29		Prep Date/Time: 11/05/07 10:00		Container ID:1075845002-D		Analyst: HP		
Dilution Factor: 1								
Analytical Batch: WDA1194		Prep Batch: WXX6232		Initial Prep Wt./Vol.: 6 mL				
Analytical Method: SM20 4500-CN I		Prep Method: EXT/WAD1		Prep Extract Vol.: 6 mL				
Analysis Date/Time: 11/06/07 15:40		Prep Date/Time: 11/05/07 10:00		Container ID:1075845002-D		Analyst: HP		
Dilution Factor: 1								
Analytical Batch: WFI1523						Initial Prep Wt./Vol.: 5 mL		
Analytical Method: SM20 4500NO3-F								
Analysis Date/Time: 11/01/07 16:03						Container ID:1075845002-A Analyst: LCP		
Dilution Factor: 5								
Analytical Batch: WIC4122		Prep Batch: WXX6225		Initial Prep Wt./Vol.: 10 mL				
Analytical Method: EPA 300.0		Prep Method: H2O/EP300		Prep Extract Vol.: 10 mL				
Analysis Date/Time: 11/02/07 20:55		Prep Date/Time: 11/02/07 14:45		Container ID:1075845002-B		Analyst: LCP		
Dilution Factor: 1								



Client Sample ID: **HMW-4A**
SGS Ref. #: 1075845002
Project ID: Big Hurrah
Matrix: Water (Surface, Eff., Ground)

All Dates/Times are Alaska Local Time
Collection Date/Time: 10/23/07 14:20
Receipt Date/Time: 10/30/07 08:50

Waters Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Analytical Batch: WIC4123 Analytical Method: EPA 300.0 Analysis Date/Time: 11/05/07 15:31 Dilution Factor: 2			Prep Batch: WXX6230 Prep Method: H2O/EP300 Prep Date/Time: 11/05/07 12:29				Initial Prep Wt./Vol.: 10 mL Prep Extract Vol.: 10 mL Container ID:1075845002-B Analyst: LCP	
Analytical Batch: WPH5283 Analytical Method: SM20 4500-H B Analysis Date/Time: 10/30/07 14:45							Initial Prep Wt./Vol.: 1 mL Container ID:1075845002-G Analyst: HP	
Analytical Batch: WTI2897 Analytical Method: SM20 2320B Analysis Date/Time: 11/05/07 14:01 Dilution Factor: 1							Initial Prep Wt./Vol.: 100 mL Container ID:1075845002-G Analyst: JDH	



AK Gold Company

Print Date: 11/19/2007

Client Sample ID: **HMW-5A**
SGS Ref. #: 1075845003
Project ID: Big Hurrah
Matrix: Water (Surface, Eff., Ground)

All Dates/Times are Alaska Local Time
Collection Date/Time: 10/23/07 15:30
Receipt Date/Time: 10/30/07 08:50

Metals Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Calcium	61.3	0.200	0.0620	mg/L	2	MIP5413	MXX19724	
Iron	0.882	0.0400	0.0124	mg/L	2	MIP5413	MXX19724	
Magnesium	20.7	0.200	0.0620	mg/L	2	MIP5413	MXX19724	
Strontium	0.425	0.0100	0.00300	mg/L	2	MIP5413	MXX19724	
Mercury	ND	1.00	0.500	ng/L	1	MCV3760	MXX19756	

Batch Information

Analytical Batch: MCV3760
Analytical Method: EPA 1631 E
Analysis Date/Time: 11/09/07 13:59
Dilution Factor: 1

Prep Batch: MXX19756
Prep Method: METHOD
Prep Date/Time: 11/08/07 10:15

Initial Prep Wt./Vol.: 50 mL
Prep Extract Vol.: 50 mL
Container ID:1075845003-I
Analyst: AFH

Analytical Batch: MIP5413
Analytical Method: EP200.7
Analysis Date/Time: 11/08/07 15:52
Dilution Factor: 2

Prep Batch: MXX19724
Prep Method: E200.2
Prep Date/Time: 10/31/07 17:30

Initial Prep Wt./Vol.: 50 mL
Prep Extract Vol.: 25 mL
Container ID:1075845003-F
Analyst: NRB



AK Gold Company

Print Date: 11/19/2007

Client Sample ID: **HMW-5A**
 SGS Ref. #: 1075845003
 Project ID: Big Hurrah
 Matrix: Water (Surface, Eff., Ground)

All Dates/Times are Alaska Local Time
 Collection Date/Time: 10/23/07 15:30
 Receipt Date/Time: 10/30/07 08:50

Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Aluminum	ND	20.0	6.20	ug/L	5	MMS5178	MXX19723	
Antimony	3.38	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Arsenic	24.4	5.00	2.50	ug/L	5	MMS5178	MXX19723	
Barium	28.7	3.00	0.940	ug/L	5	MMS5178	MXX19723	
Beryllium	ND	0.400	0.130	ug/L	5	MMS5178	MXX19723	
Cadmium	ND	0.500	0.150	ug/L	5	MMS5178	MXX19723	
Chromium	ND	2.00	0.620	ug/L	5	MMS5178	MXX19723	
Cobalt	ND	4.00	1.20	ug/L	5	MMS5178	MXX19723	
Copper	ND	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Lead	ND	0.200	0.0620	ug/L	5	MMS5178	MXX19723	
Manganese	61.1	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Molybdenum	7.70 J	10.0	3.10	ug/L	5	MMS5178	MXX19723	
Nickel	5.80	2.00	0.620	ug/L	5	MMS5178	MXX19723	
Phosphorus	ND	200	62.0	ug/L	5	MMS5178	MXX19723	
Potassium	519	500	150	ug/L	5	MMS5178	MXX19723	
Selenium	ND	5.00	1.50	ug/L	5	MMS5178	MXX19723	
Silicon	3930	200	100	ug/L	5	MMS5178	MXX19723	
Silver	ND	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Sodium	3700	500	150	ug/L	5	MMS5180	MXX19723	
Thallium	ND	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Titanium	56.2	5.00	1.50	ug/L	5	MMS5178	MXX19723	
Vanadium	ND	20.0	6.20	ug/L	5	MMS5178	MXX19723	
Tin	ND	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Zinc	ND	5.00	2.50	ug/L	5	MMS5178	MXX19723	

Batch Information

Analytical Batch: MMS5178
 Analytical Method: EP200.8
 Analysis Date/Time: 11/01/07 18:25
 Dilution Factor: 5

Prep Batch: MXX19723
 Prep Method: E200.2
 Prep Date/Time: 10/31/07 17:30

Initial Prep Wt./Vol.: 50 mL
 Prep Extract Vol.: 25 mL
 Container ID:1075845003-F
 Analyst: MH

Analytical Batch: MMS5180
 Analytical Method: EP200.8
 Analysis Date/Time: 11/02/07 12:26
 Dilution Factor: 5

Prep Batch: MXX19723
 Prep Method: E200.2
 Prep Date/Time: 10/31/07 17:30

Initial Prep Wt./Vol.: 50 mL
 Prep Extract Vol.: 25 mL
 Container ID:1075845003-F
 Analyst: MH



Client Sample ID: **HMW-5A**
 SGS Ref. #: 1075845003
 Project ID: Big Hurrah
 Matrix: Water (Surface, Eff., Ground)

All Dates/Times are Alaska Local Time
 Collection Date/Time: 10/23/07 15:30
 Receipt Date/Time: 10/30/07 08:50

Waters Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Chloride	2.94	0.100	0.0310	mg/L	1	WIC4122	WXX6225	
Fluoride	0.0860 J	0.100	0.0310	mg/L	1	WIC4122	WXX6225	
Total Nitrate/Nitrite-N	ND	0.100	0.0310	mg/L	5	WFI1523		
Sulfate	46.0	0.100	0.0310	mg/L	1	WIC4122	WXX6225	
Alkalinity	187	10.0	3.10	mg/L	1	WTI2897		
Total Suspended Solids	1.44	0.515	0.155	mg/L		STS3096		
Ammonia-N	0.0470 J	0.100	0.0310	mg/L	1	WDA1192	WXX6224	
Conductivity	400	1.00	0.477	umhos/cm		WAT6644		
Cyanide	ND	0.0050	0.0015	mg/L	1	WDA1193	WXX6231	
Weak Acid Dissociable CN	ND	0.0050	0.0015	mg/L	1	WDA1194	WXX6232	
pH	7.59	0.100	0.100	pH units		WPH5283		
Sulfide	ND	0.100	0.100	mg/L		WAT6638		
Total Dissolved Solids	248	10.0	3.10	mg/L	1	WAT6639		



Client Sample ID: **HMW-5A**
 SGS Ref. #: 1075845003
 Project ID: Big Hurrah
 Matrix: Water (Surface, Eff., Ground)

All Dates/Times are Alaska Local Time
 Collection Date/Time: 10/23/07 15:30
 Receipt Date/Time: 10/30/07 08:50

Waters Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Batch Information								
Analytical Batch: STS3096						Initial Prep Wt./Vol.: 970 mL		
Analytical Method: SM20 2540D								
Analysis Date/Time: 10/30/07 15:30						Container ID:1075845003-H Analyst: CLS		
Analytical Batch: WAT6638						Initial Prep Wt./Vol.: 1 mL		
Analytical Method: SM20 4500S D								
Analysis Date/Time: 10/30/07 13:00						Container ID:1075845003-C Analyst: TRM		
Analytical Batch: WAT6639						Initial Prep Wt./Vol.: 80 mL		
Analytical Method: SM20 2540C								
Analysis Date/Time: 10/30/07 17:00						Container ID:1075845003-G Analyst: JDH		
Dilution Factor: 1								
Analytical Batch: WAT6644						Initial Prep Wt./Vol.: 1 mL		
Analytical Method: SM20 2510B								
Analysis Date/Time: 11/05/07 12:00						Container ID:1075845003-G Analyst: JDH		
Analytical Batch: WDA1192		Prep Batch: WXX6224		Initial Prep Wt./Vol.: 50 mL				
Analytical Method: SM20 4500-NH3 F		Prep Method: EXT/4500F1		Prep Extract Vol.: 50 mL				
Analysis Date/Time: 11/02/07 12:09		Prep Date/Time: 11/02/07 09:30		Container ID:1075845003-E		Analyst: TRM		
Dilution Factor: 1								
Analytical Batch: WDA1193		Prep Batch: WXX6231		Initial Prep Wt./Vol.: 6 mL				
Analytical Method: SM20 4500-CN C,E		Prep Method: EXT/CN4500		Prep Extract Vol.: 6 mL				
Analysis Date/Time: 11/06/07 14:29		Prep Date/Time: 11/05/07 10:00		Container ID:1075845003-D		Analyst: HP		
Dilution Factor: 1								
Analytical Batch: WDA1194		Prep Batch: WXX6232		Initial Prep Wt./Vol.: 6 mL				
Analytical Method: SM20 4500-CN I		Prep Method: EXT/WAD1		Prep Extract Vol.: 6 mL				
Analysis Date/Time: 11/06/07 15:40		Prep Date/Time: 11/05/07 10:00		Container ID:1075845003-D		Analyst: HP		
Dilution Factor: 1								
Analytical Batch: WFI1523						Initial Prep Wt./Vol.: 5 mL		
Analytical Method: SM20 4500NO3-F								
Analysis Date/Time: 11/01/07 16:04						Container ID:1075845003-A Analyst: LCP		
Dilution Factor: 5								
Analytical Batch: WIC4122		Prep Batch: WXX6225		Initial Prep Wt./Vol.: 10 mL				
Analytical Method: EPA 300.0		Prep Method: H2O/EP300		Prep Extract Vol.: 10 mL				
Analysis Date/Time: 11/02/07 21:16		Prep Date/Time: 11/02/07 14:45		Container ID:1075845003-B		Analyst: LCP		
Dilution Factor: 1								



Client Sample ID: **HMW-5A**
SGS Ref. #: 1075845003
Project ID: Big Hurrah
Matrix: Water (Surface, Eff., Ground)

All Dates/Times are Alaska Local Time
Collection Date/Time: 10/23/07 15:30
Receipt Date/Time: 10/30/07 08:50

Waters Department

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Analytical Batch: WPH5283 Analytical Method: SM20 4500-H B Analysis Date/Time: 10/30/07 14:45							Initial Prep Wt./Vol.: 1 mL	
						Container ID:1075845003-G Analyst: HP		
Analytical Batch: WT12897 Analytical Method: SM20 2320B Analysis Date/Time: 11/05/07 14:10 Dilution Factor: 1						Initial Prep Wt./Vol.: 100 mL		
						Container ID:1075845003-G Analyst: JDH		



Client Sample ID: **HMW-3A**
SGS Ref. #: 1075845004
Project ID: Big Hurrah
Matrix: Water (Surface, Eff., Ground)

All Dates/Times are Alaska Local Time
Collection Date/Time: 10/24/07 14:00
Receipt Date/Time: 10/30/07 08:50

Dissolved Metals

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Calcium	84.5	0.200	0.0620	mg/L	2	MIP5413	MXX19724	
Iron	0.182	0.0400	0.0124	mg/L	2	MIP5413	MXX19724	
Strontium	0.479	0.0100	0.00300	mg/L	2	MIP5413	MXX19724	
Magnesium	36.5	0.200	0.0620	mg/L	2	MIP5413	MXX19724	

Batch Information

Analytical Batch: MIP5413
Analytical Method: EP200.7
Analysis Date/Time: 11/08/07 15:55
Dilution Factor: 2

Prep Batch: MXX19724
Prep Method: E200.2
Prep Date/Time: 10/31/07 17:30

Initial Prep Wt./Vol.: 50 mL
Prep Extract Vol.: 25 mL
Container ID:1075845004-A
Analyst: NRB



Client Sample ID: **HMW-3A**
SGS Ref. #: 1075845004
Project ID: Big Hurrah
Matrix: Water (Surface, Eff., Ground)

All Dates/Times are Alaska Local Time
Collection Date/Time: 10/24/07 14:00
Receipt Date/Time: 10/30/07 08:50

Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Aluminum	6.62 J	20.0	6.20	ug/L	5	MMS5178	MXX19723	
Antimony	0.385 J	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Arsenic	ND	5.00	2.50	ug/L	5	MMS5178	MXX19723	
Barium	38.4	3.00	0.940	ug/L	5	MMS5178	MXX19723	
Beryllium	ND	0.400	0.130	ug/L	5	MMS5178	MXX19723	
Cadmium	ND	0.500	0.150	ug/L	5	MMS5178	MXX19723	
Chromium	ND	2.00	0.620	ug/L	5	MMS5178	MXX19723	
Cobalt	ND	4.00	1.20	ug/L	5	MMS5178	MXX19723	
Copper	ND	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Lead	ND	0.200	0.0620	ug/L	5	MMS5178	MXX19723	
Manganese	9.19	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Molybdenum	ND	10.0	3.10	ug/L	5	MMS5178	MXX19723	
Nickel	1.93 J	2.00	0.620	ug/L	5	MMS5178	MXX19723	
Phosphorus	ND	200	62.0	ug/L	5	MMS5178	MXX19723	
Potassium	1770	500	150	ug/L	5	MMS5178	MXX19723	
Selenium	ND	5.00	1.50	ug/L	5	MMS5178	MXX19723	
Silver	ND	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Thallium	ND	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Vanadium	ND	20.0	6.20	ug/L	5	MMS5178	MXX19723	
Zinc	9.31	5.00	2.50	ug/L	5	MMS5178	MXX19723	
Silicon	4820	200	100	ug/L	5	MMS5178	MXX19723	
Sodium	2830	500	150	ug/L	5	MMS5180	MXX19723	
Tin	ND	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Titanium	85.4	5.00	1.50	ug/L	5	MMS5178	MXX19723	

Batch Information

Analytical Batch: MMS5178
Analytical Method: EP200.8
Analysis Date/Time: 11/01/07 18:31
Dilution Factor: 5

Prep Batch: MXX19723
Prep Method: E200.2
Prep Date/Time: 10/31/07 17:30

Initial Prep Wt./Vol.: 50 mL
Prep Extract Vol.: 25 mL
Container ID:1075845004-A
Analyst: MH

Analytical Batch: MMS5180
Analytical Method: EP200.8
Analysis Date/Time: 11/02/07 12:32
Dilution Factor: 5

Prep Batch: MXX19723
Prep Method: E200.2
Prep Date/Time: 10/31/07 17:30

Initial Prep Wt./Vol.: 50 mL
Prep Extract Vol.: 25 mL
Container ID:1075845004-A
Analyst: MH



Client Sample ID: **HMW-4A**
SGS Ref. #: 1075845005
Project ID: Big Hurrah
Matrix: Water (Surface, Eff., Ground)

All Dates/Times are Alaska Local Time
Collection Date/Time: 10/23/07 14:20
Receipt Date/Time: 10/30/07 08:50

Dissolved Metals

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Calcium	57.8	0.200	0.0620	mg/L	2	MIP5413	MXX19724	
Iron	ND	0.0200	0.00620	mg/L	1	MIP5413	MXX19724	
Strontium	0.324	0.00500	0.00150	mg/L	1	MIP5413	MXX19724	
Magnesium	14.5	0.100	0.0310	mg/L	1	MIP5413	MXX19724	

Batch Information

Analytical Batch: MIP5413
Analytical Method: EP200.7
Analysis Date/Time: 11/08/07 16:00
Dilution Factor: 1

Prep Batch: MXX19724
Prep Method: E200.2
Prep Date/Time: 10/31/07 17:30

Initial Prep Wt./Vol.: 50 mL
Prep Extract Vol.: 25 mL
Container ID:1075845005-A
Analyst: NRB

Analytical Batch: MIP5413
Analytical Method: EP200.7
Analysis Date/Time: 11/08/07 16:09
Dilution Factor: 2

Prep Batch: MXX19724
Prep Method: E200.2
Prep Date/Time: 10/31/07 17:30

Initial Prep Wt./Vol.: 50 mL
Prep Extract Vol.: 25 mL
Container ID:1075845005-A
Analyst: NRB



Client Sample ID: **HMW-4A**
 SGS Ref. #: 1075845005
 Project ID: Big Hurrah
 Matrix: Water (Surface, Eff., Ground)

All Dates/Times are Alaska Local Time
 Collection Date/Time: 10/23/07 14:20
 Receipt Date/Time: 10/30/07 08:50

Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Aluminum	ND	20.0	6.20	ug/L	5	MMS5178	MXX19723	
Antimony	1.15	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Arsenic	ND	5.00	2.50	ug/L	5	MMS5178	MXX19723	
Barium	21.5	3.00	0.940	ug/L	5	MMS5178	MXX19723	
Beryllium	ND	0.400	0.130	ug/L	5	MMS5178	MXX19723	
Cadmium	ND	0.500	0.150	ug/L	5	MMS5178	MXX19723	
Chromium	ND	2.00	0.620	ug/L	5	MMS5178	MXX19723	
Cobalt	ND	4.00	1.20	ug/L	5	MMS5178	MXX19723	
Copper	ND	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Lead	ND	0.200	0.0620	ug/L	5	MMS5178	MXX19723	
Manganese	109	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Molybdenum	ND	10.0	3.10	ug/L	5	MMS5178	MXX19723	
Nickel	1.38 J	2.00	0.620	ug/L	5	MMS5178	MXX19723	
Phosphorus	ND	200	62.0	ug/L	5	MMS5178	MXX19723	
Potassium	388 J	500	150	ug/L	5	MMS5178	MXX19723	
Selenium	ND	5.00	1.50	ug/L	5	MMS5178	MXX19723	
Silver	ND	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Sodium	2510	500	150	ug/L	5	MMS5180	MXX19723	
Thallium	ND	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Vanadium	ND	20.0	6.20	ug/L	5	MMS5178	MXX19723	
Silicon	3690	200	100	ug/L	5	MMS5178	MXX19723	
Tin	ND	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Titanium	54.0	5.00	1.50	ug/L	5	MMS5178	MXX19723	
Zinc	6.67	5.00	2.50	ug/L	5	MMS5178	MXX19723	

Batch Information

Analytical Batch: MMS5178	Prep Batch: MXX19723	Initial Prep Wt./Vol.: 50 mL
Analytical Method: EP200.8	Prep Method: E200.2	Prep Extract Vol.: 25 mL
Analysis Date/Time: 11/01/07 18:37	Prep Date/Time: 10/31/07 17:30	Container ID:1075845005-A
Dilution Factor: 5		Analyst: MH
Analytical Batch: MMS5180	Prep Batch: MXX19723	Initial Prep Wt./Vol.: 50 mL
Analytical Method: EP200.8	Prep Method: E200.2	Prep Extract Vol.: 25 mL
Analysis Date/Time: 11/02/07 12:37	Prep Date/Time: 10/31/07 17:30	Container ID:1075845005-A
Dilution Factor: 5		Analyst: MH



Client Sample ID: **HMW-5A**
SGS Ref. #: 1075845006
Project ID: Big Hurrah
Matrix: Water (Surface, Eff., Ground)

All Dates/Times are Alaska Local Time
Collection Date/Time: 10/23/07 15:30
Receipt Date/Time: 10/30/07 08:50

Dissolved Metals

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Calcium	60.8	0.200	0.0620	mg/L	2	MIP5413	MXX19724	
Iron	0.213	0.0400	0.0124	mg/L	2	MIP5413	MXX19724	
Strontium	0.420	0.0100	0.00300	mg/L	2	MIP5413	MXX19724	
Magnesium	20.5	0.200	0.0620	mg/L	2	MIP5413	MXX19724	

Batch Information

Analytical Batch: MIP5413
Analytical Method: EP200.7
Analysis Date/Time: 11/08/07 16:12
Dilution Factor: 2

Prep Batch: MXX19724
Prep Method: E200.2
Prep Date/Time: 10/31/07 17:30

Initial Prep Wt./Vol.: 50 mL
Prep Extract Vol.: 25 mL
Container ID:1075845006-A
Analyst: NRB



Client Sample ID: **HMW-5A**
 SGS Ref. #: 1075845006
 Project ID: Big Hurrah
 Matrix: Water (Surface, Eff., Ground)

All Dates/Times are Alaska Local Time
 Collection Date/Time: 10/23/07 15:30
 Receipt Date/Time: 10/30/07 08:50

Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>PQL/CL</u>	<u>MDL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Aluminum	ND	20.0	6.20	ug/L	5	MMS5178	MXX19723	
Antimony	2.99	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Arsenic	17.1	5.00	2.50	ug/L	5	MMS5178	MXX19723	
Barium	28.5	3.00	0.940	ug/L	5	MMS5178	MXX19723	
Beryllium	ND	0.400	0.130	ug/L	5	MMS5178	MXX19723	
Cadmium	ND	0.500	0.150	ug/L	5	MMS5178	MXX19723	
Chromium	ND	2.00	0.620	ug/L	5	MMS5178	MXX19723	
Cobalt	ND	4.00	1.20	ug/L	5	MMS5178	MXX19723	
Copper	2.51	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Lead	ND	0.200	0.0620	ug/L	5	MMS5178	MXX19723	
Manganese	63.5	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Molybdenum	7.69 J	10.0	3.10	ug/L	5	MMS5178	MXX19723	
Nickel	5.85	2.00	0.620	ug/L	5	MMS5178	MXX19723	
Phosphorus	ND	200	62.0	ug/L	5	MMS5178	MXX19723	
Potassium	585	500	150	ug/L	5	MMS5178	MXX19723	
Selenium	ND	5.00	1.50	ug/L	5	MMS5178	MXX19723	
Sodium	3690	500	150	ug/L	5	MMS5180	MXX19723	
Zinc	11.2	5.00	2.50	ug/L	5	MMS5178	MXX19723	
Silicon	4070	200	100	ug/L	5	MMS5178	MXX19723	
Silver	ND	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Thallium	ND	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Tin	ND	1.00	0.310	ug/L	5	MMS5178	MXX19723	
Titanium	56.7	5.00	1.50	ug/L	5	MMS5178	MXX19723	
Vanadium	ND	20.0	6.20	ug/L	5	MMS5178	MXX19723	

Batch Information

Analytical Batch: MMS5178	Prep Batch: MXX19723	Initial Prep Wt./Vol.: 50 mL
Analytical Method: EP200.8	Prep Method: E200.2	Prep Extract Vol.: 25 mL
Analysis Date/Time: 11/01/07 18:43	Prep Date/Time: 10/31/07 17:30	Container ID:1075845006-A
Dilution Factor: 5		Analyst: MH
Analytical Batch: MMS5180	Prep Batch: MXX19723	Initial Prep Wt./Vol.: 50 mL
Analytical Method: EP200.8	Prep Method: E200.2	Prep Extract Vol.: 25 mL
Analysis Date/Time: 11/02/07 12:42	Prep Date/Time: 10/31/07 17:30	Container ID:1075845006-A
Dilution Factor: 5		Analyst: MH