

Table M-1
Evaluation of Geochemical Data
November and December 2006 Sampling Event
Phase A Source Area Investigation Results
Tronox Facility - Henderson, Nevada

SAMPLE ID	SAMPLE DATE	SAMPLE TYPE (WELL OR "GRAB")	PUMPING RATE (ml/min)	TURBIDITY FIELD (NTUs)	TOTAL DISSOLVED SOLIDS ³ (TDS)	CATIONS ⁴								ANIONS ⁵								SUM OF CATIONS	SUM OF ANIONS	Cation/Anion	Percent Difference ⁶	ACCEPTANCE CRITERIA			TDS SUM ⁷	TDS Lab/ TDS Sum				
						Ca		Mg		Na		K		HCO ₃		SO ₄		Cl		NO ₃						ClO ₃		ClO ₄			>5% Difference	<5% Difference	QA/QC Criteria	
						mg/L	meq/L	mg/L	meq/L	mg/L	meq/L	mg/L	meq/L	mg/L	meq/L	mg/L	meq/L	mg/L	meq/L	mg/L	meq/L					mg/L	meq/L	mg/L			meq/L	meq/L	meq/L	%
SOLUBLE¹																																		
M29	11/17/2006	Grab	nm	nm	6180J-	395	19.71	619	50.93	525	22.84	15.9	0.407	268	4.39	5330	111.0	229	6.5	9.5	0.15	15.0	0.18	2.41	0.024	93.9	122.2	77%	-13.1%	X			7,409	83%
GWSA02	11/06/2006	Grab	nm	nm	1660	87.6	4.37	38	3.13	368	16.01	7.24	0.185	106	1.74	913	19.0	170	4.8	5.4	0.09	4.0 J	0.05	0.393	0.004	23.7	25.7	92%	-4.0%	X	X	PASS	1,700	98%
GWSA09	11/07/2006	Grab	nm	nm	12900	452	22.55	278	22.87	78.8	3.43	31.1	0.795	99	1.62	2520	52.5	6930	195.2	3.3	0.05	5.0 U	0.06	0.216	0.002	49.6	249.4	20%	-66.8%	X			10,397	124%
GWSA10	11/07/2006	Grab	nm	nm	2370	237	11.83	95.6	7.87	308	13.40	14.1	0.361	63	1.03	1090	22.7	375	10.6	6.4	0.10	26.9	0.32	1.79	0.018	33.4	34.7	96%	-1.9%		X	PASS	2,218	107%
GWSA14	11/08/2006	Grab	nm	nm	13500	1050	52.40	557	45.82	2350	102.22	31.5	0.806	67	1.10	1950	40.6	5180	145.9	1.1	0.02	5.0 U	0.06	1.12	0.0113	201.2	187.7	107%	3.5%		X	PASS	11,193	121%
GWSA15	11/08/2006	Grab	nm	nm	14400	308	15.37	144	11.85	2940	127.88	42.2	1.079	198	3.25	2200	45.8	3750	105.6	132	2.13	172	2.06	6290	63.25	156.2	222.2	70%	-17.4%	X			16,176	89%
TOTAL²																																		
IAR	12/01/2006	Well	nm	nm	7870	508	25.35	168	13.82	688	29.9	351	8.98	172 J+	2.8	1250	26.0	518	14.6	283	4.56	46.8	0.56	4160	41.8	78.1	90.4	86%	-7.3%	X			8,145	97%
M100	12/04/2006	Well	360	1	1670	123	6.14	50.8	4.18	304	13.2	6.68	0.17	126	2.1	3520	73.3	165	4.6	12.8	0.21	85.0	1.02	51.4 J+	0.52	23.7	81.8	29%	-55.0%	X			4,445	38%
M100D	12/04/2006	Well	360	1	1630	120	5.99	50.3	4.14	302	13.1	6.62	0.17	136	2.2	3530	73.5	168	4.7	12.9	0.21	108	1.29	50.7 J+	0.51	23.4	82.5	28%	-55.8%	X			4,485	36%
M11	12/06/2006	Well	150	89.5	3270	37	1.85	37.1	3.05	968	42.1	151	3.86	205	3.4	1290	26.9	239	6.7	3.4	0.05	421	5.04	32.5 J+	0.33	50.9	42.4	120%	9.1%	X			3,384	97%
M11D	12/06/2006	Well	150	89.5	3280	36.7	1.83	37.5	3.09	970	42.2	149	3.81	184	3.0	1380	28.7	246	6.9	3.5	0.06	444	5.32	32.4 J+	0.33	50.9	44.4	115%	6.8%	X			3,483	94%
M120	11/28/2006	Well	320	1.8	1700	165	8.23	77	6.33	181	7.9	8.96	0.23	146	2.4	824	17.2	158	4.5	1.2	0.02	5.0 U	0.06	0.498	0.01	22.7	24.1	94%	-3.0%		X	PASS	1,567	109%
M12A	12/05/2006	Well	210	19.7	8170	51.3	2.56	18	1.48	231	10.0	41.7	1.07	381	6.2	1510	31.5	1030	29.0	15.2	0.25	2370	28.40	323 J+	3.25	15.2	98.6	15%	-73.4%	X			5,971	137%
M13	12/01/2006	Well	300	32.4	3440	232	11.58	107	8.80	679	29.5	14.1	0.36	111 J+	1.8	1520	31.7	394	11.1	1.8	0.03	279	3.34	25.3	0.25	50.3	48.2	104%	2.1%		X	PASS	3,363	102%
M2A	12/04/2006	Well	350	49	12700	753	37.57	389	32.00	1620	70.5	32.0	0.82	92.0	1.5	1250	26.0	1800	50.7	13.6	0.22	4600	55.12	465	4.68	140.9	138.3	102%	0.9%		X	PASS	11,015	115%
M31A	12/06/2006	Well	145	155	9720	582	29.04	254	20.90	1710	74.4	23.1	0.59	108	1.8	1480	30.8	1130	31.8	17.6	0.28	3320	39.78	1740 J+	17.50	124.9	122.0	102%	1.2%		X	PASS	10,375	94%
M39	12/05/2006	Well	320	62.9	7270	586	29.24	357	29.37	909	39.5	24.1	0.62	137	2.2	2720	56.7	1280	36.1	12.1	0.20	1620	19.41	403 J+	4.05	98.8	118.6	83%	-9.1%	X			8,048	90%
M48	12/06/2006	Well	350	nm	2690	133	6.64	62.1	5.11	497	21.6	7.48	0.19	134	2.2	861	17.9	314	8.8	15.2	0.25	484	5.80	153	1.54	33.6	36.6	92%	-4.3%		X	PASS	2,661	101%
M55	12/07/2006	Well	360	1.5	9560	48.6	2.43	273	22.46	1740	75.7	42.3	1.08	156	2.6	1210	25.2	2030	57.2	28.8	0.46	3340	40.02	577 J+	5.80	101.7	131.2	77%	-12.7%	X			9,446	101%
M55D	12/07/2006	Well	360	1.5	9630	479	23.90	271	22.30	1840	80.0	41.4	1.06	168	2.8	1230	25.6	1940	54.6	28.8	0.46	3320	39.78	587 J+	5.90	127.3	129.2	99%	-0.7%		X	PASS	9,905	97%
M5A	12/07/2006	Well	200	7	11000	811	40.47	944	77.66	1970	85.7	16.3	0.42	202	3.3	1600	33.3	5320	149.9	2.0 U	0.03	5.0 U	0.06	0.0339 U	0.00	204.2	186.6	109%	4.5%		X	PASS	10,870	101%
M76	12/04/2006	Well	100	0.1	3970	121	6.04	78.2	6.43	1040	45.2	16.6	0.42	125	2.0	770	16.0	829	23.4	8.8	0.14	820	9.83	77.3 J+	0.78	58.1	52.2	111%	5.4%		X	PASS	3,886	102%
M7B	11/30/2006	Well	290	16.1	7650	613	30.59	394	32.41	1400	60.9	22.8	0.58	98.0	1.6	1690	35.2	4160	117.2	10.0 U	0.16	8.0	0.10	61	0.61	124.5	154.9	80%	-10.9%	X			8,457	90%
M89	12/05/2006	Well	235	0.3	13800	754	37.62	369	30.36	2300	100.0	38.9	0.99	150	2.5	1080	22.5	2300	64.8	32.1	0.52	6460	77.41	898 J+	9.03	169.0	176.7	96%	-2.2%		X	PASS	14,382	96%
M92	11/29/2006	Well	280	76.0	1850	138	6.89	67	5.51	306	13.3	11.4	0.29	80.0	1.3	992	20.7	192	5.4	4.0	0.06	3.2 J	0.04	0.61	0.01	26.0	27.5	95%	-2.8%		X	PASS	1,794	103%
M95	12/04/2006	Well	480	68.8	7910	643	32.09	212	17.44	1330	57.9	16.8	0.43	77.0	1.3	3020	62.9	1270	35.8	59.5	0.96	962	11.53	624 J+	6.27	107.8	118.7	91%	-4.8%		X	PASS	8,214	96%
M97	11/29/2006	Well	380	31.7	3750	309	15.42	192	15.80	623	27.1	17.3	0.44	90.0	1.5	1150	24.0	1190	33.5	8.4	0.14	277	3.32	74.5	0.75	58.8	63.2	93%	-3.6%		X	PASS	3,931	95%
M98	11/30/2006	Well	300	nm	3900	273	13.62	147	12.09	847	36.8	8.11	0.21	90.0	1.5	1100	22.9	1120	31.5	2.6	0.04	25.0	0.30	21.8	0.22	62.8	56.5	111%	5.3%	X			3,635	107%
MC45	12/06/2006	Well	290	0.5	10500	213	10.63	230	18.92	3480	151.4	34.3	0.88	286	4.7	1870	39.0	4460	125.6	2.0 U	0.03	5.0 U	0.06	7.94 J+	0.08	181.8	169.5	107%	3.5%		X	PASS	10,588	99%
PC40	12/01/2006	Well	420	149	12200	482	24.05	268	22.05	3380	147.0	29.0	0.74	212 J+	3.5	2440	50.8	4790	134.9	2.4	0.04	48.0	0.58	36.8	0.37	193.9	190.2	102%	0.9%		X	PASS	11,688	104%
M29	11/17/2006	Grab	nm	nm	6180J-	339	16.92	538	44.26	442	19.23	15	0.384	268	4.39	5330	111.0	229	6.5	9.5	0.15	15.0	0.18	2.41	0.024	80.8	122.2	66%	-20.4%	X			7,188	86%
GWSA02	11/06/2006	Grab	nm	nm	1660	588	29.34	420	34.55	60.5	2.63	305	7.800	106	1.74	913	19.0	170	4.8	5.4	0.09	4.0 J	0.05	0.393	0.004	74.3	25.7	289%	48.6%	X			2,572	65%
GWSA09	11/07/2006	Grab	nm	nm	12900	308	15.37	309	25.42	3590	156.2	21.6	0.552	99	1.62	2520	52.5	6930	195.2	3.3	0.05	5.0 U	0.06	0.216	0.002	197.5	249.4	79%	-11.6%	X			13,786	94%
GWSA10	11/07/2006	Grab	nm	nm	2370	1210	60.38	1160	95.43	73.5	3.20	289	7.391	63	1.03	1090	22.7	375	10.6	6.4	0.10	26.9	0.32	1.79	0.018	166.4	34.7	479%	65.5%	X			4,296	55%
GWSA14	11/08/2006	Grab	nm	nm	13500	4800	239.5	5220	429.5	15.1	0.66	2300	58.82	67	1.10	1950	40.6	5180	145.9	1.1	0.02	5.0 U	0.06	1.12	0.011	728.5	187.7	388%	59.0%	X			19,539	69%
GWSA15	11/08/2006	Grab	nm	nm	14400	457	22.80	571	46.98	78.8	3.43	3180	81.33	198	3.25	2200	45.8	3750	105.6	132	2.13	172	2.06	6290	63.248	154.5	222.15	70%	-17.9%	X			17,029	85%

NOTES

- Groundwater sample collected was field filtered prior to analysis.
- Groundwater sample collected was not filtered prior to analysis.
- Total dissolved solids concentrations as shown on Table 4-2, "General Chemistry Results in Groundwater - Phase A Source Area Investigation Results".
- Major cations as shown on Table 4-5, "Metals Concentrations in Groundwater, Phase Source Area Investigation Results".
- Excepting perchlorate, major anion concentrations as shown on Table 4-2, "General Chemistry Results in Groundwater - Phase A Source Area Investigation Results". Perchlorate concentrations shown on Table 4-15, "Perchlorate Concentrations in Groundwater".
- Percent Difference equals 100*(Sum cations-Sum anions)/(Sum cations+Sum anions) (Standard Methods 1995).
- TDS sum equals the sum (mg/L) of the major cations and anions.

Groundwater samples collected that PASSED meeting the QA/QC criteria of 5% or less percent difference

DEFINITIONS

J The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+ The result is an estimated quantity and the results may be biased high.
J- The result is an estimated quantity and the result may be biased low.
meq/L milliequivalents per liter.
mg/L milligrams per liter.
ml/min milliliters per minute.
nm not measured,
NTU Nephelometer Turbidity Units.
TDS Total Dissolved Solids.
U The analyte was analyzed for, but was not detected above the laboratory sample quantitation limit.
-- No value or not able to estimate (calculate) as there was insufficient data.