APPENDIX A

ELECTRONIC DATA

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APPENDIX B

EXPOSURE POINT CONCENTRATIONS (EPCS)

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Table B-1. Soil Exposure Point Concentrations

All soil concentrations are shown as mg/kg.

		Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
Plant Benchmark		na	5.0	31	500	10	28	na	1.00	32	95	na	210	na	152	0.3	48	na	1.0	2.0	na	1.0	2.0	130
Colorado bkg avg		77,500	--	6.9	1,100	2.9	--	9,200	37.5	7.25	33.75	36,250	62.5	6,750	500	0.11	18.75	36,000	0.47	--	15,000	--	80	175
Colorado bkg range		70,000 - 100,000	--	3.2 - 10	700 - 2,000	1.5 - 5	--	7,200 - 11,000	20 - 50	5 - 10	15 - 50	15,000 - 70,000	30 - 100	3,000 - 10,000	200 - 1,000	0.04 - 0.18	15 - 20	26,000 - 63,000	0.26 - 0.60	--	10,000 - 20,000	--	50 - 100	50 - 400
3801 Brighton-Sector 01	surface			11			3																	210
3801 Brighton-Sector 02	surface			94			6																	430
3801 Brighton-Sector 03	surface			15			3																	250
3801 Brighton-Sector 04	surface			15			4																	230
3801 Brighton-Sector 05	surface			8			1																	130
3801 Brighton-Sector 06	surface			15			3																	220
3801 Brighton-Sector 07	surface			18			2																	180
3801 Brighton-Sector 08	surface			22			2																	210
3801 Brighton-Sector 09	surface			85			11																	360
4201 Brigh-01	surface			34			6						540											1300
4201 Brigh-02	surface			48			8						1600											770
4201 Brigh-03	surface			36			6						1300											580
4201 Brigh-04	surface			86			8						880											440
4301 Brighton-Sector 01	surface			10			3																	470
4375 Brighton-Sector 01	surface			23			4																	350
4600 Humbo-10	surface			17			5						260											370
4600 Humbo-11	surface			52			6						270											330
4600 Humbo-2	surface			27			3						380											230
4600 Humbo-3	surface			46			4						380											210
4600 Humbo-4	surface			11			1						82											77
4600 Humbo-5	surface			7			1						110											240
4600 Humbo-6	surface			8			1						170											160
4600 Humbo-7	surface			8			1						190											150
4600 Humbo-8	surface			6			1						110											150
4600 Humbo-9	surface			13			3						230											250
A3-1	surface			4									9											
A3-10	surface			3									23											
A3-11	surface			4									51											
A3-12	surface			15									120											
A3-13	surface			15									240											
A3-14	surface			18									210											
A3-15	surface			9									58											
A3-16	surface			35									300											
A3-17	surface			11									120											
A3-18	surface			24									200											
A3-19	surface			21									190											
A3-2	surface			13									180											
A3-20	surface			9									81											
A3-3	surface			52									290											
A3-4	surface			55									430											
A3-5	surface			9									110											
A3-6	surface			50									370											
A3-7	surface			30									340											
A3-8	surface			4									300											
A3-9	surface			65									610											
A4-1	surface			18									150											
A4-10	surface			21									290											
A4-11	surface			4									11											
A4-12	surface			4									290											
A4-13	surface			9									90											
A4-14	surface			9									350											
A4-15	surface			4									37											
A4-16	surface			4									60											
A4-2	surface			4									66											
A4-3	surface			4									93											
A4-4	surface			61									260											
A4-5	surface			4									88											
A4-6	surface			4									100											
A4-7	surface			79									1100											
A4-8	surface			20									230											
A4-9	surface			55									380											
BB-BB-28-00	surface			29									310											
BB-BB-30-00	surface			33									410											
BB-BB-32-00	surface			17									210											
BB-BB-34-00	surface			38									270											
BB-BB-35-00	surface			44									390											
BB-BB-37-00	surface			4									27											
BH-01 1.5-	surface			32									360											
BH-02 1.7-	surface			63									580											
BH-03 0.7-	surface			18									240											
BH-04 1.0-	surface			54									570											
BH-05 (2.0-2.5)	surface			37									520											
BH-06 0.9-	surface			85									600											

Table B-1. Soil Exposure Point Concentrations

All soil concentrations are shown as mg/kg.

		Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
Plant Benchmark		na	5.0	31	500	10	28	na	1.00	32	95	na	210	na	152	0.3	48	na	1.0	2.0	na	1.0	2.0	130
Colorado bkg avg		77,500	--	6.9	1,100	2.9	--	9,200	37.5	7.25	33.75	36,250	62.5	6,750	500	0.11	18.75	36,000	0.47	--	15,000	--	80	175
Colorado bkg range		70,000 - 100,000	--	3.2 - 10	700 - 2,000	1.5 - 5	--	7,200 - 11,000	20 - 50	5 - 10	15 - 50	15,000 - 70,000	30 - 100	3,000 - 10,000	200 - 1,000	0.04 - 0.18	15 - 20	26,000 - 63,000	0.26 - 0.60	--	10,000 - 20,000	--	50 - 100	50 - 400
BH-07 (0.4-0.7)	surface			27									280											
BH-07 (1.5-1.8)	surface			9									210											
MW-02 (2.0-2.5)	surface			16									630											
MW-03 1.8-	surface			23									400											
SB-2-1-SS	surface			19									1500											
SB-2-2-SS	surface			19									160											
SB-2-3-SS	surface			10									300											
SB-2-4-SS	surface			73									560											
SB-3-1-SS	surface			12									200											
SB-3-2-SS	surface			10									130											
SB-3-3-SS	surface			4									33											
SB-3-4-SS	surface			8									39											
SB-3-5-SS	surface			4									71											
SB-4-1-SS	surface			24									240											
SB-4-2-SS	surface			12									85											
SB-4-3-SS	surface			8									61											
SB-4-4-SS	surface			8									120											
SB-4-5-SS	surface	6690	8	117	218	1	26	8820	10	3	105	12000	1880	1770	476	2	5	1740	4	8	218	2	19	778
SS-3-1-SS	surface	6670	3	16	333	1	2	4510	8	3	66	14200	406	1650	774	0	6	1700	4	1	320	2	18	1300
VB10220304	surface	6980	3	23	873	1	4	7750	10	4	134	21100	761	2080	1630	0	6	2470	4	4	556	4	20	2650
VB10220307	surface	5870	13	85	269	1	11	6210	8	3	493	17600	4530	1370	515	0	7	1790	4	45	179	1	19	1180
A1-1	sub-surface	7370	6	94	954	1	30	25900	11	4	681	53200	4120	1990	8340	0	5	2680	4	25	1360	15	24	13500
A1-2	sub-surface	7240	3	15	137	1	2	2690	8	3	36	14100	407	3350	328	0	5	3350	4	2	364	3	22	217
A1-3	sub-surface			30			5						240											160
A2 Caisson 1-10	sub-surface			21			5						250											230
A2 Caisson 1-16	sub-surface			46			9						300											250
A2 Caisson 2-10	sub-surface			48			8						1400											1800
A2 Caisson 2-20	sub-surface			21			4						330											620
A2-1	sub-surface			15			2						180											800
A2-2	sub-surface			22			6						1200											310
A2-3	sub-surface			950			150						470											26
A2-4	sub-surface			3			0						75											82
A2-5	sub-surface			16			2						460											690
A2-6	sub-surface			14			2						330											460
A6-1 0-10	sub-surface			85			33						3000											530
A6-2 0-10	sub-surface			420			37						2900											460
A6-3 0-10	sub-surface			15			70						230											480
A6-4 0-10	sub-surface			270			100						34000											14000
A6-5 0-10	sub-surface			3			0						12											27
A6-6 0-10	sub-surface			510			25						15000											560
A7-1	sub-surface			17			2						180											190
A7-10	sub-surface			3			3						9											420
A7-2	sub-surface			3			14						17											1300
A7-3	sub-surface			13									110											
A7-4	sub-surface			22									320											
A7-5	sub-surface			3			1						130											140
A7-6	sub-surface			59			1						3600											19000
A7-7	sub-surface			23			3						950											3400
A7-8	sub-surface			13			1						320											180
A7-9	sub-surface			9			6						1600											2400
BH-01 6.8-	sub-surface			2									11											
BH-01 9.5-	sub-surface			1									5											
BH-02 4.5-	sub-surface			1									7											
BH-02 9.0-	sub-surface			2									18											
BH-03 10.2	sub-surface			1									4											
BH-03 6.0-	sub-surface			8									280											
BH-04 3.0-	sub-surface			1									6											
BH-05 (10.4-10.9)	sub-surface			0									1											
BH-05 (6.5-7.0)	sub-surface			2									2											
BH-06 5.5-	sub-surface			2									9											
BH-07 (5.6-6.0)	sub-surface			1									6											
BH-07 (9.5-10.0)	sub-surface			7									160											
Crane Pad 1	sub-surface			1									2											
Crane Pad 2	sub-surface			32									1900											
MW-02 (5.0-5.5)	sub-surface			6									190											
MW-03 5.5-	sub-surface			14									190											
MW-03 9.0-	sub-surface			10									210											
SB-2-1-2-4	sub-surface			2									31											
SB-2-1-4-9	sub-surface			3									13											
SB-2-2-2-4	sub-surface			1									3											
SB-2-2-4-9	sub-surface			2									22											
SB-2-3-18-19	sub-surface			8									140											
SB-2-3-20-20.5	sub-surface			1									2											

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All soil concentrations are shown as mg/kg.

		Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
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Colorado bkg avg		77,500	--	6.9	1,100	2.9	--	9,200	37.5	7.25	33.75	36,250	62.5	6,750	500	0.11	18.75	36,000	0.47	--	15,000	--	80	175
Colorado bkg range		70,000 - 100,000	--	3.2 - 10	700 - 2,000	1.5 - 5	--	7,200 - 11,000	20 - 50	5 - 10	15 - 50	15,000 - 70,000	30 - 100	3,000 - 10,000	200 - 1,000	0.04 - 0.18	15 - 20	26,000 - 63,000	0.26 - 0.60	--	10,000 - 20,000	--	50 - 100	50 - 400
SB-2-4-14-15	sub-surface			1									14											
SB-2-4-4-5	sub-surface			5									270											
SB-3-1-14-15	sub-surface			5									170											
SB-3-1-4-9	sub-surface			4									82											
SB-3-2-14-15	sub-surface			5									26											
SB-3-2-2-3	sub-surface			6									180											
SB-3-2-4-9	sub-surface			14									140											
SB-3-3-14-15	sub-surface			4									51											
SB-3-3-4-9	sub-surface			3									30											
SB-3-4-14-15	sub-surface			5									190											
SB-3-4-2-4	sub-surface			3									61											
SB-3-5-10-15	sub-surface			9									290											
SB-3-5-14-15	sub-surface			3									55											
SB-3-5-6-8	sub-surface			18									600											
SB-4-1-12-14	sub-surface			2									64											
SB-4-1-2-4	sub-surface			4									62											
SB-4-2-12-14	sub-surface			3									39											
SB-4-2-2-4	sub-surface			3									12											
SB-4-2-8-9	sub-surface			1									17											
SB-4-3-22-24	sub-surface			5									150											
SB-4-3-2-4	sub-surface			2									21											
SB-4-3-4-9	sub-surface			22									780											
SB-4-4-23-24.5	sub-surface			2									12											
SB-4-4-2-4	sub-surface			8									130											
SB-4-5-2-4	sub-surface			11									160											
SB-4-5-8-9	sub-surface			17									210											
UT-1	sub-surface			42									490											
UT-10	sub-surface			9									370											
UT-11	sub-surface			4									31											
UT-12	sub-surface			16									190											
UT-13	sub-surface			12									300											
UT-14	sub-surface			14									940											
UT-2	sub-surface			50									350											
UT-3	sub-surface			9									160											
UT-4a	sub-surface			4									180											
UT-5	sub-surface			630									2800											
UT-6	sub-surface			16									130											
UT-7	sub-surface			4									46											
UT-8	sub-surface			14	140		3		5				120			0.1			1	1				
UT-9	sub-surface			24	160		3		11				700			0.1			1	3				
VB10220301	sub-surface			17	180		4		13				590			0.1			1	4				
VB10220302	sub-surface			6	150		1		17				50			0.0			1	0				
VB10220303	sub-surface			7	89		1		8				160			0.1			1	1				
VB10220305	sub-surface			14	120		2		11				330			0.1			1	1				
VB10220306	sub-surface			7	170		1		17				110			0.1			1	1				

Table B-2.
Surface Water
Exposure Point Concentrations (EPCs)
TOTAL FRACTION

EXPOSURE UNIT	CHEMICAL	FRACTION	NUMBER OF SAMPLES	CONCENTRATION (ug/L)			DATA DISTRIBUTION	95th UCL METHOD	EXPOSURE POINT CONCENTRATION (ug/L)
				MEAN	MAX	95th UCL			
N43	Arsenic	total	4	1.2	1.5	--	--	--	1.5
	Cadmium	total	4	0.1	0.2	--	--	--	0.2
	Copper	total	4	5.2	6.4	--	--	--	6.4
	Lead	total	4	2	5	--	--	--	4.6
	Zinc	total	4	32	35	--	--	--	35
N46	Arsenic	total	4	1.2	1.2	--	--	--	1.2
	Cadmium	total	4	0.2	0.2	--	--	--	0.2
	Copper	total	4	7	13	--	--	--	13
	Lead	total	4	2	5.4	--	--	--	5.4
	Zinc	total	4	36	40	--	--	--	39.0

NA = Not Applicable.
-- Due to sample size (less than 10), a 95th UCL was not calculated.

[1] Risks to human receptors from lead are evaluated based on the mean concentration.

Table B-3.
Sediment
Exposure Point Concentrations (EPCs)

EXPOSURE UNIT	CHEMICAL	NUMBER OF SAMPLES	CONCENTRATION (mg/kg)			DATA DISTRIBUTION	95th UCL METHOD	EXPOSURE POINT CONCENTRATION (mg/kg)
			MEAN	MAX	95th UCL			
N43 (upgradient)	Arsenic	4	1.5	1.9	--	--	--	1.9
	Cadmium	4	0.6	0.9	--	--	--	0.9
	Copper	4	17	20	--	--	--	20
	Lead	4	164	550	--	--	--	550
	Zinc	4	97	110	--	--	--	110
N46 (downgradient)	Arsenic	4	1	2	--	--	--	2
	Cadmium	4	0.4	0.6	--	--	--	0.6
	Copper	4	14	19	--	--	--	19
	Lead	4	25	31	--	--	--	31
	Zinc	4	95	110	--	--	--	110

NA = Not Applicable.
-- Due to sample size (less than 10), a 95th UCL was not calculated.

[1] Risks to human receptors from lead are evaluated based on the mean concentration.