

Appendix B Tables

Table 1. Summary of Lead, Arsenic, and Mercury Soil Sample Results in AOC-1
Argonaut Mine Tailings Pile, Jackson, California

TDD #: TO-02-09-13-01-0004

PAN #: EE-002693-2213

Sample ID	Date Collected	Lead		Arsenic		Mercury		Comment	
		Environmental Screening Levels (mg/kg)							
		400		61		10			
		Analysis Results (mg/kg)							
		XRF	Lab	XRF	Lab	XRF	Lab		
AOC1-D-01-00	07/10/13	120	110J	660	610	<8.1	0.62		
AOC1-D-01-12	07/10/13	45		200		<8.1			
AOC1-D-02-00	07/09/13	580		5,500		<8.1			
AOC1-D-02-12	07/09/13	180	180	1,700	1,600	<8.1	4.4		
AOC1-D-02-12-07	07/09/13	180	170	1,700	1,600	<8.1	4.3	3	
AOC1-D-03-00	07/10/13	<28		21		<8.1			
AOC1-D-03-12	07/10/13	<28		18		<8.1			
AOC1-D-04-00	07/10/13	170		3,400		<8.1			
AOC1-D-05-00	07/09/13	400		3,900		<8.1			
AOC1-D-05-12	07/09/13	270	250	2,400	2,200	<8.1	3.6		
AOC1-D-06-00	07/09/13	3,000	3,500	19,000	19,000	83	82		
AOC1-D-06-12	07/09/13	1,700		5,600		28			
AOC1-D-07-00	07/09/13	<28		23		<8.1			
AOC1-D-07-12	07/09/13	<28		4.4		<8.1			
AOC1-D-07-12-PD	07/09/13	<28		5.2		<8.1		4	
AOC1-D-07-12-PD	07/09/13	<28		4.3		<8.1		4, 5	
AOC1-D-08-00	07/09/13	1,300		15,000		12		1	
AOC1-D-08-12	07/09/13	1,600		23,000		<8.1		1	
AOC1-D-09-00	07/09/13	210		3,600		<8.1		1	
AOC1-D-09-12	07/09/13	850		10,000		<8.1			
AOC1-D-10-00	07/09/13	420		4,600		<8.1			
AOC1-D-10-12	07/09/13	110		1,600		<8.1			
AOC1-D-11-00	07/09/13	280		2,100		<8.1		1	
AOC1-D-11-12	07/09/13	500		4,600		<8.1			
AOC1-D-12-00	07/09/13	31		95		<8.1			
AOC1-D-12-12	07/09/13	<28		36		<8.1			
AOC1-D-13-00	07/09/13	3,700	4,000	6,800	6,700	71	59	1	
AOC1-D-13-12	07/09/13	780		2,200		11			
AOC1-D-13-12-PD	07/09/13	760		2,200		15		4	
AOC1-D-14-00	07/09/13	28		93		<8.1		1	
AOC1-D-15-00	07/09/13	29		36		<8.1		1	
AOC1-D-15-12	07/09/13	<28	20	26	22	<8.1	0.19	1, 2	
AOC1-D-15-12-7	07/09/13	<28		29		<8.1		1, 3	
AOC1-D-15-12-7	07/09/13	<28		29		<8.1		1, 3, 5	
AOC1-D-16-00	07/09/13	<28	21	50	41	<8.1	0.19		
AOC1-D-16-12	07/09/13	<28		28		<8.1			
AOC1-D-17-00	07/09/13	60		2,000		<8.1			
AOC1-D-17-12	07/09/13	<28		640		<8.1		1	
AOC1-D-18-00	07/09/13	820		490		91		1	
AOC1-D-18-12	07/09/13	970	990	510	670	88	54	1, 2	
AOC1-D-19-00	07/09/13	160	170J	270	300	8.1	4.8	1	
AOC1-D-19-12	07/09/13	<28		230		<8.1		1	
AOC1-D-20-00	07/09/13	640		4,000		8.4			
AOC1-D-20-12	07/09/13	550		6,300		<8.1			
AOC1-D-20-12	07/09/13	580		6,500		<8.1		5	
AOC1-D-21-00	07/09/13	<28	12	26	23	<8.1	0.10	1, 2	
AOC1-D-21-12	07/09/13	<28		13		<8.1		1	
AOC1-D-22-00	07/09/13	<28		42		<8.1			

**Table 1. Summary of Lead, Arsenic, and Mercury Soil Sample Results in AOC-1
Argonaut Mine Tailings Pile, Jackson, California**

TDD #: TO-02-09-13-01-0004

PAN #: EE-002693-2213

Sample ID	Date Collected	Lead		Arsenic		Mercury		Comment
		Environmental Screening Levels (mg/kg)						
		400		61		10		
		Analysis Results (mg/kg)						
		XRF	Lab	XRF	Lab	XRF	Lab	
AOC1-D-22-12	07/09/13	<28		11		<8.1		
AOC1-D-23-12	07/09/13	<28		16		<8.1		
AOC1-D-24-00	07/09/13	<28	20	67	55	<8.1	0.14	
AOC1-D-24-12	07/09/13	<28		39		<8.1		
AOC1-D-25-00	07/09/13	<28	16	32	25	<8.1	0.12	
AOC1-D-25-12	07/09/13	<28		22		<8.1		
AOC1-D-25-12	07/09/13	<28		23		<8.1		5
AOC1-D-26-00	07/09/13	360		5,200		<8.1		1
AOC1-D-26-12	07/09/13	41		360		<8.1		1
AOC1-D-27-00	07/09/13	700		4,200		13		
AOC1-D-27-12	07/09/13	73	28J	470	130	<8.1	0.21	1
AOC1-D-28-00	07/09/13	1,300	1,300J	3,000	2,800	42	27	1
AOC1-D-28-00-7	07/09/13	1,600	1,600J	3,200	3,200	38	37	3
AOC1-D-28-00-7	07/09/13	1,600	1,600J	3,200	3,200	45	37	3,5
AOC1-D-29-00	07/09/13	190	190J	3,800	3,700	<8.1	360	1
AOC1-D-29-12	07/09/13	45		3,000		<8.1		1
AOC1-D-30-00	07/09/13	1,300		3,200		31		1
AOC1-D-30-12	07/09/13	830	1,000J	41,000	48,000	<8.1	17	1
AOC1-D-34-00	07/09/13	110		6,800		<8.1		
AOC1-D-34-12	07/09/13	410	14	2,800	290J	<8.1	0.34J	1, 2
AOC1-D-36-00	07/09/13	320		660		11		1
AOC1-D-36-12	07/09/13	250	110	770	1,900	10	1.5	1
AOC1-D-37-00	07/10/13	<28	14J	8.0	8.0	<8.1	0.10	6
AOC1-D-37-12	07/10/13	<28		7.2		<8.1		6

Notes:

1. Indicates XRF sample was obtained from an unsieved sample analyzed directly through plastic bag.
2. Indicates laboratory analysis was performed on an unprocessed sample (i.e. not sieved)
3. Field duplicate
4. Preparation duplicate
5. XRF analysis duplicate
6. Background sample

-00 - Sample collected 0 to 2 inches below ground surface

-12 - Sample collected 12 to 18 inches below ground surface

< - Below the detection limit for the XRF analysis, which was calculated as 3 times the lowest detected value

J - Value is estimated

mg/kg - Milligram per kilogram

D - Discrete sample

PD - Preparation Duplicate

AOC - Area of Concern

Bold - Indicates contaminant was detected above the environmental screening level

Screening levels are from the *Sampling and Analysis Plan, Argonaut Mine Tailings Pile Assessment, Jackson, California, July, 2013*, Ecology and Environment Inc. (E & E, 2013).

Blank results field indicates the sample was not analyzed for the applicable analyte/method.

XRF Samples analyzed by X-ray fluorescence, U.S. EPA Method 6200

Laboratory samples analyzed for arsenic and lead using U.S. EPA Method 6010B and for mercury using U.S. EPA Method 7471A

**Table 2. Summary of STLC Metals Data, Argonaut Mine Tailings Pile,
Jackson, California**

TDD No. TO-02-09-13-01-0004				PAN #: EE-002693.2213	
Date Sampled	07/09/13	07/09/13	07/09/13	07/09/13	
Sample ID	AOC1-D-27-12	AOC1-D-34-12	AOC2-SD-03-00	AOC2-SD-06-00	
Analyte, mg/L					STLC Regulatory Limit
Antimony (Sb)	<0.20	<0.20	<0.20	<0.20	15
Arsenic (As)	0.42	8.9	0.53	4.5	5.0
Barium (Ba)	1.2	1.5	3.7	2.8	100
Beryllium (Be)	0.0091	0.0059	<0.050	0.0048	0.75
Cadmium (Cd)	0.0029	0.0092	<0.050	0.015	1.0
Cobalt (Co)	1.1	0.24	0.055	0.51	80
Chromium (Cr)	0.061	0.11	0.022	0.031	5
Copper (Cu)	0.37	1.1	0.14	0.89	25
Lead (Pb)	0.065	<0.10	1.7	1.1	5.0
Molybdenum (Mo)	0.016	<0.20	0.024	0.019	350
Nickel (Ni)	0.70	0.70	0.18	0.43	20
Selenium (Se)	0.11	<0.20	<0.20	<0.20	1.0
Silver (Ag)	<0.10	<0.10	<0.10	<0.10	5
Thallium (Tl)	<0.20	<0.20	<0.20	<0.20	7.0
Vanadium (Va)	0.18	0.16	0.028	0.22	24
Zinc (Zn)	0.41	1.2	0.27	17	250
Mercury (Hg)	0.0021	0.0011	0.0016	0.0036	0.2
<p>Notes:</p> <p>Samples analyzed by California Wate Extraction Test and concentrations presented in milligrams per liter.</p> <p>STLC: Soluble Threshold Limit Concentration</p> <p>AOC = Area of Concern</p> <p>SD = Sediment sample</p> <p>D = Discrete soil sample</p> <p>-00 = Indicates sample collected from 0 to 2 inches below ground surface</p> <p>-12 = Indicates samples was collected from 12 to 18 inches below ground surface</p> <p>Bold = Indicates value exceeds regulatory limit</p>					

**Table 3. Soil pH in Selected Samples in AOC-1 and AOC-2
Argonaut Mine Tailings Pile, Jackson, California**

TDD #: TO-02-09-13-01-0004

PAN #: EE-002693-2213

Sample ID	Date Collected	pH	Comment
AOC1-D-01-00	07/10/2013	5.09	Collected from west side of Argonaut Lane
AOC1-D-02-12	07/09/2013	3.86	
AOC1-D-02-12-07	07/09/2013	3.79	Field duplicate
AOC1-D-19-00	07/09/2013	5.86	From Thickening Basin (AOC-2)
AOC1-D-25-00	07/09/2013	5.76	From slope near yards on east side
AOC1-D-25-00	07/09/2013	5.80	Lab duplicate
AOC1-D-28-00	07/09/2013	7.76	
AOC1-D-28-00-7	07/09/2013	3.07	Field duplicate
AOC1-D-30-12	07/09/2013	3.09	Collected from "Hot Spot"
AOC1-D-37-00	07/10/2013	5.96	Background sample, collected from west side of Argonaut Lane
AOC1-D-37-00	07/10/2013	5.89	Lab duplicate
AOC2-SD-03-00	07/10/2013	2.14	Collected from the product line in the decanting tank in AOC-2 (cyanide plant)

Notes:

-00 - Sample collected 0 to 2 inches below ground surface

-12 - Sample collected 12 to 18 inches below ground surface

D - Discrete sample

AOC - Area of Concern

Analysis by U.S. EPA Method 9045C, adjusted to 25 degrees Celsius

**Table 4. Summary of Lead, Arsenic, and Mercury Soil Sample Results in AOC-2
Argonaut Mine Tailings Pile, Jackson, California**

TDD #: TO-02-09-13-01-0004

PAN #: EE-002693-2213

Sample ID	Date Collected	Lead		Arsenic		Mercury		Location Description	Comment
		Environmental Screening Levels (mg/kg)							
		400		61		10			
		Analysis Results (mg/kg)							
		XRF	Lab	XRF	Lab	XRF	Lab		
AOC2-SD-01-00	07/10/13	<28	17J	210	230	<8.1	0.20	Thickening basin	
AOC2-SD-01-12	07/10/13	<28		270		<8.1			
AOC2-SD-01-12-7	07/10/13	<28		270		<8.1			3
AOC2-SD-02-00	07/10/13	54	48J	470	480	16	11	Coal tar tumbling barrel	
AOC2-SD-03-00	07/10/13	180	160J	280	300	53	41	Decant line of the decant tank, roughly 2 feet above ground surface	
AOC2-SD-03-00	07/10/13	180	160J	280	300	53	41		5
AOC2-SD-04-00	07/10/13	180		390		<8.1		Inside the burn barrel at the SW side of Tank 1	
AOC2-SD-04-00	07/10/13	180		390		10			5
AOC2-SD-05-00	07/10/13	37		200		<8.1		Tank 5 - Wall was broken and contents were accessible	
AOC2-SD-05-00-PD	07/10/13	37		190		<8.1			4
AOC2-SD-06-00	07/10/13	94		350		<8.1		Tank 3 - Used hand auger to access contents	
AOC2-SD-06-12	07/10/13	32		320		<8.1			
AOC2-SD-06-12-PD	07/10/13	33		320		<8.1			4
AOC2-SD-07-00	07/10/13	180		340		<8.1		Between tanks 1, 2, 5, & 6	
AOC2-SD-07-12	07/10/13	170		250		12			
AOC2-SD-08-00	07/10/13	31	30J	64	63	<8.1	1.7	35 gallon (estimated) process drum at the NE side of Tank 6	
AOC2-SD-10-00	07/10/13	490	750J	4,900	6,300	<8.1	13	Vat 2	1, 7
AOC2-SD-10-00-7		480		4,900		<8.1			1, 3, 5

Notes:

1. Indicates XRF sample was obtained from an unsieved sample analyzed directly through plastic bag.
2. Indicates laboratory analysis was performed on an unprocessed sample (i.e. not sieved).
3. Field duplicate
4. Preparation duplicate
5. XRF analysis duplicate
6. Background sample
7. Indicates XRF values are from field duplicate sample AOC2-SD-10-00-7, which was analyzed through bag as an unprocessed sample.

-00 - Sample collected 0 to 2 inches below ground surface

-12 - Sample collected 12 to 18 inches below ground surface

< - Below the detection limit for the XRF analysis, which was calculated as 3 times the lowest detected value

J - Value is estimated

mg/kg - Milligram per kilogram

SD - Discrete sediment sample

PD - Preparation Duplicate

AOC - Area of Concern

Bold - Indicates contaminant was detected above the environmental screening level

Screening levels are from the *Sampling and Analysis Plan, Argonaut Mine Tailings Pile Assessment, Jackson, California, July, 2013*, Ecology and Environment Inc. (E & E, 2013).

Blank results field indicates the sample was not analyzed for the applicable analyte/method.

XRF Samples analyzed by X-ray fluorescence, U.S. EPA Method 6200.

Laboratory samples analyzed for arsenic and lead using U.S. EPA Method 6010B and for mercury using U.S. EPA Method 7471A.

**Table 5. Summary of Cyanide Soil Sample Results in AOC-2
Argonaut Mine Tailings Pile, Jackson, California**

TDD #: TO-02-09-13-01-0004

PAN #: EE-002693-2213

Sample ID	Cyanide, Amenable	Cyanide, Total	Comment
<i>Environmental screening level (mg/kg)</i>	22		
AOC2-SD-01-00	< 0.95	< 0.95	
AOC2-SD-01-12	< 0.98	< 0.98	
AOC2-SD-01-12-7	< 1	< 1	1
AOC2-SD-02-00	22	22J	
AOC2-SD-03-00	2.8	2.8J	
AOC2-SD-04-00	21	21J	
AOC2-SD-05-00	< 0.97	< 0.97	
AOC2-SD-06-00	1.4	1.4J	
AOC2-SD-06-12	< 0.95	< 0.95	
AOC2-SD-07-00	23	23J	
AOC2-SD-07-12	27	27J	
AOC2-SD-08-00	75	75J	
AOC2-SD-09-00	9.6	9.6J	
AOC2-SD-10-00	6.6	6.6J	
AOC2-SD-10-7	8.1	9.6J	1

Notes:

1. Field duplicate

-00 - Sample collected 0 to 2 inches below ground surface

-12 - Sample collected 12 to 18 inches below ground surface

<XX - Not detected above the indicated limit of detection

J - Value is estimated

mg/kg - Milligram per kilogram

SD - Discrete sediment sample

AOC - Area of Concern

All samples collected on July 10, 2013

Samples analyzed using U.S. EPA method 9012A

Bold - Indicates contaminant was detected above the environmental screening level
The screening level for cyanide is the noncarcinogenic US EPA Region 9 Residential Regional Screening Level (rRSL) for soil (U.S. EPA Nov 2012).

Table 6. Summary of Soil Sample Results for PAHs in AOC-2 Argonaut Mine Tailings Pile, Jackson, California																PAN #: EE-002693-2213
TDD #: TO-02-09-13-01-0004																
Sample ID	Acenaphthene	Anthracene	Benzo[a]-anthracene	Benzo[a]-pyrene	Benzo[b]-fluoranthene	Benzo[k]-fluoranthene	Benzo[ghi]perylene	Chrysene	Dibenz(a,h)-anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene
Environmental Screening Levels (mg/kg)	340	1,700	15	1.5	15	150	NA	1,500	1.5	230	230	15	23	14	NA	170
AOC2-P-01	< 42	170	350	260	270	250	130	410	< 52	880	< 47	150J	< 43	< 42	920	1,000
AOC2-SD-02-00	< 0.43 UJ	< 0.44 UJ	< 0.48 UJ	< 0.49 UJ	< 0.49 UJ	< 0.58 UJ	< 0.57	< 0.43 UJ	< 0.53 UJ	< 0.49 UJ	< 0.48 UJ	< 0.50 UJ	< 0.44 UJ	< 0.42 UJ	< 0.49	< 0.49 UJ
AOC2-SD-03-00	< 0.45	< 0.46	< 0.49	< 0.51	< 0.51	< 0.61	< 0.59	< 0.45	< 0.55	< 0.51	< 0.49	< 0.52	< 0.46	< 0.44	< 0.51	< 0.51
AOC2-SD-04-00	< 0.44	< 0.46	3.6	4.2	3.5	4.1	2.9	4.9	0.87J	6.1	< 0.49	3.0	< 0.45	< 0.44	2.5	6.5
AOC2-SD-05-00	< 0.42 UJ	< 0.44 UJ	< 0.47 UJ	< 0.48 UJ	< 0.48 UJ	< 0.58 UJ	< 0.56	< 0.43 UJ	< 0.52 UJ	< 0.48 UJ	< 0.47 UJ	< 0.49 UJ	< 0.43 UJ	< 0.42 UJ	< 0.48 UJ	< 0.48 UJ
AOC2-SD-06-12	< 0.44	< 0.46	< 0.49	< 0.50	< 0.51	< 0.60	< 0.59	< 0.45	< 0.54	< 0.51	< 0.49	< 0.51	< 0.45	< 0.44	< 0.50	< 0.50
AOC2-SD-07-12	< 0.42	< 0.44	0.54J	1.0J	0.66J	0.90J	1.1J	0.76J	< 0.52	0.60J	< 0.47	0.91J	< 0.43	< 0.42	< 0.48	0.79J
AOC2-SD-08-00	< 0.41	< 0.42	< 0.45	< 0.46	< 0.47	< 0.56	< 0.54	< 0.41	< 0.50	< 0.47	< 0.45	< 0.47	< 0.42	< 0.40	< 0.46	< 0.46
AOC2-SD-09-12	< 0.76	< 0.78	< 0.84	< 0.86	< 0.87	< 1.0	< 1.0	< 0.77	< 0.93	< 0.87	< 0.84	< 0.88	< 0.77	< 0.75	< 0.86	< 0.86
AOC2-SD-10-00	< 0.59	< 0.61	< 0.65	< 0.67	< 0.67	< 0.80	< 0.78	< 0.59	< 0.72	< 0.67	< 0.65	< 0.68	< 0.60	< 0.58	< 0.67	< 0.67
Notes:																
PAH = Polycyclic Aromatic Hydrocarbons																
All results in mg/kg (milligrams per kilogram)																
-00 - Sample collected 0-12 inches below ground surface																
-12 - Sample collected 12-18 inches below ground surface																
<XX - Not detected above the indicated Limit of Detection																
J, UJ - Value is estimated																
NA- No screening level available																
SD - Discrete sediment sample																
AOC - Area of Concern																
Sample AOC4-SD-01-00 collected on July 9, 2013, all others collected on July 10, 2013.																
Bold - Indicates contaminant was detected above the environmental screening level																
Screening levels from the Regional Screening Level (RSL) Residential Soil Table, Region 9, U.S. EPA, May 2013. U.S. EPA Superfund clean-up levels based on an excess carcinogenic target risk (TR) of 10 ⁻⁴ , the RSLs are based on a TR of 10 ⁻⁶ .																
Values have been adjusted for a TR of 10 ⁻⁴ .																
Samples analyzed using U.S. EPA Method 8270C																

Notes:

PAH = Polycyclic Aromatic Hydrocarbons
 All results in mg/kg (milligrams per kilogram)
 -00 - Sample collected 0-12 inches below ground surface
 -12 - Sample collected 12-18 inches below ground surface
 <XX - Not detected above the indicated Limit of Detection
 J, UJ - Value is estimated
 NA - No screening level available
 SD - Discrete sediment sample
 AOC - Area of Concern

Sample AOC4-SD-01-00 collected on July 9, 2013; all others collected on July 10, 2013.

Bold - Indicates contaminant was detected above the environmental screening level

Screening levels from the Regional Screening Level (RSL) Residential Soil Table. Region 9, U.S. EPA. May 2013. U.S. EPA Superfund clean-up levels based on an excess carcinogenic target risk (TR) of 10^{-4} , the RSLs are based on a TR of 10^{-6} . Values have been adjusted for a TR of 10^{-4} .

Samples analyzed using U.S. EPA Method 8270C

**Table 7. Summary of Lead, Arsenic, and Mercury Soil Sample Results in AOC-4
Argonaut Mine Tailings Pile, Jackson, California**

TDD #: TO-02-09-13-01-0004

PAN #:EE-002693-2213

Sample ID	Date Collected	Lead		Arsenic		Mercury		Comment
		Environmental Screening Levels (mg/kg)						
		400		61		10		
		Analysis Results (mg/kg)						
		XRF	Lab	XRF	Lab	XRF	Lab	
AOC4-SD-01-00	07/09/13		12		4,700		0.25	2
AOC4-SD-02-00	07/10/13	690	750	7,200	7,300	<8.1	14	2
AOC4-SD-02-00	07/10/13	680	750	7,200	7,300	<8.1	14	2, 5
AOC4-SD-02-00-PD	07/10/13	680		7,200		<8.1		2, 4
AOC4-SD-03-00	07/10/13	20	13	50	49	<8.1	0.66	2
AOC4-SD-03-00-07	07/10/13		13		44		0.72	2, 3
AOC4-SD-04-00	07/10/13	13	19	120	190	<8.1	0.11	1, 2

Notes:

1. Indicates XRF sample was obtained from an unsieved sample analyzed directly through plastic bag.

2. Indicates laboratory analysis was performed on an unprocessed sample (i.e. not sieved)

3. Field duplicate

4. Preparation duplicate

5. XRF analysis duplicate

-00 - Sample collected 0 to 2 inches below ground surface

-12 - Sample collected 12 to 18 inches below ground surface

< - Below the detection limit for the XRF analysis, which was calculated as 3 times the lowest detected value

mg/kg - Milligram per kilogram

SD - Discrete sediment sample

PD - Preparation Duplicate

AOC - Area of Concern

Bold - Indicates contaminant was detected above the environmental screening level.

Screening levels are from the *Sampling and Analysis Plan, Argonaut Mine Tailings Pile Assessment, Jackson, California, July, 2013*, Ecology and Environment Inc. (E & E, 2013).

Blank results field indicates the sample was not analyzed for the applicable analyte/method.

Laboratory samples analyzed for arsenic and lead using U.S. EPA Method 6010B and for mercury using U.S. EPA Method 7471A.

**Table 8. Summary of Soil Sample Results for Cyanide in AOC-4
Argonaut Mine Tailings Pile, Jackson, California**

TDD #: TO-02-09-13-01-0004 PAN #: EE-002693-

Sample ID	Cyanide, Amenable	Cyanide, Total	Comment
<i>Environmental screening level (mg/kg)</i>	22		
AOC4-SD-01-00	1.4	1.4J	
AOC4-SD-02-00	23	23J	
AOC4-SD-03-00	< 0.98	< 0.98	
AOC4-SD-03-07	< 0.99	< 0.99	1
AOC4-SD-04-00	1.0	1.0J	

Notes:

1. Field duplicate

-00 - Sample collected 0 to 2 inches below ground surface

-12 - Sample collected 12 to 18 inches below ground surface

<XX - Not detected above the indicated limit of detection

J - Value is estimated

mg/kg - Milligram per kilogram

SD - Discrete sediment sample

AOC - Area of Concern

All samples collected on July 10, 2013

Samples analyzed using U.S. EPA method 9012A

Bold - Indicates contaminant was detected above the environmental screening level.

The screening level for cyanide is the noncarcinogenic U.S. EPA Region 9 Residential Regional Screening Level (rRSL) for soil (U.S. EPA Nov 2012).

**Table 9. Summary of Soil and Surface Water Sample Results for PAHs in AOC-4
Argonaut Mine Tailings Pile, Jackson, California**

TDD #: TO-02-09-13-01-0004																PAN #: EE-002693-2213	
Sample ID	Acenaphthene	Anthracene	Benzo[a]-anthracene	Benzo[a]-pyrene	Benzo[b]-fluoranthene	Benzo[k]-fluoranthene	Benzo[g,h,i]perylene	Chrysene	Dibenz(a,h)-anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene	
Environmental Screening Levels (mg/kg)	340	1,700	15	1.5	15	150	NA	1,500	1.5	230	230	15	23	14	NA	170	
AOC4-SD-01-00	< 3.0	< 3.1	< 3.4	< 3.4	< 3.5	< 4.1	< 4.0	< 3.1	< 3.7	< 3.5	< 3.4	< 3.5	< 3.1	< 3.0	< 3.4	< 3.4	
AOC4-SD-02-00	< 0.090	< 0.093	< 0.10	< 0.10	< 0.10	< 0.12	< 0.12	< 0.091	< 0.11	< 0.10	< 0.10	< 0.10	< 0.092	< 0.089	< 0.10	< 0.10	
AOC4-SD-03-00	< 0.083	< 0.086	0.20J	0.56J	0.42J	0.45J	0.51J	0.29J	0.13J	0.20J	< 0.092	0.50J	< 0.085	< 0.082	< 0.94	0.36J	
AOC4-SD-03-07	< 0.083	< 0.086	0.14J	0.41J	0.32J	0.34J	J	0.21J	0.11J	0.15J	< 0.092	0.40J	< 0.085	< 0.082	< 0.72	0.25J	
AOC4-SD-04-00	< 0.63	< 0.66	< 0.70	< 0.72	< 0.73	< 0.86	< 0.84	< 0.64	< 0.78	< 0.73	< 0.70	< 0.73	< 0.65	< 0.63	< 0.94	< 0.72	
AOC4-W-01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
AOC4-W-02	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	

Notes:

PAH = Polycyclic aromatic hydrocarbons

All results in mg/kg (milligrams per kilogram)

-00 - Sample collected 0-12 inches below ground surface

-12 - Sample collected 12-18 inches below ground surface

<XX - Not detected above the indicated Limit of Detection

J - value is estimated

NA - No screening level available

SD - Discrete sediment sample

W- Denotes surface water sample

AOC - Area of Concern

Sample AOC4-SD-01-00 collected on July 9, 2013, all others collected on July 10, 2013.

Screening levels from the Regional Screening Level (RSL) Resident Soil Table, Region 9, U.S. EPA, May 2013. U.S. EPA Superfund clean-up levels based on a Carcinogenic Target Risk of 10^{-4} or a non-cancer Hazard Index value of 1.

Samples analyzed using U.S. EPA Method 8270C

Appendix C Sampling and Analysis Plan

(Included Electronically on Attached CD)

Appendix D Photo Documentation

Argonaut Mine Tailings Pile Assessment Photolog
Jackson, Amador County, California



PHOTO 1

Date: February 7, 2013

Direction: Southeast

Photographer: B. Milton

Location: Looking southeast at AOC-1

Description: Soils devoid of vegetation in AOC-1.



PHOTO 2

Date: February 7, 2013

Direction: West

Photographer: B. Milton

Location: AOC-2, Looking West at Vats V-1 and V-2

Description: Vats in cyanide plant (AOC-2). Note sediment and water in Vat V-1.



PHOTO 3

Date: July 10, 2013

Direction: North

Photographer: B. Milton

Location: AOC-2, Looking North at Vat V-1

Description: Vat V-1 in AOC-2. Note sediment remains but water is no longer present.

Argonaut Mine Tailings Pile Assessment Photolog
Jackson, Amador County, California



PHOTO 4

Date: July 10, 2013

Direction: South

Photographer: J. Loomis

Location: AOC-2

Description: Coal-tar tumbling barrel. Sample AOC1-P-01 was collected from residual tar lining this barrel.



PHOTO 5

Date: July 10, 2013

Direction: West

Photographer: B. Milton

Location: Breach in Upper Tailings Dam

Description: Sediment sample AOC4-SD-03-00 was collected from this location. Note erosion of tailings.

Argonaut Mine Tailings Pile Assessment Photolog
Jackson, Amador County, California



PHOTO 6

Date: July 10, 2013

Direction: Southeast

Photographer: B. Milton

Location: Upstream side of Lower Tailings Dam

Description: Approximately 15-foot deep by 12-foot diameter sink hole has formed behind the Lower Tailings Dam.

Appendix E Data Validation and Laboratory Analytical Reports

(Included Electronically on Attached CD)