Table 1 - Land Ownership Information in the Vicinity of the Van Stone Mine

Parcel	Owner Name	Address	Land Type
433400	Vaagen Bros. Lumber Co. Inc.	567 W 5th Ave., Colville, WA 99114	Resource - Designated Forest Land
5032620	William H. Martin	1976 Onion Creek Rd., Colville WA, 99114	Residential - Single Family
5032700	Diana L. Walker et al.	464 Douglas Falls Rd., Colville WA, 99114	Resource - Designated Forest Land
5032900	Diana L. Walker et al.	464 Douglas Falls Rd., Colville, WA 99114	Resource - Designated Forest Land
5032950	Onion Creek School Distict	Onion Creek School Distict	School District
5033100	North Country Properties LLC	2500 N Linder Rd., Eagle, ID 83616	Residential - Single Family
5033200	North Country Properties LLC	2500 N Linder Rd., Eagle, ID 83616	Undeveloped - Land
5033800	William M. Swartz	2025 B Lotze Creek Rd., Colville, WA 99114	Residential - Single Family
5033900	North Country Properties LLC	2501 N. Linder Rd., Eagle, ID 83616	Resource - Designated Forest Land
5034100	Brad R. Allison	1269 Arcadia Blvd., Bullhead City, AZ 86442-6959	Resource - Designated Forest Land
5034200	North Country Properties LLC	2500 N Linder Rd., Eagle, ID 83616	Resource - Designated Forest Land
5037100	Gallatin Northeast Washington, Land and Timber LLC	687 W Canville Ave. #101, Coeur d'Alene, ID 83815	Resource - Designated Forest Land
5037200	Stimson Washington Inc.	7600 N Mineral Dr., Suite 400, Coeur d'Alene, ID 83815	Resource - Designated Forest Land
5037500	Gallatin Northeast Washington, Land and Timber LLC	687 W Canville Ave. #101, Coeur d'Alene, ID 83815	Resource - Designated Forest Land
5037650	Stimson Washington Inc.	7600 N Mineral Dr., Suite 400, Coeur d'Alene, ID 83815	Resource - Designated Forest Land
5037690	Stimson Washington Inc	7601 N Mineral Dr. #400, Suite 400, Coeur d'Alene, ID 83815	Resource - Designated Forest Land
5037695	Olen R. Burris	2057 Lotze Creek Rd., Lot D, Colville, WA 99114	Residential - Single Family
5037700	Equinox Resources (Wash) Inc.	PO Box 32, Colville, WA 99114	Undeveloped - Land
5037850	Gallatin Northeast Washington, Land and Timber LLC	687 W Canville Ave. #101, Coeur d'Alene, ID 83815	Resource - Designated Forest Land
5037900	Vaagen Bros. Lumber Co. Inc.	565 W 5th Ave., Colville, WA 99114	Resource - Designated Forest Land
5038000	William M. Swartz	2025 B Lotze Creek Rd., Colville WA 99114	Resource - Designated Forest Land
5038100	Keith D. Ringer	1436 Peterson Swamp Rd., Colville, WA 99114	Resource - Designated Forest Land
5038200	Gallatin Northeast Washington, Land and Timber LLC	687 W Canville Ave. #101, Coeur d'Alene, ID 83815	Resource - Designated Forest Land
5038401	Equinox Resources (Wash) Inc.	PO Box 32, Colville, WA 99116	Undeveloped - Land
5038410	Vaagen Bros. Lumber Co. Inc.	566 W 5th Ave., Colville, WA 99114	Resource - Designated Forest Land
5038450	Gallatin Northeast Washington, Land and Timber LLC	687 W Canville Ave. #101, Coeur d'Alene, ID 83815	Resource - Designated Forest Land
5038600	Edward C. Darrah	2131 Lotze Creek Rd., Colville, WA 99114	Residential - Single Family
5038650	George Mattozzi	2157 Lotze Creek Rd., Colville, WA 99114	Undeveloped - Land
5038700	Onion Creek Eighty Acres LLC	298 S Main St. #304, Colville, WA 98114	Resource - Designated Forest Land
5038800	Vaagen Bros. Lumber Co. Inc.	565 W 5th Ave., Colville, WA 99114	Resource - Designated Forest Land
5038900	Earle W. Olson	20321 22nd Ave. E., Spanaway, WA 98387	Residential - Single Family
5039000	Jason A. Jones	2117 Lotze Creek Rd., Colville, WA 99114	Residential - Single Family
5039101	Daniel L. Hildahl	2125 Lotze Creek Rd., Colville, WA 99114	Undeveloped - Land
5039201	Daniel L. Hildahl	2125 Lotze Creek Rd., Colville, WA 99114	Residential - Single Family
5039302	Equinox Resources (Wash) Inc.	PO Box 32, Colville, WA 99115	Undeveloped - Land
5039320	Equinox Resources (Wash) Inc.	PO Box 32, Colville, WA 99114	Undeveloped - Land
5039400	Diana L Walker et al.	464 Douglas Falls Rd., Colville WA, 99114	Resource - Designated Forest Land
5039420	Chopot Lands LLC	PO Box 206 Colville, WA, 99114	Resource - Designated Forest Land
5039500	Chopot Lands LLC	PO Box 206 Colville, WA, 99114	Resource - Designated Forest Land
5039550	Vaagen Bros. Lumber Co. Inc.	565 W 5th Ave., Colville, WA 99114	Resource - Designated Forest Land
5039700	Frank D. Age	PO Box 1415, Eugene, OR 97440	Resource - Designated Forest Land
5040000	Frank D. Age	PO Box 1415, Eugene, OR 97441	Residential - Single Family
5040200	Stacy E. Henricks	2132 Lotz Creek Rd., Colville WA, 99114	Resource - Designated Forest Land
5040235	Frank D. Age	PO Box 1415, Eugene, OR 97440	Residential - All Other
5041075	Stephen M. Lambert	PO Box 4122, Bremerton, WA 98312	Undedeveloped - Timber Land
5041100	Stimson Washington Inc.	7602 N Mineral Dr., Suite 400, Coeur d'Alene, ID 83815	Resource - Designated Forest Land

Table 1 - Land Ownership Information in the Vicinity of the Van Stone Mine

Parcel	Owner Name	Address	Land Type
5041200	Onion Creek Eighty Acres LLC	298 S Main St. #304, Colville, WA 98114	Resource - Designated Forest Land
5041300	Gallatin Northeast Washington, Land and Timber LLC	687 W Canville Ave. #101, Coeur d'Alene, ID 83815	Resource - Designated Forest Land
5041401	Equinox Resources (Wash) Inc.	PO Box 32, Colville, WA 99114	Resource - Designated Forest Land
5041500	Vaagen Bros. Lumber Co. Inc.	565 W 5th Ave., Colville, WA 99114	Resource - Designated Forest Land
5041600	Vaagen Bros. Lumber Co. Inc.	565 W 5th Ave., Colville, WA 99114	Resource - Designated Forest Land
5041700	Vaagen Bros. Lumber Co. Inc.	565 W 5th Ave., Colville, WA 99114	Resource - Designated Forest Land
5041725	Ron J. Matney	Julie A. Matney, 790 S Main St., Colville, WA 99114	Resource - Designated Forest Land
5041750	Vaagen Bros. Lumber Co. Inc.	565 W 5th Ave., Colville, WA 99114	Resource - Designated Forest Land
5041800	Vaagen Bros. Lumber Co. Inc.	565 W 5th Ave., Colville, WA 99114	Resource - Designated Forest Land
5042000	Gallatin Northeast Washington, Land and Timber LLC	687 W Canville Ave. #101, Coeur d'Alene, ID 83815	Resource - Designated Forest Land
5042150	Vaagen Bros. Lumber Co. Inc.	565 W 5th Ave., Colville, WA 99114	Undeveloped - Land

Table 2 - Summary of Water Wells in the in the Vicinity of the Van Stone Mine

Map ID	Well Log ID	Section	Owner	Well Address	Owner Address	Depth (ft)	Use
W-1	WL-1	28	Jack McCotter	695 Rocky Lake Rd., #A, Colville, WA 99114	Same as well	660	Domestic
W-2	WL-2	31	Jerry Bonetto	Not available	PO Box 68, Colville, WA 99114	38	Domestic
W-3	WL-3	31	Alan Cates	Not available	Rte. 2, Box 307 A, Colville, WA 99114	30	Domestic
W-4	WL-4	29	Jim Haager	Not available	Rte. 2, Colville, WA, 99114	20	Domestic
W-5	WL-5-Jones1	29	Frank Jones	2117 Lotze Creek Rd., Colville, WA 98114	20315 22nd Ave. E, Spanaway, WA 98387	100	Domestic
W-5	WL-5-Jones2	29	Frank Jones	2118 Lotze Creek Rd., Colville, WA 98114	20316 22nd Ave. E, Spanaway, WA 98387	600	Domestic
W-5	WL-5-Garceau	29	L. Garceau	Not available		240	Domestic
W-6	WL-6	20	Jerry Carmen	Not available	PO Box 232, Vaughn, WA 98394	480	Domestic
W-7	WL-7	20	Bill Allison	Not available	Rte 2, Box 31CA, Colville, WA 99114	263	Domestic
W-8	WL-8	19	Jacob Ralph	1994 Clugston-Onion Creek Rd., Colville, WA 99114	PO Box 499, Chewelah, WA 99109	200	Domestic
W-9	WL-9	19	Schwab, Otto & Diedre	1991 Clugston-Onion Creek Rd., Colville, WA 99114	Same as well	120	Domestic
W-10	WL-10	18	Dan Wilcox	Not available	Rte. 1, Box 670, Evans, WA 99126	100	Domestic
W-11	WL-11	13	Doug & Sharon Sundheim	Not available	2335 Alm Rd., #18, Chewelah, WA 99109	400	Domestic
W-12	WL-12	24	Channing M. Day, Jr.	Not available	Rte 2, Box 250, Colville, WA 99116	280	Domestic
W-13	WL-13	30	American Smelting and Refining Co.	Not available	Not available	21	Not available
W-14	WL-14	30	Equinox Resources Ltd.		625 Howell St., Vancouver, BC	23	Monitoring Well
W-15	WL-15	30	Paul Lotze	Not available	Not available	120	Domestic
W-16	WL-16	NE1/4NE1/4S25T38NR39E	Jerry L. Slater	Not available	1880 Clugston- Onion Creek Rd., Colville, WA 99114	200	Domestic
W-17	WL-17	N1/2SW1/4SE1/4S24T38NR39E	Leoward Gordon	Not available	Rte. 2, Box 285 Colville, WA	280	Domestic
W-18	WL-18	NW1/4SE1/4S24T38NR39E	Tony Nickerson	Not available	1923 Clugston-Onion Creek Rd., Colville, WA 99114	120	Domestic
W-19	WL-19	SW1/4NE1/4S24T38NR39E	State of WA Ford Fish Hatchery	Not available	Not available	40	Other
WL-20	WL-20	NE1/4SE1/4S19T38NR40E	2006 Lotze	Onion Creek School	2006 Lotze Creek Rd., Colville, WA 99114	135	Non-transient/Non-community[1]

1: A Group A Public Water System serves 25 or more people per day for 60 or more days /year. The system is defined as Noncommunity when it does not serve 15 or more year-round service connections or 25 or more non-residents/day for 60 or more days/year. The system is Nontransient when it serves 25 or more of the same people/day for 180 or more days/year.

Table 3 - Summary of Domestic Well Log Information

Well Number	Depth Interval (feet)	Stratigraphy	Well Completion Information		Units	Water Bearing Zone
WL-1	0-2	Overburden	Total Well Depth	660	ft	Fractured Granite
	5-57	Sand and gravel and boulders	Surface Elevation	N/A	ft	
	57-98	Granite, tan, decomposed	Thickness of Glacial Material	57	ft	
	98-100	Granite fractured with water	Static Water Level	100	ft	
	100-157	Granite, tan	Depth of Screened Interval	300-640	ft	
	157-275	Granite, green	Estimated Well Yield	3-4	gpm	
	275-280	Granite, fractured with water				
	550-660	Granite, gray				
	660	Granite, green, hard				
WL-2	0-4	Sand and gravel	Total Well Depth	38	ft	Glacial material
	4-16	Sand and gravel and clay	Surface Elevation	2,800	ft	
	16-35	Sand and gravel, water bearing	Thickness of Glacial Material	35	ft	
	35-38	Granite (medium hard)	Static Water Level	15	ft	
			Depth of Screened Interval	22-34	ft	
			Estimated Well Yield	4-5	gpm	
WL-3	0-2	Clay, gray	Total Well Depth	30	ft	Weathered Granite
	2-4	Clay, gray, gravel	Surface Elevation	2,800	ft	
	4-30	Granite, sandy, crumbly, decomposed	Thickness of Glacial Material	4	ft	
			Static Water Level	15	ft	
			Depth of Screened Interval	25-30	ft	
			Estimated Well Yield	2	gpm	
WL-4	0-4	Clay	Total Well Depth	100	ft	Weathered Granite
	4-35	Clay, gray	Surface Elevation	N/A	ft	
	35-79	Clay, black-gray, hard	Thickness of Glacial Material	79	ft	
	79-99	Granite, broken	Static Water Level	20	ft	
	99-100	Granite, hard	Depth of Screened Interval	79-92	ft	
			Estimated Well Yield	10-15	gpm	
WL-5-1 Well WL-5-1 and WL-5-2 are at the same map location	0-6	Sand and clay, brown	Total Well Depth	100	ft	Fractured Granite
	6-34	Granite, decomposed	Surface Elevation	N/A	ft	
	34-100	Granite, gray, medium	Thickness of Glacial Material	6	ft	
			Static Water Level	30	ft	
			Depth of Screened Interval	None	ft	
			Estimated Well Yield	1.5-2	gpm	
WL-5-2	0-9	Sand and clay, brown	Total Well Depth	600	ft	Fractured Granite
	9-47	Granite, brown & white, soft	Surface Elevation	N/A	ft	
	47-48	Granite, brown, soft (water bearing)	Thickness of Glacial Material	9	ft	
	48-125	Granite, brown & white, soft	Static Water Level	12	ft	
	125-240	Granite, gray & white, medium	Depth of Screened Interval	None	ft	
	240-257	Granite, gray & white, soft	Estimated Well Yield	1.5	gpm	
	257-350	Granite, gray & white, medium				
	350-370	Granite, gray & brown, soft				
	370-420	Granite, gray & white, medium				
	420-445	Granite, brown & white, soft				
	445-460	Granite, gray & brown, soft				
	460-520	Granite, gray & white, medium				
	520-540	Granite, gray & brown, soft				
	540-600	Granite, gray & white, medium				

Table 3 - Summary of Domestic Well Log Information

Well Number	Depth Interval (feet)	Stratigraphy	Well Completion Information		Units	Water Bearing Zone
WL-6	0-1	Topsoil	Total Well Depth	480	ft	Fractured Granite
	1-8	Granite, gray, decomposed	Surface Elevation	N/A	ft	
	8-160	Granite, gray, medium	Thickness of Glacial Material	1	ft	
	160-180	Granite, gray, soft	Static Water Level	150	ft	
	180-210	Granite, gray, medium	Depth of Screened Interval	None	ft	
	210-300	Granite, soft (water bearing)	Estimated Well Yield	1.5-2	gpm	
	300-420	Granite, gray, medium				
	420-440	Granite, gray, fractured				
	440-480	Granite, soft				
WL-7	0-2	Overburden	Total Well Depth	N/A	ft	Fractured Granite
	2-11	Sand and gravel	Surface Elevation	N/A	ft	
	11-27	Granite, gray, soft	Thickness of Glacial Material	11	ft	
	27-49	Granite, brown, soft	Static Water Level	N/A	ft	
	49-120	Granite, gray, medium hard	Depth of Screened Interval	None	ft	
	120-121	Granite, red, fractured	Estimated Well Yield	3-4	gpm	
	121-141	Granite, gray, medium hard				
	141-142	Granite, brown, fractured				
	141-236	Granite, gray, medium hard				
	236-241	Granite, brown, soft				
	241-257	Granite, gray, medium hard				
	257-263	Granite, yellow and brown, medium soft				
WL-8	0-2	Topsoil	Total Well Depth	200	ft	Fractured Granite
	2-4	Boulders	Surface Elevation	N/A	ft	
	4-24	Granite, decomposed	Thickness of Glacial Material	4	ft	
	24-60	Granite, medium	Static Water Level	30	ft	
	60-86	Granite, brown (water bearing)	Depth of Screened Interval	60-200	ft	
	86-200	Granite, hard	Estimated Well Yield	1.5	gpm	
WL-9	0-14	Granite and sand, brown	Total Well Depth	120	ft	Fractured Granite
	14-68	Broken rock, clay, gravel, gray	Surface Elevation	N/A	ft	
	68-81	Clay, black with broken rock	Thickness of Glacial Material	0	ft	
	81-90	Granite, gray, soft	Static Water Level	78	ft	
	90-110	Granite, fractured (water bearing)	Depth of Screened Interval	80-120	ft	
	110-120	Granite, salt & pepper, hard	Estimated Well Yield	30	gpm	
WL-10	0-1	Overburden	Total Well Depth	100	ft	Fractured Granite
	1-19	Sand and gravel and boulders	Surface Elevation	2,375	ft	
	19-25	Granite, decomposed	Thickness of Glacial Material	19	ft	
	25-100	Granite, black & white	Static Water Level	N/A	ft	
			Depth of Screened Interval	None	ft	
			Estimated Well Yield	5	gpm	
WL-11	0-17	Gravel and sand and clay	Total Well Depth	400	ft	Fractured Granite
	17	Boulders	Surface Elevation	N/A	ft	
	7-22	Granite, tan, soft	Static Water Level	100	ft	
	22-190	Granite, soft, medium	Thickness of Glacial Material	17	ft	
	190-270	Granite, medium, fractured	Depth of Screened Intervals	160-180	ft	
	270-400	Granite, medium, hard		210-340	ft	
	400	Granite, fractured (water bearing)		360-380	ft	
			Estimated Well Yield	2	gpm	

Table 3 - Summary of Domestic Well Log Information

Well Number	Depth Interval (feet)	Stratigraphy	Well Completion Information		Units	Water Bearing Zone
WL-12	0-21	Sand and gravel, light brown	Total Well Depth	280	ft	Fractured Granite
	21-45	Gravel and boulders, gray brown	Surface Elevation	2,500	ft	
	45-75	Granite, gray, hard	Thickness of Glacial Material	45	ft	
	75-76	Granite, reddish brown, soft (water bearing)	Static Water Level	30	ft	
	76-275	Granite, gray, hard	Depth of Screened Interval	None	ft	
	275-276	Granite, brown, soft (water bearing)	Estimated Well Yield	20	gpm	
	276-280	Granite, gray, hard				
WL-13		No log	Total Well Depth	21	ft	Mine Tailings
			Surface Elevation	N/A	ft	
			Static Water Level	N/A	ft	
			Depth of Screened Interval	N/A	ft	
			Estimated Well Yield	75	gpm	
WL-14	0-5	Tailings	Total Well Depth	23	ft	Weathered Granite
	5-10	Sand	Surface Elevation	N/A	ft	
	10-17	Granite, weathered	Thickness of Glacial Material	10	ft	
	17-23	Granite, decomposed	Static Water Level	N/A	ft	
	23-33	Granite, black & white	Depth of Screened Interval	15-23	ft	
			Estimated Well Yield	N/A	gpm	
WL-15	0-40	Sand and gravel, brown and clay	Total Well Depth	120	ft	Fractured Granite
	40-44	Granite, brown (water bearing)	Surface Elevation	N/A	ft	
	44-49	Granite, brown, medium hard	Thickness of Glacial Material	40	ft	
	49-82	Granite, brown, medium hard (water bearing)	Static Water Level	20	ft	
	82-93	Granite, salt and pepper	Depth of Screened Interval	None	ft	
	93-94	Granite, broken (water Bearing)	Estimated Well Yield	7	gpm	
	94-120	Granite				
WL-16	0-3	Topsoil	Total Well Depth	200	ft	Fractured Granite
	3-18	Sand and gravel and boulders	Surface Elevation	N/A	ft	
	18-30	Granite, gray, pink	Thickness of Glacial Material	18	ft	
	30-75	Granite, gray, medium (water bearing)	Static Water Level	2	ft	
	75-140	Granite, gray, soft to medium (water bearing)	Screened Intervals	80-100	ft	
	140-200	Granite, gray, green		140-160	ft	
				180-200	ft	
			Estimated Well Yield	5	gpm	
WL-17	0-2	Topsoil	Total Well Depth	280	ft	Fractured Granite
	2-53	Sand and gravel, brown	Surface Elevation	N/A	ft	
	53-110	Granite, brown	Thickness of Glacial Material	53	ft	
	110-220	Granite, grey	Static Water Level	30	ft	
	220-280	Granite, green	Depth of Screened Interval	220-280	ft	
			Estimated Well Yield	5-6	gpm	
WL-18	0-8	Sand and clay, brown	Total Well Depth	120	ft	Fractured Granite
	8-10	Granite, hard	Surface Elevation	N/A	ft	
	10-12	Sand and clay, brown	Thickness of Glacial Material	8	ft	
	12-15	Granite, hard	Static Water Level	N/A	ft	
	15-18	Sand and gravel and clay	Depth of Screened Interval	None	ft	
	18-90	Granite, soft, brown	Estimated Well Yield	4	gpm	
	90-120	Granite, medium, gray				

Table 3 - Summary of Domestic Well Log Information

Well Number	Depth Interval (feet)	Stratigraphy	Well Completion Information		Units	Water Bearing Zone
WL-19	0-20	Sand and gravels and cobbles, brown	Total Well Depth	40	ft	Glacial Material
	20-25	Sand, gravel (water bearing)	Surface Elevation	N/A	ft	
	25-40	Sand, medium coarse (water bearing)	Thickness of Glacial Material	70+	ft	
	40-45	Sand, fine	Static Water Level	18	ft	
	45-70	Sand, silty, fine and clay, brown	Depth of Screened Interval	30-40	ft	
			Estimated Well Yield	20	gpm	
WL-20	0-5	Sand and gravel	Total Well Depth	135	ft	Fractured Granite
	5-20	Clay, blue and gravel	Surface Elevation	N/A	ft	
	20-21	Gravel (water bearing 5-6 gpm)	Thickness of Glacial Material	80	ft	
	21-80	Clay, blue and gravel	Static Water Level	N/A	ft	
	80-82	Granite, broken	Depth of Screened Interval	None	ft	
	82-108	Granite, gray, medium hard	Estimated Well Yield	20-25	gpm	
	108-109	Granite, fractured (water bearing)				
	109-126	Granite, gray, medium hard				
	126-132	Granite, gray, fractured (water bearing 15 gpm)				
	132-135	Granite				

Table 4 - Transect Surface Soil Sample Descriptions

Sample ID	Collection Date	Visual Soil Description	General Location/ Observations	Chemical Analysis	XRF Analysis	Evidence of Mine Impacts
AOI-1: Mill Facility, Open Pits and Waste Rock						
Transect 11						
T11-SS-300	11/2/2011	Dry, light gray, slightly silty SAND with trace gravel and occasional rootlets (SW)	Below 1" duff	X	X	
T11-SS-500	11/2/2011	Dry, light red-brown, slightly sandy SILT with trace gravel (ML)	Below 1" duff		X	
T11-SS-600	11/2/2011	Dry, red-brown, slightly sandy SILT with trace gravel (ML)	Below 1" duff		X	
T11-SS-750	11/2/2011	Dry, gray-brown, slightly sandy SILT with trace gravel (ML)	Below 0.5" duff		X	
T11-SS-900	11/2/2011	Dry, light brown, slightly sandy SILT with trace gravel (ML)	Below 3" duff	X	X	
T11-SS-1000	11/2/2011	No description	No sample collected, XRF analysis in situ Below 0.5" duff		X	
T11-SS-1200	11/2/2011	Dry, red-brown, slightly sandy SILT with trace gravel and occasional rootlets (ML)	Below 3" duff	X	X	
T11-SS-1250	11/2/2011	Damp, red-brown, slightly sandy SILT with trace gravel and occasional rootlets (ML)	Below 2" duff		X	
T11-SS-1500	11/2/2011	Dry, red-brown, slightly sandy SILT with trace gravel and occasional rootlets (ML)	Below 0.5" debris		X	
T11-SS-1750	11/2/2011	Dry, gray-brown, slightly sandy SILT with occasional rootlets (ML)	Below 2" duff			
T11-SS-2000	11/2/2011	Dry, gray-brown, silty SAND with trace gravel and scattered rootlets (SM)	Below 2" duff		X	
Transect 12						
T12-SS-150	11/3/2011	Dry, brown, slightly sandy SILT with trace gravel and occasional rootlets (ML)	Below 3" duff	X	X	
T12-SS-300	11/3/2011	Damp, red-brown, silty SAND with trace gravel and occasional rootlets (SM)	Below 6" duff		X	
T12-SS-450	11/3/2011	Dry, red-brown, slightly sandy SILT with occasional rootlets (ML)	Below 3" duff	X	X	
T12-SS-500	11/2/2011	No description	No sample collected, XRF analysis in situ Below 0.5" duff		X	
T12-SS-600	11/3/2011	Dry, light brown, slightly sandy SILT with trace gravel and occasional rootlets (ML)	Below 5" duff		X	
T12-SS-750	11/2/2011	Dry, brown, slightly sandy SILT with occasional rootlets (ML)	Below 0 to 1" duff	X	X	
T12-SS-1000	11/2/2011	No description	No sample collected, XRF analysis in situ. Below 0 to 3" duff.		X	
T12-SS-1250	11/3/2011	Dry, light brown, SILT with trace gravel and occasional rootlets (ML)	Below 8" duff		X	

Table 4 - Transect Surface Soil Sample Descriptions

Sample ID	Collection Date	Visual Soil Description	General Location/ Observations	Chemical Analysis	XRF Analysis	Evidence of Mine Impacts
T12-SS-1500	11/3/2011	Dry, red-brown, slightly sandy SILT with trace gravel and occasional rootlets (ML)	Below 2" duff		X	
Transect 13						
T13-SS-150	10/31/2011	Dry, red-brown, slightly silty SAND with occasional rootlets (SW)	Below 4" wood	X	X	
T13-SS-300	10/31/2011	Dry, brown, slightly silty SAND with rootlets (SW)	Below 1" duff	X	X	
T13-SS-450	10/31/2011	Dry, light brown, slightly silty SAND with occasional rootlets (SW)	Below 2 to 3" duff		X	
T13-SS-500	10/31/2011	Damp, brown, slightly silty SAND with trace rootlets (SW)		X	X	
T13-SS-600	10/31/2011	Dry, brown, slightly silty SAND with trace rootlets (SW)	Below 3" duff		X	
T13-SS-750	10/31/2011	Damp, brown to black, slightly silty SAND (SW)	Below 1" duff		X	
T13-SS-1000	10/31/2011	Dry, red-brown to light brown, slightly silty SAND (SW)	Below 1.5" duff		X	
T13-SS-1250	10/31/2011	Dry, red-brown to yellow brown, slightly silty SAND (SW)	Below 1" duff		X	
Transect 14						
T14-SS-150	11/7/2011	Dry, light brown, slightly silty SAND with organics (wood, roots) (SW)	Below 1" duff		X	
T14-SS-300	11/7/2011	Dry, gray-brown, slightly silty SAND with scattered rootlets (SW)	Below 0.5" duff	X	X	
T14-SS-450	11/7/2011	Dry, gray-brown, silty SAND with organics (wood, roots) (SM)	Below 8" duff		X	
T14-SS-500	10/30/2011	Dry, light brown, slightly silty SAND with occasional rootlets (SW)		X	X	
T14-SS-600	11/7/2011	Dry, red-brown, slightly silty SAND with occasional rootlets (SW)	Below 2" duff		X	
T14-SS-750	10/30/2011	Dry, red-brown, slightly silty SAND with occasional rootlets (SW)		X	X	
T14-SS-800	11/7/2011	Dry, gray-brown, slightly silty SAND with organics (wood, roots) (SW)	Below 2" duff		X	
T14-SS-1000	10/30/2011	Damp, gray-brown, slightly silty SAND with rootlets (SW)			X	
Transect 15						
T15-SS-200	11/1/2011	Dry, red-brown, slightly gravelly, silty SAND (SP)	Below 1" duff	X	X	
T15-SS-400	11/1/2011	Dry, red-brown, silty SAND with trace gravel and occasional rootlets (SM)	Below 1 to 2" duff		X	
T15-SS-500	11/1/2011	No description	No sample collected, XRF analysis in situ. Below 2" duff		X	
T15-SS-600	11/1/2011	Dry, brown, slightly silty SAND with trace gravel and occasional rootlets (SW)	Below 1" duff		X	
T15-SS-750	11/1/2011	Dry, red-brown, sandy SILT with trace gravel and occasional rootlets (ML)	Below 0.5" plants	X	X	
T15-SS-800	11/1/2011	Dry, red-brown, silty SAND with trace gravel and scattered rootlets (SM)	Below 2" duff		X	

Table 4 - Transect Surface Soil Sample Descriptions

Sample ID	Collection Date	Visual Soil Description	General Location/ Observations	Chemical Analysis	XRF Analysis	Evidence of Mine Impacts
T15-SS-1000	11/1/2011	Dry, brown, slightly silty SAND with trace gravel and scattered rootlets (SW)	Below 0.5" moss	X	X	
T15-SS-1250	11/1/2011	Dry, light red-brown, silty SAND with trace gravel (SM)	Below 1" duff		X	
T15-SS-1500	11/1/2011	Dry, light red-brown, sandy SILT with trace gravel and occasional rootlets (ML)	Below 2" duff		X	
Transect 16						
T16-SS-0	6/21/2012	Damp, black organic soil over red-brown, sandy SILT with roots and rootlets (OL/SM)	Below ~ 3.5" duff	X		No tailings observed
T16-SS-315	6/21/2012	Damp, black organic soil over red-brown, sandy SILT with roots and rootlets (OL/SM)	Below 1.5 to 2" duff	X		No tailings observed
T16-SS-770	6/21/2012	Moist, light brown, slightly gravelly sandy SILT (SP-SM)	Below ~ 1.5" duff	X		No tailings observed
Transect 17						
T17-SS-0	6/21/2012	Damp, red-brown, sandy SILT with roots and rootlets (SM)	Below ~ 1' duff	X		No tailings observed
T17-SS-500	6/21/2012	Damp, black organic SOIL over red-brown, sandy SILT with roots and rootlets (OL/SM)	Below ~ 3.5" duff	X		No tailings observed
Transect 18						
T18-SS-0	6/21/2012	Damp, red-brown, silty SAND with rootlets (SM)	Below ~ 0.5 to 1" duf	X		No tailings observed
T18-SS-350	6/21/2012	Damp, black organic SOIL over red-brown, sandy SILT with roots and rootlets (OL/SM)	Below 1 to 2" duff	X		No tailings observed
AOI-2: Upper Tailings Pile						
Transect 6						
T6-SS-100	11/6/2011	Dry, gray-brown, slightly sandy SILT (ML)	Below 2" duff	X	X	
T6-SS-200	11/6/2011	Dry, brown SILT with occasional rootlets (ML)	Below 6" duff		X	
T6-SS-300	11/6/2011	Dry, light brown SILT with occasional rootlets (ML)	Below 4" duff	X	X	
T6-SS-400	11/6/2011	Dry, brown, silty SAND with numerous rootlets (SM)	Below 8" duff		X	
T6-SS-500	11/6/2011	Damp, dark brown-black, slightly sandy SILT with scattered rootlets (ML)	Below 6" duff	X	X	
T6-SS-750	11/6/2011	Dry, gray-brown, slightly sandy SILT with trace gravel (ML)	Below 6" duff		X	
T6-SS-1000	11/6/2011	Dry, brown, silty SAND with trace gravel (SM)	Below 1" duff		X	
Transect 7						
T7-SS-100	11/7/2011	Dry, gray-brown, SAND (SP)	Below 4" duff	X	X	
T7-SS-200	11/7/2011	Dry, brown to gray-brown, slightly silty SAND (SW)	Below 2" duff		X	
T7-SS-300	11/7/2011	Dry, gray-brown, SAND (SP)	Below 4" duff	X	X	
T7-SS-400	11/7/2011	Dry, light brown, slightly silty SAND with occasional rootlets (SW)	Below 0.5" duff		X	
T7-SS-500	11/7/2011	Dry, light brown, slightly silty SAND (SW)	Below 3" duff	X	X	

Table 4 - Transect Surface Soil Sample Descriptions

Sample ID	Collection Date	Visual Soil Description	General Location/ Observations	Chemical Analysis	XRF Analysis	Evidence of Mine Impacts
T7-SS-750	11/7/2011	Dry, light brown, slightly silty SAND with occasional rootlets (SW)	Below 3" duff		X	
T7-SS-1000	11/7/2011	Dry, gray-brown, slightly silty SAND (SW)	Below 4" duff		X	
Transect 8						
T8-SS-100	11/5/2011	Dry, red-brown, slightly silty SAND (SW)	Below 1" duff	X	X	
T8-SS-200	11/5/2011	Dry, light brown, slightly silty SAND with trace rootlets (SW)	Below 3" duff		X	
T8-SS-300	11/5/2011	Damp, brown, slightly sandy SILT with trace gravel and scattered rootlets (SM)	Below 0.5" duff	X	X	
T8-SS-400	11/5/2011	Dry, light brown, slightly silty SAND with trace rootlets (SW)	Below 12" duff		X	
T8-SS-500	11/5/2011	Dry, red-brown, slightly silty SAND (SW)	Below 0.5" duff	X	X	
T8-SS-750	11/5/2011	Dry, black to brown, slightly silty SAND (SW)	Below 0.5" duff		X	
T8-SS-1000	11/5/2011	Dry, brown to black, slightly silty SAND with trace rootlets (SW)	Below 4" duff and wood debris		X	
Transect 9						
T9-SS-100	11/5/2011	Dry, brown, slightly silty SAND with trace rootlets (SW)	Below 0.5" duff	X	X	
T9-SS-200	11/5/2011	Dry, gray-brown, slightly silty SAND with trace rootlets (SW)	Below 3" duff		X	
T9-SS-300	11/5/2011	Dry, red-brown, slightly silty SAND with trace rootlets (SW)	Below 1" duff	X	X	
T9-SS-400	11/5/2011	Dry, brown, slightly silty SAND with trace rootlets (SW)	Below 1" duff		X	
T9-SS-500	11/5/2011	Dry, gray-brown to light brown, slightly silty SAND with trace rootlets (SW)	Below 1" duff	X	X	
T9-SS-750	11/5/2011	Dry, light brown, slightly silty SAND (SW)	Below 1" duff		X	
T9-SS-1000	11/5/2011	Dry, gray-brown, slightly silty SAND with trace rootlets (SW)	Below 1" duff		X	
Transect 10						
T10-SS-150	11/6/2011	Dry, red-brown, slightly sandy SILT with numerous rootlets (SM)	Below 3" duff	X	X	
T10-SS-300	11/6/2011	Damp, gray-brown, slightly silty SAND with occasional rootlets (SW)	Below 3" duff		X	
T10-SS-450	11/6/2011	Dry, light brown, slightly silty SAND (SW)	Below 3" duff		X	
T10-SS-500	11/6/2011	Dry, brown, slightly silty SAND (SW)	Below 1" duff	X	X	
T10-SS-600	11/6/2011	Dry, brown, slightly silty SAND (SW)	Below 2" duff		X	
T10-SS-750	11/6/2011	Dry, light brown, slightly silty SAND (SW)	Below 6" duff	X	X	
T10-SS-1000	11/6/2011	Dry, light brown, slightly silty SAND (SW)	Below 3" duff		X	
T10-SS-1250	11/6/2011	Dry, light brown to red-brown, slightly silty SAND (SW)	Below 3" duff		X	
AOI-3: Lower Tailings Pile						
Transect 1						
T1-SS-100	11/4/2011	Damp, gray-brown, slightly silty SAND with trace rootlets (SW)	Below 0.5" duff	X	X	

Table 4 - Transect Surface Soil Sample Descriptions

Sample ID	Collection Date	Visual Soil Description	General Location/ Observations	Chemical Analysis	XRF Analysis	Evidence of Mine Impacts
T1-SS-200	11/4/2011	Dry, gray-brown, slightly silty SAND with trace rootlets (SW)	Below 0.5" duff		X	
T1-SS-300	11/4/2011	Dry, light brown, slightly sandy SILT with occasional rootlets (ML)	Below 0.5" duff	X	X	
T1-SS-400	11/4/2011	Dry, brown, slightly silty SAND with trace organics (rootlets and duff) (SW)	Below 1" duff		X	
T1-SS-500	11/4/2011	Dry, light brown, slightly sandy SILT with trace gravel and occasional rootlets (ML)	Below 3" duff and wood	X	X	
T1-SS-750	11/4/2011	Dry, light brown, slightly silty SAND (SW)	Below 1" duff		X	
T1-SS-1000	11/4/2011	Dry, brown to gray-brown, slightly silty SAND (SW)	Below 0.5" duff		X	
Transect 2						
T2-SS-100	11/4/2011	Damp, gray to gray-brown, slightly silty SAND with trace gravel (SW)	Below 0.5" duff	X	X	
T2-SS-200	11/4/2011	Dry, gray-brown to yellow-brown, slightly silty SAND with occasional rootlets (SW)	Below 0.5" duff		X	
T2-SS-300	11/4/2011	Dry, light gray, silty SAND (SM)		X	X	Tailings
T2-SS-400	11/4/2011	Dry, light brown to gray-brown, slightly silty SAND (SW)	Below 4" duff		X	
T2-SS-500	11/4/2011	Dry, gray-brown, slightly silty SAND (SW)	Below 1" duff	X	X	
T2-SS-750	11/4/2011	Dry, gray-brown, slightly silty SAND with trace organics (duff and rootlets) (SW)	Below 3" duff		X	
T2-SS-750 3-5	11/4/2011	Dry, light brown, slightly silty SAND with occasional rootlets (SW)	Below 3" duff		X	
T2-SS-1000	11/4/2011	Dry, brown to gray-brown slightly silty SAND with trace organics (duff and rootlets) (SW)	Below 6" duff and wood debris		X	
Transect 3						
T3-SS-100	11/3/2011	Dry, gray-brown, slightly sandy SILT with trace roots (ML)	Below 0.5" roots	X	X	
T3-SS-200	11/3/2011	Dry, gray-brown, slightly sandy SILT with trace roots and debris (ML)	Below 0.5" roots		X	
T3-SS-300	11/3/2011	Dry, light brown, slightly sandy SILT (ML)	Below 0.5" roots	X	X	
T3-SS-400	11/3/2011	Dry, red-brown, slightly sandy SILT with trace roots (ML)	Below 1" roots		X	
T3-SS-500	11/3/2011	Dry, red-brown, slightly sandy SILT with trace roots (ML)	Below 1" roots	X	X	
T3-SS-750	11/3/2011	Dry, red-brown, slightly sandy SILT with trace roots and wood debris (ML)	Below 1" roots		X	
T3-SS-1000	11/3/2011	Dry, brown, slightly sandy SILT with trace roots (ML)	Below 1" roots		X	
Transect 4						
T4-SS-100	11/3/2011	Damp, light gray SAND with trace silt (SP)		X	X	Tailings
T4-SS-200	11/3/2011	Damp, light gray SAND (SP)			X	Tailings

Table 4 - Transect Surface Soil Sample Descriptions

Sample ID	Collection Date	Visual Soil Description	General Location/ Observations	Chemical Analysis	XRF Analysis	Evidence of Mine Impacts
T4-SS-300	11/3/2011	Dry, brown, slightly sandy SILT with trace gravel and occasional rootlets (ML)	Below 4" duff and wood debris	X	X	
T4-SS-400	11/3/2011	Damp, brown, sandy SILT with trace gravel and occasional rootlets (ML)	Below 3" duff and burn debris		X	
T4-SS-500	11/3/2011	Dry, gray-brown, slightly sandy SILT with trace gravel (ML)	Below 0.5" duff	X	X	
T4-SS-750	11/3/2011	Dry, brown, silty SAND with trace gravel and scattered rootlets (SM)	Below 2" duff		X	
T4-SS-1000	11/3/2011	Damp, red-brown, silty SAND with trace gravel and occasional rootlets (SM)	Below 1" duff		X	
Transect 5						
T5-SS-100	11/4/2011	Dry, light brown, slightly silty SAND with scattered rootlets (SW)	Below 6" duff and debris	X	X	
T5-SS-200	11/4/2011	Dry, gray-brown to brown, slightly silty SAND (SW)	Below 3" duff and wood		X	
T5-SS-300	11/4/2011	Dry, gray-brown, slightly silty SAND (SW)	Below 1" duff	X	X	
T5-SS-400	11/4/2011	Dry, gray-brown, slightly silty SAND (SW)	Below 1" duff		X	
T5-SS-500	11/4/2011	Dry, red-brown to gray-brown, slightly silty SAND (SW)	Below 3" duff	X	X	
T5-SS-750	11/4/2011	Dry, gray-brown, slightly silty SAND (SW)	Below 2" duff		X	
T5-SS-1000	11/4/2011	Dry, gray-brown, slightly silty SAND (SW)	Below 1.5" duff		X	

Table 5 - Discrete Soil Sampling in Mill Area

Sample ID	Collection Date	Visual Soil Description	General Location	Observations
AOI-1: Mill Facility, Open Pits and Waste Rock				
NP-1-SS	10/14/2011	Moist, tan-brown, sandy GRAVEL (GW/GP)	North Pit	5-point composite, XRF verification sample
NP-2-SS	10/14/2011	Moist, tan-brown, sandy GRAVEL (GW/GP)	North Pit	5-point composite, XRF verification sample
NP-3-SS	10/14/2011	Moist, tan-brown to gray sandy GRAVEL (GW/GP)	North Pit	5-point composite, XRF verification sample
MS-1	6/20/2012	Tan, silty SAND with some charred material and trash (SM)	Mill Site	Stained soil
MS-2	6/20/2012	Tan-brown, sandy GRAVEL with trash (GP)	Mill Site	Stained soil
MS-3	6/20/2012	Brown-black, sandy GRAVEL with charred material (GP)	Mill Site	Stained soil, burn pile
MS-4	6/20/2012	Brown-tan, sandy GRAVEL with waste rock and trash (GP)	Mill Site	Stained soil, burn pile or debris pile
MS-5	6/20/2012	Black, slightly silty sandy GRAVEL with trash (GM)	Mill Site	Stained soil
MS-6	6/20/2012	Wet, gray, silty sandy GRAVEL (GM)	Mill Site	Stained soil, mild solvent odor
MS-7	6/20/2012	Wet, tan-brown, slightly silty GRAVEL (GM)	Mill Site	Stained soil
MS-8	6/20/2012	Tan-black, sandy GRAVEL (GP)	Mill Site	Stained soil, slight petroleum odor
MS-9	6/20/2012	Black, sandy GRAVEL (GP)	Mill Site	Stained soil
MS-10	6/20/2012	Slightly silty sandy GRAVEL (GM)	Mill Site	Stained soil
MS-11	6/21/2012	Dry, tan-brown silty SAND (SM)		
MS-12	6/21/2012	Moist, gray-brown slightly silty, slightly gravelly SAND (SW)		Below 2 to 3" duff
MS-13	6/21/2012	Moist, gray-brown slightly silty, slightly gravelly SAND (SW)		Below 4" duff
MS-14	6/21/2012	Wet, brown, slightly gravelly silty SAND (SW)		
MS-15	6/21/2012	Tan-brown, slightly silty gravelly SAND (SP)		
MS-16	6/21/2012	Slightly silty SAND with GRAVEL (SW)		Below 1" duff
MS-17	6/20/2012	No description		
MS-18	6/20/2012	No description		

Table 6 - Upper Tailings Pile Soil Sample Descriptions

Sample ID	Collection Date	Visual Soil Description	General Location	Observations	Evidence of Mine Impacts
UT-1-SS	10/14/2011	Dry, light gray, slightly silty SAND (SW)	Upper tailings pile	5-point composite. XRF analysis only.	Tailings
UT-2-SS	10/14/2011	Dry, light gray, slightly silty SAND (SW)	Upper tailings pile - west basin	5-point composite	Tailings
UT-3-SS	10/14/2011	Dry, light brown, slightly silty SAND (SW)	Upper tailings pile - east basin	5-point composite	Tailings
UT-1	6/24/2012	Moist, brown, slightly silty SAND with abundant organics and roots	South of UTP	Sample collected below 2" of forest duff in flood plain of drainage on an old road	No evidence of tailings
UT-2	6/24/2012	Moist, tan-brown, silty SAND with gravel	South of UTP	Sample collected below 05" of moss on bank of drainage south of UTP	No evidence of tailings Drainage next to UTP
UT-20	6/24/2012	Moist, tan-brown, silty SAND with gravel	South of UTP	Field duplicate of UT-2	No evidence of tailings Drainage next to UTP
UT-3	6/24/2012	Moist, tan-brown, slightly silty SAND with gravel	South of UTP	Sample collected below 1" of moss in drainage south of UTP	No evidence of tailings Drainage next to UTP
UT-4	6/24/2012	Moist, tan-brown-red, slightly silty, gravelly SAND	Northeast of UTP	Sample collected below 2" of moss and forest duff, in clearcut area between two logging roads	No evidence of tailings
UT-5	6/24/2012	Moist, tan-brown, silty, gravelly SAND	Northeast of UTP	Sample collected below 05" of moss and roots in clearcut area	No evidence of tailings
UT-6	6/24/2012	Moist, tan-brown, slightly silty gravelly SAND	Northeast of UTP	Sample collected below 2" of forest duff and roots in clearcut area between two logging roads	No evidence of tailings
UT-10	6/26/2012	Slightly silty, coarse SAND with gravel and abundant roots	West of UTP, downslope from breach	Sample collected below 4 to 5" forest duff on west side of small tributary	No evidence of tailings
UT-11	6/26/2012	3' thick tailings deposit over soil	West of UTP, downslope from breach	Sample collected in tailings deposit at confluence with small tributary	Tailings ~3" thick
UT-7	6/26/2012	Tailings	West of UTP, downslope from breach	Surface tailings from breach	Tailings
UT-9	6/26/2012	Moist, tan-brown, silty medium to coarse SAND with roots.	West of UTP, downslope from breach	Sample collected below 4" forest duff ~10' from obvious tailings deposit	No evidence of tailings
UT-12	6/27/2012	Tailings over moist, tan-brown, slightly silty coarse SAND	West of UTP, downslope from breach	Recent tailings deposits covering vegetation	Tailings
UT-13	6/27/2012	2 to 3" thick tailings over moist, brown, slightly silty, coarse SAND	West of UTP, downslope from breach	Recent tailings deposit in active erosional area	Tailings
UT-14	6/27/2012	0.5 to 1" thick tailings over wet, slightly silty SAND with roots	West of UTP, downslope from breach	Northern boundary of tailings erosional feature on an old road	Tailings

Table 6 - Upper Tailings Pile Soil Sample Descriptions

Sample ID	Collection Date	Visual Soil Description	General Location	Observations	Evidence of Mine Impacts
UT-15	6/27/2012	3 to 4" thick tailings over wet, brown-black, slightly silty, gravelly SAND	West of UTP, downslope from breach	Recent tailings deposit in drainage close to SE tributary	Tailings
UT-16	6/27/2012	Moist, dark brown-black, gravelly, coarse SAND	West of UTP.	Northern observed extent of tailings next to SE tributary	No evidence of tailings
UT-160	6/27/2012	Moist, dark brown-black, gravelly, coarse SAND	West of UTP.	Field duplicate of UT-16	No evidence of tailings
UT-17	6/27/2012	1 to 1.5" thick tailings over wet, brown, gravelly SAND	West of UTP.	Drainage between two sections of UTP	Tailings ~1 to 15" thick

Table 7 - Lower Tailings Pile Soil Sample Descriptions

Sample ID	Collection Date	Visual Soil Description	General Location	Observations	Evidence of Mine Impacts
LT-DP-1	11/8/2011	Wet, gray-brown, slightly silty SAND (SW)	Lower Tailings Detention Pond	5-point composite sample	Tailings
LT-DP-2	11/8/2011	Damp, gray-brown, SAND with occasional organics (rootlets and duff) (SP)	LTP	XRF analysis only	Tailings
LT-OC ROAD-CULVERT	11/9/2011	Damp, gray-brown, slightly silty SAND (SW)	Lower Tailings Pile Onion Creek Road Culvert	5-point composite sample	
LT-1-SS	10/14/2011	Dry, light gray SAND (SP)	Lower Tailings Pile	5-point composite sample	Tailings
LT-2-SS	10/14/2011	Moist to dry, light gray SAND (SP)	Lower Tailings Pile	5-point composite sample	Tailings
LT-3-SS	10/14/2011	Dry to moist, light gray SAND (SP)	LTP	5-point composite, XRF analysis only	Tailings
LT-1	6/23/2012	Damp, tan-brown, slightly silty gravelly fine to medium SAND	Logged area to NE of LTP	Within old road cut and drainage	Possible tailings observed
LT-2	6/23/2012	Moist to damp, tan-brown, slightly silty gravelly fine to coarse SAND with roots	Logged area to NE of LTP	Partway down slope above NE tributary	No tailings observed
LT-3	6/23/2012	Damp, red-brown, slightly gravelly SAND	Logged area to NE of LTP	Sample collected below 4 to 6" forest duff downslope from old road	No tailings observed
LT-4	6/23/2012	Moist, brown, very slightly silty gravelly SAND	Logged area to NE of LTP	Sample collected below 1 to 3" forest duff	No tailings observed
LT-5	6/23/2012	Moist, gray-brown, slightly silty SAND with abundant organics and roots	Logged area to NE of LTP	Sample collected below 2" forest duff in flood plain of NE tributary	No tailings observed
LT-6	6/23/2012	Moist, dark brown, silty SAND with abundant roots	Logged area to N of LTP	Sample collected below 2 to 3" forest duff in flood plain north of NE tributary	No tailings observed
LT-7	6/23/2012	Layer of 1/2 to 1" tailings over moist, brown, silty SAND with gravel and abundant roots	Logged area to N of LTP	Sample collected from outer extent of tailings erosional area below ~ 1/2" conifer needles in flood plain south of NE tributary	Tailings ~ 1/2 to 1" thick
LT-8	6/23/2012	Damp, light brown to gray, silty SAND with trace gravel	Logged area to N of LTP	Sample collected in flood plain of south of NE tributary ~ 50' from creek	No tailings observed
LT-9	6/23/2012	Moist, dark brown, silty SAND with abundant roots	Logged area to N of LTP	Sample collected in flood plain of NE tributary ~ 20' from south side of creek	No tailings observed
LT-90	6/23/2012	Moist, dark brown, silty SAND with abundant roots	Logged area to N of LTP	Field duplicate of LT-9	No tailings observed
LT-10	6/23/2012	Moist, dark brown, silty SAND with gravel	Logged area to N of LTP	Sample collected in flood plan on south side of NE tributary	No tailings observed
LT-11	6/23/2012	Interbedded layers of light gray SAND (tailings) with moist to damp, black, slightly silty SAND with abundant organics and roots	Flood plain of NE tributary, northwest of LTP	Sample collected on south side of creek	Tailings

Table 7 - Lower Tailings Pile Soil Sample Descriptions

Sample ID	Collection Date	Visual Soil Description	General Location	Observations	Evidence of Mine Impacts
LT-12	6/26/2012	Wet, gray-brown, 2" thick layer of black organic SOIL over fine grained tailings	Flood plain of NE tributary, northwest of LTP	Sample collected on south side of creek	Tailings ~ 6" thick
LT-13	6/26/2012	Wet, black, organic SOIL with roots overlaying moist to damp, slightly silty medium to coarse SAND	Flood plain of NE tributary, northwest of LTP	Sample collected on north side of creek	No tailings observed
LT-14	6/26/2012	Wet, black, organic SOIL with sand	Flood plain of NE tributary, northwest of LTP	Sample collected on north side of creek	No tailings observed
LT-15	6/26/2012	Wet, black, organic SOIL overlaying ~ 6" of tailings	Flood plain of NE tributary, northwest of LTP	Sample collected on south side of creek	Tailings ~ 6" thick
LT-16	6/21/2012	Damp, brown, silty SAND with roots and rootlets	Meadow southwest of LTP	Grass, herbs, and wildflowers	No tailings observed
LT-17	6/21/2012	Damp, brown, slightly gravelly, silty SAND with rootlets	Meadow south of Van Stone Mine Road to southwest of LTP	Grass, herbs, and wildflowers	No tailings observed
LT-18	6/21/2012	Damp, brown, sandy SILT	Logged area south of LTP	Sample collected from old logging road	No tailings observed
LT-180	6/21/2012	Damp, brown, sandy SILT	Logged area south of LTP	Field duplicate of LT-18	No tailings observed
LT-19	6/21/2012	Damp, red-brown with black mottling, silty SAND with trace gravel	Logged area south of LTP	Sample collected ~10' from new logging road	No tailings observed
LT-190	6/21/2012	Damp, red-brown with black mottling, silty SAND with trace gravel	Logged area south of LTP	Field duplicate of LT-19	No tailings observed
LT-20	6/22/2012	Damp, red-brown, silty SAND with trace gravel	Logged area northeast of LTP	Sample collected from below ~1/2" forest duff, next to tree stump	No tailings observed
LT-21	6/22/2012	Moist, brown, sandy SILT with trace gravel and abundant rootlets	NE of LTP	Soggy fenced meadow with conifers and grass	No tailings observed
LT-22	6/22/2012	Damp, light brown grading to gray with black mottling, silty SAND with rootlets	West of LTP	Drainage below detention pond	Possible tailings observed
LT-23	6/22/2012	Damp, gray-brown, silty SAND with trace gravel, wood debris, and rootlets	West of LTP	Between Van Stone Mine Road and Onion Creek	No tailings observed

Table 8 - Pipeline Soil Sample Descriptions

Sample ID	Collection Date	Visual Soil Description	General Location	Observations	Evidence of Mine Impacts
PL-1	6/25/2012		Between Open Pits and LTP	Berm along access road, ~3' from rotting wood tailings pipe	Tailings
PL-2	6/25/2012		Between Open Pits and LTP	Immediate vicinity of pipeline	Tailings
PL-3	6/25/2012	Damp, gray-brown silty SAND with roots and decomposing wood	Between MS and UT	Sample collected downslope from access road, at north boundary of tailings release.	No tailings in sample, near edge of tailings release, wood pipes ~50' to east
PL-4	6/25/2012	Damp, brown, gravelly SAND	Between MS and UT	Outside boundary of tailings release	No tailings in sample, near edge of tailings release
PL-5	6/25/2012		Between MS and UT	Logged area, sample adjacent to pipeline	Tailings ~1 to 3" thick.
PL-6	6/26/2012		Between MS and LT	South of pipeline/UT access road	Tailings ~2' thick
PL-7	6/26/2012	Wet, brown, gravelly SAND with trace silt	Between MS and LT	Below elevated tailing pipe that crossed creek	No tailings in sample, near pipeline
PL-8	6/25/2012	Tailings intermixed with native soil	Between MS and UT	Drainage below right angle turn in pipeline	Multiple layers of tailings observed
PL-9	6/25/2012		Between MS and UT	Within culvert above UT	
PL-10	6/26/2012	Damp, brown, silty SAND with trace gravel and abundant roots	Between MS and LT	Collected from road adjacent to pipeline	No tailings in sample, near pipeline
PL-11	6/26/2012		Between MS and LT	Below abandoned house	Tailings 0 to 18" thick, numerous disconnected pipes observed
PL-12	6/27/2012	Moist, brown, gravelly, silty SAND	Between MS and LT	North side of Van Stone Mine road	No tailings observed
PL-13	6/27/2012		Between MS and LT	~80 feet downslope from pipeline	Tailings ~6" thick
PL-14	6/27/2012	Moist, brown, slightly silty SAND with trace gravel	Between MS and LT	Logged area	No tailings observed
PL-15	6/27/2012		Between MS and LT	Collected from ditch, no pipes observed	Tailings ~7" thick
TAILINGS BOX	11/6/2011		Between MS and UT	5-point composite collected downslope from pile of pipes.	Tailings observed
UT-LT-2000'	11/10/2011	Frozen, brown to light brown, silty, fine SAND	Between UT and LT	Collected between wooden pipe and concrete pipe	Tailings observed
UT-LT-4000'	11/10/2011	Frozen, light brown, silty SAND	Between UT and LT	Collected from area near broken pipeline sections	Tailings observed

Table 9 - Road Material Sample Descriptions

Sample ID	Collection Date	Visual Soil Description	General Location	Observations	Evidence of Mine Impacts
DR-1	6/25/2012	Moist, gray-black, slightly silty, gravelly SAND (SW)	Van Stone-Onion Road between junction with Van Stone Mine Road and County Highway 9425	No evidence of surface road weathering, road base appears to be different material than Van Stone Mine Road	No evidence of waste rock or tailings observed
DR-2	6/25/2012	Moist, gray-black, slightly silty, gravelly SAND (SW)	Van Stone-Onion Road between junction with Van Stone Mine Road and County Highway 9425	No evidence of surface road weathering, road base appears to be different material than Van Stone Mine Road	No evidence of waste rock or tailings observed
DR-3	6/25/2012	Wet, gray-black, slightly silty, gravelly SAND (SW)	Van Stone-Onion Road slightly north of junction with Van Stone Mine Road	No evidence of surface road weathering, road base appears to be different material than Van Stone Mine Road	No evidence of waste rock or tailings observed
DR-4	6/25/2012	Wet, tan-brown, slightly silty, gravelly SAND (SW)	Van Stone Mine Road slightly south of junction with Van Stone-Onion Road	Surface road erosion in ruts	No evidence of waste rock or tailings observed
DR-5	6/25/2012	Wet, gray-black, slightly silty, gravelly SAND (SW)	Van Stone-Onion Road south of Lower Tailings Pile and junction of Van Stone-Onion Road and Van Stone Mine Road	No evidence of surface road weathering, road base appears to be different material than Van Stone Mine Road	No evidence of waste rock or tailings observed
DR-6	6/25/2012	Wet, tan-brown, slightly silty, gravelly SAND (SW)	Van Stone Mine Road between Upper Tailings Pile Road and Lower Tailings Pile Road, slightly south of Lower Tailings Pile Road.	Surface road erosion	No evidence of waste rock or tailings observed
DR-7	6/25/2012	Wet, tan-brown, slightly silty, gravelly SAND (SW)	Van Stone Mine Road between Upper Tailings Pile Road and Lower Tailings Pile Road	Minor surface road erosion in ruts	No evidence of waste rock or tailings observed
DR-8	6/25/2012	Wet, tan-brown, silty SAND with trace gravel (SM)	Van Stone Mine Road between Upper Tailings Pile Road and Lower Tailings Pile Road	Limited surface road erosion in ruts	No evidence of waste rock or tailings observed
DR-9	6/25/2012	Wet, tan-brown, silty SAND (SM)	Van Stone Mine Road. Between Upper Tailings Pile Road and Lower Tailings Pile Road.	No evidence of surface road erosion	No evidence of waste rock or tailings observed
DR-10	6/25/2012	Wet, tan-brown, silty SAND with trace gravel (SM)	Van Stone Mine Road between Upper Tailings Pile Road and Lower Tailings Pile Road		No evidence of tailings observed, some pieces of waste rock observed on shoulders of the road
DR-11	6/25/2012	Wet, tan-brown, silty SAND with trace gravel (SM)	Van Stone Mine Road along bend where road shifts from southeast to northeast	Very minor surface road erosion	No evidence of waste rock or tailings observed
DR-12	6/25/2012	Wet, tan-brown, slightly silty, gravelly SAND (SW)	Van Stone Mine Road between Mine Site and Upper Tailings Pile Road	Some surface road erosion in main ruts	No evidence of tailings observed, several pieces of waste rock and native bedrock mixed in with the road base

Table 9 - Road Material Sample Descriptions

Sample ID	Collection Date	Visual Soil Description	General Location	Observations	Evidence of Mine Impacts
DR-13	6/25/2012	Wet, tan-brown, slightly silty, gravelly SAND (SW)	Van Stone Mine Road between Mine Site and Upper Tailings Pile Road	Limited surface road erosion in main ruts	No evidence of tailings observed, several large pieces of waste rock observed on side of the road
DR-14	6/25/2012	Wet, tan-brown, slightly silty, gravelly SAND (SW)	Van Stone Mine Road at Y-intersection where Van Stone Mine Road forks to east, below gate to Burris residence and Van Stone Mine	Surface road erosion	No evidence of waste rock or tailings observed
DR-15	6/25/2012	Wet, brown, slightly silty, gravelly SAND (SW)	Van Stone Mine Road below gate to Van Stone Mine	Surface road erosion	No evidence of waste rock or tailings observed

Table 10 - Onion Creek Sediment Sample Descriptions

Sample ID	Collection Date	Visual Soil Description
OC-1-SD	10/9/2011	Saturated, light brown SAND (SP)
OC-2-SD	10/9/2011	Saturated, gray-brown SAND (SP)
OC-3-SD	10/12/2011	Saturated, gray-brown to black, very silty SAND (SM)
OC-4-SD	10/13/2011	Saturated, light brown, slightly silty SAND (SW)
OC-5-SD	10/13/2011	Saturated, gray-brown, slightly silty SAND with trace gravel (SW)
OC-6-SD	10/13/2011	Saturated, light gray to light brown to brown (layered), silty SAND (SM)
OC-7-SD	10/14/2011	Saturated, red-brown, SAND (SP)
OC-8-SD	10/13/2011	Saturated, brown, silty SAND with trace gravel (SM)
OC-9-SD	10/12/2011	Saturated, gray-brown, silty SAND with occasional conifer needles (SM)
OC-10-SD	10/12/2011	Saturated, gray-brown, slightly silty SAND with occasional conifer needles (SW)
OC-11-SD	10/12/2011	Saturated, gray-brown to brown, silty SAND with occasional conifer needles (SM)
OC-12-SD	10/11/2011	Saturated, gray-brown, slightly silty SAND (SW)
OC-13-SD	10/9/2011	Saturated, gray-brown SAND (SP)
OC-14-SD	10/12/2011	Saturated, light brown SAND with occasional conifer needles (SP)
OC-15-SD	10/14/2011	Saturated, gray-brown SAND (SP)
OC-16-SD	10/14/2011	Saturated, red-brown SAND with occasional wood fragments (SP)
OC-17-SD	10/14/2011	Saturated, brown, very sandy GRAVEL (GW/GP)
OC-18-SD	10/14/2011	Saturated, gray-brown, slightly gravelly SAND with scattered wood fragments (SW)
OC-19-SD	10/14/2011	Saturated, brown, slightly gravelly SAND with occasional conifer needles and wood fragments (SW)
NT-SD-1	6/23/2012	Saturated, light brown SAND (SP)
BG-12-SD	10/7/2011	Saturated, gray-brown, slightly silty SAND (SW)

Table 11 - Screening Levels for Waste Rock, Soil, and Tailings

Constituents of Concern (mg/kg)	**Draft Screening Levels (not lower than background)**	Draft Background Concentrations	Lowest Potential Soil ARAR[a]	State of Washington							Federal			
						MTCA Method B Soil Cleanup Levels		Ecological Indicator Screening Criteria			Ecological Soil Screening Levels (Eco-SSL)[g]			
				Ecology-Reported Natural Background[b]	MTCA Method A Soil Cleanup Levels[c]	Soil Ingestion[d]	Groundwater Protection[e]	Protection of Plants[f]	Protection of Soil[f]	Protection of Wildlife[f]	Plants	Soil Invertebrates	Avian Wildlife	Mammalian Wildlife
Aluminum (Al)	**50**	--	50	37,200	--	80000	--	50	--	--	--	--	--	--
Antimony (Sb)	**0.86**	0.86	0.27	--	--	32	5.42[j]	5	--	--	--	78	--	0.27
Arsenic (As)	**5.04**	5.04	0.67	7	20	0.67	5.84[j]	-- / 10[h]	-- / 60[h]	7 / 132 (h)	18	--	43	46
Barium (Ba)	**102**	0.72	102	--	--	16,000	1650[j]	500	--	102	--	330	--	2000
Beryllium (Be)	**1.4**	--	1.4	1.4	--	160	63[j]	10	--	--	--	40	--	21
Cadmium (Cd)	**1.60**	1.60	0.36	1	2	80	0.69[j]	4	20	14	32	140	0.77	0.36
Chromium III (Cr III)	**26**	15.8	26	42 (i)	2,000	120,000	2000[j]	42[i]	42[i]	67 (i)	--	--	26	34
Chromium VI (Cr VI)	**19**	--	19		19	240	19.2[j]				--	--	--	130
Cobalt (Co)	**13**	--	13	--	--	--	--	20	--	--	13	--	120	230
Copper (Cu)	**28**	12.7	28	36	--	3,200	577[j]	100	50	217	70	80	28	49
Iron (Fe)	**91.2**	--	91.2	43,100	--	56,000	91.2[j]	--	--	--	--	--	--	--
Lead (Pb)	**44.9**	44.9	11	17	250	--	--	50	500	118	120	1700	11	56
Manganese (Mn)	**220**	--	220	1,100	--	11,200	522[j]	1,100	--	1,500	220	450	4300	4000
Mercury (Hg, inorganic)	**0.13**	0.13	0.07	0.07	2	--	2.09[j]	0.3	0.1	5.5	--	--	--	--
Nickel (Ni)	**30**	13.1	30	38	--	1,600	130[j]	30	200	980	38	280	210	130
Selenium (Se)	**1.65**	1.65	0.3	--	--	400	5.2[j]	1	70	0.3	0.52	4.1	1.2	0.63
Silver (Ag)	**2**	0.12	2	--	--	400	13.6[j]	2	--	--	560	--	4.2	14
Thallium (Th)	**1**	0.20	1	--	--	--	--	1	--	--	--	--	--	--
Vanadium (Va)	**2**	--	2	--	--	5.6	22.4[j]	2	--	--	--	--	7.8	280
Zinc (Zn)	**206**	206	46	86	--	24,000	6220[j]	86	200	360	160	120	46	79

Notes:

(a) Shaded cells correspond to lowest potential chemical-specific ARAR.

(b) Data from Natural Background Soil Metals Concentrations in Washington State, (Ecology 1994)

(c) WAC 173-340-740(2), WAC 173-340-900 (Table 740-1), Model Toxics Control Act (MTCA) Method A

(d) WAC 173-340-740(3). MTCA Method B unrestricted land use soil cleanup standards. For carcinogenic constituents, the value presented is the lower of the non-carcinogenic and carcinogenic levels calculated using Equations 740-1 and 740-2 for ingestion only. Equations 740-4 and 740-5 are for ingestion and dermal contact. Information from CLARC 3.1 was used unless otherwise noted.

(e) WAC 173-340-740(3)(b)(iii)(A); MTCA Method B unrestricted land use soil cleanup standards, groundwater protection. Values calculated using the MTCA three-phase partitioning model WAC 173-340-747(4).

(f) MTCA 173-340-900 (Table 749-3)

(g) EPA Ecological Soil Screening Levels (ECO-SSL) are found at http://www.epa.gov/ecotox/ecossl/.

(h) Based on Arsenic III / Arsenic V

(i) Based on total Chromium

(j) Based on drinking water MCL

-- Not established or not applicable

Table 12 - Screening Levels for Sediment

Constituents of Concern (mg/kg)	**Screening Levels (not lower than background)**	Background Concentrations	Lowest Potential Sediment ARAR[a]	*State of Washington* *Freshwater Sediment Quality Values* [b]		Federal MacDonald[c]	
				SCO	*CSL*	TELs[d]	PELs[e]
Aluminum (Al)	**--**		--	--	--	--	--
Antimony (Sb)	**0.59**	0.59	--	--	--	--	--
Arsenic (As)	**6.66**	6.66	5.9	*14*	*120*	5.9	17
Beryllium (Be)	**0.74**	0.74	--	--	--	--	--
Cadmium (Cd)	**0.596**	0.43	2.100	*2.1*	*5.4*	0.596	3.53
Chromium (Cr)	**37.3**	14.3	72.0	*72*	*88*	37.3	90
Copper (Cu)	**35.7**	12.2	400.0	*400*	*1,200*	35.7	197
Iron (Fe)	**--**		--	--	--	--	--
Lead (Pb)	**35**	22.8	360	*360*	*>1,300*	35	91.3
Manganese (Mn)	**--**		--	--	--	--	--
Mercury (Hg, inorganic)	**0.174**	0.028	0.660	*0.66*	*0.8*	0.174	0.486
Nickel (Ni)	**18**	11.0	26	*26*	*110*	18	35.9
Selenium (Se)	**11**	2.03	--	11	*>20*	--	--
Silver (Ag)	**0.57**	0.09	--	0.57	*1.7*	--	--
Thallium (Th)	**0.41**	0.41	--	--	--	--	--
Vanadium (Va)	**--**		--	--	--	--	--
Zinc (Zn)	**123**	120	3,200	*3,200*	*>4,200*	123	315

Notes:

(a) Shaded cells correspond to lowest potential chemical-specific ARAR.

(b) Freshwater sediment chemical criteria (WAC 173-204-563) are referenced for comparison. Criteria may not reliably predict benthic community toxicity in sediment impacted by metals mining, milling, or smelting. Bioassay testing may be required.

(c) MacDonald TELs and PELs are included for comparison. Criteria are often used in freshwater sediment.

(d) MacDonald, D., C. Ingersoll, and T. Berger 2000. Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems. Archives of Environmental Contamination and Toxicology, vol. 39, pp 20 -31, 2000.

(e) Ingersoll, C., D. MacDonald, N. Wang, J. Crane, L. Field, P. Haverland, N. Kemble, R. Lindskoog, C. Severn, and D. Smorong 2000. Prediction of sediment toxicity using consensus-based freshwater sediment quality guidelines. Prepared by U.S. Geological Survey for U.S. Environmental Protection Agency Great Lakes National

-- Not established or not applicable.

Table 13 - Screening Levels for Surface Water

Constituents of Concern	Lowest Potential Surface Water ARAR[a]	Laboratory MDL	State of Washington			Federal							
			Water Quality Standards for Surface Waters[b]		MTCA Method B Cleanup Levels [WAC 173-340-730][c]	National Recommended Water Quality Criteria [Section 304 of the Clean Water Act][d]				National Toxics Rule Criteria [40 CFR 131.36(b)(1)][e]			
			Protection of Aquatic Organisms		Protection of Human Health	Protection of Aquatic Organisms		Protection of Human Health		Protection of Aquatic Organisms		Protection of Human Health	
			Acute	Chronic	Fish Ingestion	Acute	Chronic	Consumption of Water and Organism	Consumption of Organism Only	Acute	Chronic	Consumption of Water and Organism	Consumption of Organism Only
Total Metals in µg/L													
Aluminum (Al)	87	-	--	--	--	750	87	--	--	--	--	--	--
Antimony (Sb)	1000	-	--	--	1000	--	--	--	--	--	--	--	--
Arsenic (As)	0.018	-	--	--	0.098	--	--	0.018	0.14	--	--	0.018	0.14
Beryllium (Be)	270	-	--	--	270	--	--	--	--	--	--	--	--
Cadmium (Cd)	41	-	--	--	41	--	--	--	--	--	--	--	--
Chromium (Cr)	243,055(Cr^{III})/ 486(Cr^{VI})	-	--	--	240,000(Cr^{III})/ 490(Cr^{VI})	--	--	--	--	--	--	--	--
Copper (Cu)	1300	-	--	--	2,900	--	--	1,300	--	--	--	--	--
Iron (Fe)	300[f]	-	--	--	--	--	1,000	300[f]	--	--	--	--	--
Lead (Pb)	--	-	--	--	--	--	--	--	--	--	--	--	--
Manganese (Mn)	50	-	--	--	--	--	--	50	100	--	--	--	--
Mercury (Hg, inorganic)	0.012	0.0005	--	0.012	--	--	--	--	--	--	0.012	0.14	0.15
Nickel (Ni)	610	-	--	--	1,100	--	--	610	4,600	--	--	610	4,600
Selenium (Se)	5	-	20	5.0	2,700	--	5	170	4,200	20	5	--	--
Silver (Ag)	26000	-	--	--	26,000	--	--	--	--	--	--	--	--
Thallium (Th)	0.24	-	--	--	--	--	--	0.24	0.47	--	--	1.7	6.3
Vanadium (Va)	--	-	--	--	--	--	--	--	--	--	--	--	--
Zinc (Zn)	7400	-	--	--	17,000	--	--	7,400	26,000	--	--	--	--
Dissolved Metals in µg/L													
Aluminum (Al)	--	-	--	--	--	--	--	--	--	--	--	--	--
Antimony (Sb)	14	2	--	--	1000	--	--	--	--	--	--	14	4300
Arsenic (As)	3.8	3.8	360	190	0.098	340	150	0.018	0.14	360	190	0.018	0.14
Beryllium (Be)	270	0.51	--	--	270	--	--	--	--	--	--	--	--
Cadmium (Cd)	0.2	0.14	3.62	1.02	41	2	0.2	--	--	3.66	1.02	--	--
Chromium III (Cr III)	74	1.4	540	175	240,000	565	74	--	--	544	177	--	--
Chromium VI (Cr VI)	10	-	15	10	490	16	11	--	--	15	10	--	--
Copper (Cu)	8.9	0.55	17	11	2,900	13.3	8.9	1,300	--	17	11	--	--
Iron (Fe)	300[f]	-	--	--	--	--	1,000	300[f]	--	--	--	--	--
Lead (Pb)	2.46	0.17	63	2.46	--	64	2.5	--	--	64	2.49	--	--
Manganese (Mn)	50	-	--	--	--	--	--	50	100	--	--	--	--
Mercury (Hg, inorganic)	0.14	0.0005	2.1	--	--	1.4	0.77			2.1	--	0.14	0.15
Nickel (Ni)	52	2	1391	155	1,100	464	52	610	4,600	1403	156	610	4,600
Selenium (Se)	5	3.6	--	--	2,600	--	5	170	4,200	--	--	--	--
Silver (Ag)	3.2	0.15	3.3	--	26,000	3.2	--	--	--	3.4	--	--	--
Thallium (Th)	1.4	1.4	--	--	--	--	--	0.24	0.47	--	--	1.7	6.3
Vanadium (Va)	--	-	--	--	--	--	--	--	--	--	--	--	--
Zinc (Zn)	103	4.4	113	103	17,000	116	117	7,400	26,000	113	104	--	--

Notes:

Drinking water criteria shown in the table should also be considered if surface water is classified as a current or future potential domestic water supply under Chapter 173-201A WAC.

Underlined values are hardness dependant, hardness in historical data from Onion Creek ranged from 50 to 200 mg/L. Hardness dependant criteria were adjusted based on the median site background hardness of 98 mg/L.

(a) Shaded cells correspond to the lowest potential chemical-specific ARAR.

(b) Chapter 173-201A WAC. Water Quality Standards for Surface Waters of the State of Washington (last update November 20, 2006)

(c) Chapter 173-340-730 WAC. MTCA Method B surface water cleanup levels. For carcinogenic constituents, the value presented is the lower of the non-carcinogenic and carcinogenic levels calculated using Equations 730-1 and 730-2. Information from CLARC 3.1 was used unless otherwise noted.

(d) Water quality criteria published under Section 304 of the Clean Water Act. EPA, National Recommended Water Quality Criteria, 2006.

(e) National Toxics Rule, 40 CFR 131.26(b)(1)

(f) Secondary State of Washington MCLs per 246-290-310 WAC

-- Not established or not applicable

Table 14 - Screening Levels for Groundwater

Constituents of Concern	Lowest Potential Groundwater ARAR[a]	Laboratory MDL	State of Washington			Federal	
			State MCLs[b]	MTCA Method A[c]	MTCA Method B[d]	Federal MCLGs[e]	Federal MCLs[f]
Total Metals in ug/L							
Aluminum (Al)	16,000	-	--	--	16,000[i]	--	--
Antimony (Sb)	6	0.4	6	--	6.4	6	6
Arsenic (As)	3.8	3.8	10	5	0.058	0 at tap	10
Beryllium (Be)	4	0.51	4	--	32	4	4
Cadmium (Cd)	5	0.14	5	5	16	5	5
Chromium (Cr)	100/50 (h)	1.4	100	100/50 (h)	24,000/48 (j)	100	100
Copper (Cu)	640	0.55	1,300	--	640	1,300	--
Iron (Fe)	300 (g)	-	300 (g)	--	11,200	--	--
Lead (Pb)	15	0.17	15	15	--	0 at tap	--
Manganese (Mn)	50 (g)	-	50 (g)	--	2,240	--	--
Mercury (Hg, inorganic)	2	0.041	2	2	--	2	2
Nickel (Ni)	100	2	100	--	320	--	--
Selenium (Se)	50	3.6	50	--	80	50	50
Silver (Ag)	80	0.15	100 (g)	--	80	--	--
Thallium (Th)	1.4	1.4	2	--	--	0.5	2
Vanadium (Va)	1.12	-	--	--	1.12	--	--
Zinc (Zn)	4,800	4.4	5,000 (g)	--	4,800	--	--

Notes:

(a) Shaded cells identify lowest potential chemical-specific ARAR.

(b) WAC 246-290-310. State of Washington MCLs.

(c) WAC 173-340-900, Table 720-1. MTCA Method A.

(d) WAC 173-340-720. MTCA Method B Groundwater cleanup levels. For carcinogenic constituents, the value presented is the lower of the non-carcinogenic and carcinogenic levels calculated using Equations 720-1 and 720-2. Information from CLARC 3.1 was used unless otherwise noted.

(e) Maximum Contaminant Level Goals (MCLGs) for non-carcinogens. Non-zero MCLGs are potentially relevant and appropriate per 40 CFR 141.50 and 141.51 and the Drinking Water Standards and Health Advisories Office.

(f) Maximum Contaminant Levels (MCLs). 40 CFR 141.62 and Drinking Water Standards and Health Advisories, Office of Water, US EPA, EPA 822-B-00-001, Summer 2000.

(g) Secondary State of Washington MCLs, per 246-290-310 WAC.

(h) Adjusted MCL/MTCA Method A value of 50 µg/L is based on total value for chromium III and chromium VI. If only chromium III is present, an MCL of 100 µg/L may be used.

(i) Reference dose and/or cancer potency factor from EPA Region 9 Preliminary Remediation Goals table, October 2004.

(j) 24,000 µg/L (Chromium III), 48 µg/L (Chromium VI)

-- Not established or not applicable

Table 15 - 1 Van Stone Mine Soil and Sediment Metal Correlations

Soil Correlations

	Sb	As	Be	Cd	Cr	Cu	Pb	Hg	Ni	Se	Ag	Tl	Zn
Sb	1												
As	**0.555**	1											
Be	-0.162	-0.199	1										
Cd	**0.667**	0.493	-0.0809	1									
Cr	0.246	-0.0642	0.0568	0.141	1								
Cu	0.419	0.161	-0.045	**0.503**	0.0333	1							
Pb	**0.696**	0.298	0.0217	**0.869**	0.124	0.457	1						
Hg	**0.585**	**0.536**	-0.0469	**0.806**	-0.0104	0.371	**0.67**	1					
Ni	0.128	0.0333	-0.0822	-0.0239	**0.598**	0.00943	-0.0385	-0.0211	1				
Se	0.137	0.0464	0.0321	0.151	0.0628	0.0598	0.198	0.183	0.262	1			
Ag	**0.763**	**0.556**	-0.0212	**0.777**	0.0574	0.324	**0.838**	0.82	0.0238	0.248	1		
Tl	**0.586**	0.391	-0.0688	**0.738**	-0.118	0.236	**0.814**	**0.751**	-0.248	-0.0702	**0.865**	1	
Zn	**0.692**	**0.601**	-0.141	**0.914**	0.157	0.372	**0.715**	**0.716**	-0.00884	0.105	**0.748**	**0.68**	1

Sediment Correlations

	Sb	As	Be	Cd	Cr	Cu	Pb	Hg	Ni	Se	Zn		
Sb	1												
As	**0.627**	1											
Be	0.0297	0.162	1										
Cd	**0.591**	**0.818**	0.143	1									
Cr	-0.174	0.14	0.479	0.084	1								
Cu	0.12	-0.0543	**0.614**	0.129	0.15	1							
Pb	**0.715**	**0.706**	0.101	**0.886**	0.119	0.156	1						
Hg	0.207	0.341	**0.606**	**0.673**	0.355	0.306	**0.604**	1					
Ni	-0.135	0.187	0.452	0.175	**0.939**	0.0962	0.21	0.443	1				
Se	-0.189	0.001	**0.819**	0.0897	0.301	0.363	-0.137	**0.579**	0.297	1			
Zn	**0.517**	**0.719**	0.0379	**0.971**	0.132	0.135	**0.872**	**0.667**	0.216	-0.021	1		

Note:

Bold = Correlation deemed potentially significant; $r^2 > 0.50$

Table 16 - AOI-1 Stained Soil Analytical Results for Non-Metals

Sample ID	Screening Criteria (MTCA Method A Unrestricted)	MS-1	MS-2	MS-3	MS-4	MS-5	MS-6	MS-7	MS-8	MS-9	MS-10
TPH in mg/kg											
#2 Diesel	2000	1300	27 U	33 U	28 U	290	30 UJ	49 J	1900 J	1300	1700
Motor Oil	2000	**2800**	54 U	67 U	120	**4700**	76 UJ	480 J	**40000 J**	**20000**	**9300**
PCBs in mg/kg											
PCB-aroclor 1016		0.0039 U	0.0032 U	0.0043 UJ	0.0034 U	0.0036 U	0.0038 UJ	0.0036 UJ	0.0037 UJ	0.0035 U	0.0037 U
PCB-aroclor 1221		0.0097 U	0.0081 U	0.011 UJ	0.0086 U	0.0091 U	0.0094 UJ	0.0089 UJ	0.0093 UJ	0.0088 U	0.0094 U
PCB-aroclor 1232		0.0085 U	0.0071 U	0.0094 UJ	0.0075 U	0.008 U	0.0082 UJ	0.0078 UJ	0.0082 UJ	0.0077 U	0.0082 U
PCB-aroclor 1242		0.0025 U	0.0021 U	0.0028 UJ	0.0023 U	0.0024 U	0.0025 UJ	0.0023 UJ	0.0024 UJ	0.0023 U	0.0025 U
PCB-aroclor 1248		0.0036 U	0.003 U	0.004 UJ	0.0032 U	0.0034 U	0.0035 UJ	0.0033 UJ	0.0035 UJ	0.0033 U	0.0035 U
PCB-aroclor 1254		0.0025 U	0.0021 U	0.0028 UJ	0.0023 U	0.0024 U	0.0025 UJ	0.0023 UJ	0.0024 UJ	0.0023 U	0.0025 U
PCB-aroclor 1260		0.0036 UJ	0.003 UJ	0.004 UJ	0.0032 UJ	0.017 J	0.0035 UJ	0.0033 UJ	0.0035 UJ	0.016 J	0.046 J
Total PCBs	1	0.0097 U	0.0081 U	0.011 UJ	0.0086 U	0.017 J	0.0094 UJ	0.0089 UJ	0.0093 UJ	0.016 J	0.046 J
Volatiles in ug/kg											
1,1,1,2-Tetrachloroethane		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
1,1,1-Trichloroethane	2000	13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
1,1,2,2-Tetrachloroethane		4.2 U	2.6 U	5.1 U	2.9 U	3.6 U	3.1 U	3.5 U	3.4 U	3.4 U	3.5 U
1,1,2-Trichloroethane		3.8 U	2.4 U	4.6 U	2.7 U	3.3 U	2.8 U	3.2 U	3.1 U	3.1 U	3.2 U
1,1-Dichloroethane		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
1,1-Dichloroethene		6.3 U	4 U	7.7 U	4.4 U	5.4 U	4.7 U	5.3 U	5.2 U	5.1 U	5.4 U
1,1-Dichloropropene		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
1,2,3-Trichlorobenzene		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
1,2,3-Trichloropropane		15 U	9.2 U	18 U	10 U	13 U	11 U	12 U	12 U	12 U	12 U
1,2,4-Trichlorobenzene		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
1,2,4-Trimethylbenzene		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
1,2-Dibromo-3-Chloropropane		83 U	52 U	100 U	58 U	72 U	62 U	69 U	69 U	67 U	71 U
1,2-Dichlorobenzene		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
1,2-Dichloroethane		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
1,2-Dichloropropane		4.9 U	3.1 U	6 U	3.5 U	4.2 U	3.6 U	4.1 U	4.1 U	4 U	4.2 U
1,3,5-Trimethylbenzene		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
1,3-Dichlorobenzene		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
1,3-Dichloropropane		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
1,4-Dichlorobenzene		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
2,2-Dichloropropane		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
2-Chlorotoluene		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
4-Chlorotoluene		16 U	10 U	20 U	12 U	14 U	12 U	14 U	14 U	13 U	14 U
4-Isopropyltoluene		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
Benzene	30	**65**	3.2 U	22 T	24	23	3.7 U	4.2 U	4.2 U	4.1 U	4.3 U
Bromobenzene		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
Bromochloromomethane		15 U	9.5 U	18 U	11 U	13 U	11 U	13 U	13 U	12 U	13 U
Bromodichloromomethane		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
Bromoform		14 U	8.7 U	17 U	9.7 U	12 U	10 U	12 U	11 U	11 U	12 U
Bromomethane		44 U	28 U	54 U	31 U	38 U	33 U	37 U	37 U	36 U	38 U
Carbon Tetrachloride		6.3 U	4 U	26 T	4.4 U	5.4 U	4.7 U	5.3 U	5.2 U	5.1 U	5.4 U
Chlorobenzene		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
Chloroethane		130 U	79 U	150 U	89 U	110 U	93 U	110 U	100 U	100 U	110 U
Chloroform		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
Chloromethane		130 U	79 U	150 U	89 U	110 U	93 U	110 U	100 U	100 U	110 U
Cis-1,2-Dichloroethene		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
Cis-1,3-Dichloropropene		5 U	3.2 U	6.2 U	3.5 U	4.3 U	3.7 U	4.2 U	4.2 U	4.1 U	4.3 U
Dibromochloromethane		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
Dibromomethane		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
Dichlorodifluoromethane		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U

Table 16 - AOI-1 Stained Soil Analytical Results for Non-Metals

Sample ID	Screening Criteria (MTCA Method A Unrestricted)	MS-1	MS-2	MS-3	MS-4	MS-5	MS-6	MS-7	MS-8	MS-9	MS-10
Ethylbenzene	6000	13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
Ethylene Dibromide	5	13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
Hexachlorobutadiene		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
Isopropylbenzene (Cumene)		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
Methylene Chloride	20	13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
MTBE	100	13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
m-Xylene & p-Xylene	9000	30 T	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
Naphthalene	5000	14 T	8.1 T	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
n-Butylbenzene		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
N-Propylbenzene		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
o-Xylene	9000	13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
Sec-Butylbenzene		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
Styrene		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
Tert-Butylbenzene		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
Tetrachloroethene		6.3 U	4 U	7.7 U	4.4 U	5.4 U	4.7 U	5.3 U	5.2 U	5.1 U	5.4 U
Toluene	7000	30 T	7.9 U	15 U	9.8 T	15 T	9.3 U	11 U	10 U	10 U	11 U
Trans-1,2-Dichloroethene		13 U	7.9 U	15 U	8.9 U	11 U	9.3 U	11 U	10 U	10 U	11 U
Trans-1,3-Dichloropropene		5 U	3.2 U	6.2 U	3.5 U	4.3 U	3.7 U	4.2 U	4.2 U	4.1 U	4.3 U
Trichloroethene	30	5 U	3.2 U	6.2 U	3.5 U	4.3 U	3.7 U	4.2 U	4.2 U	4.1 U	4.3 U
Trichlorofluoromethane		13 U	7.9 U	15 U	13 T	11 U	9.3 U	11 U	10 U	10 U	11 U
Vinyl Chloride		2.5 U	1.6 U	3.1 U	1.8 U	2.2 U	1.9 U	2.1 U	2.1 U	2 U	2.1 U
PAHs in ug/kg											
1-Methylnaphthalene		78	9.9	5.8 T	1.6 T	13	1.7 UJ	2.7 JT	1.8 UJ	3.4 T	4.1 T
2-Methylnaphthalene		96	11	6.7 T	2.1 U	13	2.3 UJ	2.2 UJ	2.4 UJ	2.5 T	6.8
Naphthalene		49	28	16	5.2 T	21	2.3 UJ	2.2 UJ	2.4 UJ	5 T	11
Total Naphthalenes	5000	223	48.9	28.5 J	6.8 J	47	2.3 UJ	2.7 J	2.4 UJ	10.9 J	21.9 J
Acenaphthene		1800	1.6 U	3.2 T	1.6 U	3.3 T	1.7 UJ	3.8 JT	1.8 UJ	1.7 U	1.8 U
Acenaphthylene		180	1.7 T	2.7 T	1.6 U	6.6	1.7 UJ	1.7 UJ	4.9 JT	2.8 T	1.8 U
Anthracene		120	5.7	10	2 T	4.3 T	1.7 UJ	7.4 J	1.8 UJ	1.7 U	4.2 T
Benzo(a)anthracene		99	2.9 T	26	1.8 T	42	1.7 UJ	13 J	1.8 UJ	18	1.8 U
Benzo(a)pyrene	100	70	2.5 T	19	1.7 T	33	1.7 UJ	8.4 J	66 J	1.7 U	68
Benzo(b)fluoranthene		84	6.8	20	2.4 T	130	2.4 JT	30 J	1.8 UJ	1.7 U	1.8 U
Benzo(ghi)perylene		27	2.8 T	11	1.9 T	70	1.7 UJ	13 J	1.8 UJ	1.7 U	1.8 U
Benzo(k)fluoranthene		14	1.9 T	6 T	1.6 U	1.8 UJ	1.7 UJ	9.2 J	1.8 UJ	1.7 U	1.8 U
Chrysene		150	13	37	4.8 T	290	4.9 JT	43 J	1.8 UJ	47	78
Dibenzo(a,h)anthracene		15	1.6 U	2.7 T	1.6 U	31	1.7 UJ	3.8 JT	1.8 UJ	1.7 U	1.8 U
Fluoranthene		150	11	35	4.1 T	29	1.7 UJ	50 J	7.2 J	21	22
Fluorene		70	1.9 T	4.5 T	1.7 T	4.5 T	1.7 UJ	2.2 JT	1.8 UJ	1.7 U	1.8 U
Indeno(1,2,3-cd)pyrene		41	2.5 T	11	1.8 T	59	1.7 UJ	12 J	1.8 UJ	1.7 U	1.8 U
Phenanthrene		180	42	39	7.1	27	1.7 UJ	29 J	4.3 JT	24	19
Pyrene		240	12	57	5.8	66	2.8 JT	46 J	51 J	63	18
cPAH TEQ	100	96.8	4.04 J	25.94 J	2.3 J	62.1 J	0.3 J	15.6 J	66 J	2.3 J	68.8

Notes:
U = Not detected at reporting limit indicated
J = Estimated value
T = Value is between the MDL and MRL.
Bold = Concentration exceeded screening level.

Table 17 - Surface Soil Analytical Results

Sample ID	Collection Date	General Location	Concentrations in mg/Kg												
			Antimony	Arsenic	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
		Surface Soil Screening Levels:	**0.86**	**5.04**	**1.4**	**1.6**	**26**	**28**	**44.9**	**0.13**	**30**	**1.65**	**2**	**1**	**206**
Background Sample															
BG-1-SS	10/6/2011	Background Sample	0.51	3.9	0.41 T	1.3	9.6	20	11	0.075	7.5	**2.3**	0.1 T	0.26 U	48
BG-2-SS	10/4/2011	Background Sample	0.31	4.4	0.33	0.4	5	6.2	12	0.052	3.7	0.87	0.062 T	0.17 T	23
BG-3-SS	10/6/2011	Background Sample	**1**	4.6	0.71	0.81	16	10	39	**0.15**	8	**2.3**	0.15 T	0.17 T	30
BG-4-SS	10/6/2011	Background Sample	0.73	2.4	0.47	0.42	7.2	6.7	21	0.082	6.1	0.88 T	0.069 T	0.2 T	25
BG-5-SS	10/5/2011	Background Sample	0.29	3.6	0.73	**1.8**	9.9	2.9	19	0.043	8.1	0.68 T	0.057 T	0.14 U	**390**
BG-6-SS	10/4/2011	Background Sample	0.49	4.3	0.78	0.86	15	6.3	36	0.11	11	0.96	0.12 T	0.2 T	90
BG-7-SS	10/4/2011	Background Sample	0.22	2.1	0.47	0.26	15	2.9	15	0.034	10	0.45 T	0.056 T	0.14 U	52
BG-8-SS	10/3/2011	Background Sample	0.16 JT	1.8	0.46	0.25	6.2	2.5	9.6	0.023	4.4	0.64 T	0.03 T	0.15 T	69
BG-9-SS	10/7/2011	Background Sample	0.37 J	4.3	0.58	0.56	12	7.4	26	0.11	13	1.3	0.12 T	0.23 T	60
BG-9-SS2	10/7/2011	Field duplicate of BG-9-SS	0.33 J	4.2	0.5	0.5	12	6.9	22	0.1	13	1.2	0.099 T	0.22 T	53
BG-10-SS	10/5/2011	Background Sample	**1**	3	0.27 T	**3.1**	4.7	14	**45**	0.12	3.7	0.71 T	0.082 T	0.22 U	**660**
BG-11-SS	10/8/2011	Background Sample	0.14 T	2.2	0.47	0.2 T	13	3.6	11	0.038	9.6	0.64 T	0.04 T	0.16 T	51
BG-13-SS	10/5/2011	Background Sample	0.64	5.2	0.54	0.37	11	6.1	42	0.088	14	0.96	0.065 T	0.15 U	37
BG-14-SS	10/6/2011	Background Sample	0.32	2.6	0.28	0.28	7.9	4	13	0.024	7.4	0.49 T	0.043 T	0.15 T	36
BG-15-SS	10/7/2011	Background Sample	0.22 T	3.7	0.31	0.56	10	5.4	38	0.06	8.3	0.73 T	0.056 T	0.16 T	140
AOI-1: Mill Facility, Open Pits, and Waste Rock															
NP-1-SS	10/14/2011	Mine Site Sample		**10**		**7.4**		6.8	**500**						**1700**
NP-3-SS	10/14/2011	Mine Site Sample		**7.1**		**120**		**48**	**22000**						**36000**
T11-SS-300	11/2/2011	XRF Transect 11 at 300 feet	**2.6**	**9.6**	0.19 U	**5.5**	2.1	**31**	**190**	0.081	2.4	0.19 U	0.11 T	0.15 T	**1400**
T11-SS-900	11/2/2011	XRF Transect 11 at 900 feet	0.47	3	0.46	0.44	6.3	6.9	23	0.032	5.8	0.24 T	0.049 T	0.14 U	**360**
T11-SS-1200	11/2/2011	XRF Transect 11 at 1200 feet	0.2 T	2.8	0.55	0.31	7.2	4.6	21	0.041	6.9	0.24 U	0.025 T	0.15 U	150
T12-SS-150	11/8/2011	XRF Transect 12 at 150 feet	0.31	3.6	0.37	0.39	4.7	0.89 T	9.3	0.028	4.4	0.23 U	0.03 T	0.15 U	75
T12-SS-450	11/8/2011	XRF Transect 12 at 450 feet	0.72	4.2	0.48	**2.4**	9.5	2.4	**120**	0.06	6.9	0.48 T	0.064 T	0.24 T	**610**
T12-SS-750	11/2/2011	XRF Transect 12 at 750 feet	0.33	2.4	0.22 T	0.38	6.5	1.1	18	0.015 T	4.4	0.23 U	0.036 T	0.15 U	120
T13 SS-150	10/31/2011	XRF Transect 13 at 150 feet	**1.2**	3.4	0.46	0.64	6.9	5.2	16	0.05	6.8	0.32 T	0.037 T	0.21 T	110
T13-SS-300	10/31/2011	XRF Transect 13 at 300 feet	**0.92**	3.1	0.47	0.31	5.7	7	19	0.05	6.2	0.4 T	0.056 T	0.17 T	78
T13-SS-500	10/31/2011	XRF Transect 13 at 500 feet	0.19 T	2.4	0.47	0.45	5.4	6.5	16	0.037	5.7	0.28 T	0.047 T	0.16 U	99
T14-SS-300	11/7/2011	XRF Transect 14 at 300 feet	0.32	2	0.27	**4.7**	3.6	15	**240**	0.09	2.5	0.28 T	0.062 T	0.13 U	**2100**
T14-SS-500	11/7/2011	XRF Transect 14 at 500 feet	0.37	4.1	0.52	**2.4**	6.2	13	34	0.073	6.5	0.29 T	0.087 T	0.16 T	**960**
T14-SS-750	11/7/2011	XRF Transect 14 at 750 feet	0.099 T	1.9	0.43	0.3	5.4	4.3	6.7	0.027	4.8	0.21 U	0.049 T	0.14 U	51
T15-SS-200	11/1/2011	XRF Transect 15 at 200 feet	0.18 JT	2.1	0.44	**3.7**	4.7	5	**88**	**0.15 J**	4	0.41 T	0.073 T	0.2 T	**1300**
T15-SS-750	11/1/2011	XRF Transect 15 at 750 feet	0.29	2.6	0.52	0.66	6.2	5.3	21	0.041	6.6	0.25 T	0.041 T	0.24 T	**220**
T15-SS-1000	11/1/2011	XRF Transect 15 at 1000 feet	0.18 T	2.6	0.59	0.47	11	8.3	22	0.039	7.9	0.47 T	0.055 T	0.19 T	99
T15-SS-1020	11/1/2011	Field duplicate of T15-SS-1000	0.36	2.9	0.47	0.62	8.1	4.4	17	0.03	6.3	0.42 T	0.056 T	0.16 T	89
T16-SS-0	6/21/2012	Transect 16 at 0 feet	**0.92**	**5.6**	1.1 U	1.5	6 U	17 U	**48**	0.034	15 U	0.33 T	0.044 T	0.2 U	**270**
T16-SS-315	6/21/2012	Transect 16 at 315 feet	**1**	3.3	1.1 U	0.94	6.1 U	28 U	**77**	0.061	16 U	0.37 T	0.036 T	0.2 U	130
T16-SS-770	6/21/2012	Transect 16 at 770 feet	0.23 T	1.6	0.84 U	0.21 T	5 T	8.5 U	18	0.018 T	22	0.24 U	0.032 T	0.15 U	37
T17-SS-0	6/21/2012	Transect 17 at 0 feet	0.49	4.7	0.87 U	0.76	4.8 U	15 U	**95**	0.039	12 U	0.31 T	0.086 T	0.16 U	**250**
T17-SS-500	6/21/2012	Transect 17 at 500 feet	0.31	3.2	1 U	0.3	5.7 U	18 U	9.5 T	0.052	15 U	0.3 U	0.073 T	0.19 U	71
T18-SS-0	6/21/2012	Transect 18 at 0 feet	0.37	4	1.1 T	0.61	5.7 T	17 U	26	0.042	17 U	0.41 T	0.066 T	0.18 U	140
T18-SS-350	6/21/2012	Transect 18 at 350 feet	0.56	3.1	0.94 U	0.4	5.1 U	16 U	29	0.032	13 U	0.32 T	0.081 T	0.17 U	120
MS-1	6/20/2012	Mine Site Mill Area Stained Soil	**8.8**	**6.2**	0.76 U	**8.9**	10 T	**52 J**	**840**	0.12	7.3 T	0.36 T	0.22	0.18 T	**3700**
MS-2	6/20/2012	Mine Site Mill Area Stained Soil	**1.4**	**5.2**	0.65 U	**5.6**	3.6 U	6.6 U	**380**	**0.15**	2.8 T	0.22 T	0.16 T	0.18 T	**1700**
MS-3	6/20/2012	Mine Site Mill Area Stained Soil	**20**	**9.3**	0.84 U	**22**	8.4 T	**130**	**2600**	0.079	13	0.43 T	0.64	0.15 U	**12000**
MS-4	6/20/2012	Mine Site Mill Area Stained Soil	**5.3**	**17**	0.62 U	**50**	7.7 T	**58**	**4500**	**0.45**	9.1	0.36 T	0.66	0.3 T	**11000**
MS-5	6/20/2012	Mine Site Mill Area Stained Soil	**4.6**	**6.6**	0.64 U	**31**	21	**70**	**3100**	**0.5**	**45**	0.54 T	0.46	0.3 T	**8200**
MS-6	6/20/2012	Mine Site Mill Area Stained Soil	**15 J**	**11 J**	0.65 UJ	**180 J**	5.5 JT	**360 J**	**26000 J**	**2.8 J**	1.2 UJ	0.77 J	**3.3 J**	**1.3 J**	**23000 J**
MS-7	6/20/2012	Mine Site Mill Area Stained Soil	**3.3 J**	**7.9 J**	0.57 UJ	**47 J**	3.1 UJ	**640 J**	**3900 J**	0.36 J	1.5 JT	0.31 JT	0.56 J	0.3 JT	**9700 J**
MS-8	6/20/2012	Mine Site Mill Area Stained Soil	**15 J**	**8.8 J**	0.67 UJ	**46 J**	3.7 UJ	**75 J**	**21000 J**	**0.17 J**	1.2 UJ	0.5 JT	**3.4 J**	**1.2 J**	**9400 J**
MS-9	6/20/2012	Mine Site Mill Area Stained Soil	**11**	**7.7**	0.65 U	**19**	**35**	**59**	**2500**	**0.16**	23	0.55 T	0.59	0.3 T	**4300**
MS-10	6/20/2012	Mine Site Mill Area Stained Soil	**1.3**	4.2	1.2 T	**3.4**	6.5 T	7.2 T	**530**	**0.13**	7.8 T	0.57 T	0.43	0.32 T	**1100**
MS-11	6/21/2012	Waste Rock Erosional Area	0.19	2.3	0.69 U	0.19	3.8 U	17 UJ	24 J	0.0058 T	9.7 U	0.21 T	0.02 T	0.13 U	64 J

Table 17 - Surface Soil Analytical Results

Sample ID	Collection Date	General Location	Concentrations in mg/Kg											
			Antimony	Arsenic	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
		Surface Soil Screening Levels:	**0.86**	**5.04**	**1.4**	**1.6**	**26**	**28**	**44.9**	**0.13**	**30**	**1.65**	**2**	**1**	**206**
MS-12	6/21/2012	Waste Rock Erosional Area	0.1 T	1.2	0.8 U	1.3	4.8 T	12 U	8.9 T	0.013 T	1.5 U	0.31 T	0.029 T	0.15 U	**300**
MS-13	6/21/2012	Waste Rock Erosional Area	0.28	3.2	1.1 T	0.45	4.4 U	14 U	12 T	0.016 T	11 U	0.83	0.032 T	0.15 U	48
MS-14	6/21/2012	Waste Rock Erosional Area	0.32	2.2	0.98 U	0.25 T	5.4 U	14 U	9.1 T	0.035	14 U	0.38 T	0.049 T	0.18 U	41
MS-15	6/21/2012	Waste Rock Erosional Area	**2.6**	**8.1**	0.77 U	**21**	4.2 U	23 U	**980**	**0.51**	11 U	0.34 T	0.35	0.19 T	**5600**
MS-16	6/21/2012	Waste Rock Erosional Area	**0.91**	3.6	0.74 U	**12**	4 U	*33 U*	**1200**	**0.14**	10 U	0.84	0.31	0.18 T	**6400**
MS-17	6/20/2012	Mine Site north of Waste Rock Area	0.048 T	0.61	0.59 U	0.046 T	4.2 T	7.4 T	2.6 T	0.0056 U	1.3 T	0.33 T	0.01 U	0.11 U	8.1 T
MS-18	6/20/2012	Mine Site north of Waste Rock Area	0.27	1.9	0.96 U	0.61	5.3 U	11 T	**81**	0.056	4 T	0.31 T	0.042 T	0.18 U	200
MS-1-COMP	11/4/2011	30-point Composite Sample from Waste Rock at Mine Site	**1.4**	**9.2**	0.23	**19**	2	6.2	**710**	0.12 J	4.4	0.22 T	0.19	0.29 T	**4200**
MS-2-COMP	11/11/2011	30-point Composite Sample from Waste Rock at Mine Site	**1.7**	**15**	0.33	**16**	2.8	6.8	**450**	**0.25 J**	4.9	0.3 T	0.19 T	0.33 T	**4400**
MS-3-COMP	11/10/2011	30-point Composite Sample from Waste Rock at Mine Site	**6.2**	**15**	0.3	**130**	16	22	**12000**	**0.29 J**	4.4	0.4 T	1.3	0.64	**37000**
MS-4-COMP	6/26/2012	30-point Composite Sample from Waste Rock at Mine Site	**3.8**	**23**	0.56	**18**	4.1	3.4	**860**	**0.48 J**	3.4	0.3 T	0.51	0.44	**5000**
SWR-COMP	11/5/2011	30-point Composite Sample from Waste Rock to south of Mine Site	**9.4**	**30**	0.19 T	**71**	1.4	13	**5800**	**2.5 J**	4.5	0.67 T	**3.6**	**1.1**	**24000**
SWR-1-COMP	6/20/2012	30-point Composite Sample from Waste Rock to south of Mine Site	**6**	**45**	0.39	**30**	2.3	0.85 T	**1600**	**0.51**	4.5	0.41 T	0.63	0.65	**8900 J**
SWR-2-COMP	6/20/2012	30-point Composite Sample from Waste Rock to south of Mine Site	**7.7**	**32**	0.44	**34**	3	1.8	**2700**	**0.88**	4.1	0.3 T	**2**	0.67	**9600**
SWR-3-COMP	6/19/2012	30-point Composite Sample from Waste Rock to south of Mine Site	**11**	**22**	0.55	**33**	3.3	6.6	**3900**	**0.71**	3.4	0.41 T	1.8	0.81	**10000**
SWR-4-COMP	6/26/2012	30-point Composite Sample from Waste Rock to south of Mine Site	**3.2**	**18**	0.66	**22**	4.1	1.5	**700**	**0.42 J**	6.4 J	0.2 T	0.33	0.39 T	**9000**
AOI-2: Upper Tailings Pile															
UT-2-SS	10/14/2011	Upper Tailings Pile		**15**		**15 J**		**58**	**370**						**6500**
UT-3-SS	10/14/2011	Upper Tailings Pile		**11**		**12**		**150**	**690**						**4100**
UT-1	6/24/2012	UTP Erosional Area	0.099 T	1.6	0.99 U	0.34	5.5 U	10 U	11 T	0.026	2.7 T	0.5 T	0.046 T	0.18 U	79 U
UT-2	6/24/2012	UTP Erosional Area	0.064 JT	1.1 J	1 JT	0.23 J	5 JT	8.4 J	7.9 JT	0.01 JT	2.8 JT	0.52 JT	0.02 JT	0.15 UJ	79 J
UT-20	6/24/2012	Field duplicate of UT-2	0.044 T	0.76	0.73 T	0.16 T	3.5 U	6.4 U	4.9 T	0.0051 U	2 T	0.41 T	0.014 T	0.12 U	43 J
UT-3	6/24/2012	UTP Erosional Area	0.29	4.9	**1.8 T**	**2.9**	7 T	**35**	**150**	0.11	5.7 T	1	0.098 T	0.32 T	**880**
UT-4	6/24/2012	UTP Erosional Area	0.13 T	1.9	0.76 T	0.36	8.6 T	7.6 U	11 T	0.017 T	4.3 T	0.28 T	0.065 T	0.14 U	68
UT-5	6/24/2012	UTP Erosional Area	0.065 JT	1.3 J	0.8 JT	0.074 JT	4.9 JT	7.2 J	7.8 JT	0.0072 JT	2.4 JT	0.41 JT	0.044 JT	0.13 UJ	20 UJ
UT-6	6/24/2012	UTP Erosional Area	0.045 U	0.78	0.77 U	0.073 T	4.2 U	7.8 U	3.5 T	0.0063 T	1.4 U	0.45 T	0.013 U	0.14 U	22 U
UT-7	6/26/2012	UTP Erosional Area	**3.1**	**16**	0.086 U	**14**	0.66 T	13	**1200**	**0.16**	2.7	0.24 U	0.55	0.27 T	**4000**
UT-9	6/26/2012	UTP Breach Erosional Area	0.27	2	0.32	0.29	2.8	1.4	7.4	0.0097 T	1.5	0.23 U	0.029 T	0.15 U	33
UT-10	6/26/2012	UTP Breach Erosional Area	0.11 T	0.68	0.28 T	0.65	2.3	0.98 T	5.1	0.015 T	1.5	0.24 U	0.028 T	0.15 U	78
UT-11	6/26/2012	UTP Breach Erosional Area	**2.6**	**9.8**	0.089 U	**12**	0.72 T	17	**630**	**0.13**	2.3	0.25 U	0.33	0.2 T	**3600**
UT-12	6/27/2012	UTP Breach Erosional Area	**2.1**	**7.5**	0.08 U	**14**	0.67 T	13	**340**	**0.2**	1.6	0.23 U	0.32	0.16 T	**4500**
UT-13	6/27/2012	UTP Breach Erosional Area	**2.6**	**6**	0.14 T	**12**	1.4	**36**	**420**	**0.18**	2.3	0.22 U	0.31	0.17 T	**3500**
UT-14	6/27/2012	UTP Breach Erosional Area	**2.3**	**5.4**	0.37	**10**	1.9	**35**	**350**	**0.18**	2.2	0.27 U	0.26 T	0.19 T	**2800**
UT-15	6/27/2012	UTP Breach Erosional Area	**0.92**	3.4	0.17 T	**4.1**	5.8	9	**130**	0.079	1.5	0.22 U	0.1 T	0.14 U	**1200 J**
UT-16	6/27/2012	UTP Breach Erosional Area	0.25	1.1	**1.6**	0.33	2	0.78 U	10	0.013 T	1.2	0.22 U	0.039 T	0.36 T	68
UT-160	6/27/2012	Field duplicate of UT-16	0.26	1.4	**1.9**	0.33	2.5	0.79 U	8.8	0.013 T	1.5	0.22 U	0.038 T	0.41 T	85
UT-17	6/27/2012	UTP Breach Erosional Area	**1.2**	**5.3**	0.24 T	**6.5**	2.3	11	**140**	**0.18**	2.4	0.26 U	0.12 T	0.17 U	**2000**
T6-SS-100	11/6/2011	XRF Transect 6 at 100 feet	**2**	**5.7**	0.36	**1.7**	4.9	1.7	**46**	0.065	4.7	0.24 T	0.075 T	0.14 T	140
T6-SS-300	11/6/2011	XRF Transect 6 at 300 feet	0.26	1.8	0.25	0.27	3.3	1.1	6.3	0.019	3.4	0.19 U	0.03 T	0.12 U	53

Table 17 - Surface Soil Analytical Results

Sample ID	Collection Date	General Location	Concentrations in mg/Kg											
			Antimony	Arsenic	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
		Surface Soil Screening Levels:	**0.86**	**5.04**	**1.4**	**1.6**	**26**	**28**	**44.9**	**0.13**	**30**	**1.65**	**2**	**1**	**206**
T6-SS-500	11/6/2011	XRF Transect 6 at 500 feet	0.55	3	0.38	**1.6**	7.1	16	10	0.052	6.3	0.47 T	0.12 T	0.19 U	42
T7-SS-100	11/7/2011	XRF Transect 7 at 100 feet	0.29	3.8	0.2 U	**4**	2.5	8.5	**140**	0.062	2.6	0.2 U	0.083 T	0.13 U	**1300**
T7-SS-300	11/7/2011	XRF Transect 7 at 300 feet	0.11 T	0.98	0.19 U	0.12 T	2.8	1.4	10	0.013 T	1.8	0.19 U	0.018 T	0.12 U	29
T7-SS-500	11/7/2011	XRF Transect 7 at 500 feet	0.072 T	1.3	0.38	0.57	7.1	3.5	11	0.013 T	4.2	0.42 T	0.028 T	0.12 T	140
T8-SS-100	11/5/2011	XRF Transect 8 at 100 feet	0.56	3.3	0.49	0.57	6.7	6.9	30	0.024	6.8	0.3 T	0.056 T	0.14 U	150
T8-SS-300	11/5/2011	XRF Transect 8 at 300 feet	0.66	1.4	0.27 U	0.42	4.4	3.2	20	0.059	2.5	0.27 U	0.027 T	0.17 U	46
T8-SS-500	11/5/2011	XRF Transect 8 at 500 feet	0.3	2.5	0.32	0.48	4.5	9.4	20	0.029	4.2	0.26 T	0.047 T	0.14 U	140
T9-SS-100	11/5/2011	XRF Transect 9 at 100 feet	0.092 T	1.4	0.59	0.21	5.5	7.9	6.5	0.023	5.9	0.36 T	0.037 T	0.13 U	42
T9-SS-300	11/5/2011	XRF Transect 9 at 300 feet	0.29	2.4	0.45	0.34	5	7.7	8.8	0.036	5.4	0.3 T	0.049 T	0.16 U	52
T9-SS-500	11/5/2011	XRF Transect 9 at 500 feet	0.14 T	2.8	0.47	0.24	5.7	6.2	8.4	0.03	6.5	0.39 T	0.03 T	0.15 U	65
T10-SS-150	11/6/2011	XRF Transect 10 at 150 feet	**1.7**	3.6	0.33	0.67	5	7	**62**	0.082	5.6	0.36 T	0.051 T	0.18 T	88
T10-SS-500	11/6/2011	XRF Transect 10 at 500 feet	0.54	**5.4**	0.33	**1.8**	4.5	15	32	0.016 T	4.9	0.32 T	0.12 T	0.14 T	**510**
T10-SS-750	11/6/2011	XRF Transect 10 at 750 feet	0.12 T	1.7	0.46	0.21	4.9	4.5	6	0.028	7.5	0.25 T	0.026 T	0.13 U	73
AOI-3: Lower Tailings Pile															
LT-DP-1	11/8/2011	LTP Detention Pond	**2.8**	**13**	0.1 T	**17**	3.6	**56**	**600**	**0.21 J**	3.8	0.27 U	0.23 T	0.27 T	**5700**
LT-OC ROAD-CULVERT	11/9/2011	Lower Tailings Pile Onion Creek Road Culvert	0.8	4.5	0.21 T	**3.9**	4	14	**59**	0.051 J	7.1	0.45 T	0.14 T	0.14 T	**530**
LT-1-SS	10/14/2011	Lower Tailings Pile		**6.2**		**35**		23	**9500**						**11000**
LT-2-SS	10/14/2011	Lower Tailings Pile		3.1		**19**		**77**	**2700**						**5200**
LT-1	6/23/2012	LTP Erosional Area	0.26	1.5	0.81 UJ	0.34	8.5 T	8.2 UJ	8.1 T	0.018 T	11 U	0.31 T	0.056 T	0.15 U	49
LT-2	6/23/2012	LTP Erosional Area	0.34	2.2	0.81 U	0.62	8.3 T	8.2 U	16 T	0.021	11 U	0.46 T	0.11 T	0.15 U	75
LT-3	6/23/2012	LTP Erosional Area	**1**	2.3	0.89 U	0.88	4.9 U	9 U	29	0.03	13 U	0.35 T	0.052 T	0.16 U	69
LT-4	6/23/2012	LTP Erosional Area	0.4	2.4	0.85 U	0.63	4.7 U	10 T	15 T	0.033	12 U	0.36 T	0.08 T	0.16 U	60
LT-5	6/23/2012	LTP Erosional Area	0.58	1.9	0.88 U	0.43	6 T	8.9 U	24	0.039	1.6 U	0.25 U	0.031 T	0.16 U	41
LT-6	6/23/2012	LTP Erosional Area	0.51 J	4.8 J	**1.7 JT**	0.96 J	7.3 JT	17 JT	44 J	0.045 J	6.6 JT	1.2 J	0.089 JT	0.23 UJ	150 J
LT-7	6/23/2012	LTP Erosional Area	0.69	4.9	0.93 U	**4.5**	5.1 U	10 T	**190**	0.053	3 T	0.32 T	0.059 T	0.17 U	**1200**
LT-8	6/23/2012	LTP Erosional Area	0.19 T	1.1	0.82 T	0.19 T	4.7 T	12	5.9 T	0.013 T	2.9 T	0.41 T	0.038 T	0.14 U	23 U
LT-9	6/23/2012	LTP Erosional Area	0.25	2.2 J	0.96 T	0.41	4.9 U	11 T	17 T	0.02 T	3.8 T	0.5 T	0.03 T	0.16 U	52 U
LT-90	6/23/2012	Field duplicate of LT-9	0.27	**7 J**	1.2 T	0.64	4.9 U	14	8.3 T	0.017 T	7.9 T	0.62 T	0.032 T	0.19 T	34 U
LT-10	6/23/2012	LTP Erosional Area	0.51	4.1	0.97 U	1.3	5.3 U	13 T	**65**	0.036	6.3 T	0.43 T	0.059 T	0.18 U	**220**
LT-11	6/23/2012	LTP Erosional Area	**2.4**	**9.5**	1 U	**5.9**	5.8 U	**130**	**250**	0.072	4.6 T	0.49 T	0.11 T	0.19 U	**2200**
LT-12	6/26/2012	LTP Erosional Area	**2.2**	**14**	0.11 U	**6.8**	1.1 T	10	**490**	0.11	2	0.31 U	0.21 T	0.2 U	**1900**
LT-13	6/26/2012	LTP Erosional Area	0.094 T	1.2	0.075 T	0.2	1.2	1.4	2.9	0.0058 T	1.4	0.25 T	0.27	0.12 U	14
LT-14	6/26/2012	LTP Erosional Area	0.81	3.1	0.25 T	0.96	3.8	7.7	37	0.036	3.3	0.45 T	0.06 T	0.19 U	150
LT-15	6/26/2012	LTP Erosional Area	0.81	1.3	0.25 T	0.28	3.5	11	14	0.0065 T	3.2	0.27 T	0.04 T	0.16 U	60
LT-16	6/21/2012	LTP discrete sample	0.77	4.2	0.91 U	1.1	5 U	26 U	19	0.029	13 U	0.5 T	0.13 T	0.17 U	91
LT-17	6/21/2012	LTP discrete sample	0.54	3.4	0.81 U	0.86	4.5 U	13 U	13 T	0.021	11 U	0.46 T	0.13 T	0.15 U	68
LT-18	6/21/2012	LTP discrete sample	0.55	3.6	0.85 U	1.1	4.7 U	19 U	11 T	0.026	12 U	0.43 T	0.14 T	0.16 U	77
LT-180	6/21/2012	Field duplicate of LT-18	0.58	3.6	0.87 U	0.85	4.8 U	22 U	10 T	0.026	12 U	0.43 T	0.15 T	0.16 U	69
LT-19	6/21/2012	LTP discrete sample	0.4	3.1	0.91 U	0.46	5 U	13 U	6.1 T	0.025	24	0.37 T	0.077 T	0.17 U	63
LT-190	6/21/2012	Field duplicate of LT-19	0.41	3.3	0.85 T	0.55	4.6 T	14 U	6 T	0.019 T	12 U	0.43 T	0.085 T	0.15 U	54
LT-20	6/22/2012	LTP discrete sample	0.23	2.4	0.77 U	0.86	4.2 U	13	16	0.019	4.5 T	0.37 T	0.059 T	0.14 U	99
LT-21	6/22/2012	LTP discrete sample	0.32	2.1	0.95 T	0.48	4.9 U	9 U	10 T	0.016 T	5.5 T	0.41 T	0.099 T	0.16 U	40 U
LT-22	6/22/2012	LTP discrete sample	**1**	**7.6**	0.95 U	**5.3**	5.2 U	**110**	**380**	0.091	3.9 T	0.37 T	0.2 T	0.17 U	**1400**
LT-23	6/22/2012	LTP discrete sample	0.16 T	1.7	0.78 U	0.37	4.3 U	12	6.7 T	0.015 T	3.8 T	0.33 T	0.057 T	0.14 U	29 U
T1-SS-100	11/4/2011	XRF Transect 1 at 100 feet	**1.2**	**5.2**	0.29	**3.7**	5.6	**31**	170	0.071	6	0.29 T	0.12 T	0.15 T	**1200**
T1-SS-300	11/4/2011	XRF Transect 1 at 300 feet	0.43	3.3	0.43	0.41	6.3	11	7.9	0.023	9.3	0.37 T	0.12 T	0.14 U	75
T1-SS-500	11/4/2011	XRF Transect 1 at 500 feet	0.54	2.4	0.3	0.77	5.5	8.1	43	0.025	7.8	0.32 T	0.078 T	0.14 U	170
T2-SS-100	11/4/2011	XRF Transect 2 at 100 feet	0.67	3.4	0.31	0.65	8.3	16	21	0.019	12	0.52 T	0.14 T	0.19 T	140
T2-SS-300	11/4/2011	XRF Transect 2 at 300 feet	0.58	**10**	0.21 U	**9.7**	4.6	18	**420**	0.08	4	0.21 U	0.086 T	0.21 T	**2900**
T2-SS-500	11/4/2011	XRF Transect 2 at 500 feet	0.78	4.9	0.46	1.3	7.6	11	12	0.038	12	0.53 T	0.27	0.15 T	110
T3-SS-100	11/3/2011	XRF Transect 3 at 100 feet	0.74	3.3	0.52	1.1 J	9.3	4.8	24	0.038	12	0.35 T	0.18 T	0.23 T	190
T3-SS-300	11/3/2011	XRF Transect 3 at 300 feet	**5**	**8.7**	0.28	**8.7**	2.9	**180**	**880**	0.1	4.3	0.23 U	0.26	0.42 T	**1900**
T3-SS-320	11/3/2011	Field duplicate of T3-SS-300	**4.5**	**8.3**	0.2 T	**8.1**	2.9	**180**	**840**	0.096	4.4	0.2 U	0.25	0.35 T	**1700**

Table 17 - Surface Soil Analytical Results

Sample ID	Collection Date	General Location	Concentrations in mg/Kg											
			Antimony	Arsenic	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
		Surface Soil Screening Levels:	**0.86**	**5.04**	**1.4**	**1.6**	**26**	**28**	**44.9**	**0.13**	**30**	**1.65**	**2**	**1**	**206**
T3-SS-500	11/3/2011	XRF Transect 3 at 500 feet	**1.3**	4.3	0.45	1.3	9.1	9.4	24	0.027	12	0.44 T	0.18 T	0.22 T	130
T4-SS-100	11/3/2011	XRF Transect 4 at 100 feet	**2.4**	**9**	0.2 U	**11**	4.8 JT	25	**300**	0.1	3.2	0.2 U	0.15 T	0.23 T	**4100 J**
T4-SS-120	11/3/2011	Field duplicate of T4-SS-100	**2.9**	**9.8**	0.057 U	**12**	0.64 JT	26	**310**	0.086	2.9	0.16 U	0.16	0.18 T	**1900 J**
T4-SS-300	11/3/2011	XRF Transect 4 at 300 feet	0.64	3.9	0.29	0.68	4.8	6.9	21	0.055	5.8	0.35 T	0.067 T	0.13 U	85
T4-SS-500	11/3/2011	XRF Transect 4 at 500 feet	0.25	3	0.44	0.85	7.5	11	16	0.026	8.6	0.41 T	0.11 T	0.14 T	160
T5-SS-100	11/4/2011	XRF Transect 5 at 100 feet	0.18 T	2.2	0.2 U	0.24	2.7	3.7	4.3	0.018	3.3	0.22 T	0.065 T	0.13 U	45
T5-SS-300	11/4/2011	XRF Transect 5 at 300 feet	0.35	1.5	0.26 U	0.45	3.8	5	17	0.016	3.7	0.35 T	0.036 T	0.13 U	88
T5-SS-500	11/4/2011	XRF Transect 5 at 500 feet	0.6	2.3	0.38	0.58	6.1	8.3	13	0.031	8.6	0.41 T	0.11 T	0.15 U	73
AOI-4:Tailings Pipeline and Access Road															
DR-1	6/25/2012	Public Access Road	**2.2**	**10**	0.28	**3.1**	10	**28**	10	0.043	26	0.89	0.52	0.18 T	150
DR-2	6/25/2012	Public Access Road	**1.6**	**9.5**	0.21 T	**1.8**	8.7	23	9.9	0.036	23	1	0.38	0.15 T	120
DR-3	6/25/2012	Public Access Road	**2.1**	**9.8**	0.29	**2.6**	9.7	24	8.8	0.032	25	0.99	0.44	0.16 T	140
DR-4	6/25/2012	Van Stone Access Road	0.26	1.5	0.2 T	0.73	3.7	4.8	6	0.0052 U	3	0.18 U	0.046 T	0.12 U	120
DR-5	6/25/2012	Public Access Road	**1.9**	**8.2**	0.28	**1.9**	9	21	7.7	0.027	24	1.1	0.36	0.14 T	120
DR-6	6/25/2012	Van Stone Access Road	0.27	2.2	0.19 T	0.45	4.5	8.4	36 J	0.0054 U	3.2	0.36 T	0.038 T	0.13 U	56 J
DR-7	6/25/2012	Van Stone Access Road	0.22	1.2	0.2 T	0.27	4.2	6.7	12	0.0053 T	2.7	0.32 T	0.044 T	0.12 U	41
DR-8	6/25/2012	Van Stone Access Road	0.23	1	0.16 T	0.29	4.1	7.1	7	0.0051 T	2.5	0.31 T	0.047 T	0.13 U	40
DR-9	6/25/2012	Van Stone Access Road	0.22	1.2	0.22 T	0.31	3.9	5.8	13	0.0073 T	2.5	0.35 T	0.041 T	0.13 U	52
DR-10	6/25/2012	Van Stone Access Road	0.21	1.2	0.18 T	0.31	2.8	5.5	7.3	0.0068 T	2.6	0.32 T	0.04 T	0.12 U	40
DR-11	6/25/2012	Van Stone Access Road	0.24	0.91	0.19 T	0.26	2.7	4	10	0.0054 U	1.5	0.24 T	0.023 T	0.14 U	49
DR-12	6/25/2012	Van Stone Access Road	0.12 T	0.73	0.17 T	0.21	2.4	3.8	12	0.0053 U	1.1	0.22 T	0.015 T	0.13 U	36
DR-13	6/25/2012	Van Stone Access Road	0.094 T	0.68	0.24	0.24	3.2	4.4	11	0.0052 U	1.3	0.26 T	0.013 T	0.12 U	57
DR-14	6/25/2012	Van Stone Access Road	0.06 T	0.6	0.18 T	0.13 T	3	4.1	5.5	0.0055 U	0.95 T	0.29 T	0.012 U	0.13 U	17
DR-15	6/25/2012	Van Stone Access Road	**1**	1	0.13 T	0.87	2.9	3.5	**64**	0.01 T	1.7	0.23 T	0.034 T	0.13 U	170
TAILINGS BOX	11/6/2011	Tailings Box Pile, located along the pipeline	**5**	**12**	0.084 T	**25**	3.7	**81**	**760**	**0.45 J**	4.5	0.27 T	0.31	0.21 T	**7700**
UT-LT-2000'	11/10/2011	Upper and Lower Tailings Pile Pipeline 2000ft	**2.1**	**14**	0.11 T	**10**	3.3	**34**	**470**	0.11 J	3.9	0.23 T	0.18 T	0.3 T	**3200**
UT-LT-4000'	11/10/2011	Upper and Lower Tailings Pile Pipeline 4000ft	**1.3**	**7.4**	0.14 T	**5.5**	1.9	14	**220**	0.041 J	2.6	0.25 T	0.11 T	0.14 T	**1400**
PL-1	6/25/2012	Tailings Pipeline	**4.2**	**21**	0.14 T	**11**	2.3	**75 J**	**860**	**0.16**	2.8	0.24 U	0.21 T	0.22 T	**3000**
PL-2	6/25/2012	Tailings Pipeline	**0.9**	**6.4**	0.078 U	**3.8**	0.91 T	12	**250**	0.036	1.5	0.24 T	0.12 T	0.23 T	**870**
PL-3	6/25/2012	Tailings Pipeline	0.16 T	0.93	0.36	0.25	2.2	0.9 T	6.9	0.0099 T	1.4	0.24 T	0.035 T	0.13 U	36
PL-4	6/25/2012	Tailings Pipeline	0.22	2.4	0.42	0.3	5.2	4.6	21	0.018	3.5	0.28 T	0.054 T	0.12 U	65
PL-5	6/25/2012	Tailings Pipeline	**1.2**	3.5	0.13 T	**5.5**	1.7	23	**280**	0.069	2.2	0.25 T	0.086 T	0.2 T	**1700**
PL-6	6/26/2012	Tailings Pipeline	0.35 J	**6.2 J**	0.079 UJ	**5.4 J**	1.6 J	16 J	**320 J**	0.068 J	2.4 J	0.23 UJ	0.12 JT	0.23 JT	**1300 J**
PL-7	6/26/2012	Tailings Pipeline	0.2 T	0.5 T	0.18 T	0.13 T	1.1 T	1.3	7.6	0.0042 T	0.77 T	0.22 T	0.012 T	0.13 U	28
PL-8	6/25/2012	Tailings Pipeline	**1.1**	**18**	0.069 U	**21**	2.3	**70**	**1000**	**0.29**	4.7	0.32 T	0.4	0.29 T	**6300**
PL-9	6/25/2012	Tailings Pipeline	0.11 T	1.1	0.45	0.21 T	3.6	3.1	7.1	0.01 T	2.2	0.44 T	0.02 T	0.16 U	25
PL-10	6/26/2012	Tailings Pipeline	0.17 JT	2.1 J	0.72 J	0.28 J	5 J	5.5 J	10 J	0.017 JT	4.2 J	0.35 JT	0.051 JT	0.16 UJ	45 J
PL-11	6/26/2012	Tailings Pipeline	0.62	**8.3**	0.079 U	**7.6**	2.3	10	**380**	0.065	2.3	0.27 T	0.086 T	0.17 T	**1900**
PL-12	6/27/2012	Tailings Pipeline	0.13 T	1.4	0.31	0.7	3.2	3.4	22	0.014 T	3	0.42 T	0.049 T	0.14 U	140
PL-13	6/27/2012	Tailings Pipeline	**1.3**	**13**	0.18 T	4.4	1.7	25	**560**	0.043	1.6	0.3 T	0.1 T	0.16 T	**1100**
PL-14	6/27/2012	Tailings Pipeline	0.23 JT	2.8 J	0.54 J	0.64 J	4.5 J	6.3 J	27 J	0.023 J	4.8 J	0.45 JT	0.1 JT	0.17 UJ	99 J
PL-15	6/27/2012	Tailings Pipeline	**1.1 J**	**10 J**	0.087 UJ	**24 J**	5 J	**45 J**	**570 J**	**0.23 J**	2.5 J	0.28 JT	0.2 JT	0.22 JT	**5200 J**
AOI-5: Onion Creek and Tributaries															
BG-12-SS	10/7/2011	Onion Creek Sample	0.19 T	3.3	0.46	1.5	7.8	3.6	**46**	0.045	5.9	0.66 T	0.066 T	0.17 T	**460**

Notes:

U = Not detected at reporting limit indicated

J = Estimated value

T = Value is between the MDL and MRL.

Bold = Concentration exceeds criteria

Table 18 - Sediment Analytical Results

Sample ID	Collection Date	Location Description	Concentrations in mg/Kg												
			Antimony	Arsenic	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc	Total Organic Carbon - Quad
		Screening Levels:	***0.59***	**6.66**	**0.74**	***0.596***	**37.3**	**35.7**	**35**	***0.174***	**18**	**11**	**0.57**	**0.41**	**123**	
Background																
BG-1-SD	10/6/2011	Background Sample	0.25 T	4.3	0.42 T	0.42 T	6.5	10	7.4	0.071	5	1.7	0.084 T	0.29 U	39	100000
BG-2-SD	10/4/2011	Background Sample	0.39 T	5.3	0.47 T	0.39 T	5.9	8.2	5.6	0.099	4.2	1.8 T	0.086 T	0.41 U	28	130000
BG-3-SD	10/6/2011	Background Sample	0.51 T	3.6	**1.6**	0.34 T	33	21	9.9	0.09	15	3.6	0.28 T	**0.59 T**	44	52000
BG-4-SD	10/6/2011	Background Sample	0.17 T	0.95	0.45	0.14 T	4.2	5.5	5.3	0.016 T	3.5	0.73 T	0.044 T	0.16 U	14	17000
BG-5-SD	10/5/2011	Background Sample	0.056 U	0.57 T	0.25 T	0.43	4.6	1.6	3.6	0.0054 U	3.1	0.28 T	0.016 U	0.17 U	**130**	4400
BG-6-SD	10/4/2011	Background Sample	0.076 T	1.7	0.5	0.16 T	7.1	3.1	4.9	0.0085 U	3.9	0.59 T	0.026 T	0.21 U	19	17000
BG-7-SD	10/4/2011	Background Sample	0.069 T	10	0.64	0.32	12	2	2.7	0.0071 U	9.2	0.55 T	0.018 T	0.17 U	48	6800
BG-8-SD	10/3/2011	Background Sample	0.14 T	0.4 T	0.16 T	0.079 T	1.8	0.9 U	2.2	0.0045 U	1.1 T	0.25 U	0.015 U	0.2 T	24	2000
BG-9-SD	10/7/2011	Background Sample	0.53	2.9	0.24 T	0.21	6.2	4.4	8.4	0.0049 T	8.9	0.48 T	0.02 T	0.21 T	63	1400 T
BG-9-SD2	10/7/2011	Field duplicate of BG-9-SD	0.095 T	1.4	0.18 T	0.068 T	5.2	1.9	5.7	0.0045 U	5.1	0.29 T	0.017 T	0.23 T	21	2500
BG-10-SD	10/5/2011	Background Sample	0.85 T	2.6	0.34 U	**51**	5 T	19	**170**	0.15	5.3	1.9 T	0.24 T	**0.91 T**	**3800**	260000
BG-11-SD	10/8/2011	Background Sample	0.051 T	0.58	0.2 T	0.066 T	2.8	1.1 T	2.3	0.0054 U	2.3	0.24 T	0.014 U	0.15 U	24	3700
BG-13-SD	10/5/2011	Background Sample	0.068 T	2.2	0.22 T	0.12 T	5.2	1.7	5.9	0.0057 T	5	0.27 T	0.018 T	0.13 U	26	3000
BG-14-SD	10/6/2011	Background Sample	0.15 T	1.6	0.23 T	0.1 T	6	3	5.8	0.0071 T	6	0.45 T	0.023 T	0.15 U	24	13000
BG-15-SD	10/7/2011	Background Sample	0.27	3.7	0.28 T	0.19 T	8.9	2.4	29	0.0061 U	7.5	0.31 T	0.021 T	0.16 U	98	3200
AOI-5: Onion Creek and Tributaries																
BG-12-SD	10/7/2011	Onion Creek Sample	0.13 T	2.5	0.18 T	**0.77**	7.3	2.7	30	0.015 T	4.9	0.33 T	0.029 T	0.18 U	**290**	7200
OC-1-SD	10/9/2011	Onion Creek Sample	0.47	1.8	0.19 T	0.33	4.9	1.3	15	0.012 T	3	0.57 T	0.039 T	0.15 T	120	610 U
OC-2-SD	10/9/2011	Onion Creek Sample	0.24	0.93	0.11 T	0.36	1.5	0.86 U	6.9	0.0095 T	1.2	0.25 T	0.025 T	0.15 U	120	2500
OC-3-SD	10/12/2011	Onion Creek Sample	0.067 T	1.1	0.089 T	0.12 T	1 T	1 T	1.8	0.016	0.69 T	0.28 T	0.017 T	0.14 U	6.2	7500
OC-4-SD	10/13/2011	Onion Creek Sample	0.13 T	1.4	0.12 T	0.28	3.2	1.2	15	0.019 T	2.5	0.23 T	0.015 T	0.13 U	**130**	1600 T
OC-5-SD	10/13/2011	Onion Creek Sample	0.19 T	1.6	0.17 T	**0.86**	6.2	1.7	34	0.041	6.4	0.33 T	0.031 T	0.14 U	**300**	2000
OC-6-SD	10/13/2011	Onion Creek Sample	0.28	2.4	0.16 T	0.28	4.6	1.1	29	0.01 T	3.2	0.23 T	0.015 T	0.13 U	120	4600
OC-7-SD	10/14/2011	Onion Creek Sample	0.21 T	1.4	0.095 U	**2**	2.5	2.9 J	**59 J**	0.026	1.7	0.27 T	0.025 T	0.17 U	**670 J**	5300
OC-8-SD	10/13/2011	Onion Creek Sample	0.52	3.6	0.44 T	**3.8**	7.2	4.5	**110**	0.13	5.6	0.82 T	0.068 T	0.26 U	**910**	21000
OC-9-SD	10/12/2011	Onion Creek Sample	**0.67**	2.9	0.089 T	**2.1**	1.8	1.6	**69**	0.052	1.6	0.24 T	0.024 T	0.16 U	**560**	3500
OC-10-SD	10/12/2011	Onion Creek Sample	0.36	1	0.35	0.26	3.4	8	9.3	0.016 T	2.1	0.58 T	0.024 T	0.14 T	98	8200
OC-11-SD	10/12/2011	Onion Creek Sample	**1**	**7.8**	0.14 T	**4.5**	2	1.6	**97**	0.036	1.7	0.25 T	0.037 T	0.16 U	**970**	4400
OC-12-SD	10/11/2011	Onion Creek Sample	0.18 T	0.79	0.3 T	0.17 T	3	3	6.1	0.048 J	1.9	0.49 T	0.024 T	0.18 U	48	20000
OC-13-SD	10/9/2011	Onion Creek Sample	0.2 T	2.9	0.2 T	0.52	5	2.2	20	0.026	3.3	0.47 T	0.032 T	0.15 U	**180**	4400
OC-13-SD2	10/9/2011	Field duplicate of OC-13-SD	0.18 T	1.6	0.16 T	**0.61**	5.1	1.4	22	0.013 T	3.8	0.47 T	0.03 T	0.16 U	**190**	4400
OC-14-SD	10/12/2011	Onion Creek Sample	**0.93**	2.9	0.15 T	**1.3**	2.4	2.8	**96**	0.011 T	1.9	0.24 U	0.049 T	0.19 T	**300**	1400 T
OC-15-SD	10/14/2011	Onion Creek Sample	**0.88**	1.1	0.11 T	0.39	2.3	2.3	32	0.0095 T	1.2	0.25 T	0.012 T	0.13 U	**160**	2800
OC-16-SD	10/14/2011	Onion Creek Sample	0.16 T	0.43 T	0.087 U	0.24	1.6	2.3	27	0.01 T	1.2	0.25 U	0.015 U	0.16 U	100	3700
OC-17-SD	10/14/2011	Onion Creek Sample	0.14 T	1.4	0.1 T	**0.62**	5.4	1.5	26	0.016 T	3	0.17 U	0.015 T	0.11 U	**250**	4400
OC-18-SD	10/14/2011	Onion Creek Sample	0.26	1	0.08 U	**1.3**	1.6	2.5	**38**	0.032	1.1	0.23 U	0.02 T	0.15 U	**510**	8700
OC-19-SD	10/14/2011	Onion Creek Sample	0.12 T	1.7	0.14 T	0.35	3.8	1.8	14	0.0076 T	2.9	0.26 U	0.029 T	0.16 U	**130**	9600
NT-SD-1	6/22/2012	NE Tributary sediment sample	0.066 T	1.1	0.12 T	0.24 U	1.6	1.4	1.3 T	0.0064 U	0.76 T	0.24 U	0.02 T	0.16 U	5.9	

Notes:
U = Not detected at reporting limit indicated.
J = Estimated value.
T = Value is between the MDL and MRL.
Bold = Concentration exceeds proposed freshwater sediment quality objective or site specific background/ARAR
Box = Concentration exceeds proposed freshwater cleanup screening level

Table 19 - Surface Water Analytical Results

Sample ID	Collection Date	General Location	Dissolved Concentrations in mg/L													
			Antimony	Arsenic	Beryllium	Cadmium	Chromium	Copper	Lead	Dissolved Mercury (ug/L)	Total Mercury (ug/L)	Nickel	Selenium	Silver	Thallium	Zinc
		Screening Level:	**0.014**	**0.0038**	**0.27**	**0.0002**	**0.074**	**0.0089**	**0.00246**	**0.14**	**0.012**	**0.052**	**0.005**	**0.0032**	**0.0014**	**0.103**
Background																
BG-1-SW	10/06/11	Background Sample	0.0004 U	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00095 T	0.00017 U	0.00212	0.00225	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.0044 U
BG-2-SW	10/04/11	Background Sample	0.0004 U	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00017 U	0.00176	0.00221	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.0044 U
BG-3-SW	10/06/11	Background Sample	0.0004 U	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00059 T	0.00017 U	0.00198	0.00244	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.0044 U
BG-4-SW	10/06/11	Background Sample	0.0004 U	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.0016 T	0.00054 T	0.00336	0.00505	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.006 T
BG-4-SW2	10/06/11	Field duplicate of BG-4-SW								0.00348	0.00471					
BG-5-SW	10/05/11	Background Sample	0.0004 U	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00017 U	0.000814	0.000702	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.0075
BG-6-SW	10/04/11	Background Sample	0.0004 U	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00018 T	0.000768	0.000657	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.0044 U
BG-7-SW	10/05/11	Background Sample	0.0004 U	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00017 U	0.000882	0.00108	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.0044 U
BG-8-SW	10/03/11	Background Sample	0.0004 UJ	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00026 T	0.000671	0.000688	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.0056 T
BG-9-SW	10/07/11	Background Sample	0.0004 U	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00017 U	0.0005 U	0.00083	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.0044 U
BG-9-SW2	10/07/11	Field duplicate of BG-9-SW	0.0004 U	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00017 U			0.002 U	0.0036 U	0.00015 U	0.0014 U	0.0044 U
BG-10-SW	10/05/11	Background Sample	0.0004 U	0.0038 U	0.00051 U	**0.0042**	0.0014 U	0.0014 T	**0.017**	0.00134	0.00596	0.002 U	0.0036 U	0.00015 U	0.0014 U	**0.43**
BG-11-SW	10/08/11	Background Sample	0.0004 U	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00017 U	0.0005 U	0.0005 U	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.0051 T
BG-13-SW	10/05/11	Background Sample	0.0004 U	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00029 T	0.00152	0.00275	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.0047 T
BG-14-SW	10/06/11	Background Sample	0.0004 U	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00017 U	0.000956	0.000658	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.0044 U
BG-15-SW	10/07/11	Background Sample	0.0004 U	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00017 U	0.0005 U	0.000728	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.0044 U
AOI 1 - Mill Facility, Open Pits, and Waste Rock																
SP-SW-1	11/03/11	South Pit Lake	0.002 U	0.0038 U	0.00051 U	**0.0014 T**	0.0014 U	0.00055 U	**0.0094**			0.002 U	0.0036 U	0.00015 U	0.0014 U	**0.72**
WP-SW-1	11/02/11	West End of West Pit Lake discharge	0.002 U	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00017 U			0.002 U	0.0036 U	0.00015 U	0.0014 U	0.1 J
NP-SW-1	11/02/11	West Pit Lake Seep Sample	0.002 U	0.0038 U	0.00051 U	0.00014 T	0.0014 U	0.00055 U	0.00017 U			0.002 U	0.0036 U	0.00015 U	0.0014 U	0.034
AOI-2: Upper Tailings Pile																
UT-SW-1	11/09/11	Upper Tailings Seep Sample	0.0004 U	0.0038 U	0.00051 U	0.00014 U	0.0015 T	0.0037 T	0.00017 U	0.0005 U	0.000889	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.018
UT-SW-2	06/26/12	Discharge of tailings to tributary	0.0004 U	0.0038 U	0.00051 U	**0.00063 T**	0.0014 U	0.0067	**0.0053**	0.000041 U		0.002 U	0.0036 U	0.00015 U	0.0014 U	**0.23**
UT-SW-3	06/26/12	Downstream of tailings release into tributary	0.0004 U	0.0038 U	0.00051 U	**0.00033 T**	0.0014 U	**0.01**	**0.0031**	0.000041 U		0.0039 T	0.0036 U	0.00015 U	0.0014 U	**0.12**
AOI 5 - Onion Creek																
BG-12-SW	10/07/11	Onion Creek Sample	0.0004 U	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00017 U	0.000602	0.000661	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.043
OC-1-SW	10/09/11	Onion Creek Sample	0.0004 U	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00017 U	0.0005 U	0.000537	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.017
OC-2-SW	10/09/11	Onion Creek Sample	0.0004 U	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00017 U	0.0009	0.00103	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.0044 U
OC-3-SW	10/12/11	Onion Creek Sample	0.013 J	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.001 T	0.00017 U	0.000916	0.00115	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.0044 U
OC-4-SW	10/13/11	Onion Creek Sample	0.0012 JT	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00017 U	0.0005 U	0.0005 U	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.022
OC-5-SW	10/13/11	Onion Creek Sample	0.00083 JT	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00017 U	0.0005 U	0.000541	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.042
OC-6-SW	10/13/11	Onion Creek Sample	0.001 JT	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00017 U	0.0005 U	0.000519	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.042
OC-7-SW	10/14/11	Onion Creek Sample	0.0005 T	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00017 U	0.000595	0.000697	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.077
OC-8-SW	10/13/11	Onion Creek Sample	0.0009 JT	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00017 U	0.0005 U	0.000558	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.081
OC-9-SW	10/12/11	Onion Creek Sample	0.00085 JT	0.0038 U	0.00051 U	**0.00031 T**	0.0014 U	0.0014 T	0.00057 T	0.0005 U	0.000534	0.002 U	0.0036 U	0.00015 U	0.0014 U	**0.13**
OC-10-SW	10/12/11	Onion Creek Sample	0.0019 JT	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00017 U	0.00059	0.000903	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.0044 U
OC-11-SW	10/12/11	Onion Creek Sample	0.0034 J	0.0038 U	0.00051 U	**0.00027 T**	0.0014 U	0.00055 U	0.00066 T	0.0005 U	0.000885	0.002 U	0.0036 U	0.00015 U	0.0014 U	**0.13**
OC-12-SW	10/11/11	Onion Creek Sample	0.0004 UJ	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00017 U	0.000522	0.000578	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.0044 U
OC-13-SW	10/09/11	Onion Creek Sample	0.0004 U	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00017 U	0.000518	0.0005 U	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.019
OC-13-SW2	10/09/11	Field duplicate of OC-13-SW	0.0004 U	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00017 U	0.0005 U	0.0005 U	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.018
OC-14-SW	10/12/11	Onion Creek Sample	0.0056 J	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00017 T	0.0005 U	0.0005 U	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.029
OC-15-SW	10/14/11	Onion Creek Sample	0.013	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00017 U	0.000502	0.000709	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.015
OC-16-SW	10/14/11	Onion Creek Sample	0.0051	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00017 U	0.00056	0.000603	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.013
OC-17-SW	10/14/11	Onion Creek Sample	0.0035	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00017 U	0.0005 U	0.000642	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.07
OC-18-SW	10/14/11	Onion Creek Sample	0.0024	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00017 T	0.0005 U	0.000697	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.083
OC-19-SW	10/14/11	Onion Creek Sample	0.00065 T	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.00017 U	0.0005 U	0.000607	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.021

Notes:
Metal results, with the exception of Total Mercury, are reported from the dissolved fraction
U = Not detected at reporting limit indicated
J = Estimated value
T = Value is between the MDL and MRL.
Bold = Concentration exceeded screening level.

Table 19 - Surface Water Analytical Results

Sample ID	Collection Date	General Location	Concentrations in mg/L						
			Hardness as CaCO3	Total Dissolved Solids	Total Suspended Solids	Alkalinity as Bicarbonate	Alkalinity as Carbonate	Alkalinity as Hydroxide	Total Alkalinity
Screening Level:									
Background									
BG-1-SW	10/06/11	Background Sample	88	170	4 U	95	5 U	5 U	95
BG-2-SW	10/04/11	Background Sample	75	150	4 U	89	5 U	5 U	89
BG-3-SW	10/06/11	Background Sample	61	120	4 U	67	5 U	5 U	67
BG-4-SW	10/06/11	Background Sample	30	130	4 U	33	5 U	5 U	33
BG-4-SW2	10/06/11	Field duplicate of BG-4-SW		100	4.4				
BG-5-SW	10/05/11	Background Sample	97	120	4 U	99	5 U	5 U	99
BG-6-SW	10/04/11	Background Sample	99	120	4 U	100	5 U	5 U	100
BG-7-SW	10/05/11	Background Sample	9	20	4 U	11	5 U	5 U	11
BG-8-SW	10/03/11	Background Sample	200	220	5.6	200	5 U	5 U	200
BG-9-SW	10/07/11	Background Sample	110	150	4 U	110	5 U	5 U	110
BG-9-SW2	10/07/11	Field duplicate of BG-9-SW	110			110	5 U	5 U	110
BG-10-SW	10/05/11	Background Sample	300	310	31	300	5 U	5 U	300
BG-11-SW	10/08/11	Background Sample	160	200	4 U	230	5 U	5 U	230
BG-13-SW	10/05/11	Background Sample	120	140	13	120	5 U	5 U	120
BG-14-SW	10/06/11	Background Sample	120	150	4 U	150	5 U	5 U	150
BG-15-SW	10/07/11	Background Sample	88	120 J	4 U	93	5 U	5 U	93
AOI 1 - Mill Facility, Open Pits, and Waste Rock									
SP-SW-1	11/03/11	South Pit Lake	220	290	10 U	140	5 U	5 U	140
WP-SW-1	11/02/11	West End of West Pit Lake discharge	280	400	10 U	170	5 U	5 U	170
NP-SW-1	11/02/11	West Pit Lake Seep Sample	330	430	26	190	5 U	5 U	190
AOI-2: Upper Tailings Pile									
UT-SW-1	11/09/11	Upper Tailings Seep Sample	1000	1100	49	160	5 U	5 U	160
UT-SW-2	06/26/12	Discharge of tailings to tributary							
UT-SW-3	06/26/12	Downstream of tailings release into tributary							
AOI 5 - Onion Creek									
BG-12-SW	10/07/11	Onion Creek Sample	190	250	4 U	140	5 U	5 U	140
OC-1-SW	10/09/11	Onion Creek Sample	180			150	5 U	5 U	150
OC-2-SW	10/09/11	Onion Creek Sample	200			130	5 U	5 U	130
OC-3-SW	10/12/11	Onion Creek Sample	92			110	5 U	5 U	110
OC-4-SW	10/13/11	Onion Creek Sample	180			150	5 U	5 U	150
OC-5-SW	10/13/11	Onion Creek Sample	190			150	5 U	5 U	150
OC-6-SW	10/13/11	Onion Creek Sample	190			150	5 U	5 U	150
OC-7-SW	10/14/11	Onion Creek Sample	230			150	5 U	5 U	150
OC-8-SW	10/13/11	Onion Creek Sample	220			140	5 U	5 U	140
OC-9-SW	10/12/11	Onion Creek Sample	220			130	5 U	5 U	130
OC-10-SW	10/12/11	Onion Creek Sample	170			180	5 U	5 U	180
OC-11-SW	10/12/11	Onion Creek Sample	160			130	5 U	5 U	130
OC-12-SW	10/11/11	Onion Creek Sample	170			180	5 U	5 U	180
OC-13-SW	10/09/11	Onion Creek Sample	180			150	5 U	5 U	150
OC-13-SW2	10/09/11	Field duplicate of OC-13-SW	180			150	5 U	5 U	150
OC-14-SW	10/12/11	Onion Creek Sample	110			100	5 U	5 U	100
OC-15-SW	10/14/11	Onion Creek Sample	140			150	5 U	5 U	150
OC-16-SW	10/14/11	Onion Creek Sample	140			150	5 U	5 U	150
OC-17-SW	10/14/11	Onion Creek Sample	190			140	5 U	5 U	140
OC-18-SW	10/14/11	Onion Creek Sample	210			150	5 U	5 U	150
OC-19-SW	10/14/11	Onion Creek Sample	180			150	5 U	5 U	150

Notes:
Metal results, with the exception of Total Mercury, are reported from the dissc
U = Not detected at reporting limit indicated
J = Estimated value
T = Value is between the MDL and MRL.
Bold = Concentration exceeded screening level.

Table 20 - Groundwater Analytical Results

Sample ID	Collection Date	General Location	Concentrations in mg/L											
			Antimony	Arsenic	Beryllium	Cadmium	Chromium	Copper	Lead	Total Mercury	Nickel	Selenium	Silver	Thallium	Zinc
Groundwater Screening Levels:			**0.006**	**0.0038**	**0.004**	**0.005**	**0.1**	**0.64**	**0.015**	**0.002**	**0.1**	**0.05**	**0.08**	**0.0014**	**4.8**
Residential Wells															
RW-1	11/5/2011	Residential Well Sample	0.0004 U	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.00055 U	0.0053	0.000041 U	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.1
RW-2	11/6/2011	Residential Well Sample	0.0004 U	**0.0053**	0.00051 U	0.00014 U	0.0014 U	0.00065 T	0.00017 U	0.000041 U	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.013
RW-3	11/6/2011	Residential Well Sample	0.0004 U	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.0044 T	0.00025 T	0.000041 U	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.074
RW-4	11/9/2011	Residential Well Sample	0.0004 U	0.0038 U	0.00051 U	0.00014 U	0.0015 T	0.0032 T	0.00025 T	0.000041 U	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.024
RW-5	11/10/2011	Residential Well Sample	0.0004 U	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.034	0.0016 T	0.000041 U	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.045
RW-50	11/10/2011	Field Duplicate of RW-5	0.0005 T	0.0038 U	0.00051 U	0.00014 T	0.0014 U	0.02	0.00086 T	0.000041 U	0.002 U	0.0036 U	0.00015 U	**0.0015 T**	0.019
RW-6	11/11/2011	Residential Well Sample	0.0004 U	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.0024 T	0.00017 U	0.000041 U	0.002 U	0.0036 U	0.00015 U	0.0014 U	0.28
RW-7	11/11/2011	Residential Well Sample	0.0004 U	0.0038 U	0.00051 U	0.00014 U	0.0014 U	0.0073	0.0016 T	0.000041 U	0.002 U	0.0036 U	0.00015 U	0.0014 U	1.2
Monitoring Wells															
AOI-2: Upper Tailings Pile															
MW-4	11/11/2011	Monitoring Well Sample	0.0004 U	0.0038 U	0.00051 U	0.00015 T	0.0039	0.0077	0.0042	0.000041 U	0.0041 T	0.0036 U	0.00015 U	0.0014 U	0.041
MW-5	11/11/2011	Monitoring Well Sample	0.0004 U	0.0038 U	0.00051 U	0.0014 T	0.016	0.0061	0.0027	0.000041 U	0.014 T	0.0036 U	0.0014 T	0.0014 U	0.026
AOI-3: Lower Tailings Pile															
MW-2	11/9/2011	Monitoring Well Sample	0.00053 T	0.0038 U	0.00081 T	0.00062 T	**0.47**	0.048	0.0075	0.00015 T	**0.31**	0.0036 U	0.042	0.0014 U	0.13
MW-3	11/10/2011	Monitoring Well Sample	0.0004 U	0.0038 U	0.0018 T	0.00015 T	0.086	0.032	0.011	0.00056	0.05	0.0036 U	0.0014 T	**0.0014 T**	0.26
DH-2[(a)]	11/8/2011	Monitoring Well Sample	**0.028**	**0.015**	0.00055 T	**0.0095**	0.016	0.021	**0.22**	0.00016 T	0.028	0.0036 U	0.00015 U	0.0014 U	0.39
W-1[(a)]	11/10/2011	Monitoring Well Sample, DH-8	0.00075 T	0.0038 U	0.00051 U	0.0007 T	0.017	0.0093	0.011	0.000041 U	0.011 T	0.0036 U	0.0005 T	0.0014 U	0.044
W-2[(a)]	11/9/2011	Monitoring Well Sample, W2	0.0009 T	0.0038 U	0.00051 U	0.00053 T	0.0031	0.0033 T	**0.015**	0.000041 U	0.002 U	0.0036 U	0.00021 T	0.0014 U	0.044

Sample ID	Collection Date	General Location	Concentrations in mg/L						
			Hardness as CaCO3	Total Dissolved Solids	Total Suspended Solids	Alkalinity as Bicarbonate	Alkalinity as Carbonate	Alkalinity as Hydroxide	Total Alkalinity
Residential Wells									
RW-1	11/5/2011	Residential Well Sample	150	180	20 U	150	5 U	5 U	150
RW-2	11/6/2011	Residential Well Sample	240	270	20 U	240	5 U	5 U	240
RW-3	11/6/2011	Residential Well Sample	250	290	20 U	250	5 U	5 U	250
RW-4	11/9/2011	Residential Well Sample	260	340	10 U	250	5 U	5 U	250
RW - 5	11/10/2011	Residential Well Sample	250	300	10 U	230	5 U	5 U	230
RW - 50	11/10/2011	Field Duplicate of RW-5	250	330	10 U	230	5 U	5 U	230
RW - 6	11/11/2011	Residential Well Sample	65	120	10 U	83	5 U	5 U	83
RW-7	11/11/2011	Residential Well Sample	320	380	10 U	310	5 U	5 U	310
Monitoring Wells									
AOI-2: Upper Tailings Pile									
MW-4	11/11/2011	Monitoring Well Sample	1200	2000	69	230	5 U	5 U	230
MW-5	11/11/2011	Monitoring Well Sample	520	830	120	170	5 U	5 U	170
AOI-3: Lower Tailings Pile									
MW-2	11/9/2011	Monitoring Well Sample	1500	2200	620	320	5 U	5 U	320
MW-3	11/10/2011	Monitoring Well Sample	590	450	1500	230	5 U	5 U	230
DH-2[(a)]	11/8/2011	Monitoring Well Sample	1800	2300	4000	200	5 U	5 U	200
W-1[(a)]	11/10/2011	Monitoring Well Sample, DH-8	920	2000	48	240	5 U	5 U	240
W-2[(a)]	11/9/2011	Monitoring Well Sample, W2	310	420	150	200	5 U	5 U	200

Notes:

Metal results, with the exception of Total Mercury, are reported from the total recoverable fraction.

(a) Monitoring wells were installed prior to the Remedial Investigation.

U = Not detected at reporting limit indicated

T = Value is between the MDL and MRL.

Table 21 - Summary of Human Health Carcinogenic and Non-Carcinogenic Risk

	Risk	Soil/Sediment (ingestion)	Surface Water (fish ingestion)	Surface Water (ingestion)	Groundwater (ingestion)	Cumulative Risk across All Media	Above Target Risk
AOI-1	Carcinogenic:	**2E-05**	NA	NA	ND	**2E-05**	**Y**
	Non-Carcinogenic HI:	**2**	NA	NA	ND	**2**	**Y**
AOI-2	Carcinogenic:	**8E-06**	NA	NA	NA	8E-06	N
	Non-Carcinogenic HI:	0.6	NA	NA	0.46	1	N
AOI-3	Carcinogenic:	**8E-06**	ND	ND	**3E-04**	**3E-04**	**Y**
	Non-Carcinogenic HI:	0.5	ND	ND	19	**20**	**Y**
AOI-4	Carcinogenic:	1E-05	ND	ND	ND	1E-05	N
	Non-Carcinogenic HI:	0.7	ND	ND	ND	0.7	N
AOI-5	Carcinogenic:	**4E-06**	NA	NA	ND	4E-06	N
	Non-Carcinogenic HI:	0.2	0.007	1.0	ND	1	N

Notes:

NA = Not applicable

ND = No available data

Carcinogenic Risk by Media = Where bold, the risk exceeds target level of 1 X 10^{-6}

Non-Carcinogenic Hazard Index (HI) = Bold exceeds target level of 1

Cumulative Carcinogenic Risk = Where bold and yellow, the risk exceeds target level of 1 X 10^{-5}

Table 22 - Summary of Human Health Risk, COCs by AOI

Area of Interest (AOI)/Exposure Route	Risk Type	Antimony	Arsenic	Cadmium	Chromium	Copper	Lead[2]	Mercury	Nickel	Zinc
AOI-1		**COCs with Unacceptable Risk**								
Soil/Sediment (ingestion)	Carcinogenic:		X							
	Non-Carcinogenic:						X			
Surface Water (fish ingestion)	Carcinogenic:									
	Non-Carcinogenic:									
Surface Water (ingestion)	Carcinogenic:									
	Non-Carcinogenic:									
Groundwater (ingestion)	Carcinogenic:									
	Non-Carcinogenic:									
Groundwater (protection)[1]	Exceeds MTCA Method B:	X	X	X						X
AOI-2										
Soil/Sediment (ingestion)	Carcinogenic:		X							
	Non-Carcinogenic:						X			
Surface Water (fish ingestion)	Carcinogenic:									
	Non-Carcinogenic:									
Surface Water (ingestion)	Carcinogenic:									
	Non-Carcinogenic:									
Groundwater (ingestion)	Carcinogenic:									
	Non-Carcinogenic:									
Groundwater (protection)	Exceeds MTCA Method B:			X						
AOI-3										
Soil/Sediment (ingestion)	Carcinogenic:		X							
	Non-Carcinogenic:						X			
Surface Water (fish ingestion)	Carcinogenic:									
	Non-Carcinogenic:									
Surface Water (ingestion)	Carcinogenic:									
	Non-Carcinogenic:									
Groundwater (ingestion)	Carcinogenic:		X				X			
	Non-Carcinogenic:	X	X	X	X				X	
Groundwater (protection)	Exceeds MTCA Method B:			X			X			
AOI-4										
Soil/Sediment (ingestion)	Carcinogenic:		X							
	Non-Carcinogenic:						X			
Surface Water (fish ingestion)	Carcinogenic:									
	Non-Carcinogenic:									
Surface Water (ingestion)	Carcinogenic:									
	Non-Carcinogenic:									
Groundwater (ingestion)	Carcinogenic:									
	Non-Carcinogenic:									
Groundwater (protection)	Exceeds MTCA Method B:		X	X						
AOI-5										
Soil/Sediment (ingestion)	Carcinogenic:		X							
	Non-Carcinogenic:									
Surface Water (fish ingestion)	Carcinogenic:									
	Non-Carcinogenic:									
Surface Water (ingestion)	Carcinogenic:									
	Non-Carcinogenic:									
Groundwater (ingestion)	Carcinogenic:									
	Non-Carcinogenic:									
Groundwater (protection)	Exceeds MTCA Method B:									

Notes: COCs = Constiuents of Concern

1) Groundwater protection was evaluated by comparing exposure point concentrations or maxiumum concentrations to MTCA Method B soil preliminary cleanup levels for protection of the groundwater pathway.

2) Lead risk was assessed by comparing MTCA Method A preliminary cleanup levels for soil ingestion and Federal and State drinking water criteria for groundwater ingestion.

Table 23 - Summary of Ecological Risks in Soil, Sediment, and Surface Water by AOI and Receptor

Area of Interest (AOI)	COEC	Receptors				
		Plants	Invertebrates	Birds	Small Mammals	Aquatic
AOI-1						
	Antimony					
	Cadmium			X	X	X
	Copper					
	Lead	X		X	X	X
	Mercury					
	Zinc	X	X	X	X	X
AOI-2						
	Antimony					
	Cadmium					
	Copper					
	Lead					X
	Mercury					
	Zinc		X	X	X	X
AOI-3						
	Antimony					
	Cadmium					
	Copper					
	Lead			X		
	Mercury					
	Zinc		X	X	X	
AOI-4						
	Antimony					
	Cadmium					
	Copper					
	Lead					
	Mercury					
	Zinc		X	X	X	X

Notes:
COPEC = Chemical of Potential Ecological Concern

The Ecological Risk Assessment indicates possible unaccetable risk, COEPC, using an exceedance of the ecological indicator concentration or an alternative Toxic Reference Value (TRV) by the exposure concentration (i.e., HQ greater than 1).

For soil, as a means of focusing the risk assessment on those COPECs that pose the highest risk the Lowest Observed Adverse Affects Level (LOAEL) adjusted for a bioavailability factor (BF) are screened using a a Hazard Quotient (HQ) exceeding 5. For surface water, sediment risk was evaluated based on exceedance of water quality standards (WQS) or sediment criteria. The Table above summarizes summarizes the COECs using an HQ>5.