

Table 1
XRF and Corresponding Laboratory Results for Surfacing Material
Grandview Mine/Mill Site Reconnaissance
September 2008
Metaline Falls, WA

												Laboratory Verification Sample Results (mg/kg)				
												Researched No Data	20	2	2	250
												Researched No Data	200	10	2	1,000
Sample ID	Sample Date	Zinc	Zn +/-	Arsenic	As +/-	Cadmium	Cd +/-	Mercury	Hg +/-	Lead	Pb +/-	Zn	As	Cd	Hg	Pb
Historic Homesites																
LL-02	9/16/08	16,578.21	304.46	420.48	52.83	<68.46	na	< 46.10	na	5,771.67	113.77					
LL-03	9/16/08	9,878.45	194.81	<186.76	na	<67.35	na	< 45.13	na	8,378.72	161.47	5,980	8.69	16	0.26	3,870
LL-21	9/16/08	15,790.10	292.59	241.87	54.47	73.79	22.74	< 46.65	na	6,352.25	124.29	13,500	11	43	1.38	5,070
LL-22	9/16/08	14,572.76	285.09	433.39	66.99	<71.50	na	< 50.58	na	8,629.13	171.13					
LL-23	9/16/08	18,277.03	376.91	1,267.79	97.62	<77.62	na	< 65.52	na	14,728.44	300.52	19,800	10.9	60.7	0.945	12,300
Grandview Flat Road and access road to Upper Level Mine Area																
LL-10	9/16/08	5,303.94	107.77	<52.10	na	<64.25	na	< 25.09	na	699.25	22.96					
LL-11*	9/16/08	43,125.34	852.94	108.56	31.17	132.95	26.50	< 58.24	na	1,584.83	46.22					
LL-14*	9/16/08	834.84	26.60	<22.64	na	<56.99	na	< 17.09	na	142.96	9.06					
LL-24	9/16/08	5,544.95	110.35	<65.25	na	<63.38	na	< 25.68	na	1,146.75	31.05					
LL-25	9/16/08	1,706.40	46.08	<42.33	na	<64.07	na	< 18.53	na	444.07	17.55	1,350	5.71	4.5	0.0882	364
LL-26	9/16/08	853.06	29.29	<33.42	na	<63.14	na	< 20.26	na	286.53	13.69					
UL-LL-Access	9/16/08	5,185.05	110.81	<40.25	na	<67.30	na	< 22.95	na	359.59	16.43	668	5.19	2.93	0.0634	470
Lower Level Mill Area surface area																
LL-27	9/17/08	28,623.79	555.32	<202.19	na	<74.36	na	< 59.62	na	8,439.93	173.90					
LL-27-1.0-2.0'	9/17/08											10,100	6.94	17.4	0.274	941
LL-27-1.0-2.0'/FD	9/17/08	4,191.99	80.58	<14.47	na	<57.96	na	< 22.01	na	41.16	5.74	9,180	7.73	14.78	0.256	1,370
LL-28	9/17/08	2,954.58	61.79	84.29	27.91	<58.45	na	< 25.97	na	2,220.92	45.43					
LL-29	9/17/08	5,151.90	107.30	<91.11	na	<66.36	na	< 27.54	na	2,193.65	50.71					
LL-30	9/17/08	14,676.03	284.04	<195.63	na	<71.01	na	< 50.34	na	8,965.24	175.36					
LL-31	9/17/08	13,533.06	261.10	463.30	65.34	<68.58	na	< 48.47	na	8,483.06	165.10					
LL-31-0.5-1.0'	9/17/08	96.52	9.53	<12.56	na	<58.90	na	< 15.40	na	17.54	4.91	69.9	4.63	0.372	<0.0050	14.7
LL-32	9/17/08	10,115.66	189.80	<90.30	na	<65.38	na	< 31.90	na	2,174.48	50.26					
LL-34-0-0.5'	9/18/08	5,763.47	107.87	<87.12	na	<60.42	na	< 28.99	na	2,351.88	49.06					
LL-35-0-0.5'	9/18/08	16,301.07	303.91	<229.64	na	80.45	23.00	< 58.06	na	12,749.70	235.34					
LL-36-0-0.5'	9/18/08	2,421.44	53.47	<74.17	na	<59.16	na	< 23.89	na	1,865.19	39.91					

Black **BOLD** values indicate the value exceeds the MTCA Method A Unrestricted Land Use cleanup levels

Red **BOLD** values indicate the value exceeds MTCA Method A Industrial cleanup levels

<LOD: below instrument's detection limit

LL: Lower Level

TP: Tailings Pile

D: Drainage Ditch

SD: Secondary Ditch (man-made ditch)

UL: Upper Level

S: South

N: North

mg/kg: milligrams per kilogram

< : compound not detected above Method Reporting Limit (MRL)

(+/-): margin of error

*: soil samples collected along roadside to determine lateral extent

na: precision ranges are not applicable for non-detectable results

According to WDOE Cleanup Levels and Risk Calculations (CLARC) database, "Researched-No Data" means research has been conducted and no data exists in the database for this parameter.

Table 2
Lower Level Mill Area XRF and Corresponding Laboratory Results for Tailings Material
Grandview Mine/Mill Site Reconnaissance
September 2008
Metaline Falls, WA

												Laboratory Verification Sample Results (mg/kg)				
												Researched No Data	20	2	2	250
												Researched No Data	200	10	2	1,000
Sample ID	Sample Date	Zinc	Zn +/-	Arsenic	As +/-	Cadmium	Cd +/-	Mercury	Hg +/-	Lead	Pb +/-	Zn	As	Cd	Hg	Pb
Unvegetated Areas along Grandview Flat Road																
LL-01 ^[a]	9/16/08	13,655.14	247.41	< 58.53	na	<66.63	na	< 31.39	na	891.69	27.02					
LL-04	9/16/08	1,117,257.13	69,549.55	< 704.38	na	1,025.48	117.11	< 618.92	na	9,406.43	639.45	521,000	98.4	1,230	78.6	9,150
LL-05	9/16/08	295,926.69	8,949.67	< 173.21	na	546.13	46.90	< 198.52	na	2,177.70	91.08					
LL-05-0-0.5'	9/18/08	5,958.46	109.25	< 13.06	na	<61.18	na	< 22.45	na	19.34	4.98	8,620	5.72	84.4	0.0845	<46.6
LL-06	9/16/08	485,440.56	20,035.83	< 350.39	na	665.71	66.83	< 322.17	na	5,215.46	251.72					
LL-07*	9/16/08	2,455.30	54.84	< 33.44	na	<59.10	na	< 20.31	na	325.93	13.75					
LL-08	9/16/08	53,171.24	1,028.36	< 74.56	na	156.21	26.24	< 58.33	na	1,036.26	34.15					
LL-09	9/16/08	884,541.19	49,623.76	< 384.88	na	956.20	100.91	< 527.69	na	3,525.78	244.92					
LL-12	9/16/08	34,460.46	666.82	< 60.98	na	142.84	24.73	< 50.10	na	701.99	26.28					
LL-13*	9/16/08	1,317.80	32.36	< 22.72	na	<51.01	na	< 13.74	na	169.33	8.94	2,010	3.64	6.16	0.188	183
LL-15*	9/16/08	2,927.59	58.33	< 25.46	na	<54.83	na	< 18.91	na	218.57	10.52					
LL-16*	9/16/08	2,690.58	57.83	< 23.20	na	<58.75	na	< 16.21	na	153.70	9.44					
LL-17	9/16/08	77,171.65	1,650.45	< 85.45	na	223.42	29.69	< 81.38	na	1,195.09	41.74					
LL-18	9/16/08	29,823.17	540.27	< 54.07	na	108.92	23.07	< 45.63	na	643.22	23.33					
LL-19	9/16/08	2,631.66	57.31	< 23.68	na	<58.06	na	< 19.08	na	151.35	9.47					
LL-20	9/16/08	548.02	21.26	< 21.41	na	<58.65	na	< 17.94	na	114.39	8.40					
LL-33*	9/18/08	748.71	24.60	< 25.62	na	<56.46	na	< 15.49	na	205.05	10.53					
Drainage Ditch																
TP-D-500'	9/17/08	5,502.82	106.67	< 74.10	na	<62.61	na	< 29.49	na	1,648.81	38.79					
TP-D-500'-S-48'	9/17/08	5,530.14	111.66	< 67.28	na	<64.32	na	< 27.00	na	1,169.00	31.87	6,520	7.52	19.4	0.492	1,190
TP-D-500-N-37'	9/18/08	4,112.95	83.38	< 57.75	na	<59.09	na	< 19.96	na	985.84	26.99					
TP-D-500'-S-88'	9/18/08	1,469.78	38.89	< 34.39	na	<59.36	na	< 16.76	na	338.67	14.12	1,510	7.2	5.06	0.177	347
TP-D-500-BLUFF	9/18/08	2,462.17	59.28	< 45.27	na	<62.32	na	< 21.71	na	559.99	19.99	2,650	6.1	8.06	0.22	620
Man-made Ditch																
TP-SD-01-0-0.5'	9/17/08											3,150	11.6	14.5	0.436	1,070
TP-SD-01-0-0.5'/FD	9/17/08	2,586.30	56.98	< 55.91	na	<60.02	na	< 24.10	na	1,086.45	27.90	3,310	12.5	15.4	0.46	1,110
TP-SD-02-0-0.5'	9/17/08	2,582.97	56.01	< 51.86	na	<57.62	na	< 21.43	na	918.27	24.62	3,370	8.2	14	0.548	895
TP-SD-03-0-0.5'	9/17/08	1,955.00	48.11	< 44.56	na	<59.82	na	< 22.82	na	587.58	19.61	3,570	8.45	11.9	0.29	833

Black **BOLD** values indicate the value exceeds the MTCA Method A Unrestricted Land Use cleanup levels

Red **BOLD** values indicate the value exceeds MTCA Method A Industrial cleanup levels

LL: Lower Level

TP: Tailings Pile

D: Drainage Ditch

SD: Secondary Ditch (man-made ditch)

UL: Upper Level

S: South

N: North

mg/kg: milligrams per kilogram

(+/-): margin of error

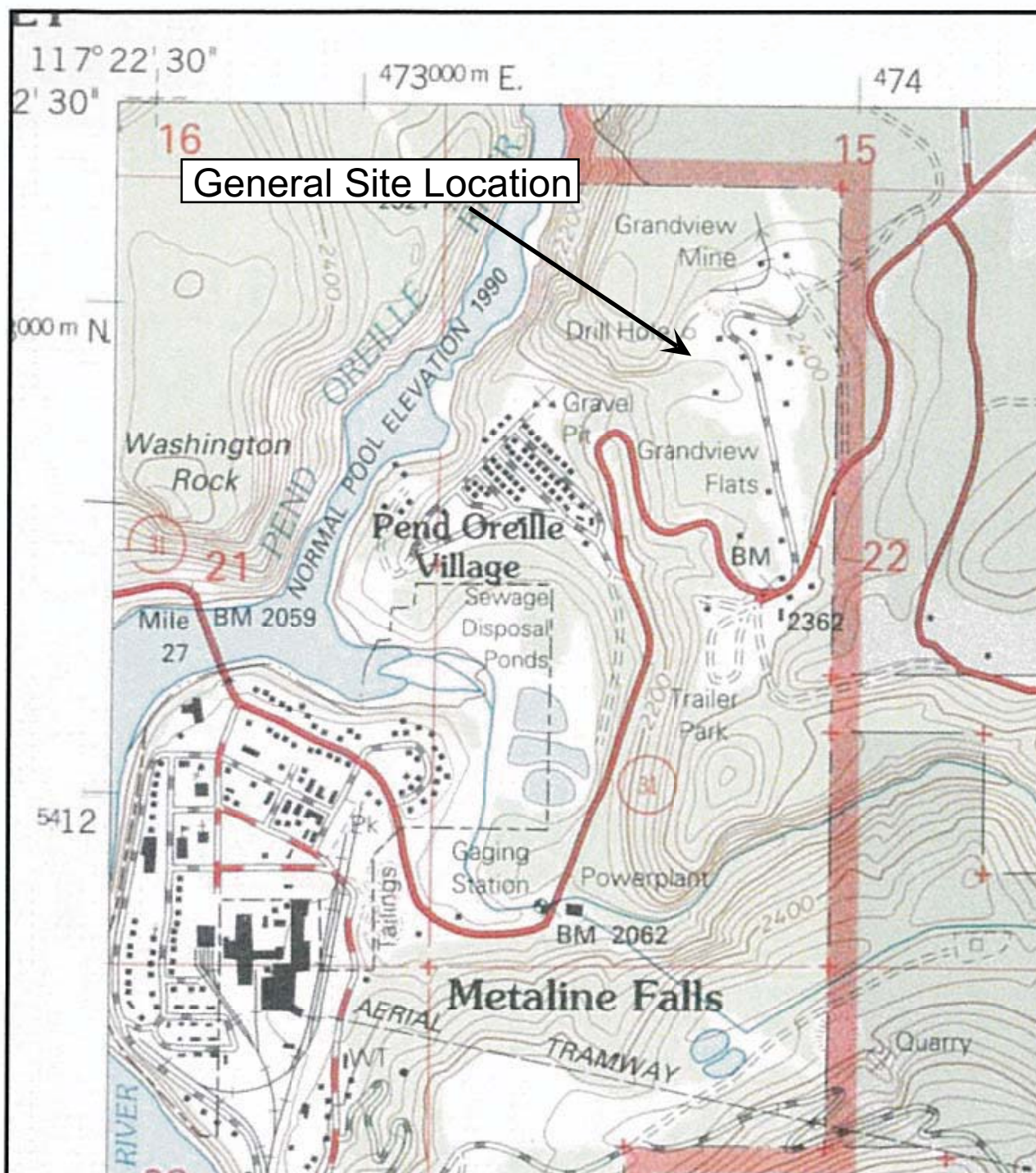
< : compound not detected above Method Reporting Limit (MRL)

*: soil samples collected from surrounding vegetated areas to determine lateral extent


na: precision ranges are not applicable for non-detectable results

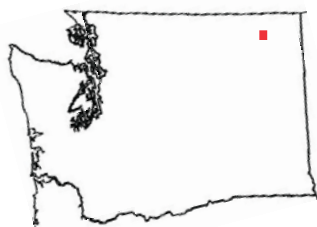
^[a]: small distressed area near Highway 31 entrance

According to WDOE Cleanup Levels and Risk Calculations (CLARC) database, "Researched-No Data" means research has been conducted and no data exists in the database for this parameter.




1992 USGS 7.5 Minute Historical Topographic Map
 Scale 1:24,000
 Metaline Falls Quadrangle
 Source: Environmental Data Resources, Inc.

 ENTACT <small>Leading the Nation in Customer Care</small>	Grandview Mine/Mill Property Metaline Falls, Washington
<p>Figure 1 General Site Location</p>	





 ENTACT <i>Leading the Nation in Customer Care</i>	Grandview Mine/Mill Property Metaline Falls, Washington
<p>Figure 2 Site Layout Site Reconnaissance, September 2008</p>	



LEGEND

- ▲ XRF results below MTCA Method A cleanup levels
- XRF results above MTCA Method A cleanup levels for unrestricted land uses
- XRF results above MTCA Method A cleanup levels for industrial properties




Grandview Mine/Mill Property
Metaline Falls, Washington

Figure 3
Lower Level Mill Area Sampling - Unvegetated Area and Homesite Area
Site Reconnaissance, September 2008



LEGEND


- XRF results above MTCA Method A cleanup levels for industrial properties

 ENTACT Leading the Nation in Customer Care	Grandview Mine/Mill Property Metaline Falls, Washington
<p>Figure 4 Lower Level Mill Area Sampling along Grandview Flat Road Site Reconnaissance, September 2008</p>	



LEGEND

- XRF results above MTCA Method A cleanup levels for unrestricted land uses
- XRF results above MTCA Method A cleanup levels for industrial properties

 ENTACT Leading the Nation in Customer Care	Grandview Mine/Mill Property Metaline Falls, Washington
<p align="center"> Figure 5 Tailings Accumulation Area and Drainage Ditches Site Reconnaissance, September 2008 </p>	



Grandview Mine/Mill Property
Metaline Falls, Washington

Figure 6
Upper Level Mine Area and Lower Level Mill Area
Site Reconnaissance, September 2008



LEGEND

- XRF results above MTCA Method A cleanup levels for industrial properties



Grandview Mine/Mill Property
Metaline Falls, Washington

Figure 7
Lower Level Mill Area Sampling
Site Reconnaissance, September 2008