**TABLE 2-2**
**SURFACE WATER CHARACTERIZATION - FLOW RATES AND FIELD WATER QUALITY PARAMETERS**
Leviathan Mine Site
Alpine County, California

| Location[1] | Sample Date | Flow (cfs) | Temperature (°C) | pH (su) | Specific Electrical Conductance (µS/cm) | Dissolved Oxygen (mg/L) | Oxidation-Reduction Potential (mV) | Location Description |
|---|---|---|---|---|---|---|---|---|
| CUD-Weir | 5/2/2011 | -- | 8.35 | 3.45 | 4105 | 4.72 | 173.2 | Channel Underdrain inflow to USGS weir |
| DSL | 5/2/2011 | -- | 8.44 | 5.12 | 1863 | 6.34 | 114.8 | Lower Delta Seep in collection tank |
| DSSD | 5/2/2011 | -- | 8.45 | 2.49 | 2390 | 10.58 | 451.7 | Delta slope storm drainage pipe located approximately 40 feet east of Delta Seep capture tank |
| DSU | 5/2/2011 | -- | 7.89 | 4.98 | 1741 | 9.14 | 152.1 | Upper Delta Seep in collection tank |
| | 5/13/2011 | 0.023 | -- | -- | -- | -- | -- | |
| DSUD | 5/2/2011 | -- | 7.08 | 2.88 | 2903 | 11.29 | 510.2 | Delta Seep Underdrain |
| | 5/13/2011 | 0.021 | -- | -- | -- | -- | -- | |
| OS | 5/2/2011 | -- | 12.30 | 3.00 | 2685 | 3.70 | 355.0 | Overburden Seep/Aspen Seep |
| OUS | 5/2/2011 | -- | 8.70 | 3.00 | 1548 | 6.90 | 396.0 | Overburden Upper Seep/Upper Aspen Seep |
| | 5/20/2011 | 0.038 | -- | -- | -- | -- | -- | |
| | 5/24/2011 | -- | 8.67 | 3.45 | 974 | 5.44 | 443.9 | |
| | 10/26/2011 | 0.024 | 8.43 | 3.57 | 1517 | 8.77 | 310.4 | |
| Pond 4 Inflow | 5/10/2011 | -- | 7.53 | 2.87 | 2841 | 8.33 | 444.3 | Collected from standpipe at south end of Pond 4 |
| | 6/22/2011 | -- | 9.44 | 2.54 | 3359 | 4.56 | 485.2 | |
| | 7/11/2011 | -- | 11.43 | 2.77 | 3987 | 4.20 | 350.5 | |
| SD-01 | 5/3/2011 | -- | 12.86 | 2.10 | 4162 | 9.31 | 488.9 | Seep above Pond 4 and below the wind tower up-slope of the Crusher Road |
| | 5/20/2011 | 0.001 | -- | -- | -- | -- | -- | |
| | 5/24/2011 | -- | 15.69 | 2.52 | 4000 | 6.11 | 504.1 | |
| SD-02 | 5/3/2011 | -- | 7.68 | 2.24 | 1100 | 6.74 | 466.5 | Seep on the south side of the pit on the 5th bench up from the bottom just below the high wall |
| | 5/19/2011 | 0.005 | 8.17 | 4.69 | 598 | 5.45 | 147.3 | |
| SD-03 | 5/3/2011 | | 7.05 | 2.98 | 1050 | 9.33 | 435.1 | Seep in the 4-inch pipe on the uppermost v-ditch near MW-04 |
| | 5/19/2011 | -- | 7.75 | 3.44 | 771 | 7.35 | 368.7 | |
| SD-05 | 6/9/2011 | -- | 12.09 | 3.81 | 1448 | 8.16 | 193.5 | Lower reach of Upper Aspen Seep |
| SD-06 | 10/25/2011 | -- | 8.77 | 7.35 | 2037 | 11.85 | -0.3 | Source of western feeder area to saturated ground on LCBL |
| SD-06A | 10/24/2011 | -- | 8.38 | 7.62 | 1982 | 11.67 | 208.5 | Mid-slope in western feeder area to saturated ground on LCBL |
| SD-06B | 5/13/2011 | 0.245 | -- | -- | -- | -- | -- | Flowing channel parallel to saturated ground on Nevada access road |
| | 5/18/2011 | -- | 9.41 | 7.91 | 1086 | 82.60 | -45.8 | |
| | 10/24/2011 | -- | 8.31 | 8.02 | 1021 | 14.08 | 144.1 | |
| SD-07 | 10/24/2011 | -- | 9.17 | 3.73 | 1991 | 10.34 | 216.0 | Source of eastern feeder area to saturated ground on LCBL |
| SD-07A | 5/18/2011 | 0.01 | 10.29 | 3.89 | 1346 | 68.3[2] | 206.4 | Mid-slope in saturated ground on the LCBL east/northeast of PZ-05A, downgradient of SD-07 |
| | 10/24/2011 | -- | 8.48 | 3.65 | 2001 | 14.16 | 333.3 | |
| SD-07B | 5/18/2011 | -- | 11.94 | 4.82 | 1367 | 62.1[2] | 120.7 | Mid-slope in saturated ground on the LCBL east/northeast of PZ-05A |
| | 10/24/2011 | -- | 7.11 | 3.69 | 2218 | 14.88 | 334.0 | |
| SD-07C | 10/24/2011 | -- | 6.45 | 3.90 | 2054 | 12.41 | 305.5 | Bottom of eastern feeder area to saturated ground on LCBL |
| SD-07D | 10/24/2011 | -- | 7.79 | 4.22 | 2102 | 9.45 | 294.5 | Immediate source of saturated ground next to Nevada access road |
| SD-07E | 10/25/2011 | -- | 10.04 | 4.45 | 2110 | 12.90 | 220.7 | Ponded area on saturated ground next to road |
| SD-08 | 10/24/2011 | -- | 9.22 | 8.15 | 1913 | 10.31 | 51.3 | Seep below bottom of wetland downgradient of SD-14 |
| SD-08A | 10/24/2011 | -- | 8.70 | 8.28 | 1930 | 12.20 | 46.1 | Toe of LCBL approximately 1,000 feet up-slope of the Leviathan Creek waterfall located at the base of Hairpin turn |
| SD-09 | 5/19/2011 | 0.002 | 6.63 | 3.16 | 2074 | 3.17 | 327.8 | Seep along east side of Leviathan Mine Road above Pond 1 |
| SD-10 | 10/24/2011 | -- | 9.76 | 4.84 | 1943 | 5.98 | 200.8 | Seep feeding the ephemeral flowing wetland area on the LCBL downgradient of NV access road |
| SD-10A | 5/19/2011 | 0.001 | 8.35 | 6.16 | 1423 | 6.67 | -24.4 | Ephemeral flowing wetland area on LCBL downgradient of Nevada access road |
| | 10/24/2011 | -- | 10.74 | 5.71 | 2017 | 9.20 | 207.1 | |

**TABLE 2-2**
**SURFACE WATER CHARACTERIZATION - FLOW RATES AND FIELD WATER QUALITY PARAMETERS**
Leviathan Mine Site
Alpine County, California

| Location[1] | Sample Date | Flow (cfs) | Temperature (°C) | pH (su) | Specific Electrical Conductance (µS/cm) | Dissolved Oxygen (mg/L) | Oxidation-Reduction Potential (mV) | Location Description |
|---|---|---|---|---|---|---|---|---|
| SD-11 | 5/19/2011 | 0.001 | 8.58 | 7.11 | 1478 | 7.74 | -20.0 | Secondary LCBL seep downstream of waterfall into Aspen Creek waterfall, directly west of the hairpin turn |
| SD-11A | 5/19/2011 | 0.002 | 11.50 | 7.45 | 1655 | 7.65 | -43.3 | Downgradient of SD-11 |
| SD-12 | 5/20/2011 | 0.118 | -- | -- | -- | -- | -- | Lower Tributary immediately above the concrete-channelized portion |
| | 5/24/2011 | -- | 6.55 | 6.96 | 170 | 8.82 | 102.5 | |
| SD-13 | 5/20/2011 | 0.003 | -- | -- | -- | -- | -- | Seep located immediately above the concrete-channelized portion of the Lower Tributary |
| | 5/24/2011 | -- | 7.42 | 6.92 | 241 | 5.77 | 93.6 | |
| SD-14 | 10/24/2011 | -- | 9.69 | 8.06 | 1914 | 12.10 | 61.4 | Bottom of wetland downgradient of SW-17 |
| SD-15 | 10/24/2011 | -- | 10.73 | 7.63 | 188 | 9.09 | 38.1 | Campsite Seep above road approximately 1,500 feet north of the Aspen gate |
| SD-16 | 5/19/2011 | -- | 7.89 | 7.55 | 113 | 9.28 | -35.0 | Tributary into Leviathan Creek at the Beaver Pond below the confluence with 4L Creek and above the confluence of Aspen Creek |
| | 5/20/2011 | 0.152 | -- | -- | -- | -- | -- | |
| | 6/9/2011 | 0.001 | -- | -- | -- | -- | -- | |
| SD-17 | 6/9/2011 | -- | 15.95 | 4.44 | 1506 | 6.05 | 321.9 | Secondary seep down-gradient of Upper Aspen Seep near Aspen Creek |
| SD-17A | 10/26/2011 | -- | 5.21 | 4.66 | 1315 | 12.59 | 244.6 | Wetland downgradient of SD-17 and Aspen Seep near Aspen Creek |
| SD-19 | 10/25/2011 | -- | 6.17 | 6.70 | 1214 | 8.77 | -19.3 | Wetland on Leviathan side, upstream of confluence of Aspen and Leviathan Creeks |
| SD-19A | 10/25/2011 | -- | 7.61 | 7.03 | 604 | 12.20 | -42.3 | Wetland on Leviathan side, upstream of confluence of Aspen and Leviathan Creeks, down-gradient of SD-19 |
| SW-01 | 10/26/2011 | -- | 1.65 | 8.00 | 142 | 19.31 | 76.2 | Leviathan Creek upstream of Leviathan Mine collocated with USGS flow gage at Station 1 and storm water monitoring station ST-1 |
| SW-04 | 5/20/2011 | 0.806 | -- | -- | -- | -- | -- | Upper Tributary immediately above the concrete-channelized portion |
| | 5/24/2011 | -- | 10.53 | 6.21 | 68 | 7.92 | 66.9 | |
| | 10/26/2011 | -- | 4.35 | 6.47 | 249 | 4.79 | 335.3 | |
| SW-11 | 10/25/2011 | -- | 4.86 | 7.47 | 732 | 14.67 | -33.9 | Leviathan Creek just upstream of the confluence with 4L Creek (SW-12) |
| SW-12 | 10/25/2011 | -- | 5.53 | 7.26 | 463 | 14.71 | 4.0 | 4L Creek just upstream of the confluence with Leviathan Creek |
| SW-14 | 5/19/2011 | -- | 8.30 | 7.58 | 553 | 7.89 | -7.9 | Beaver Pond (west side of Leviathan Creek) |
| | 10/24/2011 | -- | 9.05 | 6.10 | 1591 | 8.25 | 97.6 | |
| SW-15 | 10/25/2011 | -- | 7.87 | 7.00 | 1536 | 13.16 | -40.3 | Leviathan Creek above Aspen Creek collocated with USGS flow gage at Station 15 |
| SW-16 | 5/19/2011 | -- | 7.89 | 7.55 | 113 | 9.28 | -35.0 | Leviathan Creek, downstream of confluence with Aspen Creek |
| | 10/25/2011 | -- | 8.69 | 7.57 | 834 | 12.01 | -65.0 | |
| SW-17 | 5/13/2011 | 0.08 | -- | -- | -- | -- | -- | Flowing water in wetland approximately 10 feet downstream of the culvert that crosses the Nevada access road near the saturated ground |
| | 5/18/2011 | -- | 9.70 | 7.81 | 1117 | 73.9[2] | -19.5 | |
| | 10/24/2011 | -- | 8.79 | 7.97 | 1885 | 11.48 | 71.3 | |
| SW-18 | 10/24/2011 | -- | 11.62 | 7.86 | 191 | 9.21 | 32.7 | Aspen Creek, above site collocated with USGS flow gage at Station 22 |
| SW-19 | 6/9/2011 | 0.071 | 18.58 | 8.21 | 180 | 7.85 | 25.7 | Culvert on Aspen access road approximately 1,500 feet north of Aspen gate |

Notes:
1. Locations shown on Figures 2-1 and 2-2.
2. Units of measure in percent.

Abbreviations:
ºC = degrees Celsius
µS/cm = microsiemens per centimeter
-- = not measured
cfs = cubic feet per second
LCBL = Leviathan Creek Basin Landslide
mg/L = milligrams per liter
mV = millivolts
su = standard units
USGS = U.S. Geological Survey