Tables

TABLE 1 - SURFACE WATER ANALYTICAL RESULTS
IDOL CITY MINE SITE INSPECTION

		Laboratory General Chemistry												Field Parameters							
Sample ID	Date	ALKALINITY, BICARBONATE, mg/L	ALKALINITY, CARBONATE, mg/L	ALKALINITY, HYDROXIDE, mg/L	CONDUCTANCE, uS/cm	HARDNESS, mg/L	pH	REDOX POTENTIAL, mV	SULFATE, mg/L	SUSPENDED SOLIDS, TOTAL, mg/L	SUSPENDED SOLIDS, VOLATILE, mg/L	TOTAL ALKALINITY, mg/L	TOTAL DISSOLVED SOLIDS, mg/L	TEMPERATURE, °C	DISSOLVED OXYGEN, mg/L	SPECIFIC CONDUCTANCE, uS/cm	pH	TURBIDITY, NTUs	REDOX POTENTIAL, mV	AVERAGE DEPTH, feet	CURRENT VELOCITY, ft/sec
Adit																					
AD-SFW-12	07/22/03	341	<1	<1	1150	860	7.5	145	391	186	18.5	341	945	19.42	1.33	1019	6.85	161.3	-48.9	0.33	NM
Ponds																					
PD-SFW-13	07/22/03	145	<1	<1	403	460	7.6	162	69	22.8	<5	145	283	19.55	6.22	354	7.27	4.8	55.9	2 to 6	NA
PD-SFW-14	07/21/03	142	<1	<1	371	220	7.4	159	58.6	79.2	23.6	142	318	22.40	7.30	357	7.00	4.00	115	1	NA
Streams																					
ST-SFW-05 (at mine)	07/22/03	192	<1	<1	210	500	7.4	169	126	236	25.8	192	300	20.67	5.48	410	7.16	172.5*	129	0.17	NM
ST-SFW-06 (downstream)	07/21/03	254	<1	<1	451	272	7.4	160	18.1	19.8	<5	254	295	14.67	3.44	60	6.83	4.6	4.6	0.5	NM
ST-SFW-07 (upstream)	07/22/03	175	7.7	<1	400	216	8.2	158	43	8.4	<5	183	286	19.62	6.20	361	7.77	2.8	126.8	0.33	0.03
Comparison Criteria																					
EPA-Ecological		NA	NA	NA	NA	>20	6.5-9	NA	NA	NA	NA	NA	NA	NA	8	NA	6.5-9	NA	NA	NA	NA
EPA-Human Health		NA	NA	NA	NA	NA	5-9	NA	NA	NA	NA	NA	250	NA	NA	NA	5-9	NA	NA	NA	NA
Oak Ridge PRG		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
OR-Ecological		NA	NA	NA	NA	NA	6.5-9	NA	NA	NA	NA	NA	500	NA	6-11	NA	6.5-9	NA	NA	NA	NA
OR-Human Health		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

*Stream was not flowing at time of sample collection; a small hole was created to sample for surface water and this created turbidity in the water column.

TABLE 1 CONTINUED - SURFACE WATER ANALYTICAL RESULTS
IDOL CITY MINE SITE INSPECTION

Sample ID	Date	TAL Metals, µg/L												
		ALUMINUM	ARSENIC	BARIUM	CADMIUM	CALCIUM	COPPER	IRON	LEAD	MAGNESIUM	MANGANESE	POTASSIUM	SODIUM	ZINC
Adit														
AD-SFW-12	07/22/03	32.5	**41.7**	**63.5**	<0.6	**175000**	<2.4	**2020**	<1.3	53800	**941**	3040	14600	6.2
Ponds														
PD-SFW-13 (big pond)	07/22/03	36	**14.3**	**78.9**	<0.6	53800	3.6	178	1.4	15600	**139**	3200	12400	16.4
PD-SFW-14 (small pond)	07/21/03	<23.6	<4.8	**83.9**	<0.6	47000	6.2	214	<1.3	15300	29.4	5320	10400	41.8
Streams														
ST-SFW-05 (at mine)	07/22/03	26.4	**8.3**	**113**	**1.2**	64500	3.5	87	**4.5**	16500	**100**	3950	9900	**162**
ST-SFW-06 (downstream)	07/21/03	<23.6	<4.8	**157**	<0.6	72100	3.6	73.5	<1.3	17500	<0.7	3120	7630	13.4
ST-SFW-07 (upstream)	07/22/03	<23.6	<4.8	**122**	<0.6	62300	<2.4	55.6	<1.3	14800	<0.7	2950	10300	4.4
Comparison Criteria														
EPA Ecological		87	150	4	1.4 - 3.7	NA	22.9 - 75.1	1000	1.6 - 6.5	NA	120	NA	NA	196.7 - 639.1
EPA Human Health		NA	0.018	1000	NA	NA	1300	300	NA	NA	50	NA	NA	7400
Oak Ridge PRG		87	NA	4	1.1	NA	12	1000	3.2	NA	120	NA	NA	110
OR Ecological		87	NA	4	1.6 - 4.5	116000	22.9 - 75.1	1000	2.3 - 13.6	82000	120	53000	680000	199.5 - 648.2
OR Human Health		NA	0.022	1000	10	NA	NA	300	50	NA	50	NA	NA	NA

TABLE 1 CONTINUED - SURFACE WATER ANALYTICAL RESULTS
IDOL CITY MINE SITE INSPECTION

Notes

- **Bold, shaded results indicate concentrations above the lowest applicable comparison criterion.**
- Cyanide (total) was anaylzed for but not detected in any sample.
- All alkalinity was contributed by bicarbonate and carbonate; hydroxide alkalinity was not detected in any samples.
- The following dissolved metals were analyzed for but not detected in any sample: antimony, beryllium, chromium, cobalt, mercury, nickel, selenium, silver, thallium, and vanadium.
- Hardness-based criteria for cadmium, chromium III, copper, lead, nickel, silver, and zinc were calculated for each sample. The range of calculated criteria is indicated.

< = Analyte was analyzed for but not detected.
NA = Not available.
NM = Not measurable (flow).

Units:

^{o}C = Degrees celcius
ft/sec = Feet per second
mg/L = Milligrams per liter
uS/cm = Microsiemens per centimeter
mV = Millivolts
ug/L = Micrograms per liter
NTU = Nephelometric turbidity units

Comparison Criteria

Oregon Ecological - Criteria are the lowest of:

- ODEQ Water Quality Criteria, Protection of Aquatic Life, Fresh Chronic Criteria (OAR 340-041-001), or
- ODEQ (1998b) Guidance for Ecological Risk Assessment, Level II Screening Values for surface water.

EPA Ecological - Criteria are the lowest of:

- USEPA (2002) recommended ambient water quality criteria for freshwater aquatic organisms, chronic; hardness dependent values were calculated for each sample, or
- USEPA (2002) recommended ambient water quality criteria for freshwater aquatic organisms, Tier II secondary chronic values calculated by Oak RidgeNational Laboratory (Suter & Tsao 1996).

Oak Ridge PRGs - Oak Ridge National Laboratory Preliminary Remediation Goals (Efroymson et al 1997c).

Oregon Human Health - ODEQ Water Quality Criteria, Protection of Human Health, Water and Fish Ingestion (OAR-340-041-001).

EPA Human Health - USEPA (2002) recommended ambient water quality criteria for protection of human consumption of fish.
Hardness dependent values were calculated for each sample; the range of values is indicated.