Table C5
Providence Mine Surface Water and Groundwater Analytical Results

		Sample ID	Metals (mg/L)																							TSS (mg/L)	Total Alkalinity (mg/L $CaCO_3$)	Hardness (mg/L of $CaCO_3$)
			Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium (Total)	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc			
Surface Water	E & E, 2003	SW/A/1	0.0436	<0.02	0.0223	0.0367	<0.005	<0.005	192	<0.01	<0.02	<0.00689	0.193	<0.005	62	0.173	<0.0002	<0.02	3.27	**0.0132**	<0.01	66.6	0.0538	<0.02	0.01	NA	NA	NA
Surface Water	E & E, 2003	SW/C/1 a	0.0538	<0.02	0.0225	0.0383	<0.005	<0.005	196	<0.01	<0.02	0.00617	0.218	<0.005	64	0.2	<0.0002	<0.02	3	**0.0172**	<0.01	68	0.0531	<0.02	0.00956	NA	NA	NA
Surface Water	Weston, 2009	PM-SW-2	NA	NA	<0.01	NA	NA	0.0032	140	<0.01	NA	0.013	NA	<0.01	43	NA	<0.0002	NA	NA	<0.025	NA	NA	NA	NA	<0.05	10	150	520
			NA	NA	<0.01[D]	NA	NA	<0.003[D]	NA	<0.01[D]	NA	<0.01[D]	NA	<0.01[D]	NA	NA	<0.0002[D]	NA	NA	<0.025[D]	NA	70[D]	NA	NA	<0.05[D]			
Surface Water	Weston, 2009	PM-SW-2D[a]	NA	NA	<0.01	NA	NA	<0.003	140	<0.01	NA	0.022	NA	<0.01	43	NA	<0.0002	NA	NA	<0.025	NA	NA	NA	NA	<0.05	<10	150	530
			NA	NA	<0.01[D]	NA	NA	<0.003[D]	NA	<0.01[D]	NA	0.022[D]	NA	<0.01[D]	NA	NA	<0.0002[D]	NA	NA	<0.025[D]	NA	77[D]	NA	NA	<0.05[D]			
Ground water	Weston, 2009	PM-GW-407	NA	NA	<0.01	NA	NA	<0.003	NA	<0.01	NA	0.028	NA	<0.01	NA	NA	<0.0002	NA	NA	<0.025	NA	NA	NA	NA	<0.05	NA	NA	NA
Ground water	Weston, 2009	PM-GW-407D[a]	NA	NA	<0.01	NA	NA	<0.003	NA	<0.01	NA	0.025	NA	<0.01	NA	NA	<0.0002	NA	NA	<0.025	NA	NA	NA	NA	<0.05	NA	NA	NA
AZ WQS (Surface Water)	FBC		NE	0.747[T]	**0.03[T]**	98[T]	1.867[T]	0.7[T]	NE	2.8[T]	NE	**1.3[T]**	NE	0.015[T]	NE	130.7[T]	0.28[T]	28[T]	NE	4.667[T]	4.667[T]	NE	**0.075[T]**	NE	280[T]	NE	NE	NE
AZ WQS (Surface Water)	AgL		NE	NE	0.2[T]	NE	NE	0.05[T]	NE	1.0[T]	NE	0.5[T]	NE	0.1[T]	NE	NE	0.01[T]	NE	NE	0.05[T]	NE	NE	NE	NE	25[T]	NE	NE	NE
AZ WQS (Surface Water)	AgI		NE	NE	2[T]	NE	NE	0.05[T]	NE	1.0[T]	NE	5[T]	NE	10[T]	NE	10[T]	NE	NE	NE	0.02[T]	NE	NE	NE	NE	10[T]	NE	NE	NE
AZ WQS (Surface Water)	FC		NE	0.64[T]	0.08[T]	NE	0.084[T]	0.084[T]	NE	0.15[T, c]	NE	NE	NE	NE	NE	NE	NE	0.511[T]	NE	0.667[T]	8.0[T]	NE	0.001[T]	NE	5.106[T]	NE	NE	NE
AZ WQS (Surface Water)	A&Ww	acute	NE	0.088[D]	0.34[D]	NE	NE	0.03023[D, b]	NE	0.016[D, c]	NE	0.04962[D, b]	NE	0.28[D, b]	NE	NE	0.0024[D]	1.513[D, b]	NE	NE	0.035[D, b]	NE	0.7[D]	NE	0.379[D, b]	NE	NE	NE
AZ WQS (Surface Water)	A&Ww	chronic	NE	**0.03[D]**	**0.15[D]**	NE	NE	**0.00147[D, b]**	NE	**0.11[D, c]**	NE	**0.02928[D, b]**	NE	**0.01[D, b]**	NE	NE	**0.00001[D]**	**0.168[D, b]**	NE	**0.002[T]**	NE	NE	**0.15[D]**	NE	**0.379[D, b]**	NE	NE	NE
BLM RMC (SW)	Camper		NE	0.124[T]	0.093[T]	NE	NE	0.155[T]	NE	NE	NE	11.49[T]	NE	0.05[T]	NE	**1.548[T]**	0.093[T]	6.194[T]	NE	1.548[T]	1.548[T]	NE	NE	NE	**92.909[T]**	NE	NE	NE
AZ AWQS (GW)	Drinking Water Protected Use		NE	**0.006[T]**	**0.05[T]**	**2[T]**	**0.004[T]**	**0.005[T]**	NE	**0.1[T]**	NE	NE	NE	**0.05[T]**	NE	NE	**0.002[T]**	**0.1[T]**	NE	**0.05[T]**	NE	NE	**0.002[T]**	NE	NE	NE	NE	NE
EPA	Primary Drinking Water MCLs		NE	0.006[T]	0.01[T]	2[T]	0.004[T]	0.005[T]	NE	0.1[T]	NE	1.3[T, d]	NE	0.015[T, d]	NE	NE	0.002[T]	0.1[T]	NE	0.05[T]	NE	NE	0.002[T]	NE	NE	NE	NE	NE

[a] Indicates field duplicate sample
[b] Values are hardness dependent. Hardness results for Providence Mine are >400 mg/L; therefore, values applicable to Providence are based on the maximum hardness value of 400 mg/kg.
[c] Chromium action level listed is for hexavalent chromium (Cr VI). Total chromium action levels for this category do not exist.
[d] Lead and copper are regulated by a Treatment Technique that requires systems to control the corrosiveness of their water. If more than 10% of tap water samples exceed the action level, public water systems are required to take additional steps.
[D] Indicates results and action levels for dissolved metals. Unless noted, results are for total metals.
[T] Indicates action levels for total metals.

AgI = Agricultural (irrigation)
A&Ww = aquatic and wildlife warm water (applicable to Providence Mine)
AZ WQS = Arizona Water Quality Standards
AZ AWQS = Arizona Aquifer Water Quality Standards
E & E = Ecology and Environment
FC = Fish Consumption
NE = none established
mg/L = miligrams per liter
MCL = Maximum Contaminant Level

AgL = Agricultural (livestock watering)
BLM RMC = Bureau of Land Management Risk Management Criteria
FBC = Full : Indicates exceedence of one or more ecological criteria
TSS = Total suspended solids
Indicates exceedence of one or more human health criteria
Indicates exceedence of one or more ecological criteria
Bold Action Level indicates the driver level for human and ecological receptors
Bold result indicates exceedence of driver action level