

**Table B1
Potential Chemical-Specific ARARs
Big Bug Watershed EE/CA**

Regulation	Citation	Criterion/Standard					Applicability/ Appropriateness	Discussion		
<i>State</i>										
Arizona Water Quality Criteria	Title 18 A.A.C. Chapter 11, Article 1, Appendix A	Contaminant (mg/L)	PBC		A&We (acute)			Applicable	Arizona Department of Environmental Quality (ADEQ) provides designated uses for stream reaches in the state. The aquatic and wildlife (A&We) and partial-body contact (PBC) standards apply to an unlisted tributary that is an ephemeral water. The unnamed stream flowing through Money Metals is an unlisted ephemeral tributary to Big Bug Creek. Big Bug Creek, from below its confluence with Eugene Gulch is designated for as aquatic and wildlife warm water (A&Ww), FBC, FC, AgI, and AgL. This applies to Providence Mine. (1) A total chromium standard is not established. The chromium standard listed is for chromium VI, which is the most conservative available standard. (2) The A&We acute chromium standard has only been established for chromium III. T = Total metals concentrations D = Dissolved metals concentrations	
		Antimony	0.747 ^T		--					
		Arsenic	0.280 ^T		0.44 ^D					
		Barium	98 ^T		--					
		Beryllium	1.867 ^T		--					
		Cadmium	0.7 ^T		Hardness dependent ^D					
		Chromium ⁽¹⁾	2.8 ^T		0.34 ⁽²⁾					
		Copper	1.3 ^T		Hardness dependent ^D					
		Lead	0.015 ^T		Hardness dependent ^D					
		Manganese	130.667 ^T		--					
		Mercury	0.280 ^T		0.00001 ^D					
		Nickel	28 ^T		Hardness dependent ^D					
		Selenium	4.667 ^T		0.002					
		Thallium	0.075 ^T		0.15					
		Zinc	280 ^T		Hardness dependent ^D					
				Contaminant (mg/L)	FC	FBC	A&Ww (chronic)	AgI	AgL	Applicable
				Antimony	4.3 ^T	0.56 ^T	0.03 ^D	--	--	
				Arsenic	1.45 ^T	0.05 ^T	0.15 ^D	2 ^T	0.200 ^T	
				Barium	--	9.8 ^T	--	--	--	
				Beryllium	0.084 ^T	1.867 ^T	--	--	--	
				Cadmium	0.084	0.7 ^T	Hardness dependent ^D	0.05 ^T	0.05 ^T	
				Chromium ⁽¹⁾	--	0.100 ^T	--	1.0 ^T	1.0 ^T	
				Copper	--	--	Hardness dependent ^D	--	--	
				Lead	--	0.015 ^T	Hardness dependent ^D	10 ^T	0.100 ^T	
				Manganese	--	196 ^T	--	10 ^T	--	
				Mercury	0.00006 ^T	0.42 ^T	0.00001 ^D	10 ^T	--	
		Nickel	4.6 ^T	28 ^T	Hardness dependent ^D	--	--			
		Selenium	9 ^T	7 ^T	0.002 ^D	0.020 ^T	0.050 ^T			
		Thallium	0.001 ^T	0.075 ^T	0.15 ^D	--	--			
		Zinc	--	--	Hardness dependent ^D	--	--			
Arizona Aquifer Water Quality Standard	Title 18 A.A.C. Chapter 11, Article 4	Contaminant (mg/L)	AWQS		Contaminant (mg/L)	AWQS		Applicable	Provides enforceable numerical standards for the protection of aquifers that are classified for drinking water uses. In general, the aquifer underlying the Providence site does not provide a drinking water source; however, protection of the aquifer for future potential drinking water sources is considered.	
		Antimony	0.006		Cyanide, free	0.2				
		Arsenic	0.05		Lead	0.05				
		Barium	2		Mercury	0.002				
		Beryllium	0.004		Nickel	0.1				
		Cadmium	0.005		Selenium	0.05				
		Chromium	0.1		Thallium	0.002				
Arizona Soil Remediation Levels (SRLS)	A.A.C. Title 18, Chapter 7	Metals (mg/kg)	rSRL	nrSRLs	Metals (mg/kg)	rSRL	nrSRLs	Applicable	Provides enforceable numerical standards for residential and non-residential land uses when soil remediation is required by any one of several state regulatory programs. Because the future land use for both sites is non-residential, the non-residential SRLs are applicable.	
		Antimony	31	410	Lead	400	800			
		Arsenic	10	10	Manganese	3,300	32,000			
		Barium	15,000	170,000	Mercury	23	310			
		Beryllium	150	1,900	Nickel	1,600	20,000			
		Cadmium	39	510	Selenium	390	5,100			
		Chromium III	NE	1,000,000	Silver	390	5,100			
		Chromium VI	NE	65	Vanadium	78	1,000			
		Copper	3,100	41,000	Zinc	23,000	310,000			

A.A.C. = Arizona Administrative Code
A&We = Aquatic and Wildlife (ephemeral)
A&Ww = Aquatic and Wildlife (warmwater)
AgI = Agricultural watering (irrigation)
AgL = Agricultural watering (livestock)
AWQS = Arizona Aquifer Water Quality Standard

BLM RMC = Bureau of Land Management Risk Management Criteria
CFR = Code of Federal Regulations
EPA = United States Environmental Protection Agency
FBC = Full Body Contact
FC = Fish consumption

mg/L = milligrams per liter
mg/kg = milligrams per kilogram
nrSRL = Arizona Non-Residential Soil Remediation Level
PBC = Partial body contact
rSRL = Arizona Residential Soil Remediation Level