

**Table RP-1b Restoration Groundwater Quality Parameters (Page 1 of 2)**

Parameter	WDEQ/LQD Guidelines 4 & 8 <sup>1,2</sup>	WDEQ/WQD Groundwater Classification Standards <sup>3</sup>			EPA MCL <sup>4</sup>
		Class I Domestic	Class II Agriculture	Class III Livestock	
<b>GENERAL CHEMISTRY</b>					
Total Dissolved Solids (mg/L)	R	500	2,000	5,000	-
Conductivity - field measured (µmhos)	R	-	-	-	
pH-field measured (su)	R	6.5 to 8.5	4.5 to 9.0	6.5 to 8.5	-
Temperature – field measured	R	-	-	-	-
Alkalinity	R	-	-	-	-
<b>MAJOR IONS (mg/L)</b>					
Calcium-dissolved	R	-	-	-	-
Potassium-dissolved	R	-	-	-	-
Magnesium-dissolved	R	-	-	-	-
Sodium-dissolved	R	-	-	-	-
Bicarbonate	R	-	-	-	-
Carbonate	R	-	-	-	-
Chloride-dissolved	R	250	100	2,000	-
Silica - dissolved	-	-	-	-	-
Sulfate	R	250	200	3,000	-
Ammonia Nitrogen as Nitrogen (as NH <sub>3</sub> )	R	0.50	-	-	-
Nitrate + Nitrite as Nitrogen	R	-	-	100.0	10.0
Fluoride	R	4.0	-	-	4.0
<b>TRACE METALS (mg/L)</b>					
Aluminum-dissolved	R	-	5.0	5.0	-
Arsenic-dissolved	R	0.05	0.1	0.2	0.01
Barium-dissolved	R	2.0	-	-	2.0
Boron	R	0.75	0.75	5.0	-
Cadmium-dissolved	R	0.005	0.01	0.05	0.005

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Parameter	WDEQ/LQD Guidelines 4 & 8 <sup>1,2</sup>	WDEQ/WQD Groundwater Classification Standards <sup>3</sup>			EPA MCL <sup>4</sup>
		Class I Domestic	Class II Agriculture	Class III Livestock	
Chromium-dissolved	R	0.10	0.1	0.05	0.1
Copper-dissolved	R	1.0	0.2	0.5	1.3
Iron-total and dissolved	R	0.3	5.0	-	-
Lead-dissolved	R	0.015	5.0	0.1	0.015
Manganese-total	R	0.05	0.2	-	-
Mercury-dissolved	R	0.002	-	0.00005	0.002
Molybdenum-dissolved	R	-	-	-	-
Nickel-dissolved	R	-	0.2	-	-
Selenium-dissolved	R	0.05	0.02	0.05	0.05
Vanadium	R	-	0.1	0.1	-
Zinc-dissolved	R	5.0	2.0	25.0	-
<b>RADIONUCLIDES (pCi/L)</b>					
Gross Alpha <sup>5</sup>	R	15.0	15.0	15.0	15.0
Gross Beta	R	-	-	-	- <sup>6</sup>
Radium-226 + 228	R	5.0	5.0	5.0	5.0
Uranium - dissolved	R	-	-	-	0.03

<sup>1</sup> <http://deq.state.wy.us/lqd/guidelines.asp>.

<sup>2</sup> R = Recommended in WDEQ Guidelines 4 or 8.

<sup>3</sup> [http://deq.state.wy.us/wqd/WQDrules/Chapter\\_08.pdf](http://deq.state.wy.us/wqd/WQDrules/Chapter_08.pdf). The above list is from Table I in Chapter 8 of the WDEQ/WQD Rules. There are broad narrative standards as well in Chapter 8, Section 4(d), and the Table I in Chapter 8 also lists other parameters such as Sodium Adsorption Ratio (SAR). However, the parameters listed above are the ones of most concern for ISR operations.

<sup>4</sup> MCL = Maximum Contaminant Level, <http://www.epa.gov/safewater/contaminants/index.html>.

<sup>5</sup> The gross alpha standard for WDEQ/WQD includes Ra-226 but excludes radon and uranium.

<sup>6</sup> The MCL for gross beta is given as an exposure rate (4 mrem/year), which is addressed through the radiological monitoring for the site decommissioning.