

Reasonable Potential Analysis for Deer Creek Permit Amendment

Table I below contains data from Rilda Canyon mine water (Outfall 003 mine water)

Table I	Most Stringent WLA	6/16/2016	7/12/2016	8/2/2016	9/6/2016	10/6/2016	11/3/2016
T-Arsenic mg/L	0.5877		<0.01	<0.01	<0.01	<0.01	<0.01
T-Cadmium mg/L	0.0055		<0.001	<0.001	<0.001	<0.001	<0.001
T-Chromium mg/L	0.0813		0.005	0.004	0.003	0.002	0.004
T-Copper mg/L	0.2024		<0.01	<0.01	<0.01	<0.01	<0.01
T-Lead mg/L	0.1129		<0.01	<0.01	<0.01	<0.01	<0.01
T-Mercury ug/L	0.142		<0.2	<0.2	<0.2	<0.2	<0.2
T-Nickel mg/L	1.282		0.037	0.036	0.035	0.035	0.030
T-Selenium mg/L	0.0446		<0.002**	<0.002**	<0.002**	<0.002**	<0.002**
T-Silver mg/L	0.1104		<0.002	<0.002	<0.002	<0.002	<0.002
T-Zinc mg/L	1.5941		<0.004	0.012*	<0.004	<0.004	0.008
T-Boron mg/L	8.67914		0.22	0.21	0.21	0.21	0.19
T-Iron mg/L	7.0721	1.21	1.35	1.48	1.44	1.45	0.61

*Dissolved zinc was <0.004 mg/L.

**MRL using method 200.8, not 200.7.

If all of the values reported are below the minimum reportable limit (MRL), no reasonable potential (RP) analysis will be done on that parameter. For parameters with some or all values above the MRL, the permit writer uses the process below to determine if an RP analysis is necessary:

To determine whether a reasonable potential (RP) analysis is needed the permit writer multiplies the largest value found for each metal by 10. If this value is equal to or close to the determined effluent limit from the wasteload allocation, then an RP analysis is required for that particular parameter.

If an RP analysis is necessary, a computer model obtained from EPA Region VIII will be used to determine if an effluent limit is required, if just monitoring is required or nothing is required at all.

In this case the only parameter requiring RP analysis was total iron. RP analysis indicated that no limit is required in the permit as the values in the effluent are not statistically predicted to exceed the WLA limit of 7.1 mg/L. However based on 40 CFR 434 Subpart E – Post Mining areas a maximum daily effluent limitation for total iron of 7.0 mg/L and an average monthly effluent limitation for total iron of 3.5 mg/L will be incorporated into the permit for Outfall 003. This federal categorical standard is more stringent than the total iron limit developed through the WLA process.