

Screening Values used in Evaluation of San Juan River Sediment Samples

Screening values are taken from Agency for Toxic Substance and Disease Registry (ATSDR). As is most appropriate for recreational exposures, ATSDR Environmental Media Evaluation Guideline (EMEG) health-based child intermediate exposure (>14 days up to one year) comparison values, were chosen first if available, followed by ATSDR EMEG health-based child chronic exposure (>1 year) comparison values. In the absence of EMEGs, ATSDR child Reference Dose Media Evaluation Guidelines (RMEGs), based upon EPA RfDs, were used. In the absence of RMEGs, EPA risk-based Regional Screening Levels (RSLs) were used.

Analyte	CAS #	Units	Soil CV (ppm)/(mg/kg)	
			Health-Based Comparison Value for Water Ingestion (CV) [Total Metals]	CV Type and Source
Aluminum	7429-90-5	mg/kg	50,000	Child Chronic EMEG
Antimony	7440-36-0	mg/kg	20	Child RMEG
Arsenic	7440-38-2	mg/kg	15	Child Chronic EMEG
Barium	7440-39-3	mg/kg	10,000	Child Chronic EMEG
Beryllium	7440-41-7	mg/kg	100	Child Chronic EMEG
Cadmium	7440-43-9	mg/kg	25	Child Intermediate EMEG
Calcium	7440-70-2	mg/kg	-	No CVs available
Chromium	7440-47-3	mg/kg	250	Child Intermediate EMEG Cr(VI)
Cobalt	7440-48-4	mg/kg	500	Child Intermediate EMEG
Copper	7440-50-8	mg/kg	500	Child Intermediate EMEG
Iron	7439-89-6	mg/kg	55,000	Child RSL
Lead	7439-92-1	mg/kg	400	Child RSL
Magnesium	7439-95-4	mg/kg	-	No Screening Level Available
Manganese	7439-96-5	mg/kg	2,500	Child RMEG
Molybdenum	7439-98-7	mg/kg	250	Child RMEG
Nickel	7440-02-0	mg/kg	1,000	Child RMEG
Nitrate+Nitrite	22100-10-	mg/kg	-	No Screening Level Available
Nitrite	14797-65-0	mg/kg	5,000	Child RMEG
Potassium	7440-22-4	mg/kg	-	No Screening Level Available
Selenium	7782-49-2	mg/kg	250	Child Chronic EMEG
Silver	7440-22-4	mg/kg	250	Child RMEG
Sodium	7440-23-5	mg/kg	-	No Screening Level Available
Sulfate		mg/kg	-	No Screening Level Available
Thallium	7440-28-0	mg/kg	0.78	Child RSL
Vanadium	7440-62-2	mg/kg	500	Child Intermediate EMEG
Zinc	7440-66-6	mg/kg	15,000	Child Intermediate EMEG
Mercury	7439-97-6	mg/kg	9.4	Child RSL
		RMEG: ATSDR Reference Dose Media Evaluation Guide		
		EMEG: ATSDR Environmental Media Evaluation Guide		
		RSL: EPA Regional Screening Level		

Comparison of San Juan River Sediment Samples with Health Based Screening Values

Site Description	Collection Date	Collection Time	Plume Arrival	Concentration (mg/kg)																						
				Aluminum	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Silver	Sodium	Thallium	Vanadium	Zinc	Molybdenum	
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
San Juan R @ US160 Xing in CO	8/8/2015	1:23:00 PM	1	16,600	3.76	200	0.68	0.31	21,900	14.2	4.1	8.7	11,400	9.0	7,060	280	0.002	8.11	4,870	0.04	722	0.18	29	40	-	
	8/15/2015	9:43:00 AM	3	12,900	3.20	217	0.54	0.20	9,140	12.1	4.1	8.3	11,900	7.0	3,300	240	0.005	6.40	2,660	0.03	344	0.14	25	32	-	
San Juan R @ Town of Montezuma	8/8/2015	2:54:00 PM	1	6,140	1.74	279	0.29	0.12	8,470	5.0	1.8	3.4	5,530	3.9	1,900	156	-	2.80	1,690	-	145	0.07	14	19	-	
	8/15/2015	10:30:00 AM	3	14,600	3.16	199	0.57	0.24	11,100	13.9	4.2	7.9	12,100	7.5	3,810	241	0.006	6.67	3,140	0.03	393	0.17	27	33	-	
San Juan R @ Sand Island	8/8/2015	4:19:00 PM	1	7,140	2.13	232	0.32	0.13	7,250	5.8	2.1	3.7	6,340	4.3	1,740	198	-	2.85	1,810	0.06	157	0.10	15	19	-	
	8/15/2015	11:31:00 AM	3	10,600	2.78	297	0.45	0.17	10,500	9.5	3.2	6.4	9,630	6.2	3,120	223	0.003	4.96	2,540	0.02	277	0.13	23	27	-	
San Juan R @ Mexican Hat US163 Xing	8/8/2015	5:40:00 PM	1	8,780	2.70	271	0.42	0.17	6,980	7.7	2.7	5.0	7,630	5.5	2,190	218	-	4.09	2,280	0.07	291	0.13	19	26	0.43	
	8/15/2015	12:04:00 PM	3	7,480	2.20	213	0.37	0.15	13,300	8.8	2.5	3.8	7,210	4.8	3,340	192	-	4.50	2,120	0.05	201	0.07	17	25	-	
San Juan R @ Clay Hills	8/15/2015	2:30:00 PM	3	6,160	1.50	251	0.31	0.15	16,900	6.3	2.1	2.8	6,040	4.0	3,550	176	0.003	3.68	1,790	-	218	0.07	14	17	-	
	No Exceedence																									
	Above Screening Level																									
	Prior to Plume Arrival																									
	Estimated Plume Arrival																									
	Post Plume Arrival																									

None of the values collected before or after the plume exceed health based screening values used to evaluate recreational exposures, as discussed in the [Statement of Evaluation](#) provided by the Department of Health.