TABLE 2.13
SUMMARY OF COTTONWOOD CREEK SAMPLE ANALYSES

Analyte	Units	Federal Drinking Water MCLs	Utah Water Quality Protection Standards			Creek Water Samples			
			Class 1C Domestic Supply	Class 3B - Warmwater Aquatic Life	Class 4 - Agriculture	Cottonwood South (USFS 06/20/96)	Cottonwood Creek Above USFS Bndry (UDWQ 3/31/98)	Cottonwood North (USFS 06/20/96)	Cottonwood Creek Above Mine Site (UDWQ 3/31/98)
Metals									
Al	mg/L					na	<0.030	na	
As	mg/L	0.05 [2]	0.05	0.19	0.1	<0.005	<0.005	<0.005	<0.005
Ba	mg/L	2	1			0.15	<0.160	0.13	0.16
Cd	mg/L	0.005	0.01	0.0011	0.01	<0.005	<0.001	<0.005	<0.001
Cr	mg/L	0.1	0.05		0.1	<0.01	<0.016	<0.01	0.015
Cu	mg/L					na	<0.012	na	<0.012
Fe	mg/L					na	<0.020	na	<0.020
Pb	mg/L	0.015	0.05	0.0032	0.1	<0.005	<0.003	<0.005	<0.003
Hg	mg/L	0.002	0.002			<0.001	<0.0002	<0.001	<0.0002
Mn	mg/L					na	0.016	na	<0.005
Se	mg/L	0.05	0.01	0.005	0.05	<0.005	0.0015	<0.005	<0.001
Ag [5]	mg/L	0.1	0.05			<0.01	<0.002	<0.01	<0.002
U	mg/L	0.03				na	0.0342	na	0.00831
V	mg/L					na	na	na	na
Zn	mg/L					na	<0.030	na	<0.030
Radiochemistry									
Alpha	pCi/L	15	15	15	15		75.9		22
Beta	pCi/L						31.3		<10
Beta	mrem/yr	4	50 [3]	50 [3]	50 [3]		na		na
Ra-226 [4]	pCi/L	5	5			0.7 ±0.4	0.758	0.4 ±0.3	<0.5
Ra-228 [4]	pCi/L	5	5				na		na
Th-230	pCi/L					0.3 ±0.6	na	0.2 ±0.6	na
Th-232	pCi/L					0.0 ±0.3	na	0.0 ±0.4	na
U-234	pCi/L					12 ±1	na	7.3 ±0.8	na
U-238	pCi/L					11 ±1	na	6.6 ±0.8	na
General Water Quality Parameters									
Ca	mg/L						48.9		36.6
Mg	mg/L						30.9		26.2
P	mg/L						<0.015		<0.015
K	mg/L						2.95		2.27
Na	mg/L						48		18.7
HCO_3	mg/L						356		316
CO_2	mg/L						3		2
CO_3^{2-}	mg/L						0		0
CO_3 Solids	none						175		155
Cl^-	mg/L						11.5		4.5
OH^-	mg/L						0		0
SO_4^{2-}	mg/L						62.08		18.42
NH_3	mg/L						<0.05		<0.05
NO_2+NO_3	none						0.11		<0.02
pH	s.u.	6.5-8.5 [5]	6.5-9.0	6.5-9.0	6.5-9.0	8.58	8.7	8.58	8.9
Alkalinity	mg/L					271	292	273	259
Hardness	mg/L					234	249.1	226	199.1
Sp. Cond	umohs/cm						561		518
Turbidity	NTU						28.6		8.62
TDS [5]	mg/L	500				312	398	318	302
TSS	mg/L						36.4		10.8
DO	mg/L						6.7		6.4
Temp	°C						15.9		12.2
Flow	cfs						1.2		2

[2] = Current MCL for As is 0.01. Public water suppliers must comply by 1/23/06.

[3] = Listed as a "pollution indicator"

[4] = Standards are for Ra-226 and Ra-228 combined.

[5] = Secondary MCL standard (non-enforceable guideline for cosmetic or aesthetic effects)

na = not analyzed