Water Quality Status Report No. 118

Ground Water Study of the Lower Boise River Valley Ada and Canyon Counties, Idaho

Idaho Department of
Health and Welfare
Division of Environmental Quality
May 1996

APPENDIX E

Table 11

Metals, Chloride, Sulfate Fluoride, Silica, Selenium and Arsenic Results

Headnotes for Tables 8, 9, 10, and 11

Well Location: well location in latitude and longitude or township, range and section

Primary Use of Water:

H	domestic
I	irrigation
P	public supply
C	commercial
D	dewater
S	stock
F	fire

Units of Measure:

°C	degrees celsius
US/CM	microsiemens per centimeter at 25 °C
<	less than
>	greater than
MG/L	milligrams per liter
STAND UNITS	standard units
MG/L as N	milligrams per liter as nitrogen
DISS	dissolved
MG/L as PO4	milligrams per liter as phosphate
MG/L as P	milligrams per liter as phosphorus
COL/100 ML	colonies per 100 milliliters
PCI/L	picocuries per liter
UG/L	micrograms per liter
H2O	water
REC	recoverable
GF	glass fiber filter
FLT	filtered
U	micron (filter pore size)
ND	non-detect
*	results from Dept. of Ag study
MG/L as CACO3	milligrams per liter as calcium carbonate
MG/L as CA	milligrams per liter as calcium
MG/L as MG	milligrams per liter as magnesium
MG/L as NA	milligrams per liter as sodium
MG/L as K	milligrams per liter as potassium
MG/L as CL	milligrams per liter as chloride
MG/L as SO4	milligrams per liter as sulfate
MG/L as F	milligrams per liter as fluoride
MG/L as SIO2	milligrams per liter as silica
UG/L as AS	micrograms per liter as arsenic
UG/L as CD	micrograms per liter as cadmium
UG/L as CR	micrograms per liter as chromium
UG/L as FE	micrograms per liter as iron

Units of Measure continued:

UG/L as PB	micrograms per liter as lead
UG/L as MN	micrograms per liter as manganese
UG/L as ZN	micrograms per liter as zinc
UG/L as SE	micrograms per liter as selenium

Empty Box: no information available

Volatile Organic Compounds (VOCs) were analyzed at every site with a portable gas chromatograph for presence or absence. Sites with VOCs present had duplicates sent to Alpha Analytical Laboratory in Sparks, Nevada, those results can be found in Table 9.

Metals, Chloride, Sulfate, Fluoride, Silica, Selenium, and Arsenic Results

Table 11

	A	B	C	D	E	F	G	H	I
1	LATITUDE	LONGITUDE	TOWNSHIP RANGE & SECTION	DATE SAMPLED	DEPTH OF WELL (FEET)	PRIMARY USE OF WATER	SPECIFIC COND. (US/CM)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISS (MG/L AS CA)
2									
3									
4									
5									
6	43°31'43"	116°24'51"	02N 01W 11ADA1	08-03-95	190	I	794	180	41
7	43°32'42"	116°35'53"	02N 02W 05ABA1	07-22-95	180	H	694	230	61
8	43°38'02"	116°19'48"	03N 01E 03BBA1	08-18-95	117	H	352	110	35
9	43°36'07"	116°18'33"	03N 01E 14BBD1	07-05-95	183		655	200	60
10	43°34'17"	116°17'27"	03N 01E 25BCB1	08-06-95	117	H		210	54
11	43°34'17"	116°17'27"	03N 01E 25BCB1	08-06-95	117	H	568	210	55
12	43°36'42"	116°26'06"	03N 01W 10DAAB1	10-16-95	210	H	491		
13	43°36'18"	116°24'53"	03N 01W 11DDDC1	09-05-95	83	H	876		
14	43°33'42"	116°24'52"	03N 01W 26DDDC1	08-31-95	213	H	673	170	55
15	43°37'37"	116°37'07"	03N 02W 06ACD1	09-08-95	87	I	965	280	71
16	43°37'37"	116°37'07"	03N 02W 06ACD1	09-08-95	87	I		290	72
17	43°36'33"	116°37'51"	03N 02W 07CBC1	07-22-95	196	H	233	61	17
18	43°36'33"	116°37'51"	03N 02W 07CBC1	07-22-95	196	H	233	61	17
19	43°36'02"	116°36'38"	03N 02W 17BCB1	08-16-95	461	P	245	49	14
20	43°32'49"	116°31'35"	03N 02W 36CDC1	07-25-95	90	H	812	250	69
21	43°35'22"	116°40'36"	03N 03W 22ABB1	08-16-95	250	I	340	110	31
22	43°43'15"	116°23'32"	04N 01E 06BBB1	07-17-95	67	H	414	170	48
23	43°41'45"	116°21'53"	04N 01E 08CAD1	07-19-95	462	I	289	100	32
24	43°42'23"	116°18'39"	04N 01E 11BBB1	07-17-95	203	H	994	270	73
25	43°41'28"	116°17'02"	04N 01E 13BAAA1	07-25-95	150	P	193	61	17
26	43°40'06"	116°17'46"	04N 01E 23DAC1	07-27-95	403	P	242	69	22
27	43°42'44"	116°24'11"	04N 01W 01CAA1	07-20-95	260	H	604	190	56
28	43°43'15"	116°25'02"	04N 01W 02AAB1	07-19-95	68	H	641	280	81
29	43°41'39"	116°23'50"	04N 01W 12DDB1	07-21-95	81	H	245	96	30
30	43°41'51"	116°31'55"	04N 02W 12CBC1	07-12-95	155	H	175	65	21
31	43°39'05"	116°36'42"	04N 02W 29CCB1	07-20-95	130	I	144	38	11

Metals, Chloride, Sulfate, Fluoride, Silica, Selenium, and Arsenic Results

Table 11

	J	K	L	M	N	O	P	Q	R	S
1	MAGNE	SODIUM	SODIUM	SODIUM	POTAS	CHLORIDE	SULFATE	FLUORIDE	SILICA	ARSENIC
2	SIUM	DISS	ADSORP	PERCENT	SIUM	DISS	DISS	DISS	DISS	DISS
3	DISS	(MG/L	TION		DISS	(MG/L	(MG/L	(MG/L	(MG/L	(UG/L
4	(MG/L	AS NA)	RATIO		(MG/L	AS CL)	AS SO4)	AS F)	AS SIO2)	AS AS)
5	AS MG)				AS K)					
6	20	95	3	52	4.2	14	92	0.5	40	5
7	18	49	1	32	3.8	53	120	0.4	43	8
8	6.1	29	1	35	2.5	8.6	22	0.5	44	1
9	13	59	2	38	1.9	19	51	0.4	32	ND
10	18	43	1	31	1.1	5.1	34	0.8	44	3
11	18	44	1	31	1.3	5	34	0.8	43	2
12								0.2		
13										
14	8.8	75	2	48	1.4	34	110	0.4	26	2
15	26	97	3	42	2.8	22	97	0.6	57	18
16	26	97	2	42	2.9	21	97	0.6	56	18
17	4.4	25	1	46	3	5	8.1	0.5	43	4
18	4.4	25	1	46	3.2	5.2	8.3	0.4	43	4
19	3.5	34	2	58	2.6	5.9	7.1	1	38	5
20	18	78	2	40	7.3	26	130	0.2	48	2
21	8.6	27	1	34	2.9	4.2	24	0.5	49	10
22	11	23	0.8	23	1.7	5.4	8.6	0.3	56	32
23	5.8	20	0.9	29	1.6	3.3	18	0.4	14	1
24	22	97	3	43	2.6	83	65	0.4	37	5
25	4.5	14	0.8	32	1.9	6.9	19	0.3	44	6
26	3.3	22	1	40	3	2	8.9	0.3	42	ND
27	11	61	2	41	2.7	4.2	22	0.4	33	6
28	18	34	0.9	21	4.1	14	27	0.3	63	28
29	5.1	12	0.5	21	1.6	4.9	19	0.3	30	2
30	3	10	0.5	25	0.9	1.9	4.9	0.3	25	ND
31	2.5	15	1	46	0.7	3.5	7.5	0.5	31	4

Metals, Chloride, Sulfate, Fluoride, Silica, Selenium, and Arsenic Results

Table 11

	T	U	V	W	X	Y	Z	AA
1	CADMIUM	CHROMIUM	COPPER	IRON	LEAD	MANGA	ZINC	SELENIUM
2	DISS	DISS	DISS	DISS	DISS	NESE	DISS	DISS
3	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	DISS	(UG/L	(UG/L
4	as CD)	AS CR)	AS CU)	AS FE)	AS PB)	(UG/L	AS ZN)	AS SE)
5						AS MN)		
6	ND	ND	1	ND	ND	ND	3	ND
7	ND	5	ND	10	ND	ND	30	1
8	ND	ND	4	21	ND	46	49	ND
9	ND	1	1	ND	ND	ND	120	1
10	ND	ND	ND	ND	ND	ND	37	ND
11	ND	ND	1	ND	ND	ND	34	ND
12								
13				ND		ND		
14	ND	2	3	ND	ND	2	30	
15	ND	ND	2	ND	ND	ND	ND	ND
16	ND	ND	1	ND	ND	ND	5	1
17	ND	7	ND	ND	ND	ND	ND	ND
18	ND	7	ND	3	ND	ND	6	ND
19	ND	7	ND	ND	ND	ND	4	ND
20	ND	2	ND	ND	ND	ND	39	1
21	ND	ND	ND	ND	ND	ND	6	ND
22	ND	ND	2	ND	ND	ND	49	
23	ND	ND	1	310	ND	170	20	ND
24	ND	2	ND	3	ND	ND	25	7
25	ND	ND	ND	6	ND	1	52	ND
26	ND	ND	ND	120	ND	130	ND	ND
27	ND	2	4	ND	ND	1	19	ND
28	ND	ND	8	ND	ND	9	27	ND
29	ND	1	6	ND	ND	3	62	ND
30	ND	ND	ND	390	ND	7	36	ND
31	ND	3	ND	4	ND	3	31	ND

Metals, Chloride, Sulfate, Fluoride, Silica, Selenium, and Arsenic Results

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2									
3									
4									
5									
32	43°39'35"	116°36'47"	04N 02W 30ADA1	08-22-95	80	H	224	73	21
33	43°42'10"	116°42'27"	04N 03W 09BBD1	07-25-95	200	P	686	200	61
34	43°41'28"	116°38'36"	04N 03W 13BAA1	08-13-95	185	S	120	39	12
35	43°43'31"	116°21'36"	05N 01E 32DBD1	08-07-95	128	H	275	93	27
36	43°43'21"	116°19'08"	05N 01E 34DCD1	08-06-95	54	H	926	340	100

Metals, Chloride, Sulfate, Fluoride, Silica, Selenium, and Arsenic Results

Table 11

	J	K	L	M	N	O	P	Q	R	S
1 2 3 4 5	MAGNESIUM DISS (MG/L AS MG)	SODIUM DISS (MG/L AS NA)	SODIUM ADSORPTION RATIO	SODIUM PERCENT	POTASSIUM DISS (MG/L AS K)	CHLORIDE DISS (MG/L AS CL)	SULFATE DISS (MG/L AS SO4)	FLUORIDE DISS (MG/L AS F)	SILICA DISS (MG/L AS SIO2)	ARSENIC DISS (UG/L AS AS)
32	5	14	0.7	29	1.9	9.1	22	0.3	32	1
33	11	69	2	43	2.6	24	76	0.3	36	4
34	2.1	9.4	0.7	34	0.9	1.2	3.7	0.2	29	3
35	6.3	21	0.9	32	2.2	2.4	7.2	0.2	45	10
36	22	56	1	26	5.2	36	140	1.1	43	14

Metals, Chloride, Sulfate, Fluoride, Silica, Selenium, and Arsenic Results

Table 11

	T	U	V	W	X	Y	Z	AA
1	CADMIUM	CHROMIUM	COPPER	IRON	LEAD	MANGA	ZINC	SELENIUM
2	DISS	DISS	DISS	DISS	DISS	NESE	DISS	DISS
3	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	DISS	(UG/L	(UG/L
4	as CD)	AS CR)	AS CU)	AS FE)	AS PB)	(UG/L	AS ZN)	AS SE)
5						AS MN)		
32	ND	3	8	ND	ND	ND	37	ND
33	ND	2	1	ND	ND	ND	9	1
34	ND	2	ND	ND	ND	ND	ND	ND
35	ND	ND	3	ND	ND	ND	18	ND
36	ND	ND	2	ND	ND	ND	ND	5