EXHIBIT I – PART 2

Table 10. Lithologic log for unsaturated-zone monitoring site LSCW near Victorville, San Bernardino County, California

[Location shown in figure 1. Altitude of land surface, approximately 3,288 ft. Depth is in feet below land surface. Soil and rock color notation from Munsell Color (1994). Drilled by U.S. Geological Survey using ODEX, December 4, 1995. Total depth drilled 110 ft. Construction data and instrumentation given in table 1 and figure 13. ft, foot]

Depth (ft)		Description
From	To	
1	3	Sand, fine to medium, with some very fine to very coarse sand and silt; poorly sorted; angular to subrounded; dry color; pale olive (10Y 6/2)
3	4	Gravelly sand, very fine to medium, with some coarse to very coarse sand and granule- to medium pebble-sized gravel; poorly sorted; angular to subrounded; pale olive (10Y 6/2)
4	5	Sandy gravel, granule- to large pebble-sized, with some medium to very coarse sand; poorly sorted; angular to subrounded; pale olive (10Y 6/2)
5	6	Slightly gravelly sand, very fine to fine, with some silt, medium to very coarse sand, and granule- to small pebble-sized gravel; poorly sorted; subangular to subrounded; pale olive (10Y 6/2)
6	9	Sandy gravel, granule- to large pebble-sized, with some medium to very coarse sand; poorly sorted; angular to subrounded; pale olive (10Y 6/2)
9	10	Sandy gravel, granule- to medium pebble-sized, with some fine to very coarse sand; poorly sorted; angular to subrounded; pale olive (10Y 6/2)
10	11	Sandy gravel, large pebble-sized, with some granule- to medium pebble-sized gravel and medium to very coarse sand; poorly sorted; angular to subrounded; pale olive (10Y 6/2)
11	13	Slightly gravelly sand, medium to coarse, with some fine to very coarse sand and granule- to small pebble-sized gravel; poorly sorted; angular to subrounded; pale olive (10Y 6/2)
13	15	Sandy gravel, granule- to medium pebble-sized, with some medium to very coarse sand; poorly sorted; angular to subrounded; pale olive (10Y 6/2)
15	16	Sandy gravel, granule- to medium pebble-sized, with some medium to very coarse sand; poorly sorted; angular to subrounded; pale olive (10Y 6/2)
16	18	No sample.
18	20	Gravelly sand, medium, with some fine to very coarse sand and granule- to small pebble-sized gravel; poorly sorted; subangular to subrounded; light olive gray (5Y 5/2)
20	21	Gravelly sand, fine to medium, with some coarse to very coarse sand and granule- to small pebble-sized gravel; poorly sorted; angular to subrounded; pale olive (10Y 6/2)
21	22	Gravelly sand, medium to coarse, with some fine to very coarse sand and granule- to large pebble-sized gravel; poorly sorted; angular to subrounded; pale olive (10Y 6/2)
22	28	Gravelly sand, medium, with some fine to very coarse sand and granule- to small pebble-sized gravel; poorly sorted; subangular to subrounded; pale olive (10Y 6/2)
28	29	Slightly gravelly sand, fine to medium, with some very fine to coarse sand and granule- to small pebble-sized gravel; poorly sorted; subangular to subrounded; pale olive (10Y 6/2)

Table 10. Lithologic log for unsaturated-zone monitoring site LSCW near Victorville, San Bernardino County, California—Continued

Depth (ft)		Description
From	To	
29	31	Gravelly sand, medium to coarse, with some fine to very coarse sand and granule- to medium pebble-sized gravel; poorly sorted; subangular to subrounded; pale olive (10Y 6/2)
31	35	Slightly gravelly sand, fine to medium, with some coarse to very coarse sand and granule- to medium pebble-sized gravel; poorly sorted; subangular to rounded, pale olive (10Y 6/2)
35	38	Slightly gravelly sand, fine, sand with some very fine to very coarse sand and granule- to small pebble-sized gravel; well-sorted; subangular to subrounded; pale yellowish brown (10YR 6/2)
38	40	Silty sand, very fine to fine, with some silt; well-sorted; subangular to subrounded; moderate yellowish brown (10YR 5/4)
40	41	Slightly gravelly sand, very fine to fine, with some silt, medium to very coarse sand, and granule- to large pebble-sized gravel; poorly sorted; angular to subrounded; pale olive (10Y 6/2)
41	42	Silty sand, very fine, with some fine sand and silt; well-sorted; subangular to subrounded; moderate yellowish brown (10YR 5/4)
42	53	Silty sand, very fine, with some medium to coarse sand and silt; moderately sorted; subangular to subrounded; pale olive (10Y 6/2)
53	56	Sand, very fine to fine, with some medium to coarse sand and silt; moderately sorted; subangular to subrounded; pale olive (10Y 6/2)
56	58	Slightly gravelly sand, fine, with some very fine to very coarse sand and granule- sized gravel; poorly sorted; subangular to subrounded; pale olive (10Y 6/2)
58	61	Slightly gravelly sand, fine, with some very fine to very coarse sand, silt, and granule- to medium pebble-sized gravel; poorly sorted; angular to subrounded; pale yellowish brown (10YR 6/2)
61	63	Silty sand, very fine to fine, with some silt and occasional coarse to very coarse sand or granule-sized gravel; well-sorted; subangular to subrounded; moderate yellowish brown (10YR 5/4)
63	66	Gravelly sand, very fine to fine, with some medium to very coarse sand and granule- to medium pebble-sized gravel; poorly sorted; angular to subrounded; pale yellowish brown (10YR 6/2)
66	68	Sand, very fine to fine; well-sorted; subangular to subrounded; pale yellowish brown (10YR 6/2)
68	71	Slightly gravelly sand, very fine to fine, with some medium to very coarse sand and granule- to small pebble-sized gravel; poorly sorted; angular to subrounded; pale olive (10Y 6/2)
71	73	Sandy gravel, granule- to small pebble-sized gravel, with some medium to large pebble-sized gravel and very fine to very coarse sand; poorly sorted; angular to rounded, pale olive (10Y 6/2)
73	75	Gravelly sand, very fine to medium, with some coarse to very coarse sand and granule- to small pebble-sized gravel; poorly sorted; subangular to subrounded; pale olive (10Y 6/2)
75	76	Sand, very fine to fine, with some silt and medium sand; well-sorted; subangular to subrounded; pale olive (10Y 6/2)

Table 10. Lithologic log for unsaturated-zone monitoring site LSCW near Victorville, San Bernardino County, California—Continued

Depth (ft)		Description
From	To	
76	77	Silty sand, very fine, with some fine sand and silt; well-sorted; subangular to subrounded; light olive gray (5Y 5/2)
77	78	Sand, very fine to fine, with some silt and medium sand; well-sorted; subangular to subrounded; pale olive (10Y 6/2)
78	80	Slightly gravelly sand, very fine to fine, with some silt, medium to very coarse sand, and granule-sized gravel; poorly sorted; subangular to subrounded; pale olive (10Y 6/2)
80	81	Gravelly sand, very fine to fine, with some silt, medium to very coarse sand and granule-sized gravel; poorly sorted; subangular to subrounded; pale olive (10Y 6/2)
81	82	Sandy gravel, granule- to small pebble-sized gravel with some silt, very fine to very coarse sand and medium to large pebble-sized gravel; poorly sorted; angular to subrounded; pale olive (10Y 6/2)
82	83	Slightly gravelly sand, very fine to fine, with some silt, medium to coarse sand, and granule-sized gravel; poorly sorted; subangular to subrounded; pale olive (10Y 6/2)
83	85	Gravelly sand, fine, with some silt, very fine to very coarse sand, and granule- to small pebble-sized gravel; poorly sorted; subangular to subrounded; pale olive (10Y 6/2)
85	88	Gravelly sand, fine to medium, with some silt, very fine to very coarse sand, and granule- to large pebble-sized gravel; poorly sorted; angular to subrounded; pale olive (10Y 6/2)
88	90	Sand, fine to medium, with some silt, very fine to coarse sand, and occasional granule or small pebble-sized gravel; poorly sorted; subangular to subrounded; pale olive (10Y 6/2)
90	93	Sand, very fine to fine, with some silt and occasional granule- or small pebble-sized gravel; poorly sorted; subangular to subrounded; pale olive (10Y 6/2)
93	95	Sand, very fine to fine, with some silt and occasional granule- or small pebble-sized gravel; poorly sorted; subangular to subrounded; pale olive (10Y 6/2)
95	96	Sand, very fine, with some silt and occasional medium to coarse sand; well-sorted; subangular to subrounded; moderate yellowish brown (10YR 5/4)
96	97	Sand, very fine to fine, with some silt; and occasional medium to coarse sand; well-sorted; subangular to subrounded; moderate yellowish brown (10YR 5/4)
97	100	Sand, very fine, with some silt, fine sand, and occasional medium to very coarse sand; well-sorted; subangular to subrounded; moderate yellowish brown (10YR 5/4)
100	102	Sand, very fine, with some silt and fine sand; well-sorted; subangular to subrounded; pale olive (10Y 6/2)
102	104	Sand, very fine, with some silt; well-sorted; subangular to subrounded; pale olive (10Y 6/2)
104	108	Gravelly sand, very fine to fine, with some silt, medium to very coarse sand, and granule- to large pebble-sized gravel; poorly sorted; angular to subrounded; pale olive (10Y 6/2)

Table 11. Lithologic log for unsaturated-zone monitoring site SCF near Victorville, San Bernardino County, California

[Location shown in figure 1. Altitude of land surface, approximately 3,308 ft. Depth is in feet below land surface. Soil and rock color notation from Munsell Color (1994). Drilled by U.S. Geological Survey using ODEX, December 1, 1995. Total depth drilled 110 ft. Construction data and instrumentation given in table 1 and figure 14. ft, foot]

Depth (ft)		Description
From	To	
0	4	Sand, fine to medium, with some very fine to very coarse sand and occasional granule-sized gravel; poorly sorted; angular to rounded; olive gray (5Y 3/2)
4	6	Sand, fine to medium, with some very fine to very coarse sand and occasional granule-sized gravel; poorly sorted; angular to subrounded; light olive gray (5Y 5/2)
6	9	Gravelly sand, fine to coarse, with some very coarse sand and granule- to medium pebble-sized gravel; poorly sorted; angular to subrounded; olive gray (5Y 3/2)
9	10	Sand, fine to medium, with some very fine to very coarse; poorly sorted, angular to subrounded; olive gray (5Y 3/2)
10	11	Gravelly sand, fine to medium, with some very fine to very coarse sand and granule- to small pebble-sized gravel; subangular to subrounded; olive gray (5Y 3/2)
11	13	Silty sand, very fine to fine, with some medium to very coarse sand and silt, poorly sorted; subangular to subrounded; olive gray (5Y 3/2)
13	15	Silty sand, very fine to fine, with some medium to very coarse sand, silt, and occasional granule-sized gravel; poorly sorted; subangular to rounded; olive gray (5Y 3/2)
15	16	Slightly gravelly sand, very fine to fine, with some silt, medium to very coarse sand, and granule- to small pebble-sized gravel; poorly sorted; angular to subrounded; olive gray (5Y 3/2)
16	18	Gravelly sand, fine to medium, with some silt, very fine to very coarse sand and granule- to medium pebble-sized gravel; poorly sorted subangular to rounded; olive gray (5Y 3/2)
18	20	Sand, very fine, with some silt, fine sand and occasional medium to very coarse sand, and small- to medium pebble-sized gravel; moderately sorted; subangular to subrounded; olive gray (5Y 3/2)
20	21	Slightly gravelly sand, very fine to fine, with some silt, medium to very coarse sand, and occasional granule- to medium pebble-sized gravel; poorly sorted; subangular to subrounded; olive gray (5Y 3/2)
21	23	Slightly gravelly sand, fine, with some silt, very fine to very coarse sand, and occasional granule- to small pebble-sized gravel; poorly sorted; subangular to rounded; olive gray (5Y 3/2)
23	26	Slightly gravelly sand, fine, with some silt, very fine to very coarse sand, and granule- to medium pebble-sized gravel; poorly sorted; subangular to subrounded; olive gray (5Y 3/2)
26	31	Gravelly sand, fine, with some silt, very fine to very coarse sand, and granule- to large pebble-sized gravel; poorly sorted; subangular to rounded; olive (5Y 3/2)
31	33	Gravelly sand, fine to medium, with some silt, very fine to very coarse sand and granule- to large pebble-sized gravel; poorly sorted; subangular to rounded; olive gray (5Y 3/2)
33	36	Sand, fine to medium, with some very fine to very coarse sand and occasional silt and granule-sized gravel; poorly sorted; subangular to rounded; olive gray (5Y 3/2)

Table 11. Lithologic log for unsaturated-zone monitoring site SCF near Victorville, San Bernardino County, California—Continued

Depth (ft)		Description
From	To	
36	39	Sand, medium to coarse, with some fine sand and occasional granule- to small pebble-sized gravel; moderately sorted; angular to subrounded; olive gray (5Y 3/2)
39	40	Gravelly sand, medium to coarse, with some fine to very coarse sand and granule- to large pebble-sized gravel; poorly sorted; subangular to rounded; light olive gray (5Y 5/2)
40	41	Slightly gravelly sand, fine to medium, with some silt, very fine sand and occasional granule- to small pebble-sized gravel; poorly sorted; subangular to subrounded; dark yellowish brown (10YR 4/2)
41	43	Slightly gravelly sand, medium, with some fine to coarse sand and occasional granule- to small pebble-sized gravel; poorly sorted; subangular to rounded; olive gray (5Y 3/2)
43	44	Sand, very fine to fine, with some silt and occasional medium to very coarse sand; well-sorted; subangular to subrounded; dark yellowish brown (10YR 4/2)
44	46	Sand, very fine to fine, with some silt; well-sorted; subangular to subrounded; dark yellowish brown (10YR 4/2)
46	50	Sand, very fine to fine, with some silt and occasional medium to coarse sand; well-sorted; subangular to subrounded; dark yellowish brown (10YR 4/2)
50	53	Sand, very fine to fine, with some silt and occasional granule- to small pebble-sized gravel; moderately sorted; subangular to subrounded; dark yellowish brown (5Y 3/2)
53	54	Sand, medium, with some fine to coarse sand with occasional granule- to small pebble-sized gravel; moderately sorted; subangular to subrounded; olive gray (5Y 3/2)
54	55	Sand, fine to medium, with some very fine and occasional coarse sand and granule- to small pebble-sized gravel; well-sorted; subangular to subrounded; dark yellowish brown (10YR 4/2)
55	56	Sand, very fine, with some silt, fine and occasional medium to very coarse sand, and granule- to small pebble-sized gravel; poorly sorted; subangular to subrounded; pale olive (10Y 6/2)
56	58	Slightly gravelly sand, very fine, with some silt, fine and occasional medium to very coarse sand, and granule- to small pebble-sized gravel; poorly sorted; subangular to subrounded; pale olive (10Y 6/2)
58	59	Gravelly sand, very fine, with some silt, fine to very coarse sand and granule- to small pebble-sized gravel; poorly sorted; subangular to subrounded; pale olive (10YR 6/2)
59	60	Slightly gravelly sand, very fine, with some silt, fine to medium sand, and occasional coarse to very coarse sand, and granule- to small pebble-sized gravel; poorly sorted; subangular to subrounded; moderate yellowish brown (10YR 5/4)
60	61	Sand, very fine, with some silt, and fine sand, and occasional coarse to very coarse sand; moderately sorted, angular to subrounded; moderate yellowish brown (10YR 5/4)
61	66	Sand, very fine, with some silt and fine sand, occasional coarse to very coarse sand, and granule- to large pebble-sized gravel, moderately sorted; subangular to subrounded; moderate yellowish brown (10YR 5/4)
66	69	Sand, very fine, with some silt and occasional fine to very coarse sand; moderately sorted; subangular to subrounded; pale yellowish brown (10YR 6/2)

Table 11. Lithologic log for unsaturated-zone monitoring site SCF near Victorville, San Bernardino County, California—Continued

Depth [ft]		Description
From	To	
69	70	Slightly gravelly sand, very fine, with some silt, fine to very coarse sand, and occasional granule- to small pebble-sized gravel; poorly sorted; angular to subrounded; pale yellowish brown (10YR 6/2)
70	71	Slightly gravelly sand, fine to medium, with some silt, very fine sand, and coarse to very coarse sand with occasional granule- to small pebble-sized gravel; poorly sorted; angular to subrounded; pale yellowish brown (10YR 6/2)
71	72	Sand, very fine, with some silt and fine to medium sand; well-sorted; subangular to subrounded; pale yellowish brown (10YR 6/2)
72	74	Sand, fine, with some silt, very fine to coarse sand, and occasional granule-sized gravel; poorly sorted; angular to subrounded; pale yellowish brown (10YR 6/2)
74	75	Slightly gravelly sand, very fine to fine, with some silt, medium to very coarse sand, and occasional granule- to large pebble-sized gravel; poorly sorted; angular to subrounded; pale yellowish brown (10YR 6/2)
75	76	Slightly gravelly sand, very fine, with some silt, fine sand, and occasional medium to very coarse sand and granule- to small pebble-sized gravel; poorly sorted; angular to subrounded; pale yellowish brown (10YR 6/2)
76	77	Slightly gravelly sand, very fine to fine, with some silt, medium to very coarse sand, and occasional granule- to small pebble-sized gravel; poorly sorted; angular to subrounded; pale yellowish brown (10YR 6/2)
77	79	Sand, very fine to fine, with some silt and medium to very coarse sand, and occasional granule- to small pebble-sized gravel; poorly sorted; subangular to subrounded; pale yellowish brown (10YR 6/2)
79	80	Sand, very fine, with some silt and fine sand, and occasional medium to very coarse sand; moderately sorted; subangular to subrounded; pale yellowish brown (10YR 6/2)
80	81	Silty sand, very fine, and silt with occasional fine to coarse sand; well-sorted; subangular to subrounded; pale yellowish brown (10YR 6/2)
81	82	Slightly gravelly silty sand, very fine, silt with occasional coarse to very coarse sand, and granule- to small pebble-sized gravel; poorly sorted; angular to subrounded; pale yellowish brown (10YR 6/2)

Table 12. Lithologic log for unsaturated-zone monitoring site SUMMIT near Victorville, San Bernardino County, California

[Location shown in figure 1. Altitude of land surface, approximately 4,120 ft. Depth is in feet below land surface. Soil and rock color notation from Munsell Color (1994). Drilled by U.S. Geological Survey using ODEX, January 14, 1997. Total depth drilled 51 ft. Construction data and instrumentation given in table 1 and figure 15. ft, foot]

Depth (ft)		Description
From	To	
0	4	Silty sand, very fine to fine, with some medium to very coarse sand and occasional granule- to large pebble-sized gravel; poorly sorted; subangular to rounded; moderate yellowish brown (10YR 5/4)
4	5	Silty sand, very fine to fine, with some medium to very coarse sand and occasional granule- to large pebble-sized gravel; poorly sorted; subangular to subrounded; some well-cemented sands; moderate yellowish brown (10YR 5/4)
5	6	Silty sand, very fine to medium, with some coarse to very coarse sand and occasional granule- to medium pebble-sized gravel; poorly sorted; angular to subrounded; moderate yellowish brown (10YR 5/4)
6	7	Silty sand, very fine to fine, with some medium to very coarse sand and occasional granule- to medium pebble-sized gravel; poorly sorted; angular to subrounded; light brown (5YR 6/4)
7	9	Silty sand, very fine to medium, with some coarse to very coarse sand and occasional granule- to large pebble-sized gravel; poorly sorted; subangular to subrounded; light brown (5YR 6/4)
9	10	Sand, very fine to medium, with some silt, coarse to very coarse sand, and minor granule- to large pebble-sized gravel; poorly sorted; subangular to subrounded; light brown (5YR 6/4)
10	11	Sand, very fine to medium, with some silt, coarse to very coarse sand, and minor granule- to medium pebble-sized gravel; poorly sorted; subangular to subrounded; well-cemented; light brown (5Y 5/6)
11	12	Sand, very fine to medium, with some silt, coarse to very coarse sand, and minor granule- to medium pebble-sized gravel; poorly sorted; subangular to subrounded; occasional large schist pebbles; light brown (5Y 6/4)
12	14	Sand, very fine to medium, with some silt, coarse to very coarse sand, and minor granule- to small pebble-sized gravel; poorly sorted; subangular to subrounded; moderate yellowish brown (10YR 5/4)
14	15	Sand, very fine to medium, with some silt, coarse to very coarse sand, and minor granule- to small pebble-sized gravel; poorly sorted; whitish mineral present; light brown (5YR 5/6)
15	16	Slightly gravelly sand, medium, with some very fine to fine and coarse to very coarse sand, and minor granule- to medium pebble-sized gravel; poorly sorted; subangular to subrounded; light brown (5YR 5/6)
16	17	Gravelly silty sand, very fine to medium, with some silt, granule- to large pebble-sized gravel, and minor coarse to very coarse sand; poorly sorted; subangular to subrounded; moderate yellowish brown (10YR 5/4)
17	19	Slightly gravelly sand, very fine to medium, with some granule- to large pebble-sized gravel, and coarse to very coarse sand; poorly sorted; subangular to subrounded; moderate yellowish brown (10YR 5/4)
19	20	Slightly gravelly sand, very fine to medium, with some coarse to very coarse sand and minor granule to granule- to medium pebble-sized gravel; poorly sorted; subangular to subrounded; moderate yellowish brown (10YR 5/4)
20	21	Slightly gravelly sand, fine to medium, with some granule- to small pebble-sized gravel, minor silt, very fine and coarse to very coarse sand; poorly sorted; subangular to subrounded; grayish orange (10YR 7/4)
21	22	Sand, fine to coarse, with some silt, very fine and very coarse sand, and granule- to small pebble-sized gravel; poorly sorted; subangular to subrounded; moderate yellowish brown (10YR 5/4)

Table 12. Lithologic log for unsaturated-zone monitoring site SUMMIT near Victorville, San Bernardino County, California—Continued

Depth [ft]		Description
From	To	
22	24	Sand, fine to medium, with some silt to very fine sand, coarse to very coarse sand, and minor granule- to small pebble-sized gravel; poorly sorted; subangular to subrounded; moderate yellowish brown (10YR 5/4)
24	25	Sand, fine to medium, some coarse, minor silt to very fine sand, and very coarse sand, trace granule- to small pebble-sized gravel; poorly sorted; subangular to subrounded; moderate yellowish brown (10YR 5/4)
25	26	Sand, fine to medium, with some very fine to very coarse sand, minor silt and granule- to medium pebble-sized gravel; poorly sorted; subangular to subrounded; moderate yellowish brown (10YR 5/4)
26	27	Sand, fine to medium, with some very fine to very coarse sand, minor silt and granule- to medium pebble-sized gravel; poorly sorted; subangular to subrounded; moderate yellowish brown (10YR 5/4)
27	29	Sand, fine to medium, with some very fine to very coarse sand and granule- to small pebble-sized gravel, minor silt, poorly sorted; subangular to subrounded; moderate yellowish brown (10YR 5/4)
29	30	Sand, medium to coarse, with some very fine to very coarse sand and minor granule- to medium pebble-sized gravel; poorly sorted; subangular to subrounded; moderate yellowish brown (10YR 5/4)
30	31	Sand, fine to coarse, with some very fine to very coarse sand and granule- to small pebble-sized gravel; poorly sorted; subangular to subrounded; moderate yellowish brown (10YR 5/4)
31	32	Sand, fine to coarse, with some very fine to very coarse sand and minor granule- to small pebble-sized gravel; poorly sorted; subangular to subrounded; moderate yellowish brown (10YR 5/4)
32	34	Sand, fine to medium, with some very fine to very coarse sand, minor silt, and granule- to large pebble-sized gravel; poorly sorted; subangular to subrounded; pale yellowish brown (10YR 6/2)
34	35	Slightly gravelly sand, fine to coarse, granule- to medium pebble-sized gravel with some very fine to very coarse sand, minor silt; poorly sorted; angular to subrounded; pale yellowish brown (10YR 6/2)
35	36	Sandy gravel, granule- to large pebble-sized gravel with some coarse to very coarse and minor fine to medium sand; poorly sorted; subangular to rounded; pale yellowish brown (10YR 6/2)
36	37	Sand, fine to coarse, with some very fine to very coarse sand and minor granule- to large pebble-sized gravel; poorly sorted; subangular to rounded; pale yellowish brown (10YR 6/2)
37	39	No sample
39	41	Sand, fine to medium, with some silt, very fine to very coarse sand, and minor granule- to small pebble-sized gravel; poorly sorted; subangular to subrounded; pale yellowish brown (10YR 6/2)
41	45	Sand, fine to medium, with some very fine to coarse sand, minor silt, very coarse sand, and occasional granule- to small pebble-sized gravel; poorly sorted; subangular to subrounded; pale yellowish brown (10YR 6/2)
45	47	Sand, fine to coarse, with some very fine and very coarse sand, and minor granule- to small pebble-sized gravel; poorly sorted; subangular to subrounded; pale yellowish brown (10YR 6/2)

Table 13. Water content, bulk density, and water-potential data for selected core material from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994–97

[Data were analyzed at the Desert Research Institute, University of Nevada, Reno. Location of sites shown in figure 1. Date sites were drilled given in tables 2–12. Numbering system for sites is explained in text. ft, foot; g, gram; cm, centimeter; kPa, kilopascal; <, less than; —, no data. Methods for analysis of water content are gravimetric and volumetric. Methods for analysis of water potential are water activity meter, filter paper, and tensiometer]

Site	Depth interval (ft)	Water content		Bulk density (g/cm^3)	Water potential (kPa)		
		Gravimetric (g/g)	Volumetric (cm^3/cm^3)		Water activity meter	Filter paper	Tensiometer
UOGW	7.5–8	0.04	0.12	2.70	—	—	−5.1
	15–15.5	.05	.06	1.23	—	—	−1.9
	19–19.5	.06	.09	1.53	—	—	−2.7
	23.1–23.4	.04	.08	1.84	—	—	−1.9
	27.8–28.3	.04	.08	1.90	—	—	−1.8
	32.5–33	.04	.09	2.01	—	—	−3.5
	37.5–38	.17	.20	2.06	—	—	−0.3
	42.5–43	.03	.07	2.10	—	—	−6.8
	53–53.5	.04	.07	1.86	—	—	−4.9
	57–57.5	.02	—	—	—	—	−4.2
	62.5–63	.03	—	—	—	—	−2.9
	67–67.5	.04	—	—	—	—	−7.4
	72.5–78	.03	.06	1.99	—	—	−11
	78–78.5	.02	.04	1.90	—	—	−11
	83–83.5	.07	—	—	—	—	−11
	88–88.5	.04	.09	2.08	—	—	—
	93–93.5	.06	.11	1.79	—	—	−6.6
	98–98.5	.08	.17	2.06	—	—	−14
	103–103.5	.05	.10	1.99	—	—	−15
MOGW	7–7.5	.04	.06	1.55	—	—	−0.8
	12.5–13	.05	.09	1.85	—	—	−3.5
	19–19.5	.03	—	—	—	—	−3.6
	22–22.5	.08	.13	1.62	—	—	−6.1
	27.5–28	.03	.03	1.18	—	—	−4.6
	32.5–33	.03	.05	1.53	—	—	−2.1
	38–38.5	.05	.06	1.26	—	—	−1.3
	42.5–43	.04	.08	1.97	—	—	−2.1
	47.5–48	.04	—	—	—	—	−0.7
	53–53.5	.09	.19	2.02	—	—	−4.0
	57.5–58	.03	.07	2.01	—	—	−2.2
	62.5–63	.12	.24	1.97	—	—	−3.1
	67.5–68	.10	.15	1.51	—	—	−8.2
	73.5–74	.03	—	—	—	—	−2.9
	79.5–80	.04	.07	1.97	—	—	−6.4
	83.5–84	.02	—	—	—	—	—
	88–88.5	.02	.03	1.06	—	—	−3.2
	94–94.5	.06	.11	1.78	—	—	−12.9
	98–98.5	.09	.18	2.08	—	—	−17
	117–117.5	.02	.04	2.10	—	—	−5.3
	159–159.5	.10	.18	1.84	—	—	−7.8

Table 13. Water content, bulk density, and water-potential data for selected core material from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994–97—Continued

Site	Depth interval (ft)	Water content		Bulk density (g/cm^3)	Water potential (kPa)		
		Gravimetric (g/g)	Volumetric (cm^3/cm^3)		Water activity meter	Filter paper	Tensiometer
MOGW	177–177.5	0.02	0.04	2.21	—	—	–9.5
	217–217.5	.11	.17	1.52	—	—	—
	259.5–260	.05	.09	1.91	—	—	–20
	319–319.5	.06	.11	1.97	—	—	–4.8
	360–360.2	.03	.06	1.76	—	—	–7.6
	418.8–419	.09	.15	1.53	—	—	–7.1
	479.5–480	.05	.11	1.98	—	—	–3.5
LOGW-1	6.5–7	.02	.03	1.20	—	—	–47
	11–11.5	.03	.04	1.47	—	—	–14
	17.5–18	.04	.06	1.34	—	—	–1.8
	22–22.5	.12	.25	2.04	—	—	–8.0
	27–27.5	.06	.12	1.92	—	—	–3.0
	33–33.5	.07	.13	1.79	—	—	–2.9
	38–38.5	.03	.05	1.89	—	—	–6.8
	43–43.5	.04	.06	1.52	—	—	–26
	48–48.5	.13	.22	1.65	—	—	–27
	52–52.5	.15	.20	1.35	—	—	–17
	57–57.5	.14	.27	1.92	—	—	–25
	62–62.5	.04	.06	1.46	—	—	–21
	67–67.5	.06	.11	1.74	—	—	–27
	72–72.5	.11	.18	1.67	—	—	–41
	77–77.5	.20	.25	1.25	—	—	–22
	82–82.5	.03	—	—	—	—	–21
	87–87.5	.14	.24	1.65	—	—	–38
	92–92.5	.04	—	—	—	—	–24
	97–97.5	.05	—	—	—	—	–19
LOGW-2	7.5–8	.02	.03	1.64	–5,700	—	—
	12–12.5	.02	.04	1.89	–4,000	—	—
	17.5–18	.02	.04	1.80	–1,900	—	—
	22.5–23	.03	.05	1.76	–2,100	—	—
	27.5–28	.03	.04	1.71	–3,500	—	—
	32.5–33	.02	.04	1.63	–4,300	—	—
	37.5–38	.02	.03	1.74	–3,500	—	—
	42.5–43	.01	.03	1.98	–3,000	—	—
	47.5–48	.05	.07	1.42	–2,100	—	—
	52.5–53	.06	.09	1.49	–1,200	—	—
	57.5–58	.05	.09	1.64	–1,700	—	—
	62.5–63	.08	.12	1.59	–1,200	—	—
	67.5–68	.03	.05	1.81	–1,700	—	—
	72.5–73	.06	.10	1.83	–1,900	—	—
	77.5–78	.05	.09	1.86	–1,600	—	—
	82.5–83	.03	.05	1.77	–1,900	—	—

Table 13. Water content, bulk density, and water-potential data for selected core material from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994–97—Continued

Site	Depth interval (ft)	Water content		Bulk density (g/cm^3)	Water potential (kPa)		
		Gravimetric (g/g)	Volumetric (cm^3/cm^3)		Water activity meter	Filter paper	Tensiometer
LOGW-2	87.5–88	0.08	0.12	1.66	–760	–1,000	—
	92.5–93	.02	.03	1.87	–1,700	—	—
	97.5–98	.08	.14	1.75	–1,200	—	—
	102.5–103	.02	.04	1.87	–1,100	–1,000	—
OGF	7–7.66	.01	.02	1.69	–5,200	—	—
	12–12.66	.03	.05	1.79	–4,700	—	—
	17–17.66	.02	.04	1.72	–6,300	—	—
	22–22.66	.02	.04	1.84	–7,600	—	—
	27–27.66	.01	.02	1.72	–6,900	—	—
	31–31.5	.01	.02	2.11	–14,000	—	—
	37–37.5	.05	.09	1.68	–3,800	—	—
	42–42.5	.02	.03	2.04	–5,300	—	—
	47–47.5	.06	.10	1.69	–3,500	—	—
	52–52.5	.04	.07	1.60	–3,700	—	—
	58–58.5	.01	.02	1.55	–5,500	—	—
	63–63.5	.01	.03	2.15	–4,300	—	—
	68–68.5	.04	.09	2.04	–3,300	—	—
	72–72.5	.01	.03	1.96	–4,300	—	—
	77–77.5	.02	.05	2.68	–4,100	—	—
	82–82.5	.05	.13	2.59	–1,700	—	—
	87–87.5	.05	.13	2.50	–1,700	—	—
	92–92.5	.03	.08	2.49	–2,000	—	—
	97–97.5	.03	.08	2.55	–1,300	—	—
	103–103.5	.02	.04	2.41	–1,600	—	—
USCW	8.0–8.5	.02	.04	2.07	–270	—	—
	13.5–14	.04	.09	2.07	–270	—	—
	19–19.5	.03	.06	1.99	–270	—	—
	23.0–24	.03	.06	2.01	–410	—	—
	29–29.5	.04	.06	1.86	–340	—	—
	33.5–34	.03	.05	1.90	—	–14	—
	39–39.5	.03	.06	2.07	–140	—	—
	44–44.5	.02	.05	1.90	–140	—	—
	49–49.5	.03	.06	1.98	–140	—	—
	53.5–54	.03	.06	1.91	—	–9.0	—
	59–59.5	.03	.06	2.01	–410	—	—
	64–64.5	.02	.04	2.05	–140	—	—
	69–69.5	.02	.05	1.91	–550	—	—
	73.5–74	.01	.02	2.34	—	–110	—
	79–79.5	.03	.07	2.15	—	—	—
	89–89.5	.03	.06	1.94	–410	—	—
	98.5–99	.02	.04	2.28	—	–48	—

Table 13. Water content, bulk density, and water-potential data for selected core material from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994–97—Continued

Site	Depth interval (ft)	Water content		Bulk density (g/cm^3)	Water potential (kPa)		
		Gravimetric (g/g)	Volumetric (cm^3/cm^3)		Water activity meter	Filter paper	Tensiometer
MSCW-2	7.0–7.5	0.01	0.02	1.71	–880	—	—
	13–13.5	.02	.04	1.88	—	—	—
	18.5–19	.01	.02	1.99	–540	—	—
	22.5–23	.01	.03	2.13	–410	—	—
	28–28.5	.02	.04	2.12	—	—	—
	32.5–33	.06	.1	1.67	—	–26	—
	38.5–39	.05	.08	1.59	—	—	—
	42.5–43	.10	.15	1.48	—	–19	—
	48–48.5	.03	.05	1.88	—	—	—
	54–54.5	.06	.10	1.83	—	—	—
	58.5–59	.03	.06	1.95	–1,300	—	—
	63–63.5	.02	.03	1.49	–2,700	—	—
	68–68.5	.02	.04	2.00	–1,700	—	—
	74–74.5	.01	.03	2.03	–1,800	—	—
	77–77.5	.05	.08	1.60	–1,100	—	—
	83–83.5	.03	.04	1.55	–950	—	—
	89.5–90	.02	.04	1.99	–750	—	—
	94–94.5	.02	.04	1.87	–1,000	—	—
	98.5–99	.05	.08	1.75	–410	—	—
	108.5–109	.01	.02	1.95	—	—	—
	138.5–139	.03	.05	1.83	—	–120	—
	158.5–159	.1	.19	1.88	—	–60	—
	178.5–179	.02	.04	1.99	–470	—	—
	198.5–199	.03	.05	1.80	–340	—	—
	201–201.5	.04	.06	1.79	—	–110	—
	260.5–261	.02	.03	1.90	–680	—	—
	320–320.5	.05	.09	1.85	—	–100	—
	400–400.5	.02	.04	1.95	—	–170	—
LSCW	7–7.5	.02	.03	2.06	–610	—	—
	11.5–12	.02	.04	1.98	–540	—	—
	19–19.5	.03	.05	1.91	–610		—
	24–24.5	.03	.05	1.91	–540	—	—
	26.5–27	.05	.09	1.79	—	–30.5	—
	33.5–34	.01	.02	1.84	–7,400	—	—
	39–39.5	.03	.06	1.83	–5,700	—	—
	44–44.5	.03	.05	1.79	–7,100	—	—
	48.5–49	.02	.03	1.89	–6,200	—	—
	49.5–50	.02	.03	1.78	–6,600	—	—
	54–54.5	.01	.02	1.83	–6,900	—	—
	54.5–55	.01	.02	1.77	–9,100	—	—
	58.5–59	.04	.07	1.89	–4,400	—	—
	64–64.5	.02	.04	1.91	–3,900	—	—
	69–69.5	.01	.02	1.94	–4,400	—	—

Table 13. Water content, bulk density, and water-potential data for selected core material from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994–97—Continued

Site	Depth interval (ft)	Water content		Bulk density (g/cm^3)	Water potential (kPa)		
		Gravimetric (g/g)	Volumetric (cm^3/cm^3)		Water activity meter	Filter paper	Tensiometer
LSCW	74–74.5	0.01	0.02	2.03	−3,300	—	—
	79–79.5	.01	.03	2.04	−2,400	—	—
	84–84.5	.01	.02	1.99	−2,900	—	—
	89–89.5	.03	.06	1.84	−1,400	—	—
	94–94.5	.03	.05	1.80	−1,200	—	—
	98–98.5	.06	.09	1.57	−1,200	—	—
	109–109.5	.01	.03	1.85	−1,400	—	—
SCF	11–11.5	.01	.02	1.67	−5,200	—	—
	16.5–17	<.01	.01	1.93	−11,000	—	—
	21–21.5	<.01	.01	1.74	−7,700	—	—
	32–32.5	<.01	.01	2.04	−6,700	—	—
	37–37.5	.01	.02	1.83	−5,500	—	—
	41–41.5	.01	.02	1.54	−5,700	—	—
	42.5–43	.01	.02	1.97	−17,000	—	—
	46.5–47	.01	.02	1.75	−6,400	—	—
	52–52.5	.01	.02	1.97	−5,500	—	—
	56–56.5	.01	.02	1.84	−8,900	—	—
	57.5–58	.02	.03	1.33	−3,800	—	—
	63–63.5	.04	.06	1.68	−2,300	—	—
	68–68.5	.02	.04	1.60	−2,200	—	—
	72–72.5	.01	.03	1.88	−3,000	—	—
	73.5–74	.01	.02	1.82	−3,100	—	—
	77.5–78	.01	.02	1.68	−3,700	—	—
	83–83.5	.02	.04	1.69	−1,600	—	—
SUMMIT	7.5–8	.06	.09	1.51	−1,100	−1,000	—
	12.5–13	.06	.08	1.51	−550	−490	—
	17.5–18	.07	.11	1.69	−550	−500	—
	22.5–23	.06	.10	1.61	—	−110	—
	27.5–28	.05	.09	1.70	—	−27	—
	32.5–33	.06	.10	1.78	—	−12	—
	37.5–38	.06	.10	1.75	—	−8.0	—
	47.5–48	.02	.04	1.80	—	−1,100	—

Table 14. Particle-size data using the dry-sieve method for selected core material from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994–97

[Data were analyzed at the Desert Research Institute, University of Nevada, Reno. Location of sites shown in figure 1. Date sites were drilled given in tables 2–12. Numbering system for sites is explained in text. Grain-size descriptions modified from National Research Council, 1947; ft, foot]

Site	Depth interval (ft)	Percent finer than size indicated, in millimeters								
		Rock	Gravel		Very coarse sand	Coarse sand	Medium sand	Fine sand	Very fine sand	Silt
		19.0	9.52	4.76	2.0	0.85	0.417	0.25	0.149	0.075
OGW	7.5–8	98.3	96.0	92.1	81.1	62.6	46.2	35.9	26.8	16.7
	15–15.5	98.4	93.3	80.7	56.5	31.3	18.1	13.2	10.3	7.3
	19–19.5	100.0	100.0	99.4	93.4	64.4	34.9	19.8	12.9	8.3
	53–53.5	64.4	47.5	37.8	27.8	20.6	15.3	10.7	6.9	3.7
	67–67.5	86.0	68.8	51.6	33.1	19.5	12.4	9.4	7.1	4.5
	83–83.5	100.0	100.0	98.3	86.9	67.6	53.1	44.2	36.4	24.7
	103–103.5	100.0	100.0	94.4	79.0	51.9	33.8	23.8	16.9	10.3
MOGW	7–7.5	100.0	96.0	93.4	82.7	58.0	35.3	21.5	13.2	7.0
	27.5–28	86.7	83.3	78.9	71.9	54.4	29.4	16.0	9.1	5.0
	32.5–33	100.0	90.8	75.9	58.5	39.4	20.7	11.4	7.2	4.5
	47.5–48	77.3	71.2	64.3	51.7	38.8	30.9	27.6	26.1	25.2
	53–53.5	100.0	98.0	95.1	84.4	65.7	47.7	34.0	24.8	16.3
	73.5–74	79.8	76.6	70.5	61.0	39.7	19.6	10.3	5.9	3.4
	79.5–80	85.9	78.7	67.9	53.6	37.3	20.5	11.8	7.1	4.0
	88–88.5	31.9	22.3	20.1	16.5	10.8	5.8	3.6	2.4	1.6
	94–94.5	100.0	99.5	97.3	89.3	76.4	49.4	27.7	17.4	12.3
	98–98.5	100.0	100.0	97.2	82.6	61.0	45.0	35.5	26.2	18.0
	117–117.5	46.5	24.8	16.0	10.7	7.0	4.6	3.2	2.3	1.4
	319–319.5	66.0	58.4	55.7	52.0	45.9	37.4	30.3	23.0	14.5
LOGW-1	6.5–7	100.0	95.1	89.0	75.3	53.9	33.5	21.6	14.3	8.3
	17.5–18	75.6	54.0	44.1	33.3	22.6	16.0	10.7	6.4	4.0
	27–27.5	100.0	98.6	93.8	77.6	50.0	30.4	19.9	13.0	8.1
	43–43.5	73.8	69.3	67.7	65.1	60.8	54.7	49.3	41.2	25.4
	62–62.5	100.0	100.0	100.0	99.7	87.4	50.5	29.7	17.7	8.4
	77–77.5	100.0	100.0	100.0	98.8	94.4	87.1	80.1	71.6	52.3
	82–82.5	100.0	100.0	100.0	95.8	84.6	68.0	54.2	38.6	15.1
	92–92.5	100.0	100.0	99.6	98.6	93.2	78.8	56.1	34.6	18.7
	97–97.5	100.0	100.0	99.9	99.7	99.1	95.3	83.2	56.8	27.7
LOGW-2	7.5–8	100.0	96.8	92.2	80.6	58.2	37.1	24.6	16.5	10.7
	12–12.5	99.0	98.1	95.1	81.0	50.7	27.1	16.7	10.7	6.9
	17.5–18	96.6	88.5	80.2	63.9	35.8	19.3	11.2	6.8	4.3
	22.5–23	73.0	62.3	53.5	43.5	34.4	26.0	18.5	12.5	7.9
	27.5–28	92.2	89.7	86.5	75.0	49.7	29.3	18.9	12.4	7.8
	32.5–33	100.0	100.0	99.4	93.8	63.8	36.3	21.6	13.2	8.1
	37.5–38	100.0	98.4	97.6	86.1	46.9	24.0	15.0	9.9	6.2
	42.5–43	97.9	92.9	81.2	60.2	38.0	21.5	14.1	9.6	6.1
	47.5–48	100.0	100.0	99.8	99.0	97.3	95.1	91.8	82.8	61.3
	52.5–53	100.0	100.0	100.0	99.7	98.4	95.4	89.6	70.3	45.7
	57.5–58	100.0	100.0	100.0	99.6	93.9	75.6	53.6	31.5	17.4

Table 14. Particle-size data using the dry-sieve method for selected core material from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994–97—Continued

Site	Depth interval (ft)	Percent finer than size indicated, in millimeters								
		Rock 19.0	Gravel 9.52	Gravel 4.76	Very coarse sand 2.0	Coarse sand 0.85	Medium sand 0.417	Fine sand 0.25	Very fine sand 0.149	Silt 0.075
LOGW-2	62.5–63	100.0	99.1	97.3	96.7	95.4	89.0	72.7	51.5	37.6
	67.5–68	100.0	100.0	100.0	99.8	97.3	76.6	55.0	32.5	16.0
	72.5–73	100.0	100.0	99.9	99.8	99.2	94.2	80.0	58.0	31.9
	77.5–78	100.0	98.9	98.6	96.3	88.4	78.7	70.3	59.4	42.7
	82.5–83	100.0	99.8	99.5	98.0	94.0	80.7	65.5	49.5	32.4
	87.5–88	100.0	96.1	93.8	89.8	83.7	77.4	70.0	55.5	43.5
	92.5–93	100.0	99.9	99.3	94.9	80.2	47.9	26.3	14.6	7.0
	97.5–98	100.0	99.0	98.0	96.2	93.5	90.2	85.4	76.9	62.3
	102.5–103	100.0	99.5	99.1	95.8	72.0	50.1	35.1	22.6	12.1
OGF	17–17.66	100.0	100.0	96.1	90.7	90.7	52.3	30.7	24.9	15.3
	47–47.5	100.0	100.0	98.7	94.3	94.3	66.5	43.1	37.7	28.3
	68–68.5	100.0	100.0	96.6	92.0	92.0	70.1	52.4	46.3	34.2
	97–97.5	100.0	100.0	100.0	99.5	99.5	73.7	48.2	41.2	22.3
USCW	13.5–14	94.0	85.4	74.2	56.4	35.9	21.4	14.2	10.2	6.9
	33.5–34	80.6	60.2	48.9	35.1	22.9	14.1	8.6	5.2	2.7
	53.5–54	87.5	78.9	68.2	53.1	32.7	17.6	10.6	6.7	4.0
	73.5–74	37.5	29.6	24.4	18.4	12.0	7.2	5.0	3.7	2.5
	98.5–99	62.8	55.8	48.0	37.0	24.4	15.2	10.6	7.7	5.1
MSCW-2	7.0–7.5	100.0	98.0	93.3	83.4	63.3	39.3	21.7	9.8	3.4
	22.5–23	84.7	72.7	64.0	51.5	32.5	18.4	11.8	7.4	4.3
	32.5–33	98.9	97.6	95.1	90.0	78.7	63.5	50.4	37.8	22.9
	42.5–43	100.0	94.9	93.2	91.6	88.8	78.8	67.9	49.9	36.7
	58.5–59	100.0	96.0	92.4	86.2	76.5	64.1	48.6	28.3	17.2
	89.5–90	100.0	100.0	96.8	70.3	46.9	33.8	26.1	20.0	13.9
MSCW-2	98.5–99	99.1	98.8	98.6	98.4	97.6	92.0	80.8	65.7	41.5
	108.5–109	89.1	85.3	77.9	60.1	36.4	21.9	15.6	12.1	9.5
	138.5–139	100.0	98.4	96.6	89.6	77.8	58.6	44.8	33.6	19.8
	158.5–159	96.7	95.8	94.3	89.8	78.0	64.7	55.4	47.6	37.4
LSCW	11.5–12	95.9	93.4	88.5	75.5	50.2	26.6	14.5	8.1	4.7
	26.5–27	97.0	96.2	93.5	90.9	86.7	68.4	47.9	29.4	15.0
	33.5–34	100.0	99.2	98.0	93.5	77.9	47.8	25.6	12.4	4.5
	58.5–59	100.0	99.6	97.7	89.3	75.7	59.6	44.1	30.4	20.1
	94–94.5	100.0	99.9	97.1	87.0	73.0	61.9	53.4	42.9	27.2
SCF	11–11.5	96.4	95.7	93.0	87.7	74.5	55.4	38.4	24.4	12.9
	16.5–17	97.2	94.9	90.4	78.8	55.3	29.1	14.8	6.3	2.3
	21–21.5	83.4	82.2	80.9	74.5	51.7	25.8	13.8	8.0	4.5
	46.5–47	100.0	100.0	100.0	99.9	99.3	85.2	52.3	27.2	10.8
	63–63.5	100.0	99.8	98.6	94.6	84.0	68.0	53.2	38.8	24.2

Table 14. Particle-size data using the dry-sieve method for selected core material from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994–97—Continued

Site	Depth interval (ft)	Percent finer than size indicated, in millimeters								
		Rock 19.0	Gravel 9.52	Gravel 4.76	Very coarse sand 2.0	Coarse sand 0.85	Medium sand 0.417	Fine sand 0.25	Very fine sand 0.149	Silt 0.075
SCF	83–83.5	100.0	99.8	99.8	99.6	97.8	90.9	79.7	58.0	30.2
SUMMIT	7.5–8	100.0	98.2	94.8	81.0	49.2	28.2	19.6	13.2	7.8
	12.5–13	100.0	93.2	86.3	66.9	37.8	21.2	14.7	10.6	6.9
	17.5–18	100.0	97.0	92.6	76.8	47.5	27.3	17.9	12.7	9.3
	22.5–23	100.0	99.9	96.8	85.1	58.1	33.0	20.2	12.8	8.1
	27.5–28	100.0	98.5	94.6	81.0	51.1	25.1	13.0	7.3	4.7
	32.5–33	100.0	98.1	94.9	84.6	58.4	32.4	17.9	9.2	5.1
	37.5–38	100.0	99.6	97.2	90.0	68.8	45.5	27.8	14.7	6.9
	47.5–48	97.0	83.3	72.0	52.0	29.7	14.7	8.1	4.8	2.8

Table 15. Particle-size data using the hygrometer method for selected core material from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994–97

[Data were analyzed at the Desert Research Institute, University of Nevada, Reno. Location of sites shown in figure 1. Date sites were drilled given in tables 2–12. Numbering system is explained in text. Grain-size descriptions modified from National Research Council, 1947. ft, foot; —, no data]

Site	Depth interval (ft)	Percent finer than size indicated, in millimeters						
		Clay						
		0.0365	0.0235	0.0138	0.0097	0.0069	0.0034	0.0014
UOGW	7.5–8	9.6	3.7	2.2	1.5	1.5	0.7	0.7
	15–15.5	2.8	1.7	1.1	1.1	1.1	.8	.8
	19–19.5	6.4	4.5	3.6	2.7	2.7	2.3	1.8
	53–53.5	2.3	1.3	1.1	1.0	.8	.3	.3
	67–67.5	3.9	2.8	2.2	2.2	1.4	1.1	1.1
	83–83.5	3.4	1.7	1.7	1.7	1.7	.9	.9
	103–103.5	5.9	4.4	3.7	2.9	2.6	1.5	1.5
MOGW	7–7.5	4.9	4.9	4.1	3.3	2.5	2.1	1.6
	27.5–28	3.9	3.2	2.4	2.4	2.4	1.6	1.6
	32.5–33	3.3	2.8	2.2	2.2	1.7	1.7	1.7
	47.5–48	1.9	1.5	1.5	1.1	1.1	1.1	.9
	53–53.5	8.0	.4	.4	.4	.4	.4	.4
	73.5–74	2.8	1.4	1.4	1.4	1.4	1.4	1.4
	79.5–80	2.6	2.0	1.5	1.5	1.3	1.3	1.3
	88–88.5	1.2	.9	.7	.6	.5	.5	.5
	94–94.5	5.3	3.5	2.6	1.8	1.8	1.8	.9
	98–98.5	6.4	4.0	3.2	3.2	2.4	2.0	1.6
	117–117.5	1.0	.7	.6	.4	.3	.1	.1
	319–319.5	12.1	5.6	1.0	1.0	1.0	.5	.5
LOGW-1	6.5–7	3.6	2.9	2.4	2.4	1.9	1.4	.5
	17.5–18	.4	.3	.3	.3	.3	.3	.3
	27–27.5	1.6	.8	.8	.8	.8	.8	.8
	43–43.5	3.7	3.0	2.2	1.5	1.5	1.5	1.5
	62–62.5	6.0	4.0	3.0	2.0	2.0	2.0	2.0
	77–77.5	1.0	.0	.0	.0	.0	.0	.0
	82–82.5	3.8	1.9	1.9	1.9	1.4	1.4	1.4
	92–92.5	9.8	6.9	4.9	4.4	3.9	3.0	2.0
	97–97.5	8.0	5.0	4.0	3.0	2.0	1.0	.5
OGF	17–17.66	8.4	6.7	5.9	5.0	5.0	3.4	1.7
	47–47.5	22.4	2.8	.9	.9	.9	.9	.9
	68–68.5	5.9	5.0	5.0	4.2	3.4	1.7	1.7
	97–97.5	7.8	5.9	4.9	3.9	3.9	2.0	2.0
USCW	13.5–14	.8	.6	.4	.4	.4	.2	.2
	33.5–34	2.8	1.7	1.1	.6	.6	.6	.6
	53.5–54	2.8	2.0	1.2	1.0	.4	.4	.4
	69–69.5	5.3	3.7	2.6	2.1	1.6	1.1	.8
	98.5–99	4.9	3.3	2.2	1.6	1.1	1.1	.8

Table 15. Particle-size data using the hygrometer method for selected core material from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994–97—Continued

Site	Depth interval (ft)	Percent finer than size indicated, in millimeters						
		Clay						
		0.0365	0.0235	0.0138	0.0097	0.0069	0.0034	0.0014
MSCW-2	7.0–7.5	0.4	0.3	0.3	0.3	0.3	0.1	0.1
	22.5–23	2.1	1.6	1.1	.8	.5	.5	.5
	32.5–33	1.8	1.1	.8	.6	.6	.3	.1
	42.5–43	2.2	1.4	.9	.7	.5	.3	.1
	58.5–59	.7	.6	.4	.4	.3	.1	.1
	89.5–90	3.5	2.2	1.9	1.6	1.0	.5	.3
	98.5–99	.0	—	—	—	—	—	—
	108.5–109	2.0	1.2	1.2	.8	.4	.4	.4
	138.5–139	1.0	.6	.5	.4	.3	.1	.1
	158.5–159	.9	.5	.4	.2	.2	.2	.0
	201–201.5	1.4	1.0	.7	.5	.4	.2	.1
	260.5–261	2.7	2.3	1.5	.8	.8	.4	.4
	320–320.5	1.8	1.3	1.0	.8	.7	.3	.2
	400–400.5	.8	.5	.5	.3	.2	.1	.1
LSCW	11.5–12	1.2	1.0	.7	.5	.5	.2	.2
	26.5–27	.4	.3	.2	.2	.1	.1	.0
	33.5–34	.2	.1	.1	.1	.1	.0	—
	58.5–59	1.7	.0	—	—	—	—	—
	94–94.5	1.5	1.1	.7	.5	.3	.1	.1
SCF	11–11.5	.9	.7	.4	.3	.2	.1	.1
	16.5–17	1.2	1.0	.7	.5	.5	.2	.2
	21–21.5	.4	.3	.1	.1	.1	.1	.1
	63–63.5	.3	.2	.2	.1	.1	.1	.1
	83–83.5	.1	.0	—	—	—	—	—

Table 16. Water-retention data using the pressure-plate method for selected core material from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994–95

[Data were analyzed at the Desert Research Institute, University of Nevada, Reno. Location of sites shown in figure 1. Date sites were drilled given in tables 2-4 and 7. Numbering system for sites is explained in text. ft, foot; kPa, kilopascal; —, no data]

Site	Depth interval (ft)	Volumetric water content, in cubic centimeter per cubic centimeter, at indicated water potential, in kPa						
		-2	-3	-5	-50	-100	-500	-1,500
UOGW	15–15.5	—	0.269	0.178	0.144	0.142	0.128	0.094
	83–83.5	—	.326	.290	.191	.146	.095	.095
MOGW	7–7.5	—	.279	.153	.074	.063	.038	.013
	73–73.5	—	.263	.106	.070	.058	.025	.020
	98–98.5	—	.326	.306	.216	.179	.005	.005
	319–	—	.333	.313	.239	.219	.227	.195
LOGW	6.5–7	0.306	—	.182	.097	.077	.056	.042
	17.5–18	—	.302	.259	.215	.199	.184	.184
	82–82.5	—	.363	.304	.091	.089	.079	.063
OGF	7–7.66	—	.313	.272	.146	.121	.066	.065
	27–27.66	—	.243	.152	.085	.072	.055	.026

Table 17. Water-retention data using the water-activity-meter method for selected core material from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994–95

[Data were analyzed at the Desert Research Institute, University of Nevada, Reno. Location of sites shown in figure 1. Date sites were drilled given in tables 2–4 and 7. Numbering system for sites is explained in text. WP is water potential, in 10^{-3} kilopascal. WC is volumetric water content, in cubic centimeter per cubic centimeter. ft, foot; —, no data]

Site	Depth interval (ft)	WP	WC	WP	WC	WP	WC	WP	WC	WP	WC	WP	WC	WP	WC	WP	WC	WP	WC	WP	WC
UOGW	15–15.5	—	—	—	—	-4.2	0.021	—	—	-50.8	0.015	—	—	-97.9	0.012	-116	0.009	—	—	-157	0.008
	83–83.5	—	—	—	—	-5.7	.030	-24.5	0.026	-44.2	.024	—	—	—	—	-114	.017	-128	0.013	—	—
MOGW	7–7.5	—	—	-1.4	0.042	-6.1	.028	-22.3	.014	-44.1	.018	-71.1	.020	-105	.008	—	—	—	—	—	—
	73–73.5	—	—	-1.4	.015	-4.5	.007	-28.8	.008	—	—	-60.1	.006	-109	.003	—	—	-131	.008	—	—
	98–98.5	—	—	—	—	—	—	-15.3	.028	-40.4	.023	-69.8	.019	—	—	—	—	—	—	-198	.008
	319–319.5	—	—	—	—	—	—	-24.1	.049	—	—	-73.7	.038	—	—	—	—	-127	.021	-181	.022
LOGW-1	6.6–7	-0.8	2.8	-1.9	.022	-5.5	.018	—	—	-39.2	.007	-45.0	.005	-89.5	.003	—	—	—	—	—	—
	17.5–18	—	—	—	—	-7.4	.024	-21.5	.018	-48.8	.012	-67.3	.008	-92.7	.008	-106	.008	—	—	—	—
	82–82.5	—	—	-1.5	.021	—	—			-34.1	.004	—	—	—	—	-104	.003	-129	.002	-144	.007
OGF	17–17.66	—	—	—	—	—	—	—	—	—	—	-80.6	.010	-97.9	.006	-102	.007	-132	.009	-145	.004
	27–17.66	—	—	—	—	—	—	—	—	-32.6	.007	—	—	-90.3	.003	-111	.010	-138	.008	-183	.008

Table 18. Chemical composition of leachate for selected core material and cuttings from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994–97

[Data were analyzed at U.S. Geological Survey laboratory in San Diego, California, except specific conductance was analyzed in the field. Location of sites shown in figure 1. Date sites were drilled given in tables 2–12. Numbering system for sites is explained in text. Sample depth in feet below land surface. ft, foot; µS/cm, microsiemen per centimeter at 25° Celsius; mg/L, milligram per liter; —, no data; <, less than value shown]

Site	State well no.	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)	Depth to sample (ft)	Specific conductance (µS/cm)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Nitrogen, dissolved (mg/L as N)
UOGW	3N/5W-5N1	2	3	—	66	10	3.1	0.5	<0.02
		4	5	—	47	4	.9	<.2	<.02
		6	7	—	43	<3	.9	.2	<.02
		8	10	—	18	<3	1.0	<.2	.28
		—	—	10.0	23	<3	1.0	<.2	.28
		11	12	—	14	<3	1.0	<.2	<.02
		12	13	—	15	—	—	—	—
		13	14	—	18	<3	.3	<.2	<.02
		13	15	—	15	<3	.8	.2	.05
		—	—	15.0	16	<3	.8	.2	.05
		17	18	—	16	—	—	—	—
		18	19	—	15	<3	1.2	<.2	<.02
		19	20	—	18	<3	1.0	<.2	<.02
		19	21	—	18	—	—	—	—
		—	—	21.0	15	—	—	—	—
		22	23	—	17	<3	.5	.2	<.02
		23	24	—	19	—	—	—	—
		24	25	—	19	<3	.4	<.2	<.02
		23	25	—	18	<3	1.0	<.2	<.02
		—	—	25.4	14	<3	1.0	<.2	<.02
		26	27	—	23	—	—	—	—
		27	28	—	17	—	—	—	—
		28	29	—	14	<3	.3	<.2	<.02
		28	30	—	18	<3	1.0	<.2	<.02
		—	—	29.8	14	<3	1.0	<.2	<.02
		31	32	—	20	—	—	—	—
		32	33	—	18	—	—	—	—
		33	34	—	17	3	1.2	<.2	<.02
		33	35	—	20	<3	.9	<.2	.14
		—	—	34.5	—	<3	.9	<.2	.14
		36	37	—	15		—	—	—
		37	38	—	23		—	—	—
		38	39	—	34	3	1.3	<.2	<.02
		38	40	—	35	<3	1.2	<.2	.22
		—	—	39.5	30	<3	1.2	<.2	.22
		41	42	—	23	—	—	—	—

Table 18. Chemical composition of leachate for selected core material and cuttings from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994-97—Continued

Site	State well no.	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)	Depth to sample (ft)	Specific conductance (µS/cm)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Nitrogen, dissolved (mg/L as N)
UOGW	3N/5W-5N1	42	43	—	23	—	—	—	—
		43	44	—	29	3	1.2	<0.2	<0.02
		43	45	—	36	<3	.7	<.2	.14
		—	—	44.5	20	<3	.7	<.2	.14
		45	47	—	32	—	—	—	—
		47	48	—	30	—	—	—	—
		48	49	—	25	<3	.9	<.2	<.02
		48	50	—	15	5	1.2	.2	.16
		—	—	49.5	—	5	1.2	.2	.16
		51	52	—	22	—	—	—	—
		52	53	—	16	—	—	—	—
		53	54	—	16	3	.9	<.2	<.02
		53	55	—	—	<3	1.0	.2	.32
		—	—	55.0	18	<3	1.0	.2	.32
		56	57	—	22	—	—	—	—
		57	58	—	22	—	—	—	—
		58	59	—	23	3	.9	<.2	<.02
		57	59	—	16	<3	.9	<.2	.09
		—	—	59.0	14	<3	.9	>.2	.09
		60	61	—	16	—	—	—	—
		61	62	—	16	—	—	—	—
		62	63	—	16	<3	.6	<.2	<.02
		63	65	—	21	<3	.6	<.2	.17
		—	—	64.5	14	<3	.6	<.2	.17
		65	66	—	16	—	—	—	—
		66	67	—	—	—	—	—	—
		67	68	—	19	<3	.8	<.2	<.02
		67	69	—	—	<3	1.0	<.2	<.02
		—	—	69.0	46	<3	1.0	<.2	<.02
		70	71	—	57	—	—	—	—
		71	72	—	64	—	—	—	—
		72	73	—	52	<3	.6	.2	<.02
		73	74	—	58	<3	.8	.2	<.02
		—	—	73.0	—	<3	.8	.2	<.02
		74	75	—	50	—	—	—	—
		75	76	—	56	<3	.8	<.2	<.02
		76	77	—	49	—	—	—	—
		78	80	—	44	<3	.6	<.2	<.02
		—	—	80.0	43	<3	.6	<.2	<.02
		81	82	—	50	—	—	—	—
		82	83	—	40	—	—	—	—
		83	84	—	37	3	1.1	<.2	<.02
		83	85	—	26	<3	.9	.3	.57
		—	—	85.0	48	<3	.9	.3	.57
		86	87	—	52	—	—	—	—

Table 18. Chemical composition of leachate for selected core material and cuttings from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994-97—Continued

Site	State well no.	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)	Depth to sample (ft)	Specific conductance (µS/cm)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Nitrogen, dissolved (mg/L as N)
UOGW	3N/5W-5N1	87	88	—	46	—	—	—	—
		88	89	—	52	<3	0.9	<0.2	<0.02
		88	90	—	58	<3	1.1	<.2	.37
		—	—	90.0	34	<3	1.1	<.2	.37
		91	92	—	53	—	—	—	—
		92	93	—	39	—	—	—	—
		93	94	—	32	3	1.1	<.2	<.02
		93	95	—	22	—	—	—	—
		—	—	95.0	15	—	—	—	—
		96	97	—	22	—	—	—	—
		97	98	—	15	—	—	—	—
		98	99	—	26	<3	.7	<.2	<.02
		98	100	—	—	<3	1.4	.5	.33
		—	—	100.0	15	<3	1.4	.5	.33
		101	102	—	21	—	—	—	—
		102	103	—	22	—	—	—	—
		103	104	—	17	<3	.9	<.2	<.02
		104	105	—	—	<3	.7	.6	.3
		—	—	104.5	17	<3	.7	.6	.3
MOGW	4N/5W-21H1	0	1	—	12	—	—	—	—
		2	3	—	—	<3	1.1	<.2	<.02
		6	7	—	14	3	1.0	.3	.95
		7	10	—	11	5	2.3	<.2	.52
		—	—	10.0	11	5	2.3	<.2	.52
		12	13	—	24	—	—	—	—
		13	15	—	39	5	2.4	<.2	.18
		—	—	14.5	18	5	2.4	<.2	.18
		16	17	—	49	—	—	—	—
		18	19	—	23	5	.7	<.2	<.02
		19	21	—	76	4	2.1	.3	.06
		—	—	21.0	17	4	2.1	.3	.06
		22	23	—	50	4	1.6	.3	.04
		23	24	—	23	—	—	—	—
		24	25	—	22	8	2.9	<.2	<.02
		22	24	—	21	—	—	—	—
		—	—	24.0	11	—	—	—	—
		25	26	—	13	—	—	—	—
		26	27	—	11	—	—	—	—
		27	28	—	9	5	—	—	—
		28	30	—	9	—	2.5	<.2	.03
		—	—	29.5	9	—	2.5	<.2	.03
		31	32	—	8	—	—	—	—
		32	33	—	10	—	—	—	—
		33	34	—	10	3	1.9	<.2	<.02
		33	35	—	25	6	2.7	<.2	<.02

Table 18. Chemical composition of leachate for selected core material and cuttings from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994-97—Continued

Site	State well no.	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)	Depth to sample (ft)	Specific conductance (µS/cm)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Nitrogen, dissolved (mg/L as N)
MOGW	4N/5W-21H1	—	—	34.5	11	6	2.7	<0.2	<0.02
		36	37	—	20	—	—	—	—
		37	38	—	29	—	—	—	—
		38	39	—	28	—	—	—	—
		38	40	—	33	<3	.6	<.2	<.02
		—	—	40.0	15	<3	.6	<.2	<.02
		41	42	—	24	—	—	—	—
		42	43	—	23	4	.9	.3	.02
		43	44	—	22	—	—	—	—
		43	45	—	31	6	2.2	<.2	<.02
		—	—	44.5	20	6	2.2	<.2	<.02
		46	47	—	21	—	—	—	—
		47	48	—	34	—	—	—	—
		48	49	—	44	<3	1.3	<.2	<.02
		48	50	—	27	<3	1.0	<.2	.05
		—	—	49.5	18	<3	1.0	<.2	.05
		51	52	—	29	—	—	—	—
		52	53	—	36	<3	1.2	<.2	.02
		53	54	—	38	—	—	—	—
		53	55	—	17	6	2.6	<.2	.07
		—	—	54.5	36	6	2.6	<.2	.07
		56	57	—	21	—	—	—	—
		57	58	—	18	—	—	—	—
		58	59	—	20	6	1.0	.3	<.02
		58	60	—	16	—	—	—	—
		—	—	59.5	14	—	—	—	—
		61	62	—	18	—	—	—	—
		62	63	—	14	—	—	—	—
		63	64	—	34	4	1.5	<.2	<.02
		63	65	—	36	5	1.4	.2	.33
		—	—	64.5	28	5	1.4	.2	.33
		66	67	—	28	—	—	—	—
		67	68	—	27	—	—	—	—
		68	69	—	32	<3	.8	<.2	<.02
		68	70	—	15	<3	.7	<.2	<.02
		—	—	69.5	—	<3	.7	<.2	<.02
		71	72	—	15	—	—	—	—
		72	73	—	24	—	—	—	—
		73	74	—	22	—	—	—	—
		74	76	—	—	4	1.7	<.2	.10
		79	81	—	20	4	1.2	.2	<.02
		—	—	81.0	13	4	1.2	.2	<.02
		82	83	—	23	—	—	—	—
		83	84	—	22	—	—	—	—

Table 18. Chemical composition of leachate for selected core material and cuttings from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994-97—Continued

Site	State well no.	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)	Depth to sample (ft)	Specific conductance (µS/cm)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Nitrogen, dissolved (mg/L as N)
MOGW	4N/5W-21H1	84	85	—	19	—	—	—	—
		84	86	—	25	—	—	—	—
		—	—	85.5	10	—	—	—	—
		87	88	—	20	—	—	—	—
		88	89	—	35	—	—	—	—
		89	90	—	39	4	1.4	<0.2	<0.02
		88	89	—	41	—	—	—	—
		—	—	89.0	18	—	—	—	—
		91	92	—	24	—	—	—	—
		92	93	—	68	—	—	—	—
		93	94	—	51	3	.5	<.2	<.02
		94	96	—	46	—	—	—	—
		—	—	95.5	39	—	—	—	—
		97	98	—	32	—	—	—	—
		98	99	—	42	—	—	—	—
		99	100	—	36	4	.5	<.2	<.02
		98	100	—	39	—	—	—	—
		—	—	100.0	39				
		105	106	—	34	—	—	—	—
		110	111	—	15	—	—	—	—
		115	116	—	13	—	—	—	—
		120	121	—	17	—	—	—	—
		117	119	—	17	—	—	—	—
		—	—	119.0	17	—	—	—	—
		119	124	—	18	—	—	—	—
		124	129	—	24	13	2.0	.2	<.02
		129	139	—	23	9	1.7	<.2	<.02
		145	146	—	29	—	—	—	—
		150	151	—	23	—	—	—	—
		155	156	—	32	—	—	—	—
		160	161	—	41	—	—	—	—
		159	161	—	48	—	—	—	—
		—	—	160.5	48	—	—	—	—
		—	—	178.5	34	—	—	—	—
		184	185	—	43	7	2.5	<.2	<.02
		189	190	—	52	11	3.2	<.2	<.02
		194	195	—	63	—	—	—	—
		199	200	—	53	6	2.6	<.2	.07
		198	200	—	57	—	—	—	—
		—	—	199.5	57	—	—	—	—
		205	206	—	66	10	3.3	<.2	.06
		210	211	—	56	—	—	—	—
		215	216	—	60	8	2.4	<.2	.10
		220	221	—	59	7	2.2	<.2	.09
		217	219	—	71	—	—	—	—

Table 18. Chemical composition of leachate for selected core material and cuttings from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994-97—Continued

Site	State well no.	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)	Depth to sample (ft)	Specific conductance (µS/cm)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Nitrogen, dissolved (mg/L as N)
MOGW	4N/5W-21H1	—	—	218.5	71	—	—	—	—
		224	225	—	93	47	6.4	<0.2	0.18
		229	230	—	71	24	3.5	<.2	<.02
		234	235	—	84	25	4.3	<.2	<.02
		239	240	—	75	28	3.1	<.2	<.02
		238	240	—	49	—	—	—	—
		—	—	240.0	49	—	—	—	—
		245	246	—	64	36	3.5	<.2	<.02
		259	261	—	42	3	1.4	<.2	.06
		—	—	260.5	42	3	1.4	<.2	.06
		275	276	—	39	<3	.9	<.2	.05
		280	281	—	47	<3	.9	<.2	.03
		285	286	—	34	<3	1.3	<.2	<.02
		290	291	—	43	<3	.7	<.2	.06
		295	296	—	43	<3	.9	<.2	.03
		300	301	—	48	4	1.8	<.2	<.02
		370	371	—	—	9	1.5	<.2	.07
		390	391	—	—	4	.7	<.2	.04
		418	420	—	—	5	1.6	<.2	.17
		479	481	—	56	3	1.1	<.2	.15
		—	—	480.5	56	3	1.1	<.2	.15
		640	641	—	126	—	—	—	—
LOGW-1	4N/5W-1C2	0	1	—	107	—	—	—	—
		3	4	—	273	—	—	—	—
		4	5	—	258	—	—	—	—
		5	6	—	182	26	12	<.2	.02
		6.5	8.5	—	22	4	1.8	<.2	.06
		9	10	—	106	—	—	—	—
		10	11	—	77	—	—	—	—
		11	12	—	86	12	4.9	<.2	.03
		11	13	—	41	—	—	—	—
		14	15	—	42	5	3.1	<.2	<.02
		15	16	—	32	—	—	—	—
		16	17	—	30	<3	1.8	<.2	.06
		17	19	—	29	<3	1.7	<.2	.12
		—	—	19.0	19	<3	1.7	<.2	.12
		20	21	—	27	—	—	—	—
		21	22	—	23	—	—	—	—
		22	23	—	29	4	1.7	<.2	.02
		22	24	—	44	7	3.1	<.2	.12
		—	—	24.0	58	7	3.1	<.2	.12
		25	26	—	42	—	—	—	—
		26	27	—	38	—	—	—	—
		27	28	—	36	7	1.7	<.2	.09
		27	29	—	45	—	—	—	—

Table 18. Chemical composition of leachate for selected core material and cuttings from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994-97—Continued

Site	State well no.	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)	Depth to sample (ft)	Specific conductance (µS/cm)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Nitrogen, dissolved (mg/L as N)
LOGW-1	4N/5W-1C2	30	31	—	45	18	2.3	<0.2	0.12
		31	32	—	52	—	—	—	—
		32	33	—	30	7	2.0	<.2	.04
		33	35	—	53	—	—	—	—
		—	—	35.0	52	—	—	—	—
		36	37	—	49	12	1.6	<.2	.05
		37	39	—	40	6	1.8	<.2	.04
		38	40	—	59	4	.5	<.2	<.02
		—	—	40.0	28	4	.5	<.2	<.02
		40	41	—	36	—	—	—	—
		41	42	—	34	—	—	—	—
		42	43	—	41	5	1.5	<.2	<.02
		43	45	—	56	41	8.7	<.2	.31
		—	—	45.0	120	41	8.7	<.2	.31
		46	47	—	52	—	—	—	—
		47	48	—	54	—	—	—	—
		48	49	—	57	20	.3	<.2	<.02
		48	50	—	68	41	8.7	<.2	.31
		—	—	50.0	88	41	8.7	<.2	.31
		50	51	—	74	—	—	—	—
		51	52	—	64	—	—	—	—
		52	53	—	76	14	2.6	<.2	.06
		53	54	—	80	—	—	—	—
		—	—	54.0	81	—	—	—	—
		55	56	—	78	35	4.0	<.2	.06
		56	57	—	72	—	—	—	—
		57	58	—	137	38	4.4	.2	<.02
		57	59	—	129	44	8.1	.2	.20
		—	—	59.0	—	44	8.1	.2	.20
		57	59	—	106	—	—	—	—
		60	61	—	100	—	—	—	—
		61	62	—	109	—	—	—	—
		62	63	—	93	36	9.5	<.2	<.02
		62	64	—	82	18	5.5	<.2	.08
		—	—	64.0	—	18	5.5	<.2	.08
		65	66	—	65	—	—	—	—
		66	67	—	72	—	—	—	—
		67	68	—	88	28	11	.2	<.02
		68	70	—	105	23	15	.2	.11
		—	—	69.5	117	23	15	.2	.11
		70	71	—	97	—	—	—	—
		71	72	—	102	—	—	—	—
		72	73	—	188	92	36	.4	<.02
		72	74	—	176	100	55	.2	.32
		—	—	74.0	208	100	55	.2	.32

Table 18. Chemical composition of leachate for selected core material and cuttings from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994-97—Continued

Site	State well no.	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)	Depth to sample (ft)	Specific conductance (µS/cm)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Nitrogen, dissolved (mg/L as N)
LOGW-1	4N/5W-1C2	75	76	—	224	—	—	—	—
		76	77	—	247	—	—	—	—
		77	78	—	262	37	92	0.3	<0.02
		77	79	—	212	100	55	.2	.32
		—	—	79.0	178	100	55	.2	.32
		80	81	—	228	—	—	—	—
		81	82	—	245	—	—	—	—
		82	83	—	151	<3	110	.5	<.02
		82	84	—	128	—	—	—	—
		85	86	—	76	3	9.3	<.2	<.02
		86	87	—	79	—	—	—	—
		87	88	—	118	—	—	—	—
		87	89	—	133	<3	1.0	.2	.12
		—	—	89.0	37	<3	1.0	.2	.12
		90	91	—	94	—	—	—	—
		91	92	—	103	—	—	—	—
		92	93	—	115	<3	1.0	<.2	.17
		92	94	—	105	—	—	—	—
		—	—	94.0	74	—	—	—	—
		95	96	—	112	<3	1.2	<.2	.11
		96	97	—	101	—	—	—	—
		—	—	97.0	128	<3	3.8	<.2	.15
		97	99	—	112	23	.6	<.2	.14
		—	—	99.0	134	23	.6	<.2	.14
		100	101	—	131	—	—	—	—
		101	102	—	106	—	—	—	—
		102	103	—	79	<3	1.0	<.2	<.02
LOGW-2	4N/5W-1C12	0	4	—	60	12	4.9	<.2	.09
		4	7	—	140	14	290	<.2	.06
		—	—	9.0	267	—	310	<.2	<.02
		7	9	—	51	11	3.1	<.2	.09
		11	12	—	35	7	1.4	<.2	<.30
		—	—	13.5	106	5	160	<.2	.02
		12	14	—	76	10	1.9	<.2	.09
		14	15	—	59	9	7.3	<.2	.10
		15	16	—	63	8	7.5	<.2	.13
		16	17	—	34	5	1.7	.2	.13
		—	—	19	230	61	81	.2	.02
		17	19	—	89	19	7.0	.2	.14
		19	20	—	246	57	49	.3	.12
		20	21	—	406	84	100	.5	.09
		21	22	—	194	56	76	.4	.10
		—	—	24	369	65	150	.7	1.6
		22	24	—	173	40	74	.5	1.9

Table 18. Chemical composition of leachate for selected core material and cuttings from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994-97—Continued

Site	State well no.	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)	Depth to sample (ft)	Specific conductance (µS/cm)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Nitrogen, dissolved (mg/L as N)
LOGW-2	4N/5W-1C12	24	25	24	520	67	150	0.6	0.14
		25	26	—	523	280	170	.4	.11
		26	27	—	574	130	160	.4	2.7
		—	—	29	471	49	140	.4	2.4
		27	29	—	399	53	110	.5	2.2
		29	30	—	348	58	140	.8	3.2
		30	31	—	297	41	120	.5	.05
		31	32	—	361	22	110	.6	2.3
		32	34	34	344	10	110	.4	.02
		32	34	—	317	13	88	.4	2.2
		34	35	—	308	14	110	.6	.04
		35	36	—	164	5	37	.2	.81
		36	37	—	168	4	31	.2	.88
		—	—	39	88	4	22	.2	<.02
		37	39	—	135	5	32	<.2	.35
		39	40	—	120	8	27	<.2	.02
		40	41	—	52	6	14	<.2	.13
		41	42	—	32	6	4.9	<.2	.14
		—	—	44	19	2	2.1	<.2	.04
		42	44	—	54	3	4.2	<.2	.37
		44	45	—	41	3	2.8	<.2	.12
		45	46	—	64	4	3.9	<.2	.41
		46	47	—	76	4	6.1	<.2	.13
		—	—	49	68	4	4.7	<.2	.04
		47	49	—	49	5	3.5	<.2	.12
		49	50	—	51	4	6.6	<.2	.13
		50	51	—	62	4	6.5	.2	.13
		51	52	—	64	6	4.7	<.2	.09
		—	—	54	63	3	5.0	<.2	.11
		70	71	—	42	16	2.5	<.2	.08
		52	54	—	42	7	3.3	<.2	.02
		54	55	—	42	19	4.8	<.2	.07
		55	56	—	29	4	2.6	<.2	.13
		56	57	—	30	—	2.8	<.2	.12
		57	59	—	41	12	3.3	<.2	.47
		—	—	59	148	<3	2.8	<.2	.1
		59	60	—	31	4	2.9	<.2	.08
		60	61	—	24	3	2.1	<.2	.09
		61	62	—	50	—	2.1	<.3	.09
		92	94	—	45	—	—	—	—
		—	—	64	46	<3	1.2	<.2	.02
		62	64	—	75	6	2.7	<.2	.10
		64	65	—	83	3	2.2	<.2	.08
		65	66	—	70	3	1.9	<.2	.11
		66	67	—	67	<3	2.2	<.2	.24

Table 18. Chemical composition of leachate for selected core material and cuttings from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994-97—Continued

Site	State well no.	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)	Depth to sample (ft)	Specific conductance (µS/cm)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Nitrogen, dissolved (mg/L as N)
LOGW-2	4N/5W-1C12	—	—	69	21	<3	1.1	<0.2	<0.02
		67	69	—	56	3	2.9	<.2	.23
		69	70	—	40	<3	1.9	<.2	.11
		71	72	—	27	<3	1.9	<.2	.23
		—	—	74	42	<3	1.2	<.2	.03
		72	74	—	43	6	2.9	<.2	.08
		74	75	—	60	3	5.2	<.2	.09
		75	76	—	57	4	4.6	<.2	.08
		76	77	—	86	<3	3.7	<.2	.11
		77	79	—	91	9	1.9	<.2	.10
		—	—	79	36	<3	1.3	<.2	.01
		79	80	—	62	3	3.0	<.2	.22
		81	82	—	36	<3	1.1	<.2	.15
		—	—	84	50	10	1.0	<.2	.03
		82	84	—	62	3	2.5	<.2	.38
		84	85	—	55	3	5.2	.2	.18
		85	86	—	58	3	1.0	<.2	<.02
		—	—	89	52	<3	8.1	<.2	.10
		86	87	—	43	<3	2.9	<.2	.19
		87	89	—	60	5	3.5	<.2	.09
		89	90	—	70	4	1.3	<.2	.09
		80	81	—	90	—	—	—	—
		90	91	—	45	—	—	—	—
		94	95	—	59	—	—	—	—
		91	92	—	47	<3	1.2	<.2	.08
		—	—	94	44	<3	4.4	<.2	.02
		95	96	—	42	5	1.4	<.2	.09
		—	—	99	16	<3	1.6	<.2	.10
		97	99	—	74	6	2.5	<.2	.12
		100	101	—	38	3	1.2	<.2	.08
		101	102	—	32	<3	3.1	<.2	.08
		—	—	104	64	3	1.5	<.2	.08
LOGW-3	4N/5W-1C20	0	5	—	—	<3	4.0	<.2	.03
		5	10	—	—	3	1.0	<.2	.04
		10	15	—	—	9	2.0	<.2	.04
		15	17	—	—	18	5.8	<.2	.08
		17	19	—	—	29	22	.2	.03
		19	21	—	—	26	80	.4	<.02
		21	23	—	—	24	120	.7	<.02
		23	25	—	—	29	170	.7	.02
		25	27	—	—	37	200	1.0	.02
		27	29	—	—	37	200	1.1	.02
		29	31	—	—	30	160	1.0	<.02
		32	37	—	—	7	140	.7	.02
		32	37	—	—	8	150	.4	<.02

Table 18. Chemical composition of leachate for selected core material and cuttings from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994-97—Continued

Site	State well no.	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)	Depth to sample (ft)	Specific conductance (µS/cm)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Nitrogen, dissolved (mg/L as N)
LOGW-3	4N/5W-1C20	32	37	—	—	6	150	<0.2	<0.02
		37	42	—	—	7	45	.3	<.02
		42	47	—	—	4	26	<.2	.2
		47	52	—	—	6	30	.2	.04
		52	57	—	—	7	1.9	<.2	.14
OGF	4N/5W-1D1	0	1	—	49	—	—	—	—
		2	3	—	130	—	—	—	—
		4	5	—	79	—	—	—	—
		6	7	—	60	9	1.3	.4	.02
		—	—	4.5	—	—	—	—	—
		7	9	—	96	210	49	<.2	.65
		—	—	9	375	210	49	<.2	.65
		10	11	—	927	—	—	—	—
		11	12	—	1470	—	—	—	—
		12	13	—	997	2300	110	<.2	<.20
		12	14	—	817	310	150	.5	.37
		—	—	14	550	310	150	.5	.37
		15	16	—	522	—	—	—	—
		16	17	—	960	680	170	<.2	.11
		17	18	—	329	—	—	—	—
		17	19	—	695	35	120	.4	.35
		—	—	19	476	35	120	.4	.35
		20	21	—	275	—	—	—	—
		21	22	—	318	—	—	—	—
		22	23	—	350	15	81	.4	.22
		22	24	—	315	9	120	.5	.34
		—	—	24	340	9	120	.5	.34
		25	26	—	250	—	—	—	—
		26	27	—	300	6	140	.6	.39
		27	28	—	100	—	—	—	—
		27	29	—	93	<3	13	<.2	.13
		—	—	29	679	<3	13	<.2	.13
		30	31	—	49	—	—	—	—
		31	32	—	59	<3	17	<.2	.19
		32	33	—	30	—	—	—	—
		31	33	—	66	<3	6.1	.2	<.02
		—	—	33	90	<3	6.1	.2	<.02
		34	35	—	70	—	—	—	—
		35	36	—	75	—	—	—	—
		36	37	—	84	4	4.2	<.2	.19
		37	39	—	78	<3	4.4	<.2	.40
		—	—	39	71	<3	4.4	<.2	.40
		40	41	—	100	—	—	—	—
		41	42	—	44	—	—	—	—
		42	43	—	38	<3	2.0	<.2	.36

Table 18. Chemical composition of leachate for selected core material and cuttings from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994-97—Continued

Site	State well no.	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)	Depth to sample (ft)	Specific conductance (µS/cm)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Nitrogen, dissolved (mg/L as N)
OGF	4N/5W-1D1	42	44	—	39	<3	1.1	<0.2	0.28
		—	—	44	23	<3	1.1	<.2	.28
		45	46	—	34	—	—	—	—
		46	47	—	43	—	—	—	—
		47	48	—	125	6	2.6	<.2	.82
		47	49	—	92	—	—	—	—
		—	—	49	77	—	—	—	—
		50	51	—	69	4	1.4	<.2	.52
		51	52	—	129	—	—	—	—
		52	53	—	82	<3	2.0	<.2	.33
		52	54	—	108	<3	1.2	<.2	.13
		—	—	54	125	<3	1.2	<.2	.13
		55	56	—	140	—	—	—	—
		56	57	—	132	—	—	—	—
		57	58	—	64	3	1.4	<.2	.21
		58	60	—	72	<3	.7	<.2	.20
		—	—	60	148	<3	.7	<.2	.20
		61	62	—	50	—	—	—	—
		62	63	—	124	—	—	—	—
		63	64	—	144	<3	.9	<.2	.28
		63	65	—	76	<3	1.2	.2	.24
		—	—	65	62	<3	1.2	.2	.24
		66	67	—	52	—	—	—	—
		67	68	—	65	—	—	—	—
		68	69	—	74	<3	1.1	<.2	.23
		68	70	—	63	<3	1.2	.4	.36
		—	—	70	49	<3	1.2	.4	.36
		71	72	—	39	—	—	—	—
		72	73	—	27	<3	.9	.3	.27
		73	74	—	38	—	—	—	—
		72	74	—	29	<3	.1	<.2	.32
		—	—	74	34	<3	.1	<.2	.32
		75	76	—	31	—	—	—	—
		76	77	—	29	—	—	—	—
		77	78	—	43	<3	1.6	<.2	.30
		77	79	—	76	<3	1.1	.2	.34
		—	—	79	61	<3	1.1	.2	.34
		—	—	79	61	4	2.5	<.2	.68
		80	81	—	97	—	—	—	—
		81	82	—	73	—	—	—	—
		82	83	—	85	<3	2.6	<.2	.87
		82	84	—	79	<3	1.4	<.2	.34
		—	—	84	36	<3	1.4	<.2	.34
		85	86	—	62	—	—	—	—
		86	87	81	81	—	—	—	—

Table 18. Chemical composition of leachate for selected core material and cuttings from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994-97—Continued

Site	State well no.	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)	Depth to sample (ft)	Specific conductance (µS/cm)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Nitrogen, dissolved (mg/L as N)
OGF	4N/5W-1D1	87	88	—	89	<3	1.7	<0.2	0.76
		87	89	—	63	<3	1.7	.8	.49
		—	—	89	68	<3	1.7	.8	.49
		90	91	—	65	—	—	—	—
		91	92	—	63	—	—	—	—
		92	93	—	139	<3	1.2	<.2	.41
		92	94	—	144	<3	1.5	<.2	.74
		—	—	94	149	<3	1.5	<.2	.74
		95	96	—	131	—	—	—	—
		96	97	—	170	—	—	—	—
		97	98	—	99	<3	1.1	<.2	.29
		97	99	—	81	<3	1.3	<.2	.27
		—	—	99	—	<3	1.3	<.2	.27
		100	101	—	75	—	—	—	—
		101	102	—	84	<3	1.7	.5	.20
		102	103	—	62	<3	1.1	<.2	.17
		103	105	—	47	—	—	—	—
USCW	4N/7W-16J1	—	—	9	—	8	1.0	<.2	.04
		0	2	—	—	5	.5	<.2	<.02
		2	4	—	—	5	.6	.2	.14
		4	6	—	—	7	.8	<.2	.03
		6	8	—	—	4	.5	<.2	<.02
		7	9	—	—	4	.4	<.2	.02
		9	10	—	—	7	.7	<.2	<.02
		10	11	—	—	9	.6	<.2	<.02
		11	12	—	—	12	.5	<.2	<.02
		—	—	15	83	18	.7	<.2	<.02
		13	15	—	89	23	.5	<.2	<.02
		15	16	—	103	20	.7	<.2	<.02
		16	17	—	106	23	.5	<.2	<.02
		17	18	—	92	22	.4	<.2	<.02
		—	—	19	61	—	—	—	—
		18	20	—	72	20	1.1	<.2	<.02
		20	21	—	64	15	.4	<.2	.02
		21	22	—	63	16	.4	<.2	<.02
		22	23	—	69	17	.5	<.2	<.02
		—	—	25	64	15	1.0	<.2	<.02
		78	80	—	83	15	1.8	<.2	<.02
		23	25	—	60	14	.5	<.2	<.02
		25	26	—	59	12	.6	.2	<.02
		26	27	—	52	12	0.8	<.2	<.02
		27	28	—	47	11	.8	.3	<.02
		—	—	30	35	14	1.0	<.2	<.02
		28	30	—	50	14	.9	<.2	.02
		30	31	—	59	16	1.0	<.2	<.02

Table 18. Chemical composition of leachate for selected core material and cuttings from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994-97—Continued

Site	State well no.	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)	Depth to sample (ft)	Specific conductance (µS/cm)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Nitrogen, dissolved (mg/L as N)
USCW	4N/7W-16J1	31	32	—	52	15	2.3	<0.2	<0.02
		32	33	—	45	t2	1.1	<.2	<.02
		—	—	35	59	11	1.2	<.2	<.02
		33	35	—	69	10	1.5	.4	<.02
		35	36	—	69	11	1.3	.3	<.02
		36	37	36	57	10	1.2	<.2	<.02
		37	38	—	64	17	.9	<.2	<.02
		—	—	40	56	11	.8	<.2	.10
		38	40	—	52	10	1.1	.2	<.02
		40	41	—	59	9	.8	<.2	<.02
		41	42	—	80	15	1.5	<.2	<.02
		42	43	—	80	10	1.0	.3	<.02
		—	—	45	80	24	1.9	<.2	<.02
		43	45	—	57	9	1.1	<.2	<.02
		45	46	—	58	—	—	—	—
		46	47	—	91	17	1.7	<.2	<.02
		47	48	—	86	16	1.7	.2	.03
		—	—	50	66	14	1.8	.2	.02
		48	50	—	79	12	1.6	<.2	.03
		50	51	—	71	17	1.2	<.2	<.02
		51	52	—	71	15	1.1	<.2	<.02
		52	53	—	67	—	—	—	—
		—	—	55	62	13	1.4	<.2	<.02
		53	55	—	63	13	1.6	<.2	.02
		55	56	—	81	16	.9	<.2	<.02
		56	57	—	73	—	—	—	—
		57	58	—	66	13	.9	.2	<.02
		—	—	60	63	16	<.2	.2	<.02
		58	60	—	58	9	1.0	.2	<.02
		60	61	—	54	—	—	—	—
		61	62	—	63	12	1.2	<.2	<.02
		62	63	—	72	—	—	—	—
		—	—	65	61	9	.9	.2	<.02
		63	65	—	66	20	3.8	<.2	.03
		65	66	—	84	—	—	—	—
		66	67	—	83	13	1.1	<.2	<.02
		67	68	—	81	—	—	—	—
		—	—	70	72	10	1.0	.2	.03
		68	70	—	67	13	1.2	<.2	.02
		70	71	—	73	—	—	—	—
		71	72	—	75	t2	1.0	<.2	<.02
		72	73	—	74	—	—	—	—
		—	—	75	68	14	1.9	<.2	.11
		73	75	—	73	9	1.3	.3	.09
		75	76	—	83	—	—	—	—

Table 18. Chemical composition of leachate for selected core material and cuttings from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994-97—Continued

Site	State well no.	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)	Depth to sample (ft)	Specific conductance (µS/cm)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Nitrogen, dissolved (mg/L as N)
USCW	4N/7W-16J1	76	77	—	62	12	1.7	<0.2	0.02
		77	78	—	80	16	1.1	<.2	.02
		—	—	880	76	16	2.8	<.2	.11
		78	80	—	83	15	1.8	<.2	<.02
		80	82	—	67	—	—	—	—
		82	84	—	78	13	1.4	<.2	.02
		84	86	—	84	18	3.7	<.2	.03
		86	88	—	86	12	1.3	<.2	<.02
		—	—	90	62	8	.9	<.2	.02
		88	90	—	85	<3	2.5	<.2	.06
		90	92	—	66	10	1.0	.2	<.02
		92	94	—	69	10	.8	<.2	<.02
		94	96	—	84	14	1.2	<.2	<.02
		96	98	—	81	13	1.5	<.2	<.02
		—	—	99	61	10	1.0	<.2	.05
MSCW-1	5N/7W-28L1	—	—	202	37	4	2.7	.2	.10
		204	205	—	65	8	3.1	.8	<.02
		205	210	—	64	4	2.5	.7	<.02
		210	215	—	45	<3	1.2	.8	<.02
		215	220	—	55	5	2.0	.7	<.02
		225	225	—	59	8	1.1	.2	<.02
		225	230	—	58	5	1.5	.5	<.02
		230	235	—	69	8	2.3	.8	<.02
		235	240	—	62	7	1.9	.2	<.02
		—	—	261	48	3	1.7	.8	<.02
		240	245	—	71	14	3.1	.4	<.02
		245	250	—	64	10	2.4	.8	<.02
		250	255	—	52	5	1.4	.7	<.02
		255	260	—	42	5	1.2	<.2	<.02
		260	265	—	42	4	.9	.2	<.02
		265	270	—	70	6	2.2	.6	<.02
		270	275	—	78	8	1.6	.6	<.02
		275	280	—	60	4	1.1	.6	.11
		280	285	—	69	10	2.7	.5	<.02
		285	290	—	73	9	1.5	.5	<.02
		290	295	—	69	4	1.2	.5	<.02
		295	300	—	68	<3	.7	.8	<.02
		300	305	—	68	4	1.2	.4	<.02
MSCW-1	5N/7W-28L1	305	310	—	68	4	1.0	1.5	<0.02
		310	315	—	58	4	1.0	.3	<.02
		325	330	—	59	3	1.0	.2	<.02
		330	335	—	71	4	1.4	.5	<.02
		335	340	—	60	<3	1.1	.2	.06
		—	—	321	58	<3	.9	.8	<.02
		—	—	401	—	<3	.8	.2	<.02

Table 18. Chemical composition of leachate for selected core material and cuttings from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994-97—Continued

Site	State well no.	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)	Depth to sample (ft)	Specific conductance (µS/cm)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Nitrogen, dissolved (mg/L as N)
MSCW-1	5N/7W-28L1	340	345	—	80	6	3.6	.2	<.02
		345	350	—	62	4	1.6	.6	<.02
		350	355	—	55	4	2.0	.4	<.02
		355	360	—	67	5	1.6	.6	.21
		360	365	—	60	9	2.0	.2	<.02
		365	370	—	71	6	1.6	1.1	<.02
		370	375	—	69	4	2.4	.5	.02
		375	378	—	65	4	1.8	.2	<.02
		380	385	—	82	8	1.3	.6	<.02
		385	390	—	74	7	1.6	.5	<.02
		390	395	—	69	<3	1.9	.6	<.02
		395	400	—	55	5	1.3	.6	<.02
		—	—	200	53	—	—	—	—
		—	—	300	75	—	—	—	—
		400	420	—	169	—	—	—	—
		420	440	—	143	—	—	—	—
		440	460	—	220	—	—	—	—
		460	480	—	220	—	—	—	—
		480	500	—	122	—	—	—	—
		500	520	—	105	—	—	—	—
		520	540	—	135	—	—	—	—
		540	560	—	141	—	—	—	—
		560	580	—	144	—	—	—	—
		580	600	—	117	—	—	—	—
MSCW-2	5N/7W-28L7	0	2	—	46	10	1.2	<.2	1.8
		2	4	—	49	—	—	—	—
		4	6	—	31	13	2.6	<.2	<.02
		6	8	—	61	—	—	—	—
		8	9	—	36	4	.5	<.2	<.02
		9	10	—	39	—	—	—	—
		10	11	—	47	5	.5	<.2	<.02
		—	—	14	48	5	.5	<.2	<.02
		12	14	—	60	8	.6	.2	<.02
		14	15	—	42	5	.4	<.2	<.02
		15	16	—	39	—	—	—	—
		16	17	—	43	6	.2	<.2	<.02
		17	19	—	32	—	—	—	—
		—	—	20	44	5	.6	.4	.02
		19	20	—	39	6	.4	<.2	<.02
		20	21	—	42	—	—	—	—
		21	22	—	46	5	0.3	.4	<.02
		—	—	24	60	11	.9	<.2	.10
		22	24	—	59	8	.5	<.2	<.02
		24	25	—	58	—	—	—	—
		25	26	—	73	20	.6	<.2	<.02

Table 18. Chemical composition of leachate for selected core material and cuttings from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994-97—Continued

Site	State well no.	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)	Depth to sample (ft)	Specific conductance (µS/cm)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Nitrogen, dissolved (mg/L as N)
MSCW-2	5N/7W-28L7	26	27	—	60	—	—	—	—
		27	29	—	55	9	0.4	<0.2	<0.02
		29	30	—	66	—	—	—	—
		30	31	—	81	25	1.4	<.2	<.02
		31	32	—	143	—	—	—	—
		—	—	34	72	25	4.1	<.2	.20
		32	34	—	164	110	8.4	<.2	<.02
		34	35	—	94	—	—	—	—
		35	36	—	68	50	1.9	<.2	<.02
		36	37	—	64	—	—	—	—
		—	—	39	73	36	3.3	<.2	.57
		37	39	—	70	18	1.6	.3	<.02
		39	40	—	75	—	—	—	—
		40	41	—	82	25	2.3	<.2	<.02
		41	42	—	75	—	—	—	—
		—	—	44	62	41	2.4	<.2	.24
		42	44	—	87	39	1.9	<.2	<.02
		44	45	—	81	—	—	—	—
		45	46	—	77	26	2.0	<.2	<.02
		46	47	—	60	—	—	—	—
		—	—	49	63	24	1.5	<.2	.10
		47	49	—	64	22	1.1	<.2	<.02
		49	50	—	59	—	—	—	—
		50	50	—	62	32	1.7	<.2	.02
		51	52	—	109	—	—	—	—
		—	—	55	51	21	1.1	<.2	.18
		53	55	—	83	51	2.9	<.2	.02
		55	56	—	75	—	—	—	—
		56	57	—	76	40	2.4	<.2	<.02
		57	58	—	73	—	—	—	—
		—	—	60	61	38	.7	<.2	.13
		58	60	—	95	56	1.3	.2	.04
		60	61	—	87	—	—	—	—
		61	62	—	80	48	.9	<.2	<.02
		62	63	—	59	—	—	—	—
		—	—	64	50	48	.7	<.2	.12
		62	64	—	61	30	.6	<.2	.15
		64	65	—	68	—	—	—	—
		65	66	—	73	32	.4	.2	<.02
		66	67	—	79	—	—	—	—
		—	—	69	63	21	2.8	<.2	.07
		67	69	—	79	33	.4	<.2	.02
		69	70	—	73	—	—	—	—
		70	71	—	72	—	—	—	—
		71	72	—	65	22	.5	<.2	.11

Table 18. Chemical composition of leachate for selected core material and cuttings from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994-97—Continued

Site	State well no.	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)	Depth to sample (ft)	Specific conductance (µS/cm)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Nitrogen, dissolved (mg/L as N)
MSCW-2	5N/7W-28L7	—	—	75	75	19	0.8	<0.2	0.08
		72	75	—	57	23	.5	<.2	.12
		75	76	—	63	—	—	—	—
		76	77	—	76	15	.6	<.2	<.02
		77	78	—	62	—	—	—	—
		—	—	78	80	20	.8	<.2	.08
		78	80	—	90	23	.6	.2	.17
		80	81	—	103	—	—	—	—
		81	82	—	108	33	.5	<.2	.10
		82	83	—	94	—	—	—	—
		—	—	84	40	11	.4	<.2	.04
		83	85	—	81	52	.5	.5	.14
		85	86	—	83	—	—	—	—
		86	87	—	86	44	.7	<.2	.03
		87	88	—	76	—	—	—	—
		88	90	—	72	33	.5	<.2	.18
		90	91	—	88	—	—	—	—
		91	92	—	82	35	.6	.2	.03
		92	93	—	76	—	—	—	—
		—	—	95	77	21	.7	<.2	.11
		93	95	—	73	27	.5.6	<.2	<.02
		95	96	—	82	—	—	—	—
		96	97	—	71	27	.5	.4	.02
		97	98	—	72	20	.5	<.2	<.02
		—	—	100	61	—	—	—	—
		100	103	—	81	22	.5	<.2	<.02
		103	105	—	77	28	1.5	<.2	<.02
		105	108	—	63	24	1.7	<.2	<.02
		108	110	—	39	—	—	—	—
		—	—	110	76	28	.8	<.2	<.02
		110	112	4	56	13	1.3	<.2	.02
		112	114	—	91	—	—	—	—
		114	116	—	74	19	1.3	<.2	<.02
		116	118	—	79	—	—	—	—
		118	120	—	83	29	1.2	<.2	<.02
		120	122	—	117	—	—	—	—
		122	124	—	93	36	1.2	<.2	<.02
		124	126	—	90	—	—	—	—
		126	128	—	79	30	1.1	<.2	<.02
		128	130	—	82	—	—	—	—
		130	132	—	83	31	1.6	<.2	.02
		132	134	—	86	—	—	—	—
		134	136	—	66	24	1.0	<.2	<.02
		136	138	—	60	—	—	—	—
		—	—	140	56	29	3.7	<.2	<.02

Table 18. Chemical composition of leachate for selected core material and cuttings from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994-97—Continued

Site	State well no.	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)	Depth to sample (ft)	Specific conductance (µS/cm)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Nitrogen, dissolved (mg/L as N)
MSCW-2	5N/7W-28L7	138	140	—	56	17	1.1	<0.2	<0.02
		140	142	—	79	—	—	—	—
		142	—	—	82	35	1.5	.2	<.02
		144	146	—	60	—	—	—	—
		146	148	—	60	16	1.0	<.2	<.02
		148	150	—	66	—	—	—	—
		150	152	—	58	21	1.8	<.2	<.02
		152	154	—	53	—	—	—	—
		154	156	—	54	34	1.6	<.2	<.02
		156	158	—	64	—	—	—	—
		—	—	160	50	10	.5	<.2	.04
		158	160	—	54	18	1.6	<.2	<.02
		160	162	—	73	—	—	—	—
		162	164	—	56	22	2.2	.4	<.02
		164	166	—	51	—	—	—	—
		166	168	—	65	32	1.6	.6	<.02
		168	170	—	30	—	—	—	—
		170	172	—	54	19	1.6	<.2	<.02
		172	174	—	59	—	—	—	—
		174	176	—	66	24	2.2	<.2	<.02
		176	178	—	50	—	—	—	—
		—	—	180	33	8	.5	.2	.03
		178	180	—	48	15	1.4	<.2	<.02
		182	184	—	56	11	1.1	<.2	<.02
		184	186	—	51	—	—	—	—
		186	188	—	42	14	1.1	<.2	<.02
		188	190	—	55	—	—	—	—
		190	192	—	55	13	1.5	<.2	<.02
		194	196	—	72	16	1.4	<.2	<.02
		—	—	200	53	15	.8	.3	<.02
		—	—	303	75	9	1.1	<.2	.38
LSCW	5N/7W-17K1	1	2	—	35	8	1.1	<.2	.19
		2	3	—	31	—	—	—	—
		3	4	—	44	9	1.2	<.2	<.02
		4	5	—	58	—	—	—	—
		5	6	—	56	9	.9	<.2	<.02
		—	—	8	46	18	8.1	<.2	.43
		6	8	—	45	11	2.5	<.2	.02
		8	9	—	33	—	—	—	—
		9	10	—	58	12	4.0	<.2	<.02
		10	11	—	66	—	—	—	—
		—	—	13	73	10	3.1	<.2	.21
		11	13	—	53	—	—	—	—
		13	14	—	46	9	2.1	<.2	<.02
		14	15	—	50	—	—	—	—

Table 18. Chemical composition of leachate for selected core material and cuttings from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994-97—Continued

Site	State well no.	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)	Depth to sample (ft)	Specific conductance (µS/cm)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Nitrogen, dissolved (mg/L as N)
LSCW	5N/7W-17K1	15	16	—	57	9	2.0	<0.2	<0.02
		—	—	18	—	16	1.3	.3	<.02
		18	20	—	72	59	2.6	<.2	.05
		20	21	—	66	—	—	—	—
		21	22	—	68	31	1.9	.8	<.02
		22	23	—	75	—	—	—	—
		23	25	—	84	26	1.2	<.2	<.02
		25	26	—	85	23	1.0	<.2	<.02
		26	27	—	89	—	—	—	—
		27	28	—	111	28	1.0	<.2	<.02
		—	—	28	134	—	—	—	—
		26	28	—	138	—	—	—	—
		28	29	—	184	—	—	—	—
		29	30	—	184	42	33	.3	<.02
		30	31	—	104	—	—	—	—
		33	35	—	95	46	20	<.2	.39
		35	36	—	105	37	14	.3	.31
		36	37	—	119	—	—	—	—
		37	38	—	127	43	15	.2	.35
		38	40	—	164	43	15	.2	.46
		40	41	—	108	—	—	—	—
		41	42	—	164	49	13	<.2	.48
		42	43	—	86	—	—	—	—
		—	—	44	84	32	7.9	<.2	.38
		43	45	—	91	43	10	<.2	.30
		45	46	—	94	34	8.0	.2	.35
		46	47	—	99	—	—	—	—
		47	48	—	89	23	3.6	<.2	.23
		—	—	50	94	32	4.6	<.2	.29
		48	50	—	113	—	—	—	—
		50	51	—	100	—	—	—	—
		51	52	—	97	28	3.3	<.2	.36
		52	53	—	108	—	—	—	—
		—	—	54	75	27	2.1	<.2	.33
		53	55	—	89	22	2.3	<.2	.25
		55	56	—	73	22	1.4	.6	.30
		56	57	—	86	—	—	—	—
		57	58	—	92	26	.8	<.2	.39
		—	—	60	155	99	3.3	<.2	1.5
		58	60	—	133	74	1.9	<.2	<.02
		60	61	—	114	—	—	—	—
		61	62	—	151	90	3.0	<.2	<.02
		62	63	—	143	—	—	—	—
		—	—	65	71	—	—	—	—
		63	65	—	112	52	2.2	<.2	<.02

Table 18. Chemical composition of leachate for selected core material and cuttings from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994-97—Continued

Site	State well no.	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)	Depth to sample (ft)	Specific conductance (µS/cm)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Nitrogen, dissolved (mg/L as N)
LSCW	5N/7W-17K1	65	66	—	116	—	—	—	—
		66	67	—	105	43	1.3	<0.2	<0.02
		67	68	—	122	—	—	—	—
		—	—	70	77	43	1.2	<.2	<.02
		68	70	—	101	45	1.9	<.2	<.02
		70	71	—	92	—	—	—	—
		71	72	—	73	24	.7	<.2	.07
		72	73	—	84	—	—	—	—
		—	—	75	85	52	.6	<.2	<.02
		73	75	—	91	30	.8	.5	.04
		75	76	—	99	—	—	—	—
		76	77	—	103	52	2.0	<.2	<.02
		—	—	80	87	32	1.0	<.2	<.02
		78	80	—	89	31	.8	<.2	.02
		80	81	—	97	—	—	—	—
		81	82	—	89	39	1.8	<.2	.05
		82	83	—	86	—	—	—	—
		—	—	85	74	72	.2	<.2	<.02
		83	85	—	74	23	1.1	<.2	.18
		85	86	—	73	—	—	—	—
		86	87	—	66	21	.9	<.2	.10
		87	88	—	53	—	—	—	—
		—	—	90	82	38	1.0	<.2	<.02
		88	90	—	90	26	.9	.2	<.02
		90	91	—	98	—	—	—	—
		91	92	—	136	77	.8	<.2	<.02
		92	93	—	124	—	—	—	—
		—	—	95	83	68	1.8	<.2	<.02
		93	95	—	113	46	1.2	.3	<.02
		95	96	—	120	—	—	—	—
		96	97	—	156	70	1.5	<.2	<.02
		97	98	—	177	—	—	—	—
		—	—	100	71	26	1.3	<.2	<.02
		98	100	—	141	46	1.4	<.2	<.02
		100	102	—	74	—	—	—	—
		102	104	—	103	58	1.3	.2	<.02
		104	106	—	52	—	—	—	—
		106	108	—	74	22	1.1	<.2	<.02
		—	—	110	73	30	1.0	<.2	<.02
SCF	5N/7W-17Q1	0	1	—	60	5	2.0	<.2	3.18
		4	6	—	130	<3	1.1	.2	.13
		—	—	7	160	16	2.8	<.2	.10
		—	—	8	60	21	5.2	<.2	.74
		8	9	—	110	—	—	—	—
		9	10	—	80	8	1.1	<.2	.10

Table 18. Chemical composition of leachate for selected core material and cuttings from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994-97—Continued

Site	State well no.	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)	Depth to sample (ft)	Specific conductance (µS/cm)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Nitrogen, dissolved (mg/L as N)
SCF	5N/7W-17Q1	10	11	—	220	—	—	—	—
		—	—	13	208	67	110	0.6	1.7
		11	13	—	131	46	17	.2	.11
		13	14	—	266	—	—	—	—
		14	15	—	428	220	88	1.0	<.02
		15	16	—	334	—	—	—	—
		—	—	18	304	73	110	<.2	<.02
		16	18	—	384	170	51	<.2	.58
		18	19	—	320	—	—	—	—
		19	20	—	271	46	68	.2	.32
		20	21	—	213	—	—	—	—
		—	—	23	238	25	68	<.2	.11
		21	23	—	295	40	72	.3	.44
		23	24	—	225	—	—	—	—
		24	25	—	256	36	60	.3	.55
		25	26	—	182	—	—	—	—
		26	28	—	184	—	—	—	—
		26	28	—	236	22	55	<.2	.65
		28	29	—	166	—	—	—	—
		29	30	—	124	21	30	<.2	.57
		30	31	—	158	—	—	—	—
		—	—	33	144	40	21	<.2	<.02
		31	33	—	91	14	9.9	<.2	.33
		33	34	—	97	—	—	—	—
		34	35	—	110	28	11	.3	.37
		35	36	—	86	—	—	—	—
		—	—	38	110	78	12	<.2	<.02
		36	38	—	105	23	9.3	.2	.84
		38	39	—	116	—	—	—	—
		39	40	—	113	35	9.0	<.2	.15
		40	41	—	170	—	—	—	—
		—	—	43	87	43	8.4	<.2	<.02
		44	45	—	120	40	7.3	<.2	.31
		41	43	—	90	27	5.5	<.2	.37
		43	44	—	169	—	—	—	—
		45	46	—	138	—	—	—	—
		—	—	48	87	56	4.8	.2	<.02
		46	48	—	150	64	5.6	<.2	.31
		48	49	—	121	—	—	—	—
		49	50	—	116	39	5.4	.2	.37
		50	51	—	163	—	—	—	—
		51	53	—	107	46	4.3	<.2	.49
		53	54	—	208	—	—	—	—
		54	55	—	187	110	2.2	<.2	.94
		55	56	—	180	—	—	—	—

Table 18. Chemical composition of leachate for selected core material and cuttings from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994-97—Continued

Site	State well no.	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft)	Depth to sample (ft)	Specific conductance (µS/cm)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Nitrogen, dissolved (mg/L as N)
SCF	5N/7W-17Q1	—	—	58	129	68	2.7	<0.2	1.4
		56	58	—	255	150	2.2	<.2	.90
		58	59	—	320	—	—	—	—
		59	60	—	343	230	2.5	<.2	1.7
		60	61	—	226	—	—	—	—
		—	—	64	117	89	4.9	<.2	1.0
		62	64	—	122	86	3.1	<.2	1.5
		64	65	—	134	—	—	—	—
		65	66	—	131	46	2.3	<.2	1.2
		66	67	—	127	—	—	—	—
		—	—	69	—	28	1.1	<.2	.34
		67	69	—	129	45	2.3	<.2	.75
		69	70	—	80	—	—	—	—
		70	71	—	76	—	.8	.3	.31
		71	72	—	112	—	—	—	—
		—	—	74	72	25	.8	<.2	<.02
		72	74	—	62	13	.8	.4	.31
		74	75	—	72	—	—	—	—
		75	76	—	76	18	1.6	<.2	.50
		76	77	—	70	—	—	—	—
		77	79	—	76	15	.9	.2	.49
		79	80	—	70	—	—	—	—
		80	81	—	70	25	1.7	.2	.82
		81	82	—	80	—	—	—	—
		—	—	84	61	28	1.4	<.2	<.02
SUMMIT	3N/5W-8M1	0	4	—	44	4	3.4	<.2	<.02
		4	5	—	44	5	3.6	<.2	.02
		5	6	—	47	6	1.9	<.2	.10
		6	7	—	50	7	3.2	<.2	.10
		7	9	—	50	10	1.8	<.2	.08
		9	10	—	53	5	1.8	<.2	.08
		10	11	—	56	5	1.8	<.2	.11
		11	12	—	74	9	1.8	<.2	.09
		—	—	14	114	26	9.6	.2	.28
		12	14	—	—	20	2.9	<.2	1.1
		14	15	—	174	41	8.7	<.2	<.02
		15	16	—	168	31	14	.2	.02
		16	17	—	156	30	16	<.2	<.02
		—	—	19	154	42	34	.3	.57
		17	19	—	154	52	26	.3	<.02
		17	19	—	222	52	26	<.2	<.02
		19	20	—	233	44	36	.3	.03
		20	21	—	189	36	35	<.2	.07
		21	22	—	235	32	61	.3	.03
		—	—	24	174	37	60	.3	.03

Table 18. Chemical composition of leachate for selected core material and cuttings from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994-97—Continued

Site	State well no.	Depth to top of sample interval (ft)	Depth to bottom of sample interval (ft(	Depth to sample (ft)	Specific conductance (µS/cm)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Bromide, dissolved (mg/L as Br)	Nitrogen, dissolved (mg/L as N)
SUMMIT	3N/5W-8M1	22	24	—	253	38	66	0.3	<0.02
		24	25	—	197	31	53	.4	<.02
		25	26	—	174	28	52	.3	.02
		26	27	—	159	23	38	<.2	<.02
		—	—	29	153	28	42	.2	.03
		27	29	—	134	32	46	.2	<.02
		29	30	—	137	34	49	.4	.02
		30	31	—	166	39	56	.4	.02
		31	32	—	161	36	71	.4	<.02
		—	—	34	268	37	120	.6	.03
		32	34	—	256	34	85	.3	.02
		34	35	—	—	34	91	.3	.02
		35	36	—	—	34	110	.5	<.02
		36	37	—	—	38	130	.6	.02
		—	—	39	—	36	120	.5	.02
		39	41	—	—	38	130	.5	.02
		41	43	—	—	49	150	.7	<.02
		43	44	—	—	73	180	.6	<.02
		44	45	—	—	56	160	.6	.02
		45	47	—	—	48	120	.6	.04
		—	—	49	—	39	87	.9	.03

Table 19. Isotopic composition of water extracted from selected core material from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994–97

[Data analyzed at U.S. Geological Survey laboratory in Menlo Park, California. Location of sites shown in figure 1. Date sites were drilled given in tables 2–12. Numbering system for sites is explained in text. ft, foot; per mil, per thousand; TU, tritium unit; —, no data]

Local identifier	Sample interval (ft)	Delta deuterium (per mil)	Delta oxygen-18 (per mil)	Tritium (TU)	Tritium error count (TU)
UOGW	[1]0.5	-77	-9.9	—	—
	[1]1	-63	-6.3	—	—
	[1]1.5	-68	-7.7	—	—
	[1]2	-74	-9.4	—	—
	[1]2.5	-74	-9.6	—	—
	[1]3	-77	-10.3	—	—
	[1]3.5	-74	-10.1	—	—
	[1]4	-77	-10.3	—	—
	[1]4.5	-77	-10.4	—	—
	[1]5	-76	-10.5	—	—
	[1]6	-73	-10.3	—	—
	[1]7	-77	-10.8	—	—
	[1]8	-76	-10.1	—	—
	[1]9	-72	-10.3	—	—
	9–11	-53	-8.0	—	—
	13–15	-54	-8.3	—	—
	19–21	-52	-7.9	4.0	1.2
	28–29	-62	-9.2	—	—
	53–55	-64	-9.5	—	—
	57–59	—	—	3.6	1.2
	67–69	-64	-9.6	6.2	1.1
	83–85	-65	-9.2	4.8	1.1
	104–105	-65	-9.1	7.1	1.2
MOGW	[1].5	-74	-7.8	—	—
	[1]1	-51	-3.9	—	—
	[1]1.5	-59	-6.7	—	—
	[1]2	-64	-7.1	—	—
	[1]2.5	-63	-7.7	—	—
	[1]3	-66	-7.7	—	—
	[1]3.5	-66	-7.4	—	—
	[1]4	-71	-8.6	—	—
	[1]4.5	-69	-8.9	—	—
	[1]5	-68	-8.6	—	—
	[1]5.5	-68	-8.8	—	—
	[1]6	-64	-8.4	—	—
	[1]7	-68	-9.0	—	—
	[1]8	-66	-8.6	—	—
	8–10	-71	-10.2	—	—
	13–15	-69	-10.1	—	—
	19–21	-72	-10.3	—	—
	23–24	-74	-10.3	—	—

See footnote at end of table.

Table 19. Isotopic composition of water extracted from selected core material from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994–97—Continued

Local identifier	Sample interval (ft)	Delta deuterium (per mil)	Delta oxygen-18 (per mil)	Tritium (TU)	Tritium error count (TU)
MOGW	28–30	–72	–10.0	5.9	1.3
	33–35	–72	–10.0	—	—
	38–40	–76	–10.6	—	—
	43–45	–77	–10.9	—	—
	48–50	–79	–10.6	4.3	1.2
	53–55	–77	–10.6	—	—
	58–60	–78	–11.3	—	—
	63–65	–79	–11.0	—	—
	68–70	–67	–9.7	—	—
	74–77	–75	–10.4	6.1	.6
	80–82	–71	–10.0	—	—
	84–86	–70	–9.6	—	—
	89–90	–67	–9.2	8.7	1.5
	88–89	–89	–9.2	—	—
	94–96	–61	–9.4	—	—
	98–100	–70	–9.8	5.4	.8
	117–119	–73	–9.6	2.1	1.2
	159–161	–81	–10.6	.1	1.1
	177–179	–82	–10.5	0.2	1.2
	215–216	–72	–9.8	—	—
	217–219	–73	–9.8	—	—
	238–240	–77	–10.0	.8	1.1
	259–261	–79	–10.6	—	—
	318–320	–82	–11.2	—	—
	418–420	–55	–8.0	—	—
	479–481	–58	–8.1	—	—
LOGW-1	6.5–8.5	–61	–7.4	—	—
	11–13	–62	–8.9	—	—
	17–19	–73	–9.8	3.5	.6
	27–29	–78	–10.0	—	—
	43–45	–72	–9.5	2.6	.6
	53–54	—	—	6.7	.7
	62–64	–70	–8.7	2.6	1.2
	68–70	–71	–8.6	2.1	.8
	72–73	–75	–9.6	—	—
	72–74	–77	–9.5	1.0	.6
	77–79	–77	–9.2	.8	1.1
	87–88	–77	–9.2	—	—
	87–89	–75	–8.5	3.4	1.2
	92–94	–82	–9.7	1.7	.8
	97–98	–84	–10.7	.1	.6
	98–99	–83	–10.6	—	—

See footnote at end of table.

Table 19. Isotopic composition of water extracted from selected core material from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994–97—Continued

Local identifier	Sample interval (ft)	Delta deuterium (per mil)	Delta oxygen-18 (per mil)	Tritium (TU)	Tritium error count (TU)
LOGW-2	7–9	–82	–9.5	0.0	2.4
	27–29	–77	–8.4	1.5	1.2
	47–49	–84	–9.9	.6	1.1
	72–74	–83	–10.4	.7	1.0
	91–92	—	—	1.7	.6
	94–95	—	—	11.0	8.0
	97–99	—	—	.3	.6
	101–102	–81	–10.8	3.6	1.2
	105–106	—	—	8.0	8.0
OGF	'.5	–85	–9.6	—	—
	'1	–37	–1.2	—	—
	'1.5	–53	–3.5	—	—
	'2	–67	–6.0	—	—
	'2.5	–68	–6.3	—	—
	'3	–73	–7.7	—	—
	'3.5	–73	–8.4	—	—
	'4	–70	–8.3	—	—
	'4.5	–70	–8.6	—	—
	7–9	–72	–7.2	6.8	1.2
	12–14	–73	–7.3	2.5	1.6
	17–19	–71	–6.8	1.5	1.3
	22–24	–80	–8.6	1.2	1.4
	27–28	–63	–7.4	—	—
	28–29	–57	–6.6	—	—
	31–33	–82	–9.4	.2	1.7
	37–39	–61	–7.2	—	—
	42–44	–70	–6.4	—	—
	47–49	–77	–8.5	.3	1.5
	52–54	–70	–8.7	—	—
	58–60	–47	–5.6	—	—
	63–65	–78	–8.3	—	—
	68–69	–79	–8.6	—	—
	69–70	–72	–7.7	.7	3.9
	73–75	–78	–8.5	—	—
	77–79	–82	–9.1	—	—
	82–84	–80	–9.5	—	—
	87–89	–79	–9.6	—	—
	92–94	–82	–10.2	—	—
	97–99	–80	–9.5	.2	1.6
	103–105	–76	–9.4	—	—
USCW	13–15	–80	–8.1	5.1	1.1
	33–35	–80	–8.8	6.4	1.3

See footnote at end of table.

Table 19. Isotopic composition of water extracted from selected core material from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1994–97—Continued

Local identifier	Sample interval (ft)	Delta deuterium (per mil)	Delta oxygen-18 (per mil)	Tritium (TU)	Tritium error count (TU)
USCW	53–55	–77	–8.8	6.8	1.5
	73–75	–80	–9.0	7.0	1.5
	98–100	–68	–6.4	6.9	1.2
MSCW-2	22–24	–78	–8.8	8.4	2.8
	32–34	–88	–9.5	7.9	1.3
	42–44	–88	–8.8	3.4	1.0
	53–55	–77	–8.8	.6	1.1
	58–60	–87	–10.1	—	—
	90–91	–89	–11.0	—	—
	99–101	–83	–7.7	.6	1.0
	108–110	–85	–8.4	2.0	3.1
	138–140	–89	–10.6	1.1	1.1
	158–160	–92	–9.1	.3	1.1
	178–180	–89	–11.7	.4	3.1
	198–200	–90	–10.8	—	—
MSCW-1	202–203	–93	–11.2	—	—
	240–245	–87	–11.6	1.2	1.1
	255–260	–89	–10.7	—	—
	300–305	–95	–11.9	<.1	1.0
	320–325	–97	–11.8	—	—
	395–400	–89	–11.0	—	—
	540–560	—	—	.1	.3
LSCW	6–8	—	—	8.0	5.0
	11–13	–70	–9.0	4.4	1.7
	27–28	–79	–8.8	2.7	1.1
	33–35	–85	–7.3	3.5	3.0
	58–60	–81	–7.2	2.8	1.6
	98–100	–88	–9.0	.5	1.1
SCF	8–9	–78	–7.5	—	—
	11–13	–78	–6.5	—	—
	16–18	–77	–6.6	—	—
	21–23	–81	–6.5	4.0	2.7
	46–48	–89	–7.9	.5	1.3
	77–79	–92	–8.6	.7	1.5
SUMMIT	7–9	–77	–10.1	4.5	.7
	12–14	–75	–10.2	8.9	.7
	22–24	–72	–9.5	8.4	.8
	27–29	–71	–9.4	9.1	.9
	45–47	–73	–9.4	.8	2.3

[1]Sample collected by hand augering July 1995.

Table 20. Chemical and isotopic composition of water from suction-cup lysimeters in unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1995–97

[Data analyzed at U.S. Geological Survey National Water Quality Laboratory in Arvarda, Colarado. Location of sites shown in figure 1. Date sites were drilled given in tables 2–12. Numbering system explained in text. Instrumentation name from table 1. µS/cm, microsiemen per centimeter at 25° Celsius; mg/L, milligram per liter; —, no data; FET, fixed end point titration<, actual value is less than value shown]

Site	Instrumentation name	Date	Time	Specific conductance, field (µS/cm)	pH, field (standard units)	Calcium, dissolved (mg/L as Ca)	Magnesium, dissolved (mg/L as Mg)	Sodium, dissolved (mg/L as Na)	Potassium, dissolved (mg/L as K)
UOGW	3N/5W-5N4 LYS @82	05-03-95	0800	6,930	—	—	—	—	—
		06-22-95	1029	7,620	6.1	—	—	—	—
		07-27-95	1300	6,120	6.1	140	44	44	11
		09-12-95	1012	3,930	6.7	28	9.1	870	7.2
		02-21-96	0820	2,400	7.2	—	—	—	—
		03-13-96	1540	1,830	7.2	—	—	—	—
		04-04-96	0730	1,690	7.4	—	—	—	—
UOGW	3N/5W-5N7 LYS @38	03-23-95	1200	1,450	9.3	—	—	—	—
		04-12-95	0850	1,430	9.3	—	—	—	—
		05-03-95	0810	1,430	—	40	15	290	3.4
		05-12-95	0850	1,430	9.3	—	—	—	—
		06-22-95	1100	1,060	8.0	—	—	—	—
		07-27-95	1310	1,420	8.6	—	—	—	—
		09-12-95	1042	1,430	7.7	—	—	—	—
		02-21-96	0830	1,080	8.5	—	—	—	—
		03-13-96	1540	1,020	7.7	—	—	—	—
		04-04-96	0740	960	7.6	—	—	—	—
MOGW	4N/5W-21H5 LYS @140	03-12-96	1540	2,870	8.8	—	—	270	5.7
MOGW	4N/5W-21H6 LYS @92	03-12-96	1400	688	6.9	23	12	64	2.0
		04-04-96	0825	400	7.2	—	—	—	—
		05-29-96	1130	—	7.4	—	—	—	—

Table 20. Chemical and isotopic composition of water from suction-cup lysimeters in unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1995–97—Continued

Site	Instrumentation name	Alkalinity, dissolved FET field $CaCO_3$ (mg/L)	Carbonate, dissolved FET field CO_3 (mg/L)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Fluoride, dissolved (mg/L as F)	Bromide, dissolved (mg/L as Br)	Silica, dissolved (mg/L as SiO_2)	Nitrogen, Nitrate dissolved (mg/L as N)
UOGW	3N/5W-5N4 LYS @82	—	—	—	—	—	—	—	—
		—	—	3,600	140	<1.0	0.32	110	—
		590	—	2,300	120	<1.0	<1.0	—	15
		180	—	1,500	120	<.80	<.80	—	13
		170	—	1,500	61	—	—	—	9.6
		160	—	—	—	—	—	—	—
		190	—	380	32	<.60	.30	—	11
UOGW	3N/5W-5N7 LYS @38	570	86	—	—	—	—	—	—
		—	—	120	25	<.20	<.20	—	—
		—	—	270	30	1.1	.11	69	—
		—	—	—	—	—	—	—	—
		—	—	330	22	<1.0	<1.0	—	.60
		380	—	280	19	<1.0	<1.0	—	3.0
		320	—	340	13	<.40	<.04	—	4.7
		450	—	230	7.2	—	—	—	4.1
		270	—	—	—	—	—	—	—
		270	—	170	5.9	<.30	<.15	—	4.1
MOGW	4N/5W-21H5 LYS @140	600	62	—	—	—	—	—	—
MOGW	4N/5W-21H6 LYS @92	120	—	—	—	—	—	31	—
		130	—	35	11	<.60	.30	—	4.4
		130	—	—	—	—	—	—	—

Table 20. Chemical and isotopic composition of water from suction-cup lysimeters in unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1995–97—Continued

Site	Instrumentation name	Nitrogen, Nitrite dissolved (mg/L as N)	Nitrogen, NO_2+NO_3 dissolved (mg/L as N)	Phosphorus, dissolved (mg/L as P)	Phosphate Ortho, dissolved (mg/L as P)	Boron, dissolved (µg/L as B)	Delta Deuterium (per mil)	Delta Oxygen-18 (per mil)	Delta Carbon-13 (per mil)
UOGW	3N/5W-5N4 LYS @82	—	—	—	—	—	—	—	—
		<0.50	26	100	—	2,400	-65.0	-9.42	—
		.34	15	72	—	—	—	—	—
		<.04	—	—	100	—	—	—	—
		.06	—	—	—	—	—	—	—
		—	—	—	—	—	—	—	—
		.02	—	—	93	—	—	—	-9.73
UOGW	3N/5W-5N7 LYS @38	—	—	—	—	—	—	—	—
		.15	.01	13	—	—	—	—	—
		—	—	—	—	320	-61.6	-9.42	—
		—	—	—	—	—	—	—	—
		.80	1.4	16	—	—	-62.4	-9.42	—
		.17	3.2	9.0	—	—	—	—	—
		.06	—	—	t0.	—	—	—	—
		<.01	—	—	—	—	—	—	—
		—	—	—	—	—	—	—	—
		.04	—	—	7.4	—	—	—	-15.84
MOGW	4N/5W-21H5 LYS @140	—	—	—	—	—	-60.2	-8.73	—
MOGW	4N/5W-21H6 LYS @92	—	—	—	—	—	-68.4	-9.94	—
		.27	—	—	<.6	—	—	—	-12.71
		—	—	—	—	—	—	—	—

Table 20. Chemical and isotopic composition of water from suction-cup lysimeters in unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1995–97—Continued

Site	Instrumentation name	Date	Time	Specific conductance, field (µS/cm)	pH, field (standard units)	Calcium, dissolved (mg/L as Ca)	Magnesium, dissolved (mg/L as Mg)	Sodium, dissolved (mg/L es Na)	Potassium, dissolved (mg/L as K)
MOGW	4N/5W-21H6 LYS @92	06-12-96	1530	461	7.3	—	—	—	—
MOGW	4N/5W-21H8 LYS @ 65	04-12-95	1220	705	9.2	—	—	—	—
		04-20-95	1600	1,120	8.6	—	—	—	—
		07-25-95	1630	1,380	6.8	63	23	180	5.9
		09-13-95	1305	890	7.1	—	—	—	—
		03-13-96	0930	752	6.5	—	—	—	—
		04-04-96	0835	686	6.7	—	—	—	—
MOGW	4N/5W-21H12 LYS @ 22	04-12-95	1250	3,440	8.2	—	—	—	—
		05-03-95	1620	4,490	—	—	—	—	—
		06-22-95	1515	4,380	8.3	—	—	—	—
		07-25-95	1650	4,030	7.8	72	65	830	16
		09-13-95	1245	980	7.5	69	31	110	3.3
		02-22-96	1430	—	—	—	—	—	—
		03-13-96	0940	980	7.6	—	—	—	—
		04-04-96	0840	1,070	7.6	—	—	—	—
LOGW-1	4N/5W-1C5 LYS @76	07-25-95	1530	11,600	9.3	14	16	16	30
		09-14-95	1007	13,000	9.5	—	—	3,400	—

Table 20. Chemical and isotopic composition of water from suction-cup lysimeters in unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1995–97—Continued

Site	Instrumentation name	Alkalinity, dissolved FET field $CaCO_3$ (mg/L)	Carbonate dissolved FET field CO_3 (mg/L)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Fluoride, dissolved (mg/L as F)	Bromide, dissolved (mg/L as Br)	Silica, dissolved (mg/L as SiO_2)	Nitrogen, Nitrate dissolved (mg/L as N)
MOGW	4N/5W-21H6 LYS @92	—	—	—	—	—	—	—	—
MOGW	4N/5W-21H8 LYS @65	250	32	—	—	—	—	—	—
		360	12	—	—	—	—	—	—
		120	—	180	220	5.0	<1.0	—	3.8
		120	—	180	96	2.9	.10	19	5.8
		42	—	—	—	—	—	—	—
		44	—	220	17	1.4	<.30	—	11
MOGW	4N/5W-21H12 LYS @22	610	—	560	330	34	<.20	—	—
		—	—	—	—	—	—	—	—
		—	—	700	410	64	.71	68	—
		780	—	610	350	55	1.2	—	7.1
		240	—	300	16	<.20	<.20	43	8.4
		—	—	270	16	16	—	—	—
		240	—	—	—	—	—	—	—
		200	—	260	14	<.60	<.30	—	9.6
LOGW-1	4N/5W-1C5 LYS @76	7,300	1,200	450	41	<1.0	21	—	—
		8,200	2,600	250	28	<4.0	<1.1	—	.37

Table 20. Chemical and isotopic composition of water from suction-cup lysimeters in unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1995–97—Continued

Site	Instrumentation name	Nitrogen, Nitrite dissolved (mg/L as N)	Nitrogen, NO2+NO3 dissolved (mg/L as N)	Phosphorus, dissolved (mg/L as P)	Phophate Ortho, dissolved (mg/L as P)	Boron, dissolved (µg/L as B)	Delta Deuterium (per mil)	Delta Oxygen-18 (per mil)	Delta Carbon-13 (per mil)
MOGW	4N/5W-21H6 LYS @92	—	—	—	—	—	—	—	-12.71
MOGW	4N/5W-21H8 LYS @65	—	—	—	—	—	—	—	—
		—	—	—	—	—	-72.4	-10.18	—
		0.09	3.9	<2.0	—	—	-76.8	-10.68	—
		.08	—	—	0.20	—	—	—	—
		—	—	—	—	—	—	—	—
		.20	—	—	<.60	—	—	—	-11.82
MOGW	4N/5W-21H12 LYS @22	<.20	.70	.30	—	—	—	—	—
		—	—	—	—	—	—	—	—
		<.05	<.05	<2.0	—	810	-67.1	-9.30	—
		.05	<.05	<2.0	—	—	—	—	—
		.51	—	—	<.30	—	—	—	—
		.18	—	—	—	—	—	—	—
		—	—	—	—	—	—	—	—
		.02	—	—	1.0	—	—	—	-16.98
LOGW-1	4N/5W-1C5 LYS @76	<.05	.69	21	—	—	-79.7	-11.37	—
		<.20	—	—	13.	—	—	—	—

Table 20. Chemical and isotopic composition of water from suction-cup lysimeters in unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1995–97—Continued

Site	Instrumentation name	Date	Time	Specific conductance, field (µS/cm)	pH, field (standard units)	Calcium, dissolved (mg/L as Ca)	Magnesium, dissolved (mg/L as Mg)	Sodium, dissolved (mg/L as Na)	Potassium, dissolved (mg/L as K)
LOGW-1	4N/5W-1C5 LYS @76	02-21-96	1200	—	—	—	—	—	—
		03-13-96	1300	10,500	9.5	—	—	—	—
		04-03-96	1545	10,100	9.6	—	—	—	—
LOGW-1	4 N/5W-1C7 LYS @64	06-23-95	0909	—	9.7	14	52	3,500	63
		07-25-95	1520	10,400	9.6	—	—	—	—
		09-14-95	1235	6,750	9.0	—	—	—	—
		02-21-96	1210	4,000	8.4	—	—	—	—
		03-13-96	1340	4,030	7.8	—	—	—	—
LOGW-1	4N/5W-1C10 LYS @22	09-14-95	1310	1,150	9.2	18	37	250	4.4
LOGW-1	4N/5W-1C11 LYS @14	04-12-95	1600	5,240	—	—	—	—	—
		06-23-95	0830	4,410	8.5	42	30	1,300	27
		07-25-95	1500	4,410	8.5	—	—	—	—
		09-14-95	1345	2,480	8.3	—	—	—	—
		02-21-96	1220	1,810	8.2	—	—	—	—
		03-13-96	1430	1,730	8.2	—	—	—	—
		04-03-96	1555	1,510	7.9	—	—	—	—
USCW	4N/7W-16J6 LYS @ 58	04-03-96	0935	668	8.1	—	—	—	—
		05-29-96	1345	657	8.7	48	28	41	3.5
		02-26-97	1640	—	—	66	28	23	4.3
USCW	4N/7W-16J9 LYS @ 28	05-29-96	1355	1,850	7.1	—	—	—	—

Table 20. Chemical and isotopic composition of water from suction-cup lysimeters in unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1995–97—Continued

Site	Instrumentation name	Alkalinity, dissolved FET field $CaCO_3$ (mg/L)	Carbonate, dissolved FET field CO_3 (mg/L)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Fluoride, dissolved (mg/L as F)	Bromide, dissolved (mg/L as Br)	Silica, dissolved (mg/L as SiO_2)	Nitrogen, Nitrate dissolved (mg/L as N)
LOGW-1	4N/5W-1C5 LYS @76	—	—	110	870	—	—	—	—
		5,600	1,600	—	—	—	—	—	—
		—	—	—	—	—	—	—	—
LOGW-1	4N/5W-1C7 LYS @64	6,100	1,600	500	540	<1.0	<1.0	—	—
		5,600	1,200	160	170	<1.0	.64	18	0.54
		2,400	240	670	540	<4.0	<1.0	—	1.2
		700	—	1,000	860	—	—	—	2.79
		720	—	—	—	—	—	—	—
LOGW-1	4N/5W-1C010 LYS @22	650	82	7.0	4.5	<.04	<.040	34	1.2
LOGW-1	4N/5W-1C11 LYS @14	—	—	230	360	<.20	<.20	—	—
		2,600	280	330	86	<1.0	<1.0	—	—
		2,200	110	250	66	<1.0	.21	28	—
		930	2.0	390	32	<.80	<.10	—	1.4
		540	—	450	25	—	—	—	1.2
		670	—	—	—	—	—	—	—
		—	—	240	23	<.60	.60	—	1.4
USCW	4N/7W-16J6 LYS @ 58	210	—	99	22	.70	<.3	—	.93
		190	12	—	—	—	—	32	—
		—	—	—	—	—	—	24	—
USCW	4N/7W-16J9 LYS @ 28	66	—	—	—	—	—	—	—

Table 20. Chemical and isotopic composition of water from suction-cup lysimeters in unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1995–97—Continued

Site	Instrumentation name	Nitrogen, Nitrate dissolved (mg/L as N)	Nitrogen, NO_2+NO_3 dissolved (mg/L as N)	Phosphorus, dissolved (mg/L as P)	Phosphate Ortho, dissolved (mg/L as P)	Boron, dissolved (µg/L as B)	Delta Deuterium (per mil)	Delta Oxygen-18 (per mil)	Delta Carbon-13 (per mil)
LOGW-1	4N/5W-1C5 LYS @76	—	—	—	—	—	—	—	-26.20
		—	—	—	—	—	—	—	—
		—	—	—	—	—	—	—	—
LOGW-1	4N/5W-1C7 LYS @64	—	1.7	23	—	—	-72.8	-9.20	—
		0.54	.63	7.0	—	5,000	—	—	—
		1.2	—	—	<0.60	—	—	—	—
		2.8	—	—	—	—	—	—	—
		—	—	—	—	—	—	—	-11.72
LOGW-1	4N/5W-1C10 LYS @22	1.2	—	—	<.06	—	-68.3	-9.73	—
LOGW-1	4N/5W-1C11 LYS @14	—	—	17	—	—	—	—	—
		—	.06	9.0	—	—	-67.5	-9.06	—
		—	<.05	6.0	—	750	—	—	—
		1.4	—	—	<1.2	—	—	—	—
		1.2	—	—	—	—	—	—	—
		—	—	—	—	—	—	—	—
		1.4	—	—	<.60	—	—	—	-8.80
USCW	4N/7W-16J6 LYS @ 58	.93	—		.40	—	—	—	—
		—	—	—	—	—	-77.5	-10.67	—
		—	—	—	—	—	—	—	—
USCW	4N/7W-16J9 LYS @ 28	—	—	—	—	—	-81.3	-10.63	—

Table 20. Chemical and isotopic composition of water from suction-cup lysimeters in unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1995–97—Continued

Site	Instrrumentation name	Date	Time	Specific conductance, field (µS/cm)	pH, field (standard units)	Calcium, dissolved (mg/L as Ca)	Magnesium, dissolved (mg/L as Mg)	Sodium, dissolved (mg/L as Na)	Potasium, dissolved (mg/L as K)
USCW	4N/7W-16J11 LYS @ 15	03-13-96	0840	2,930	8.9	—	—	—	—
		04-03-96	0940	2,060	8.8	—	—	—	—
		05-29-96	1400	1,540	9.0	22	19	300	3.6
LSCW	5N/7W-17K9 LYS @ 27	06-13-96	1645	5,920	8.1	—	—	—	—
		12-04-96	1215	—	—	—	—	—	—
		01-08-97	0945	6,620	—	—	—	—	—
		02-19-97	1220	4,270	—	—	—	—	—
		04-10-97	0915	—	8.5	—	—	—	—

Table 20. Chemical and isotopic composition of water from suction-cup lysimeters in unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1995–97—Continued

Site	Instrumentation name	Alkalinity, dissolved FET field $CaCO_3$ (mg/L)	Carbonate, dissolved FET field CO_3 (mg/L)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Fluoride, dissolved (mg/L as F)	Bromide, dissolved (mg/L as Br)	Silica, dissolved (mg/L as SiO_2)	Nitrogen, Nitrate dissolved (mg/L as N)
USCW	4N/7W-16J11 LYS @ 15	1,200	91	—	—	—	—	—	—
		720	90	310	29	<0.60	<0.30	—	—
		500	84	—	—	—	—	23	<0.04
LSCW	5N/7W-17K9 LYS @ 27	—	—	—	—	—	—	—	—
		—	—	—	—	—	—	—	—
		—	—	—	—	—	—	—	—
		—	—	—	—	—	—	—	—
		1,200	—	—	—	—	—	—	—

Table 20. Chemical and isotopic composition of water from suction-cup lysimeters in unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1995–97—Continued

Site	Instrumentation name	Nitrogen, Nitrite dissolved (mg/L as N)	Nitrogen, NO_2+NO_3 dissolved (mg/L as N)	Phos-phorus, dissolved (mg/L as P)	Posphate Ortho, dissolved (mg/L as P)	Boron, dissolved (ug/L as B)	Delta Deuterium (per mil)	Delta Oxygen-18 (per mil)	Delta Carbon-13 (per mil)
USCW	4N/7W-16J11 LYS @ 15	—	—	—	—	—	—	—	—
		<0.02	—	—	<0.60	—	—	—	—
		—	—	—	—	—	-85.5	-11.5	—
LSCW	5N/7W-17K9 LYS @ 27	—	—	—	—	—	-75.3	-9.14	—
		—	—	—	—	—	-76.2	-9.27	—
		—	—	—	—	—	—	—	—
		—	—	—	—	—	—	—	—
		—	—	—	—	—	—	—	—

Table 21. Isotopic composition of water vapor and chlorofluorocarbon concentrations of gas from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1995–97

[Delta deuterium and delta oxygen-18 were analyzed at the Desert Research Institute in Las Vegas, Nevada. Tritium analyses were done on composites of three samples of vapor collected between September and November 1995 at the U.S. Geological Survey laboratory in Menlo Park, California. Chlorofluorocarbons were analyzed at the U.S. Geological Survey laboratory in Reston, Virginia. Location of sites shown in figure 1. Date sites were drilled given in tables 2–12. Numbering system explained in text. Instrumentation name from table 1. CFC-11, trichlorofluoromethane; CFC-12, dichlorofluoromethane; CFC-113, trichlorofluoroethane. per mil, per thousand; TU, tritium unit; —, no data; pg/kg, picogram per kilogram]

Site	Instrumentation name	Date	Time	Isotopic composition of water vapor				Chlorofluorocarbons		
				Delta deuterium (per mil)	Delta oxygen-18 (per mil)	Tritium (TU)	Tritium error count (TU)	CFC-11 (pg/kg)	CFC-12 (pg/kg)	CFC-113 (pg/kg)
UOGW	3N/5W-5N2 GAS @ 105	09-12-95	1414	—	—	—	—	142	206	24
		10-12-95	1520	−135	−19.1	−8	±8	—	—	—
		10-12-95	1521	−135	—	—	—	—	—	—
	3N/5W-5N3 GAS @ 91	09-12-95	1344	—	—	—	—	199	310	42
		10-12-95	1515	−140	−19.7	11	±8	—	—	—
	3N/5W-5N5 GAS @ 69	09-12-95	1313	—	—	—	—	248	421	65
		10-12-95	1510	−141	−18.5	1	±7	—	—	—
	3N/5W-5N6 GAS @ 52	09-12-95	1254	—	—	—	—	286	506	84
		10-12-95	1505	−141	−18.4	9	±13	—	—	—
	3N/5W-5N8 GAS @ 22	09-12-95	1220	—	—	—	—	275	551	85
		10-12-95	1500	−139	−17.8	1	±7	—	—	—
MOGW	4N/5W-21H2 GAS @ 500	09-13-95	1940	—	—	—	—	<1	17	<1
		10-25-95	1525	−149	−20.4	15	±10	—	—	—
	4N/5W-21H3 GAS @ 300	09-13-95	1521	—	—	—	—	111	246	30
		10-25-95	1520	−148	−19.8	2	±8	—	—	—
	4N/5W-21H4 GAS @ 150	09-13-95	1548	—	—	—	—	150	322	41
		10-25-95	1515	−147	−19.9	10	±7	—	—	—
	4N/5W-21H7 GAS @ 80	09-13-95	1520	—	—	—	—	199	499	68
		10-25-95	1510	−143	−20.5	0	±5	—	—	—
	4N/5W-21H9 GAS @ 50	09-13-95	1440	—	—	—	—	245	485	77
		10-25-95	1505	−147	−19.9	7	±7	—	—	—
	4N/5W-21H11 GAS @ 26	09-13-95	1420	—	—	—	—	269	535	85
		10-25-95	1500	−147	−19.7	5	±12	—	—	—
LOGW-1	4N/5W-1C3 GAS @ 103	09-14-95	1114	−147	−19.9	−5	±7	191	389	56
		09-14-95	1115	−148	−20.5	—	—	—	—	—
		10-04-96	1520	−131	−17.8	—	—	—	—	—
		10-04-96	1521	—	−18.0	—	—	—	—	—
		01-17-97	1240	−159	−22.1	—	—	—	—	—

Table 21. Isotopic composition of water vapor and chlorofluorocarbon concentrations of gas from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1995–97—Continued

Site	Instrumentation name	Date	Time	Isotopic composition of water vapor				Chlorofluorocarbons		
				Delta deuterium (per mil)	Delta oxygen-18 (per mil)	Tritium (TU)	Tritium error count (TU)	CFC-11 (pg/kg)	CFC-12 (pg/kg)	CFC-113 (pg/kg)
LOGW-1	4N/5W-1C3 GAS @ 103	04-08-97	1220	−178	−24.4	—	—	—	—	—
		09-10-97	0845	−154	−21.1	—	—	—	—	—
	4N/5W-1C4 GAS @ 86	09-14-95	1515	−154	−19.8	13	±8	186	435	51
		11-22-95	1515	−165	−21.0	—	—	—	—	—
		10-04-96	1515	−149	−19.9	—	—	—	—	—
		01-17-97	1230	−152	−22.6	—	—	—	—	—
		04-08-97	1205	−169	−22.0	—	—	—	—	—
		09-10-97	0900	−149	−19.8	—	—	—	—	—
		09-10-97	0905	−149	—	—	—	—	—	—
	4N/5W-1C6 GAS @ 73	09-14-95	1100	−143	−18.9	9	±6	181	404	56
		10-04-96	1530	−144	−19.4	—	—	—	—	—
		01-17-97	1220	−218	−28.8	—	—	—	—	—
		04-08-97	1105	−170	−22.2	—	—	—	—	—
		09-10-97	0950	−127	−18.0	—	—	—	—	—
	4N/5W-1C8 GAS @ 59	09-14-95	1110	−151	−19.6	−4	±6	167	381	85
		10-04-95	1445	−148	−20.6	—	—	—	—	—
		01-17-97	1210	−219	−28.1	—	—	—	—	—
		04-08-97	1240	−176	−22.2	—	—	—	—	—
		09-10-97	1020	−141	−20.0	—	—	—	—	—
	4N/5W-1C9 GAS @ 38	09-14-95	1200	−149	−19.5	5	±6	196	437	64
		10-04-96	1550	−145	−17.8	—	—	—	—	—
		01-17-97	1200	−218	−28.6	—	—	—	—	—
		04-08-97	1245	−180	−24.3	—	—	—	—	—
		09-10-97	1030	−126	−17.1	—	—	—	—	—
OGF	4N/5W-1D2 GAS @ 83	09-15-95	1049	—	—	—	—	198	388	49
		09-20-95	1520	−149	−18.6	−3	±6	—	—	—
	4N/5W-1D3 GAS @ 70	09-15-95	1028	—	—	—	—	194	441	51
		09-20-95	1515	−146	−18.4	−2	±8	—	—	—
	4N/5W-1D4 GAS @ 50	09-11-95	2125	—	—	—	—	232	428	62
		09-15-95	0958	—	—	—	—	229	421	60
		09-20-95	1510	−149	−17.3	−2	±4	—	—	—

Table 21. Isotopic composition of water vapor and chlorofluorocarbon concentrations of gas from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1995–97—Continued

Site	Instrumentation name	Date	Time	Isotopic composition of water vapor				Chlorofluorocarbons		
				Delta deuterium (per mil)	Delta oxygen-18 (per mil)	Tritium (TU)	Tritium error count (TU)	CFC-11 (pg/kg)	CFC-12 (pg/kg)	CFC-113 (pg/kg)
OGF	4N/5W-1D5 GAS @ 30	09-15-95	0922	—	—	—	—	243	462	64
		11-22-95	1200	−166	−18.5	−2	±6	—	—	—
	4N//5W-1D6 GAS @ 12	09-11-95	1940	—	—	—	—	216	467	68
		09-15-95	0931	—	—	—	—	252	526	79
		11-22-95	1205	−169	−19.4	−2	±4	—	—	—
USCW	4N/7W-16J2 GAS @ 98	01-07-97	1609	—	—	—	—	9,810	105,000	267
		01-07-97	1620	—	—	—	—	10,200	105,000	273
	4N/7W-16J4 GAS @ 80	01-07-97	1411	—	—	—	—	10,300	104,000	262
	4N/7W-16J5 GAS @ 63	01-07-97	1342	—	—	—	—	8,670	92,900	188
		01-07-97	1357	—	—	—	—	9,050	90,800	197
	4N/7W-16J8 GAS @ 38	01-07-97	1230	—	—	—	—	7,490	72,700	134
		01-07-97	1251	—	—	—	—	7,800	73,800	134
	4N/7W-16J10 GAS @ 20	01-07-97	1311	—	—	—	—	5,190	49,000	104
		01-07-97	1329	—	—	—	—	5,480	50,000	106
MSCW-1	5N/7W-28L2 GAS @ 500	12-05-96	1700	—	—	—	—	—	103	9.8
		12-05-96	1730	—	—	—	—	48	92	10.8
	5N/7W-28L4 GAS @ 300	12-05-96	1535	—	—	—	—	—	122	11.2
MSCW-2	5N/7W-28L8 GAS @ 226	12-05-96	1400	—	—	—	—	160	323	41.8
	5N/7W-28L9 GAS @ 148	12-05-96	1210	—	—	—	—	—	312	41.3
		12-05-96	1215	—	—	—	—	156	293	38.0
	5N/7W-28L12 GAS @ 83	12-05-96	1200	—	—	—	—	260	359	51.6
		12-05-96	1205	—	—	—	—	—	415	54.8
LSCW	5N/7W-17K2 GAS @ 108	12-04-96	1650	—	—	—	—	—	433	64.4
		12-04-96	1635	—	—	—	—	—	420	58.8
	5N/7W-17K4 GAS @ 65	12-04-96	1720	—	—	—	—	—	465	71.3
		12-04-96	1725	—	—	—	—	237	476	73.4
	5N/7W-17K6 GAS @ 46	12-04-96	1620	—	—	—	—	238	475	79.6
		12-04-96	1625	—	—	—	—	233	466	76.6

Table 21. Isotopic composition of water vapor and chlorofluorocarbon concentrations of gas from unsaturated-zone monitoring sites near Victorville, San Bernardino County, California, 1995–97—Continued

Site	Instrumentation name	Date	Time	Isotopic composition of water vapor				Chlorofluorocarbons		
				Delta deuterium (per mil)	Delta oxygen-18 (per mil)	Tritium (TU)	Tritium error count (TU)	CFC-11 (pg/kg)	CFC-12 (pg/kg)	CFC-113 (pg/kg)
LSCW	5N/7W-17K8 GAS @ 32	12-04-96	—	—	—	—	—	222	442	73.5
		12-04-96	—	—	—	—	—	245	484	81.6
	5N/7W-17K10 GAS @ 20	12-04-96	—	—	—	—	—	256	496	79.8
		12-04-96	—	—	—	—	—	259	494	85.0
	Surface air sample	12-04-96	—	—	—	—	—	271	543	84.0
SCF	5N/7W-17Q2 GAS @ 77	12-06-96	—	—	—	—	—	173	416	71.3
		12-06-96	—	—	—	—	—	212	425	69.0
	5N/7W-17Q3 GAS @ 50	12-06-96	—	—	—	—	—	225	453	75.5
		12-05-96	—	—	—	—	—	231	455	78.5
	5N/7W-17Q4 GAS @ 20	12-05-96	—	—	—	—	—	247	482	85.5
	5N/7W-17Q5 GAS @ 8	12-05-96	—	—	—	—	—	250	495	80.8
		12-05-96	—	—	—	—	—	238	499	85.8

Table 22. Chemical and isotopic composition of bulk precipitation near Victorville, San Bernardino County, California, 1994–98

[Chemical data analyzed at U.S. Geological Survey laboratory in San Diego, California. Isotopic data analyzed at U.S. Geological Survey National Water Quality Laboratory in Arvarda, Colorado. Location of sites shown in figure 1. Numbering system for sites explained in text. in., inch; µS/cm, microsiemen per centimeter at 25° Celsius; mg/L, milligram per liter; per mil, per thousand; >, greater than; <, less than; —, no data]

Precipitation gage	Begin date	End date	Precipitation (in.)	Specific-conductance (µS/cm)	pH (standard units)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Nitrogen, nitrate, dissolved (mg/L as N)	Nitrogen, nitrite, dissolved (mg/L as N)	Phosphorus, dissolved (mg/L as P	Delta deuterium (per mil)	Delta oxygen-18 (per mil)
3N/4W-8G PRECIP	12-16-94	02-08-95	>22.0	38	6.6	1.6	2.6	0.06	<0.01	<0.30	−55	−8.2
	02-08-95	04-19-95	10.7	54	6.2	3.4	1.8	.02	.04	<.40	−67	−9.2
	04-19-95	11-01-95	0.15	131	6.0	9.0	6.8	1.7	.01	<.40	−60	−8.4
	11-01-95	04-23-96	7.3	29	6.4	1.2	.60	.36	.10	<.20	−60	−8.8
	[1]11-01-95	04-23-96	—	—	—	—	.60	.36	<.01	.20	—	—
	04-23-96	11-20-96	.64	122	6.2	4.0	3.2	1.7	<.01	<.30	−37	−6.0
	11-20-96	01-30-97	>22.8	109	6.1	10	2.4	1.1	<.01	<.30	—	—
	01-30-97	04-01-97	.01	—	—	11	2.4	1.1	<.01	<.30	−32	−1.6
	04-12-97	09-15-97	.22	—	—	29	8.8	.50	<.01	<.30	−33	−2.9
	09-15-97	09-27-97	1.8	—	—	2.3	1.6	.54	<.01	<.30	−74	−10.9
	09-29-97	01-16-98	6.0	17	6.5	1.4	.9	.25	<.01	<.30	−59	−9.4
	01-16-98	04-02-98	12.2	10	6.3	.9	1.0	.14	<.01	<.30	−62	−9.3
	04-02-98	06-03-98	2.3	24	6.7	1.3	1.2	.27	<.01	<.30	−41	−6.8
	[1]04-02-98	06-03-98	—	—	—	1.2	1.5	.27	<.01	<.30	—	—
	[1]04-02-98	06-03-98	—	—	—	.9	1.3	.27	<.01	<.30	—	—
	06-03-98	10-20-98	1.1	109	7.2	3.9	3.9	.72	<.01	<.30	−29	−4.4
4N/5W-33M PRECIP	12-16-94	02-16-95	7.4	78	7.8	1.0	5.8	.29	.03	<.30	−86	−11.7
	02-16-95	04-19-95	10.1	38	7.2	2.0	1.7	<.01	<.01	.30	−65	−9.2
	04-19-95	11-01-95	.27	231	6.8	9.9	19	.02	.22	<.40	−22	.36
	11-01-95	04-23-96	22.0	49	6.8	2.3	2.0	<.01	<.01	<.20	−56	−8.2
	[1]11-01-95	04-23-96	—	—	—	2.1	1.9	<.01	<.01	.30	—	—
	04-25-96	11-20-96	.82	257	5.8	27	16	2.5	.02	<.30	−43	−7.1
	11-20-96	01-30-97	20.3	26	6.1	1.3	1.7	<.01	<.01	<.30	−70	−10.2
	01-30-97	04-01-98	.15	—	—	3.8	4.5	<.01	<.01	<.30	−70	−10.2
	04-12-97	09-15-97	.43	—	—	9.2	20	3.2	<.01	<.30	−37	−5.9
	09-15-97	09-29-97	1.4	—	—	2.7	11	1.0	<.01	<.30	−76	−11.3
	09-29-97	01-16-97	4.5	46	6.0	<1.0	4.5	<.01	.01	<.30	−63	−9.9

Table 22. Chemical and isotopic composition of bulk precipitation near Victorville, San Bernardino County, California, 1994–98—Continued

Precipitation gage	Begin date	End date	Precipitation (in.)	Specific conductance (µS/cm)	pH (standard units)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Nitrogen, nitrate, dissolved (mg/L as N)	Nitrogen, nitrite, dissolved (mg/L as N)	Phosphorus, dissolved (mg/L as P	Delta deuterium (per mil)	Delta oxygen-18 (per mil)
4N/5W-33M PRECIP	01-16-98	04-02-98	11.4	12	5.6	<1.0	2.1	<0.01	0.01	<0.30	−70	−10.1
	04-02-98	06-02-98	1.8	39	6.3	<1.0	4.5	.27	.02	<.30	−48	−7.5
	06-03-98	10-20-98	1.3	62	6.4	6.3	5.5	1.4	<.01	<.30	−18	−4.2
4N/4W-3A PRECIP	12-19-94	02-08-95	3.4	85	7.3	4.2	12	.47	.01	<.30	−88	−12
	02-08-95	04-20-95	3.3	33	6.9	2.2	1.0	.02	<.01	<.40	−65	−9.2
	04-20-95	11-01-95	<.01	—	—	26	16	2.2	.05	7.8	−49	−6.9
	11-01-95	04-23-96	2.8	138	5.5	5.3	11	.95	.02	.80	−65	−9.4
	[1]11-01-95	04-23-96	—	—	—	5.2	11	.92	.02	.70	—	—
	04-25-96	11-20-96	.82	257	6.9	12	67	4.7	.02	<.30	−55	−7.7
	11-20-96	01-30-97	20.3	26	6.5	3.3	8.9	.70	.01	<.30	—	—
	01-30-97	04-11-97	<.01	—	—	—	—	—	—	—	—	—
	04-11-97	09-15-97	.15	—	—	—	—	—	—	—	−38	−4.8
	09-15-97	09-29-97	.94	—	—	31	95	13	<.01	<.30	−74	−10.6
	09-29-97	01-16-98	3.5	57	5.8	1.1	6.9	.22	<.01	<.30	−67	−10.2
	01-16-98	04-02-98	7.1	24	6.6	1.1	2.2	.13	<.01	<.30	−74	−10.7
	04-02-98	06-03-98	.51	104	7.2	3.5	11	.68	.01	<.30	−43	−6.5
	[1]04-02-98	06-03-98	—	—	—	3.7	12	.74	.01	<.30	—	—
	[1]04-02-98	06-03-98	—	—	—	3.5	12	.74	.03	<.30	—	—
	06-03-98	10-20-98	1.5	120	7.2	4.0	7.9	.76	<.01	<.30	−19	−4.8
4N/5W-10D PRECIP	12-16-94	02-08-95	4.5	65	7.2	3.1	8.8	.45	<.01	.30	−94.7	−12.7
	02-08-95	04-19-95	3.3	26	6.7	<2.0	.90	.19	<.01	<.40	−62.8	−9.0
	04-19-95	11-01-95	.26	369	6.7	15	14	3.6	<.01	.40	−45.8	−5.77
	11-01-95	04-23-96	3.1	92	6.9	5.3	8.6	1.0	<.01	<.30	−7.36	−10.2
	[1]11-01-95	04-23-96	—	—	—	5.6	8.5	1.0	.21	<.30	—	—
	04-25-96	11-20-96	.35	560	6.9	<4.0	63	3.2	.85	<.30	−49.0	−6.96
	11-20-96	01-30-97	2.3	80	6.6	3.2	7.9	.63	.01	<.30	−87	−11.7
	01-30-97	04-11-97	.05	—	—	—	—	—	—	—	—	—
	04-11-97	09-16-97	.39	—	—	14	44	5.0	.04	<.30	−51	−7.4

Table 22. Chemical and isotopic composition of bulk precipitation near Victorville, San Bernardino County, California, 1994–98—Continued

Precipitation gage	Begin date	End date	Precipitation (in.)	Specific conductance (µS/cm)	pH (standard units)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Nitrogen, nitrate, dissolved (mg/L as N)	Nitrogen, nitrite, dissolved (mg/L as N)	Phosphorus, dissolved (mg/L as P	Delta deuterium (per mil)	Delta oxygen-18 (per mil
4N/5W-10D PRECIP	09-16-97	09-29-97	1.3	—	—	3.8	17	1.3	<0.01	<0.30	−74	−10.8
	09-29-97	01-16-98	3.5	59	6.7	1.9	7.1	.34	.01	<.30	−67	−10.5
	01-16-98	04-02-98	7.5	20	6.8	1.0	2.6	.15	.02	<.30	−75	−10.8
	04-02-98	06-03-98	.52	94	7.1	3.6	12	.72	.03	<.30	−34	−5.2
	06-03-98	10-20-98	1.3	98	6.8	3.6	7.3	1.2	<.01	<.30	−16	−4.3
5N/7W-24D PRECIP	12-19-94	02-08-95	3.6	93	7.4	8.0	12	.45	<.01	<.30	−94.5	−12.4
	02-08-95	04-20-95	2.3	20	6.9	<2.0	.90	.13	<.01	<.40	−70.6	−9.47
	04-20-95	11-01-95	.33	179	6.7	14	8.1	1.1	.01	<.40	−51.9	−5.83
	11-01-95	04-23-96	2.6	90	5.6	5.1	12	.52	<.01	.30	−70.9	−10.8
	[1]11-01-95	04-23-96	—	—	—	5.0	12	.52	<.01	.30	—	—
	04-25-96	11-20-96	1.3	213	6.7	5.0	28	.16	<.01	.60	−38	−5.0
	11-20-96	01-30-97	2.4	107	6.7	3.0	13	.47	<.01	.80	−93	−12.5
	01-30-97	09-15-97	.11	—	—	6.6	28	1.2	.05	<.03	−42	−6.6
	09-15-97	09-27-97	1.3	—	—	8.9	82	3.2	<.01	<.03	−78	−11.3
	09-27-97	01-16-98	2.8	60	6.4	34	10	<.01	.01	<.03	−69	−10.6
	01-16-98	04-02-98	7.1	20	6.4	<1.0	2.6	.09	.01	<.03	−81	−11.4
	04-02-98	06-03-98	.87	72	6.6	<1.0	11	.45	.01	<.03	—	—
	06-03-98	10-20-98	1.1	86	6.4	2.7	11.3	.56	<.01	<.03	−25	−4.4

[1]Duplicate analyses.

Table 23. Water-level data from wells 4N/5W-21H1 (MOGW) and 5N/7W-28L1 (MSCW) near Victorville, San Bernardino County, California, 1995–99

[All water-level measurements were made with a calibrated electric tape. in, inch; ft, foot]

SITE ID 342519117240701
LOCAL ID 4N/5W-21H1 MOGW AT 670
Near Hesperia. Drilled observation well. Diameter 2 in., depth 670 ft, perforated 630–670 ft. Altitude of land-surface datum 3,530 ft. Water-level records available since 1995.

WATER LEVELS, IN FEET BELOW LAND SURFACE DATUM

Data	Water level	Data	Water level	Data	Water level	Data	Water level
April 12, 1995	647.8	January 17, 1996	647.4	October 23, 1996	647.9	November 20, 1997	648.4
April 21, 1995	647.7	February 20, 1996	647.6	November 13, 1996	648.1	December 17, 1997	648.3
May 3, 1995	647.5	March 13, 1996	647.4	January 9, 1997	647.8	January 7, 1998	648.3
May 26, 1995	647.5	April 2, 1996	647.7	February 20, 1997	648.1	January 28, 1998	648.3
June 8, 1995	647.4	May 14, 1996	647.8	February 26, 1997	647.7	April 23, 1998	648.4
August 24, 1995	647.7	May 29, 1996	647.8	April 9, 1997	648.0	July 29, 1998	648.5
September 12, 1995	647.8	June 12, 1996	647.8	May 14, 1997	648.2	September 11, 1998	648.4
October 12, 1995	647.8	August 19, 1996	647.9	June 11, 1997	648.2	October 20, 1998	648.7
October 25, 1995	647.7	September 18, 1996	648.2	July 15, 1997	648.4	January 7, 1999	648.5
November 30, 1995	647.7	October 4, 1996	648.1	August 12, 1997	648.2		

HIGHEST 647.4 June 08, 1995 January 17, 1996, March 13, 1996
LOWEST 648.7 October 20, 1998

SITE ID 342923117370601
LOCAL ID 5N/7W-28L1 MSCW AT 626
Southwest of Phelan in Sheep Creek Wash. Drilled observation well. Diameter 2 in., depth 626 ft, perforated 606–626 ft. Altitude of land-surface datum 3,505 ft. Water-level records available since 1996.

WATER LEVELS, IN FEET BELOW LAND SURFACE DATUM

Date	Water level	Date	Water level	Date	Water level	Data	Water level
April 10, 1996	543.8	September 18, 1996	545.0	June 12, 1996	545.4	April 16, 1998	545.7
May 29, 1996	544.0	February 19, 1997	544.9	July 16, 1996	545.6	July 28, 1998	546.1
June 13, 1996	544.8	April 9, 1997	545.0	December 20, 1996	545.2	September 11, 1998	546.1
July 11, 1996	545.0	April 16, 1997	545.2	January 8, 1998	545.2	October 20, 1998	546.2
August 19, 1996	544.8	May 16, 1997	545.5	January 27, 1998	545.3	January 7, 1999	545.7

HIGHEST 543.8 April 10, 1996
LOWEST 546.2 October 20, 1998

Table 24. Chemical and isotopic composition of water from wells 4N/5W-21H1(MOGW) and 5N/7W-28L1 (MSCW) near Victorville, San Bernardino County, California, 1995–96

[Data analyzed by U.S. Geological Survey National Water Quality Laboratory in Arvarda, Colorado. Location of sites shown in figure 1. Date sites were drilled given in tables 2–12. Numbering system for sites explained in text. Well number from table 1. µS/cm, microsiemen per centimeter at 25° Celsius; mg/L, milligram per liter; µg/L, microgram per liter; per mil, per thousand; TU, tritium unit; PMC, percent modern carbon; FET, fixed end-point titration; —, no data; <, actual value is less than value shown]

Site	Well number	Date	Time	Specific conductance field (µS/cm)	pH, field (standard units)	Calcium, dissolved (mg/L as Ca)	Magnesium, dissolved (mg/L as Mg)	Sodium, dissolved (mg/L as Na)	Potassium, dissolved (mg/L as K)
MOGW	4N/5W-21H1 WELL @670	03-20-95	1700	233	9.4	11	3.2	35	3.2
		06-09-95	1400	114	9.7	4.4	1.7	34	2.4
MSCW	4N/7W-28L1 WELL @626	07-18-96	2145	546	7.7	48	18	28	6.2

Site	Well number	Alkalinity, dissolved FET field $CaCO_3$ (mg/L)	Carbonate, dissolved FET field CO_3 (mg/L)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Fluoride, dissolved (mg/L as F)	Bromide, dissolved (mg/L as Br)	Silica, dissolved (mg/L as SiO_2)	Nitrogen, Nitrite dissolved (mg/L as N)
MOGW	4N/5W-21H1 WELL @670	81	20	13	9.3	0.3	<0.1	5.1	0.06
		56	—	9.3	13	.3	.05	5.9	.01
MSCW	4N/7W-28L1 WELL @621	690	—	130	3.9	.2	.03	<0.1	—

Site	Well number	Nitrogen, NO_2+NO_3 dissolved (mg/L as N)	Phosphorus, dissolved (mg/L as P)	Boron, dissolved (µg/L as B)	Delta deuterium (per mil)	Delta oxygen-18 (per mil)	Tritium (TU)	Tritium error count (TU)	Carbon-14 (PMC)	Delta carbon-13 (per mil)
MOGW	4N/5W-21H1 WELL @670	0.36	<0.01	20	−69	−9.7	—	—	—	—
		.07	.06	10	−75	−10.5	0.2	± 0.1	32.8	−14.6
MSCW	4N/7W-28L1 WELL @626	—	—	22	−84	−11.8	.07	± 0.1	61.5	−13.4