DEPARTMENT OF THE INTERIOR

DONALD PAUL HODEL, Secretary

U.S. GEOLOGICAL SURVEY

Dallas L. Peck, Director

For additional information write to:

District Chief U.S. Geological Survey Federal Building, Room W-2234 2800 Cottage Way Sacramento, CA 95825 Copies of this report may be purchased from:

U.S. Geological Survey Books and Open-File Reports Section Box 25425, Federal Center Denver, CO 80225

TABLE 4.--U.S. Environmental Protection Agency primary and secondary maximum contaminant levels for selected chemical constituents in drinking water, and number of wells that equaled or exceeded levels

Constituent	Environmental Protection Agency maximum contaminant levels for drinking water		Number of wells that equaled or exceeded levels
	Primary	Secondary	
Phenols		1 μg/L	7
Arsenic (As)	50 μg/L		17
Barium (Ba)	1,000 µg/L		0
Cadmium (Cd)	10 μg/L		2
Chloride (C1)		250 mg/L	40
Chromium (Cr)	50 μg/L		0
Copper (Cu)	1	1,000 µg/L	0
Fluoride (F)	1.8 mg/L		31
Iron (Fe)		300 μg/L	30
Lead (Pb)	50 μg/L		1
Manganese (Mn)		50 μg/L	26
Mercury (Hg)	2 μg/L		1
Nitrate nitrogen (N)	10 mg/L		1
Sulfate (SO,)		250 mg/L	32
Zinc (Zn)4		5,000 μg/L	0
Dissolved solids		500 mg/L	66

Maximum level is adjusted according to mean maximum daily air temperature (U.S. Environmental Protection Agency, 1977). For 64.3°F, at Inyokern (National Oceanic and Atmospheric Administration, 1983), the limit is 1.8 mg/L.

In 1985 the Environmental Protection Agency proposed maximum contaminant levels for nine organic priority pollutants for public water supplies (U.S. EPA, 1985). The proposed maximum contaminant levels pertain to organic compounds that are carcinogens or present a health hazard. The proposed maximum contaminant level is 5 μ g/L for the following eight contaminants: benzene, carbon tetrachloride, 1,2-dichloroethane, 1,1-dichloroethylene, p-dichlorobenzene (not analyzed for in this study), tetrachloroethylene, trichloroethylene, and 1,1,1-trichloroethane. The proposed maximum contaminant level for vinyl chloride is 1 μ g/L.

The concentrations of all 27 selected organic pollutants were less than the detection limit of 3 $\mu g/L$ used for these analyses in all wells except 26S/40E-22B1, -22H3, and -22P4. Well 26S/40E-22B1 contained three organic pollutants--chloroform, chloroethylene, and trichloroethylene (TCE)--at concentrations of 12.0, 6.0, and 94.0 $\mu g/L$, respectively. The concentration of trichloroethylene in this well exceeded the EPA proposed maximum contaminant level of 5 $\mu g/L$ for drinking water. Well 26S/40E-22H3 contained vinyl chloride at a concentration of 7.9 $\mu g/L$, which exceeds the proposed maximum contaminant level of 1 $\mu g/L$. Well 26S/40E-22P4 contained methylene chloride at a concentration of 4.0 $\mu g/L$. No maximum contaminant levels have been proposed for methylene chloride, chloroform, and chloroethylene.

55

SELECTED REFERENCES

- Banta, R.L., 1974, Ground-water data, 1973, Indian Wells Valley, California: U.S. Geological Survey Open-File Report, 9 p.
- Dutcher, L.C., and Moyle, W.R., Jr., 1973, Geologic and hydrologic features of Indian Wells Valley, California: U.S. Geological Survey Water-Supply Paper 2007, 50 p.
- Hem, J.D., 1970, Study and interpretation of the chemical characteristics of natural water [2d ed.]: U.S. Geological Survey Water-Supply Paper 1473, 363 p.
- Keith, L.H., and Telliard, W.A., 1979, Priority Pollutants I--a perspective view: Environmental Science and Technology, v. 13, no. 4, p. 416-423.
- Lamb, C.E., and Downing, D.J., 1978, Ground-water data, 1974-76, Indian Wells Valley, Kern, Inyo, and San Bernardino Counties, California: U.S. Geological Survey Open-File Report 78-335, 42 p.
- Lipinski, Paul, and Knochenmus, D.D., 1981, A 10-year plan to study the aquifer system of Indian Wells Valley, California: U.S. Geological Survey Open-File Report 81-404, 16 p.
- National Oceanic and Atmospheric Administration, 1983, [published monthly and annually (all data prior to 1940 by U.S. Weather Bureau)], Climatological data--California: v. 82, nos. 1-13.
- U.S. Environmental Protection Agency, 1976 [1978], Quality criteria for water: U.S. Environmental Protection Agency, Office of Water and Hazardous Materials, EPA 258-389/6057, 256 p.
- 1977, National interim primary drinking water regulations: U.S. Environmental Protection Agency, Office of Water Supply, EPA 570/9-76-003, 159 p.
- _____1979, National secondary drinking water regulations: Federal Register, v. 44, no. 140, July 19, 1979, p. 42195-42202.
- _____1985, National primary drinking water regulations; volatile synthetic organic chemicals; final rule and proposed rule: Federal Register, Part III: Environmental Protection Agency, v. 50, no. 219, November 13, 1985, p. 46880-46933.
- Warner, J.W., 1975, Ground-water quality in Indian Wells Valley, California: U.S. Geological Survey Water-Resources Investigations Report 8-75, 59 p.
- Zbur, R.T., 1963, A geophysical investigation of Indian Wells Valley, California: U.S. Naval Ordnance Test Station, China Lake, Calif., Naval Ordnance Test Station Technical Publication 2795, 98 p.

GROUND-WATER DATA FOR INDIAN WELLS VALLEY

KERN, INYO, AND SAN BERNARDINO COUNTIES, CALIFORNIA, 1977-84

By Charles Berenbrock

U.S. GEOLOGICAL SURVEY

Open-File Report 86-315

Prepared in cooperation with the

INDIAN WELLS VALLEY WATER DISTRICT and the

U.S. DEPARTMENT OF THE NAVY, CHINA LAKES NAVAL WEAPONS CENTER

7211–3.

