

Table 3-1. Final Cleanup Levels for the 200-ZP-1 Groundwater OU

COC	90th Percentile Concentration	Federal MCL	State MCL	Model Toxics Control Act Method B Cleanup Levels		Final Cleanup Level
				Non-carcinogens	Carcinogens at 10 ⁻⁵ Risk Level	
Carbon tetrachloride	2,900	5	5	5.6	3.4 ^a	3.4 ^b
Chromium (total)	130	100	100	24,000	—	100
Hexavalent chromium ^c	203	N/A ^d	N/A ^d	48	—	48
Iodine-129	1.2	1	1	—	—	1
Nitrate (as N) ^e	81,050	10,000	10,000	25,600	—	10,000
Technetium-99	1,442	900	900	—	—	900
Trichloroethene	10.9	5	5	2.4	1 ^a	1 ^b
Tritium	36,200	20,000	20,000	—	—	20,000

Source: EPA et al., 2008, *Record of Decision Hanford 200 Area 200-ZP-1 Operable Unit Superfund Site, Benton County, Washington*.

Notes:

Units are “µg/L” for nonradionuclides and “pCi/L” for radionuclides.

Federal MCL values are from 40 CFR 141, “National Primary Drinking Water Regulations,” with iodine-129 and technetium-99 values from EPA’s *Implementation Guidance for Radionuclides* (EPA 816-F-00-002).

State MCL values are from WAC 246-290, “Public Water Supplies.”

a. The WAC 173-340-705, “Model Toxics Control Act—Cleanup,” “Use of Method B,” cleanup levels for carbon tetrachloride and trichloroethene are from Ecology, 2008 Cleanup Levels and Risk Calculations (CLARC) database table.

b. DOE will clean up COCs for the 200-ZP-1 OU subject to WAC 173-340, “Model Toxics Control Act—Cleanup” (carbon tetrachloride and trichloroethene), so the excess lifetime cancer risk does not exceed 1×10^{-5} at the conclusion of the remedy.

c. The mobile form of chromium in Hanford Site groundwater is hexavalent chromium. Groundwater samples have been analyzed for chromium by the analytical laboratories as either total chromium or hexavalent chromium. Both methods yield similar results, although there can be differences caused by normal analytical variability or sample turbidity. Therefore, although total chromium and hexavalent chromium are listed as separate COCs, they represent the same constituent in Hanford Site groundwater. The effective cleanup level for chromium is the hexavalent chromium standard of 48 µg/L because it is more restrictive.

d. There is no MCL specific to hexavalent chromium.

e. Nitrate may be expressed as total nitrate (NO₃) or as total nitrogen (N). The MCL for nitrate as NO₃ is 45,000 µg/L, and the same concentration expressed as N is 10,000 µg/L. (Note that the EPA’s drinking water regulations are published as 10,000 µg/L.)

CLARC = Cleanup Levels and Risk Calculations

EPA = U.S. Environmental Protection Agency

COC = contaminant of concern

MCL = maximum contaminant level

DOE = U.S. Department of Energy

N/A = not applicable

Ecology = Washington State Department of Ecology

OU = operable unit