Table 2.3
ARARs and TBCs for Site Contaminants of Potential Concern
Pemaco Superfund Site, Maywood, California

	Applicable or Relevant and Appropriate Requirements (ARARs)					To Be Considered (TBCs)						
	Drinking Water Standards (California & Federal) Maximum Contaminant Levels (MCLs)[1&2]					California Department of Health Services Action Levels[3] (mg/L)	EPA Region IX Preliminary Remediation Goals (PRGs) for Tap Water[4] (µg/L)	EPA Region IX Preliminary Remediation Goals (PRGs) for Ambient Air (µg/m3)	EPA Region IX Preliminary Remediation Goals (PRGs) for Ambient Air x 100[5] (µg/m3)	EPA Region IX Preliminary Remediation Goals (PRGs) for Residential Soil (mg/kg)	EPA Region IX Soil Screening Levels (SSLs) for Migration to Groundwater[6]	
	California Dept. of Health Services		U.S. Environmental Protection Agency									
	Primary MCL (µg/L)	Secondary MCL (µg/L)	Primary MCL (µg/L)	MCL Goal (µg/L)	Secondary MCL (µg/L)						DAF 20 (mg/kg)	DAF 1 (mg/kg)
INORGANIC COPCs												
Aluminum	1,000	200	--	--	50-200	--	36,000	5.1	510	76,000	--	--
Antimony	6.0	--	6.0	6.0	--	--	15	--	--	31	5.0	0.3
Arsenic	50	--	10	--	--	--	0.045	0.00045	0.045	22/0.39[+]	29	1.0
Barium	1,000	--	2,000	2,000	--	--	2,600	0.52	52	5,400	1,600	82
Cadmium	5.0	--	5.0	5.0	--	--	18	0.0011	0.11	37	8.0	0.4
Chromium (total)	50	--	100	100	--	--	55,000 (trivalent)	0.00016	0.016	210	38	2.0
Iron	--	300	--	--	300	--	11,000	--	--	23,000	--	--
Lead	--	--	see Action Level	zero	--	15	--	--	--	150	--	--
Manganese	--	50	--	--	50	--	880	0.051	5.1	1,800	--	--
Nickel	100	--	--	--	--	--	730	--	--	1,600	130	7.0
Selenium	50	--	50	50	--	--	180	--	--	390	5	0.3
Thallium	2.0	--	2.0	0.5	--	--	2.4	--	--	5.2	--	--
ORGANIC COPCs												
1,1,2,2-Tetrachloroethene	1.0	--	--	--	--	--	0.055	0.033	3.3	0.41	0.003	0.0002
1,1,2-Trichloroethane	5.0	--	5.0	3.0	--	--	0.2	0.12	12	0.73	0.02	0.0009
1,1-Dichloroethane	5.0	--	–	--	--	--	810/0.2*	520/1.2*	52,000/120*	510/28*	23	1.0
1,1-Dichloroethene	6.0	--	7.0	7.0	--	--	340	210	21000	120	0.06	0.003
1,2,4-Trimethylbenzene	--	--	--	--	--	--	120	6.2	620	52	--	--
1,2-Dibromo-3-chloropropane	0.2	--	0.2	zero	--	--	0.048/0.0016*	0.21/0.00096*	21/0.096*	0.45/0.019*	--	--
1,2-Dichloroethane	0.5	--	5.0	zero	--	--	0.12	0.074	7.4	0.28	0.02	0.001
1,3-Dichlorobenzene	--	--	--	--	--	--	5.5	3.3	330	1.6	--	--
1,4-Dichlorobenzene	5.0	--	75	75	--	--	0.5	0.31	31	3.4	2	0.1
1,4-Dioxane	--	--	–	--	--	0.003	6.1	0.61	61	44	--	--
Acenonitrile	--	--	--	--	--	--	100	62	6,200	420	--	--
Acetone	--	--	–	--	--	--	610	370	37,000	1,600	16	0.8
Acrylonitrile	--	--	–	--	--	--	0.039	0.028	2.8	0.21	--	--
Benzene	1.0	--	5.0	zero	--	--	0.34	0.23	23	0.6	0.03	0.002
Benzo(a)anthracene	--	--	--	--	--	--	0.092	0.0092	0.92	0.62	2.0	0.08
Benzo(a)pyrene	0.2	--	0.2	zero	--	--	0.0092	0.00092	0.092	0.062	8.0	0.4
Benzo(b)fluoranthene	--	--	--	--	--	--	0.092	0.0092	0.92	0.62	5.0	0.2
Benzo(k)fluoranthene	--	--	--	--	--	--	0.92/0.056*	0.092/0.017*	9.2/1.7*	6.2/0.38*	49	2.0
bis(2-Ethylhexyl)phthalate	4.0	--	6.0	zero	--	--	4.8	0.48	48	35	--	--
Bromodichloromethane	--	--	–	--	--	--	0.18	0.11	11	0.82	0.6	0.03
Carbazole	--	--	--	--	--	--	3.4	0.34	34	24	0.6	0.03
Chloroform	--	--	–	--	--	--	6.2/0.53*	3.1/0.35*	310/35*	3.6/0.94*	0.6	0.03
Chloroethane	--	--	--	--	--	--	4.6	2.3	230	3	--	--
Chloromethane	--	--	--	--	--	--	1.5	1.1	110	1.2	--	--
Chysene	--	--	--	--	--	--	9.2/0.56*	0.92/0.17*	92/17*	62/3.8*	160	8.0
cis-1,2-Dichloroethene	6.0	--	70	70	--	--	61	37	3,700	43	0.4	0.02
Dibenzo(a,h)anthracene	--	--	--	--	--	--	0.0092	0.00092	0.092	0.062	2.0	0.08
Dibromochloromethane	--	--	–	--	--	--	0.13	0.08	8.0	1.1	0.4	0.02
Dichlorodifluoromethane	--	--	--	--	--	--	390	210	21,000	94	--	--
Ethylbenzene	300	--	700	700	--	--	2.9	1.7	170	8.9	13	0.7
Hexachlorobutadiene	--	--	--	--	--	--	0.86	0.086	8.6	6.2	2.0	0.1
Indeno (1,2,3-cd) pyrene	--	--	--	--	--	--	0.092	0.0092	0.92	0.62	14	0.7
Isophorone	--	--	--	--	--	--	71	7.1	710	510	0.5	0.03
Methyl isobutyl ketone	--	--	--	--	--	--	160	83	8,300	790	--	--
Methyl tert-butyl Ether	13	5.0	--	--	--	--	13/6.2*	19/3.7*	1,900/370*	62/17*	--	--
Methylene Chloride	5.0	--	--	--	--	--	4.3	4.1	410	9.1	0.02	0.001
Napththalene	--	--	--	--	--	--	6.2	3.1	310	56	84	4.0
Sulfide	--	--	--	--	--	--	110	--	--	--	--	--

Table 2.3
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Pemaco Superfund Site, Maywood, California

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	Drinking Water Standards (California & Federal) Maximum Contaminant Levels (MCLs)[1&2]					California Department of Health Services Action Levels[3] (mg/L)	EPA Region IX Preliminary Remediation Goals (PRGs) for Tap Water[4] (µg/L)	EPA Region IX Preliminary Remediation Goals (PRGs) for Ambient Air (µg/m3)	EPA Region IX Preliminary Remediation Goals (PRGs) for Ambient Air x 100[5] (µg/m3)	EPA Region IX Preliminary Remediation Goals (PRGs) for Residential Soil (mg/kg)	EPA Region IX Soil Screening Levels (SSLs) for Migration to Groundwater[6]	
	California Dept. of Health Services		U.S. Environmental Protection Agency									
	Primary MCL (µg/L)	Secondary MCL (µg/L)	Primary MCL (µg/L)	MCL Goal (µg/L)	Secondary MCL (µg/L)						DAF 20 (mg/kg)	DAF 1 (mg/kg)
Tetrachloroethene	5.0	--	5.0	zero	--	--	0.66	0.67	67	1.5	0.06	0.003
Toluene	150	--	1,000	1,000	--	--	720	400	40,000	520	12	0.6
Total xylenes	1,750	--	10,000	10,000	--	--	210	110	11,000	270	210	10
trans-1,2-Dichloroethene	10	--	100	100	--	--	120	73	7,300	69	0.7	0.03
Trichloroethene	5.0	--	5.0	zero	--	--	0.028	0.017	1.7	0.053	0.06	0.003
Vinyl Chloride	0.5	--	2.0	zero	--	--	0.02	0.11	11	0.079	0.01	0.0007

Notes:
µg/L - microgram per liter.
mg/L - milligram per liter.
µg/m3 - microgram per cubic meter.
mg/kg - milligram per kilogram.
µg/kg - microgram per kilogram.
*' - State of California modified PRG.
** - Action Levels, for purposes of regulatory compliance for both the California Dept. of Health Services and the USEPA.
'+' - non-cancer endpoint/cancer endpoint
1.) State of California Maximum Contaminant Levels (MCLs) are legally enforceable drinking water standards established by the California Department of Health Services. Primary MCLs are risk-based levels where it is assumed that a person will drink water with the specified chemical concentrations. Secondary MCLs address taste, odor, or appearance of drinking water. In general, California MCLs are more stringent that federal MCLs established by the USEPA.
2.) United States Environmental Protection Agency (USEPA) Maximum Contaminant Levels (MCLs) are legally enforceable drinking water standards established by the USEPA. Primary MCLs are risk-based levels where it is assumed that a person will drink water with the specified chemical concentrations. Secondary MCLs address taste, odor, or appearance of drinking water.
3.) The California Department of Health Services (DHS) Action Levels are health-based advisory levels establised by DHS for chemicals in drinking water that lack MCLs.
4.) USEPA Region IX Preliminary Remediation Goals (PRGs) are tools for evaluating and cleaning up contaminated sites. They are risk-based concentrations combining exposure information and EPA toxicity data. PRGs should be viewed as Agency guidelines, not legally enforceable standards.
5.) USEPA Region IX Preliminary Remediation Goals (PRGs) are tools for evaluating and cleaning up contaminated sites. They are risk-based concentrations combining exposure information and EPA toxicity data. PRGs should be viewed as Agency guidelines, not legally enforceable standards. No soil vapor PRGs are available. Ambient air PRGs were multiplied by an attenuation factor of 100 to develop a conservative screening method of soil vapor data.
6.) Region IX PRGs used to screen subsurface soils as a threat to groundwater are divided by Dilution Attentuation Factors (DAF) of 20 and 1. DAF 20 PRGs are used when the contaminated soil is not directly adjacent to a drinking water source and dilution of the contaminant is occurring before it reaches the drinking water source. DAF 1 PRGs assume that the contaminated soil is directly adjacent to a drinking water source and no dilution of the contaminant is occurring along the pathway between the source soil and the drinking water
7.) The State of California Office of Environmental Health Hazard Assessment (OEHNA) Public Health Goals (PHGs) are based on health risk assessments using the most current scientific methods.

Table 2.3
ARARs and TBCs for Site Contaminants of Potential Concern
Pemaco Superfund Site, Maywood, California

California Office of Env. Health Hazard Assessment Public Health Goal (PHG) in Drinking Water[7] (µg/L)
600
20
--
--
0.07
--
--
2.0
--
12
--
0.1
--
--
--
--
10
--
0.0017
0.4
--
6.0
--
--
--
--
0.15
--
0.004
--
--
12
--
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--
--
--
--
--
--
--
--
300
--
--
--
--
13
--
--
--

Table 2.3
ARARs and TBCs for Site Contaminants of Potential Concern
Pemaco Superfund Site, Maywood, California

	California Office of Env. Health Hazard Assessment Public Health Goal (PHG) in Drinking Water[7] (µg/L)
	0.06
	150
	1,800
	--
	0.8
	0.05