

TABLE A-1
Data Needs and Uses
Quality Assurance Project Plan, Omega OU-2

Compound	Uses/Decisions	Applicable Regulatory Limit (µg/L)	Applicable ARAR ⁽¹⁾	California DHS DLR (µg/L) ⁽²⁾	Additional Regulatory Limits (µg/L)
TCL Volatile Organic Compounds					
Acetone	Exceedances with respect to federal and state drinking water standards, and state action levels.	1	CA Primary MCL ^(A)	0.5	0.15 ^(E)
Benzene		100	USEPA Primary MCL ^(C)	0.5	2.5 ^(I) ; 100-proposed ^(A)
Bromodichloromethane	Evaluate water treatment system design.	100	USEPA Primary MCL ^(C)	0.5	45 ^(I) ; 100-proposed ^(A)
Bromoform		500	CA Proposition 65 Regulatory Level ^(I)	0.5	
Bromomethane	Evaluate remedial action performance.	260	CA DHS State Action Level ^(F)		
n-Butylbenzene		260	CA DHS State Action Level ^(F)		
sec-Butylbenzene		160	CA DHS State Action Level ^(F)		
Carbon disulfide	↓	0.5	CA Primary MCL ^(A)	0.5	0.1 ^(E)
Carbon tetrachloride		100	USEPA Primary MCL ^(C)		50 ^(H)
Chlorobenzene		16	Other Taste and Odor ^(H)	0.5	100 ^(I)
Chloroethane			No Applicable ARAR		
Chloroform		140	CA DHS State Action Level ^(F)		
Chloromethane		140	CA DHS State Action Level ^(F)		
2-Chlorotoluene					
4-Chlorotoluene					
Cyclohexane					
Dibromomethane					
Dibromochloromethane					
Dibromochloropropane (DBCP)		0.2	USEPA Primary MCL ^(C)		0.05 ^(I)
1,2-Dibromoethane		0.05			0.1 ^(I)
1,2-Dichlorobenzene		600	CA DHS State Action Level ^(G)	0.5	600 ^(E)
1,3-Dichlorobenzene		600	CA DHS State Action Level ^(G)	0.5	600 ^(F)
1,4-Dichlorobenzene		5	CA Primary MCL ^(A)	0.5	6 ^(E)
Dichlorodifluoromethane		1,000	CA DHS State Action Level ^(F)		

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1,1-Dichloroethane	Exceedances with respect to federal and state drinking water standards, and state action levels. Evaluate water treatment system design. Evaluate remedial action performance.	5	CA Primary MCL ^(A)	0.5	3 ^(E)
1,2-Dichloroethane		0.5	CA Primary MCL ^(A)	0.5	0.4 ^(E)
1,1-Dichloroethylene		6	CA Primary MCL ^(A)	0.5	7 ^(C) ; 10 ^(E)
cis-1,2-Dichloroethylene		6	CA Primary MCL ^(A)	0.5	70 ^(C)
trans-1,2-Dichloroethylene		10	CA Primary MCL ^(A)	0.5	100 ^(C)
Dichloromethane (Methylene Chloride)		5	CA/USEPA Primary MCL ^{(A) (C)}	0.5	4 ^(E)
1,2-Dichloropropane		5	CA/USEPA Primary MCL ^{(A) (C)}	0.5	0.5 ^(E)
2,2-Dichloropropane					
1,1-Dichloropropene					
1,3-Dichloropropene		0.5	CA Primary MCL ^(A)		
cis-1,3-Dichloropropene	0.5	CA Primary MCL ^(A)	0.5	0.2 ^(E)	
trans-1,3-Dichloropropene	0.5	CA Primary MCL ^(A)	0.5	0.2 ^(E)	
Ethane					
Ethene					
Ethybenzene		300	CA Primary MCL ^(A)	0.5	700 ^(C) ; 300 ^(E) ; 29 ^(H)
Hexachlorobutadiene					
2-Hexanone					
Isopropylbenzene (Cumene)		770	CA DHS State Action Level ^(F)	0.5	
Methane					
Methyl acetate					
Methyl ethyl ketone		8,400	Other Taste and Odor ^(H)	5	
Methyl isobutyl ketone (MIBK)		120	CA DHS State Action Level ^(F)		1300 ^(H)
Methylcyclohexane					
Napthalene		170	CA DHS State Action Level ^(F)		
n-Propylbenzene		260	CA DHS State Action Level ^(F)		

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Styrene	Exceedances with respect to federal and state drinking water standards, and state action levels. Evaluate water treatment system design. Evaluate remedial action performance.	100	CA/USEPA Primary MCL ^{(A) (C)}	0.5	11 ^(H)	
1,1,2,2-Tetrachloroethane		1	CA Primary MCL ^(A)	0.1	0.5 ^(E) ; 1.5 ^(I)	
Tetrachloroethylene (PCE)		5	CA/USEPA Primary MCL ^{(A) (C)}	0.5	0.06 ^(E)	
Toluene		150	CA Primary MCL ^(A) /CA PHG ^(E)	0.5	42 ^(H) ; 1,000 ^(C)	
1,2,3-Trichlorobenzene		↓	5	CA Primary MCL ^(A) /CA PHG ^(E)	0.5	70 ^(C)
1,2,4-Trichlorobenzene			200	CA/USEPA Primary MCL ^{(A) (C)}	0.5	
1,1,1-Trichloroethane (1,1,1-TCA)			5	CA/USEPA Primary MCL ^{(A) (C)}	0.5	5 ^(I)
1,1,2-Trichloroethane			5	CA/USEPA Primary MCL ^{(A) (C)}	0.5	0.8 ^(E)
Trichloroethylene (TCE)			150	CA Primary MCL ^(A)	5	700 ^(E)
Trichlorofluoromethane			1,200	CA Primary MCL ^(A)	10	4,000 ^(E)
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)			330	CA DHS State Action Level ^(F)		
1,2,4-Trimethylbenzene			330	CA DHS State Action Level ^(F)		
1,3,5-Trimethylbenzene			0.5	CA Primary MCL ^(A)	0.5	0.05 ^(E) ; 2 ^(C)
Vinyl chloride	1,750		CA Primary MCL ^(A)	1,800	17 ^(H) ; 10,000 ^(C)	
Xylene(s)						
Additional Volatiles						
Methyl tert-butyl ether (MTBE)	Exceedances with respect to federal and state drinking water standards, and state action levels	13	CA Secondary MCL ^(B)	3	13 ^(E)	

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TCL Semivolatile Organic Compounds					
Acenaphthene	Exceedances with respect to federal and state drinking water standards, and state action levels.				
Acenaphthylene					
Acetophenone	Evaluate water treatment system design.				
Aniline (Phenylamine) (Aminobenzene)					
Anthracene	Evaluate remedial action performance.				
Benzaldehyde					
Benzoic Acid (Carboxybenzene)	↓				
Benzo(a)anthracene					
Benzo(a)pyrene		0.2	CA/USEPA Primary MCL ^{(A.) (C)}	0.1	0.004 ^(E)
Benzo(b)fluoranthene					
Benzo(g,h,i)perylene					
Benzo(k)fluoranthene					
Benzyl Alcohol (Phenylmethanol)					
1,1'-Biphenyl					
Bis(2-chloroethoxy)methane					
Bis(2-chloroethyl)ether					
Bis(2-chloroisopropyl)ether					
4-Bromophenyl-phenyl ether					
Butylbenzyl phthalate (BBP)					
Caprolactam					
Carbazole					
4-Chloro-3-methylphenol					
4-Chloroaniline					

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Quality Assurance Project Plan, Omega OU-2

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2-Chloronaphthalene	Exceedances with respect to federal and state drinking water standards, and state action levels.								
2-Chlorophenol									
4-Chlorophenyl-phenyl ether									
Chrysene	Evaluate water treatment system design.	400	CA/USEPA Primary MCL ^{(A) (C)}	5	200 ^(E)				
Di(2-ethylhexyl)adipate									
Di(2-ethylhexyl)phthalate	Evaluate remedial action performance.	4	CA Primary MCL ^(A)	3	6 ^(C) ; 12 ^(E)				
Dibenz(a,h)anthracene									
Dibenzofuran (Diphenylene oxide)	↓								
3,3'-Dichlorobenzidine									
2,4-Dichlorophenol									
Diethyl phthalate (DEP)									
Dimethyl phthalate									
2,4-Dimethylphenol						100	CA DHS State Action Level ^(F)		
4,6-Dinitro-2-methylphenol									
2,4-Dinitrophenol									
2,4-Dinitrotoluene									
2,6-Dinitrotoluene									
Di-n-butylphthalate (Dibutyl phthalate)									
Di-n-octylphthalate(Dioctyl phthalate)									
Endothall						100	CA/USEPA Primary MCL ^{(A), (C)}	45	580 ^(E)
Fluoranthene (Idryl)									
Fluorene									
Glyphosate	700	CA/USEPA Primary MCL ^{(A) (C)}	25	1,000 ^(E)					
Hexachlorobenzene	1	CA/USEPA Primary MCL ^{(A) (C)}	0.5	0.03 ^(E)					

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Hexachlorocyclopentadiene	Exceedances with respect to federal and state drinking water standards, and state action levels. Evaluate water treatment system design. Evaluate remedial action performance.	50	CA/USEPA Primary MCL ^{(A) (C)}	1	50 ^(E)
Hexachloroethane					
Indeno(1,2,3-cd)pyrene					
Isophorone					
2-Methylnaphthalene					
2-Methylphenol					
4-Methylphenol					
3,4-Methylphenol					
2-Nitroaniline					
3-Nitroaniline					
2-Nitrophenol					
4-Nitroaniline					
4-Nitrophenol					
Pentachlorophenol		1	CA/USEPA Primary MCL ^{(A) (C)}	0.2	0.4 ^(E)
Phenanthrene					
Phenol	4,200	CA DHS State Action Level ^(F)			
Pyrene					
Pyridine					
2,4,6-Trichlorophenol					
2,4,5-Trichlorophenol					
Emergent Compounds	Exceedances with respect to federal and state drinking water standards, and state action levels. Evaluate water treatment system design.				
1,4-Dioxane		3	CA DHS State Action Level ^(F)		15 ^(I)
N-Nitrosodimethylamine (NDMA)		0.01	CA DHS State Action Level ^(F)		0.02 ^(I)
1,2,3-Trichloropropane (1,2,3-TCP)		0.005	CA DHS State Action Level ^(F)		

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Treatment/Discharge Parameters					
Total Organic Parameters	Evaluate groundwater treatment alternatives.				
Total Organic Carbon					
Biological Oxygen Demand	Evaluate treated groundwater discharge alternatives.				
Chemical Oxygen Demand					

Notes:

- (1) ARARs from June 2003 California EPA Compilation of Water Quality Goals and Updates through September 2003.
- (2) California Department of Health Services required Detection Limit for Purposes of Reporting (DLR).
- (3) Calculated ARAR based on hardness = 120 mg/L as CaCO₃.
- (A) California Department of Health Services Primary MCL for Drinking Water.
- (B) California Department of Health Services Secondary MCL for Drinking Water.
- (C) USEPA Primary MCL for Drinking Water.
- (D) USEPA Secondary MCL for Drinking Water.
- (E) California Office of Environmental Health Hazard Assessment Public Health Goal for Drinking Water.
- (F) California Department of Health Services State Action Level for Toxicity.
- (G) California Department of Health Services State Action Level for Taste and Odor.
- (H) Other Taste and Odor Thresholds.
- (I) California Proposition 65 Regulatory Level for Drinking Water.

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Quality Assurance Project Plan, Omega OU-2

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Emergent Compounds						
Chromium (VI)	Exceedances with respect to federal and state drinking water standards, and state action levels. Evaluate water treatment system design.	11 (0.2) ⁴	California Toxics Rule for Aquatic Life Protection ^(H)	1		
Perchlorate		4	CA DHS State Action Level ^(F)	4 (preliminary)		
TAL Inorganics						
Aluminum	Exceedances with respect to federal and state drinking water standards, and state action levels. Evaluate groundwater treatment alternatives and treated groundwater discharge options.	50	USEPA Secondary MCL ^{(D)11}	50	200 ^(B) ; 600 ^(E)	
Antimony		6	CA/USEPA Primary MCL ^{(A) (C)}	6	20 ^(E)	
Arsenic		10	USEPA Primary MCL ^(C)	2	50 ^(A) ; 0.004 ^(E)	
Barium		1,000	CA Primary MCL ^(A)	100	2,000 ^{(C) (E)}	
Beryllium		4	CA/USEPA Primary MCL ^{(A) (C)}	1	1 ^(E)	
Cadmium		5	CA/USEPA Primary MCL ^{(A) (C)}	1	0.07 ^(E) ; 2.6 ^{(3) (H)}	
Calcium						
Chromium (total)			50	CA Primary MCL ^(A)	10	100 ^(C)
Cobalt						
Copper			11 ⁽²⁾	California Toxics Rule for Aquatic Life Protection ^(H)	50	170 ^(E) ; 1300 ^(F)
Iron			300	CA/USEPA Secondary MCL ^{(B) (D)}	100	
Lead			3.1	California Toxics Rule for Aquatic Life Protection ^(H)	5	15 ^(F) ; 2 ^(E) ; 0.25 ^(G)
Magnesium						
Manganese			50	CA/USEPA Secondary MCL ^{(B) (D)}	20	
Mercury			2	CA/USEPA Primary MCL ^{(A) (C)}	1	1.2 ^(E)
Molybdenum						
Nickel			61	California Toxics Rule for Aquatic Life Protection ^(H)	10	100 ^(A) ; 12 ^(E)
Potassium						
Selenium		5	California Toxics Rule for Aquatic Life Protection ^(H)	5	50 ^{(A) (C)}	

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Silver	Exceedances with respect to federal and state drinking water standards, and state action levels. Evaluate groundwater treatment alternatives and treated groundwater discharge options.	4.7 ⁽²⁾	California Toxics Rule for Aquatic Life Protection ^(I)	10	100 ^{(B) (D)}
Sodium		2.0	CA/USEPA Primary MCL ^{(A) (C)}	1	0.1 ^(E)
Thallium		50	CA DHS State Action Level ^(F)	3 (preliminary)	
Vanadium		140 ⁽²⁾	California Toxics Rule for Aquatic Life Protection ^(H)	50	5,000 ^{(B) (D)}
Zinc		5.2	California Toxics Rule for Aquatic Life Protection ^(H)	100	200 ^(C) ; 150 ^(E)
Cyanide					
Additional Inorganics					
Boron	Evaluate groundwater treatment alternatives and treated groundwater discharge options	1,000	CA DHS State Action Level ^(F)		
Silicon					
Treatment/Discharge Parameters					
pH	Evaluate groundwater treatment alternatives and treated groundwater discharge options	6.5 to 8.5	USEPA Secondary MCL ^(D)		
Alkalinity					
Ammonia					
Bicarbonate					
Bromide	Exceedances with respect to federal and state drinking water standards, and state action levels	250,000	CA/USEPA Secondary MCL ^(B,D)		
Chloride					
Fluoride					
Nitrate (as N)					
Nitrite (as N)					
Phosphorus (orthophosphate, total phosphorus)					
Sulfate		250,000	CA Secondary MCL ^(B)	500	250,000 ^(D)

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Total dissolved solids (TDS)	Evaluate groundwater treatment alternatives and treated groundwater discharge options Exceedances with respect to federal and state drinking water standards, and state action levels	250,000	CA/USEPA Secondary MCL ^(B,D)		

NOTES:

- (1) ARARs from June 2003 California EPA Compilation of Water Quality Goals and Updates through September 2003.
(2) Calculated ARAR based on hardness = 120 mg/L as CaCO₃.
(3) California Department of Health Services required Detection Limit for Purposes of Reporting (DLR).
(4) 0.2 µg/L detection level is needed for comparability to other databases in the region per previous DHS limit.
(A) California Department of Health Services Primary MCL for Drinking Water.
(B) California Department of Health Services Secondary MCL for Drinking Water.
(C) USEPA Primary MCL for Drinking Water.
(D) USEPA Secondary MCL for Drinking Water.
(E) California Office of Environmental Health Hazard Assessment Public Health Goal for Drinking Water.
(F) California Department of Health Services State Action Level for Toxicity.
(G) California Proposition 65 Regulatory Level for Drinking Water.
(H) California Toxics Rule for Freshwater Aquatic Life Protection - Continuous (4-day average) Concentration.
(I) California Toxics Rule for Freshwater Aquatic Life Protection - Maximum (1-hr average) Concentration.
(J) Other Taste and Odor Thresholds.