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EM CX Center of Expertise Information - Fact Sheets

EM CX Regulatory Fact Sheet FY11-01

Maximum Contaminant Levels Under the Safe Drinking Water Act

Purpose of this Fact Sheet

The purpose of this Fact Sheet is to provide a quick reference for determining concentration based MCLs established under Federal Regulations pursuant to the Safe Drinking Water Act. The values in the tables below are current as of November 2010. This updates and replaces Fact Sheet 97-04.

Definitions

Public Water System (PWS) - A system for the provision to the public of water for human consumption through pipes or other constructed conveyances, if such system has at least fifteen service connections or regularly serves at least 25 individuals daily at least 60 days out of the year. (Note: This is the definition as it was redefined in the SDWA of 1996. Refer to P. L. 104-182, section 101(b) for additional information regarding constructed conveyances which are not considered connections for purposes of this definition.)

Community Water System (CWS) - A public water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

Non-Transient Non-Community Water System (NTNCWS) - A public water systems that is not a community water system that regularly serves at least 25 of the same persons over 6 months of the year.

Transient Non-Community Water System (TNCWS) - A non-community water system that does not regularly serve at least 25 of the same persons over 6 months per year.

Maximum Contaminant Level Tables

The MCLs in the following tables are established at the Federal level within 40 CFR 141. States may have more stringent standards. These tables summarize concentration-based MCLs for chemicals. For information on microbiological contaminants and/or contaminants with treatment technologies, rather than concentration-based MCLs, see 40 CFR 141.

MCLs are strictly applicable to PWSs as defined above. PWS are subcategorized into three types of systems - CWSs, NTNCWSs, TNCWSs (also defined above). Not all types of systems are required to monitor for all types of contaminants. For example, only CWSs are required to monitor for the radionuclides listed in Table 5. Applicability of the MCLs are addressed at the end of each table.

MCLs may also be used during remedial actions as the basis for establishing cleanup standards. MCLs may be “applicable” to PWSs depending upon the population served. Where not applicable, MCLs may still be designated as “relevant and appropriate” requirements where water is used or likely to be used for drinking water purposes.

Technical Assistance

For questions regarding this Fact Sheet, contact the USACE Environmental and Munitions Center of Expertise at (402) 697-2559.

Table 1 - Inorganic Contaminants

<u>Constituent</u>	<u>MCL</u>	<u>Reference</u>
Antimony	0.006 milligrams/liter	40 CFR 141.62
Arsenic	0.010 mg/L	40 CFR 141.62
Asbestos	7 million fibers/L	40 CFR 141.62
Barium	2 mg/L	40 CFR 141.62
Beryllium	0.004 mg/L	40 CFR 141.62
Cadmium	0.005 mg/L	40 CFR 141.62
Chromium	0.1 mg/L	40 CFR 141.62
Cyanide	0.2 mg/L	40 CFR 141.62
Fluoride*	4.0 mg/L	40 CFR 141.62
Mercury	0.002 mg/L	40 CFR 141.62
Nitrate**	10 mg/L as N	40 CFR 141.62
Nitrate ***	20 mg/L	40 CFR 141.11
Nitrite**	1 mg/L as N	40 CFR 141.62
Nitrate and ** nitrite, total	10 mg/L as N	40 CFR 141.62
Selenium	0.05 mg/L	40 CFR 141.62
Thallium	0.002 mg/L	40 CFR 141.62
These MCLs apply to monitoring of CWSs and NTNCWSs unless otherwise noted.		
* Indicates the MCL applies to monitoring of CWS only.		
** Indicates the MCL applies to monitoring of CWSs, NTNCWSs, and TNCWSs.		
*** Indicates that this level may be allowed in non-community water systems if the water is not available to children under the age of 6 months and other conditions are met.		

Table 2 - Organic Contaminants

<u>Constituent</u>	<u>MCL</u>	<u>Reference</u>
Benzene	0.005 mg/L	40 CFR 141.61
Carbon tetrachloride	0.005 mg/L	40 CFR 141.61
ortho-Dichlorobenzene	0.6 mg/L	40 CFR 141.61
para-Dichlorobenzene	0.075 mg/L	40 CFR 141.61
1,2-Dichloroethane	0.005 mg/L	40 CFR 141.61
1,1-Dichloroethylene	0.007 mg/L	40 CFR 141.61
cis-1,2-Dichloroethylene	0.07 mg/L	40 CFR 141.61
trans-1,2-Dichloroethylene	0.1 mg/L	40 CFR 141.61
Dichloromethane	0.005 mg/L	40 CFR 141.61
1,2-Dichloropropane	0.005 mg/L	40 CFR 141.61
Ethylbenzene	0.7 mg/L	40 CFR 141.61
Monochlorobenzene	0.1 mg/L	40 CFR 141.61
Styrene	0.1 mg/L	40 CFR 141.61
Tetrachloroethylene	0.005 mg/L	40 CFR 141.61
Toluene	1 mg/L	40 CFR 141.61
1,2,4-Trichlorobenzene	0.07 mg/L	40 CFR 141.61
1,1,1-Trichloroethane	0.2 mg/L	40 CFR 141.61
1,1,2-Trichloroethane	0.005 mg/L	40 CFR 141.61
Trichloroethylene	0.005 mg/L	40 CFR 141.61
Vinyl chloride	0.002 mg/L	40 CFR 141.61
Xylenes (total)	10 mg/L	40 CFR 141.61

These MCLs apply to monitoring of CWSs and NTNCWSs.

Table 3 - Pesticides and PCBs

<u>Constituent</u>	<u>MCL</u>	<u>Reference</u>
Alachlor	0.002 mg/L	40 CFR 141.61
Aldicarb	0.003 mg/L	40 CFR 141.61
Aldicarb sulfoxide	0.004 mg/L	40 CFR 141.61
Aldicarb sulfone	0.002 mg/L	40 CFR 141.61
Atrazine	0.003 mg/L	40 CFR 141.61
Benzo[a]pyrene	0.0002 mg/L	40 CFR 141.61
Carbofuran	0.04 mg/L	40 CFR 141.61
Chlordane	0.002 mg/L	40 CFR 141.61
2,4-D	0.07 mg/L	40 CFR 141.61
Dalapon	0.2 mg/L	40 CFR 141.61
Dibromochloropropane	0.0002 mg/L	40 CFR 141.61
Di(2-ethylhexyl)adipate	0.4 mg/L	40 CFR 141.61
Di(2-ethylhexyl)phthalate	0.006 mg/L	40 CFR 141.61
Dinoseb	0.007 mg/L	40 CFR 141.61

Diquat	0.02 mg/L	40 CFR 141.61
Endothall	0.1 mg/L	40 CFR 141.61
Endrin	0.002 mg/L	40 CFR 141.61
Ethylene dibromide	0.00005 mg/L	40 CFR 141.61
Glyphosate	0.7 mg/L	40 CFR 141.61
Heptachlor	0.0004 mg/L	40 CFR 141.61
Heptachlor epoxide	0.0002 mg/L	40 CFR 141.61
Hexachlorobenzene	0.001 mg/L	40 CFR 141.61
Hexachlorocyclopentadiene	0.05 mg/L	40 CFR 141.61
Lindane	0.0002 mg/L	40 CFR 141.61
Methoxychlor	0.04 mg/L	40 CFR 141.61
Oxamyl (Vydate)	0.2 mg/L	40 CFR 141.61
Pentachlorophenol	0.001 mg/L	40 CFR 141.61
Picloram	0.5 mg/L	40 CFR 141.61
Polychlorinated biphenyls	0.0005 mg/L	40 CFR 141.61
Simazine	0.004 mg/L	40 CFR 141.61
2,3,7,8-TCDD (Dioxin)	0.00000003 mg/L	40 CFR 141.61
Toxaphene	0.003 mg/L	40 CFR 141.61
2,4,5 – TP	0.05mg/L	40 CFR 141.61
Trihalomethanes	0.10 mg/L	40 CFR 141.12
These MCLs apply to monitoring of CWSs and NTNCWSs.		

Table 4 -Radionuclides

<u>Constituent</u>	<u>MCL</u>	<u>Reference</u>
Radium-226 and radium-228 combined	5 pCi/liter	40 CFR 141.66
Gross alpha particle activity including radium-226 but excluding radon and uranium	15 pCi/L	40 CFR 141.66
Beta particle and photon radioactivity from man-made radionuclides shall not produce an annual dose equivalent to the total body or any internal organ greater than 4 millirem/year	4 millirem/year	40 CFR 141.66
Uranium	30 ug/L	40 CFR 141.66
These MCLs apply to monitoring of CWSs.		

Table 5 - Disinfection Byproducts

<u>Constituent</u>	<u>MCL</u>	<u>Reference</u>
Bromate	0.010 mg/L	40 CFR 141.64
Chlorite	1.0 mg/L	40 CFR 141.64
Total trihalomethanes	0.080 mg/L	40 CFR 141.64

(TTHM)		
Haloacetic acids (five) (HAA5)	0.60 mg/L	40 CFR 141.64
Applicability is contingent upon population served. See 40 CFR 141 for details.		

Table 6 – Maximum Residual Disinfectant Levels (MRDLs)

Constituent	MRDL	Reference
Chlorine	4.0 (as Cl ₂)	40 CFR 141.65
Chloroamines	4.0 (as Cl ₂)	40 CFR 141.65
Chlorine dioxide	08 (as ClO ₂)	40 CFR 141.65
Applicability is contingent upon population served. See 40 CFR 141 for details.		