



Ohio Cleanup Standards for Contaminated Groundwater and Soil

Bureau of Underground Storage Tank Regulations Closure Action Levels					
Chemicals of Concern	Soil Action Levels			Water	PCS Re-use
	Class 1 Soils	Class 2 Soils	Class 3 Soils		
Benzene	0.149	0.252	0.937	0.005	0.015
Toluene	49.1	70.8	86.0	1	4.91
Ethylbenzene	45.5	83.0	282.0	0.7	4.55
Total Xylenes	15.7	18.0	21.7	10	15.7
MTBE	0.470	0.788	3.440	0.04	0.047
Benzo(a)anthracene	11.0	11.0	11.0	0.00026	2.2
Benzo(a)pyrene	1.1	1.1	1.1	0.0002	1.1
Benzo(b)flouranthene	11.0	11.0	11.0	0.00017	5.53
Benzo(k)flouranthene	110.0	110.0	110.0	0.0017	1.97
Chrysene	1,100.0	1,100.0	1,100.0	0.047	1.27
Dibenz(a,h)anthracene	1.1	1.1	1.1	0.0002	0.94
Indeno(1,2,3-cd) pyrene	11.0	11.0	11.0	0.00022	0.15
Naphthalene	39.8	54.0	54.0	0.14	3.98
TPH C ₆ -C ₁₂	1,000.0	5,000.0	8,000.0	-	1,000.0
TPH C ₁₀ -C ₂₀	2,000.0	10,000.0	20,000.0	-	2,000.0
TPH C ₂₀ -C ₃₄	5,000.0	20,000.0	40,000.0	-	5,000.0

Soil contaminant levels in mg/kg

Water contaminant levels in mg/L

Analytical Group 1 - light distillate products - including unleaded gasoline, leaded gasoline and aviation gasoline;

Analytical Group 2 - middle distillate products - including diesel, light fuel oils, stoddard solvents, mineral spirits, kerosene, and jet fuels;

Analytical Group 3 - heavy petroleum distillate products - including, but not limited to, lubricating and hydraulic oils;

Analytical Group 4 - used oil

Analytical Group 5 - unknown petroleum products or petroleum products other than those listed in analytical groups 1, 2, 3 and 4. Additional chemical(s) of concern and analytical methods must be selected, as appropriate, based on reasonably available information related to the product stored, including additives, impurities and degradation products. In addition, chemical(s) of concern should be

selected based on their toxicity, mobility, and persistence in the environment. The owners and operators shall consult with the fire marshal for the appropriate chemical(s) of concern for products not in analytical group 1, 2, 3 and 4.

Analytical Group Number		1	2	3	4	5	Analytical Methods
		Light Distillates	Middle Distillates	Heavy Distillates	Used Oil	Unknowns & Others	
Chemical							
Aromatics	Benzene	x	x		x		8021/8260
	Toluene	x	x		x		
	Ethylbenzene	x	x		x		
	o, m and p-Xylenes	x	x		x		
Additives	Methyl tertiary-butyl ether (MTBE)	x			x		
Polynuclear Aromatics	Benzo(a)anthracene		x	x	x		8270/8310
	Benzo(a)pyrene		x	x	x		
	Benzo(b)fluoranthene		x	x	x		
	Benzo(k)fluoranthene		x	x	x		
	Chrysene		x	x	x		
	Dibenz(a,h)anthracene		x	x	x		
	Indeno(1,2,3-c,d)pyrene		x	x	x		
Naphthalene		x	x	x			
Chlorinated Hydrocarbons	Volatile Organic Hydrocarbons				x		8260
Total Petroleum Hydrocarbons *1	TPH (C6 – C12)	x			x		8015
	TPH (C10 – C20)		x		x		
	TPH (C20 – C34)			x	x		
	Varies based on UST contents			x	x	*2	

*1 TPH analysis is not required for ground water samples.

*2 Additional chemical(s) of concern and analytical methods must be selected, as appropriate, based on reasonably available information related to the product stored, including additives, impurities and degradation products. In addition, chemical(s) of concern should be selected based on their toxicity, mobility, and persistence in the environment. The owners and operators shall consult with the fire marshal for the appropriate chemical(s) of concern for products not in analytical group 1, 2, 3 and 4.

Contact: Scott Sigler, Ohio Department of Commerce, Bureau of Underground Storage Tank Regulations, 614-752-7938

E-mail: Scott.Sigler@com.state.oh.us

Web Site: <http://www.dnr.state.oh.us/>