



Wyoming Cleanup Standards for Hydrocarbon Contaminated Groundwater

PRODUCT	CONSTITUENT	MCL	DWEL	ACTION LEVEL
Fuel Tanks	Benzene	0.005	--	--
	Ethylbenzene	0.7	--	--
	Toluene	1.0	--	--
	Xylenes	10	--	--
	Naphthalene	--	0.7*	--
	Methyl <i>tert</i> -Butyl Ether (MTBE)	--	0.04	--
	<i>tert</i> -Butyl Alcohol (TBA)	--	0.22	--
	Ethyl <i>tert</i> -Butyl Ether (ETBE)	--	0.19	--
	Diisopropyl Ether (DIPE)	--	1.2	--
	<i>tert</i> -Amyl Methyl Ether (TAME)	--	0.128	--
	TPH-GRO (C ₆ - C ₁₀)	--	--	7.3**
	TPH-DRO (C ₁₀ - C ₃₂)	--	--	1.1**
	Dissolved Lead	0.015	--	--
	1,2-dibromoethane or ethylene dibromide (EDB)	0.00005	--	--
1,2-dichloroethane (1,2-DCA)	0.005	--	--	
Used Oil Tanks	Benzene	0.005	--	--
	Ethylbenzene	0.7	--	--
	Toluene	1.0	--	--
	Xylenes	10	--	--
	Naphthalene	--	0.7*	--
	TPH-GRO (C ₆ - C ₁₀)	--	--	7.3**
	TPH-DRO (C ₁₀ - C ₃₂)	--	--	1.1**
	Dissolved Lead	0.015	--	--
	Dissolved Cadmium	0.005	--	--
	Dissolved Chromium; total, hexavalent, and trivalent	>0.1 for total; report hexavalent and trivalent concentrations	--	--

Table 4 Notes:

All values are in milligrams per liter (mg/L)

TPH-GRO – Total petroleum hydrocarbon as gasoline range organics

TPH-DRO – Total petroleum hydrocarbon as diesel range organic

C6 - C32 = carbon atom range

* EPA Health Advisory Level (2006)

** If naphthalene is detected above the DWEL (0.7 mg/L), the TPH-DRO action level is 1.1 mg/L.

However, if naphthalene and BETX concentrations are below the respective DWEL and MCLs and free product is not present on the groundwater table, the TPH-DRO plus TPH-GRO concentration must be equal to or less than 10 mg/L (sheen criteria).

Contact: Karen Halvorsen, Storage Tank Program Manager, Wyoming Department of Environmental Quality, (307) 777-7244

Email address: Karen.halvorsen@wyo.gov

Web Site: <http://deq.state.wy.us/>

Wyoming Cleanup Standards for Hydrocarbon Contaminated Soil

Product	Constituent	Remediation Standard
Fuel Tanks	BETX	Site Specific
	Total Organic Carbon	Site Specific
	Total Lead	Site Specific
	TPH-DRO	>2300 mg/kg
	TPH-GRO	Site Specific
	Naphthalene	Site Specific
Used Oil Tanks	BETX	Site Specific
	Total Organic Carbon	Site Specific
	TPH-DRO	>2300 mg/kg
	Naphthalene	Site Specific
	Total Lead	Site Specific
	Total Cadmium	Site Specific
	Chromium – total, hexavalent, trivalent	Site Specific for total only; report hexavalent and trivalent concentrations
	TOX Constituents	Site Specific (See Note 3)

Table 2 Notes:

BETX = benzene, ethylbenzene, toluene, xylenes (report constituents separately)

C₆ - C₃₂ = carbon atom range

DRO = diesel range organics

EPA = Environmental Protection Agency

GRO = gasoline range organics

mg/kg = milligrams per kilogram

TPH = total petroleum hydrocarbons

1. Site-specific soil clean-up levels for organic compounds (except TPH-GRO) and metals are determined from an environmental fate and transport risk assessment model contained in the Wyoming Water Quality Rules and Regulations, Chapter 17, Storage Tanks, Sections 40 and 41.

2. Site-specific soil clean-up levels for TPH-GRO are determined from graphs (Attachment A) using average thickness of the contaminated zone and average distance between the bottom of the contaminated zone and the top of the seasonally high groundwater table.

3. If the Total TOX exceeds the detection limit, further analysis is required to determine the presence of individual halogenated organic constituents. A site-specific remediation standard shall be calculated for all individual halogenated organic constituents detected.

Contact: Karen Halvorsen, Storage Tank Program Manager, Wyoming Department of Environmental Quality, (307) 777-7244

Email address: Karen.halvorsen@wyo.gov

Web Site: <http://deq.state.wy.us/>