

**Table 720-1 Method A Cleanup Levels for Groundwater.<sup>a</sup>**  
**From Model Toxics Control Act Cleanup Regulation**  
**Chapter 173-340 WAC**

Hazardous Substance	CAS Number	Cleanup Level
Arsenic	7440-38-2	5 ug/liter <sup>b</sup>
Benzene	71-43-2	5 ug/liter <sup>c</sup>
Benzo(a)pyrene	50-32-8	0.1 ug/liter <sup>d</sup>
Cadmium	7440-43-9	5 ug/liter <sup>e</sup>
Chromium (Total)	7440-47-3	50 ug/liter <sup>f</sup>
DDT	50-29-3	0.3 ug/liter <sup>g</sup>
1,2 Dichloroethane (EDC)	107-06-2	5 ug/liter <sup>h</sup>
Ethylbenzene	100-41-4	700 ug/liter <sup>i</sup>
Ethylene dibromide (EDB)	106-93-4	0.01 ug/liter <sup>j</sup>
Gross Alpha Particle Activity		15 pCi/liter <sup>k</sup>
Gross Beta Particle Activity		4 mrem/yr <sup>l</sup>
Lead	7439-92-1	15 ug/liter <sup>m</sup>
Lindane	58-89-9	0.2 ug/liter <sup>n</sup>
Methylene chloride	75-09-2	5 ug/liter <sup>o</sup>
Mercury	7439-97-6	2 ug/liter <sup>p</sup>
MTBE	1634-04-4	20 ug/liter <sup>q</sup>
Naphthalenes	91-20-3	160 ug/liter <sup>r</sup>
PAHs (carcinogenic)		See benzo(a)pyrene <sup>d</sup>
PCB mixtures		0.1 ug/liter <sup>s</sup>
Radium 226 and 228		5 pCi/liter <sup>t</sup>
Radium 226		3 pCi/liter <sup>u</sup>
Tetrachloroethylene	127-18-4	5 ug/liter <sup>v</sup>
Toluene	108-88-3	1,000 ug/liter <sup>w</sup>
Total Petroleum Hydrocarbons <sup>x</sup>		
[Note: Must also test for and meet cleanup levels for other petroleum components--see footnotes!]		
Gasoline Range Organics		
Benzene present in ground water		800 ug/liter
No detectable benzene in ground water		1,000 ug/liter
Diesel Range Organics		500 ug/liter
Heavy Oils		500 ug/liter
Mineral Oil		500 ug/liter
1,1,1 Trichloroethane	71-55-6	200 ug/liter <sup>y</sup>

Trichloroethylene	79-01-6	5 ug/liter <sup>z</sup>
Vinyl chloride	75-01-4	0.2 ug/liter <sup>aa</sup>
Xylenes	1330-20-7	1,000 ug/liter <sup>bb</sup>

**Footnotes:**

- a Caution on misusing this table.** This table has been developed for specific purposes. It is intended to provide conservative cleanup levels for drinking water beneficial uses at sites undergoing routine cleanup actions or those sites with relatively few hazardous substances. This table may not be appropriate for defining cleanup levels at other sites. For these reasons, the values in this table should not automatically be used to define cleanup levels that must be met for financial, real estate, insurance coverage or placement, or similar transactions or purposes. Exceedances of the values in this table do not necessarily mean the ground water must be restored to those levels at all sites. The level of restoration depends on the remedy selected under WAC 173-340-350 through 173-340-390.
- b Arsenic.** Cleanup level based on background concentrations for state of Washington.
- c Benzene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).
- d Benzo(a)pyrene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61), adjusted to a  $1 \times 10^{-5}$  risk. If other carcinogenic PAHs are suspected of being present at the site, test for them and use this value as the total concentration that all carcinogenic PAHs must meet using the toxicity equivalency methodology in WAC 173-340-708(8).
- e Cadmium.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.62).
- f Chromium (Total).** Cleanup level based on concentration derived using Equation 720-1 for hexavalent chromium. This is a total value for chromium III and chromium VI. If just chromium III is present at the site, a cleanup level of 100 ug/l may be used (based on WAC 246-290-310 and 40 C.F.R. 141.62).
- g DDT (dichlorodiphenyltrichloroethane).** Cleanup levels based on concentration derived using Equation 720-2.
- h 1,2 Dichloroethane (ethylene dichloride or EDC).** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).
- i Ethylbenzene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).
- j Ethylene dibromide (1,2 dibromoethane or EDB).** Cleanup level based on concentration derived using Equation 720-2, adjusted for the practical quantitation limit.
- k Gross Alpha Particle Activity, excluding uranium.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.15).
- l Gross Beta Particle Activity, including gamma activity.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.15).
- m Lead.** Cleanup level based on applicable state and federal law (40 C.F.R. 141.80).
- n Lindane.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).
- o Methylene chloride (dichloromethane).** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

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## Clarc Data

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- p Mercury.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.62).
- q Methyl tertiary-butyl ether (MTBE).** Cleanup level based on federal drinking water advisory level (EPA-822-F-97-009, December 1997).
- r Naphthalenes.** Cleanup level based on concentration derived using Equation 720-1. This is a total value for naphthalene, 1-methyl naphthalene and 2-methyl naphthalene.
- s PCB mixtures.** Cleanup level based on concentration derived using Equation 720-2, adjusted for the practical quantitation limit. This cleanup level is a total value for all PCBs.
- t Radium 226 and 228.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.15).
- u Radium 226.** Cleanup level based on applicable state law (WAC 246-290-310).
- v Tetrachloroethylene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).
- w Toluene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).
- x Total Petroleum Hydrocarbons (TPH).** TPH cleanup values have been provided for the most common petroleum products encountered at contaminated sites. Where there is a mixture of products or the product composition is unknown, samples must be tested using both the NWTPH-Gx and NWTPH-Dx methods and the lowest applicable TPH cleanup level must be met.
- **Gasoline range organics** means organic compounds measured using method NWTPH-Gx. Examples are aviation and automotive gasoline. The cleanup level is based on protection of ground water for noncarcinogenic effects during drinking water use. Two cleanup levels are provided. The higher value is based on the assumption that no benzene is present in the ground water sample. If any detectable amount of benzene is present in the ground water sample, then the lower TPH cleanup level must be used. No interpolation between these cleanup levels is allowed. The ground water cleanup level for any carcinogenic components of the petroleum [such as benzene, EDB and EDC] and any noncarcinogenic components [such as ethylbenzene, toluene, xylenes and MTBE], if present at the site, must also be met. See Table 830-1 for the minimum testing requirements for gasoline releases.
  - **Diesel range organics** means organic compounds measured using NWTPH-Dx. Examples are diesel, kerosene, and #1 and #2 heating oil. The cleanup level is based on protection from noncarcinogenic effects during drinking water use. The ground water cleanup level for any carcinogenic components of the petroleum [such as benzene and PAHs] and any noncarcinogenic components [such as ethylbenzene, toluene, xylenes and naphthalenes], if present at the site, must also be met. See Table 830-1 for the minimum testing requirements for diesel releases.
  - **Heavy oils** means organic compounds measured using NWTPH-Dx. Examples are #6 fuel oil, bunker C oil, hydraulic oil and waste oil. The cleanup level is based on protection from noncarcinogenic effects during drinking water use, assuming a product composition similar to diesel fuel. The ground water cleanup level for any carcinogenic components of the petroleum [such as benzene, PAHs and PCBs] and any noncarcinogenic components [such as ethylbenzene, toluene, xylenes and naphthalenes], if present at the site, must also be met. See Table 830-1 for the minimum testing requirements for heavy oil releases.
  - **Mineral oil** means non-PCB mineral oil, typically used as an insulator and coolant in electrical devices such as transformers and capacitors measured using NWTPH-Dx. The cleanup level is based on protection from noncarcinogenic effects during drinking water use. Sites using this cleanup level must analyze ground water samples for PCBs and meet the PCB cleanup level in this table unless it can be demonstrated that: (1) The release originated from an electrical device manufactured after July 1, 1979; or (2) oil containing PCBs was never used in the equipment suspected as the source of the release; or (3) it can be documented that the oil released was recently tested and did not contain PCBs. Method B (or Method C, if applicable) must be used for releases of oils containing greater than 50 ppm PCBs. See Table 830-1 for the minimum testing requirements for mineral oil releases.
- y 1,1,1 Trichloroethane.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).
- z Trichloroethylene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).
- aa Vinyl chloride.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61), adjusted to a  $1 \times 10^{-5}$  risk.
- bb Xylenes.** Cleanup level based on xylene not exceeding the maximum allowed cleanup level in this table for total petroleum hydrocarbons and on prevention of adverse aesthetic characteristics. This is a total value for all xylenes.