

Table 5-1 (Page 1 of 3)
Chemicals of Concern for Different Product Releases

Contaminant		Gasoline	Diesel/ Light Fuel Oils	Product Jet Fuel	Kerosene	Heavy Fuel Oils	Waste/ Used Oil	Analytical Methods	
								Groundwater	Soil
VOLATILES									
Benzene	a	X	X	X	X	NC	X	8260B	8260B
Toluene	n	X	X	X	X	NC	X	8260B	8260B
Ethylbenzene	n	X	X	X	X	NC	X	8260B	8260B
Xylenes (total)	n	X	X	X	X	NC	X	8260B	8260B
1,2-Dibromoethane / Ethylene dibromide (EDB)	b	X ¹	NC	NC	NC	NC	NC	8260B	8260B
1,2-Dichloroethane / Ethylene dichloride (EDC)	b	X ¹	NC	NC	NC	NC	NC	8260B	8260B
OXYGENATES									
Methyl-tert-butyl-ether (MTBE)	n	X	NC	NC	NC	NC	NC	8260B	8260B
Tertiary amyl methyl ether (TAME)		X	NC	NC	NC	NC	NC	8260B	8260B
Tertiary butyl alcohol (TBA)		X	NC	NC	NC	NC	NC	8260B	8260B
Ethyl-tert-butyl-ether (ETBE)		X	NC	NC	NC	NC	NC	8260B	8260B
Diisopropyl ether (DIPE)		X	NC	NC	NC	NC	NC	8260B	8260B
Ethanol		X	NC	NC	NC	NC	NC	Direct injection GC	NA
Methanol		X	NC	NC	NC	NC	NC	Direct injection GC	NA
TPH									
TPH-GRO		X	NC	NC	NC	NC	X	8260B	8260B
TPH-DRO		NC	X	X	X	X	X	8270C	8270C
TPH-ORO		NC	NC	X	X	X	X	8270C	8270C

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Contaminant		Gasoline	Diesel/ Light Fuel Oils	Product Jet Fuel	Kerosene	Heavy Fuel Oils	Waste/ Used Oil	Analytical Methods	
								Groundwater	Soil
PAHs⁴									
Acenaphthene	n	NC	X	X	X	X	X	8270C ³	8270C ³
Anthracene	n	NC	X	X	X	X	X	8270C ³	8270C ³
Benzo(a)anthracene	b	NC	X	X	X	X	X	8270C ³	8270C ³
Benzo(a)pyrene	b	NC	X	X	X	X	X	8270C ³	8270C ³
Benzo(b)fluoranthene	b	NC	X	X	X	X	X	8270C ³	8270C ³
Benzo(k)fluoranthene	b	NC	X	X	X	X	X	8270C ³	8270C ³
Chrysene	b	NC	X	X	X	X	X	8270C ³	8270C ³
Dibenzo(a,h)anthracene	b	NC	X	X	X	X	X	8270C ³	8270C ³
Fluoranthene	n	NC	X	X	X	X	X	8270C ³	8270C ³
Fluorene	n	NC	X	X	X	X	X	8270C ³	8270C ³
Naphthalene	n	X	X	X	X	X	X	8260B ² , 8270C ³	8260B ² , 8270C ³
Pyrene	n	NC	X	X	X	X	X	8270C ³	8270C ³
METALS								Soil and Groundwater	
Arsenic		NC	NC	NC	NC	NC	X	6010B, 6020	
Barium		NC	NC	NC	NC	NC	X	6010B, 6020	
Cadmium		NC	NC	NC	NC	NC	X	6010B, 6020	
Chromium		NC	NC	NC	NC	NC	X	6010B, 6020	
Lead	b	X ¹	NC	NC	NC	NC	X	6010B, 6020	
Selenium		NC	NC	NC	NC	NC	X	6010B, 6020	

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Chemicals of Concern for Different Product Releases

- Note:** X Chemical of concern to be analyzed
NC Not a chemical of concern
1 Chemical of concern for leaded gasoline
2 When gasoline was the only product released, naphthalene should be analyzed by Method 8260B; if the petroleum released was other than or in addition to gasoline, naphthalene should be analyzed by Method 8270C
3 For 8270 where a detection limit lower than the Estimated Quantitation Limit is required, measures to increase the sensitivity of the method should be taken.
a Human carcinogen (Group A under EPA weight of evidence classification system for carcinogenicity)
b Probable human carcinogen (Group B1 or B2 under EPA weight of evidence classification system for carcinogenicity)
n Non-carcinogen
NA Not Applicable – soil samples need not be analyzed for ethanol or methanol
4 Samples must be analyzed for PAHs when TPH-DRO or TPH-ORO are detected in soil at a concentration at or above the RRLs in Table 5-3

Sources:

- U. S. Environmental Protection Agency, November 1986, *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition. Office of Solid Waste and Emergency Response, Washington D.C.
- U.S. Environmental Protection Agency, March 1983, *Methods for Chemical Analysis of Water and Wastes*, Environmental Monitoring and Support Laboratory, Cincinnati, OH 45263.
- Methods Information Communication Exchange, Office of Solid Waste, (703) 821-4690.
- U.S. Environmental Protection Agency, July 1982, *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater*, EPA-600/4-82-057. Environmental Monitoring and Support Laboratory, Cincinnati, OH 45263.