

**Analytical Methods for Environmental Sampling at  
Underground Storage Tank Sites in Utah  
(July 2013)**

Substance or Product Type	Contaminant Compounds to be Analyzed for Each Substance or Product Type	ANALYTICAL METHODS <sup>1</sup>
		Soil, Groundwater or Surface Water
Gasoline	Total Petroleum Hydrocarbons ( <u>purgeable</u> TPH as gasoline range organics C <sub>6</sub> - C <sub>10</sub> )	EPA 8015 <u>or</u> EPA 8260
	Benzene, Toluene, Ethyl benzene, Xylenes, Naphthalene, (BTEXN) and MTBE	EPA 8021 <u>or</u> EPA 8260
Diesel	Total Petroleum Hydrocarbons ( <u>extractable</u> TPH as diesel range organics C <sub>10</sub> – C <sub>28</sub> )	EPA 8015
	Benzene, Toluene, Ethyl benzene, Xylenes, and Naphthalene (BTEXN)	EPA 8021 <u>or</u> EPA 8260
Used Oil	Oil and Grease (O&G) or Total Recoverable Petroleum Hydrocarbons (TRPH)	EPA 1664 <u>or</u> EPA 1664 (SGT*)
	Benzene, Toluene, Ethyl benzene, Xylenes, Naphthalene (BTEXN) & MTBE; <u>and</u> Halogenated Volatile Organic Compounds (VOX)	EPA 8021 <u>or</u> EPA 8260
New Oil	Oil and Grease (O&G) or Total Recoverable Petroleum Hydrocarbons (TRPH)	EPA 1664 <u>or</u> EPA 1664 (SGT*)
Other	Type of analyses will be based upon the substance or product stored, and as approved by the DERR Division Director	Method will be based upon the substance or product type
Unknown	Total Petroleum Hydrocarbons ( <u>purgeable</u> TPH as gasoline range organics C <sub>6</sub> - C <sub>10</sub> )	EPA 8015 <u>or</u> EPA 8260
	Total Petroleum Hydrocarbons ( <u>extractable</u> TPH as diesel range organics C <sub>10</sub> – C <sub>28</sub> )	EPA 8015
	Oil and Grease (O&G) or Total Recoverable Petroleum Hydrocarbons (TRPH)	EPA 1664 <u>or</u> EPA 1664 (SGT*)
	Benzene, Toluene, Ethyl benzene, Xylenes, and Naphthalene (BTEXN) and MTBE; <u>and</u> Halogenated Volatile Organic Compounds (VOX)	EPA 8021 <u>or</u> EPA 8260

<sup>1</sup> The following modifications to these certified methods are considered acceptable by the DERR Division Director:

- Dual column confirmation may not be required for TPH and BTEXN/MTBE analysis.
- A micro-extraction or scale-down technique may be used for aqueous samples, but only for the determination of extractable TPH as diesel range organics (C<sub>10</sub> – C<sub>28</sub>).
- Hexane may be used as an extraction solvent.
- \*Silica Gel Treatment (SGT) may be used in the determination of Total Recoverable Petroleum Hydrocarbons.

**NOTE:** The sample preparation method and any modification(s) to a certified method must be reported by the laboratory.