

Accurate News

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LUST's... What a Problem!!!

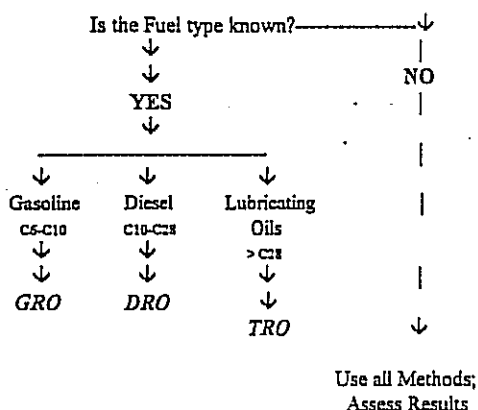
"According the US Environmental Protection Agency, it is estimated there are between 5 to 7 million underground storage tanks in the United States, with only 1.6 million currently regulated by the EPA, at over 600,000 sites. Of these, 1.37 million are utilized for the storage of petroleum fuel products (i.e., gasoline, diesel fuel, heating oil, etc.), 55,000 for used oil and 23,500 for the storage of hazardous material. According to the Tank Association of America, the oldest tank reclaimed to date was installed in 1927, and it is unknown how many derelict underground storage tanks remain. (About two years ago), the EPA confirmed 184,000 releases of hazardous substances from underground storage tanks, and thousands more are expected to be discovered in the coming years. As these tanks age, regardless of their original purpose, groundwater contamination from leaking underground storage tanks (LUST) is expected to become an increasing burden in the US and abroad and poses a serious threat to the integrity of groundwater drinking supplies...."-- by Kevin Smith, J&W Technical Support, *Considerations for LUST Analytical Methods*, Separation Times, Volume 8, No. 1, p. 5

TPH's EXPOSED

by Brian Nordberg—Director of Organic Analysis

Since most underground tanks house petroleum related products, many of the analytical methods for leaking contamination involve the analysis of Total Petroleum Hydrocarbons (TPH). TPH mainly consists of Diesel Range Organics (DRO) and Gasoline Range Organics (GRO).

DRAFT DECISION TREE FOR CHOOSING A METHOD



Different methods have been developed to analyze for these contaminants. The only official EPA method for TPH is 418.1 by IR. Unfortunately, Oklahoma does not accept IR analysis of TPH. In the absence of an official EPA method, there is not a specific GC method required by the state.

"Such a name is misleading... because...the Total Petroleum Hydrocarbons are not actually being measured, only the purgeable volatile hydrocarbons are..."

One EPA method titled 8015 Determination of Volatile Non-halogenated Hydrocarbons by GC appears to describe the type of analytes contained in gasoline. The method however does not list gasoline components. This "purge and trap" method is often cited as TPH 8015 Modified. Such a name is misleading because as a volatiles method, the Total Petroleum Hydrocarbons are not actually being measured, only the... (Cont. p. 2)

purgeable volatile hydrocarbons are being measured. For example, diesel or heavier oil samples may appear to be clean when analyzed by purge and trap. Clearly a second analysis must be performed to detect non-purgeable hydrocarbons.

The EPA has published a Draft Method for the Determination of TPH which defines separate methods for determining gasoline and diesel hydrocarbons. It is on this method that Accurate, Inc. Environmental & Laboratory Services has patterned its analysis.

* **NOTE:** This draft may **not** be used by all laboratories. Hence it is important to know what you are getting when given TPH results.

Choosing "THE BEST" Lab

by George Drye-Laboratory Manager

Since not all labs are created equal, it is worth the time and effort to gather as much information as possible to find "The Best" laboratory around. Here are a few tips on how to find your lab:

1. Ask associates for **references**.
2. Ask lab for **certifications**.
3. Ask lab for **QA/QC** documents.
4. **Visit** lab if at all possible.
5. Look at **educational** levels.
6. Your primary criteria should be

QUALITY!!!

@#!* HELP!!! WHAT CONTAINERS DO I NEED FOR BTEX/TPH?

* For **SOIL** Samples:

(1) glass 250 ml widemouth jar (preferably Teflon lined lid) is enough for both BTEX & TPH

* For **WATER** Samples:

- (1) 1 liter clear glass bottle for TPH-extractable and
- (2) 40 ml VOC vials (no headspace) for TPH-purgeable. These vials would also be enough for BTEX



From the Editor's Desk:

We hope you have enjoyed this issue of *Accurate News* and that you will look forward to our next one. If you have any questions or if we can be of help in any way give us a call.

Best wishes to all for a Prosperous and Happy New Year!

Maria de L. Nordberg, Editor in Chief and Marketing Manager

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