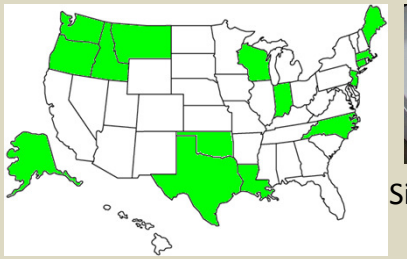
EPH C11-C22 Aromatics: Heating Oil and Diesel Fuel Sites

Calibration Kit CAL-060 used for EPH Analysis

Sitelab's UVF-3100 analyzer is a popular tool when excavating soils contaminated by fuel oils from underground storage tanks (USTs). These studies show the accuracy testing samples for Extractable Petroleum Hydrocarbons, EPH C11-C22 aromatic hydrocarbons.

Samples are extracted in solvent using test kits and measured on the UVF analyzer's EPH optics, calibrated to Sitelab's PAH Calibration Kit. Results correlate well to the Massachusetts DEP's EPH method using GC-FID.



Sitelab UVF-3100

Regulators in Massachusetts, North Carolina and a growing number of states, require VPH and EPH laboratory methods, where aliphatic and aromatics are reported separately.

Site 1: Residential Home Heating Oil Spill

A contractor split samples with Sitelab and a certified laboratory testing soils contaminated with heating oil after removing a homeowner's underground fuel tank. Field results were used to guide excavation to below 200 ppm.

UVF-3100 Field Results	vs. Lab GC EPH Aromatics
1,306 ppm	1,798 ppm
279 ppm	366 ppm
213 ppm	282 ppm
183 ppm	145 ppm
0.5 ppm	ND

Correlation $R^2 = 1.00$

Site 2: Industrial Site with No. 2 Fuel Oil

Sitelab's mobile laboratory was used on-site to excavate contaminated soils after removing two 10,000 gallon fuel tanks. The property was being redeveloped into a shopping center. The site's action limit was 800 ppm.

UVF-3100 Field Results	vs. Lab GC EPH Aromatics
7,131 ppm	10,777 ppm
8,782 ppm	7,205 ppm
1,055 ppm	1,197 ppm
452 ppm	308 ppm
40 ppm	32 ppm

Correlation $R^2 = 0.84$

Site 3: Trucking Facility with Diesel Fuel

After removing a diesel tank once used for refueling trucks, a contractor excavated all the impacted soil and then used a vacuum truck to remove the contamination above the bedrock until Sitelab's EPH concentrations were clean and site closure samples were collected.

UVF-3100 Field Results	vs. Lab GC EPH Aromatics
5 ppm	ND
4 ppm	ND
3 ppm	ND
0.9 ppm	ND

End of cleanup samples
ND = "Non Detected"

