Manufacturer & Technology (in Alphabetical Order)	Method Detection Limit Performance: Compared to Reference Laboratory Results = 6.3 ppm	Accuracy: Percentage of Spike Samples that correlated within 50% to Reference Laboratory Results:	U.S. EPA Report Demonstration Summary
CHEMetrics, Inc. Fiedel-Crafts Alkylation Reaction & Colorimetry	60 ppm	48%	The RemediAid kit exhibited the following desirable characteristics of a field TPH measurement device; (1) good accuracy, (2) good precision, (3) lack of sensitivity to interferents that are not petroleum hydrocarbons (PCE and 1,2,4-trichlorobenzene), (4) high sample throughput, (5) low measurement costs, and (6) ease of use. Despite some of the limitations observed during the demonstration, the demonstration findings collectively indicated that the RemediAid kit is a reliable field measurement device for TPH in soil.
Dexsil Corporation Emulsion Turbidimetry	20 ppm	21%	The PetroFLAG System exhibited the following desirable characteristics of a field TPH measurement device; (1) good precision, (2) lack of sensitivity to interferents that are not petroleum hydrocarbons (PCE and humic acid), (3) low measurement costs, and (4) ease of use. In addition, PetroFLAG exhibited moderate sample throughput. Based on action level conclusions and statistical correlations, PetroFLAG TPH results compared well with those of the reference method; however, the device exhibited a high bias, and its TPH results were determined to be statistically different from those of the reference method. In addition, turpentine and 1,2,4-trichlorobenzene biased the device's TPH results high. Moreover, an increase in soil moisture content biased the device's TPH results low for weathered gasoline soil PE samples. Collectively, demonstration findings indicated that the user should exercise caution when considering the device for a specific field TPH measurement application.
Environmental Systems Corp UV Fluorescence	36 ppm	31%	The Luminoscope exhibited the following desirable characteristics of a field TPH measurement device; (1) good precision, (2) lack of sensitivity to moisture content and to interferents that are not petroleum hydrocarbons (PCE; turpentine; and 1,2,4-trichlorobenzene), and (3) low measurement costs. In addition, the Luminoscope exhibited moderate sample throughput. However, the Luminoscope TPH results did not compare well with those of the reference method, indicating that the user should exercise caution when considering the device for a specific field TPH measurement application. In addition, field observations indicated the operation of the device may prove challenging unless the operator has significant analytical chemistry skills and device-specific training.
Horiba Instruments, Inc. Infrared	15.2 ppm	50%	The OCMA-350 exhibited the following desirable characteristics of a field TPH measurement device; (1) good precision, (2) sensitivity to interferents that are petroleum hydrocarbons, and (3) high sample throughput. In addition, the OCMA-350 exhibited moderate measurement costs. In general, however, the OCMA-350 TPH results for the PE samples did not compare well with the reference method results. The device results were significantly impacted by soil moisture content and by turpentine, an interferent that is not a petroleum hydrocarbon. Collectively, the demonstration findings indicated that the OCMA-250 may be considered for TPH screening purposes; however, the user should exercise caution when considering the device for a field TPH measurement application requiring definitive results.
Strategic Diagnostics, Inc. Immunoassay	Not Applicable - Inconclusive	75%, but 43% data was inconclusive	The EnSys Petro Test System exhibited the following desirable characteristics of a field TPH measurement device: (1) good precision and (2) high sample throughput. In addition, EnSys exhibited moderate measurement costs. However, a significant number of TPH results were determined to be inconclusive because the detection levels used by SDI were not appropriate to address the demonstration objectives. Overall, the device's results did not compare well with those of the reference method; in general, the device exhibited a high positive bias. Collectively, the demonstration findings indicated that the user should exercise caution when considering the device for a site-specific field TPH measurement application.
Sitelab Corporation UV Fluorescence	3.4 ppm	72%	The UVF-3100A exhibited the following desirable characteristics of a field TPH measurement device; (1) good accuracy, (2) good precision, (3) high sample throughput, (4) low measurement costs, and (5) ease of use. Despite some of the limitations observed during the demonstration, the demonstration findings collectively indicated that the UVF-3100A is a reliable field measurement device for TPH in soil.
Wilks Enterprise, Inc. Infrared	76 ppm	48%	The Infracal TOG/TPH Analyzer exhibited the following desirable characteristics of a field TPH measurement device; (1) sensitivity to interferents that are PHCs (MTBE and Stoddard solvent), (2) lack of sensitivity to interferents that are not PHCs (PCE; 1,2,4-trichlorobenzene; and humic acid), (3) high sample throughput, and (4) low measurement costs. However, the device TPH results did not compare well with the reference method results. In addition, turpentine biased the device TPH results high, indicating that the accuracy of TPH measurement using the device will likely be impacted by naturally occurring oil and grease present in soils that are not removed by silica gel. Also, the device TPH results for diesel soil PE samples showed a three-fold increase when the soil moisture content was increased by 8 percentage points. Finally, the device results obtaining using the two sample stages did not agree. Collectively, these demonstration findings indicated that the Infracal TOG/TPH Analyzer may be considered for TPH screening purposes; however, the user should exercise caution when considering the device for a field TPH measurement application requiring definitive results.