

CONES

FUEL FLUORESCENCE DETECTOR CONE

The dual downhole Fuel Fluorescence Detector (FFD) detects the fluorescence produced by aromatic hydrocarbons when excited by an ultraviolet (UV) light source. The system is pushed in to the soil using CPT equipment which provides a combination of the geotechnical information from the CPT and the geoenvironmental data from the FFD. The FFD significantly reduces the time required to detect and delineate the extent of hydrocarbon fuel spills or leaking storage tanks.

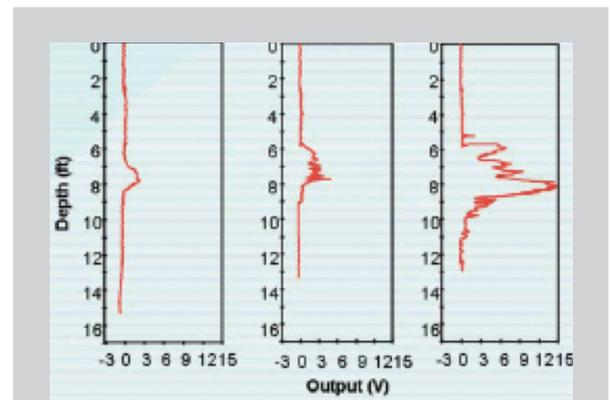
By placing the dual Photomultiplier system used in the FFD downhole, it will eliminate the signal attenuation in the optical fibre, allowing weak fluorescent compounds to be detected at any depth below ground surface.

Dual PMTs are tuned to different wavelengths; this provides the ability to differentiate between light and heavy contaminants.

This breakthrough technology produces cost savings at each stage of the site characterisation;

1. The CPT delivery system generates minimal investigation derived waste; reducing the cost of containerisation and disposal.
2. There are fewer physical samples collected, reducing associated costs with sample collection, preparation, handling and analysis.
3. The continuity of the data reduces the time and effort required for the data interpretation and presentation.
4. Using this system, the number of field days required to complete the job is reduced; this reduction in the number of field days generates immediate cost savings.

The Dual Filter FFD provides a continuous, real-time output of fluencies over the entire depth of the system, providing a more complete and easily interpreted view of the plume, compared to traditional discrete sampling methods.



Plots from three pushes conducted in a line transect across a hydrocarbon contaminant plume.

SPECIFICATIONS

PCPT CONE	THIS IS THE SAME SPECIFICATION AS THE STANDARD PCPT CONE PLEASE REFER TO THE DIGITAL PIEZO CONE PENETROMETER DATASHEET
EXCITATION WAVELENGTH	254NM
HOUSING	HARDENED STEEL WITH DURABLE COATING
OPTICAL WINDOW	REPLACEABLE SAPPHIRE
DETECTION LIMIT (FUEL & SOIL DEPENDENT)	<100 PPM (TPH) IN SANDY SOIL



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