

At Dakota Technologies, we understand the challenges involved in combining high tech with demanding field conditions.



Our Ultra-Violet Optical Screening Tool (UVOST®) is the culmination of over a decade of field experience as LIF service providers. Its highly sophisticated yet rugged design allows the UVOST to reliably delineate nearly any petroleum NAPL including gasoline, diesel, crude oil, kerosene, and many others. It can be deployed by any type of direct push platform. UVOST is simply the world's finest commercial laser-induced fluorescence (LIF) system and it was built to do one thing – find petroleum NAPL.

*Petroleum hydrocarbons contain significant amounts of naturally fluorescent PAHs. Laser-induced fluorescence systems consistently detect them. The UVOST system was specifically designed to respond to these challenging NAPLs and precisely log their presence versus depth.*



**UVOST benefits include:**

- ◆ Real-time data—allows for “on-the-fly” guidance of the next bore-hole location, leading to better bounding of source term
- ◆ No IDW—true in-situ information without investigation derived waste, carryover, or handling and storage of samples
- ◆ Fast—production rates of 300 to 500 feet per day (typical direct push conditions)
- ◆ Flexible—percussion (i.e. Geoprobe®) or cone penetration test (CPT)
- ◆ Color-coded logs—the ultimate in qualitative and semi-quantitative information at-a-glance
- ◆ High data density—one inch/data point
- ◆ Sensitive—low detection limits and baselines that only laser-based systems provide
- ◆ Selective—fluorescence time-domain waveforms offer positive identification and interference rejection
- ◆ Proven—you’ll be offering technology with over 10 years experience built in
- ◆ Quality—you’ll be trained to operate, maintain, and provide LIF service by the scientists who pioneered commercial LIF

Our innovative UVOST mates with direct-push platforms such as Geoprobe and CPT. UVOST is percussion-drivable... a Dakota Technologies, Inc. exclusive!

The UVOST system uses a sapphire window in the side of the direct push probe to measure front-face fluorescence of the petroleum NAPL as the probe is advanced into the soil with nearly any DPT platform.

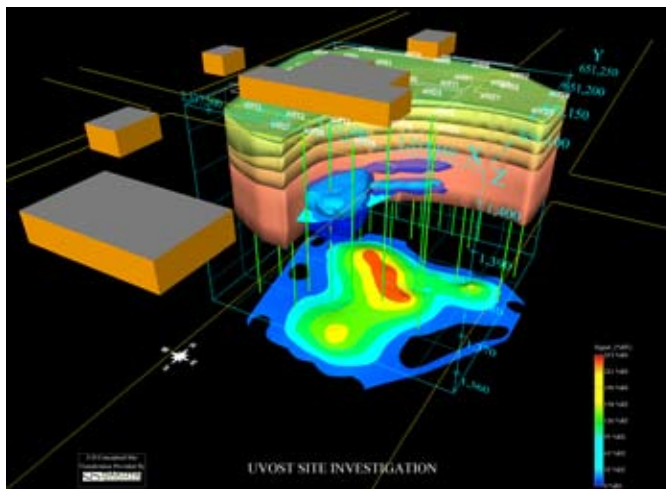
PAH fluorescence of fuels/oils is directed back to the surface where it is analyzed. Responses are indicated in real-time on a graph of UVOST signal vs. depth.



Successful remediation and treatment systems require detailed knowledge of NAPL location and distribution. UVOST provides your client with a conceptual site model at unprecedented speed, detail, and efficiency. Sampling simply can't compete with UVOST's production rates.

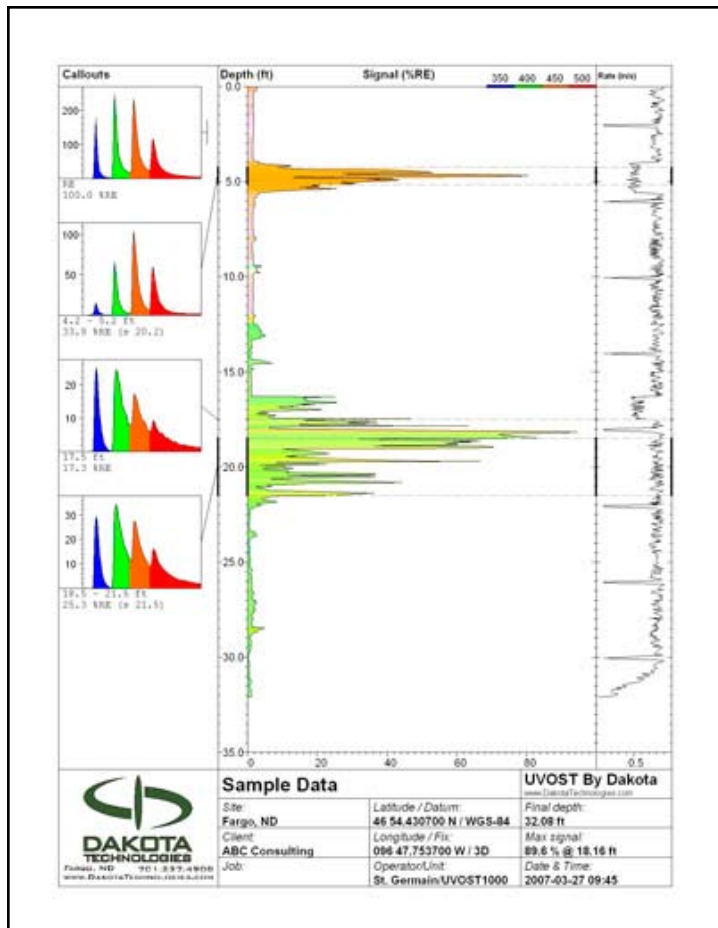
Since the first full-scale site characterization project with UVOST LIF technology in 1997, the UVOST system has been successfully applied and validated across a wide range of site conditions and deployment platforms, including Geoprobe and CPT. Nearly every major consulting firm in the U.S. has used UVOST to generate CSMs of petroleum NAPL.

### UVOST Data—Conceptual Site Model (CSM)



*The end result of a UVOST boring is a high-density, non-subjective electronic data log (left) readily incorporated into accurate conceptual site models (top). Accurate source term models lead to knowledgeable decisions, accurate treatment and removal designs, and realistic cost estimates—saving time and money.*

### Example Field UVOST Log



Each UVOST system includes a 1 year warranty and comes "ready to log". Dakota supplies you with all the tools, spares, and consumables necessary to start booking jobs as soon as you become certified (training takes 2-3 days).

Once certified, you and your UVOST crew will confidently generate detailed colored logs like the one at left – clearly painting a picture of your client's NAPL in the subsurface. The unique ability to offer LIF will set you and your company apart from your competitors. Once a client tries UVOST they are typically "hooked" – leading to more work at the same site or other NAPL sites they manage.