

TarGOST®

Tar-specific Green Optical Screening Tool

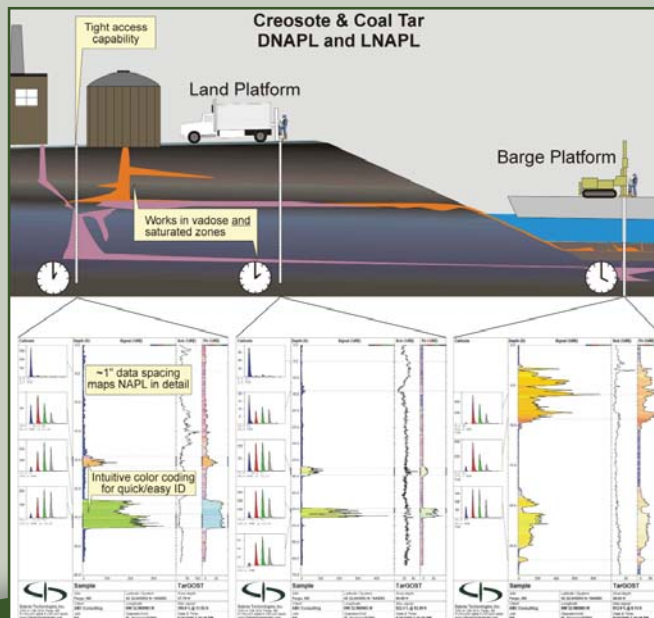
Dakota Technologies specializes in delineating coal tar and creosotes at former manufactured gas plants (MGP) and wood treatment facilities.



Our Tar-specific Green Optical Screening Tool (TarGOST®) is designed specifically for delineating coal tars and creosotes - the non-aqueous phase liquid contamination typically found at former MGP and wood treater sites. TarGOST can be deployed by all forms of direct push platforms across a wide range of site conditions... even hand delivery is an option.

TarGOST benefits include:

- **Real-time data** — allows for “on-the-fly” guidance of the next bore-hole location, leading to better bounding of source term NAPL
- **No IDW** — true in-situ information without producing waste, carryover, or handling and storage of samples
- **Fast** — production rates of 300 to 500 feet per day (typical direct push conditions)
- **Flexible delivery** — 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 quiet baselines that only laser-based systems provide
- **Selective** — TarGOST is “blind” to dissolved phase and the waveforms offer positive identification of NAPL vs natural fluorescence commonly encountered at MGP and wood treater sites
- **TarGOST-HP** — TarGOST is now available with built-in hydraulic profiling capability for comprehensive subsurface characterization using a single tool



MGP waste and creosote NAPLs contain large amounts of naturally fluorescent PAHs, but UV-based fluorescence systems fail to consistently detect them due to quenching. The TarGOST system was specifically designed to overcome this quenching and precisely log NAPL presence versus depth while ignoring dissolved phase PAHs.

TarGOST is delivered with direct-push platforms such as Geoprobe (hammerable) and CPT. The probe features a sapphire window in the side allowing direct fluorescence measurements as the probe is steadily advanced into the soil.

Coal tar and creosote fluorescence is directed back up-hole to be analyzed. Responses are indicated in real-time on a graph of Signal versus depth. The logged results are color-coded and contain hundreds of waveforms to aid in proper interpretation of the fluorescence response.



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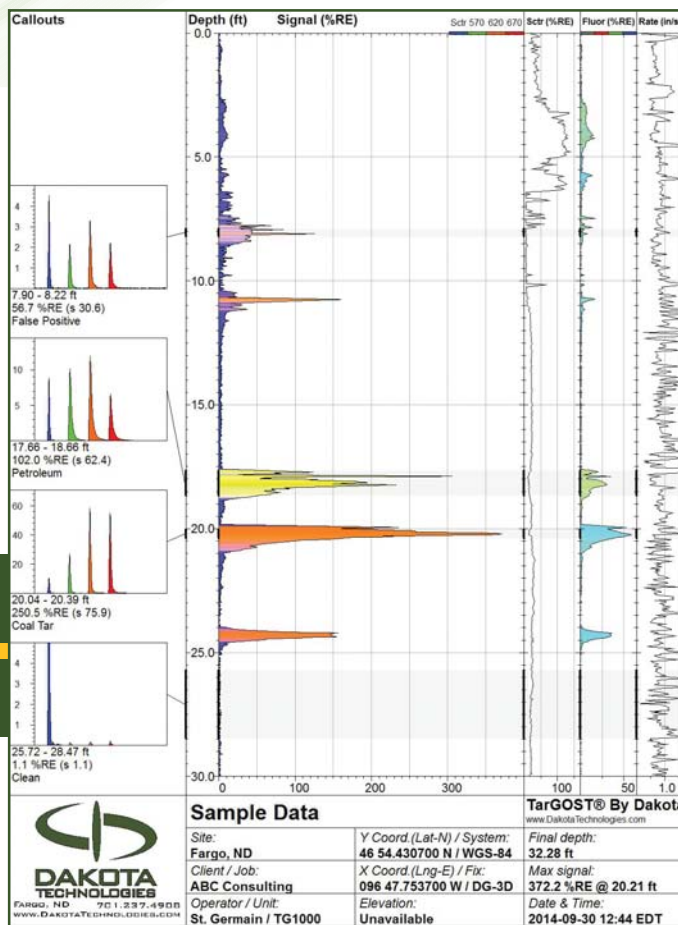
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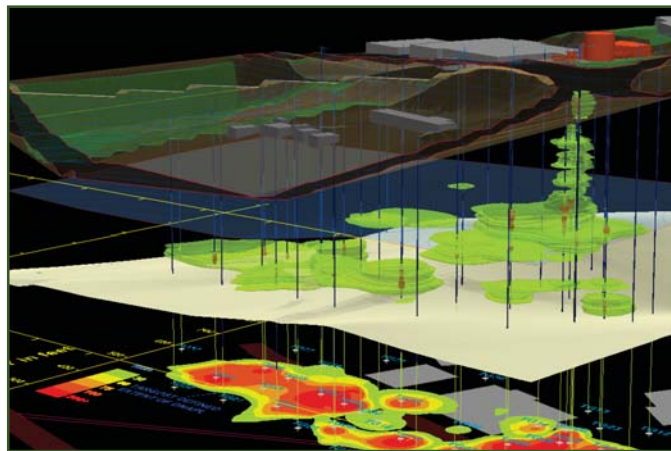
Successful risk assessments and remediation system designs require detailed knowledge of NAPL distribution. TarGOST provides this knowledge at unprecedented speed, detail, and efficiency. Sampling simply can't compete with TarGOST's production rates.

Since the first full-scale site characterization project in June 2003, the TarGOST system has been successfully applied at over 300 investigations. Barge is a common deployment platform for TarGOST studies of NAPL impacted sediments adjacent to former MGP and wood treater sites.

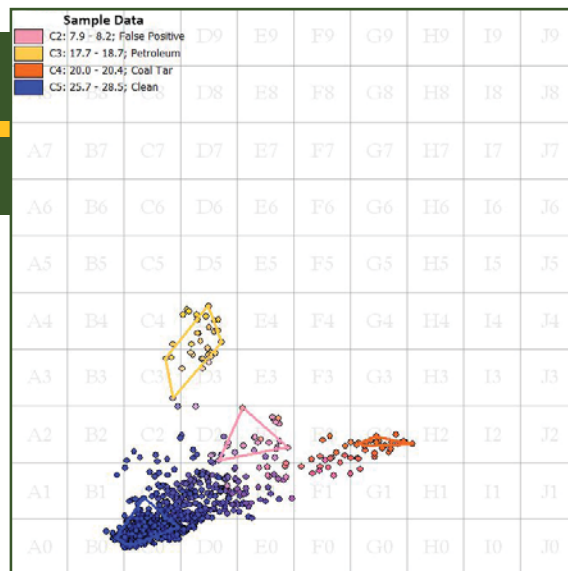


High Resolution TarGOST Logs

The end result of a TarGOST boring is a high-density, non-subjective electronic data log (above) readily incorporated into 2D and 3D conceptual site models. [The yellow contaminant at 18 ft. is diesel, while the lower orange lenses are coal tar.]



TarGOST Data—Conceptual Site Model (CSM)



Advanced data analysis extracts maximum benefit from temporal and spectral information

Bottom line: You have more important things to do for your client than struggle to define a heterogeneously distributed source term NAPL body. A TarGOST survey allows you to properly define the NAPL distribution once and for all so you can move on to the next steps.



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