



## QED-UVF Case Study

### **EHC Environmental & Haggett Engineering**

Client: Major Retail Gasoline Stations

Date: April – June 2017

Location: Sites throughout Robeson and Onslow Counties

Site History: Retail gas stations with various levels of UST leaking and contamination

### 1. Project Description

- Date: April – June 2017
- Location: Retail Gasoline Stations throughout Robeson and Onslow County of North Carolina
- Site History: Seven (7) Retail Gasoline Stations
- Environmental conditions: Atlantic Coastal Plain – Black Creek Formation of Southeastern North Carolina (Robeson County) & Lower Coastal Plain – Yorktown Formation of Northeastern North Carolina (Onslow County).
- Project objective (Investigation, Remediation, monitoring, etc.) Tons of Soil removal or area of delineation, etc.: North Carolina Department of Environmental Quality (NCDEQ) Site Check Directive(s). Obtained soil samples proximal to the UST basin and product lines throughout each site. Each sample was obtained approximately 10-ft. apart at various depths below land surface. Sample depths around the UST basin were dependent upon depth of groundwater. On average, two samples were obtained from each location proximal to the UST basin. Product line samples were obtained approximately 42-inches below land surface at 10-ft. intervals.

### 2. How was the QED incorporated into your scope of work?

- EHC Environmental & Haggett Engineering utilized QED-UVF technology for TPH analysis throughout each subject site for determination of petroleum hydrocarbon presence.
- EHC Environmental & Haggett Engineering were able to provide the Site Check reports to the Client in a reasonable time due to the quick turn around of laboratory analysis. Due to quick turnaround times, each Site Check report could be submitted to the Division upon receipt of analytical reports.

### 3. How did using this method increase efficiency on your project?

- EHC Environmental & Haggett Engineering obtained 254 samples throughout the seven (7) subject sites. Samples were prepared for shipment each day after work was conducted. Due to the QED-UVF technology 10-gram requirement, we were able to prepare more samples than the traditional EPA 8015-C (GRO/DRO) method in a shorter amount of time. We were also able to save the Client from paying for the traditional EPA 8015-C method.



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### 4. How does this method compare to the conventional method of testing?

- The QED/UVF Hydrocarbon Analyzer makes understanding of analytes much easier with constituent breakdowns. The QED/UVF Hydrocarbon Analyzer provides a clean breakdown of low fraction and high fraction carbon chains allowing results for BTEX, GRO/DRO, Total Aromatics, PAHs, and BaPs. Traditional EPA 8015-C (GRO/DRO) method does not provide a breakdown of each carbon chain in simple fashion as the QED/UVF technology provides. Time is nearly cut in half due to the reduction of containers required for QED/UVF analysis.

