

# PROGRESSIVE ENGINEERING & CONSTRUCTION, INC.

## Project Summary



### **BULK STORAGE TERMINAL GREENSBORO, NORTH CAROLINA**

Colonial Pipeline Company retained Progressive to evaluate operation of existing remedial systems at one of the largest bulk storage terminals in the USA. An existing pump and treat and soil vapor extraction (SVE) system were having minimal effectiveness even after several years of operation. Progressive developed a new remedial approach for the site and obtained approval to shut-down the pump and treat system, enhance the SVE system, and implement air sparging and a mobile multi-phase extraction system.

- ♦ Progressive designed an expansion for the existing SVE system to accommodate a 1000 cfm extraction rate and treatment of vapors through a thermal oxidizer. The concentrations dropped off significantly after one year of operation and we have outfitted the oxidizer with a catalyst for catalytic oxidation, significantly reducing the natural gas costs. The SVE system primarily addresses the free phase impacts at the site, and has dramatically decreased the size of the free product plume.
- ♦ Progressive also designed an air sparging (AS) system to protect sensitive areas where the dissolved impacts either threatened to migrate off-site or discharge to an on-site lake. A low pressure air compressor, solenoid valves and timers are used to inject air into four zones of sparge wells on a cyclic basis, which minimizes equipment sizing and O&M costs.
- ♦ An additional air sparge system was installed to address a stream that was being impacted by groundwater containing hydrocarbons.
- ♦ There are many small areas of this 250 acre bulk storage terminal that have small pockets of product that need to be addressed. The previous approach was to hire a high-vacuum truck to come to the site approximately once a month for several days to remove product. Progressive designed and constructed a mobile high-vacuum trailer system that could easily be relocated around the site to achieve product recovery from those areas more economically. The high-vacuum unit paid for itself in 0.5 years and has been more effective than the previous recovery method.

Progressive currently provides O&M support, permit compliance support, data/report reviews, remedy enhancement evaluations, database/GIS management, and coordination of hi-vacuum unit placement.

### **PROJECT HIGHLIGHTS**

- Shut Down Pump and Treatment System
- SVE System
- Thermal Oxidizer
- Mobile Multi-Phase Extraction System
- Air Sparge System
- Air Permit

### **CLIENT**

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