

## CASE STUDY - LANDFILL MONITORING

Client: Refinery Client, Virginia

**Workscope:** Industrial Waste Landfill Compliance/Groundwater Monitoring and Closure, Erosion & Sediment Control, Wetland Protection and Delineation, AST Compliance and Monitoring, and AST Release Investigations

**Regulation:**  
EPA Region III

**Project Value:**  
\$800,000

### Industrial Waste Landfill:

Environmental Alliance Inc., (Alliance) provides technical consulting services for regulatory compliance at Plains Marketing, Yorktown (Plains) for their industrial waste landfill (IWL) at the former petroleum refining / storage facility located in Yorktown, Virginia. The IWL, permitted in 1982, received waste streams from refinery operations. The groundwater monitoring well network consists of six wells and has been monitored since 1983. When Alliance became actively involved, the IWL was under a corrective action order issued by the Virginia Department of Environmental Quality (VDEQ) due to groundwater quality in the aquifer underlying the IWL.

Alliance was successful in having the order removed by demonstrating the IWL had not impacted the local groundwater aquifer. Alliance applied for and had VDEQ approve a permit amendment to modify the groundwater monitoring well network, which (as designed) removed the facility from the corrective action program, thereby saving the facility a \$10,000 permit amendment fee in addition to corrective action costs. The facility is currently in Phase II monitoring and collects semi-annual groundwater samples pursuant to 9VAC20-81-250. During the permit amendment process Alliance modernized and updated the facility's Groundwater Monitoring and Closure and Post Closure Plans. In accordance with regulatory guidance, Alliance has successfully negotiated a reduced sampling scope for the Phase II monitoring program and gained approval from the VDEQ for groundwater protection standards (GPS) that are more favorable to the facility. Alliance conducts statistical evaluations on each round of groundwater analytical results to determine if an exceedance of an established GPS has occurred. Alliance has streamlined the facility's IWL groundwater sampling and reporting activities, and continues to provide technical consulting services to the facility in operational capacities that exceed the IWL alone. Alliance has also completed landfill cap engineering and design modifications to be implemented at the IWL at the time of closure.

### Crude Oil Rail System:

In April 2012, Plains secured Alliance to design and implement an Erosion and Sediment Control Plan (E&SC) for the construction of 66,000 linear feet of rail road track and ancillary construction for a Crude Oil Rail Unloading System (CORUS). The two year project included application and approval of the Site Plan, Erosion & Sediment Control Plan and Stormwater Plan by York County. The plans included installation of more than 200,000 feet of silt and wetlands protection fence, an initial wetlands delineation and several delineations as the project developed, coordination with the Joint Permit Application (wetlands) consultant / COE and VDEQ, and daily on-site E&SC and wetlands protection inspections. Of the six or seven consultants contracted to assist in the construction of CORUS, Alliance was the final remaining consultant on the project.

