DAVIDSONVILLE FUEL OIL SPILL

SS-11

Joint Base Andrews, Davidsonville Transmitter Annex — February 2013

BACKGROUND

The Davidsonville Fuel Oil Spill Site (SS-11) at the Davidsonville Transmitter Annex is located northeast of Joint Base Andrews in Davidsonville, MD. In 1984, a fuel oil leak originating from an underground storage tank (UST) and associated fuel lines (in operation from 1957 to 1984) was discovered. More significant impacts were noted from nearby above-ground storage tanks (ASTs) and fuel lines for the generator building.

Cleanup measures at the site included excavation of the original tank as well as the removal of the ASTs, fuel lines, and all visually contaminated soil under Maryland Department of the Environment (MDE) oversight in 2002. Some product saturated materials were under the east foundation of the generator building and could not be removed, so a recovery well (sump) was installed to obtain product from this area with assistance of surfactants and vacuum recovery. Continued petroleum product in the sump led to the installation and operation of a solar-powered petroleum product skimmer in 2004-2005. Groundwater monitoring and bi-weekly well gauging continue at the site.

Two separate sampling events in 2005 revealed chlorinated solvents such as trichloroethylene (TCE) in groundwater above regulatory limits. An expanded site investigation (ESI) was conducted in 2006-2007, but the plume was not delineated.

A series of investigations (2008 to 2010) determined that the plume of solvent contamination, TCE and TCE degradation products, extended west of the building compound and across 16.5 acres of Air Force property.

CHALLENGES

The Remedial Investigation (RI) under the FY08 Performance Based Contract (PBC) found that the plume was much larger than previously thought. A series of field investigation efforts showed the contamination of groundwater covered over 16.5 acres of area and reached depths of over 80 feet below the ground surface. Although there is no impact on any drinking water wells, the large extent of contamination in multiple geological units may prove a difficult challenge to remediate.

Figure 1: SS-11 TCE Plume

PERFORMANCE BASED APPROACH

A performance-based contract was awarded in FY11 to address this site. The contract includes the RI, Feasibility Study, Proposed Plan, Record of Decision, Remedial Design, Remedial Action - Construction, and Remedy in Place (RIP). The draft RI for the site was undergoing review in January 2013 by the MDE Federal Facilities Division (FFD). Under the current contract, RIP is required within five years of contract award (Aug 2016). Site Closure is anticipated five years after RIP is reached.

RISK DRIVERS

Contaminants: Petroleum hydrocarbons and chlorinated solvents (TCE, cis-1,2-DCE, and VC)

Impacted Media: Groundwater, subsurface soil

Exposure Pathways Completed: Construction workers

Current Land Use/Surface Cover: Industrial

Reasonably Anticipated Land Use: Industrial

Relative Risk: Medium