

POPE AIR FORCE BASE, NORTH CAROLINA

Case Study

POPE AIR FORCE BASE, NORTH CAROLINA

Pope Air Force Base is home to the 43rd Airlift Wing. The wing is comprised of 3,000 personnel from 15 squadrons, providing tactical airlift support to the Army's XVIII Airborne Corps, 82nd Airborne Division and US Special Forces Command. Pope Air Force Base also conducts air mobility and airdrop testing, facilitates joint force training, and provides host support to numerous organizations including the 440th Airlift Wing, Combat Control School, 21st and 24th Special Tactics Squadrons, and 18th Air Support Operations Group.



Pope Air Force Base helps provide the Rapid Global Mobility of the United States Air Force - one of the service's six core competencies outlined in "Global Engagement: A Vision for the Twenty-First-Century Air Force." It is capable of deploying a self-sustaining war fighting package anywhere in the world at a moment's notice, to form our nation's premiere forced entry capability with the United States Army. It can also provide theater airlift for other contingencies and humanitarian missions around the world such as Operation Joint Endeavour in Bosnia or Operation Southern Watch in Southwest Asia.

Project Challenge

Pope AFB is located in Fayetteville, NC. The project challenge included identification of a BMP that would remove hydrocarbons from stormwater runoff from the airfield flight line.

The maximum loading into the storm sewer system at Pope AFB comes from the flight line area. Hydrocarbon products in the runoff were the primary concern rather than total suspended solids (TSS), and few treatment options were available for this area. The lack of green space restricted the use of bio-retention and filtration systems. Dry/wet ponds were not a suitable choice because they would increase the risk of bird strikes, and other infrastructure devices were not suitable due to lack of space. Consequently, the most appropriate BMP (Best Management Practice) system for this area would adapt to the existing infrastructure without modifications, and provide easy maintenance and installation due to its pre-engineered design.



AbTech's Ultra Urban® Filters with Smart Sponge® Technology were chosen by the project engineer, Black & Veatch Special Products Group, as the best choice for the project. AbTech's regional distributor Water Quality Solutions, LLC. provided engineering support, filter mounting collar design and manufacturing, as well as installation and maintenance. Ultra Urban® Filters have a strong performance track record having been installed in over 13,000 locations throughout the US. At Pope, 135 Ultra Urban® Filters and 135 galvanized steel filter mounting collars were installed at 5 different aircraft ramp locations throughout the nearly 500 acre flight line. The filters were engineered to drop into each drain opening, were installed without any modifications to the flight line infrastructure and provide high removal efficiency of common hydrocarbons (jet fuel, grease, oil, diesel fuel, gasoline). In addition, the filters met all requirements for easy maintenance and service. Base environmental managers are pleased about the absolute filtration ability of the filters and their ability to protect the local water shed environment.

Smart Sponge® Technology has a unique molecular structure based on polymer technologies that are chemically selective to hydrocarbons. Polymers are composed of molecules that chemically react to form large molecules. The non-leaching Smart Sponge® permanently bonds with jet fuel, grease, oil, diesel fuel and gasoline, transforming these liquid petroleum hydrocarbons into a manageable solid waste that forms a gel-like structure. The filtration material is fully recyclable, environmentally friendly, and provides a complete closed loop solution for removing pollutants from stormwater.





Smart Sponge® an Ideal Solution for Military Facilities

Military air bases are complex, dynamic facilities that operate around the clock. Environmental products and systems must be designed to operate in the same fashion with minimal attention by environmental managers. AbTech's Ultra Urban® Filters are designed to meet this exhausting schedule. When spills occur on a flight line, at a vehicle maintenance facility, or a fueling depot, the filters operate as the first defense, absorbing the spill or hydrocarbon runoff. Environmental managers and flight line personnel can physically inspect filters observing continuous color change from white at time of installation and turning jet black at end of life. Filters are serviced from the flight line deck or pavement surface by vacuuming sediment and debris from the filter surface.

For more information about the Smart Sponge® technology, visit www.abtechindustries.com or call 1-800-545-8999.

