

BioLuxing Case Studies

Sundine Enterprises Strategic Partner

Foremost Environmental Solutions



Office: 303.985.0609

Cell: 720.363.0548

www.foremostsolutions.com

isolite@ix.netcom.com

Cape Canaveral, FL



System Type:

Chemical Reactive System, Jet-Assisted I-Beam Wall of zero valent iron (ZVI) Installed with teaming partner H. Wally Baker of GeoBase, Inc.

Location:

Air Force Station, Cape Canaveral, FL

Client:

Rust Environment and Infrastructure, Brevard County, FL

Project Description:

In this demonstration project conducted for the Air Force Center for Environmental Excellence (AFCEE) at Cape Canaveral Air Station in Florida, the following procedures and techniques were used to install a Permeable Reactive Treatment System (PeRT) with dimension of 50 feet long by 40 feet deep by 4 inches wide. There were also three walls 9 feet long by 40 feet deep by 4 inches wide installed down-gradient of the large wall to evaluate the multiple treatment effects of several systems.

Foremost's in situ X-PeRT (Permeable Reactive Treatment System) is a treatment system that is permeable to groundwater and traps and destroys the pollutants as they move through the engineered system. This system was installed to treat chlorinated compounds from previous releases at the site. Compounds of concern were TCE, DCE, and vinyl chloride. The X-PeRT wall, which was 50 feet below ground surface, was installed in 8 days by a jetted I-beam and continuous jet grouting techniques. The walls were installed to design by pounding in and pulling out a jetted I-beam with simultaneous injection of 120 tons of zero-valent iron filing slurry. After the X-PeRT System had been in place for about six months, DCE concentrations were remediated from 190 parts per million (ppm) up-gradient to less than 10 ppm down-gradient of the treatment wall.

This X-PeRT wall was the first of its kind and performed more efficiently than other systems tested. However, Foremost has not used the method again because BioLuxing™ has proven more efficient and easier and safer to install.