Petroleum Contractor R.W. Mercer bucks conventional wisdom, utilizes advantages of Slide Rail shoring system for UST installation

By James McRay

We've all heard it said, "Just because you CAN do something, doesn't mean you SHOULD do something." Such was the case for Petroleum Contractor R.W. Mercer who recently installed a 26,000 gallon capacity underground fuel tank at a site free from previously installed underground utilities and with no surrounding structures. Conventional wisdom would suggest that open-cutting the excavation would be faster and more cost-effective than employing a shoring system. However, Mercer—headquartered in Jackson, Michigan—would tell you that conventional wisdom is not always the wise choice.

"We've installed underground fuel tanks before in a 'no obstruction' wide open area, and have chosen to open-cut the excavation," explains Mercer Project Manager, Bill Hunter. "We didn't need a shoring system for safety reasons—we could slope the trench—but in some cases the soil conditions were worse than expected which meant we had to excavate more dirt, use extra clean backfill, and spend more time restoring the job site when we were done," Hunter said. "In those instances it would have been faster and easier, and cheaper, to use a shoring system," he said.

Hunter decided that if future underground projects had similar site conditions, he wouldn't assume open-cutting would be the best option for excavation safety requirements. So when bidding on a recent UST installation sub-project, Mercer included in their bid the rental of a NAXSA-member Efficiency Production manufactured Slide Rail System to shore the excavation.

Efficiency's Universal Slide Rail is a component shoring system comprised of steel panels (similar to trench shield sidewalls) and vertical steel posts. Slide Rail is installed by sliding the panels into integrated rails on the posts–an outside slotted rail first, then an open-face rail on the inside–then pushing the panels and posts incrementally down to grade as the pit is dug; a process commonly referred to as a "dig and push" shoring system.

"One of the important advantages of a Slide Rail System over open-cutting is that there's no over-excavation," explained Tim Hurst, Shoring Specialist in Efficiency Production's *Special Operations Shoring Division*. "The system keeps constant pressure against the entirely vertical banks of the excavation, which equals less dirt to move than open-cutting, and less aggregate to backfill," Hurst said.

With components for a 14 x 52 x 16 Slide Rail System rented directly from Efficiency Production's corporate headquarters in Mid-Michigan and with Hurst's on-site guidance, Mercer's crew installed a three-bay, *Multi-Bay™ with Waler* configured Slide Rail System which incorporates 24 inch tie-back waler I-beams at the top of the system on both of the long sides.

The waler beams are secured into integrated brackets that connect into a slotted rail on the outside face of the two sets of linear posts. Paired with a "sacrificial member" such as a spreader pipe or timber beam braced cross-trench against the bottom of the linear posts; the entire parallel beam spreader

assembly can be completely removed, which for Mercer, provided a full 52 feet of open space to install the 47 feet long, 10.5 feet diameter fuel storage tank at a depth of 16 feet.

The double-wall fiberglass Containment Solutions manufactured tank contained two 7,000 gallon capacity compartments, and one 12,000 gallon capacity compartment. Mercer's heavy equipment on the job was a 336 Cat Excavator, a 930K Cat Front-Loader, and a 7.5 yard Efficiency Production Stone Mizer® bedding box. The tank was set in the excavation with a rented mobile crane.

Since 1960, R. W. Mercer Co. has helped customers in Michigan, Indiana and Ohio, by offering exceptional service in the Petroleum and Convenience Store industry, General Contracting, and most recently, the Agricultural Industry. Learn more at www.rwmercer.com.

Efficiency Production, "America's Trench Box Builder™," is an Arcosa Shoring Products company. Efficiency provides the widest selection of standard and custom trench shielding and shoring systems. Efficiency's versatile products are designed specifically for safe and cost effective installation of utility systems and infrastructure improvements. All products are P.E. certified to meet OSHA standards. For more information, visit www.efficiencyproduction.com.

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