

New Training Facility Takes Root

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Rudy Arana runs the backhoe while Billy Campbell (left) and Elmer Cheung (right) finish out trenches for buried pipes. Photo by Raul Rebak.

One morning last November, a 16-member team of volunteers broke ground for a new cathodic protection (CP) training facility near San Francisco, California. Set in the peninsula city of San Bruno and overlooking San Francisco Bay, the facility is located on the grounds of the Harry Tracy Water Treatment plant (operated by the San Francisco Public Utilities Commission), in an area that was previously used for storage. The goal was to provide hands-on NACE International CP-1 and CP-

2 training on the west coast of the United States.

Designed to NACE standards by Mohammed Ali, of JDH Corrosion Consultants (Walnut Creek, California), the state-of-the-art facility includes underground pipelines; dielectrically coated steel pipe, bare pipe, and steel pipe casings; storage tanks above and below ground; test stations; galvanic anode installations; and an impressed current CP system. There are galvanic anode groundbeds, impressed current groundbeds, and a transformer/rectifier. These features can be manipulated via test stations and junction boxes to simulate foreign pipe crossings, continuity joint bonds, open circuit demonstrations,

IN RECOGNITION

While building the NACE International Cathodic Protection Training Facility, the San Francisco Bay Area Section had generous support in time and materials from these organizations:

American Construction

CSI Services

East Bay Municipal Utilities District

Farwest Corrosion Control

JDH Corrosion Consultants

Lawrence Livermore National Laboratory

Northwest Pipe Co.

San Francisco Public Utilities Commission

Sherwin-Williams

Universal Rectifiers

V&A Consulting Engineers

and interference bonds. The facility was a project of the San Francisco Bay Area Section of NACE International, with generous support from area corrosion consultants, engineers, pipe manufacturers, water agencies, construction companies, and CP materials vendors.

Laboring together to develop the facility was a team-building experience for the volunteers, who did much of the work with shovels and welding equipment.

“We built most of the site ourselves, in two days,” says Raul Rebak of Lawrence Livermore National Laboratory (Livermore, California). Others who worked on the training facility project include Mongkol Mahavongtrakul of the San Francisco Public Utilities Commission, who was instrumental in arranging for the site, as well as Darby Howard, who is with JDH, and Steve McKim with American Construction (Orinda, California).

The resulting training facility is a great environment for hands-on coursework in CP systems and CP field measurement techniques.

“The Bay Area offers a variety of soil conditions, from dry, less corrosive hilly terrain, to aggressive, low-resistivity bay mud,” says Mark Lewis of the East Bay Municipal Utility District (EBMUD) (Oakland, California). “The region is also known for its coastal fog and seasonal hot, dry weather, which represent the extremes of atmospheric exposure.”

Now completed and ready for action, the NACE International Cathodic Protection Training Facility (operated by the San Francisco Bay Area Section) is filling its purpose of educating CP professionals.

“The training facility experience really helped to solidify what we learned from the CP-2 course lectures,” remarks attendee Doug Handran, “since we were able to get hands-on, practical experience with CP test equipment, measurement techniques, and real-life scenarios.” In addition to the valuable training, Handran, an electrical engineer with EBMUD, also enjoyed the location. “We had a perfect day for field work at the site, with warm temperatures, clear skies, and panoramic views,” he says. **MP**



The training facility crew: Steve McKim, Darby Howard, Raman Singh, Chris Lisson, and Jeff Curl are grouped to the left of the sign. Tom Herink, Mongkol Mahavongtrakul, Jim Lisa, Mark Lewis, Joe Guerra, and Elmer Chung are grouped to the right. At the top are Rudy Arana, Raul Rebak, Sean Yost, Mohammed Ali, Dan Day, and Billy Campbell. Photo by Hagop Istanboulian.