Case Study

THE SUBSTATION THAT IS A PARK

Anaheim Hills, CA, devoted to preserving the natural beauty of their community, has built the nation's first underground electrical switching station. With only a three-tiered retaining wall and metal door showing, above the substation lies a gorgeous park, complete with running paths and quaint park benches. The Park Substation is an innovation of the city's public utilities department in cooperation with the local neighborhoods, resulting in a new recreation area, rather than an unsightly substation.

The underground substation is virtually blackout free and would be impossible without gas-insulated switchgear technology, which reduces the space required for conventional substations by 75 to 90 percent. In order to preserve the integrity of this advanced facility, the forward thinking City of Anaheim extensively researched the best form of fire protection. From sprinklers to CO2 systems, officials explored options and looked for success cases within the transformer market.

"In looking at the amount of valuable equipment and the importance of preserving the integrity of the systems at all times, it was an easy choice what to recommend," explained Frank Kunowski, of Facilities Protection System (FPS), the contractor eventually rewarded with the fire protection contract. "Clean agent systems discharge as a gas, leaving behind no residue and don't require costly clean up, unlike sprinklers or other systems."

So FPS proposed the use of Fike's unique ECARO-25™ clean agent fire protection system and the Cheetah intelligent control panel. ECARO-25 requires 20% less agent per cubic foot/meter than most other clean agent systems, and the superior physical properties of the agent (Dupont™ FE-25™) allow for the use of small diameter piping over long distances.

"Really, with the ECARO-25 system, you are getting the premier design in clean agent systems. All clean agents must remain in the protected space for a specified period of time in order to extinguish a fire. ECARO-25 is 20% more efficient in hold time than other systems, and you need 20% less agent to protect the same room. Superior design and cost savings-makes it easy to recommend!" explained Frank. "And once we provided them with some references of other substations currently being protected with ECARO-25, we became the clear choice."

In fact, all rooms within the 14,000 square foot facility, including two transformer rooms (Class B hazards) and five zones, are protected with the ECARO-25 system. And the Cheetah control system is being utilized as the fire alarm life safety system, as well as the suppression releasing panel.

"We have been quite satisfied with the system so far, as well as the ease and quality of the installation," said Keith Tiessen, spokesperson for the City of Anaheim. "Of course, it's one of those things that we hope we never have to use, but we are confident we made the right choice."

Critical Project Success Factors:

- The City of Anaheim was proactive in the protection of its investment, understanding both the risk of fire and the damaging effects of water-based fire protection on valuable equipment.
- FPS, a professional, Fike-factory-trained fire protection company, carefully evaluated all aspects of the protected areas and all potential hazards.
- The City of Anaheim was able to protect its state-of-the-art equipment with the highest performing, most cost-effective clean agent fire protection system.
- The successful partnership of Fike, FPS and The City of Anaheim, resulted in a system that will continually protect the premier Park Substation.

Form No. SCS07-004