

Features

LEFT: ENRIQUE SIQUES/GETTY IMAGES; ASSIGNMENT, RIGHT: EYEWIRE/GETTY IMAGES



Craft workers set cyclone piping at Escondido copper project.

Energizing a Nation

Three new power plants are giving Turkey a brighter future.

Engine of Enterprise

Bechtel Enterprises sets the pace in infrastructure privatization.

Mining a Mountain

High in the Chilean Andes, a huge copper mine gets even bigger.

Fixing the Mixing Bowl

A massive highway project eases the commute in Washington, D.C.

Playing It Safe

How Bechtel is making good on its commitment to “zero accidents.”

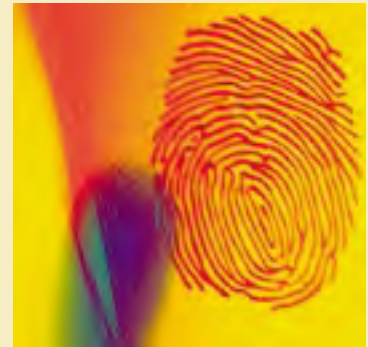


TERRY LOWENTHAL/BECHTEL

At Delta Energy Center, safety is the top priority.

DEPARTMENTS

FRONT END



Criminals beware—a Bechtel Nevada laboratory has developed a new way to detect fingerprints.

MILESTONES

Keeping up with Bechtel projects, people, and safety records around the world.

LIFE'S WORK

The weather is cold, but what takes place at this ski lodge in New York can melt your heart.

Playing It SAFE

BY SYBIL HATCH

PHOTOGRAPHS BY

TERRY LOWENTHAL/BECHTEL

A behind-the-scenes look at a major project shows how Bechtel is making good on its commitment to “zero accidents.”

AT 6:45 A.M., THE DELTA ENERGY CENTER is backlit by the first pinks of a picturesque sunrise. From a distance, the huge facility towers over the flatlands of Pittsburg, California, like a silent mesa in the desert.

Up close, however, the big power project is a cacophony of activity: day shift clocking in, concrete crews pouring new slabs, pipefitters welding and grinding high in the scaffolding, electricians wiring control panels, trucks making deliveries, cranes lifting supplies, and a thousand other actions of concerted progress.

Everywhere you look, one theme is paramount—safety. Large, colorful banners with catchy phrases such as “Get a Good Safety Attitude,” and “Caution—Unsafe Acts Lead to Accidents” billow in the breeze. Green, yellow, and red safety tags adorn the towering scaffolding system. There are countless orange cones, miles of yellow and red caution tape. Hardhat stickers proclaim, “Accidents Happen at the Blink of an Eye. Think Safety.”

“I’m a part of Bechtel and we take safety real seriously,” says a carpenter on his way to another day’s work, pointing me to the safety trailer, which is marked with a huge red cross. There, I meet Richard Simmons, Bechtel’s head of Environmental Safety and Health at the Delta Energy Center.

Simmons’ first order of business is the daily 7 a.m. meeting with the site management staff of Calpine Corporation, Bechtel’s customer. And first on the agenda is the lunch to be given to all hands in celebration of 500,000 safe working hours at the site.

Calpine’s startup engineer mentions that his crew will be filling the lube oil tanks that day. “I’ll make sure my people know they need a hot-work permit,” Simmons pipes up, referring to Bechtel’s strict protocols for performing any spark-inducing work near a flammable or combustible material.

Bechtel is committed to zero accident performance, believing that every accident, and therefore every injury, is preventable. “I think of the safety engineer as wearing any number of hats to make a safety program effective,” says

Simmons—“negotiator, mediator, psychologist, investigator, cop.”

Simmons, as well as “Safety Sam” Wilkins and Bill O’Conner—Bechtel’s day and night shift safety supervisors, respectively—walk the project constantly, stopping frequently to talk to supervisors, foremen, and workers. It’s an extrovert’s job, and small talk is the entré to safety talk.

“The most important part of my job is to communicate safety to our workers and to listen and learn from them,” says Simmons. “And one of the most proactive ways we do that is to address each and every issue as it comes up. The workers know they can count on us to support them.”

Typical of the safety teamwork you see constantly, Randy LeMoine, a third-generation Bechtel employee and the site labor general foreman, yells to Simmons, “I can’t leave my crew right now. Can you help me get some extra earplugs for my people?” “You’ve got ‘em,” says Simmons, and radios ahead to the tool room for immediate delivery.

Simmons tells the story of Bruno Genarro, a Bechtel veteran—and a big fellow—who was having difficulty keeping his hard hat on. Although Genarro never complained, Simmons special-ordered an extra-large hard hat for him. “He’s happy as a clam now,” Simmons says.”

The Delta Energy Center—an 880-megawatt, combined cycle, natural gas-fired power plant—is nearing completion. All of the superstructures are erected, the boilers installed, and the switchyard completed. Now, it’s a matter of installing valves, connecting pipes and electrical lines,





SAFETY REMINDERS GREET WORKERS AT EVERY TURN.

testing systems, and getting ready for startup.

Surprisingly, the last 25 percent of a project has the highest likelihood of safety issues. “Now is when a lot of the intricate detail work gets done,” explains Simmons. As major components are completed, people are more concentrated in smaller areas of the site. And as portions of the plant come online, there are more possibilities that a worker could inadvertently tap a pressurized pipeline or energized wire.

Bechtel recently restructured the safety program at Delta in response to the tighter quarters and the shift in the types of work activities. Simmons and Steve Fletcher, Bechtel’s safety manager in Frederick, Maryland, implemented several new programs and placed renewed emphasis on others.

One of the most important safety mandates is to designate exclusion zones below areas where people are working. Simmons gets a call on his radio to help a supervisor investigate a near-miss at the HRSG (the heat-recovery steam generator—one of the largest components of a combined cycle power plant such as Delta). A pipefitter working high above the ground on a scaffold had put his wrench down on the piping and another worker inadvertently knocked it off. The falling wrench hit the red-taped danger zone, and then bounced

under some equipment near another worker.

“Because of that taped-off area, no one was hurt. The red zone worked,” says Simmons. “But we use every near-miss as a learning experience.” He tells the worker, “When you’re working up high, hook your tools to your belt with a leash. That way this won’t happen again.” The worker nods.

Workers at the Delta Energy Center vie for the Safety Suggestion Award—a gift certificate to a department store and prominent recognition on the safety bulletin board. Glenn Hopson’s recent suggestion led to new numbered signs at all exit gates to help eliminate possible confusion during evacuations or emergency response.

At a weekly safety meeting, every

foreman and supervisor at the site—some 80 men and women—congregate at the boilermaker’s change house, four and five to a bench. These leaders of the project own this meeting, just as they own the responsibility for the safety of those they supervise. But Simmons is their “honest broker.” They depend on his expertise, advice, and guidance. He is an integral part of their meeting. At precisely 11 a.m. Simmons bellows, “Listen up, now! I’ve seen improvements in some areas, but we have a ways to go in others.”

Part motivational speaker, part drill sergeant, Simmons lays out his portion of the safety agenda. He congratulates the foremen on improved housekeeping and better cord and welding lead rollups, which have reduced tripping hazards, both topics of last week’s meeting.

He informs them of the near misses and minor injuries of the previous week, and discusses ways that they could have been prevented. He reminds the foremen that safety starts—and ends—with them.

“Work safe,” Simmons says to the last people leaving the shack. They smile, walking by a large sign that reads: “Through These Doors Walk the Safest Workers in the World.” It’s a self-fulfilling declaration, thanks to the constant efforts of every person at Delta. 🧢

You Can Never Be Too Safe

Near Gate 12 is the most dangerous spot at Delta Energy Center, where high voltage lines cross over West Road into the plant. If equipment were to come in contact with the lines, “Well, I don’t even want to think about what would happen,” says Richard Simmons, the Bechtel Environmental Safety and Health supervisor at the site.

Bechtel’s rigorous safety systems at this particular location are commensurate with the dangers. There are explicit signs everywhere: “Notice: Overhead Lines Energized.” “Cradle All Booms.” “Lower Scissors Lifts.” “Spotters Required.” Chains, made of bright yellow plastic that will not conduct electricity, close off both ends of the dangerous stretch.

“A spotter needs to get out of the vehicle to remove the chain and spend that crucial extra moment to think about the situation,” says Simmons. “It all boils down to constant, vigilant awareness about safety. It could mean the difference between life and death.”