

FRONTEND

Keeping Track

The massive cleanup operation at the U.S. Department of Energy's Oak Ridge Reservation in Tennessee involves decommissioning and deconstruction of radioactively contaminated facilities left over from World War II. On an average day, the project sends some 136 shipments of debris—as much as 1.5 million kilograms—to a disposal facility.

Keeping track of all those shipments is crucial. To make it faster and more cost-efficient, the Bechtel-Jacobs joint venture managing the project relies on RFID (radio frequency identification) technology. Already used to collect tolls from commuters, monitor the flow of retail products through supply chains, and for other purposes, RFID offers big construction projects a way to track the movement of material and equipment in real time.

Building with CO₂

In the fight against climate change, companies are looking for new ways to limit carbon dioxide emissions from coal-fired power plants. One solution is to capture CO₂ before it can reach the air and sequester it underground, in saline aquifers or depleted oil and gas fields for example. California-based

Calera has developed a more productive answer: convert captured CO₂ into calcium and magnesium carbonates for use in making concrete and other building materials. Bechtel thinks that's a good idea and has teamed with Calera in a strategic alliance to develop and construct facilities using Calera's innovative technology.

Realizing Pipe Dreams

Despite high unemployment throughout the United States, certain skilled workers remain in short supply. That's one reason Bechtel is helping support a new program that trains U.S. military veterans in welding and pipe fitting.

The program, called Veterans in Pipefitting (VIP), is a joint effort of the United Association of Plumbers and Pipefitters (UA), an international labor union, and the U.S. Army and U.S. Marine Corps, which provide funding and other support. The program encourages soldiers and Marines nearing the end of their enlistments to apply for 800 hours of hands-on training. Upon graduation, the veterans join local unions as second-year apprentices.

Graduates are guaranteed a job, and that's where the private sector comes



**DOING
OUR PART**

TAKING CLEANUP TO A WHOLE NEW LEVEL

Back in the 1950s, the U.S. government created three ponds to capture storm water runoff at its nuclear production site in Oak Ridge, Tennessee. Over time, the ponds were contaminated with polychlorinated biphenyls, commonly known as PCBs. That was bad for bottom-feeding fish, which picked up the chemicals in their systems. Now, however, the Bechtel joint venture charge with environmental cleanup at Oak Ridge has restored the ponds to their former pristine condition.

After consulting with environmental regulators, biologists, and the public on a remediation plan, the Bechtel Jacobs team lowered water levels, removed the fish, and recontoured the pond bottoms and shorelines. Then they planted aquatic vegetation and restored the water levels. The plan also involved restocking the ponds with sunfish and other species that thrive on the new plants, and placing barriers to prevent unwanted fish from migrating into the ponds from a nearby creek.

in. Bechtel has committed to hiring VIP graduates for projects that need their skills. "VIP is a great example of how unions, government, and the private sector can work together to close the

skills gap in construction," says Walker Kimball, manager of construction. "At the same time, it enables veterans to begin a lifelong career that is both rewarding and well paid."