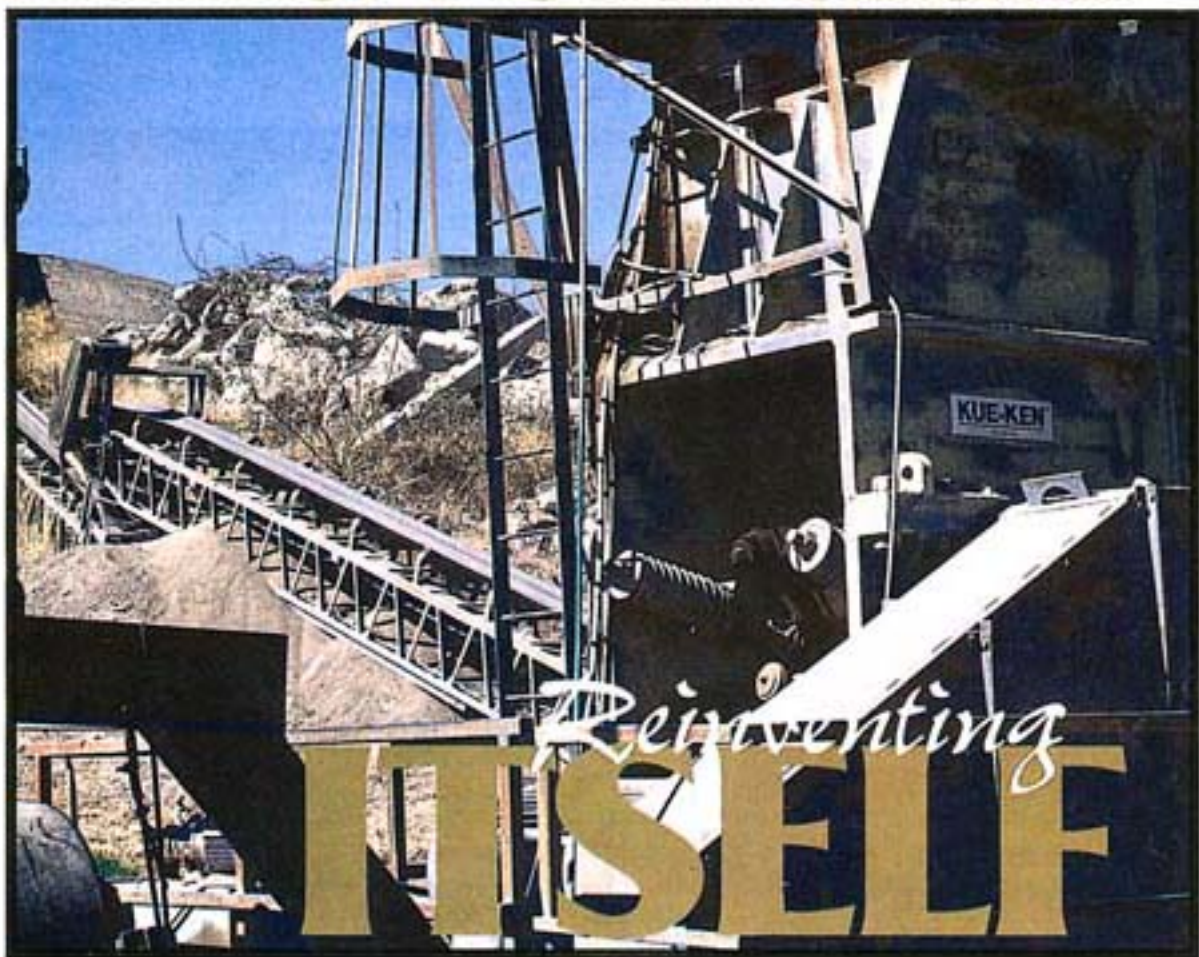


Zanker Road Landfill—



For this San Jose, Calif.-based solid waste operation, extended capacity comes through permit requirements and creative recycling.

What you first hear about the Zanker Road Landfill in San Jose, Calif., sounds like a brain teaser or one of those puzzling school math problems. The current landfill opened in 1985, expecting to reach capacity in 1990. Now, nine years past its estimated fill date, Zanker management is projecting yet another 20 years. How did the company gain 29 years?

"We've never been afraid to try something new," says Michael Gross, a Zanker marketing manager. Rein-

vention is one of the hallmarks of the site, which served solely as a solid waste landfill from the 1950s until the 1970s when U.S. EPA-required changes closed it.

In 1985, the Zanker management team completed an EIR (environmental impact report) and reopened the site as a construction and demolition (C&D) landfill, with a five-year life expectancy. The answer to its increased capacity lay in its permit.

"One of the requirements of the permit was to do

By Dee NaQuin

Fast Facts:

Uses 45 acres to handle 1,250 tpd; landfills 50 tpd

Waste stream breaks down to:

500 tpd C&D

250 tpd concrete and asphalt

350 tpd yard waste

300 to 400 tpd wood waste



An aerial view of Zanker Road Landfill. With a 90% recycling rate, the facility covers more than 45 acres.

some wood waste recycling. We got more and more involved in it. Now we recycle everything," he says, pointing to an astounding 90% plus recycling rate. The company uses a flotation system, conveyors, and sort lines.

Independent operations

Zanker handles no municipal solid waste. Materials recycled include C&D, wood waste, yard waste, concrete, and asphalt. Independent operations within the facility handle each of the waste streams.

"That's how we made more room. We've excavated areas and pulled materials out." In fact, the company throws very little away, he says, noting some material has remained on the site for three years—it's simply moved from one processing area to another.

Zanker collected material curbside for about three years, but ended pickup in 1992. These days, materials arrive from customers who have contracted with the company. How it arrives and how it's handled depends on the materials, he says.

"We pull out metals, cardboard, wood, sheet rock, anything of value, and bury residual waste. We're more like a recycling facility that happens to be a landfill," he

says. The facility uses 45 acres to handle 1,250 tpd and buries just 50 tpd.

'Anything and everything'

Gross describes the C&D waste stream as "commingled with a variety of things—carpeting, wallboard, toilets, bathtubs, sinks—you name it, it's in there." A feeder conveyor carries material to a flat deck screen. Dirt screened out here is used for landfill cover.

All "overs" fall into the flotation tank. A paddle wheel pushes wood waste up a conveyor where it is removed and diverted to its area of the landfill. A backhoe removes items that sink and places these on another conveyor. Here, Zanker employees remove concrete, brick, and metals.

"Whatever is left over drops off at the end of that conveyor—basically like mud" and then is sent to the concrete crushing operation for further processing, Gross says. Many of the company's conveyors are from Bulk Handling (Eugene, Ore.), while others are purchased at auction, he says.

Zanker started recycling concrete and asphalt in 1989. The 250-tpd operation begins by sending material through a grizzly screen, removing dirt. The next

pass is through a jaw crusher, then under a magnet, removing metals and rebar. After a swipe through another screen, the remaining product is Class II base rock.

"All overs from that go through an impact crusher and are recycled back through the screen. It's a closed loop system," Gross says.

The wood waste operation processes 300 to 400 tpd. "We take loads of woodwaste and brush, grind it with a Diamond Z [Nampa, Idaho] tub grinder, and run it through a 40-foot Royer and Retec trommel," he says. The material goes through a sorting line where paper, plastics, and metals are removed.

This produces about 300 to 400 tpd of co-generation fuel, which is sold to a plant in the Sierra Foothills. Wood fines produced are screened and sold as a soil amendment.

Composting is varied

Zanker handles 350 tpd of yard waste on an eight-

acre composting facility. The company first provided the service to San Jose in 1989. Now, compostables also come in from the county of Santa Clara, and the cities of Los Altos and Cupertino.

"The yard wastes we receive are nearly contaminant-free. Material we get is less than 1% contaminated. Maybe there's a flower pot in it," Gross says, adding that after a visual inspection, Zanker employees put the material through a screening system. Grass and leaves are separated and placed in a Scat (Delhi, Iowa) windrow, where the material is turned and watered in a 12-week process.

"The material is screened to quarter-inch size minus material. We sell that," he says. Zanker has had no problems with elevated temperatures in the windrows despite their larger than normal size piles. The overs from the screen operation, such as sticks, are reincorporated into the windrows, he says, adding, "Sometimes we take some of it back to the demolition operation."

Salvaging Memories

It's not always business as usual at a landfill. In 1989, right after the Loma Prieta earthquake, the Zanker Road Landfill was busy round the clock, recycling debris from San Francisco's Marina District.

For weeks, the company handled about 2,700 cubic yards a day from the district, says Michael Gross, marketing manager, who was the site engineer back then. He remembers walking on top of a waste pile and finding a \$20 bill. As most of us would do, he considered that a lucky find and stuck the bill in his pocket. "Five minutes later, guilt set in," he says. "This was somebody's \$20 and they didn't have

time to get it out."

Soon, Zanker management had a plan to salvage personal belongings from the wreckage. Contact with the San Francisco Department of Public Works led to a system that would identify names and addresses covered in each truckload of rubble.

"People did not have time to look for anything. We went through it for them," Gross says. At its own expense, Zanker brought in 15 workers to sort through each load and extract any items in reasonable condition. The sorters worked shifts in what turned out to be 20-hour days.

Always, they were aware of the people and circumstances connected to what was being salvaged. "One of the most tragic things we found was women's purses—and knowing somebody couldn't get their purse out. They were in a building when it collapsed," he says. The company contacted and hand-delivered those purses to survivors. In some cases, the owners were in hospitals.

Zanker employees bagged other recovered items and sent them back to San Francisco where the Department of Public Works set up an area for people to walk through. "We found war medals, pearls, diamond rings, a \$100,000 stamp collection, manuscripts, family photo albums," he says.

Probably the most valuable thing recovered were the pictures. For some earthquake survivors, snapshots might be their only memento of past times. As one woman who recovered photos and a family Bible put it, "You can't buy these things." ■

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Combustibles come from the county of Santa Clara and the cities of San Jose, Los Altos, and Cupertino.



A pile of metals waiting loading. Zanker ships approximately 30 tons of metals per day.

By this summer, Zanker plans to expand to 1,500 tpd yard and food waste as part of a composting demonstration. The company has just received a \$100,000 grant from San Jose for the food waste project. "We'll collect food waste from restaurants and supermarkets, both pre-consumer and post-consumer," Gross says. This work will take place at the company's 156-acre composting site near Gilroy.

At WasteExpo '99...

WasteExpo '99—held June 7-10 at the Dallas Convention Center—will feature a two-day landfill operations course, as well as education tracks devoted to C&D debris and recycling. Call 800/424-2869 for more information.

Into the future

Next up is expansion onto a 30-acre site adjacent to its current lot. True to form, Zanker is recycling the lot, which was owned by Owens-Corning Fiberglass. "It took nine years and seven draft EIRs," Gross says. By May, the company will move its C&D and concrete operations over to that site.

"We're changing the name to Zanker Material Recovery Facility," he says of the site. The operation will include offices, a maintenance facility, and all new equipment. "We'll be going to more of a dry system; we'll still have our flotation tanks, but they'll be smaller," he says. More trommel and flat deck screens, as well as more sorting lines may be added.

The Zanker management team is using scale mod-

els to make its decisions. "We're a landfill—we're ugly, with piles here and piles there. But we're the Disneyland of the North for recycling," he says.

In addition to the San Jose and Gilroy sites, the team oversees a transfer station in Grass Valley. Through a joint venture, the company also manages garbage collection and recycling in Tehama County

in northern California.

"We've done everything—we were doing this before recycling was cool," Gross says, adding that Zanker has hung in there despite sometimes erratic markets. For example, back in 1990 when California had a glut of glass cullet, Zanker, which processed curbside recyclables at the time, was stumped, but then reconfigured its concrete operation, and ground the glass into sand. "It was a huge hit," he says, noting the sparkling quality it gave to sidewalks.

Zanker is owned by a partnership. Three active partners/owners make up part of the management team. "Everything is done through consensus," he says. "Whoever gets the most votes wins. We're all after the same goal—to get as much done as we can through recycling." ■