



Shaw Environmental & Infrastructure, Inc.

Shaw E&I is the Primary Anthrax Decon Contractor for the USPS Brentwood Road (Washington, DC) and Trenton, NJ Facilities

A Patient Assault on Anthrax

More Than a Year Spent Preparing for Fumigation Of Postal Plant in D.C.

By Manny Fernandez

Washington Post Staff Writer

Wednesday, December 18, 2002; Page A01

The white chemical tanks are two stories high and protected by heated tents. Nearby, diesel-powered generators hum, powering computers and the lights for a makeshift cafeteria. In the trailers strewn over a vast parking lot, lab technicians fill sample vials, statisticians crunch numbers and meteorologists check the skies.



A worker checks part of the elaborate system for fumigating the mail-sorting plant in Northeast Washington. (Photos Frank Johnston -- The Washington Post)

The sprawling site is, of all things, a mail-sorting facility. But it is also Brentwood, where another sort of operation began to take shape just days after last fall's anthrax mailings, a complex, multimillion-dollar effort to rescue the building from the deadly bacteria.

More than a year later, a bustling, day-and-night community of engineers, chemists and other scientists, carpenters and plumbers has taken hold along a U-shaped corridor outside the sealed building on Brentwood Road in Northeast Washington. About 200 workers swarm over the site daily, traversing a cluttered avenue of tents and trailers and a maze of piping and chemical-mixing equipment assembled for the most ambitious reclamation of a bio-hazardous building in U.S. history.

Postal officials say the project is unlike any other -- part construction site, part testing ground, part chemical plant. "Ever worked on one of those Rubik's Cubes?" John H. Bridges, the Postal Service's on-scene commander in chief, said earlier this week, describing the world's largest anthrax decontamination.

Two generators crank out enough electricity -- four megawatts -- to power up to 500 homes. The volume of chemicals at one time made the site the largest storage facility of its kind on the East Coast. The site held about 60 tank trucks that arrived with police escort, each containing about 4,500 gallons of fluid to be converted to gas.

As a sign of how well things had gone, Bridges pointed out some of the things that have gone unused: portable air horns to signal an evacuation, printed contingency plans for more than 75 situations, the space in the south parking lot designated as a helipad in case of emergency hospitalizations. The space was used instead by workers to hold a Fourth of July barbecue.

Bridges said the many precautions, the repeated testing and the tons of custom-made machinery appeared to pay off last weekend, when the building underwent its long-awaited full fumigation. The process was performed on time and with few glitches.

This week, crews began the 30-day process of collecting 8,000 spore strips, which contain a noninfectious organism that has the same resiliency as anthrax, and taking 4,000 air and surface samples. Postal officials say they expect the results to be available for review by an independent scientific committee sometime next month.

"We don't want to claim victory too early," Bridges said. "We're very excited it went off without a hitch."

For the Postal Service, the fumigation marked both an end and a beginning. It followed a year-long effort to prepare the 17.5 million-cubic-foot plant for the release of anthrax-killing chlorine dioxide gas. It also launched the next phase of the process, including sample analysis, additional cleaning using high-powered vacuums and a wet bleach solution, and building repairs. If all goes well, officials said, 1,600 employees could return to a cleaner, safer and more technologically sound workplace in the spring.

Postal officials, who had hoped to begin full fumigation much earlier, said the delay is attributable to the project's complexity: the intricate network of computer technology, the 25,000-feet of flexible plastic piping and the vast array of chemical storage tanks.

"This is new," said Thomas G. Day, the Postal Service's vice president for engineering. "This is writing the book as we go."

Bridges and Day are among the leaders coordinating the efforts of a battalion of workers, including federal and local government regulators, postal specialists and private contractors. The site has operated under tight security 24 hours a day since shortly after the building closed Oct. 21, 2001.

A few days before that, two letters containing anthrax spores were processed there. The letters were addressed to two senators -- Majority Leader Thomas A. Daschle (D-S.D.) and Patrick J. Leahy (D-Vt.) -- but did their deadliest work inside the postal plant. Two postal employees, Joseph P. Curseen and Thomas L. Morris Jr., died of inhalational anthrax. The building was renamed in their honor.

The lethal nature of the anthrax spores caused crews to call the inside of the plant, where the letters were processed, the "Hot Zone." The cluster of trailers in the parking lots is known as the "Clean Zone." Officials said the contamination was contained inside the building.

In the Clean Zone, sheds and trailers house carpentry and welding shops and a changing room where workers put on protective gear and get their heart rates and blood pressure checked before entering the main building. Chemists in trailer labs tap up the genetic sequencing of anthrax on laptops.

Workers hang their hard hats outside a trailer that functions as a break room. Inside, caterers with security clearance serve two meals a day, one for the day shift, another for the night shift.

Not as visible, a computer network monitors virtually every piece of machinery. The unblinking eyes of infrared cameras watch the inside of the building, monitored by workers outside. A machine that helps produce chlorine dioxide gas was flown in from the oil fields of Saudi Arabia.

Bridges, 47, is the Postal Service's incident commander, a retired Marine who made sure that two flags snapped in the breeze at the site -- the Stars and Stripes, and a red flag with the Marine Corps insignia.

Bridges said he is proud of what has been accomplished in the Clean Zone.

What has been accomplished includes reams of research and analysis on the process used to fumigate the building -- the pumping of chlorine dioxide gas. Chlorine dioxide is a disinfectant used to purify drinking water and sanitize food-processing equipment. It is lethal to anthrax spores under the right conditions.

The work has developed new approaches to old scientific problems, such as a technique to collect air samples from within masonry walls. A short wall was built in the Clean Zone to test the technique. Workers painted the wall pink and named it after the rock group Pink Floyd, famous for the album "The Wall."

The fumigation system was, for the most part, designed and built from scratch. Though the successful decontamination of the Hart Senate Office Building served as a model, the postal facility's size and the complexity of problems took Brentwood crews into uncharted territory. The Hart fumigation involved a 100,000-cubic-foot area; the postal plant is about 170 times larger, officials said.

"This entire job is custom-built from the ground up," said Lawrence J. Stearns, 48, a technical manager for the Shaw Group Inc., one of three contractors on the job. "You don't find this in a handbook or textbook anywhere."

The Louisiana-based Shaw Group is the largest supplier of fabricated piping systems in the United States. The other two contracting firms are Ashland Inc. of Kentucky and Sabre Oxidation Technologies Inc. of Texas.

Stearns said he has worked 12- to 16-hour days at the site since 5 p.m. Oct. 28, 2001, recalling the experience with an exactness typical of the managers involved. Bridges said he has worked more than 4,000 hours and taken 25 days off since last fall; he said he slept in his car for the first week.

Over the past year, the site has been active in the rain, the sun and during holidays.

There have been scores of unforeseen hurdles. After installing 21 miles of plastic tubing to pull samples of chlorine dioxide from inside the building, workers conducted 258 tests to understand how the gas would react to pigments in colored tubes. The science behind the so-called scrubber system, which turns the gas into waste water after fumigation, was developed through trial and error. "All the chemistry was pretty much developed and nailed down here on-site," Stearns said.

Costs have climbed, not unexpectedly. Day said the cost of decontaminating the Brentwood facility and a postal plant in Hamilton, N.J., have exceeded \$100 million. But tearing the building down was not an option, he said. Demolishing it without fumigating would have exposed the surrounding community to anthrax.

Day said postal officials are eager to see the day when the virtual city of tanks, tents and trailers has served its purpose. "We want to get the building cleaned . . . and get back to the business of processing mail," he said.

© 2002 The Washington Post Company

For additional information on the SHAW Environmental & Infrastructure USPS Anthrax Decontamination Project, please contact Lawrence Stearns, Monroeville, PA at (412) 380-6250; Lawrence.Stearns@shawgrp.com.