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Soil still toxic 25 years later

Wade Rawlins Staff Writer

For 15 years ending in 1979, a company named Ward Transformer spilled thousands of gallons of toxic chemicals on its 11 acres at the edge of Raleigh-Durham International Airport.

The toxins have been migrating slowly downstream toward Lake Crabtree, especially when heavy rains carry particles of contaminated soil.

Prominent among the chemicals are polychlorinated biphenyls, or PCBs, which remain in the environment for decades and have been linked to cancer and reproductive problems.

Documents show that U.S. Environmental Protection Agency investigators knew in 1978 and 1979 of high levels of PCB contamination at the transformer recycling facility and found low levels in nearby streams and wetlands. But more than 25 years later, not a shovelful of the tainted soil has been cleaned up.

Four miles downstream at Lake Crabtree County Park, signs warn people not to eat catfish or carp caught in the lake because they contain PCBs. Park officials are angry they didn't learn about the contamination until years after taxpayers spent \$2.3 million to create the park, which opened in 1987.

"I've been operating that facility for 18 years not knowing PCBs were in the lake until 18 months ago," said David Carter, director of Wake County Parks. "If this contamination just happened two years ago that would be one thing. But it happened in 1978."

The pollution persists and spreads because, for years, removing it was a low priority. One potential cost of the inaction is that the PCBs could spread farther and pollute fish in Crabtree Creek, which flows through Umstead State Park.

EPA investigators did limited testing at the Ward property in 1993 but inexplicably didn't find high enough levels to require an immediate cleanup. Instead, they told state investigators to start the long process of adding the site to the federal Superfund list, which would put it in line for federally financed cleanup eventually. There was little sense of urgency that the site posed an ongoing hazard -- until a year ago.

Ward Transformer has operated at the same site since 1964. The company reconditions transformers, devices that convert the high-voltage electricity carried by power lines to lower-voltage current used by

consumers.

Ward and many other manufacturers used PCBs, a class of oillike chemicals, as a fire retardant and coolant in transformers until 1979, when Congress banned their manufacture. The way Ward handled PCBs led to widespread site contamination.

In 1979, the state required the company to start filtering contaminated runoff before discharging it into a ditch. That same year, Ward stopped accepting transformers containing PCBs for reconditioning unless the oil had been removed.

Ward: We can't pay

Under the Superfund law, Ward must clean up the pollution or face civil action.

The EPA wants the company to dig up tainted soil this year to prevent further spread of PCBs. Alternatively, the EPA could do the cleanup itself, then sue to recover costs.

"We are trying to see if we can get them to do it," said Luis Flores, EPA's project manager for the Ward investigation. "If they can do it, they should do it."

A lawyer for Ward Transformer said the company can't afford a multimillion-dollar cleanup. The state estimates that cleaning up the Ward property could require excavating and disposing of 96,000 tons of soil and cost about \$20 million. No one has even begun to calculate the cost of cleaning up the pollution downstream.

"The fundamental problem is the company really doesn't have the resources to pay," said Walter E. Brock Jr., a Raleigh attorney for Ward Transformer. "They're doing all that they can."

Brock said the company had repaired broken curbing cited by the EPA in late 2004 that allowed some stormwater to run off the site without treatment, and had consulted with state labor inspectors to ensure workers were safe. The plant has about 50 workers, the EPA said. Brock said the PCB releases occurred many years ago, before people understood the environmental threat the chemicals posed.

"Frankly, there is nothing that has changed in 25 years out there," Brock said. "Although it is a situation we certainly want to address, I don't think it's an emergency or an imminent threat."

But EPA officials want the site cleaned up to prevent further releases. Federal and state investigators have tracked the waterborne pollution downstream from a tributary below Ward Transformer, through Little Brier Creek, Brier Creek Reservoir and Brier Creek to Lake Crabtree. They did not expect the PCBs to move beyond the Brier Creek Reservoir and were surprised when tests last year confirmed PCBs in fish in Lake Crabtree.

"We were shocked at the levels in the fish tissue," said Nile Testerman, an environmental engineer with the state Department of Environment and

Natural Resources. "You just wouldn't expect something like that."

Though the fish contain unhealthy levels of contaminants, the PCB levels in the lake sediment are low. The park has never allowed swimming. Boating and contact with the soil and water are safe, health officials say. The fish are dangerous because PCBs accumulate in their tissue.

Oral Kingsley Chinfloo, a plumber from Durham, stood on the lake bank one afternoon with three fishing poles. He reeled in a catfish, washed it off and whispered to it, "You're going to have your picture made." After documenting his prize, Chinfloo put the fish back in the water.

"Before they had the PCBs, I ate the fish," Chinfloo said. "I would cook them up and everybody would eat them. Once I saw the signs, I said, 'That is terrible.' I didn't eat them anymore."

Chinfloo said he has noticed a drop in the number of people fishing at the park.

"It's really sad because there are a lot of people who used to come here," he said. "They fished to eat the fish."

The park has stopped stocking the lake with fish and removed feeding devices that drew fish to certain areas of the lake.

"I've lost a fishery," said Park Manager Drew Cade, who said the number of people fishing at the park has dropped by half. "We want a fishable lake again and something that people feel comfortable eating fish out of again."

Why cleanup delayed

Ward Transformer Co. came to public attention in 1978 after a contractor hired by Ward to dispose of its PCBs illegally sprayed the toxic chemicals along 200 miles of rural roadsides. That year, new federal regulations had restricted the disposal of PCBs, significantly raising the cost of legal disposal.

The spraying incident touched off a public health scare and led to criminal fines and prison time for the company's founder, Robert "Buck" Ward Jr., who is now deceased. His son, Robert Ward III, now heads the company.

The contaminated roadside soil was removed and buried in a landfill in Warren County. But the contamination at the industrial site remained. Jeanette Stanley, a state Superfund investigator, has documented pollution at the Ward site since 1994. The state Superfund office conducts initial site screenings of polluted sites for the EPA. Stanley said she'd often been asked why the EPA hadn't cleaned up the pollution years ago.

"EPA had a policy of leaving active facilities alone," Stanley said. "For a long time, we were just looking at closed facilities or facilities that weren't doing what we asked. Ward did what we asked by stopping the discharge."

Laura Miles, an EPA spokeswoman, said EPA officials thought a stormwater

plant built by Ward at EPA's behest and a curb to channel runoff into the collection pond addressed their concerns at the time.

Congress enacted the Superfund law in 1980. It provided broad federal powers to respond to releases of hazardous chemicals from abandoned and uncontrolled sites. The law initially focused on pollution of groundwater and gave lower priority to contamination in wetlands and creeks.

Federal investigators had found low levels of PCBs in Little Brier Creek and in streambed sediment a mile and a half downstream. But they didn't pursue it.

Stanley said investigators didn't want to spend time looking for contamination in wetlands if the areas were unlikely to be added to the Superfund list. "The laws were different," Stanley said.

From the late 1970s until the early 1990s, state regulators monitored stormwater discharges from the plant. But cleanup efforts focused on the rural roadsides where PCBs had been sprayed.

Bill Meyer, retired director of the state Division of Waste Management, said pollution at Ward Transformer was well-known in 1978, but was mostly contained on the site and was not viewed as an imminent threat to public health or the environment. The state decided to let the EPA address removal of PCBs.

"Could we have done more? The answer is always yes," Meyer said. "You have to look at it in context. It's a matter of priorities."

Adam Babich, director of the Tulane University Environmental Law Clinic, who has specialized in Superfund issues, said state and federal governments have overlapping responsibilities.

"To put all the onus on EPA is a mistake," Babich said. "State governments have an independent responsibility to protect their residents' health and welfare. Superfund is not an excuse for states to drop the ball."

In 1983 and again in 1988, a lawyer for Ward Transformer asked state environmental regulators to relax the PCB treatment standards for the Ward plant. The state denied the requests.

"They were trivializing the impact of PCBs, and it's costing us a lot," said Paul Wilms, director of the N.C. Division of Environmental Management in the 1980s and now a lobbyist for the N.C. Home Builders Association. State inspectors noted an illegal discharge from the treatment pond directly into the stream in 1986. They required Ward to raise the height of the dam because untreated water was spilling over the top. They also found contamination downstream.

Levels not alarming

EPA investigators returned to Ward Transformer in 1993 in response to reports that the company could file for bankruptcy, according to Superfund documents. They took soil samples to determine whether contamination should be removed quickly.

None of the samples from five locations showed PCB levels above 50 parts per million -- a threshold for emergency cleanup. Jeanette Stanley noted that the sites EPA chose to take samples from may not have been best for detecting high levels of PCBs. Previous and subsequent investigations found higher concentrations of contamination.

When the EPA asked the state to follow up, state investigators found plenty of contamination in the next few years.

State investigators found PCBs in a publicly accessible wooded area west of the plant in 1995. Stormwater from this area flowed into a stream that flowed into Little Brier Creek. Stanley noted that the contaminants might have moved downstream.

When notified of the discovery, an official in EPA's Emergency Response office said it would be a low priority for cleanup because of its remoteness and a lack of federal money.

Ward officials continued to press the state to relax monitoring for PCBs in water discharged from the treatment plant.

In 1995, state environmental regulators agreed to reduce the monitoring from twice a month to once a month. The state had rejected a request two years earlier to relax the limits, noting there were concerns with PCBs in the discharge.

In 1996 and 1997, a developer hired Environmental Investigations, a Morrisville-based consulting firm, to test soil downstream from Ward Transformer.

Using a hand auger, the consultants bored 12 inches into streambeds at two places near the Ward property. Their report said an oily substance came out of the hole and oil was visible in the sediment. One sample contained 400 parts per million PCBs, another 310 parts per million, well above cleanup levels. The report said the contamination appeared to be widely distributed in the stream draining the Ward property and "in an order of magnitude" greater than reflected in the 1995 Superfund study.

"The state knew it was there," said David Brewster, principal geologist at Environmental Investigations (which now goes by the name EI). "We just took a little harder look. They would have found the same things."

Because of the depth at which the contamination was found, Brewster speculated that much of it could have occurred in the 1960s.

In 2003, Ward Transformer joined the list of about 1,100 sites nationwide on EPA's Superfund list. How many years it will take to clean up the pollution remains uncertain.

In the short term, EPA proposes to build a stormwater control system to stop all surface water runoff; shore up the stormwater pond if needed; remove contaminated soil with concentrations exceeding 25 parts per million from the plant site in areas where stormwater is controlled; and remove soils with more than 1 part per million in other areas.

Federal officials are still studying the extent of contamination in the waters downstream, including Lake Crabtree and Crabtree Creek.

"We haven't made a determination regarding any of those areas," said Flores, the EPA official.

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How the Superfund law works

The federal law commonly known as Superfund gives the U.S. Environmental Protection Agency broad powers to respond to releases of hazardous chemicals. Congress created the program in 1980 to identify and clean up the worst uncontrolled hazardous waste sites nationwide. A site is rated by the EPA or the state on risk factors such as the likelihood that it has released hazardous chemicals, the toxicity and quantity of the waste, and the number of people affected.

The law created a tax on the chemical and petroleum industries that went into a trust fund to pay for cleanups when the polluter couldn't be found. The law authorized two types of actions: short-term cleanups to address releases or threatened releases requiring immediate attention and longer-term cleanups that permanently reduce chemicals that are serious but not life-threatening.

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