

Sunday Star-Ledger

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As dioxin spreads through state waterways, the DEP accuses two firms of intentionally avoiding a long-mandated cleanup

THE LONG, POISONOUS WAIT



ED MURRAY/THE STAR-LEDGER

Richard Jack, left, and Andrew Willner of New York-New Jersey Baykeeper wade into the Passaic River, which has been tainted with dioxin. Signs, right, in Riverbank Park in Kearny warn people not to eat crabs from the river.

BY ALEXANDER LANE
STAR-LEDGER STAFF

In 1992, a New Jersey appellate court handed down a famously scathing opinion.

For almost two decades ending in 1969, a three-judge panel found, the Diamond Shamrock Chemicals Co. had polluted the Passaic River, Hudson River, Arthur Kill, Kill Van Kull, Newark Bay and New York Harbor.

"Diamond's management was wholly indifferent to the consequences," Appellate Division Judge David Baime wrote. "Profits came first."

The decision came in an insurance dispute. But it had a larger significance: It gave the federal Superfund program greater leverage to order, in 1994, that Diamond's corporate successors clean up its river pollution.

Twelve years later, the pollution is still there, and spreading.

Dioxin, which the National Research Council says is among the most dangerous chemicals humankind has ever created, has spread from Diamond's old plant in Newark to the Hackensack River, Hudson River, Arthur Kill, Kill Van Kull, Newark Bay and New York Harbor.

In the meantime, the family of companies that bought Diamond's assets, led now by Spanish oil giant Repsol YPF S.A. and its subsidiary Tierra Solutions Inc., have financed the creation of a vast body of scientific literature on all aspects of Passaic River pollution. They say the research, which their hired scientists have disseminated in journals, conferences and textbooks around the world, has been conducted in earnest preparation for a cleanup.

But in recent weeks, state environmental regulators have

stepped up complaints that the companies' studies are scientifically unsound, and have been carefully designed to help the companies avoid the potential \$1 billion cost of removing their toxic waste from the river. They say federal officials, under intense pressure from lobbyists, have allowed the companies to postpone a cleanup perhaps indefinitely, and structure it so taxpayers will shoulder much of the cost.

"It seems just incredible that Tierra has been able to do nothing, essentially, but studies," state Department of Environmental Protection Regional Administrator Lisa Jackson said. "And really studies that I think are geared only toward making sure they never have to do anything substantive."

Executives at Tierra and Repsol declined requests for interviews. But their public relations representative and lobbyist, Michael Turner of the MWW Group, said it was only fair that the cleanup costs be shared, since the Passaic contains a great deal of pollution from other companies and public sewers.

"The river has suffered over 100 years of industrial activity," Turner said. "We're willing to pay our fair share, but we're not the only ones involved here."

In an interview Friday afternoon, Environmental Protection Agency Regional Administrator Alan Steinberg said he chose to focus on the future, not the past.

"What is past is not prologue here," Steinberg said. "I am determined that the days of exposure to dioxin will come to an end."

TROUBLE FROM LONG AGO

Diamond's old factory site, along the river in Newark's



Ironbound, is covered in cement now, and topped with potted trees. Entombed within is soil laced with 2,3,7,8-tetrachlorodibenzo- p -dioxin, often called TCDD, or simply dioxin.

A highly toxic byproduct of waste incineration and herbicide manufacturing, dioxin causes disfiguring skin problems and altered liver function in the short term, and cancer, as well as immune and reproductive disorders, in the long term, according to the World Health Organization and the International Agency for Research on Cancer.

From the water, Diamond's old property appears silent and sterile now. When New York-New Jersey Baykeeper Andrew Willner motored down that stretch of the river in a small boat last month, he encountered almost no other traffic, save for a cormorant carrying an eel.

"This was all commerce," he said, passing abandoned berths outside old factories. "Barges, tugs, small ships."

Diamond acquired its property on Newark's Lister Avenue in 1951. It manufactured pesticides, including DDT and Agent Orange, the deadly Vietnam-era defoliant. Its waste contained high levels of dioxin, and until at least 1956, the company's disposal policy amounted to dumping all of it in the Passaic River, courts found.

The EPA discovered the contamination in 1982, and

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placed the site on the Superfund list. Contaminated soil was gathered from around the area and capped at the site.

Gov. Thomas Kean declared a state of emergency and banned the consumption of fish and crabs from the river in 1983.

But the toxic muck at the bottom of the river remained.

The Army Corps of Engineers stopped dredging the contaminated river that same year. Silt filled the shipping channel, choking off commerce. Marinas and berths went to rot.

Diamond sued its insurance companies seeking coverage for the pollution damage, but the courts denied it. The appellate court found in 1992 that Diamond had failed to control its dioxin simply because doing so would have cost money and slowed production.

Concentrations of dioxin are normally so small that they are measured in parts per trillion. In one spot near Diamond's Newark plant, however, river sediment had 5.3 parts per million, about a half-million times more than what is typically found in an urban river, DEP officials said.

Consuming fish or crabs from the river sharply increases a person's cancer risk, according to a 2002 DEP assessment. Yet DEP surveys of the river have shown that people in nearby working-class communities regularly fish in it to put food on the table.

Many of Diamond's assets were purchased by Occidental Petroleum Corp. in 1986, though most of its environmental liability fell to a spinoff called Maxus Energy Corp., which later changed its name to Tierra.

In 1994, under EPA pressure, the companies signed an administrative order compelling them to study pollution in six miles of the Passaic surrounding the former Diamond plant, then clean it up.

They did study the pollution. But not in the way EPA wanted them to.

HIRED EXPERTS

Between 1990 and 2005, scientists retained by the companies published at least 35 studies or papers on Passaic River pollution in academic journals, most of them vetted by other scientists in a quality control process called peer review.

The companies' consultants also presented their science at conferences and symposia around the globe, including events in Newark, Washington, D.C., Venice and Vietnam.

They did so as well in at least three toxicology textbook chapters on dioxin, an article in the magazine of the New Jersey League of Municipalities and a general interest book titled "A Common Tragedy: History of an Urban River."

A review of the research reveals two dominant themes.

The first: Dioxin was not as dangerous as regulators believed, and those seeking an expensive cleanup

of it were on the wrong track. The second: The cleanup should focus more on a host of other contaminants — ones that came from all kinds of sources, not just Diamond.

For example, the book "A Common Tragedy," contained much discussion of all sorts of Passaic River polluters dating to the colonists and before. But it barely mentioned dioxin, the river's most notorious contaminant.

And it cautioned against high hopes for the Passaic.

"It can never be returned to its primeval state," the book said. "Nothing is pristine."

EPA staff scientists alleged in the late 1990s that the hired scientists were trying to distract the agency.

The companies "should not be permitted to obfuscate the (Superfund) requirement of investigating the off-site release of dioxin into the Passaic River with their proposed goal of attempting to investigate the ecological 'state' of the river," the leader of an EPA technical team wrote in a memo to

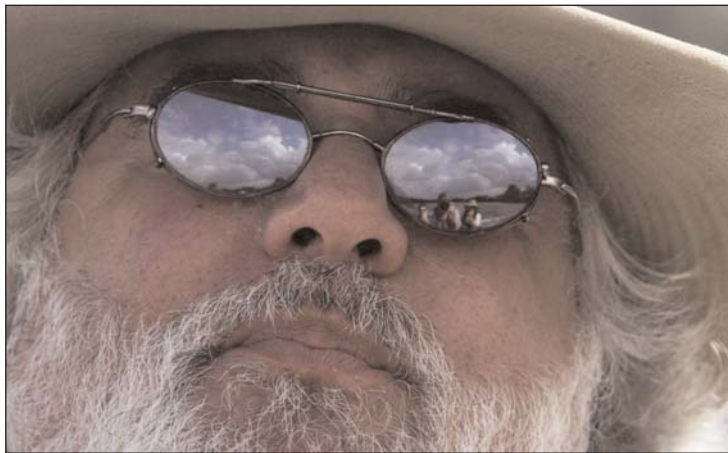


PHOTOS BY ED MURRAY/THE STAR-LEDGER

An old boat sits along the banks of the Passaic River in Newark. The Passaic once bustled with industry, but after dredging was stopped in the polluted river, silt filled the shipping channel, choking off commerce.



The old Diamond Shamrock Chemicals Co. site off Lister Avenue in Newark's Ironbound section is now encased in concrete. Beneath the cement is soil tainted with dioxin.



New York-New Jersey Baykeeper Andrew Willner gazes out over the Passaic River on a recent tour.

the site supervisor in 1998.

The memo went on to call the companies' research "inappropriate and scientifically unsound."

A DIFFERENT APPROACH

In 2002, the federal government changed course, embracing the companies' view that a sweeping river cleanup was called for, not just

of dioxin, and that the costs should be shared with others.

The EPA and the Army Corps of Engineers decided that dredging and cleanup needed to be coordinated. The approach was called the Urban River Restoration Initiative, and the lower Passaic River was declared a pilot area for it in 2003.

The new approach called for a

\$19 million investigation of 17 miles of the Passaic and Newark Bay, a study expected to take at least a decade. Federal and state taxpayers would supply \$9 million. The other \$10 million would come from Tierra and dozens of other current and former Passaic River companies.

The EPA's Steinberg said the

Pollution and the Passaic River

Seventeen years after a court found Diamond Shamrock Chemicals Co. liable for releasing dioxin in the Passaic River, the company's corporate successors have yet to conduct a cleanup, and the dioxin has spread.



Dioxin timeline

1951-1969: Diamond Shamrock Chemicals Co. dumps toxic dioxin into Passaic River as it manufactures Agent Orange and other pesticides in Newark.

1982: Federal EPA discovers Passaic dioxin.

1983: Gov. Thomas Kean bans consumption of local fish due to dioxin contamination.

1989: State Superior Court finds Diamond polluted the river "in known violation of public law."

1992: Appellate Division upholds decision.

1994: Diamond's successors sign agreement with EPA to study pollution in six miles of Passaic and clean it up.

2002: In White House ceremony, Army Corps and EPA create the

Urban River Restoration Initiative, a plan to clean and improve navigation of urban rivers partly with public money. Tierra's lobbyist had advocated the approach.

2003: Lower 17 miles of Passaic named a pilot area for the Urban River Restoration Initiative. Superfund study folded into broader, longer \$19 million study, with government to pay about half.

2005: State of New Jersey, saying federal approach would drag out cleanup and shift costs to public, sues Tierra for costs of a potentially \$1 billion dioxin dredging project.

Currently: High-level federal and state officials continue to debate how to approach Passaic cleanup.

SOURCE: Department of Environmental Protection

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public money was to pay only for measures that were beyond the scope of the Superfund cleanup.

"That \$9 million was never intended to defray Tierra's costs," Steinberg said.

Nevertheless, the approach was one that Tierra had been advocating

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Studies' ties to Tierra were seldom revealed

BY ALEXANDER LANE
AND CHRISTINE V. BAIRD
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Urban Habitats, a scientific journal published by the Brooklyn Botanic Garden and Rutgers University, ran what appeared to be an authoritative piece on Passaic River pollution in the December 2004 edition.

"Historical and Current Ecology of the Lower Passaic River," it was called.

Oddly, it contained no mention of dioxin, which state regulators say is by far the most dangerous contaminant in the highly polluted Passaic.

Readers would have no way of knowing the authors had researched and written the piece under contract for Tierra Solutions Inc., one of the companies liable for a cleanup of dioxin-laced Passaic sediment that could potentially cost \$1 billion.

Even the editors were unaware the piece was written by consultants for Tierra, said Leann Lavin, spokeswoman for the Brooklyn Botanic Garden. From now on, the journal will consider asking authors where the funding for their research came from, and disclosing it to readers, Lavin said.

"Heretofore we had not had a guideline or a policy, but your inquiry has prompted us to put our heads together and to come up with some guidelines," Lavin said. "We are working on it now."

This was not an isolated case. Between 1990 and 2005, scientists hired by Tierra or other successors of Diamond Shamrock Chemicals Co. published at least 35 articles in academic journals, Tierra officials confirmed.

Of the 33 articles The Star-Ledger was able to locate in academic databases, two contained disclosures that they were funded by Tierra or related companies. Twelve others identified one of the authors as a direct employee of one of the companies.

The other 19 articles made no mention of the connection. Each in some way supported Tierra's arguments for minimizing the cost or scope of its obligations on the Passaic.

Tierra spokesman Michael Turner said the peer-review process, in which outside scientists review research before a journal will publish it, ensured Tierra's research was sound.

"The people who do these have professional and academic reputations to uphold," Turner said. "It

doesn't make a difference who paid for it. It's the science and the facts that come out."

Some advocacy groups disagree. "When industry funds research, there's a pattern with the results of the research that it tends to benefit the industry that funded the study," said Merrill Goozner of the Center for Science in the Public Interest. "Why that pattern exists is a philosophical discussion. That it exists is beyond a doubt."

Goozner's center conducted a study in 2004 of four major journals — two medical and two environmental — and found a "small but persistent trend in all of them of a failure to disclose conflicts of interest," he said.

The scientific and medical communities are becoming less tolerant of that.

The Journal of Occupational and Environmental Medicine decided in June to retract a 1997 study on toxic chromium because industry-paid scientists had failed to disclose their involvement.

The Journal of the American Medical Association pledged to toughen its conflict-of-interest policies after it came under fire for publishing a study in February on the use of antidepressants during pregnancy without disclosing that

drugmakers had supported the research.

One of Tierra's consultants and the lead author of the Urban Habitats piece, Timothy Iannuzzi, said he had disclosed his connection with Tierra whenever journals asked.

"If they said you need to disclose your funding source, then we certainly would have done that," said Iannuzzi, a vice president at the environmental consulting firm Blasland, Bouck & Lee Inc. "I would have no problem doing that. My work stands on its merit."

As for his omission of dioxin from the paper, Iannuzzi, who has a master's degree in biology from the State University of New York-Oneonta, said it would not have made sense to show "bias towards any chemical group."

Virginia Dale, one of the journal editors who published Iannuzzi's work without disclosing its funding, said it was Iannuzzi's fault, not hers.

"Authors should reveal who their research support is coming from," said Dale, editor of the journal Environmental Management. "It is a scientific principle that everyone knows."

Tierra's publications were not confined to scientific journals. The

Natural Resource Journal, published by the University of New Mexico School of Law, published a piece in 2005 by two lawyers arguing that the cost of complex cleanups such as that on the Passaic River should be borne partly by the government. The lawyers were both working for Tierra, which they did not disclose in the piece.

"We don't ask them, because it comes up so infrequently," said Em Hall, the journal's editor-in-chief. "I suppose we should. We probably will from now on."

Lead author Paul Bohannon of the firm Andrews Kurth LLP in The Woodlands, Texas, did not return calls for comment. His co-author, Patricia Lin, said she was an associate when she helped write the piece, and Bohannon assigned it to her.

"Honestly, I shouldn't comment on it just because I don't work for the firm anymore and I don't work for Tierra anymore," said Lin, who now works for an oil company. "One of the things that almost every associate wants to do is to get published. I had the opportunity to do it with a very interesting subject and I did it."



ED MURRAY/THE STAR-LEDGER

Charles Freeman watches Shanda Smith reel in a small fish from the Passaic in Kearny. They said they were catching fish to stock a pond in Irvington, not to eat. Consuming fish or crabs from the river sharply increases a person's cancer risk, according to a 2002 DEP assessment.

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for years.

In fact, Tierra's Washington lobbyist, Robert Dawson, states on his Web site that he had developed this "fundamentally new approach" alongside "senior officials of the executive branch and key members and committees of the U.S. Senate and U.S. House of Representatives."

Dawson, principal of Dawson & Associates Inc., and former head of the Corps of Engineers, did not return calls for comment. But federal records show that Tierra has spent \$1.7 million on federal lobbying in the past six years, with annual expenditures increasing from \$200,000 in 2000 to \$380,000 last year.

Rep. William Pascrell (D-8th Dist.), who has been involved in the discussions about how to approach the Passaic cleanup, confirmed that Dawson played a key role.

"Dawson was at every meeting," Pascrell said.

In interviews, state regulators have criticized the current federal approach, saying it will take far too long, and that by the time the studies are finished the dioxin will have spread so far it will be less practical to remove it. And they said that although plenty of governments and companies poured sewage and chemicals into the Passaic over the years, Diamond did far more damage than anyone else.

"What's going to make that job really expensive is the fact that there's dioxin in that sediment,"

Jackson, the DEP commissioner, said. "The polluter should pay, not us. The federal government is us."

A LAWSUIT AND A THREAT

Last year Jackson's predecessor, Bradley Campbell, also dissatisfied with the federal approach, took harsh enforcement actions against Diamond's successors.

Campbell issued a directive giving them 30 days to pay for a \$2.9 million study — by a consultant the state hired — on how to clean up the river by dredging up to 10 million cubic yards of dioxin-contaminated sediment.

That sort of project, involving dredges specially outfitted to contain the contamination, could cost \$500 million by one estimate, not including the cost of treating the contaminated sediment.

Campbell also sued the companies to force them to pay for any eventual dredging.

In its lawsuit, the DEP argued that the companies had "orchestrated and implemented a strategy to delay and impede the cleanup and restoration of the Passaic River."

In turn, Tierra has threatened to sue the state, as well as Essex, Union and Bergen counties, the cities of Newark and Elizabeth and the Passaic Valley Sewerage Commission for contributing to the pollution.

Pascrell, who has received \$6,000 in campaign contributions from Dawson since 2000, sent a letter to Gov. Jon Corzine in February. Pascrell wrote that he had "worked hard to ensure the federal govern-

ment is contributing its part to a full and comprehensive study" and argued the state's aggressiveness could undermine his efforts.

Nevertheless, Corzine included \$12 million in the state budget to continue the lawsuit.

So far, Jackson has allowed Tierra to ignore the 30-day deadline to fund the \$2.9 million study. She said that should not be interpreted as leniency.

"That goes to litigation strategy, which I really shouldn't discuss," she said.

Steinberg, the EPA regional administrator, defended what he called the agency's "holistic" approach to the Passaic, but offered only limited support for its past actions.

"The question is what are we doing now," Steinberg said. "We are right now heavily focused more than ever on the remediation of the Passaic River."

An EPA spokeswoman said the agency did not plan to make a final decision until at least 2011 on how to clean up the Passaic. But Steinberg said he is examining what can be done to stop dioxin exposures in the meantime.

"There may be opportunities to take early cleanup actions on the lower Passaic River," he said. "But we need to make sure those early actions make sense and are supported by sound science."

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