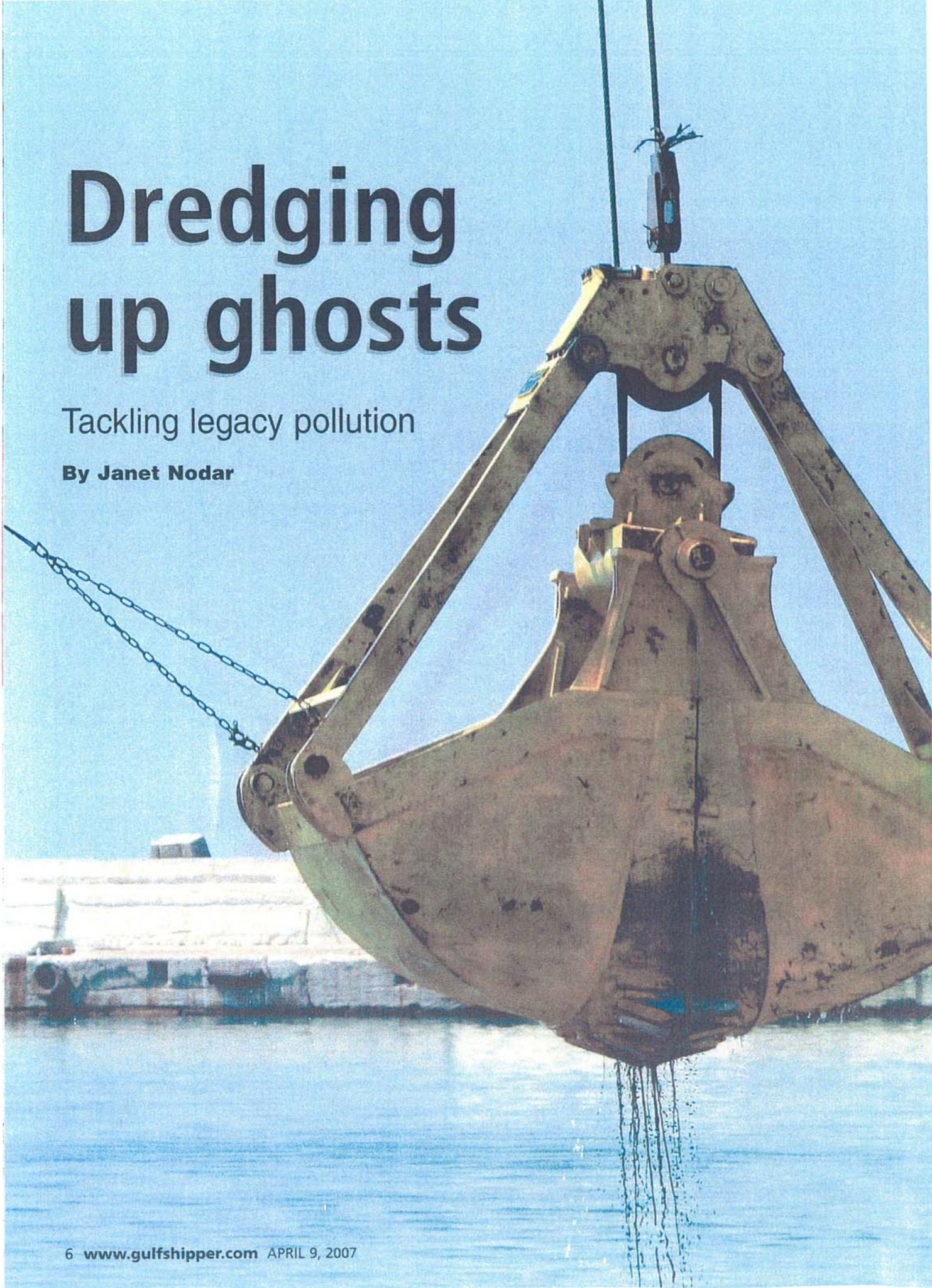
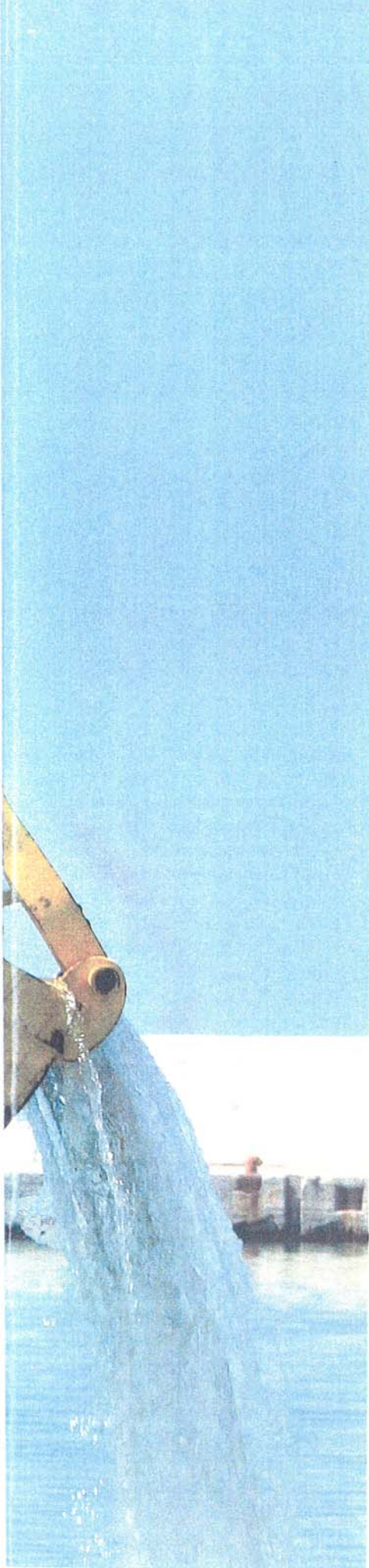


Dredging up ghosts

Tackling legacy pollution

By Janet Nodar





As ports dredge deeper ship channels to accommodate larger vessels, they may be stirring up some old trouble. Historical contamination, the toxic legacy of the bad old days in the industry, is often buried in deeper levels of ship channel sediment.

"A lot of historical contamination is sitting at 40 and 45 feet," said William Jackson, a founding partner with Houston-based law firm Connelly, Baker, Maston, Wotring and Jackson LLP, which specializes in environmental litigation and has represented many ports in legacy pollution cases.

Environmental issues, such as dredging, water quality, wetlands destruction, industrial pollution and emissions, complicate operations at every port. By their very nature, ports attract heavy industry that can create hazardous pollution if allowed to operate unchecked, as happened in many places during the earlier years of the 20th century.

Today, while tougher regulations and more enlightened policies help to keep new pollution under control, the toxic inheritance of legacy pollution is an issue with which many ports wrestle. Ports often have the task of cleaning up legacy pollution themselves or compelling the original sources to do so — when they can be pinned down.

In 1998, the Port of Houston suddenly began finding the banned pesticide DDT in its dredged material. Eventually, the contamination was traced to a manufacturing plant near Greens Bayou that had once produced the highly toxic pesticides DDT and lindane but had ceased production of DDT in 1970 and lindane in 1966. The facility had changed ownership many times over the years. At the time of the contamination, the plant was owned by GB Biosciences, which made fungicides and had never manufactured DDT at the site.

Jackson, whose firm represented the Port of Houston in the case, said that a construction project at the plant site in 1998 accidentally released DDT and lindane-contaminated soils. "They were putting in a culvert into a ditch system that had been highly contaminated. A big rainstorm came up and washed all this sediment into the bayou. So, all of a sudden, DDT started showing up in slips found during maintenance dredging," Jackson said. The port had to dispose of contaminated dredged material and find the source of the DDT. The investigation revealed that in addition to the pollution in the bayou, several hundred acres of port property adjacent to the GB Biosciences plant had also been contaminated.

The port wanted to reach a resolution early on. "We thought it was a one-time event," Jackson said. "As we got into litigation, we found that the plant had a long history of regulatory complaints and issues. Contamination was in the ground and other places over the course of decades." Litigation went on for nearly three years, involved many prior owners of the site and was resolved in December 2003, Jackson said. A \$100 million settlement included a \$45 million remediation project, damages for the port, the cost of buying the contaminated property from the port and money to establish a trust fund to deal with future problems.

Cleanup at the Greens Bayou site is still under way. Aston Hinds, manager of environmental affairs at the Port of Houston Authority, said a task force overseen by the port has developed a cleanup plan for the site, which now has to be approved by the Texas Commission on Environmental Quality. The final phase of remediation will begin after this approval is granted, Hinds said.



ALABAMA STATE PORT AUTHORITY

Mobile's new container terminal is being built on a brownfield site at Choctaw Point that was once home to fuel tanks, a coal tar refining plant that produced creosote and other industry.

Extensive pollution episodes such as the one at Greens Bayou require sampling and pilot testing, he said. The scale of pollution is analogous to what might be found at a superfund site, and cleanup is lengthy and complex.

Many older ports face similar legacy issues. "One of Mobile's largest issues is legacy pollution from old tenants," said Bob Harris, manager of environmental health and safety at Alabama State Port Authority. One site,

Mobile's Choctaw Point, is being turned into the new Mobile Container Terminal. "If you looked up 'brownfield' in the dictionary, Choctaw Point is what you'd see," Harris said.

From 1906 until the mid-1980s when regulators shut it down, a coal tar refining and wood-treating facility made creosote at Choctaw Point, which also housed fuel terminals and a tenant that stored chemicals for third parties. Creosote, used to treat railroad ties, telephone poles and

similar products, is a "witch's brew" of chemicals that includes known carcinogens. "It's been in the ground here for a hundred years," Harris said. Toxic wastewater was allowed to run into ditches at some periods of time, Harris said.

Creosote is heavier than water, so the port uses pumps to extract it from the saltwater aquifer below Choctaw Point. The port prefers to send the extracted creosote on to coal tar refineries for recycling, Harris said, but fewer and fewer plants are in that business, so recycling is becoming more difficult.

According to port officials, the new dock structure at the container terminal will help to hold back the contaminated groundwater. "The dock restricts groundwater, which naturally flows toward the bay. Groundwater wants to go toward the path of least resistance, so now it goes around the dock. In doing so, it bypasses the area where the creosote still is in the ground. It's by no means a perfect solution, but it's one of the measures that we think helps," Harris said.



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Law targets pollution culprits

By Janet Nodar

Another legacy pollution situation that Mobile deals with is the “red mud” left from an old Alcoa bauxite refinery operated from the 1940s until the 1980s. Red mud, a waste product that contains the caustic chemical sodium hydroxide, is hazardous to humans, wildlife and the surrounding wetlands environment. According to Harris, the plant pumped the waste product under the Mobile River to nearby Blakely Island for decades — enough, he estimates, to cover 200 acres, 40 to 50 feet deep.

Ports did not have environmental professionals on staff a generation ago, Harris said, and didn’t understand the problems that were developing. In the 1980s, Alcoa left Mobile on the hook for cleaning up its red mud. “The industries were out ahead of us,” Harris said. Now, the port must contain and treat rainwater that comes in contact with the red mud, a responsibility that costs approximately \$500,000 a year.

Mobile’s dredged material does not contain a high level of contaminants, Harris said. He estimates that 40 percent of the underwater fill at Choctaw Point is recycled dredged material. He is currently experimenting with putting the muckiest, finest-grained dredged material over the outer face of the red mud pile at Blakely Island, hoping to limit rainwater contact and cut down on caustic runoff.

Red mud may turn out to be of some value, however. Harris said that a company called Virotec is experimenting with red mud from Mobile to create a product that treats waste and heavy metals such as mercury, lead and arsenic in water. “The mud binds with (heavy) metals and then settles out so you can separate them from the water,” Harris said. If the experiments work, the port’s red mud could become a raw material for this product. ♣

The law allows ports to search backward, to reach back in time, to find the culprits of industrial pollution, said William Jackson, a founding partner in a Houston-based law firm that specializes in environmental litigation and has worked with many ports, including Houston and Texas City.

This ability to time travel is often necessary when it comes to cleaning up contaminated industrial sites. According to Jackson, the Comprehensive Environmental Response Compensation and Liability Act, or CERCLA, is the basic legal framework that allows ports and other entities to go after owners who may have caused problems decades ago.

“The statute is remedial,” Jackson said. “It broadened the scope of liability, so that everybody who contributed to a site has joint and several liabilities for that site. Each party who contributed to that harm is 100 percent liable for that harm.”

Tracing the ownership of a contamination source, and thus the liability, back for decades can be a convoluted endeavor. “Companies in business in the 1940s are now gone,” Jackson said. “Many times, one company gets bought from another, or there’s a merger.”

One example he used was a site at Houston’s Greens Bayou contaminated with DDT. It was originally owned by Diamond Alkali, then Diamond Shamrock, then sold to Occidental, then Occidental Chemical, which still exists today. They are not the owners now, but they are the successor to the liability from operations during the 1940s to the 1980s. Additionally, a succession of post-Occidental Japanese, British and Swiss owners, including Syngenta, which owns the current user of the site, GB Biosciences, also had to come to the table.

Once the legal issues have been addressed, ports face the question of what to do with the brownfield sites that are left. Bob Harris, manager of environmental health and safety at the Alabama State Port Authority, said the environmental regulator agencies attempted the late ’80s and early ’90s to recreate a pristine environment. He said they found that even after many years of treatment, the hoped-for level of restoration often hadn’t been reached.

According to Harris, the EPA came to realize that “under the old regulations, if you bought (an old site), you took on a portion of the liability. Therefore, nobody wanted to use those old sites. They wanted to find a fresh, clean piece of property somewhere out in the country.” Regulations designed to protect the environment were encouraging investors to develop pristine properties into industrial sites rather than reuse already contaminated property.

Now the environmental regulatory agencies allow risk-based corrective actions or remediation, Harris said. “Basically, you look at the chemicals and assess what is the risk to humans and to the environment. The EPA gives some guidance, and you base your actions on those risk levels,” he said.

At the Alabama State Port Authority’s Choctaw Point, for example, the soil and groundwater are contaminated but ordinarily no one would come into contact with either except during construction. “So we take precautions during construction and do deed restrictions,” Harris said. “The property can only be industrial, not residential, and the restrictions run in perpetuity with the land.”

Regulations that limit the liability of “innocent” landowners, those who did not own or operate on the property during the time it was contaminated, are another important factor, Harris said. ♣



William Jackson