

By Bill Glowin

Toxic Gold

One can hardly blame Richard Sweet,* the owner of a Burlington County concrete manufacturing company, for sounding bitter. Not only is business in the lagging construction market terrible, but the state of New Jersey is also forcing his company to comply with a new set of underground storage tank regulations that is costing him a small fortune.

"Compared to the mess in North Jersey, we're a pimple on a donkey's ass," he says. "Our problem is minor, but I'm trying to do the right thing, even if these regulations are beyond comprehension in terms of complexity and cost."

It's been said that one man's misfortune is another man's business opportunity. And nowhere is that truer than in New Jersey, a state that has created countless opportunities in a booming toxic-waste industry, and where Marwan M. Sadat (GSNB'71) leads a small army of Rutgers graduates in the profitable business of cleaning up the state's vast environmental battlefield.

The 56-year-old Sadat is the founder and president of Sadat Associates Inc., an environmental engineering-consulting firm in Princeton. Former head of New Jersey's Department of Environmental Protection's (DEP) Hazardous Waste Mitigation Administration, he once adorned the cover of *Engineering News-Record*, the bible of national engineering publications, as its 1986 "Man of the Year."

According to *Engineering News-Record*, former Governor Thomas H. Kean and former DEP Commissioner Robert E. Hughey may have been credited with getting Superfund moving in New Jersey, and Governor Jim Florio may have been known as the father of Superfund legislation, but it was Sadat who set the tone for the program. Four years later, he is still considered a regulatory pioneer and one of the country's most respected environmental engineers.

After serving under seven DEP commissioners in 11 years, Sadat grew increasingly weary of juggling budgets and personnel, legislative mandates, and meetings with politicians. He decided to become, as he puts it, "the master of my own destiny." He seems to have picked a good time. In each of its first three years in business,

Sadat Associates has doubled its revenues (\$3 million in 1990). In that time, it has grown from 3 to 40 employees.

The environmental pot of gold for toxic-cleanup companies in the Garden State has made environmental science degrees increasingly fashionable. Fifteen of Sadat Associates' 30 professionals are Rutgers graduates, including Sadat, who received his doctorate in civil and environmental engineering from Rutgers-New Brunswick in 1971 and has taught part-time in the environmental science department at Cook College. The firm's vice president, Jorge H. Berkowitz (Ag'68; GSNB'74, '78), a former director of the DEP's Division of Environmental Quality, earned three en-

and cleaned, and holes have been punctured. Larkins crawls inside to jimmy a stainless-steel hand auger into one of several openings. Spinning the handle, he pushes the auger deep into the soil. He then removes the dirt, knocks it from the

Marwan Sadat may not agree with all the new environmental laws, but he's the first to admit they're helping his firm clean up.



Outside of Sadat Associates' headquarters in Princeton, the environmental consulting company's small army of Rutgers' graduates muster around founder Marwan Sadat.

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"Rutgers has one of the most established environmental science departments in the country," says John Caputo (RC'80), one of the firm's project managers who is set to graduate from the environmental science master's program this spring. "New Jersey has been a pioneering state in environmental cleanup, and as a result, many of the top scientists in the field are drawn here."

Caputo and John Larkins, who is a field sampling coordinator, have made the 45-minute drive to Sweet's concrete pipe manufacturing company to take soil samples from an area surrounding two empty underground fuel storage tanks. One of the tanks has already been emptied

auger with a mallet and repeats the sequence. "I need to get down to sample depth, which is at two and four feet," says Larkins. "It's a gradual process. Once that occurs, I'll decontaminate the auger and go back and take one of several true samples. The samples are each put in their own jar and sent to a lab for testing. The level of contamination will be determined by the lab, and then we'll know how much soil needs to be ultimately removed."

It is not unusual to take six months to collect and analyze more than 100 samples, with the cost for each sample running from \$60 (for petroleum hydrocarbons) to \$1,500 (for a full priority pollutant scan). Larkins and Caputo have already been to the site five times. So far, Sweet has been

* Name changed to maintain privacy.

fortunate because previous samples revealed that the soil wasn't hazardous. Regulations require that material classified as hazardous be disposed of in its own landfill. The cost of disposal ranges from \$40 a ton (for nonhazardous) to \$2,000 a ton (for hazardous). In some cases, hazardous material is incinerated and the ash is landfilled.

"Sadat's firm was recommended by a competitor," says Sweet. "Not only does that tell me that they have experience with another concrete pipe company, but I know that Sadat and some of his people are former regulators. The regulations are

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New regulations have kept the company extremely busy. Besides the controversial Environmental Compliance Responsibility Act (ECRA) program, which requires that industrial property be environmentally clean before it is sold or transferred, new legislation in recent years includes the Community Right-to-Know Act, the Clean Water Enforcement Act, and the Clean Air Act. The new underground storage tank regulations alone are expected to involve capital expenditures in the neighborhood of \$2 billion.

"It's been a tremendous boon to everyone in our industry, especially entrepreneurs," says Sadat. "It's not just these regulations that are being taken very seriously. In almost all areas, the penalty for a couple of violations five years ago might have cost \$5,000. Today, we're talking \$100,000 to \$200,000 and possible jail time. Everyone's scrambling to make sure they are in compliance."

Sadat is unusual in that he hands over a 90-page promotional book listing many of the firm's past projects, names of clients,

background and approach to each project, and a description of services. Generally, engineering consultants are instructed not to reveal client names. Cleanups may often be a matter of public record, but discretion is still the industry's unwritten law.

The projects Sadat Associates tackles range from landfill siting and soil sampling to designing ground-water treatment systems and developing a permit-approval strategy. Before a bank will lend money for a major real-estate transaction, it may hire the firm to conduct an environmental and health assessment study. And because of the complex and expensive nature of some cleanups, Sadat Associates is sometimes asked to analyze the work of other consultants, or to provide expert testimony in court.

The firm may also help a client hire a hazardous waste contractor to do the physical labor. Bid proposals and fee schedules are generally several pages long. Clients are given a projected budget and generally billed on a time and material basis. Because of equipment and manpower, 75 to 85 percent of the cost of a project will go to the contractor.

"The contractor may do most of the physical work, but that doesn't mean we always have it easy," says Larkins. "In the case of Sharkey's Landfill, a few of us carried a 500-pound generator for two miles to work the fuel pumps."

At the DEP, Sadat was known as someone who did not play politics and was tough but fair. Although legislation works to increase his business, Sadat seems deeply disturbed about what the regulatory process is doing to businessmen like Sweet.

"There is a real backlash and a lot of resentment in the industrial community," Sadat says. "Executives have repeatedly told me that, given a choice, they would not operate in New Jersey. I even had an EPA official say to me, 'Perception by the feds is that the DEP has become a corporate bashing agency.'"

Sadat's tendency to speak his mind got him into trouble in his first visit to the United States when, as a teenager in a high school exchange program, he was asked by a newspaper about his feelings toward Israel. The Syrian government revoked his passport when it heard he favored peace negotiations. Stranded, he finished his schooling and did not return to Syria

until the next year, when the government was overthrown. As it turned out, his feelings ran in the family: Anwar Sadat, the late Egyptian president and a distant relative, negotiated a separate peace with Israel in 1979.

He settled permanently in the United States and became a citizen in 1959. Through the sixties he honed his engineering talent on various projects and, after completing work on his doctorate in 1971, joined Research Cottrell Inc. in Bound Brook as manager of civil engineering in its cooling-tower division. He left in 1975 after a dispute over the firm's construction techniques, three years before the firm's system atop a cooling tower at a nuclear powerplant killed 51 workers.

His next stop was the DEP, where he rose from environmental engineer to director in the office of sludge management and later to administrator of water quality management. In 1982, Hughey tapped him to organize the newly created hazardous waste mitigation administration.

Through the years, Sadat has seen technology improve to the point where scientists can now detect levels of contamination to parts per million, billion, trillion, and even—if enough money is spent—parts per quadrillion.

"The DEP and EPA have maximum-level goals that are, in many instances, set at zero," says Sadat. "They're perpetuating a myth that drinking water, for example, can be 100 percent risk free. It is politically expedient to say that their goal is zero, but it is scientific nonsense. I felt that way at the DEP, and I feel that way now. Standards should be fully protective of public health, but make at least some scientific sense."

New Jersey is the most regulated state in the nation, and the issue is a touchy one in many quarters, including the Governor's office, the halls of the New Jersey Business & Industry Association, and at the local gas station. In the last two years, the Garden State has certainly had its share of plant closings and company relocation announcements, and Sadat says that the importance of environmental concerns in each case is anybody's guess.

"Sure we profit directly every time a new regulation is passed," says Sadat. "And we'll make money from Sweet's plant and know there was never any public health risk. Making people do what they may not be capable of doing instead of judging each case on its merits is not the answer." □