

The Poisoning of America

By Michael H. Brown

Every year billions of pounds of lethal chemical wastes pollute our water, even the air we breathe. To clean up the mess, Congress has created a \$1.6 billion "superfund," which experts agree is but a drop in the contaminated bucket. A complete cleanup may cost \$44 billion.



The fire last time: A "witches' brew" of toxic chemicals exploded and devastated Elizabeth, N.J., last spring.

"Thousands of people are getting sick from toxic wastes. We're talking about a problem that makes the nuclear waste issue paltry by comparison."

Hugh Kaufman, Environmental Protection Agency

In Jackson Township, N.J., a rash of serious kidney and skin disorders turned up after the community's underground water source became badly contaminated with 38 chemicals, a number of them suspected cancer-causing agents. To this date, the township must pipe in water from a supply miles away, and there are fears

Michael H. Brown is the author of *Laying Waste: The Poisoning of America by Toxic Chemicals* (Pantheon), to be published in paperback next month (Pocket Books).

that this supply too will be polluted.

In a trailer park in Orange County, Calif. — a five-minute drive from Disneyland — vent pipes had to be installed in the soil to allow a safe escape for potentially sickening gases brewing below.

In Baton Rouge, La., 540 acres of pasture and swampland were flooded with an odorous sludge resembling diesel oil — a mix of highly dangerous poisons that have permanently scarred the terrain.

Each year in America, our factories generate as much as 125.4 billion pounds of toxic garbage, molasses-thick concoctions that

contain unwanted mercury, solvents and pesticidal ingredients known to cause tumors in laboratory mice. Much of this material — about 60 percent — comes from the nation's burgeoning chemical industry. And the vast majority of it — an estimated 93 percent — is disposed of improperly.

This mishandled industrial waste, agree Federal and state officials, is now causing the gravest environmental challenge in United States history. In a recent report prepared for the Senate Environment Committee, Dr. Julius Richmond, the Surgeon General of the United States, said that throughout the decade the nation will "confront a series of environmental emergencies" due to toxic chemicals that "are adding to the disease burden ... in a significant, although as yet not precisely defined, way."

The country began awakening to

what former California Congressman John E. Moss described as "the sleeping giant of the decade" in August 1978. That's when New York State began evacuating 237 homes in Love Canal, a section of Niagara Falls located near an abandoned chemical dump. Health statisticians found a startling rate of miscarriages, birth defects and liver disorders among residents of the middle-class homes, along with high levels of toxic compounds that had crept into their basements from the waste site.

During the spring of 1980, when a Federal consultant found what appeared to be chromosome damage in people living outside the evacuation zone, President Carter issued an emergency order, and the Federal Government offered to remove 800 additional families from the area. (A number of lawsuits by residents are pending, but it is difficult to prove a direct link between chemicals in the environment and disease, and such cases can be tied up in court for years.)

As it turns out, however, Love Canal was but the tip of an enormous toxic iceberg. The United States Environmental Protection Agency (E.P.A.) now estimates there are between 30,000 and 51,000 sites where toxic wastes have been stored or

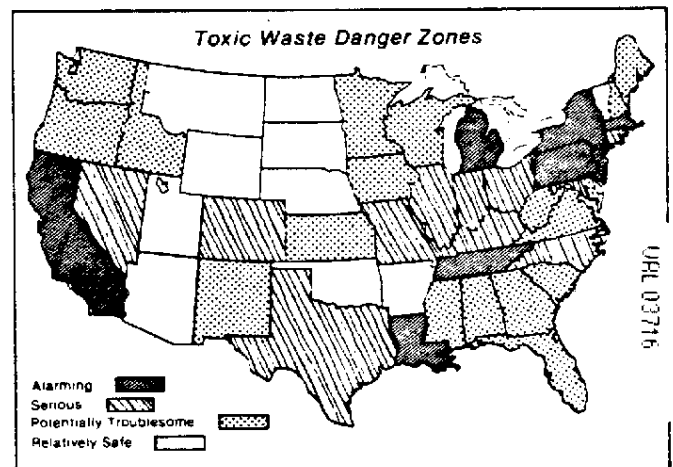
burned — and that 2,000 pose serious health threats. Their pollution threatens water supplies for literally millions of Americans, and in some instances, they already have been blamed for causing illnesses strikingly similar to what was found in Niagara Falls.

A recent reminder of the insidious dangers came from the port town of Elizabeth, N.J. There, a waste disposal firm named Chemical Control Corporation had stockpiled 45,000 rusting, 55-gallon barrels containing a veritable witches' brew of refuse: everything from hospital garbage (extracted tapeworms and excised tumors) to low-level radioactive material, toxic metals and the compound tetradoxin, one of the world's most deadly substances. (It is estimated that, if evenly distributed, three ounces of dioxin could kill at least one million people.)

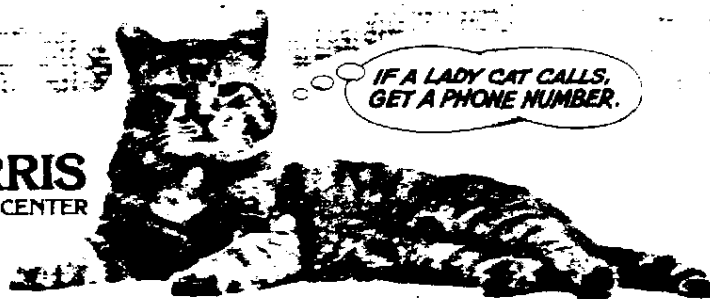
The company, subsequently charged by the state with operating a quick-cash scheme in which wastes were never properly treated, had also taken in discarded explosives: TNT, nitroglycerin and, for good measures, tetraethyl lead, which can ignite simply upon exposure to the air.

Late in the evening of April 21, 1980 — ironically, the eve of Earth Day — the Chemical Control stockpile suddenly burst into flames reaching temperatures of up to 3,000 degrees. The fire raged out of control for 10 hours, sending scores of firemen to the hospital and a billowing, 300-foot plume of tarry smoke over large sections of New York and New Jersey. The next day, schools were closed throughout the area and residents were advised to stay indoors with the windows shut, as an acrid mist descended along the shoreline. While technicians struggled to find out what exactly was in the smog, the state breathed a sigh of relief that it had removed many of the explosives shortly before the fireball erupted. "If

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The Poisoning of America (continued)



New Hampshire dumpsite: 93 percent of toxic waste is disposed of improperly.

that material was still on the site," comments New Jersey Assemblyman Raymond Lesniak. "I think we'd be missing part of Elizabeth right now."

Throughout the Northeast, where the chemical trade first began, come countless reports of water contamination. On Long Island, according to state analyses, 1.9 million people have been potentially exposed to tainted groundwater at one time or another. When New Jersey's Department of Environmental Protection tested 163 wells during a spot sampling, it found virtually all of them to contain damaging compounds. An estimated 200 communities in New England have been told their supplies may be infected with tetrachloroethylene, which has been found pouring out of a number of kitchen taps.

Nor is the problem confined to the Eastern states. The "top ten" industrial waste producers also include Illinois, Indiana, Ohio, Michigan, Tennessee, California and Texas. Almost everywhere, industry's dregs have been poured untreated into land pits, covered over with a thin layer of soil and forgotten — until health problems suddenly arise. A recent E.P.A. survey stated that at least 600,000 people live near enough to the 100 worst dumps now known to be directly affected by toxic mishaps.

To compound the crisis, authorities have had to contend with a rash of bootleg waste haulers. These operators cut their overhead by illegally dumping toxicants along the roadside in dark of night, storing chemical drums on vacant lots or in abandoned buildings or unloading their unmarked tankers into the most convenient storm sewer or rural creek. One such "midnight dumper" contaminated 210 miles of North Carolina roadway with PCB's, an electrical insulator that can persist in the environment — and human organs — for decades.

"The economics behind it is, if you don't have to treat it, there's no cost except for transport," says William Carracino, former president of Chemical Control and a man convicted of illegally pouring noxious liquids on a

Newark, N.J., street. "You can go out and rent a piece of property — rent it, don't buy it. Rent 10 acres, 20 acres; get a permit to handle drums. Bring it on the property and just store them. As soon as the heat gets too great, just go bankrupt, get out of it."

So lucrative is the waste business — and so poorly regulated by government — that profiteers have formed an underworld network in many of our states. They are paid from \$1.50 to \$100 a barrel for hauling the materials from factory gates to hidden destinations. Testifying in March 1980 before a New York legislative subcommittee, former state prosecutor John Fine claimed the toxic-disposal business is "dominated by hoodlums associated with organized crime." Carracino recently testified that organized-crime figures forced him off the premises of Chemical Control at gunpoint and took over the company.

Whatever the influence of crime syndicates, the majority of problems are created by large, legitimate companies that utilize huge landfills for their unsalable by-products and thus avoid the expenses of technologically rendering the materials harmless. When rainfall penetrates these landfills, the water picks up contaminants and drips them into subterranean streams like a coffee percolator. From there, they can travel miles under the ground until, years or even decades later, a homeowner suddenly finds his water smelling like rotten eggs or old shoe polish.

This is precisely what happened to more than a dozen families living in Toone, Tenn., a small town 70 miles east of Memphis. Beginning in 1969, the Velsicol Chemical Corporation dumped 300,000 drums and fiber canons into sandy trenches near their homes — wastes that contained the same potent insecticides the late Rachel Carson warned of in her prophetic 1962 book, *Silent Spring*. By 1977, the water was so polluted that factorylike smells permeated the households. Soon there were reports

up and down the nearest road of paralysis, skin sores, chest pains and kidney malfunctionings. Drinking the water made some residents dizzy. "I couldn't sleep," says one resident, Ethel Boyd. "I mean, I'd get up and it would seem like I was going to fly off. Then I would vomit."

Michigan has been especially hard hit by toxic wastes. Two years ago, the state discovered that a pesticide and chlorine plant near Montague had sullied two billion gallons of groundwater, allowing at least a million gallons a day to enter White Lake, a popular fishing resort that empties into Lake Michigan. One of the compounds, C-56, is listed as 10-times more potent than phosgene nerve gas. Meanwhile, farther east, in a small town appropriately named Hemlock, residents living near a system of waste wells have reported dozens of chicks born with their intestines outside their bodies, geese

cidence is 32 percent above normal.

Despite the many warning signals, Federal and state governments have still not passed sufficient measures to regulate the increasingly deteriorating situation. One promising law that was passed in 1976, the Resource Conservation and Recovery Act, just recently went into effect in mid-November. Under this act, dangerous chemical wastes will be traced "from cradle to grave," with each person or company handling such wastes having to account for what happens to them.

How effective the new law will be, though, is questionable. There are still no legal controls on permanently destroying toxic wastes or rendering them harmless. Many companies, however, worried that the act will leave a "paper trail" leading back to them, began a frantic run of midnight dumping last fall, trying to rid themselves of as much chemical waste as possible before the law took effect.

The most promising news in the fight against chemical wastes involves Congress' work on a "superfund" to begin cleaning up toxic waste dumps and chemical spills. Late into its December lame-duck session, Congress passed a \$1.6 billion superfund bill, with 88 percent of the money coming from the chemical industry and 12 percent from the Federal Government. And while all agree that the \$1.6 billion fund is a step in the right direction (Senator Daniel Patrick Moynihan of New York said it might be "the most important environmental legislation of this decade"), it is but a small step — sources estimate that a full national cleanup could cost up to \$44 billion.

The ultimate answer, most authorities agree, would be to destroy dangerous materials or recycle them into harmless products rather than to store them underground. Theoretically, there are dozens of ways to destroy toxic wastes, ranging from chemical reactions and separation techniques (separating the harmless from the dangerous) to high-temperature incineration and solidification of wastes so they do not mix with water. But these methods are much more costly than landfilling, and in some cases the technology is not yet available to safely disassemble the exotic new creations of man.

The explanations, however, do little to comfort victims like Raymond Boyd of Toone, Tenn., whose father was temporarily paralyzed and whose first child, Benjamin, was born deformed, with his intestines outside his body. "They said it wasn't hereditary," Boyd comments, "but can't get no one to say it was chemicals. Can't do it. They're all afraid, and seems like, like nobody cares no more."



Lewiston, N.Y., creek: Water for millions of Americans is threatened.

with their wings on backward and hordes of horses and cows that had developed purplish teeth and tails and died of no clear cause.

Clearly there is much to be concerned about. A 1974 study of the Mississippi River showed 48 chemicals present in the water — compounds with names such as chloroform, hexachlorobenzene and dimethylsulfoxide. It seems more than coincidental that cancer rates in New Orleans, which draws its supply from the Mississippi, were found to be the third-highest of 168 metropolitan areas for kidney mortalities and the sixth for malignancies of the bladder. Overall, New Orleans's cancer in-