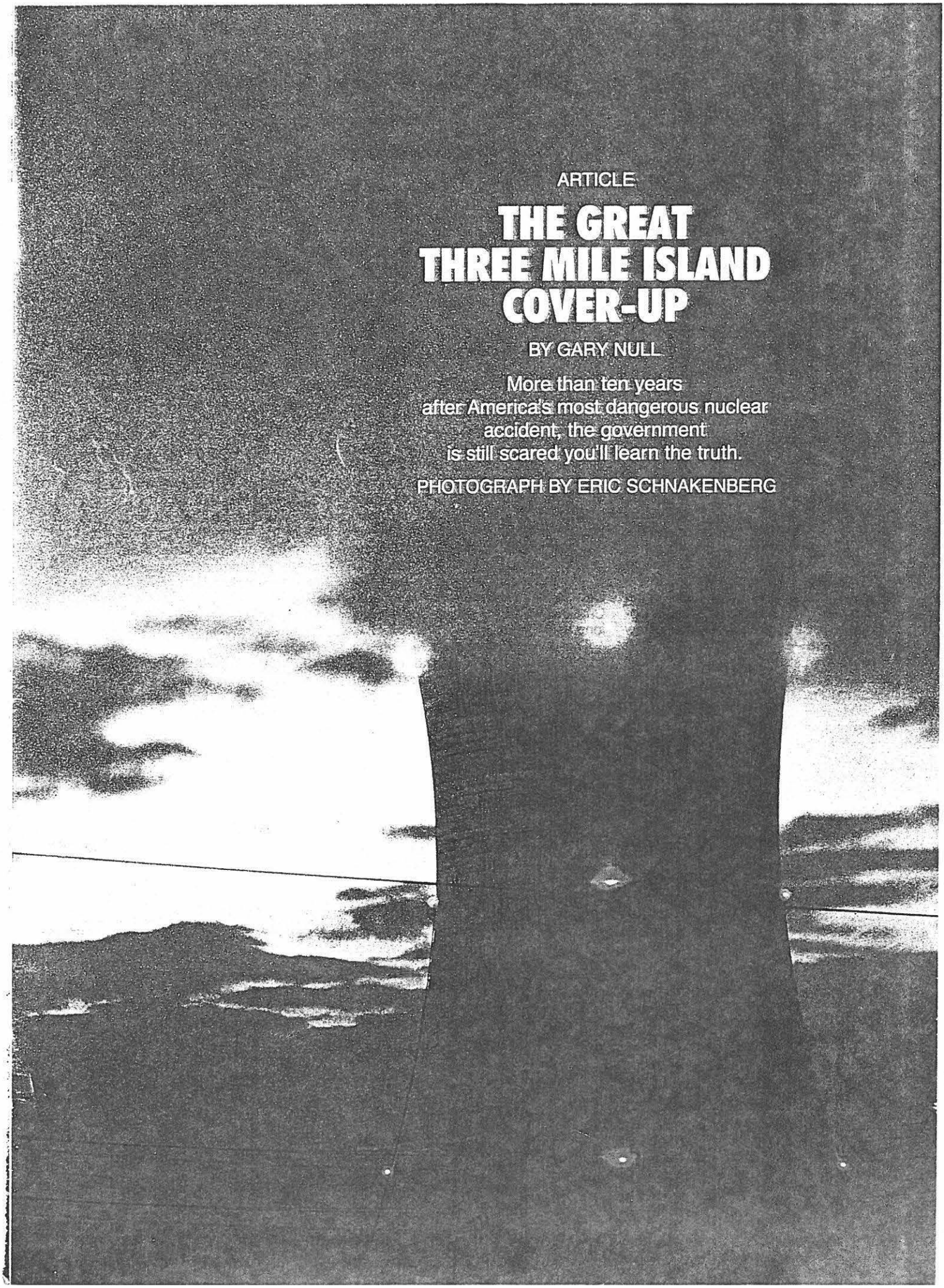

ARTICLE

THE GREAT THREE MILE ISLAND COVER-UP

BY GARY NULL

More than ten years after America's most dangerous nuclear accident, the government is still scared you'll learn the truth.

PHOTOGRAPH BY ERIC SCHNAKENBERG

It has been more than ten years now since the near meltdown at the Three Mile Island nuclear-power plant just outside of Harrisburg, Pennsylvania. Since that time, government and energy-industry officials have told us that no one was hurt as a result of the country's worst nuclear accident. But is that really so?

If you look at the quiet rural community of Middletown, Pennsylvania, where the power plant is located, it certainly seems that the crisis is long over and forgotten. Recently, on a ten-year anniversary visit to the area, *New York Newsday* special correspondent Stuart Diamond reported, "Nearby Middletown and the surrounding countryside, from which residents fled at the height of the fear, are booming with new housing, full employment, and population growth." Even Middletown Mayor Robert G. Reid, now running for his fourth term, expresses surprise at the quick recovery. "Property values are up," he says. "Housing starts are up. We are growing as a community." Once on the verge of bankruptcy, the plant's operator, General Public Utilities, "which was castigated for mismanagement and whose officials pleaded no contest to a criminal charge over safety lapses, has seen its earnings and dividends soar to record highs," states Diamond. In the meantime, the sister unit—No. 1—of the damaged No. 2 reactor has been in operation since 1985 and is attracting new customers.

But if you look beneath the surface, this peaceful picture begins to fall apart. During the ten years that have apparently restored the communities around the reactor, piecemeal reports have been filtering down telling an entirely different story. Most Americans have not heard about the people living close to the reactor who experienced the effects of radiation exposure. Nor is it widely known that General Public Utilities has already paid out between $15 and $20 million to settle 200 health claims out of some 2,500 that have been filed. We have not learned any details of these claims because the settlements were made with the condition that each recipient agree not to reveal any information about their claim or the amount of their reward. Most people are also not aware that radioactive plumes spread far beyond the ten-mile evacuation radius, and that a sudden rise in mortality rates occurred in areas exposed to these radioactive clouds.

Some of the information in this article will differ from what we have heard from the government and energy-industry officials. We will discuss estimates of how many people were really affected and why the general public never heard about it.

In the past, governments have either covered up industrial accidents completely or tried to downplay their severity. It was not until 1988 that the British government published papers concerning a fire at the military plutonium reactor at Windscale, north of Liverpool, in October 1957, the worst nuclear accident in British history. Here in the United States, very serious accidents at the federal government's own nuclear facilities at Savannah River, South Carolina, were kept secret, some for as long as 31 years.

The dangers of nuclear technology are easily obscured behind esoteric science and then further distanced from public scrutiny by the fact that small to moderate doses of radiation are entirely undetectable. Radiation, absent massive doses, cannot be smelled, touched, tasted, or experienced in any way without scientific instruments. Furthermore, it may take as long as 20 years before the effects of radiation damage are manifested in an illness, typically cancer. Consequently, the public doesn't question industry and government officials who tell us that "no one was hurt" by the accident at Three Mile Island.

But the government's reassurances do not correspond with what we now know about the health effects of the level of radiation released or with the claims of the people who actually experienced the accident. A growing number of scientists are re-evaluating the impact of Three Mile Island and the information disseminated by the government.

Dr. Ernest Sternglass, emeritus professor of radiological physics at the University of Pittsburgh School of Medicine, is especially concerned about the less than full disclosure of Three Mile Island's impact on human health. Visiting Harrisburg shortly after the accident, he was instrumental in convincing Pennsylvania's governor to order an evacuation of pregnant women and children from the areas near the reactor. But, says Sternglass, this evacuation, ordered days after the accident, may have been too late. "When the evacuation took place," he says, "the bulk of the estimated 14 curies of iodine-131 had already been released. . . . Therefore, most of the damage to the developing thyroid of the fetus had occurred by the time pregnant women began to leave."

The Kemeny Commission, convened by President Carter to evaluate the impact of the accident, found that winds were blowing the highest releases of radioactive material far beyond the ten-mile evacuation radius into upstate New York and western Pennsylvania. According to Sternglass, however, "The Kemeny Commission concluded its investigation without considering any data on the health effects of the wind-borne

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THE ATOMIC ATTORNEY GENERAL

BY HARVEY WASSERMAN

Ten years after, local Pennsylvanians still bitterly denounce then governor Richard Thornburgh—now the U.S. attorney general—for delaying their evacuation during the Three Mile Island accident and for downplaying its health effects. Indeed, in Thornburgh, the atomic-power industry has its own attorney general, uniquely suited to the rabid pro-nuclear position of George Bush, Chief of Staff John Sununu, and Secretary of Energy James Watkins.

Bush, Sununu, and Watkins are

trying to bulldoze local opposition and force open New York's Shoreham and New Hampshire's Seabrook reactors. The Bush administration is also demanding that America's dilapidated atomic-bomb factories continue to operate despite devastating health and environmental problems. But T.M.I. gave Thornburgh a unique personal stake in nuclear power.

Within hours of the March 28, 1979, meltdown, one of the world's leading experts on the health effects of radiation—the University of Pittsburgh's Dr. Ernest Sternglass—warned Thornburgh to immediately evacuate at least pregnant women and small chil-

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radiation." While the commission was preparing its report, says Sternglass, the Vital Statistics section of the Pennsylvania Department of Health would not release any mortality data, on the grounds that it had not yet been adequately reviewed. By the time the data were officially compiled, the Kemeny Commission had already submitted its final report.

Sternglass discusses some of the conclusions he drew from analyzing mortality statistics issued by the National Center for Health Statistics four months following the accident:

"An examination of the monthly changes in infant and total mortality in Pennsylvania and nearby areas as originally reported . . . indicated statistically significant rises occurred shortly after the accident. For example, the number of reported infant deaths per month in Pennsylvania rose from a minimum of 141 in March 1979 just before the accident on March 28 to a peak of 271 in July, declining again to 119 in August. This is an unprecedented and highly significant rise in the summer months, when infant mortality normally reaches its lowest values. In the four-month period following the accident, there were 242 'excess' infant deaths above the expected number in Pennsylvania, and corresponding excesses in western New York and Maryland. The hypothesis that this abnormal rise was associated with gaseous releases from T.M.I. is strongly supported by [certain] considerations.

"The peak in infant mortality three or four months after the initial release took place," Sternglass continues, "corresponds to the [birth of] infants whose thyroid glands were most active in taking up the radioactive iodine while producing hormones necessary for normal growth when the accident occurred. This explains the large rise in the number of premature and underweight babies that died of respiratory distress as indicated by an examination of hospital records as far away as Pittsburgh."

Dr. Jay Gould, a fellow at the Institute for Policy Studies in Washington, D.C., served on the Environmental Protection Agency's advisory board under the Carter administration. In studying mortality-rate statistics in the years following the accident, he believes that large numbers of people may have died as a result of T.M.I. He explains: "If you examine the age-adjusted mortality rates in the United States over a long period, you will see that from 1979 until 1982, there was a jump in that mortality that suggests that as many as 50,000 Americans died whose deaths had been accelerated by some factor. The bulk of these deaths occurred in upstate New

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York, Pennsylvania, and Maryland. The only factor that I have been able to ascertain that would account for this is the fallout from the T.M.I. accident."

Gould has received a substantial amount of criticism from scientists who argue that his evidence is weak and does not substantiate his theory. But, as he explains, he is simply a statistician who has looked at the numbers and seen that they do not align with the official version of what took place. "Statisticians use the concept of a 'significant excess of deaths,' " he says. "The significance is based on a purely scientific analysis of the probability that the excess could be due to chance. The probability in this case is of such a low order that chance has to be ruled out. We get probability values as low as one in a million or even less. That means that if low-level radiation is not responsible for the excess, then it is up to the scientific community to offer an alternative hypothesis."

But Gould is not the only voice questioning the official version of what took place at T.M.I. Chris Nord, a member of the citizens' group Clam Shell Alliance, comments on the health risks associated with radiation exposure and the symptoms experienced by those living around the T.M.I. reactor.

"One of the phenomena we have witnessed with people coming forward who were present at the atomic-bomb tests in Nevada was a reporting of classic high-level radiation symptoms—burning throat, hair loss, reddening of the skin, metallic tastes," says Nord. "Many of the veterans who were close to the test sites reported these symptoms. Then 25 years later, many came down with horrible cases of cancer, for which the government is denying any responsibility.

"In the case of T.M.I.," Nord says, "there was an early questionnaire released by the T.M.I. Public Health Fund soon after the accident. It was distributed over a fairly wide area, about 20 miles from the reactor, and a number of people did take the time to list the symptoms that they and their families experienced. Among the symptoms reported were metallic tastes, hair loss, all those things that the veterans had reported. Without the stack monitors being around to tell us how much radiation was actually released, those following up on the effects of T.M.I. are reminding us that the people are the dosimeters, and they are telling us biologically that they were exposed to high levels of radiation."

On behalf of citizens' groups in Pittsburgh, Gould presented his data to Senator Edward Kennedy's Public Health Committee in 1987. Later that year, Senator Kennedy submitted to the National Institutes of Health a request for a study of mortality rates near nuclear reactors. It was passed on to the National Cancer Institute, which has announced plans to complete the study in 1990. Gould notes, however, that the study is restricted to cancer deaths in areas very close to nuclear reactors. "This," he says, "does violence to what we have found in the case of Three Mile Island—namely that the damage extends to areas hundreds of miles away. Low-level radiation is dispersed by wind and waterways and affects people who are quite some distance from the nuclear plant," he says.

Evidence suggests that government studies sympathize with the concerns of vested interests, resulting in misleading, if not altogether false, conclusions. Activist Chris Nord talks of the reports compiled by the Centers for Disease Control in conjunction with the state of Pennsylvania: "What the state and the C.D.C. did was to look at the concentric circles at five, ten, 20 miles around the reactor, and then to look at cancer mortality in these areas. Their report concluded that there was nothing statistically significant that would indicate that something other than chance was occurring. There are two very clear problems with their study, which other scientists have also acknowledged. First, the study of health effects in concentric circles around the plant diluted the appearance of health problems, since the wind carried particulate radiation through only a small portion of that entire radius. The second problem," says Nord, "is that the study included a survey of 122,000 people, most of whom do not even live within the ten-mile radius of Three Mile Island. Whenever there was even a tip of a municipality inside the radius, they included the health data for the whole town. This is the problem with statistical data—it is as easy to bury the evidence as it is to reveal it.

"We in the United States think of our government as a great protector, and the sad and sorry truth of the matter, revealed in T.M.I., is that the government is not our protector," adds Nord. "It is not looking after our best interests, our public health. Quite the contrary, they are looking toward the interests of the giant corporations like G.P.U., and helping them to get away with murder."

> It's not widely known that the utility has spent more than $15 million to settle health claims resulting from Three Mile Island.

Studies based on faulty data were not the only means used to minimize the effects of Three Mile Island. Mortality-rate statistics were altered by government authorities. After the accident, says Gould, "The Pennsylvania Department of Health reported in their monthly publication that 271 infants had died in July 1979. In the annual summary, published in November 1980, this figure had been changed to 185, and no explanation was ever made for this change." Both Sternglass and Gould believe that the changes indicate that the government was well aware of the damage and was trying to minimize it. If you look at reports compiled by citizens' groups with no vested interest in a particular outcome, the picture of Three Mile Island is substantially different from what we have been led to believe.

Says Nord, "A small [citizens'] survey of only about 450 people was conducted in an area where a high concentration of symptoms had been reported at the time of the accident. They discovered a 600-percent increase in cancer deaths after the acccident. But the state government did not find anything like what the citizens' survey was reporting. According to the citizens' group, the state did not even go into the neighborhoods covered by their survey."

In this country, scientists tend to dismiss as unreliable the accounts people give of their illnesses. Generally, the feeling of the American scientific community is that the lay public becomes hysterical and overreacts to incidents such as T.M.I., and that people are not qualified to know what is going on in their own bodies or whether their symptoms are in any way related to a given event. A number of people, however, believe that these personal accounts, pejoratively labeled "anecdotal evidence" by the scientific establishment, can provide invaluable information concerning health effects, as long as surveys and studies are conducted responsibly.

By disregarding this type of evidence, the American government and the scientific community do not add to their credibility, but rather give the impression that they have little incentive to get at the truth. For a country such as ours—which prides itself on freedom of the press, openness, and honesty in government—suppressing important evidence is particularly embarrassing in terms of our image internationally. While American researchers have dismissed as unreliable the personal accounts of those who live in the vicinity of the accident, foreign scien-

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tists and researchers have conducted surveys and compiled very useful information on the health effects of T.M.I.

The Canadian journal *Harrowsmith* gave credence to these personal accounts when it published a report by writer Harvey Wasserman of his encounter with the Danner family, who lived near Three Mile Island at the time of the accident:

"Sam Danner turns to the mantelpiece and lifts his shirt, baring the two-foot scar across the right side of his back. Ten pounds of muscle, bone, and malignant tumor were removed in June 1983. . . . A burly 47-year-old truck driver, Danner lives with his wife, Bonnie, in a house trailer about six miles northwest of the two nuclear reactors on Three Mile Island. Monday, March 28, 1979, the day of the accident, he was out working in the yard. . . .

"The Danners' three daughters were also outdoors that day. Sherry, then 24, came home from trade school and went jogging. Four years later—around the same time her father's tumor was removed—she began to suffer from a wide range of allergic reactions, including uncontrollable sneezing fits and rashes on her leg. Most disturbing, a large, apparently non-malignant tumor developed on each of her ovaries. 'The one was the size of a grapefruit, the other the size of an orange,' Bonnie says. When they [were] removed, they found her ovaries all twisted around. To this day, she can be walking across a room and suddenly double over in pain for no apparent reason.

"Diane, then 17," Wasserman wrote, "spent that spring day riding her Appaloosa. 'I remember that horse was pregnant at the time,' Bonnie says. 'Shortly after the accident, she aborted.' By the summer of 1984, when Sherry's tumors were removed, Diane had begun a long bout—still ongoing—with unexplained fatigue and a high white-blood-cell count. [Said her mother,] 'They've checked her for infection, lupus, leukemia, everything they could think of. One doctor said it was like something foreign was trying to enter her body, and the body was trying to fight it off.' Thus far, every treatment, from special diets to antibiotics, has failed for Diane."

Of course, G.P.U. has its side of the story, backed up by a list of reports by the state of Pennsylvania, the Nuclear Regulatory Commission, the Environmental Protection Agency, the National Institutes of Health, the U.S. Department of Health and Human Services, and the Department of Defense. They contend that not enough radioactive materials were released to cause the health effects that Pennsylvania residents, like the Danners, have reported. "You can list one case after another of injuries, but [the alleged link to the T.M.I. accident] is not borne out by science. Concern and worry can do a lot to you," says G.P.U. spokeswoman Mary Wells.

It is frustrating and maddening to be deliberately deceived under any circumstances. But what took place at Three Mile Island surpasses frustration. The falsehoods generated by industry and government may have resulted in thousands of unnecessary deaths. These lies have been allowed to stand, at least in part, because of the invisible nature of radiation. The long latent period of many of the illnesses caused by radiation has made it easy for government or industry to deny the causal link between the illness and the exposure. In addition, low-level radiation acts upon the human body in an entirely different way from high-level radiation. This is another reason that its risks have been overlooked. Both Gould and Sternglass believe that a discrete and dangerous effect arises from chronic or long-term exposure to radiation through ingesting contaminated food, milk, or water, or inhaling the substances when they are airborne. (Gould's book, *Deadly Deceit*, about the effects of low-level radiation, will be published next spring.)

> We think of our government as a giant protector. But it's really looking toward the interests of giant corporations and helping them get away with murder.

The indirect effects of low-level radiation have only been fully understood since 1972, when Dr. Abram Petkau at the Canadian Atomic Energy Laboratory in Manitoba proved that gentle radiation is much more damaging to cell membranes than, say, a short X ray or a pulse from the flash of a nuclear bomb. Hormone-producing glands, such as the thyroid, or the bone marrow, which produces the white blood cells so important to our immune system, are the most vulnerable to radiation.

Sternglass expresses suspicions that information concerning low-level radiation has been purposely suppressed in this country. Prior to Petkau's 1972 research, the government had statistical information suggesting that low-level radiation was indeed causing health problems for people living near nuclear reactors. "But the government withheld this information," says Sternglass, "because they feared that public disclosure would prevent the continuation of nuclear-bomb testing in Nevada and possibly prevent the operation of huge nuclear reactors already under construction."

We now have evidence dating as far back as the early 1950s that shows the government deliberately withheld information concerning the effects of low-level radiation. In May 1953, following the detonation of two atomic bombs at test sites in Nevada, radioactive fallout rained on herds of grazing sheep in nearby areas. Shortly thereafter, an eighth of the ewes and a quarter of the lambs died showing signs of irradiation. Farmers and area residents were understandably upset, and panic spread quickly. Veterinarians conducted studies on the dead sheep as well as sheep in other areas close to nuclear facilities. Their conclusions all pointed to radiation-induced illness and death. But, reports *Science* magazine, "The A.E.C. [Atomic Energy Commission, predecessor of the Department of Energy] elected not to reveal these potentially compromising observations. Critical data from the atomic tests were suppressed when a summary was prepared for public release, and intense pressure was brought to bear against the veterinarians—through letters and personal visits from A.E.C. employees—in an effort to make them revise their conclusions." Although the A.E.C. never offered any express explanation as to what killed the sheep, in a typically cavalier response, its officials later suggested that the deaths were a result of malnutrition and climatic hardship.

When owners of the sheep sought damages in federal court, Judge A. Sherman Christensen dismissed their action for compensation and concluded that "some of the best-informed experts in the country expressed considered and convincing judgment that radiation damage could not possibly have been a cause or contributing cause." In 1979, however, the governor of Utah obtained the release of classified documents that, together with information gathered at congressional hearings, revealed the extent of the government's deception. This evidence revealed that a number of A.E.C. officials, scientists, and their lawyers had conspired to withhold information confirming the farmers' claims. It also told of the harassment techniques the A.E.C. employed to coerce veterinarians to reverse their opinions and endorse the A.E.C. position. The history of atomic energy in this country is replete with similar cases.

We now know that radioactive particulates and emissions can travel on the wind many, many miles from the site of

a reactor. In the case of the Chernobyl accident, radioactivity is believed to have traveled as far as 1,000 miles. In cases such as Three Mile Island, where radioactive wastewater was dumped into the Susquehanna River, contaminated matter can be deposited anywhere along the river's course and certainly does not halt at some arbitrary point ten miles away. Nevertheless, at present, the Nuclear Regulatory Commission, the federal agency responsible for overseeing nuclear reactors, sets a ten-mile evacuation radius around all nuclear-power plants in the U.S. The N.R.C. has issued a telephone-book-sized manual of regulations in the event of an accident, but the agency is still ignoring one of the most important lessons from T.M.I.—that the ten-mile evacuation radius is unrealistic and does not adequately protect people from a major nuclear catastrophe.

The reasons for the ten-mile evacuation zone are mainly political. If it were extended to 15 or 25 miles, for instance, plans would have to be made for the evacuation of major cities such as New York, Chicago, and Philadelphia. Implementing an evacuation on such a massive scale would, of course, be impossible; recognizing the necessity of doing so would mean acknowledging the sheer folly of building nuclear-power plants close to densely populated areas.

At least once a week, it seems a news story surfaces concerning problems associated with nuclear technology—leaks at weapons facilities, cover-ups, radioactive waste and its disposal. Not surprisingly, many citizens are working to shut down nuclear-power plants. The success of these citizens' movements demonstrates that the public, not the government, is taking charge of its safety and well-being.

Nowhere is the government's lapse of memory or lack of concern over safety matters clearer than at Three Mile Island, where the accident has all but been forgotten. At the heart of nuclear-safety issues in this country, too, is the fact that many people still believe that nuclear energy is clean, inexpensive, and safe. Until we stop and *really* examine all its costs, the industry—with government assistance—will continue to make a strong revival, treating incidents such as Three Mile Island merely as public-relations glitches to clear up. The forces behind the promotion of nuclear technology are enormous, perhaps the most formidable in the world. They include weapons manufacturers such as Westinghouse, General Electric, and DuPont, as well as the Departments of Defense and Energy and public utilities. The public stands little chance of battling these giants unless it takes a realistic look at nuclear technology and then demands nothing less than responsible action and honesty from its government officials.