Three Mile Island Killed People / Nuclear Industry's Despicable Regulatory Record

Contributed by Harvey Wasserman / Peter A. Bradford
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"People Died at Three Mile Island," by Harvey Wasserman, and "Three Mile Island: Thirty Years of Lessons Learned," testimony of Peter A. Bradford, make any intelligent adult fearful of nuclear expansion and outraged over lies of the government representing industry instead of the people. - ed.

People Died at Three Mile Island

By Harvey Wasserman

People died -- and are still dying -- at Three Mile Island.

As the thirtieth anniversary of America's most infamous industrial accident approaches, we mourn the deaths that accompanied the biggest string of lies ever told in US industrial history.

As news of the accident poured into the global media, the public was assured there were no radiation releases.

That quickly proved to be false.

The public was then told the releases were controlled and done purposely to alleviate pressure on the core.

Both those assertions were false.

The public was told the releases were "insignificant."

But stack monitors were saturated and unusable, and the Nuclear Regulatory Commission later told Congress it did not know -- and STILL does not know -- how much radiation was released at Three Mile Island, or where it went.

Using unsubstantiated estimates of how much radiation was released, the government issued average doses allegedly received by people in the region, which it assured the public were safe. But the estimates were utterly meaningless, among other things ignoring the likelihood that high doses of concentrated fallout could come down heavily on specific areas.

Official estimates said a uniform dose to all persons in the region was equivalent to a single chest x-ray. But pregnant women are no longer x-rayed because it has long been known a single dose can do catastrophic damage to an embryo or fetus in utero.

The public was told there was no melting of fuel inside the core.

But robotic cameras later showed a very substantial portion of the fuel did melt.

The public was told there was no danger of an explosion.

But there was, as there had been at Michigan's Fermi reactor in 1966. In 1986, Chernobyl Unit Four did explode.

The public was told there was no need to evacuate anyone from the area.

But Pennsylvania Governor Richard Thornburgh then evacuated pregnant women and small children. Unfortunately, many were sent to nearby Hershey, which was showered with fallout.

In fact, the entire region should have been immediately evacuated. It is standard wisdom in the health physics community that -- due in part to the extreme vulnerability of human embryos, fetuses and small children, as well as the weaknesses of old age -- there is no safe dose of radiation, and none will ever be found.

The public was assured the government would follow up with meticulous studies of the health impacts of the accident.

In fact, the state of Pennsylvania hid the health impacts, including deletion of cancers from the public record, abolition of the state's tumor registry, misrepresentation of the impacts it could not hide (including an apparent tripling of the infant death rate in nearby Harrisburg) and much more.

The federal government did nothing to track the health histories of the region's residents.

In fact, the most reliable studies were conducted by local residents like Jane Lee and Mary Osborne, who went door-to-door in neighborhoods where the fallout was thought to be worst. Their surveys showed very substantial plagues of cancer, leukemia, birth defects, respiratory problems, hair loss, rashes, lesions and much more.

A study by Columbia University claimed there were no significant health impacts, but its data by some interpretations points in the opposite direction. Investigations by epidemiologist Dr. Stephen Wing of the University of North Carolina, and others, led Wing to warn that the official studies on the health impacts of the accident suffered from "logical and methodological problems." Studies by Wing and by Arnie Gundersen, a former nuclear industry official, being announced this week at Harrisburg, significantly challenge official pronouncements on both radiation releases and health impacts.

Gundersen, a leading technical expert on nuclear engineering, says: "When I correctly interpreted the containment pressure spike and the doses measured in the environment after the TMI accident, I proved that TMI's releases were about one hundred times higher than the industry and the NRC claim, in part because the containment leaked. This new

data supports the epidemiology of Dr. Steve Wing and proves that there really were injuries from the accident. New reactor designs are also effected, as the NRC is using its low assumed release rates to justify decreases in emergency planning and containment design."

Data unearthed by radiologist Dr. Ernest Sternglass of the University of Pittsburgh, and statisticians Jay Gould (now deceased) and Joe Mangano of New York have led to strong assertions of major public health impacts. According to Mangano, one major study "found that the number of cancers within 10 miles of TMI rose from 1731 to 2847 between 1975-79 and 1981-85. A 64% increase. But they 'didn't find any link' with the accident, and suggested the rise might be due to stress." On-going work by Sternglass and Mangano clearly indicates that "normal" reactor radiation releases of far less magnitude that those at TMI continue to have catastrophic impacts on local populations.

Anecdotal evidence among the local human population has been devastating. Large numbers of central Pennsylvanians suffered skin sores and lesions that erupted while they were out of doors as the fallout rained down on them. Many quickly developed large, visible tumors, breathing problems, and a metallic taste in their mouths that matched that experienced by some of the men who dropped the bomb on Hiroshima, and who were exposed to nuclear tests in the south Pacific and Nevada.

A series of interviews conducted by Robbie Leppzer and compiled in a "a two-hour public radio documentary VOICES FROM THREE MILE ISLAND (link below) give some indication of the horrors experienced by the people of central Pennsylvania.

They are further underscored by harrowing broadcasts from then-CBS News anchor Walter Cronkite (see video link below) warning that "the world has never known a day quite like today. It faced the considerable uncertainties and dangers of the worst nuclear power plant accident of the atomic age. And the horror tonight is that it could get much worse."

In March of 1980, I went into the region and compiled a range of interviews clearly indicating widespread health damage done by radiation from the accident. The survey led to the book KILLING OUR OWN, co-authored with Norman Solomon, Robert Alvarez and Eleanor Walters (www.ratical.org/radiation/KillingOurOwn/KOO.pdf) which correlated the damage done at TMI with that suffered during nuclear bomb tests, atomic weapons production, mis-use of medical x-rays, the painting of radium watch dials, uranium mining and milling,
radioactive fuel production, failed attempts at waste disposal, and more.

My research at TMI also uncovered a plague of death and disease among the area's wild animals and farm livestock. Entire bee hives expired immediately after the accident, along with a disappearance
of birds, many of whom were found scattered dead on the ground. A rash of malformed pets were born and stillborn, including kittens that could not walk and a dog with no eyes. Reproductive rates among the
region's cows and horses plummeted.

Much of this was documented by a three-person investigative team from the Baltimore News-American, which made it clear that the problems could only have been caused by radiation. Statistics from Pennsylvania's Department of Agriculture confirmed the plague, but the state denied its existence, and said that if it did exist, it could not have been caused by TMI.

In the mid-1980s the citizens of the three counties surrounding Three Mile Island voted by a margin of 3:1 to permanently

retired TMI Unit One, which had been shut when Unit Two melted. The Reagan Administration trashed the vote and re-opened the reactor, which still operates. Its owners now seek a license renewal.

Some 2400 area residents have long-since filed a class action lawsuit demanding compensation for the plague of death and disease visited upon their families. In the past quarter-century they have been denied access to the federal court system, which claims there was not enough radiation released to do such harm. TMI's owners did quietly pay out millions in damages to area residents whose children were born with genetic damage, among other things. The payments came in exchange for silence among those receiving them.

But for all the global attention focused on the accident and its health effects, there has never been a binding public trial to test the assertion by thousands of conservative central Pennsylvanians that radiation from TMI destroyed their lives.

So while the nuclear power industry continues to assert that "no one died at Three Mile Island," it refuses to allow an open judicial hearing on the hundreds of cases still pending.

As the pushers of the "nuclear renaissance" demand massive tax- and rate-payer subsidies to build yet another generation of reactors, they cynically stonewall the obvious death toll that continues to
mount at the site of an accident that happened thirty years ago. The "see no evil" mantra continues to define all official approaches to the victims of this horrific disaster.

Ironically, like Chernobyl, Three Mile Island Unit Two was a state-of-the-art reactor. Its official opening came on December 28, 1978, and it melted exactly three months later. Had it operated longer, the accumulated radiation spewing from its core almost certainly would have been far greater.

Every reactor now operating in the US is much older -- nearly all fully three decades older -- than TMI-2 when it melted. Their potential fallout that could dwarf what came down in 1979.

But the Big Lie remains officially in tact. Expect to hear all week that TMI was "a success story" because "no one was killed."

But in mere moments that brand new reactor morphed from a $900 million asset to a multi-billion-dollar liability. It could happen to any atomic power plant, now, tomorrow and into the future.

Meanwhile, the death toll from America's worst industrial catastrophe continues to rise. More than ever, it is shrouded in official lies and desecrated by a reactor-pushing "renaissance" hell-bent on repeating the nightmare on an even larger scale.

Harvey Wasserman has been writing about atomic energy and the green alternatives since 1973. His 1982 assertion to Bryant Gumbel on NBC's TODAY Show that people were killed at TMI sparked a national mailing from the reactor industry demanding a retraction. NBC was later bought by Westinghouse, still a major force pushing atomic power. See NukeFree.org

References:
turningtide.com

Walter Cronkite video

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Hearing on “Three Mile Island: Thirty Years of Lessons Learned”

Testimony of Peter A. Bradford

Senate Committee on Environment and Public Works

Subcommittee on Clean Air and Nuclear Safety

March 24, 2009

I’d like to begin with a review of the status of nuclear power and nuclear regulation the day before the accident at Three Mile Island. As of that time, the NRC’s licensing process, maligned though it often was, had issued more licenses than the next five nations combined, though half of the construction permit recipients did not complete their power plants.

Some of those licensing hearings had been contentious, but they had not delayed the plants because they either preceded construction or went on while the plants were being built.

However, many plants were being cancelled or delayed by their owners in the face of rising costs and falling demand. Even the very high oil prices and supply uncertainty occasioned by OPEC’s successes could not offset the facts that electricity prices had tripled in the U.S. in the 1970s and that surprising events in the operating plants had caused many cost estimates to double and then double again. A few would increase tenfold in the years ahead.

In Congress, the principal focus was on the Nuclear Siting and Licensing Act of 1979. It was intended to create a one stop licensing process and limit opportunities to litigate issues repeatedly and late in the process. On the morning of March 31, 1979, as Energy Secretary Jim Schlesinger – not suspecting the seriousness of the accident by then two days underway at Three Mile Island - was testifying before the Congress on ways to expedite the nuclear licensing process, NRC Chairman Joe Hendrie was transmitting the NRC’s evacuation to Governor Thornburgh in Harrisburg.

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Here are some of the critical events from the months immediately before the accident:

- The price of oil reached $40 per barrel in 1979 dollars, which would be around $115 per barrel in today's dollars. Gasoline lines stretched for blocks here in Washington. Eliminating oil dependence in the electric sector was said to justify building otherwise uneconomic nuclear units, even as climate change does today.

- The NRC ordered the shutdown of five nuclear power plants based on errors discovered in a computer code used to assess the stresses on power plant piping during an earthquake. For this action, the Commission was summoned before Congressional committees and criticized in terms such as "asinine" and "stupid" by the some Congressmen.

- The movie "The China Syndrome" starring Jack Lemmon and Jane Fonda was released in March, 1979 and was a big hit, with industry spokesmen expending great effort to explain that the accident sequence depicted in the movie could not happen.

- The projected opening date for a spent fuel repository was postponed from 1985 to 1988, sparking considerable dismay in the industry and elsewhere.

- And an NRC inspector named Jim Creswell came to see Commissioner John Ahearne and me to stress his concern that

- based on an earlier accident at the Davis-Besse plant in Ohio

- all nine of the plants of the TMI design were unsafe and should be shut down until the problem was fixed. We were troubled by several aspects of Creswell's presentation, which foretold TMI in significant respects, but he requested that his identity be protected. This required us to devise a cover for our follow-up on his concerns. We were not to have time to pursue that undertaking, for Creswell's visit occurred on March 22, 1979. The Three Mile Island accident was six days away.

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The accident at Three Mile Island taught different lessons to different people. One implausible example was an advertisement that ran across two full pages in many prominent newspapers a few months after the accident. This ad featured a picture of the nuclear physicist Edward Teller under the caption, in very large bold-faced type, "I WAS THE ONLY VICTIM OF THREE MILE ISLAND".

Dr. Teller, who had years earlier been a pioneering proponent of nuclear power and nuclear safety, was nowhere near the accident. He had suffered a heart attack a few weeks later because, he asserted in the ad, he had been working 20 hour days to refute the anti-nuclear propaganda being "spewed to the news media by Ralph Nader, Jane Fonda and their kind". Dr. Teller offered his readers several lessons from the accident.

The least controversial - and one which I think has proven true - was that nuclear safety would improve as a result of the accident.

More problematic was Dr. Teller's conclusion that the accident showed "that nuclear reactors are even safer than we thought".

Most problematic was Dr. Teller's conclusion that "unless the political trend toward energy development changes rapidly, there may not be a United States in the 21st Century." Dr. Teller feared also that his grandson Eric might grow up under Soviet Communism, presumably in the event that US energy policymaking's trend away from nuclear energy went uncorrected.

We did stop building new nuclear plants, but Dr. Teller's grandson does not seem to have suffered. Now called Astro Teller, he specializes in artificial intelligence and has published a novel. It is Soviet communism that is defunct.

After the accident at Three Mile Island, the Soviet Union sent a delegation to the TMI site. The delegation held a press conference. The TMI design, they pointed out, was unique to the U.S. Nothing like TMI could occur in their country, and, of course, they were right. The Chernobyl accident was quite different.

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The story of the accident has been exhaustively told and retold. Some tend to minimize its significance because the hydrogen bubble that caused such widespread public concern on the accident's third, fourth and fifth days had never been a problem. However, a full appraisal of those five days must also acknowledge that the greatest danger was during the first two days, when no one knew what was going on in the reactor core, when the NRC commissioners were working on other matters. We know now, as a result of examinations of the reactor core that were not possible for several years, that the melting of the core during the early hours of the accident was far more severe than was known at the time, indeed that half of the core had melted.

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A principal conclusion of the Kemeny Commission, appointed by President Carter to investigate the accident, was "After many years of operation of nuclear plants, with no evidence that any member of the general public has been hurt, the belief that nuclear power plants are sufficiently safe grew into a conviction.....This attitude must be changed to one that says nuclear power is by its very nature potentially dangerous, and, therefore one must continually question whether the safeguards already in place are sufficient to prevent major accidents."

That lesson, that safety must always be a higher priority than economic interest or the licensing of more power plants in specified time periods is one that needs constant reiteration. Among the lessons of TMI is that nuclear power is least safe when complacency and pressure to expedite are highest. The sense that everything is safe enough already may be its worst enemy.

Nuclear power performance has improved. Perhaps the industry is - waste management aside - about where it would have been if its handlers had proceeded with appropriate caution in the 60s and 70s. But there have been uncomfortable events in some plants in recent years – especially the near rupture of the reactor vessel at Davis Besse in Ohio. That event, which the NRC's Inspector General ascribed in part to undue solicitude for the profits of the licensee, came too close to renewing our acquaintance with a nuclear power plant out of control, operating beyond the understanding of those in the control room.

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When TMI is seen together with the fire at Brown's Ferry four years earlier, the fuel cladding failures, the Emergency Core Cooling System shortcomings, the seismic design retrofits and the absence of offsite emergency plans, a clear picture emerges of a technology that had rushed far ahead of its operating experience. The nuclear regulatory problem illustrated by the accident at Three Mile Island was not – as is widely asserted today – that the U.S. had licensed too many plants too slowly. It was that we had licensed – and made large financial commitments to – too many plants too quickly. That is why within a decade of the TMI accident we had a landscape dotted with nine figure cost overruns, a nine figure accident, eight figure cancellations and eight figure mishaps in such areas as steam generator tubes, pressure vessels, seismic design and quality assurance.

From an economic and a political standpoint, TMI was only one of many nine figure accidents. Some of the others were at Shoreham, Seabrook, Nine Mile Point, Midland, Zimmer, Marble Hill, WPPSS, Byron, Braidwood, Grand Gulf, Comanche Peak, South Texas and Diablo Canyon. Every state across the
northern tier from Illinois to Maine was involved in at least one.

NRC hearings did not cause Three Mile Island. NRC hearings did not bring about the cancellation and bond default at the WPPSS units. NRC hearings had nothing to do with the quality assurance breakdowns at Diablo Canyon and Zimmer. NRC hearings did not cause the diesel generator building at Midland to sink into the soil or the tenfold cost overruns at the never-operated Shoreham nuclear plant in New York.

In 1968, the largest plant in operation was one half the size of the smallest plant under construction and one-sixth the size of the largest. This was as if the airline industry had gone from Kitty Hawk to jumbo jets in 15 years. In 1972 the Atomic Energy Commission forecast that the country would have a thousand nuclear power plants by the year 2000, complete with breeder reactors, reprocessing plants and, of course, waste repositories. This would have required the regulators to issue a construction or an operating license every week for the next 28 years, a pace that could not possibly have been sustained. In hindsight, trouble and disappointment were inevitable. The only question was how much.

The lessons for economic regulation and energy policymaking were at least as abiding. Wall Street learned that a group of licensed operators no worse than any other could transform a billion-dollar asset into a two billion dollar clean-up in ninety minutes. No more nuclear plants were ordered in the U.S., and none started after 1974 were completed.

At first, the lessons for the economic regulators from these costly disasters seemed to be to regulate more and better. The quality of state commission appointments improved, as did the budgets. The mandates expanded as regulators were told to further energy efficiency, undertake integrated resource planning, perform management audits and make a market for power plants built by nonutility companies. For a time, this mix sufficed, for energy efficiency more than filled any void created by the nuclear cancellations.

But the regulatory assumptions - such as hundred dollar a barrel oil and limited natural gas - eventually produced their own price surges and with them came a skepticism as to whether any system based on locking the forecasts of state and industry officials into long-term arrangements was likely to be superior to giving freer rein to customer choice. This skepticism was reinforced by the fact that the newly competitive power supply market produced falling construction and fuel costs where regulatory and nuclear orthodoxy had foreseen only endless increase.

And so we had electric utility restructuring, an event largely traceable to the overly exuberant nuclear construction experience that TMI embodied but did not cause.

With competition came new cost pressure and a shift in risk from customers to investors. It is that risk shift, not Three Mile Island or NRC regulation that explain the fact that we had no new nuclear orders for decades after TMI.

It is a hard time to generalize. Nuclear power provided 12% of the nation's electricity at the time of TMI. It provides 20% today. The number of events of safety concern has declined. The operating costs of the plants have been trimmed far below levels prevailing few years ago, though not to levels that make new nuclear units able to attract private capital without government shifting of risks to investors or to taxpayers.

Finally, a word about the lessons of Three Mile Island for Congressional Oversight. If the message that the NRC gets from the Congressional oversight committees is that what's wanted is strong commission focus on expedited licensing of new reactors and deemphasized enforcement, that message will have an effect over time. Senator Pete Domenici asserted in his 1998 book that he singled-handedly changed NRCs priorities in a 1998 meeting with the NRC chair in which he threatened to cut the agency's budget by one-third if the NRC did not modify its "adversarial attitude" toward the industry.

This doesn't seem to me to be the type of oversight that the Kemeny Commission had in mind.

Peter Bradford is a former NRC commissioner

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