

SPECIAL:

The Gilbertson Report on Sabotage at Three Mile Island

The Harrisburg Hoax



Featuring:
Putting TMI
Back On Line

The series that won
the Freedoms Foundation George
Washington Honor Medal for 1979:
*"An outstanding accomplishment in helping
to achieve a better understanding of the American way of life."*



CONTENTS:

1. Introduction: Why TMI Was Sabotaged
4. The Harrisburg Hoax (May, 1979)
15. Investigating the Hoax: The "Purloined Nuclear Plant"
(June, 1979)
23. The Independent Commission's Findings (July, 1979)
33. The NRC Report: Refusal to Investigate the Obvious
(Sept., 1979)
36. The Rogovin Report: A Schizoid View of TMI
37. One Year Later: Putting TMI Back On Line (April, 1980)

INTRODUCTION: WHY TMI WAS SABOTAGED

Within days of the Three Mile Island incident, the Fusion Energy Foundation and its Director of Nuclear Engineering, Jon C. Gilbertson, had launched the investigation of the possibility of sabotage which led to the Independent Commission of Investigation into the Three Mile Island Incident, and to these articles.

We knew at the outset that "The Harrisburg Hoax" was linked to the other notorious case of sabotage of high-technology energy production--the great oil hoaxes of 1974 and 1979. We stated in April 1979 that the target of the so-called environmentalists and their "one-world government" sponsors was not merely nuclear power, but the entire U.S. potential for capital formation in high technology energy production and industry.

Since the oil hoax of 1974, further industrial progress in the advanced countries and industrialization potential to rescue the Third World, could be saved in only one way: the massive investment of oil marketing revenues in nuclear power-led high-technology energy production, capital formation in nuclear fission, breeder development, thermonuclear fusion research, "nuplex"-style agro-industrial complexes in the developing sector. This will not happen automatically through "free-market forces" no matter how high the price of oil, but through conscious national policy decisions by sovereign nations, as the French nation is now showing the way.

The Harrisburg Hoax was intended to foreclose this possibility. In its wake we have seen the ongoing collapse of the American nuclear industry, and the onset of a hyperinflationary, high-interest rate regime in America which will destroy our technological potentials in short order. As the Federal Emergency Management Agency's instant involvement in TMI warned us last April, the environmentalist path after TMI led toward emergency credit controls and forced national investment of tens of billions of dollars in hideously inefficient synthetic fuel boondoggles.

THE CASE FOR SABOTAGE

One year after the Three Mile Island events, the truth continues to lie buried under a mountain of distorted press reports and investigative commissions. Publically acknowledged cases of sabotage of nuclear facilities, or obvious attempts at sabotage, have occurred during that one year in Virginia, Tennessee, Long Island, and in France, with the FBI involved in investigating at least two of these cases. Now, in Maine, environmentalists are extending the attack to the U.S. Constitution itself, defying the Constitution and the U.S. Supreme Court ruling in the Dow-Midland case, with a "states rights" petition to shut down operating nuclear plants by referendum. Because TMI has been used as the lever to escalate the policies putting the U.S. nuclear industry out of business, it is critical to restate the basic facts in the case.

1) There is still no explanation why two different valves on the back-up steam generator water-cooling system were turned off at the time of the initial steam generator trip-out. The only possible explanation, in fact, is sabotage. Yet the FBI and other agencies have not investigated this possibility seriously.

2) Kemeny Commission and NRC hearings indicated that it took 7 to 8 minutes for the operating crew to discover that the valves were turned off. This contributed to increasing the heating load in the core and to confusion in the control room about how to handle this.

3) Had the back-up valves been on, then even the sticking open of the pressure relief valve (attached to the core cooling system) would not have created the conditions in the core that resulted in the temporary cutoff of core cooling water by the operators. The plant would have simply shut down temporarily, as has occurred in many other steam generator trip-out cases.

4) Presidential Commission chairman Kemeny, in fact, referenced the case of the Davis-Besse plant in Ohio in the December issue of the Dartmouth alumni magazine. There too the pressure relief valve stuck open after the steam generator tripped out. As at TMI, the failure of the pressure indicator correctly to reflect the actual water level in the core was at first not understood by the operators. But within 20 minutes they did detect and cure the condition. At TMI, with the closed backup valves complicating the situation, it took several hours to find the stuck relief valve.

Even so, as we reported at the time, there was never any possibility of a "China Syndrome" scenario. This syndrome was invoked after the press and NRC issued erroneous reports about the possibility of a hydrogen explosion or a "meltdown" induced by a hydrogen bubble.

ENDING THE SABOTAGE: 2000 BY 2000

No review of TMI would be complete without mention of the person the NRC selected to head up its investigation into the TMI incident--Mitchell Rogovin. Rogovin is once again in the public eye because, at NRC request, he is reopening the TMI investigation to determine whether TMI officials suspected a "China Syndrome" early in the incident and did not make their alleged suspicions known. This investigation, like the first, is billed as "fair." Yet attorney Rogovin is a fellow of and general counsel to the Institute for Policy Studies, an anti-nuclear, pro-terrorist institution based in Washington, D.C. that, among other things, promotes the "decentralization" of the U.S. economy and the rewriting of the U.S. Constitution.

Rogovin is also a member of the New York Council on Foreign Relations, the same group that has called for the "controlled disintegration" of the U.S. and world economies and the destruction of stable oil and nuclear energy supplies, in a series of volumes they call The 1980's Project. Rogovin is not the only member of the Council on Foreign Relations directly involved. The author of

the 1980's Project volume on nuclear proliferation, which calls outright for the phasing out of nuclear power worldwide, is the "energy expert" of the Kemeny Commission, Professor Ted Taylor of Princeton University.

The just-completed special feature article in this report, on cleaning up the TMI mess and revamping the nuclear industry, shows what could be done if we ended the sabotage of nuclear power.

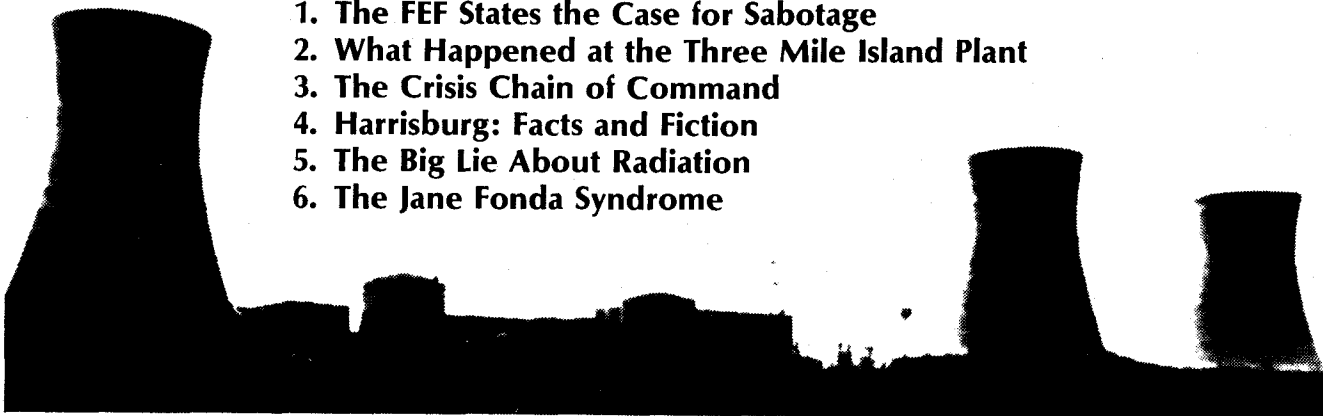
The nation has already lost about a decade's worth of progress in the development of standardized nuclear power plants, breeders, and high-temperature gas reactors. The only way to produce the energy needs and new technologies for a growing world economy over the next two decades is to get back on the track of mass production of nuclear plants for domestic use and export.

The slogan of the Atoms for Peace program of the 1950's is as appropriate today as it was then: "2000 by the year 2000."

The Harrisburg Hoax

All-Out War on Nuclear Energy

1. The FEF States the Case for Sabotage
2. What Happened at the Three Mile Island Plant
3. The Crisis Chain of Command
4. Harrisburg: Facts and Fiction
5. The Big Lie About Radiation
6. The Jane Fonda Syndrome



1

The FEF States the Case for Sabotage

The incident at Three Mile Island nuclear plant in Middletown, Pennsylvania began March 28 and unfolded like the H.G. Wells story "War of the Worlds" broadcast by CBS radio in Oct. 1938. As in that bit of masterful psychological warfare that presented a fictional invasion from Mars as "news," there never was any real danger from the incident itself. The danger came from the panic created by those presenting the "news" of the event.

As shown in this special report, the Three Mile Island event was managed by the Federal Emergency Management Agency, a newly created federal agency working closely with the White House and the National Security Council that went into effect March 27—one day before the event and five days before its legally mandated implementation date; Pennsyl-

vania Governor Richard Thornburgh, who was in direct touch with the White House and FEMA and who ordered the evacuation of pregnant women and young children; the Nuclear Regulatory Commission, which issued unscientific and inflammatory reports on the situation that were counter to the actual facts; and the national press and media, which operated like the Goebbels propaganda machine in Nazi Germany, convincing the population of things that were not true.

Soon after the story broke, a Fusion Energy Foundation investigatory team began to ascertain the actual facts of the matter, calling the utilities involved, local, state, and federal officials, and nuclear experts across the nation. As the press reports became more hysterical and the layers of contradictory "official" reports continued to grow, the FEF sent staff member Jon Gilbertson, one of the top nuclear safety engineers in the country, to the Harrisburg area to get the story first hand.

Sabotage

As reported in detail below, the scientific and technical facts of the Three Mile Island nuclear plant incident as determined by the investigation gave

the FEF reason to believe that sabotage and not "human error" was the cause of the accident. The FEF team assembled the evidence, piecing together the story of what actually happened from a variety of sources, each of whom had bits and pieces of the event but no overview.

In brief, the FEF thesis was that the chain of events at Three Mile Island could not have occurred without the complicity of some form of sabotage at the scene. Furthermore, the timing of the event was not accidental but fed in directly to an intensification of the Carter administration's policy of imposing stringent energy austerity and a systematic shutdown of the economy in the United States, coordinated with vigorous moves to do the same in the developing sector.

Once the scenario was established, the FEF began to get the real story out. From the New York FEF office, staff members briefed the utilities, government officials, the scientific community, and the public, including a dozen radio interviews. Jon Gilbertson, FEF director of nuclear engineering, held a well-attended press conference in the Pennsylvania state capitol building April 4, and Dr. Morris Levitt, FEF executive director,

briefed members of the press and diplomatic community at a press conference in Washington, D.C. the same day.

By Friday, April 6, the FEF had put together a Three Mile Island dossier and invited press and industry and government representatives to a special three-hour briefing, cosponsored with the *Executive Intelligence Review*. At the briefing, Jon Gilbertson, FEF director of research Uwe Parpart, and *Executive Intelligence Review* counterintelligence specialist Jeffrey Steinberg reported on the evidence and the political context for the incident, and suggested the proper lines of an investigation.

As Morris Levitt put it, a proper investigation would have to use the method of Edgar Allan Poe. This means that the investigators should "not look under beds and sewer covers, but differentiate among those facts that are out in the open that are meant to take you on a wild goose chase as opposed to those facts that are out in the open that can be put together coherently to explain both the specific event as well as the context in which it occurs." Specifically, Steinberg later told the audience, they should look for who was to gain from the Harrisburg incident and who had the capability to pull it off.

To date, aside from the Swedish and Mexican press, the major international press has blacked out the sabotage story.

In This Special Report

Summaries of the special briefing presentations by Jon Gilbertson and Jeffrey Steinberg are presented here, along with a day-by-day grid of what happened, what the press wrote, what the NRC said, and what the press said the NRC said. In addition, the special report summarizes the facts of the major myths: the bubble, the "melt-down," and the radiation scare. It also includes some excerpts from the press and presents a review of "The China Syndrome," the newly released Columbia Pictures film about a nuclear accident that resembles the press coverage in the Three Mile Island event.

(Transcripts of the special briefing are available from the FEF at \$50 each, \$20 for FEF members.)

2

What Happened at the Three Mile Island Plant

What happened within the first few minutes to approximately two hours after the initiation of the accident March 28 at 4 AM was an incredible chain of events that could not have occurred without deliberate acts of sabotage by one or more persons inside the reactor plant.

The event was initiated by a failure of the main secondary steam generator system flow valve that apparently shut off because of a still unknown "malfunction." This failure then caused the shutdown of two feedwater pumps, because they could no longer draw suction from this flow stream. The turbine tripped out (shut down) almost immediately, and the steam flow was bypassed directly to the condenser.

At this point, there should have been no further problems and normal shutdown of the plant should have followed immediately as standard procedure.

After the main valve malfunction occurred, what should have happened is the automatic start-up of three auxiliary feedwater pumps that would have supplied more than ample cooling for the steam generators during a shutdown condition.

This procedure is entirely normal recovery following such a valve malfunction. The problem that now occurred was that the auxiliary feedwater pumps came on line but couldn't draw water because two parallel valves were closed. These valves would have provided water supply to the three auxiliary pumps, which then would have provided make-up (emergency) water to the steam generator systems.

With no make-up water supply now available to the secondary steam generator system, the nuclear reactor core and the primary coolant system were isolated from their heat sink, with no normal or back-up method for dumping heat. At this point, the primary coolant system began slowly

to heat up and the primary system pressure rose. The reactor now tripped out and the nuclear fission process was brought to a stop. All this took place within the first 10 to 15 seconds into the "accident."

Before describing what happened after this, it is important to discuss the improbability of even getting the so-called accident to this stage of events. Furthermore, I shall describe what we already know to have happened and what most probably did happen.

The mathematical probability of the mechanical failure of the main flow valve and feedwater pump systems (failure 1 in the figure) is about *1 in 100*, which means that it is an event that can be expected to occur from time to time if enough reactor years of operation are accumulated. However, the mathematical probability of mechanical failure of the auxiliary feedwater flow systems valves and pumps (failure 2) is on the order of *1 in 10,000*, which is two orders of magnitude higher than the first failure. The probability of these two failures happening in series is conservatively estimated to be the sum of these two probabilities, or less than *1 in 1,000,000*—an astoundingly low number, which essentially rules out mechanical failure as a cause of the incident.

In fact, what this means is that the probability of human blunders, or, more likely, human sabotage, is nearly 1 million to 1—the inverse of the low probability of mechanical failure.

We have found out some very interesting facts that back up these probability calculations. The Nuclear Regulatory Commission released information April 4 in a commission hearing that stated the following. First of all, the NRC investigation indicated that both auxiliary feedwater valves had been shut off manually and were out of operation during and preceding the time of the accident. This meant that there was no way that the

make-up water flow system to the steam generators could have been put into operation.

It is totally against NRC regulations to operate a reactor under such conditions; furthermore, it is impossible to believe that reactor operators on duty would ever violate such regulations, unless in a deliberate act of sabotage. The NRC went on to say that these valves had in fact been turned off for over two weeks prior to the accident, which makes the violation even more incredible. How would three different shifts of operators allow such a condition to continue? No one in his right mind would allow the plant to operate with no back-up cooling system available.

The NRC also found out in their investigation that a maintenance crew was working on the main flow valve and pumps during the two-hour period preceding the accident. This is the likely scenario used to manually cause the first failure—and the second failure. The focus of any further in-

vestigation obviously has to have sabotage of these two systems as its working hypothesis or it is no investigation at all, just a coverup.

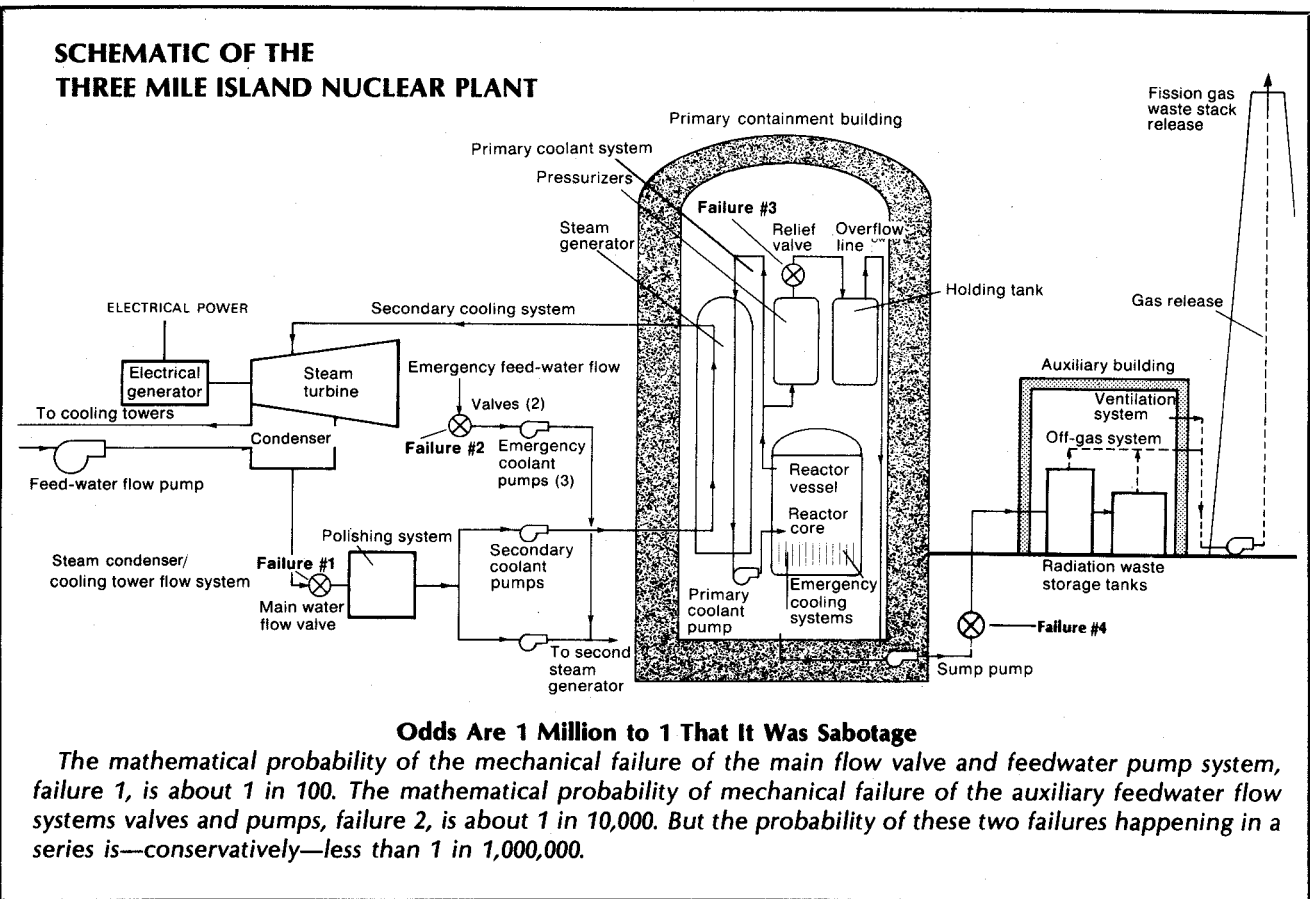
Now, getting back to the chain of events following these incidents of sabotage, we find that after the first one or two minutes into the accident the pressure relief valve on the primary system pressurizer tank opened because the pressure had risen to a pre-set limit. Given the conditions that now existed at the plant, this would have been the back-up method for cooling the reactor core and primary system temporarily until one of the secondary steam generator flow systems was put back into operation.

What should have happened was for this valve to open and close periodically over the next minutes or hours as the pressure built back up to the release limit of 2,350 psi. Releasing this steam pressure and providing make-up water to the primary system through a make-up water pump

would have been the way to keep the shutdown reactor core cool during this period.

What actually happened at this point, was an incredible chain of events, again with an extremely low probability of mechanical failure. First of all, the pressure relief valve stuck open and would not close automatically (failure 3), therefore allowing the primary coolant system to continue to blow down into a holding tank. There is a manually initiated back-up to this valve that is activated in the control room by the operator; but this manual back-up either was not activated for a long time period or failed to work, we don't know which. The continual blowing down of this steam started to reduce the primary system pressure, which eventually started to lower the water level in the reactor vessel and core.

At a system pressure of 1,600 psi, the emergency core cooling system (ECCS) automatically detected this condition, as it was designed to do,



and the high pressure injection pumps came on and started pumping large quantities of water into the core to correct the situation. It did correct the situation and would have continued to do so for a long time period—several hours—however, the operator turned it off!

Also, sometime during the first hour after the accident, the operator turned off the primary system coolant pumps because the pump head was getting low. The sequence of events after this is not well known, except that we know the operator turned the ECCS system as well as the primary coolant pumps on and off again at least one more time. During this manual manipulation of the primary system flow, the top of the reactor core became uncovered two different times. At these points, significant fuel damage occurred and fission product gases, xenon and krypton, were released to the primary coolant system.

At sometime during this first one to two hours, the operators got these flows under control and got one of the two steam generator coolant loops operating, with heat being dumped normally through the cooling towers. Also during this period, the operators were able to get the pressure relief valve on the pressurizer closed so that it was no longer dumping primary coolant water and steam—which became radioactive after the fuel failures—to the holding tank. This tank later overflowed and spilled onto the containment building floor.

What has to be emphasized is that even with all this happening, the effect would have been minimal if the event had stayed at this level. However, sometime during the first hour, the sump pump at the bottom of the containment building came on—supposedly automatically, but we're not sure—and started pumping radioactive water from the floor of the containment building out into radiation waste storage tanks in the auxiliary building. In actuality, this containment building should have automatically been isolated when radiation was detected there, thus prohibiting the sump pump from coming on.

Nevertheless, this is how some radioactivity got out of the containment building, and why some very *small amounts* of radioactivity had to be released through the normal gas release stack several times during the second day after the accident and in subsequent days.

3

The Crisis Chain of Command

President Carter issued an Executive Order June 19, 1978 establishing the Federal Emergency Management Agency and an Executive Management Committee under the control of the National Security Council. That order set April 1, 1979 as the date FEMA was to become operational.

The new FEMA was to centralize all "crisis management" functions around civil defense, nuclear disaster, transport strike disruptions, and similar national emergencies under the direct control of the National Security Council, thus completely bypassing all institutions constitutionally designated to handle national emergencies.

The Executive Order creating FEMA was the result of Presidential Memorandum 32 drafted in April 1978 by Samuel Huntington. PMR-32 outlined a specific scenario for crisis management reorganization of the U.S. government—a scenario that was tested during the Three Mile Island incident.

About three years before he drafted that memorandum, Samuel Huntington had authored a book called *The Crisis of Democracy*, a position paper for the Trilateral Commission. Huntington drew the conclusion, in part, that democratic institutions were no longer feasible. The sort of government structure defined by the U.S. Constitution, he said, had too many checks and balances. During the period of crisis he projected for the 1970s and 1980s—specifically includ-

Although the levels of radiation through release of xenon and krypton were very low and well within normal limits (see box p. 61), the press turned this into a "radioactive cloud" that gave rise to one of the biggest media hoaxes of the decade.

—Jon Gilbertson



President Carter at Three Mile Island, accompanied by Governor Dick Thornburgh

ing oil crises, energy shortages, and the necessity to impose extreme forms of austerity—the country would need hegemonic, controlling government institutions, rather than the normal, constitutionally mandated institutions, Huntington said.

FEMA on the Scene

Not only was FEMA set to go weeks before the nuclear incident at Three Mile Island, but, according to well-informed sources, the National Security Council "jumped the gun" and set FEMA into operation Tuesday, March 27—one day before the incident. Under the direction of the NSC and a White House Emergency Task Force,

FEMA personnel coordinated the emergency evacuation panic scenario, while the National Security Council's Jack Watson and Nuclear Regulatory Commission personnel managed the content and flow of news.

This news from the top was key to the creation of a climate of panic—making people feel helpless and feel as though there were no rigorous scientific principles to adequately evaluate the crisis situation.

Executive Intelligence Review correspondent Stuart Pettingell described the on-the-scene situation in Harrisburg this way at the FEF special briefing April 6: "We expected to come down into the Harrisburg area and find a ghost town, deserted streets. What we found in Middletown was business as usual, with reporters wandering around trying to find some news.

"There was no competent briefing to the press after Metropolitan Edison [part owner of the plant] was officially gagged by the White House, on the request of Governor Thornburgh. There were no written technical statements out and no technical advisors were allowed to get near the reporters to explain what was going on. So, the reports coming out of Middletown—H-Blasts, gigantic bubbles, and so forth—were based on small shreds of evidence given to the reporters in small doses that these reporters then had to elaborate into 500-word and 1,000-word articles.

"Until April 1, there was not one technical advisor on the scene who was capable of explaining how a nuclear power plant works to the press, which was generally not clear on this. In terms of where the initial incident occurred, for example, everybody assumed it was in the core of the reactor. No one understood how the entire system worked. When the technical advisors finally came in they had to spend virtually the whole night answering reporters' questions to try to clear up the complete unreality about what people thought had gone on.

"To a certain extent, the press is to blame for the sensational coverage for something that was not sensational, but the honest reporters did not have a chance to find out the true story."



4

Harrisburg: Facts and Fiction

Day 1, March 28

The reactor core was brought into stable condition within the first two to three hours, the relief valve was closed, and a main coolant loop and main secondary steam generator coolant loop were put into operation. At this point, core cooling was reestablished and has remained in this condition since then. The top region of the reactor fuel had been damaged and fission gas was released to the primary coolant. Most of the fission gas remained safely within the containment building—except for a small amount that was pumped to the auxiliary building. Therefore, most radioactivity was safely contained inside the containment building, where it should be.

There was no danger of a core meltdown during these first minutes and hours of the incident, because all emergency core cooling systems worked as they were designed. Furthermore, no radioactivity was released to the atmosphere during this first day of the incident, although radioactivity within the containment building was quite high, making building access impossible.

The Press: Early New York radio reports (WINS, WCBS) called it "the

worst accident in the history of commercial power."

The NRC: At 10:30 AM, the NRC declared the site an emergency situation and said the turbine had tripped out, cause unknown. There was no off-site radioactivity, but radioactivity was noted inside the containment building. At 5 PM, the NRC reported that they thought there was direct radiation from the containment building and that the turbine shutdown was a result of reduction in flow of feedwater.

Day 2, March 29

During the night of March 28, a small amount of fission gas was released to the atmosphere from the auxiliary building through the gas storage system and out the plant waste gas stack. This gas release was necessary because the water that had been spilled on the auxiliary building floor was releasing some fission gas to the building atmosphere that was vented to gas storage tanks. The build-up of this gas in the tanks eventually got so large that some had to be vented in order to make room for more gas in the tank. The levels released were very low and well within normal release limits. Maximum measured release rates were 1 millirem per hour, determined by a helicopter.

The reactor remained stable and cool at 250 degrees Fahrenheit and pressure of 450 psi.



The Press: "Radiation Is Released in Accident at Nuclear Plant in Pa." (New York Times); "Radioactive Gases Escape from Pa. Plant" (Baltimore Sun); "Radioactive Steam Clouds Escaping..." (New York Post). There were stories that radioactive iodine would show up in dairy cows within a week (the allegation showed up in the press April 7).

The NRC: Official release states that "radiation levels in containment building remain high. Continuing release of detectable levels to atmosphere." For the first time, the auxiliary building was mentioned as the source of gas, not the containment building. They said there were 12 millirems of radioactivity per hour at 2 miles from the plant, .33 millirems over the Harrisburg area; these are said to be far below the EPA allowable level of 1,000 millirems per hour.

Day 3, March 30

Metropolitan Edison technicians released gas from the auxiliary building two more times for periods of 45 to 60 minutes during this 24-hour period. Maximum levels of radioactivity reached 20 to 25 millirems near the site boundaries, with much lower levels at distances farther away from the plant. All releases were of short duration and resulted in dose rates far below those considered to be hazardous to the public. Some very low level waste water was released to the Susquehanna River, but was stopped in

order to avoid causing any public concern. The radioactivity of this water was well within the limits allowed by NRC regulation.

Gas bubbles were detected in the primary coolant system and were carefully monitored as they collected in the top of the reactor vessel. These bubbles are made up of noncondensable fission gases as well as hydrogen and normally are taken out through the free surface in the pressurizer. This technique was used, but it seemed to be going slowly, mainly because a considerable quantity of gas had been formed during the core and fuel heatup portion of the incident in the first two hours. No problems were occurring and none was expected.

The reactor remained in a stable condition at 280 degrees Fahrenheit and about 1,000 psi.

The Press: "Nuke Leak Goes Out of Control" (New York Post) leads with "An uncontrolled release of radiation spewed from the Three Mile Island plant today, triggering some panic in the streets here, where people alerted by Civil Defense whistles, ran for cover." It was reported that Governor Thornburgh said, "These emissions were unexpected and they could not stop it" and that he ordered all schools within a 5-mile radius to close. New York Times reports that the NRC said that detectable radiation levels had been spread over four counties.

The NRC: (AM) "At this time the danger is over for people off the site. . . . Our readings show radiation levels have dropped significantly. . . ."

Metropolitan Edison: Officials said that a core meltdown was impossible and that there are no China syndromes possible.

Governor Thornburgh: A spokesman for the governor's office, Patricia McCormack, said that radiation measured 1,200 millirems per hour. "These emission levels are more dangerous than those released Wednesday."

The NRC: (PM) The NRC's Harold Denton, director of reactor regulation, arrived at the site and announced that he and his team would be working closely with utility personnel as well as federal and state agencies and the governor. The gas bubble was reported for the first time. If pressure were decreased, the bubble might expand and might interrupt the primary coolant flow. "In the unlikely event that this may occur, further damage to the fuel rods could take place," the NRC said.

Day 4, March 31

The suspected gas bubble at the top of the reactor vessel was determined to be about 1,000 cubic feet in size and was thought to be growing very slowly. However, the gas level was far above the reactor core and above the

outlet nozzles in the vessel. There was no chance that this bubble could expand down into the core region, since the upward coolant flow velocity would simply sweep any gas out the outlet flow nozzles and break it up into small bubbles that would eventually come out at the pressurizer surface.

In fact, this is what apparently happened to the gas this day and into the next, although this is not completely known. There was no chance of a core meltdown. All emergency core cooling systems were still operable if needed.

The threat of a hydrogen explosion never existed within the reactor vessel, because there was no mechanism in existence that could provide enough oxygen into the bubble to produce the conditions for an explosion. Even if such an explosion could occur (which it could not), there was only enough hydrogen present to produce an impact on the vessel wall equivalent to a medium-sized blow of a hand-swung sledgehammer.

An additional release of fission gas was necessary from the auxiliary building via the waste gas stack. This was much lower than releases from the previous day; it was at a level of

about 1.5 millirems per hour, again far below harmful levels and of no danger to the public. All gas releases were planned and timed to be very low; however, the original source of primary water release to the auxiliary building was, of course, unplanned.

The Press: "Nuclear Crisis: Pregnant Women, Kids Flee N-Zone, Thousands Told to Stay in Their Homes, Fear Meltdown of Nuclear Core" (New York Daily News); "Race With Nuclear Disaster, Baffled Scientists Struggle to Ward Off A-Plant Meltdown" (New York Post). Most of the news is about the bubble and the possibility of a China Syndrome meltdown.

The Press on the NRC: "Depending on which options are taken and what changes are made, we can get the nuclear core into trouble" (New York Post quoting NRC spokesman Dudley).

Day 5, April 1

The gas bubble had all but disappeared by now, although it was not known exactly how this happened so quickly. First of all, the bubble's size was probably not as large as originally estimated. Furthermore, its removal by the primary coolant flow system

through the pressurizer was actually much quicker and more efficient than originally estimated. There was no threat of a hydrogen explosion, nor was there ever such a threat according to more detailed calculations and analysis.

Releases of radioactivity were now very low and were measured to be not much higher than background radiation. Total dosages that could possibly have been received by any one individual off-site since the beginning of the incident could have been only 85 millirems, or not much more than a person receives in a normal chest X ray!

The reactor remained stable and cooling at 280 degrees Fahrenheit and a pressure of 1,000 psi. Radiation in the reactor building remained quite high, which is expected given the failures that occurred during the first two hours of the incident.

The Press: "Officials Say Nuclear Plant Cooler But Still in Crisis," "Wider Evacuation Possible If Action Poses Threat" (New York Times); "Risk of Explosion at A-Plant Reported Increasing," "Top Priority Is to Collapse Gas Bubble Safely" (Washington Post).

The NRC: "When technicians decide to eliminate the bubble, it might be prudent to evacuate residents living 10 to 20 miles from the site" (Joseph Hendrie). As for the meltdown possibility: "I wouldn't give odds. I don't think they've changed much these last few days."

Day 6, April 2

All gas in the vessel and primary coolant system was now gone, and the system was now in a mode where it could begin to be brought down to the cold shutdown condition. The NRC decided to hold the reactor in this condition for a few days to reassess the situation and to determine the best way to bring it to cold shutdown.

Radioactive fission gas releases to the atmosphere have all but stopped and the levels are very low or near normal background radiation. There is no danger to the public.

The reactor continues to be held at 280 degrees Fahrenheit and 1,000 psi,

The Meltdown Myth

Headlines: "Gas Bubble Forms, Core Meltdown Likely."

Facts: A hydrogen gas bubble formed at a size much smaller than originally reported. NRC spokesman at hearings the next week admitted that the existence of any hydrogen bubble was "speculation." A core meltdown was not possible as a result of the size and type of the speculated bubble. Had such a bubble exploded, which was scientifically impossible, it would have had the impact of a hand-held mallet swung at a wall.

Headlines: "China Syndrome Likely From Meltdown."

Facts: The China Syndrome does not exist in scientific or technical reality. The reactor walls are built to withstand any meltdown.

Headlines: "Meltdown to Release Radioactivity to Susquehanna River and the Atmosphere."

Facts: Breach of containment is not possible, which means that the evacuation scenario was not necessary for safety reasons, as claimed by the governor and NRC.

Headlines: "Bubble Will Cause H-Blast."

Facts: The specific conditions for a hydrogen explosion did not exist.

with one primary coolant loop and one steam generator secondary coolant loop in operation.

The Press: "A-Reactor Core Is Cooling, Gas Bubble Is a Hazard" (Washington Post); "Key Maneuver Set at N-Plant, Aimed at Reducing Bubble Peril, May Evacuate 600,000 If Move Fails" (New York Daily News); "Atomic Era Over, Nader Predicts," "Crisis Viewed As Setback to Energy Policy" (Baltimore Sun); "What Hath Man Wrought, Worshippers Ask" (Philadelphia Inquirer).

The NRC: On the question of need for evacuation, "This area is sensitive with the state. I need to clear it with the governor and I am rushing to see the governor now. I see some signs for optimism" (Harold Denton). "Hydrogen content in the reactor building has risen from 1.7 percent to 2.4 percent. At about 4 percent, we reach the flammable level and at 8 percent the detonable level" (Harold Denton).

5

The Jane Fonda Syndrome

"The China Syndrome," Columbia Pictures, March 1979

Jane Fonda's new movie, "The China Syndrome," has been widely viewed and reviewed as an environmentalist thriller trumpeting the dangers of nuclear power. It is more accurately seen as a psychological warfare exercise carried out to prepare Americans to accept the necessity of fascism in the United States.

"Objective" refutations by nuclear scientists and others of the doomsday scenario envisioned by the filmmakers—a nuclear accident in which "an area the size of the state of Pennsylvania is covered with a radioactive cloud," as one character put it—are almost beside the point. The most important "Big Lie" in the movie is not about nuclear power per se, but about the nature of the human species.

The film makes three interlinked assumptions about the way the world works.

First assumption: The primary human emotion, the driving force of human behavior, is equivalent to that felt by a dog contemplating the prospect of his dinner.



Sad-faced Lemmon: Glorifying the victim syndrome.

All the film's major characters obey this simple psychological dynamic. The movie's villains—the power company executive who cuts corners on reactor safety in order to spare the expense of shutting down, the construction company supervisor who fakes records of reactor construction for the sake of cutting costs and delivery time, or the television producer who attempts a coverup of the initial nuclear accident because his only concern is program ratings and public esteem—these Big People are clearly ruled by simple greed, which the movie identifies in straightforward fashion with large-scale economic profit.

Less obvious is the point that the good guys—Jane Fonda as the doll-like TV glamor puss begging for her chance to do "hard news" coverage, Jack Lemmon as the sad-faced reactor supervisor "in love" with his machine, and Michael Douglas as the cynical cameraman at war with "The System"—are also the creatures of their appetites. These are the Little People, "ordinary human beings with plenty of vices just like you and me."

The Victim Syndrome

The film takes great pains to prove the point when Douglas films the plant control room in violation of regulations and jeopardizes Ms. Fonda's

career; or when Ms. Fonda acquiesces in the coverup of the near disaster at the plant in order to keep her job; or when Lemmon initially refuses to acknowledge to the outsiders that anything important has gone wrong.

Second assumption: The virtue of the Little People resides in their perpetual status as Victims of the Big People, and that the highest goal to which they can aspire is to recognize that role, accompanying the recognition with loud cries of "Rape!"

It is no accident that the film ends not with the massive "meltdown" of the reactor core that is the threat on which the whole melodrama of "The China Syndrome" turns, but with a public statement on television by "the littlest person of them all," a 25-year power company employee and friend of Lemmon whose dominant trait throughout the film is the conspicuous desire to "stay out of trouble." Shocked by the assassination of Lemmon as he tries to tell the truth about the plant's unsafe condition to Ms. Fonda's TV camera, the old fellow is finally moved to take the microphone and demand "an investigation."

Third assumption: Science and technology are no more than supererogatory aspects of a human nature thus defined; the power associated with them is thus a magnification of the irrational; and, ultimately, anything can happen and nothing makes any real sense.

With the subtlety of a steam drill, the movie hammers home the point that all the malfunctions of the fictional Ventana nuclear power plant are ultimately traceable to "human error." Therefore, natural law does not exist.

The drama of the Little People versus the Big People, who control the reactor and the workings of the society that sanctions its presence, is experienced by the audience as a constant succession of vignettes in which the individual, utterly alone, faces a hostile, arbitrary world with dim prospects for survival.

Again and again in scenes at the television station and the power plant, we are presented with visuals in which the "technology" on view is used as a metaphor for organized, systematic

lying. Ms. Fonda's primping into her TV persona whenever a camera appears is one obvious example. Insistence that technical terminology associated with the reactor is ipso facto an attempt to dehumanize language and cover up the consequences of reactor failure is another. And much is made of the fact that, when the reactor heats beyond normal temperatures, the computer printout describes this as an "event," not an accident.

By the time Lemmon takes over the control room of the plant at gunpoint and threatens to blow up a chunk of southern California in order to explain why the plant must be shut down—a favorite scenario for

theorists of nuclear terrorism—he seems positively logical!

Thus, the movie operates much as newsmen so in evidence during the events at the "living theater" replay of "The China Syndrome" at the Three Mile Island nuclear plant outside Harrisburg, Pa. There, if nuclear experts succeed in answering a succession of hypothetical questions, they are greeted with the unanswerable inquiry, "Why should I believe anything you say?"

Predictable Jane

Those who have followed Jane Fonda's career in and out of films for the past years have seen all this before, minus the reactor, of course. In the 1960s, there was her marriage to

"bad boy" director Roger Vadim, who made such "artistic" psychedelic pornography as "Barbarella," in which Ms. Fonda glorified the irrational as plasticized science fiction sex object. Later came her marriage to "New Left" activist Tom Hayden, who celebrated the Newark race riots with a front-page article in the *New York Review of Books* hailing the looting of liquor stores as a blow for economic equality.

Ms. Fonda subsequently appeared as a prostitute discovering her "feelings" through psychotherapy and "human sex" in the movie "Klute." More recently, Ms. Fonda played Florence Nightingale to a Vietnam War veteran's paraplegic blob of anguish

Some Honest Press Coverage

The *Atlanta Constitution* April 8 exposed the psychological warfare press campaign in an article titled "Faked News Hurts Credit of Media at N-Plant Site." Reporter Barry King then reviewed the following instances of press fabrication:

(1) A camera team from a major national television network asked people from Middletown to stay out of camera range as they filmed the streets. Later these same people watched coverage in which the press described the shot as that of an "abandoned city."

(2) At a firehouse where a radiation monitoring team was stationed, a robin hit a plate glass window and fell to the ground. A camera team filmed the incident and reported on the news that night that "birds are falling from the sky."

(3) A camera team was seen putting "for sale" signs on houses and then filming the result, describing the incident as people packing up and moving out.

In Europe

The West German financial paper *Handelsblatt* in an editorial April 3 countered the Harrisburg scene: "There can be no taboo on nuclear power . . . One could dictate zero growth but that policy could not remain limited to GNP, but would also have to be applied to the reproduction of mankind . . . Do you want the gigantic bureaucracy solely responsible for steering every form of growth, strictly and in police-state style? Such a bureaucracy, which would self-evidently have to be a supranational one, could not be established without war."

In Mexico

The Mexico daily *Diario de Mexico* April 1: "We can understand the uneasiness, but we cannot justify the hysteria that appears to have taken over reasonably sensible minds. Whenever man takes on new forces, the unexpected always arises. If the first person to have used fire, upon being burned had prohibited its further use, this decision would undoubtedly have paralyzed progress."

The Mexico daily *Uno Mas Uno*: "The question is not one of imagining an atomic end of the world, but in constructing a world where science becomes a tool for freedom from poverty, want, and inequality."



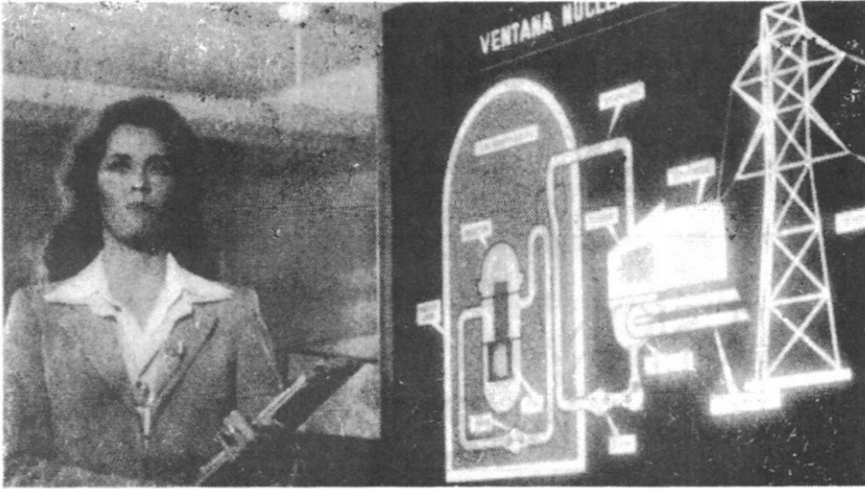
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Predictable Jane: Glorifying the irrational.

in "Coming Home." Finally, we have Ms. Fonda and Hayden putting aside their Maoist Little Red Books to stump for the candidacy of "Mr. Austerity," Zen Buddhist presidential aspirant, California Governor Jerry Brown.

Why Nuclear Energy?

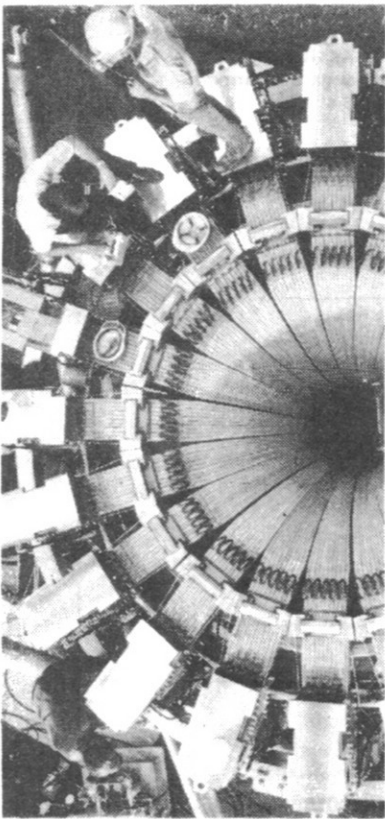
Nuclear power is not an end in itself, but a mediation of human reason. If we are to raise global living standards to the level necessary to prevent inevitable outbreak of mass

plagues and general war and depopulation, we must build hundreds of new nuclear plants. Without the material progress afforded by nuclear energy, billions of currently living persons will not reach the potential for human development now present among the American people.

Ms. Fonda and her financial backers—the same people who brought you Meyer Lansky and the drug culture, Energy Secretary James Schlesinger and his era of permanent scarcity, and Henry Kissinger and his lust to fight World War III—do not believe in reason.

The not-so-hidden message of "The China Syndrome" is this: America needs a General Haig, a man on horseback, to keep all the crazy Big People and Little People in line. As the *New York Times* put it, editorializing on the recent Jupiter space probe: "Science is useful, but myth is the stuff of life."

—Donald Baier



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pany had been "ordered" to say nothing relating to the plant.

Other engineers across the country who have direct contact with colleagues connected with Three Mile Island are widely discussing the fact that sabotage must have been involved at Harrisburg—but in private. For the record, most officials at nuclear firms and utilities refer you to the Atomic Industrial Forum or the American Nuclear Society for information and opinions on Harrisburg.

As a result, Gilbertson said, the issue has been turned into an endless stream of charges and countercharges on this or that safety modification. At the same time, every one of the nine Babcock & Wilcox reactors is shut down by Nuclear Regulatory Commission order, bringing the national electric grid perilously close to brownout conditions.

Gilbertson also noted the extraordinary lack of national publicity for revelations that indicate the gross distortions in the media of what actually occurred during the Harrisburg incident. The Advisory Committee on reactor Safeguards of the Nuclear Regulatory Commission, for example, submitted a report—not adopted—to the NRC that attacked the "misinformation that was the basis for disturbing speculation on possible hydrogen-oxygen explosions in the reactor pressure vessel a few days into the accident."

The Advisory Committee rebuked the NRC for stating that an explosion was even possible. Paul Shewmon, a member of the committee, called it "dangerous nonsense to say the thing could explode"; it only served to "scare people."

In testimony before the Senate subcommittee on nuclear regulation April 10, NRC chairman Joseph Hendrie stated that "the possibility of a flammable mixture turns out to have been a misplaced concern." When Senator Domenici told Hendrie it was "very serious" that the NRC was "communicating the possibility of the worst when merely an analysis, a proper analysis of the fact would have put that in a different perspective," Hendrie replied: "I'm not sure the NRC—I'm not sure who—was issuing

the kind of drastic reports you indicated because it is now, in retrospect, a kind of jumble."

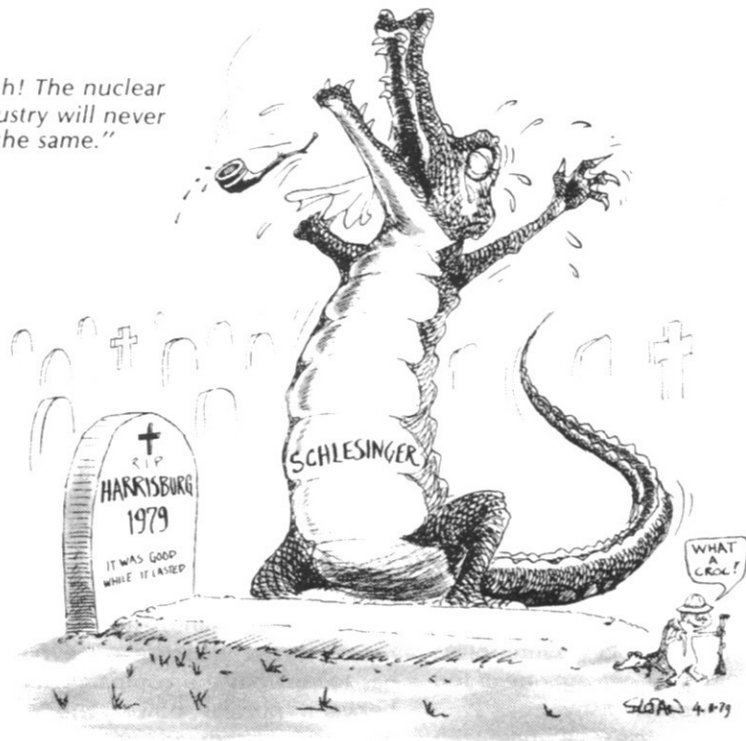
Aside from the question of whether or not NRC official Harold Denton issued the original statement, it is clear that the subsequent refutation of the danger posed has been covered virtually nowhere in the press, Gilbertson said. Why does the nuclear industry at this point fail to launch the most visible information and publicity campaign to lay the actual facts before the public? This is the real crime of Three Mile Island.

—William Engdahl

Harrisburg Transcripts Available

Transcripts of the FEF's three-hour briefing April 6 on the Harrisburg incident are available at \$50 per copy, \$20 for FEF members. The briefing was presented by staff of the Fusion Energy Foundation and the *Executive Intelligence Review*. Send check or money order to the FEF, 304 West 58th Street, New York, N.Y. 10001 or telephone (212) 265-3749.

"Waah! The nuclear industry will never be the same."



2

Highlights Of FEF Press Coverage

The Morning Call, Allentown, Pa., April 25, "Pronuclear Group Says TMI Was Sabotaged":

A pronuclear group charged yesterday that sabotage may have been behind the Three Mile Island meltdown threat and that the federal government used the incident to "discredit nuclear power."

... A spokesman for the newly formed White House Commission investigating the incident called the charges "really screwy," but said the body, holding its first meeting today, would be "looking at every line of inquiry."

The Patriot, Harrisburg, Pa. April 25,

"Pronuclear Unit Suspects Sabotage in TMI Incident" by John Helyar:

Attention on Three Mile Island thus far has been focused on the sequence of mechanical failures involved in the accident, Gilbertson contended, when what should be examined is the "accelerated, coordinated antinuclear attack taken by the environmentalist movement." He cited "weirdo" factions advocating terrorism in the name of environmentalism, which may have had plans to "infiltrate" nuclear plants in order to be in a position to do damage.

His only specific examples were the Neoamerican Church, which predicted the accident in Middletown, and Ira Einhorn, an environmental activist recently charged with murder in Philadelphia.

The Trentonian, Trenton, N.J., April 25, "3-Mile Sabotage Suggested":

... A spokesman for Critical Mass, a Ralph Nader agency which has repeatedly raised nuclear safety questions, said, "Anyone who believes that citizens, the investment community, and the Carter administration is eager to see the East Coast traumatized doesn't have any credibility."

The Times Record, Troy, N.Y., April 13, "Sabotage Possible in Nuclear Mishap," by D. R. Bahlman:

The accident at the Three Mile Island nuclear power generating plant in Middletown, Pa., was, in one of Jon Gilbertson's words, "fishy."

Gilbertson, a nuclear engineer with more than 15 years experience designing safety systems for nuclear plants, told an audience at the Rensselaer Polytechnic Institute Communications Center Thursday that the incident was blown out of all proportion by news-hungry members of the press, and he speculated that the blame for the incident will continue to fall on the operators of the plant.

It's unlikely that this thing happened by itself, or through human stupidity. These are highly trained people. They're not stupid. It's going to be very easy to say it happened because they didn't know what they were doing.

3

The Nuclear Industry Plays Ostrich

Here are some of the quotes from the nuclear industry indicating the public ostrich syndrome, the private dismay at the situation, and the incredible blindness concerning the role of Energy Secretary Schlesinger. The next issue of Fusion will report on the U.S. nuclear industry's speeches at the European Nuclear Conference.

A spokesman for the Edison Electric Institute, the lobbying arm of the nation's electric utilities, just after the Harrisburg incident:

"Our response so far has been to lay low and say nothing, hoping the whole thing blows over. ... Personally I hope that changes quickly."

The official spokesman for the Atomic Industrial Forum, May 7:

"We see the future of nuclear power as a pretty tough battle for the next year or so—until we can study or learn from what happened, especially at Three Mile Island.

"The future of nuclear power is tied to Three Mile Island. Time is needed for corrective measures. The public has to sort out the comparative risks between nuclear power and other methods of producing energy.

"The Atomic Industrial Forum will be active in informing the public about Three Mile Island and other problems."

Energy Secretary James Schlesinger at the Edison Electric Institute annual conference in Atlanta, April 11:

"I'm in favor of nuclear energy, but we must separate the weak from the strong utilities and discourage the weak ones from going into nuclear. ... [The fast breeder] won't be built nor will nuclear reprocessing be developed. These are not cost-effective until the price of uranium rises considerably."

A senior official from a Southwest utility immediately after Schlesinger's speech:

"This is a major shift. Now we've got Schlesinger on our side. This administration has finally come around on the nuclear issue."

A top Westinghouse official (with great dismay):

"The reactors now on order will be completed, then that's it. It's the end of the nuclear industry in the United States."

Despite the "lie low" defensive attitude of the nuclear industry and the utilities, both the majority of the public and key political figures have not capitulated to the Harrisburg hoax.

Governor William P. Clements of Texas told an ABC television special report May 1:

"The event at Three Mile Island hasn't done anything to my thinking on nuclear energy. It was an unfortunate event that was overblown. I question whether the risk was ever as great as it was depicted in the media. It was a sensation. I question whether people will be affected by the radiation in the future. My advisors, who are good scientific people, have analyzed the information."

Governor Edwin Edwards of Louisiana in a statement to Fusion May 3:

"I'm a strong proponent of nuclear power for this reason. I'm convinced that nuclear power can be produced cheaply and safely. ... I'm open to more nuclear power plants. Nothing that has happened in Pennsylvania has changed my mind. Nuclear energy is still needed; it's still a good thing; and everyone should feel confidence in it. Safety factors are built in, and there are continuing technical improvements."

FUSION

Investigating The Harrisburg Hoax

1. Independent Commission Formed to Investigate Sabotage
2. Highlights of FEF Press Coverage
3. The Nuclear Industry Plays Ostrich
4. The Union of Concerned Scientists: Making Nuclear War Instead of Nuclear Energy

1

Independent Commission Formed To Probe Sabotage

The formation of an independent Commission of Inquiry to investigate the evidence of sabotage at the Three Mile Island nuclear plant was announced at a Washington, D.C. press conference April 24.

The work of the new commission was presented to the press by Jon Gilbertson, director of nuclear engineering for the Fusion Energy Foundation, the group that has spearheaded the investigation of sabotage.

Gilbertson, who is recognized as

one of the nation's top nuclear safety engineers, announced the initiating membership of the commission (see box) and outlined the five primary areas of investigation to be undertaken by the commission.

The Key Questions

"Given that the probability of the sequence of failures at Three Mile Island being purely mechanical is about 1 part in 1 billion," Gilbertson said, "and given that the most basic operating and safety procedures were systematically violated contrary to all training and regulations, the most important question to be answered is: Was the shutdown the result of sabotage?"

"Given that the media and local officials were under top-down control of the National Security Council un-

der the just-instituted Federal Emergency Management Agency (FEMA)," said Gilbertson, "a second key question for probing is whether National Security Advisor Zbigniew Brzezinski and Energy Secretary Schlesinger expected such an incident beforehand?"

The commission will also investigate the following:

- Given President Carter's April 5 announcement of support for Schlesinger's "energy" austerity program, which includes a ban on nuclear breeders, drastic oil consumption cuts, and brute-force energy price inflation, was the plant failure and the implementation of the FEMA "crisis management," foreseen as a means of instituting unpopular energy austerity? Should Schlesinger and other top officials therefore be removed from office for gross malfeasance?

- Given the distortion by the national press and government officials of the alleged dangers of "melt-down," were these stories consciously meant to provoke the population into panic in order to permanently discredit nuclear energy development and prepare the U.S. for nuclear war confrontation through civil-defense-type conditioning?

- Finally, given the role of key antinuclear organizations, especially the Union of Concerned Scientists, in promotion of policies of shutting

More Nuclear Sabotage

The case of sabotage at the Virginia Electric and Power Company's Surry Unit Number 2 nuclear plant in Surry, Va., announced May 9, gives further credence to the FEF claim that sabotage was behind the incident at Three Mile Island.

Suspecting sabotage, Vepco officials called in the FBI to investigate. It has been determined that an individual or group of people dumped caustic soda (commonly known as lye) on new fuel elements over a period of several days. These fuel elements were stored in a highly secure area that could have been entered only by an employee with top security clearance and identification.

A Vepco official told *Fusion*, "off the record, you're probably right about the sabotage at Three Mile Island."

down nuclear plants, and given creation of "The China Syndrome" film and its public release only two weeks before the Three Mile Island incident, what is the relationship of the foundations and financial backers of these antinuclear groups to the economic policies of austerity advocated by Schlesinger et al.?

Press Coverage

Conference attendees included representatives from NBC-TV, *U.S. News & World Report*, *States News Service*, *Energy User News*, the National Underwriters Association, Associated Press, Mutual Broadcasting, the *Los Angeles Times*, the Bureau of National Affairs, and several local radio stations.

Reports of the press conference appeared in newspapers throughout Pennsylvania and New Jersey the next day, on television in Scranton and Pittsburgh, and on Mutual Black Broadcasting affiliates nationwide.

Gilbertson also gave a press conference for the commission in Harrisburg the next day that was covered widely by local press and radio and television.

Prior to the Washington press conference, an interview by ABC radio with Dr. Morris Levitt, FEF executive director, was aired several times nationally, drawing strong interest in the formation of the group.

Foul Play Affirmed

"We are finding a distinct shift in the national response to our allegation of deliberate sabotage and the role of the National Security Council's FEMA and Schlesinger in this whole situation," Levitt said. "We are getting increasing affirmation of the overwhelming case for foul play at Three Mile Island. Even sources within the Nuclear Regulatory Commission are willing to admit to us the strong possibility that such occurred, especially around the shutdown of the two backup valves 48 hours prior to the incident, something which is a 'Class A' NRC safety violation."

Levitt added that the commission will now draw on the advisory expertise of a broad layer of scientific, engineering, and counterintelligence and security expertise both inside and outside government to assist in the commission's investigation.

In a press statement May 7, Gilbertson noted that several other representatives of labor, industry, and the scientific community were seriously considering joining the commission in the near future, bringing the expected total number of commission members to 20.

"First and foremost," Gilbertson said, "the commission must assume the responsibility of being the cutting edge of the fight for nuclear power in the United States. ... At this point in time, the majority of the pronuclear institutions have crawled into their foxholes and have decided to lie low for a while. The nuclear industry, the utilities, the American Nuclear Council, the Atomic Industrial Forum, and so on have all told us that this is their policy—they're running for cover (see box for quotes).

"In our opinion this is tantamount to admitting defeat. Now is the time to stand up and fight. If we don't do it now, we're not likely to get another chance."

Stand Up and Fight

Gilbertson said that in addition to acting as a magnet for information about the Three Mile Island incident, putting pressure on the Pennsylvania state legislature to hold hearings on the incident, and promoting speaking engagements, commission members would be raising money to support commission activities.

It has also been proposed, Gilbertson said, that the commission initiate a national advertising campaign to promote nuclear power and educate the public about the facts of energy and economic growth. Such a campaign would need a minimum of \$25,000 to \$50,000 to get off the ground, he said.

The Ostrich Syndrome

Gilbertson described in some detail the ostrichlike behavior of the nuclear industry and its consequences in terms of the national press coverage on the Three Mile Island event.

There is currently a clamp on all vendors and nuclear firms who had any involvement with the construction of the Three Mile Island plant, he said. One engineer from a vendor that manufactures components for the reactor stated pointblank that all engineers and employees in his com-

Initial Members of Independent Commission

Prof. Charles Bonilla

Former Chairman
Chemical Engineering Dept. and
Former Director, Nuclear Program
Columbia University
New York, N.Y.

Emil Decembre

President
Building and Construction Council
Beaver County, Pa.

Walter Forbes

Vice President and Consultant
ARAMSCO Corporation
Teharofare, N.J.

Jon Gilbertson

Director of Nuclear Engineering
Fusion Energy Foundation
New York, N.Y.

Frank Hewes

Corporate Treasurer
Adirondack Steel Casting Corp.
Watervliet, N.Y.

Henry Hill

President
Central Labor Council
Cumberland County, N.J.

Dr. Morris Levitt

Executive Director
Fusion Energy Foundation
New York, N.Y.

Jim Rebman

Manager
Field Sales Dept.
ACME Corporation
and formerly Nuclear Navy
Fort Worth, Texas

Ira Seybold

Senior Engineer
Dosimetry Systems
Yankee Atomic Power Company
Westborough, Mass.



Concerned scientists? Daniel Ford (l.) and Henry Kendall.

4

The Union of Concerned Scientists:

Making Nuclear War Instead of Nuclear Energy

Since the sabotage operation at the Three Mile Island plant in Pennsylvania, the “nuclear safety”-minded Union of Concerned Scientists (UCS) has been thrust forward as the chief advocate against nuclear power in the United States. Far from being the crusading band of activists the media portrays, the UCS was created by top Anglo-American intelligence circles to carry out their mad dream to control the world by imposing deindustrialization and depopulation in the 1980s.

This characterization is confirmed by three basic features of the UCS:

First, the main tactical objective of the UCS was to dismantle the old Atomic Energy Commission (AEC) and to set up an “independent” nuclear regulatory body riddled with anti-nuclear agents. That objective has been accomplished.

Second, the top personnel of UCS interface at numerous points with a host of Anglo-American intelligence operations on both the “left” and the “right.”

Third, the UCS is a subsumed element of “arms control” mafia centered in Cambridge, Massachusetts whose strategic objective is to force the Soviet Union to accept a nuclear facedown and a new global Dark Ages.

Where Did It Come From?

The origins and mode of development of the Union of Concerned Scientists bear the ineradicable imprint of two of the worst scoundrels in postwar U.S. history: Noam Chomsky and Daniel Ellsberg. They and the UCS are tied to an operation that goes back to the anti-Vietnam-war ferment on the Massachusetts Institute of Technology campus in the late 1960s.

Groups such as SESPA—a “science for the people” group operating under the umbrella of the antiwar March 4 Movement—raised the demand that MIT break its connections to laboratories conducting military research under government contract.

At the time, MIT had more government defense contracts than any other university in the country, comprising a substantial fraction of its total budget. The two main facilities were the Instrumentation Laboratory and Lincoln Laboratory, the former concerned with missile guidance and the latter dating back to World War II radar and Manhattan Project research.

There were two objectives in going after these laboratories: first, as a wedge into a vulnerable flank that would break MIT’s industry-science tradition; and second, to set up even more secret “wonder weapon” research off campus, modeled after the British aristocracy’s subterranean installation at Aldermaston. The antimilitary research movement also fertilized the soil out of which UCS grew from its founding at MIT in 1969.

Chomsky Negotiates

In the early 1970s the MIT brouhaha about military research peaked. Professor Noam Chomsky, who was in England at the time delivering the Russell Memorial Lectures, was called back to MIT to negotiate the conflict. (Chomsky, whose work on linguistics has been used in mind control experiments, has direct links to terrorist groups here and in Europe.) As a result of the negotiations, MIT retained Lincoln Lab but divested the Instrumentation Lab, by then renamed Draper Lab.

The “divested” Draper facility is the group of labs that has conducted research since then on advanced electronic “chips” for ultra-high-accuracy missile guidance. The guidance systems developed out of this research have reinforced Energy Secretary James Schlesinger and National Security Advisor Brzezinski’s insane delusion of a U.S. nuclear first strike capability that could win a nuclear war with the Soviet Union.

The MIT antimilitary movement, moreover, was controlled directly by

Jim Morey, a former long-time Rand Corporation and Air Force Intelligence operative. Morey suddenly took up residence in the late 1960s at the Cambridge Institute, the Boston arm of the leading U.S. terrorist and social fascist think tank, the Institute for Policy Studies, which was founded in 1963 by a former staff member of the National Security Council.

Morey's colleagues at the Cambridge Institute included Gar Alperovitz, a designer of Mussolini-style economic reforms and author of the book *Atomic Diplomacy*, a coverup of Churchill's order to President Truman to A-bomb Japan. Alperovitz was also a leading figure in the March 4 Movement's teach-in on the MIT military research question, although he, like all other Institute for Policy Studies operatives, plugged directly into the intelligence networks run by the National Security Council.

Another important part of the Cambridge anarcho-fascist milieu in the early 1970s interfacing the Cambridge Institute and UCS operations was a "New Economics" project at Harvard. The present UCS Director, Daniel Ford, was a young graduate student in that program. According to the group's own bogus history of the period, Ford—who allegedly was not particularly antinuclear at the time—undertook a study of the environmental features of various energy sources, including nuclear power. Quite by accident, UCS says, Ford received, in response to requests submitted under the Freedom of Information Act, several documents that indicated the inadequacy of safety procedures for U.S. nuclear plants.

Watergating the AEC

Thus began a Watergate operation against the AEC, similar to the Ellsberg Pentagon-to-antiwar affair. For some reason, Ford sought the help of MIT physics professor Henry Kendall to verify the Freedom of Information Act disclosures. Soon Kendall applied for and received more documents incriminating the AEC and the nuclear industry.

Ford and Kendall then began meeting secretly with disaffected AEC employees and collecting "anonymous" letters describing alleged safety vio-

lations by the AEC and industry, as well as some classified documents. All these goodies helped catapult the Union of Concerned Scientists into national prominence.

This episode raises a number of very interesting questions. What officials of the AEC or other government agencies were involved in leaking secret documents to the UCS, and then protecting the UCS from prosecution as clear violators of the Atomic Energy Act's security provisions? Were the leaks of "safety violations" part of the profiling of various nuclear plants in preparation for last month's sabotage at Three Mile Island?

The UCS's smear operation was sufficient to raise a stink in Congress where representatives such as Sen. Howard Baker began to call for separating regulatory functions from the AEC, which at the time were under the Technology Division headed by Dr. Milton Shaw. With the stage thus set, numerous pronuclear figures fell into the trap of joining the call for a separate regulatory agency. This group, which included Washington state Governor Dixy Lee Ray, thought they might head off the looming attack on the nuclear industry. They

also had their own grievances against the AEC and the congressional Joint Committee on Atomic Energy for not paying enough attention to more advanced nuclear research and development.

However, this pronuclear group failed to adequately take into account two critical political aspects of the situation. One was the argument by the UCS that "special interest" industrial groups should not be permitted to influence government R&D policy under any condition. Second was that the head of the AEC at the time was none other than James R. Schlesinger. Schlesinger was playing a deception game fully consistent with his political philosophy of "lie, but don't get caught." To maintain his credibility in industrial and scientific circles, Schlesinger came out against the AEC reorganization, but at the same time he cut the basic nuclear research program and opened the door to endless environmentalist intervention by permitting a challenge to the licensing of the Calvert Cliffs nuclear plant in Baltimore, Maryland.

As planned, the reorganization went through and Dixy Lee Ray became AEC chairman. Immediately,

Mossad Implicated in Nuclear Sabotage

Two nuclear reactors destined for Iraq were almost completely destroyed April 6 when five explosive charges went off at the atomic equipment plant of the Chantiers Navals et Industriels de Méditerranée company in the Southern France town of La-Seyne-sur-Mer.

French press and government officials unofficially implied that the Israeli secret service was responsible for the terrorist act. On the day of the blasts, a French government official queried by an Israeli news correspondent replied, "I think you would know more about this than I do," according to the April 7 *Washington Post*.

The two nuclear research reactors, which were within days of being ready for shipment to Iraq, will have to be rebuilt, a task estimated to take up to 18 months. Israel has repeatedly claimed that Iraq would use the uranium that was to accompany the reactors to build its own atomic weapons.

The explosives were set by a team of three highly skilled professionals, with expert knowledge not only of explosives, but of nuclear installations, according to French reports. The team accessed the construction plant at night and immediately neutralized the alarm system with a secret code.

Ford and Kendall escalated the UCS operation and joined forces with "consumer advocate" Ralph Nader—a brand new devotee of the anti-nuclear cause—to go after Ray mercilessly on the safety question. In the subsequent course of events, Ray was forced out, and the AEC was completely reorganized: first, into the Energy Research and Development Administration, and then into the present Schlesingerian Department of Energy, along with a completely separate Nuclear Regulatory Commission. Now, after Three Mile Island, the UCS has joined forces with the "submarines" on the NRC to demand the complete shutdown of the nuclear industry.

It was, in fact, present NRC Commissioner Victor Gilinsky, a member of British intelligence's International Institute for Strategic Studies and a former colleague of Schlesinger at Rand specializing in nuclear nonproliferation, who was the architect of the NRC.

Along the way to the present state of affairs, a critical incident occurred in the mid-1970s. Several nuclear engineers quit their jobs at General Electric in California and denounced the nuclear industry and nuclear power. They were all members of a cultist "consciousness-raising" group called the Creative Initiatives Foundation, a group set up in California in the 1930s by a British national during the same period that British intelligence's hallucinogen pusher Aldous Huxley was setting up shop there. During the same period, NRC engineer Robert Pollard (see box, this page) underwent an observable change of personality and defected to the UCS.

The GE engineers were put on display in Atlanta by British intelligence's Dame Margaret Mead at a National Council of Churches meeting. This meeting passed an antiplutonium resolution to kill further development of the more advanced breeder technology and nuclear power generally. One engineer from this group subsequently became the "technical" advisor to the makers of the recent "China Syndrome" film.

Was this strange milieu the normal

stomping grounds for UCS physicist, Prof. Henry Kendall? Hardly.

Henry Kendall was a member of the elite "Jason" group of physical scientists who act as consultants on special weaponry and counterinsurgency to the Advanced Research Projects Agency of the Defense Department. During the late 1960s, supposedly antinuclear Kendall was reported in the *New York Times* to be a member of a four-man secret Jason military mission to Vietnam that was said to be surveying the battle field for tactical nuclear weapon deployment. The group, led by Dr. Richard Garwin of IBM, claimed they were working only on the "electronic battlefield."

I went into engineering because I don't want to deal with people. My idea of a good time is to go to Sears and look at the tools.

—Robert Pollard

Union of Concerned Scientists,
Former engineer for the
Nuclear Regulatory Commission

Garwin had conducted a similar military mission during the Korean war—even though he works closely with arms control circles in the Federation of American Scientists. The Federation consists of a "moderate" faction including Nobel Laureate Hans Bethe and a group of devoutly anti-Soviet Amnesty International types, such as Federation director Jeremy Stone, who are bent on curbing all scientific progress in new weapons systems.

In 1977, Kendall testified before the Senate Banking and Housing Committee hearings on civil defense and nuclear war.

He presented two reasons why the United States should not develop a civil defense program. First, civil defense exercises would be seen as provocative by the Soviet Union—this is, incidentally, the flip side of the argument used by Zbigniew Brzezinski on ABC-TV's recent series discussing U.S. military capabilities to warn against Soviet use of their existing civil defense facilities. Second and more

important, according to Kendall, this country could not support all the survivors of a nuclear war, so why save their lives temporarily through civil defense?

Exactly the same line has been pushed by Kendall's MIT physics colleague at MIT, Prof. Bernard Feld, in recent testimony before the same Senate committee. Feld is a psychotically antitechnology proponent of decentralization and solar energy who is currently the editor of the *Bulletin of Atomic Scientists*. The *Bulletin* functions as the mouthpiece for the 1940s-1950s British intelligence "Ban the Bomb" networks of Bertrand Russell, Niels Bohr, and Robert Hutchins; its current profile is environmentalist.

Kendall's selection as UCS chief scientist—despite the fact that he has no previous background in nuclear energy or social activism—his propitious receipt of useful Freedom of Information Act and secret documents, and his connections to both nuclear "wonder weapon" and antiproliferation circles are not so strange. After all, who is now the top "radical" leader of the Mobilization for Survival, the antinuclear umbrella organization that prominently includes the UCS? "Antiwar," "antinuclear" activist Daniel Ellsberg, a "former" colleague of Henry Kissinger at Harvard, "former" colleague of James Schlesinger at Rand, and a top Rand and National Security Council operative in his own right.

The Union of Concerned Scientists, in short, is nothing but a conduit and a front for the antinuclear and strategic policies of Anglo-American intelligence operatives Kissinger, Schlesinger, and Ellsberg.

Who Pays for UCS?

UCS's funding also betrays the organization's pedigree. The UCS has a salaried staff of 10 occupying a 10-room office in Cambridge that is paid for by a \$140,000 annual budget. It receives funding from the Rockefeller Brothers Fund and the Max and Anna Levinson Foundation. The Levinson Foundation, which gave UCS \$25,000 last year, is a cofounder of a variety of antinuclear operations along with the Stern Fund, which is in turn a major founder of the terrorist-con-

nected Institute for Policy Studies. The Levinson Foundation recently commissioned a study for Sen. Ted Kennedy's Joint Economic Committee by Bob Williams of Princeton's Environmental Center. The study concluded that there is no connection between economic growth and energy use.

In yet another project, the "anti-nuclear" Levinson Foundation commissioned a study of the Fusion Energy Foundation. This study was passed along to the supposedly pro-nuclear Slaner Foundation, which used the information to try to track possible FEF supporters and donors into an abortive imitation of the FEF during the past year.

Simultaneous with this nasty little operation, slanders were circulated among individuals close to the FEF that the Fusion Energy Foundation is antisemitic, while the "conservative" Heritage Foundation and William Buckley's *National Review* fulminated over the FEF's tax-exempt status.

The Slaner Foundation connects directly, through its sponsor the Kayser-Roth Corporation and Kayser's board member Disque Dean of Lazard Freres investment bank, into the so-called Nuclear Club of Wall Street. The latter has functioned as a Mossad (Israeli Intelligence) operation to maintain Anglo-American financial control by a select group of Anglo-American financiers over nuclear fuel and technology and to guarantee Israeli nuclear capabilities.

Bringing the UCS connections full circle, the numerous documented connections of the Nuclear Club of Wall Street to the Mossad include a direct interface with the producers of UCS's favorite film, "The China Syndrome." The banking house for Columbia pictures that produced the film is Allen and Company. That firm has been identified publicly as working closely with Meyer Lansky, the U.S. gangster exiled to Israel.

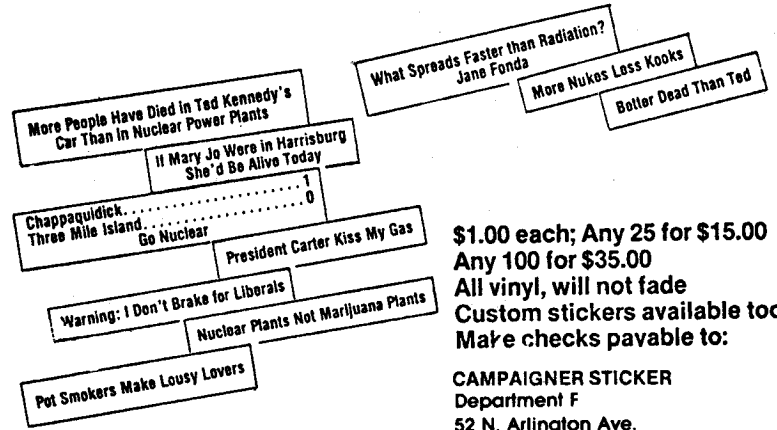
The UCS and its backers may do everything possible to halt the proliferation of nuclear energy, but they have no such concerns about the spread of drugs, the destabilizations of governments, or war.

—Dr. Morris Levitt

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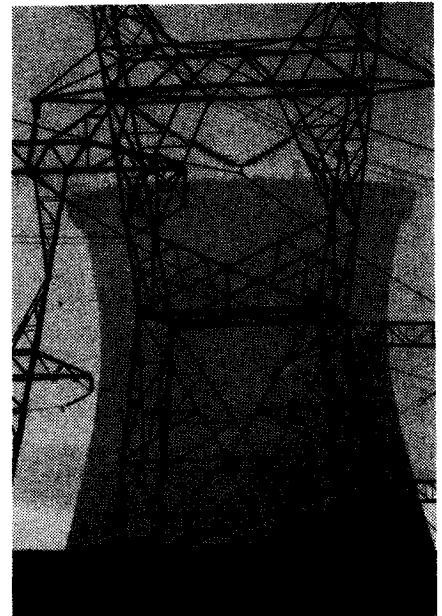
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Investigating The Harrisburg Hoax

1. Commission Presents Evidence of Sabotage
2. The Case for Sabotage: Human Error Ruled Out
3. The Big Lie About Radiation
4. Waste Disposal Dispute Threatens Cancer Research

1

Commission Presents Evidence of Sabotage

The Independent Commission of Inquiry into Three Mile Island has held several meetings and press conferences in Pennsylvania to compile and publicize evidence on the probability of sabotage at the Three Mile Island nuclear plant. The commission, which was initiated by the Fusion Energy Foundation in April, has 11 members, representing industry, labor unions, and nuclear science.

To make sure that the question of sabotage is fully addressed in all the official governmental investigations of the TMI incident and to counteract the antinuclear propaganda, the commission has launched a fundraising campaign to put full-page advertisements in the *Harrisburg Patriot*, the *Journal of Commerce*, *Nuclear News* and other national press. The commission is administered by the FEF, and contributions earmarked for the commission ad campaign and made payable to the FEF are tax-exempt.

The commission held its first official meeting at the State Capitol building

in Harrisburg, May 24. In the private part of the meeting, FEF executive director Morris Levitt laid out the TMI situation in the light of the recently published Council on Foreign Relations' *Project 1980s* scenario for the "controlled disintegration" of the U.S. economy.

The commission members resolved to raise \$5,000 to fund a complete report on TMI and \$10,000 for the full-page advertisements mentioned above. They defined the ad campaign as "urgent" in light of the mounting propaganda to kill nuclear energy in the United States.

After the commission meeting, members met with State Representative Jim Wright, chairman of the Pennsylvania Legislature's Investigating Commission on TMI, the legal counsel and secretary for the state commission, and other state legislators. The state commission offered time for the independent commission to testify at state hearings.

Key Questions

The independent commission recommended three key lines of investigation to the state commission:

(1) What will be the effect on the U.S. economy of shutting down nuclear power?

(2) The admitted sabotage at the Virginia Electric Company's Surry II nuclear plant makes it completely irresponsible not to seriously and ade-

quately investigate the likelihood of sabotage at TMI.

(3) Is the federal government's policy on nuclear power, as well as the national antinuclear press coverage, a result of the influence of zero-growth philosophy?

The commission members also held meetings with the American Legion, the State Chamber of Commerce, farm and labor groups, the State Department of Agriculture, and the coordinator of the governor's commission to investigate TMI.

The commission has defined two essential goals. First, to provide the sharp cutting edge of a campaign for nuclear development to counter the rapidly increasing attacks on nuclear power. Second, the commission intends to force the sabotage issue to be considered by the public and the official commissions investigating TMI.

Commission members feel that at this point the nuclear industry has adopted an official policy of "sitting this one out," while the guttersnipe environmentalists and their more respectable collaborators in the government are tearing the industry apart, brick by brick.

Readers who can arrange publicity for the commission campaign—radio and TV interviews, for example—should contact Jon Gilbertson at the FEF New York office.

2

The Case for Sabotage: 'Human Error' Ruled Out

by Jon Gilbertson

Although none of the official investigations of TMI has publicly addressed the sabotage question, some of the evidence presented in recent testimony has backed up the case for sabotage. In fact, testimony on the first two events of the sequence of failures of the TMI plant has confirmed that mechanical failure was not involved.

Both events were instead caused by what the Nuclear Regulatory Commission calls "human failures" or "operator error." However, the NRC has provided absolutely no explanation of how this could be possible. To date, in fact, it has been impossible to get anyone in the know to discuss these two events or to give any kind of explanation of how human error could account for them.

Before reviewing the recent testimony on the sequence of events leading to the TMI incident, I'll summarize what I reported in the May issue of *Fusion*. At the time of the incident, the Fusion Energy Foundation raised the question of the extreme unlikelihood of the then-known sequence of failures at the plant. The probability that mechanical failure could have caused the first two failures in series—that is, the main feedwater flow loss followed by the loss of both auxiliary feedwater flow systems—was less than 1 in 1 million. If you added to that the 1 in 1,000 probability that the pressure relief valve would fail in the open position, the probability of the sequence of failures became 1 in 1 billion.

Either of these extremely low probability sequences would lead any person knowledgeable in probability analysis to conclude—as the FEF did—that mechanical failure was not the cause of the incident; human intervention was.

What follows is a point-by-point review of the technical facts of the

case surrounding the complete loss of both feedwater flow systems, the main and the auxiliary systems, as they have been presented in public testimony.

Auxiliary Feedwater Flow System

Both auxiliary (or emergency) feedwater flow systems had been manually put out of operation before the incident by the closing of two separate valves. These two valves, one each in two completely separated auxiliary feedwater flow systems, are "presumed" to have been shut off for 42 hours preceding the incident. At that time, these two valves had been tested as required by NRC regulations, during which they were closed and reopened over a three-hour test period.

Although the written test records show that these valves were reopened—they were signed off as such by the operator—it is now "officially" assumed that the valves must have remained closed from that time on until the incident. That is, it is assumed that the operator actually forgot to reopen the valves, even though he signed and checked off that he did. Further, this means that the valves remained closed as at least five different shifts of skilled and experienced operators came on and off duty, never noticing or checking the red alarm lights, tags, open switches, and so forth that would alert them to such circumstances on two of the most important valves in the plant.

Operation of a nuclear plant under such conditions is strictly prohibited by regulation and protected against by various electronic means as well as by rigorous sign-off and checking procedures, as all operating personnel are aware.

Accepting "human error" as responsible for this is asking the public to believe that all the protective measures were bypassed or ignored

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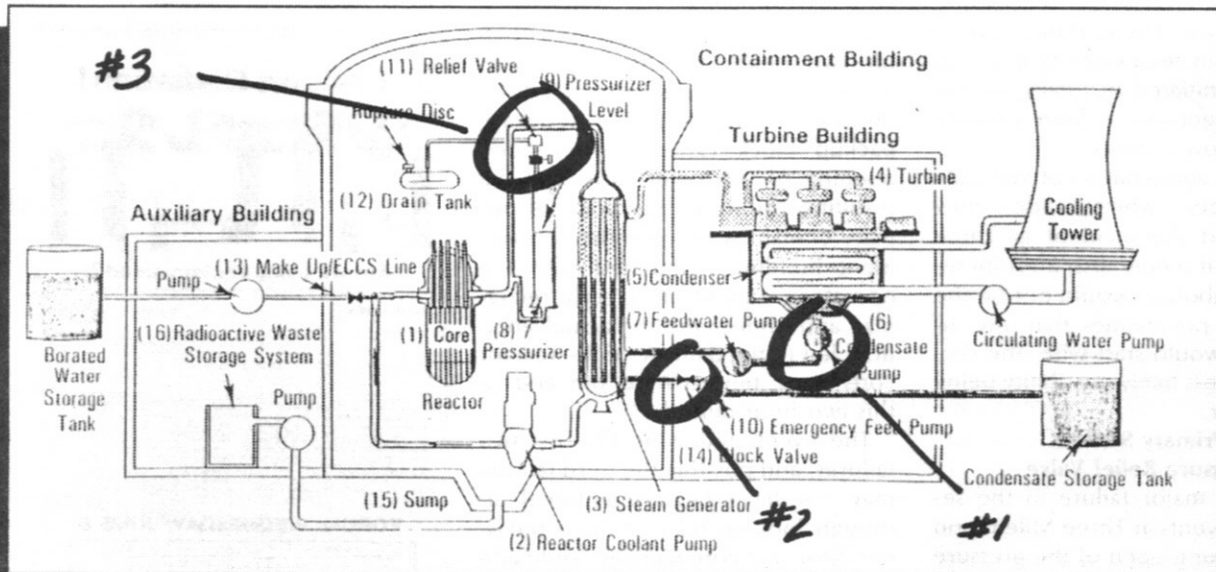
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This schematic of the TMI plant was part of the testimony of Herman Dieckamp, president of the General Public Utilities Corporation, at congressional hearings May 24. Fusion has circled the locations of the three failures mentioned in this text.

and, furthermore, that the operators were totally incompetent. Such a situation is not credible in any power plant, not to mention a nuclear plant.

A more likely explanation is that these valves were closed intentionally sometime before the incident, perhaps within minutes or even hours, for the purpose of creating a potentially serious incident at TMI. All that would be necessary to produce such an incident is to somehow cause the main feedwater flow system to trip out and shut itself down.

Under normal circumstances, after a main feedwater flow loss, three separate and independent auxiliary feedwater pumps automatically would come on, pumping sufficient feedwater through any one of three pumps to cool the reactor in a shutdown condition. In the TMI incident, these three auxiliary pumps, in fact, did come on within two seconds after the main feedwater flow shutdown. However, the pumps could draw no water because their water source was shut off by the closure of the two feedwater valves for the two separate, independent flow lines. Therefore, at least until this condition was discovered and corrected by the plant operators, the reactor core had no means of transferring its heat outside

the reactor building and it had to begin to heat up.

Main Feedwater Flow System

Circumstances surrounding the shutdown of the main feedwater flow system and the resulting turbine trip are even more cloudy than the explanations given for the failure of the auxiliary flow systems. However, the one thing that now appears certain is that its shutdown was also *manually induced*. It was the loss of main feedwater flow that initiated the TMI incident and, with both auxiliary (backup) feedwater systems suspiciously out of service, led to the subsequent more serious events.

The main feedwater flow loss was triggered approximately as follows. Maintenance was being performed on the condensate polishing (filtering) system during the one- to two-hour period preceding the incident, which consisted of cleaning several partially plugged filters. This cleaning process involved opening a valve on a pressurized air line on each filter, which forced air back through the filter (against the direction of water flow) thus blowing out some or all of the residue clogging it.

Apparently, after at least one filter had been successfully cleaned this way, the maintenance crew went on

to another filter to begin a similar process. However, it now appears that the maintenance person or persons failed or forgot to shut off the air valve on the first filter, as the procedure calls for, before moving on to the next. Since the compressed air lines on all these filters are manifolded together, the opening of the second air valve while the first air valve was still open somehow (the exact explanation is not available yet) caused water to back up into the air line of the first filter arrangement.

This manually initiated event caused a condensate pump to turn off, which, in turn, caused an automatic tripping-off of both main feedwater flow pumps. There was also an automatic turbine trip when the main pumps tripped out, since this condition cuts off the heat load to the turbine, which must then shut down to protect itself.

The loss of the main feedwater flow is not such an unusual event; it has a rather high probability of occurrence of about 1 in 100. However, when this has happened before on other reactors, there have not been any serious consequences because the auxiliary feedwater systems automatically came on to remove the heat from the shutdown reactor.

The *unusual circumstance* about the TMI main feedwater flow loss is that it was *initiated manually*, as was the *subsequent loss of both auxiliary feedwater flow systems*.

Given this combination of manually initiated events, which insiders now agree started the incident at Three Mile Island, it seems absolutely incredible that sabotage would not be the first of two possibilities that any investigation would start with, the second, much less likely possibility being human error.

Primary System Pressure Relief Valve

The third major failure in the sequence of events at Three Mile Island was the sticking open of the pressure relief valve on the primary system pressurizer tank. This does appear to be a mechanical failure, although even here some highly suspicious evidence is beginning to be uncovered that must be investigated thoroughly with respect to the first two failures. It has been reported and documented that this type of pressure relief valve has been known to stick in the open position before. In fact, the NRC stated that it now felt that this might happen as often as 1 or more times every 50 times the valve was activated.

Anyone knowing how to manually set up and initiate the first two events would certainly know about the potential vulnerability of this pressure relief valve and perhaps even plan on its failure. Furthermore, with the reactor in the condition of no heat being removed because all feedwater flow was shut off, this pressure relief valve would have had several chances to fail open. That is, the heat-up and pressure increase in the primary system would have continuously opened and closed this valve until the transfer of heat was finally restored to the steam generators.

In the TMI incident, it took the operators more than eight minutes to realize that the auxiliary feedwater flow valves were closed, at which time they opened them. However, as is now known, the pressure relief valve, which opened within a few seconds after the incident was initiated by loss of all feedwater flow to the steam generators, failed to automatically

close. In fact the valve remained open for two hours and fifteen minutes before the operators recognized the condition and closed a separate backup block valve. The extended opening of this relief valve and the resulting continual blowdown of primary coolant water into the containment building, combined with the operator's inability to clearly recognize and understand the actual situation, led to the damage of the reactor core some time toward the *end* of this two-hour period.

The events following the first two failures, and possibly the third failure, may not have been intentional although looking back at them today, it is clear that core damage could and should have been avoided. It is no doubt the case that given the difficult situation the operators found themselves in during the first minutes and hours after the incident, they did everything they thought appropriate for the situation that they presumed they were in.

However, there is every reason to believe that the initiating events of the TMI incident were intentionally set up and triggered by one or more persons inside the plant. The aim of the person or persons involved in collaboration with people on the outside would have been to create a serious incident at a reactor plant in order to discredit nuclear power in the eyes of the public with a scare campaign. To create such a situation required only the loss of all feedwater flow followed by (a) overheating of the reactor coolant water, (b) several openings of the pressure relief valve with primary coolant blowdown, and (c) activation of the emergency core make-up water system or possibly the emergency core cooling systems.

Even if the TMI incident would have been terminated within the first 15 minutes, the failure of these feedwater flow systems followed by the activation of other emergency systems would have been unprecedented and would have been used to create negative publicity for nuclear power.

Jon Gilbertson, director of nuclear engineering for the FEF, is a well-known nuclear safety expert.

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3

The Big Lie About Radiation

by Dr. Richard Pollak

An invisible but deadly force is sweeping down upon us, bringing silent death wherever it goes. At least, that's what the current barrage of nuclear scare stories would have us believe. In the aftermath of the Three Mile Island sabotage Joseph Califano, the secretary of Health, Education, and Welfare, ominously declared that 10 people would be dead, struck down by radioactive puffs of vapor. Dr. Spock gets up before crowds of confused parents and warns them to stop nuclear power if they love their children because radioactivity is just too dangerous.

Newspaper stories, movies, books, speaker after speaker barrage an increasingly frightened public with the myth that nuclear power is the genie out of the bottle, a technology that will envelop and destroy us because

Table 1
SPECTRUM OF ELECTROMAGNETIC WAVES
RANGING FROM LONG RADIO WAVES
TO SHORT COSMIC RAYS

10^4	
10^3	
10^2	Radio waves
10^1	
10^0 (1 cm)	
10^{-1} (1 mm)	
10^{-2}	Infrared
10^{-3}	
10^{-4}	Visible light
10^{-5} (1 m)	Ultraviolet
10^{-6}	
10^{-7} (1 m)	X-rays
10^{-8} (1 Å)	
10^{-9}	Gamma rays
10^{-10}	
10^{-11}	Cosmic rays

Table 2
THE CONTRIBUTION OF NUCLEAR POWER
TO RADIATION LEVELS

Type of radiation	Millirems per person
Natural radiation (per year)	
Cosmic radiation	35.0
Airborne	5.0
Terrestrial	26.0
Food	25.0
Building materials	30.0
Manmade radiation	
One coast-to-coast flight	5.0
Color television (per year)	1.0
One chest X-ray	35.0
Nuclear plant radiation	
Living within a 50 mile radius of a nuclear power plant	0.01
Total from the "disaster" at Three Mile Island	1.5*

* Acknowledged to be an overestimate. See box on page 14.

we're just too weak and stupid to handle it. Nuclear accidents will destroy entire cities, radiation will kill and maim present and future generations, and a legacy of poison will remain for our children.

This atmosphere of hysteria, engineered with such skill and at such great expense, is intended to keep us from thinking, calmly and rationally. But what are the actual facts?

A close look at the most quoted reports ostensibly damning nuclear energy shows that they do nothing of the kind. Instead, they demonstrate that nuclear energy generation is the safest known power method, that the levels of radiation involved with nuclear power are so negligible that their effects at worst are not detectable within the population, and that the hypothesis that low levels of radiation are harmful has never been accepted by the scientific community as a whole.^{1,2,3}

So how did Califano arrive at a figure of 10 dead from Three Mile Island? Assuming for the moment that his honesty is not in question, let us examine the methodology used to generate this number. The argument goes as follows: Exposure to extremely high doses of radiation over long periods of time will result in a significant increase in the incidence of cancer. Therefore, low levels of radiation over long periods of time will also result in a significantly increased incidence of cancer. In other words, since drinking a glass of fluoride will kill a child, fluoride should not be added to our drinking water. . . .

It is this method of *linear extrapolation* that is patently incorrect; at best it stems from a lack of understanding of biological processes, at worst it represents black propaganda. A fact of life is that overdoses of biologically necessary substances may be life-endangering. But it has never been demonstrated that the levels of radiation associated with nuclear power are harmful:

"It is not known whether dose rates of . . . radiation around 100 millirads per year are detrimental to exposed people; somatic effects would be masked by environmental or other

factors that produce the same types of effects on the health of those exposed as does ionizing radiation. It is unlikely that carcinogenic and teratogenic effects of low-LET radiation [radiation characteristic of X rays and gamma rays] administered at this dose rate will be demonstrated in the foreseeable future."¹

Radiation

Radiation is a common, necessary part of our lives (see Table 1). Ultraviolet (UV) radiation is the radiation from the sun responsible for sun tans, vitamin D production—and skin cancer. In the visible-light area of the electromagnetic spectrum, solar radiation is responsible for photosynthesis, by which plants turn the sun's energy into a form of energy that supports all life processes on earth. Radiowaves give us television, radio, radar, navigation, and so on. Radiation in the short-wavelength part of the spectrum gives us nuclear power, industrial testing methods, and medical diagnostic-therapeutic techniques. Any radiation, if used carelessly, can be harmful.

The nuclear radiation (Table 2) in the shorter wavelengths produces *ionizing* reactions in biological and other material; that is, when the radiation collides with atoms it releases electrons and changes a stable atom into a reactive ion (with positive charge). Along a track of high-energy radiation a train of ions is formed that can initiate a chain of chemical reactions. This property is believed to be responsible for the transformation of a healthy cell into a malignant one. It should be remembered, however, that in healthy cell metabolism ionic interactions are constantly taking place.

The Effects of Radiation

It has been demonstrated that large doses of radiation over short time periods are harmful. Very large doses, over 500 rads, are lethal to 50 percent of the population exposed. Lesser doses, over 100 rads, will cause radiation poisoning—nausea, loss of hair, lethargy, fatigue—but full recovery is usual (even for the victims of Hiroshima). An increase in cancer, however, has been documented for persons receiving over 100 rads in short



The natural radiation produced by the granite used in the construction of Grand Central Station would classify the building as a dangerous health hazard—according to environmentalist logic.

time periods. In Great Britain, over 15,000 patients received medical irradiation that averaged about 400 rads; of these, an estimated 100 suffered cancer deaths in excess of what would be expected for such a population sample. That is, radiation doses 10,000 times the doses involved in relation to nuclear power plants or medical X-rays caused a 0.7 percent incidence of cancer.

The incremental increase of radiation from nuclear plants, when added to the natural radiation we receive every day, is so small as to be virtually undetectable by any means. The increase is less than 1 millirem per person per year, which is less than 0.5 percent of normal exposure from the sun, buildings, other people, and so on. And since biological research indicates that low-level "insults" to the body from any source are repaired, there is no relationship between high-intensity induced disease and low-level effects.

The extrapolation of large-dose effects to low-dose effects results from the state of ignorance that exists in the biomedical sciences today. Let us examine this method of linear extrapolation in greater detail. The first step is the gathering of evidence that high levels of radiation, over 10 rads per dose, are carcinogenic.

One study of workers who had ingested large quantities of radium from licking their paintbrushes to get fine points while painting watch dials with this radioactive material showed that they developed bone cancer more often than would be normal. These data led investigators to conclude that radium caused the bone cancer. Other human studies as well as animal studies demonstrated that substantial exposures to radiation led to an increased incidence of cancer.

But at what level would the detrimental effects not appear? Because it is so difficult to determine that an effect has occurred when the statisti-

cal data are close to the natural levels, investigators who are not scientists have arbitrarily decided to draw a straight line from the point of high-dose, high-effect down to the point of no-dose, no-effect and then assume that this line represents the reality of dose-biological effect relationships (see Figure 1).

Snowball Reasoning

Another example of this linear reasoning would be: since a person hit by 500 snowballs at once will die from this event, a linear extrapolation predicts that a person hit with one snowball a day for five winters will also die. Similarly, throwing 500 snowballs at 500 people in one day will kill 1 person, since for every 500 snowball-people-days 1 death will result. Absurd, no? Yet this is the basic reasoning behind Califano's dire predictions.

A less absurd example is demonstrated in our daily lives: The chemical zinc is a vitally necessary ingredient in our diets, found in all vitamin supplements. But you will die from this deadly chemical poison if you drink a cupful at once.

You might say that although this linear-extrapolation method is a poor excuse for nutritional science, it still might be valid for carcinogenic events. But, as was detailed in *Fusion*,⁴

the claims that every industrial process exposes the population to an increased likelihood of cancer are outright lies, based on manipulations of data. The incidence of cancer in the United States for 1900-1978, the period of intense industrialization, has remained constant (once increased life-expectancy, absolute population size, and smoking-correlated lung cancer are properly incorporated into the data).

But, you might ask, what of specific inducers of cancer? Couldn't radiation be this kind of case? A report released by the Consumer Product Safety Commission April 26 further attested to the known carcinogenicity of vinyl chloride, a common substance used, for example, to coat photocopying paper. Experiments with rats and mice showed that large doses of vinyl chloride produce tumors in mice but not in rats. Considering the close similarity between mice and rats, this should make researchers more hesitant in using work on mice to draw conclusions for human biology.

More significantly, the study demonstrated that a threshold phenomenon was present—a certain level of exposure to the vinyl chloride was necessary before any effects whatsoever could be demonstrated. Al-

though a cumulative exposure to the chemical lowered this threshold level somewhat, small doses over a longer time period still showed the threshold effect. In other words, as this study proves, although there are substances that should be handled with care, it is fallacious to assume that the mere presence of the substance ipso facto means death for a predictable number of people, Califano's environmentalist claim to the contrary.

The Low-Level Question

What about low-level radiation? Even the most ardently antinuclear scientists will admit that threshold levels may obtain here as well. To quote from two reports:

"Estimates of the rate of induction of cancers and genetic effects caused by low radiation doses are seriously affected by the kind of extrapolation used. On this point the scientific evidence is not yet conclusive. Most students of this field believe that the rate of induction is either equal to or less than that estimated by linear extrapolation."²

"The Committee's most difficult task has been to reach a consensus on how to estimate the carcinogenic risk of low-dose, low-LET radiation. It was recognized early that there is no truly adequate or generally acceptable scientific basis for such estimation. . . . The Committee recognizes that some experimental and human data, as well as theoretical considerations, suggest that, for exposure to low-LET radiation at low doses, most cancer risk estimates based on the linear hypothesis are too high and should not be regarded as more than upper limits of risk. . . . In animal experiments, it has been shown, often with considerable statistical precision, that the dose-effect curve for radiogenic cancer can have a variety of shapes (sometimes including even a negative initial slope). As a rule the dose-effect curve has a positive curvature for low doses of low-LET radiation, i.e., the slope of the curve increases with increasing dose. . . . It seems probable that, for most types of radiogenic cancer, linear extrapolation from incidence at high doses results in an overestimate of risk associated with doses of a few rads of low-LET radiation. Neverthe-

What Radiation?

An ad hoc committee made up of the Environmental Protection Agency, the Health, Educational, and Welfare Department, and the Nuclear Regulatory Commission found that the average cumulative radiation dose to persons within a 50-mile radius of the Three Mile Island nuclear plant was 1.5 millirem—less than 5 percent of that received from one normal chest X ray.

According to the ad hoc committee's report, this amount is so insignificant that at most less than 1 case of cancer could be added to the 325,000 normally expected cancer deaths among the 2 million population of the area, and this calculation uses the worst-case estimates of these exposures.

Additionally, the "report claims that its figures overestimate risk, however, because no reduction was made to account for shielding of people indoors . . . and the fact that the dose to internal body organs would be less than the dose to thermoluminescent dosimeters monitoring the area."

(The committee's preliminary report appeared in *Science News*, June 2.)

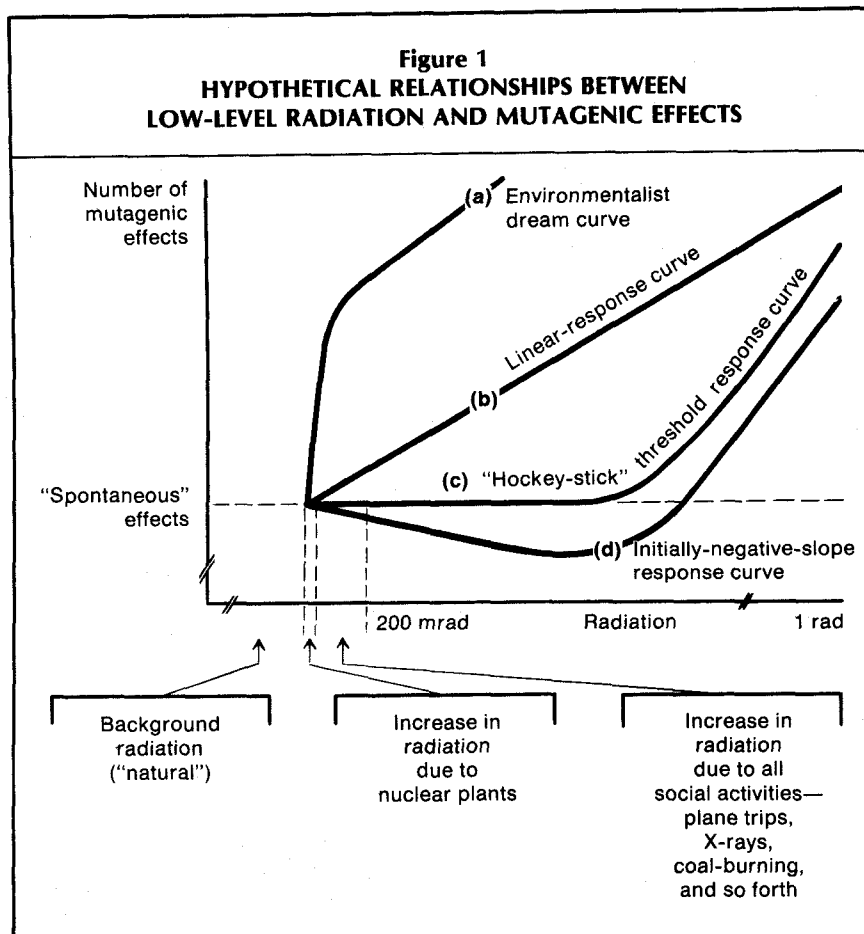
less, in most cases the linear hypothesis emerges by default as the simple model whose use appears to be least objectionable in the absence of clear evidence as to the shape of the dose-effect curve."¹

So the straight-line curve used to predict that low doses of radiation will cause cancer is simply accepted by "default . . . in the absence of clear evidence." What are some of the other hypothetical curves to extrapolate known radiation results to unknown areas where no carcinogenic or other risks have ever been shown? Keep in mind that the known data represent radiation doses of over 10 rads (usually over 100 rads) while for nuclear power we are talking about potential doses of from 10 to 100 millirads (1 millirad = 0.001 rad; 1,000 millirads = 1 rad).

Figure 1 depicts various possible relationships between the number of mutagenic events and increasing radiation exposure. As indicated earlier, the linear response curve (b) postulating a direct proportionality between radiation and cancer is the "default" curve. But the extrapolation from known 10-rad doses to unknown millirad doses takes one into a totally hypothetical area, removed from the known area by several orders of magnitude.

The third curve shown (c), known as the "hockey-stick" curve, depicts the normal biological response to environmental insults, as demonstrated in innumerable experiments with other substances. Here we note that a substantial increase in radiation is required before any rise in mutagenic effects is noted. This reflects the fact that biological insults must go beyond a certain "threshold level" before the body exhausts its capacity to handle them efficiently. The snowball example discussed earlier fits this curve. Indeed, most biological events reflect this threshold response curve.

The negative-slope curve shown in Figure 1 (d) is a provocative hypothesis, for if this type of response occurs it would indicate incremental doses of radiation above the "natural" amounts might actually be good for people. This is the curve applicable to



such dietary elements as zinc and calcium. Calcium is also necessary for good health, but overdoses will cause cancer in bulls. In fact, certain experiments have shown enhanced lifespans for animals treated with low-level radiation.

As already pointed out (see Table 2), the incremental increase of radiation due to nuclear plants is so small as to be virtually undetectable by any methods—if there is any effect at all. This is due to two interrelated facts: First, the less than 1 millirem increase per person per year due to nuclear power is less than one-half of 1 percent of normal exposures; and second, the biological findings concerned with thresholds and physiological repair make it virtually certain that any damage from low doses of radiation or any other low-level insults is "repaired." Therefore, the phenomenon of high-intensity-induced disease does not relate to low-level effects at all.

The extrapolation of large-dose effects to low-dose potential effects is a sop to the hysteria of the antinuclear antitechnology forces and results from the state of ignorance that exists in the biomedical sciences today. As a first approximation it is legitimate to look to epidemiological findings to give direction to various investigative efforts; but this should never be mistaken for science. Any scientific efforts concerned with the relationship of radiation and biological events must demand a causal and not correlative explanation of effects.

For example, naturally occurring radiation within our body results in more than 500,000 radioactive disintegrations per minute (a rate that justifies the slogan "nuclear power is safer than sex"). Yet, cancer is a disease of old age. Obviously, if there is a direct correlation between radiation and cancer, the causal relationship is not very straightforward; otherwise, under a continuous assault like this,

cancers would appear early and universally.

Similarly, were mutations to directly reflect radioactive insults, the cumulative effects over the eons should have resulted in widespread genetic disorders and infertility in the population, but this is just not the case.

This implies that although the physics of ionizing radiation is somewhat understood, the effects in the biological realm of these energies must be of a qualitatively different character, and thus must be approached as a scientific problem whose solution will yield fundamental insights into the unique nature of energy transformations and biological processes.

Paranoia Versus Reality

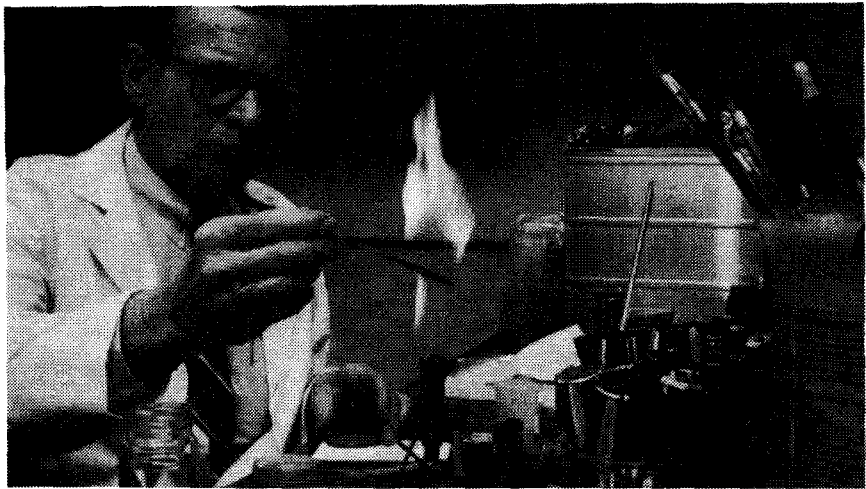
The environmentalist dream curve is just a mathematical representation of their hysteria. Califano's "10 will die from Three Mile Island" is based on mathematical juggling with no basis in reality. Even if a correlation were shown, which is not the case, the argument that radiation causes cancer would still be based on reductionist reasoning: I saw food appear in my doggie bowl every evening after I heard the noise of clanking cans. Therefore, when I am hungry I rattle tin cans to make the food appear.

Further research into energy transformations such as that of Dr. Sodi Pallares (featured in this issue of *Fusion*) will lead to a better understanding of radiation and other crucial questions. Only in the paranoid world of the environmentalists does energy represent danger; in our real world energy provides the key to the understanding of life processes and, ultimately, the negentropic invariant underlying all orders of the universe.

Richard Pollak is on the biological science staff of the FEF.

Notes

1. Committee on the Biological Effects of Ionizing Radiation of the Division of Medical Sciences in the National Research Council, "The Effects on Populations of Exposure to Low Levels of Ionizing Radiations," May 1979.
2. "Risks Associated with Nuclear Power (National Academy of Science, April 1979).
3. Herbert Inhaber, "Risk with energy from conventional and nonconventional sources," *Science* 203: 718 (1979).
4. Richard Pollak, "There is no cancer epidemic," *Fusion* 1 August (1978).



The hysteria about nuclear waste could wipe out 90 percent of U.S. cancer research. Above, a lab at the Memorial Sloan-Kettering Cancer Center in New York City.

4

Waste Disposal Dispute Threatens Cancer Research

A few days after the Three Mile Island incident, the governor of South Carolina announced that the state's disposal site for radioactive waste at Barnwell would no longer accept the liquid scintillation vials that contain the solution used in counting radioactivity in basic biological research—a decision that could shut down 90 percent of the nation's cancer research.

The governor's reasons for closing the Barnwell facility are directly related to the antinuclear propaganda after the TMI incident. In addition to the scintillation fluid, the governor banned the disposal of any low-level waste from the TMI plant.

The liquid scintillation fluid contains a minuscule amount of radiation, so low that by Environmental Protection Agency standards it could be poured down the drain. The fluid also contains a more toxic chemical, toluene. The toluene-containing fluid could readily be incinerated—except for the public hysteria generated by the environmentalists about contamination from low-level radiation.

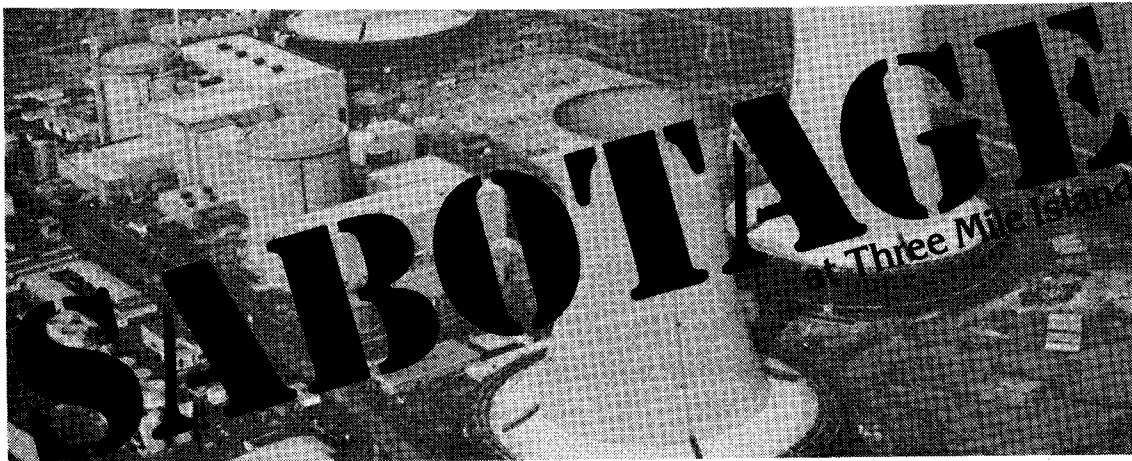
The vials of scintillation fluid are used routinely to measure metabolic activity by following the rate of metabolism of some specific molecule tagged with a tracer element such as

carbon-14 or tritium. This biochemical technology is vital to understanding the subtle metabolic changes associated with cancer, aging, and related frontier areas in medical research, and every major medical research facility uses hundreds of these vials of fluid daily.

About 90 percent of U.S. medical centers and universities rely on the Barnwell waste disposal site in South Carolina, because it is cheaper for them to transport the scintillation vials there than to Nevada or the state of Washington, the locations of the nation's other disposal facilities for low-level radiation waste. (Labs report that waste shipping costs to Nevada are 70 percent higher than to South Carolina.)

For a major cancer research center, such as Sloan Kettering in New York City, this situation threatens to make metabolic isotope studies impossible. "The impact will be tremendous," said a radiation disposal safety officer at Sloan Kettering. "The volume [of liquid scintillation fluid] is enormous, roughly 20,000 gallons a year. . . . We'll be up to our armpits in scintillation vials until the problem is solved. Research will become impractical in a month."

—Carol Cleary



A Shocking Statement?

The sponsors of this advertisement believe it is far more shocking that **not one** of the eight government-appointed commissions supposedly investigating the March 28 incident at the Three Mile Island nuclear generating plant has announced its intention to make the question of sabotage the focus of its inquiry.

Yet the facts surrounding this so-called "biggest nuclear accident in the history of the United States" overwhelmingly point to sabotage as the **most probable** cause of events.

FACT 1

Authoritative engineering studies compiled over decades have demonstrated that the odds are **1 million to 1** that the sequence of valve operations that triggered the initial emergency at TMI **did not** occur as a "natural phenomenon" or as a mechanical failure.

Question: Why has this point remained unpublicized by the responsible authorities?

FACT 2

In fact, it **was not** mechanical failure that initiated the TMI incident. The two initiating events that set off the TMI incident were (1) the loss of main feedwater flow to the steam generators followed by (2) the loss of feedwater flow in two separate emergency back-up systems. It is now known that both these events were caused by "human intervention."

Question: Was this human intervention intentional, as is most probable statistically, or was it "human or operator error," as claimed by the Nuclear Regulatory Commission?

FACT 3

Both backup feedwater cooling systems reportedly had been shut down for two days at the time of the triggering events, a **flagrant violation** of federal safety standards. In addition, the shutdown of the feedwater cooling system that triggered the incident was accidentally initiated by someone performing maintenance on the feedwater filtering system.

Question: Why has no adequate explanation been given for these bizarre occurrences?

FACT 4

According to the version of events now being suggested by the Nuclear Regulatory Commission in congressional testimony, a valve was supposedly closed in each of these back-up feedwater systems during a separate required test of each system 42 hours earlier. The NRC then assumes that these valves must have "mistakenly" been left closed following these tests, even though very strict check-off and sign-off procedures were used during these tests. According to testimony, the proper procedures were followed and the valves were checked and signed off as open by at least two groups of operating personnel. Finally, it is then assumed that **five shifts** of key plant operators must have overlooked or ignored alarm lights, open switches, warning tags, and other safety devices and operating procedures designed to alert them to the shutdown of back-up systems prior to the initiating event.

Question: Is an explanation of simple "human error" credible?

FACT 5

Nuclear sabotage has been reported elsewhere. Approximately one month after the Three Mile Island incident, someone poured lye (caustic soda) on new fuel bundles at the Virginia Electric Power Company's Surry II nuclear power plant, with the intention of causing severe economic damage. On June 17 the Newport News Daily Press reported that a Surry employee admitted to the FBI that he and an accomplice were responsible for the sabotage to force new security measures at the plant.

Question: In light of this Surry II sabotage, why haven't the FBI and other investigating bodies taken up the question of sabotage at TMI?

FACT 6

The antinuclear "environmentalist" lobby in this country is committed to the **elimination** of nuclear power used for peaceful purposes, including the generation of electrical energy. The antinuclear groups are very well funded by foundations and other zero-growth financial institutions. It is

estimated that the funding level is to the tune of at least \$300 million a year, some of it from tax-exempt foundations like the Ford Foundation, the Rockefeller Brothers Fund, and the Stern Fund.

FACT 7

Significant sections of U.S. print and electronic media deliberately did their utmost to generate mass panic among the American people over the events at Three Mile Island. Much of the information presented was at best gross distortion and in many cases outright lies. Front page media coverage included such headlines as "Radiation Pierces Four Foot Thick Walls," "Baffled Scientists Struggle to Ward Off A-Plant Meltdown," "Bubble Will Cause H-Blast," and similar scientific absurdities. On April 8, the **Atlanta Constitution** documented instances where television reporters asked residents of Middletown, Pennsylvania to stay out of camera range while they put "For Sale" signs on the houses. Later these reporters told the story of an "abandoned city" on the evening news.

FACT 8

These press distortions were given a helping hand by NRC statements during the incident asserting that a core meltdown and/or hydrogen gas bubble explosion could occur at Three Mile Island, with the possibility of mass deaths and widespread exposure of the population to dangerous levels of radiation. Yet, NRC officials and analysts knew at the time that none of this was true and that, in fact, a hydrogen explosion in the reactor vessel and a core meltdown **were not possible!** About three weeks ago, NRC spokesmen acknowledged that the original NRC statements should never have been released. Why were they issued?

FACT 9

A mass of evidence points to the existence of a top-down policy to sabotage the development of nuclear power throughout the United States. The strong possibility exists that government agencies are directly involved. Less than a week before the Three Mile Island events, the Federal Emergency Management Agency was established as a military type of command-and-control center with power to allocate "strategic resources" and facilitate production transfers to deal with so-called megadisasters. This Federal Emergency Management Agency is the same agency that is now being geared up to run the highly suspicious oil and gasoline shortages.

FACT 10

Beginning in 1976, the elite New York Council on Foreign Relations initiated its "Project for the 1980s," a series of studies asserting that "the controlled disintegration of the world economy" was a reasonable goal for the decade ahead. Depopulation and deindustrialization are explicit parts of this disintegration. Many of those who worked on the project are now ranking members of the Carter Administration: for example, Secretary of State Vance and Treasury Secretary Blumenthal. Another cogitinker, Department of Energy Secretary James Schlesinger, promoted such zero-growth policies at the June 4 meeting of the International Association of Energy Economists in Washington, D.C., where he stated "Neoclassical models of economics no longer work. . . . The neo-Malthusian model is more relevant to the problems we face in energy." Three days later in a department press conference Schlesinger stated that after TMI, the "nuclear option is barely viable."

Question: Is the highly suspicious TMI incident merely an element in a larger policy of energy and economic shutdown? There appears to be a tight interconnection between the institutions formulating the Malthusian policy, the government agencies that implement it, the foundations that disseminate the policy and fund the antinuclear groups.

WHAT IS THE INDEPENDENT COMMISSION OF INQUIRY?

The Independent Commission of Inquiry is a group of private citizens committed to investigate these facts and answer these questions **no matter where they may lead.**

The Commission was initiated by the Fusion Energy Foundation during the Three Mile Island incident, when

FEF scientists realized that the American people were being subjected to a major misinformation campaign on the Harrisburg events.

Members of the Commission know the nuclear industry inside and out, as designers, producers, and consumers of nuclear power. The Commission includes scientists, business people, trade unionists, and community leaders.

The Commission has no power to subpoena witnesses or compel testimony. Nor does it have the organized might of U.S. corporations behind it; indeed, most industry people are behaving as if the problems raised by Three Mile Island could be solved merely by keeping a "low profile."

What we do have is the intelligence and integrity of the vast majority of Americans, who must be educated and mobilized to ensure that any attempt to sabotage our vital energy supplies is exposed and the threat to our national security efficiently removed.

As a first step, the Independent Commission of Inquiry is committed to reprint this ad in major newspapers throughout the nation. We are asking anyone who can contribute to establishing the truth about Three Mile Island to come forward and tell his or her story to our investigators. Confidentiality will be respected.

The Commission will publish a full report on its inquiry by July 31 and will make this report available to all other agencies investigating Three Mile Island.

Initiating Members of the Commission (partial listing)

Emil Decembre President, Building & Construction Council Beaver County, Pa.	Henry Hill President, Central Labor Council Cumberland County, N.J.
Walter Forbes Vice President & Consultant Acumatic Corporation Ithaca, N.Y.	Dr. Morris Levitt Executive Director Fusion Energy Foundation New York, N.Y.
Jon Gilbertson Director of Nuclear Engineering Fusion Energy Foundation New York, N.Y.	Jim Rehman Manager, Field Sales Dept. Acme Corporation Fort Worth, Texas (Formerly Nuclear Hwy)
Frank Hewes Corporate Treasurer Admiral Steel Casting Corporation Waukegan, N.Y.	(Affiliations for identification purposes only)

What You Can Do

We do not intend to stop there. The Independent Commission of Inquiry plans a major educational organizing effort to bring to light all the facts bearing on the decision the United States must make on the future of nuclear power. That decision will be either a nuclear shutdown, or a policy that is actually in America's interest—the gearing up of nuclear exports and economic growth that will guarantee energy growth for future generations. Other leading nations—France, West Germany, Japan—not only have already committed themselves to such a policy of nuclear energy development but have chastised the United States for not having a similar commitment. We need your help to reprint this ad and to fund our future activities.

I want the true story of Three Mile Island and nuclear power to be made public. Here is my check in support of the Independent Commission of Inquiry.

\$1,000 \$500 \$100 \$50 _____
\$10 Other

Checks or money orders should be made payable to the Fusion Energy Foundation and earmarked for the Independent Commission of Inquiry. Contributions to the Fusion Energy Foundation can be tax-deductible. Send contributions and communications to the Independent Commission of Inquiry on Three Mile Island, Box 1443, Radio City Station, New York, N.Y. 10019. Tel. (212) 265-3749.

Please contact me personally so that I can be of further assistance.

Name _____
Address _____
Phone _____

The NRC Report on TMI: Refusal to Investigate Sabotage

The Nuclear Regulatory Commission released an official report Aug. 3 on its investigation of the March 28 incident at the Three Mile Island Unit 2 nuclear plant near Harrisburg, Pa. Although the report poses sabotage or criminal negligence as one of six possible causes of the initiating events of the nuclear accident, the NRC conclusion stops short of what its findings dictate: that the Three Mile Island incident was caused by a willful act of sabotage or negligence. Incredibly, the NRC investigators chose not to pursue an investigation of the sabotage possibility, even after they eliminated the other five possible causes of the initiating events.

The several-hundred-page report, titled "Investigation into the March 28, 1979 Three Mile Island Accident by the Office of Inspection and Enforcement" (NUREG-0600), contains revealing and important information concerning the two initiating events of TMI incident: the loss of main feedwater flow and the consequent loss of all emergency feedwater flow.

The information presented tends to confirm what the investigations of the Fusion Energy Foundation and the Independent Commission to Investigate the Three Mile Island Incident, a group initiated by the FEF, charged back in April: Namely, that the evidence indicates that the events initiating the TMI incident were manually induced; that the loss of main feedwater flow was caused by personnel performing maintenance on the filter system; and that the emergency feedwater systems had been manually put out of service.

Despite the findings that the report lays out at length, the NRC conclusion (as well as all the press accounts of the report) focuses on what happened after the event got started—not on what caused the initiating events of the incident.

The Valve Question

The key here is the valve question, and the report in fact points out new information indicating that the initiating

events were manually induced. The report reveals that for several weeks before the incident there had been significant and continual leakage of reactor primary coolant water out of the electromechanical relief valve (EMOV) and/or one or both of the pressurizer code safety valves that are connected to the pressurizer tank system. It was the EMOV valve that failed to close after opening automatically some six seconds into the incident in order to relieve the initial pressure build up. This stuck valve went undetected by the operators for more than two hours, and it eventually caused the damage to the reactor core fuel.

Without visually inspecting the valve, the NRC investigators could not ascertain whether this coolant leakage contributed to the valve's failure. However, during the same weeks, the valve's temperature was in the range of 180 degrees to 200 degrees Fahrenheit, up to 70 degrees over its specified normal temperature of 130 degrees Fahrenheit. Considering the fact that the valve had a previous history of sticking open and considering the normal engineering judgment of the expected operation of a relief valve that had been operating for weeks well above its normal operating temperatures, it is quite reasonable to assume that the valve would have failed.

If someone knew this condition (and it was generally known among plant personnel), that person could reasonably expect this valve to stick open, particularly if the emergency feedwater system were shut off, which would ensure a high primary coolant system temperature and pressure. Furthermore, with this valve stuck open and all heat-removal capabilities shut off because of the closed emergency feedwater valves, plant operators would have a very difficult time figuring out what had happened.

This is precisely what did happen, as the NRC report points out, and it is important to investigate why and how the valve stuck open in terms of who

manually closed the emergency feedwater valves, one of the two initiating events.

The FEF continues to contend that the two initiating events were caused either by sabotage or by the gross negligence of the reactor plant operators. There is no question that the operators are competent, experienced, and qualified personnel who would not have bypassed every single safety precaution and procedure. Therefore, sabotage remains the most likely cause.

This contention is supported by a report produced by a leading nuclear safety expert at the Massachusetts Institute of Technology—the Rasmussen Report—that places the probability of the sequence of events that occurred at Three Mile Island in the order of magnitude of one in a million.

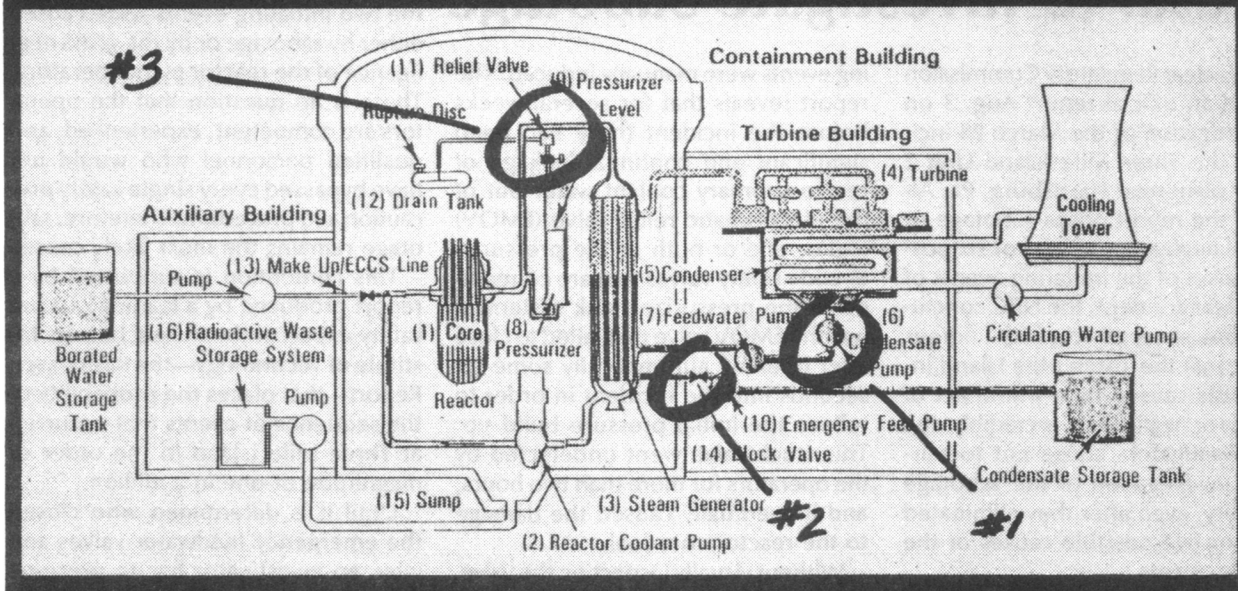
Until it is determined who closed the emergency feedwater valves and why, an investigator has to presume that the reactor was set up, waiting for a loss of main feedwater flow to initiate at least a very serious abnormal operating condition.

Sabotage or Negligence?

The NRC report posed six possible ways the emergency feedwater valves could have come to be closed, but concluded that a "review of all possible causes revealed no reason to believe that any of them was the specific cause of the closed valves" (p. I-4-7).

However, the NRC findings do not support this general conclusion. In fact, the findings eliminate four of the six possible causes and, if the operators' sworn testimony and signed testing documents are considered, the findings remove a fifth cause. According to all information available to date, including that from the presidential commission's investigation, these valves were manually opened 42 hours before the incident after a surveillance test of the emergency feedwater system.

The report states (p. I-4-7-): "The operators and supervisors responsible for conducting the surveillance test on March 26, 1979 were interviewed The operator who actually manipulated the valves involved stated that he specifically recalled opening that valve. The investigation found no basis for rejecting his assertion. If his asser-



THE INITIAL CHAIN OF EVENTS AT TMI

(1) Both main feedwater pumps were shut down, probably as a result of maintenance work on the feedwater filter system. (2) Plant operators then assumed automatic startup of the emergency feedwater pumps, because they were unaware that someone had shut the block valve in each system prior to the shutdown of the main feedwater pumps. The question of sabotage concerns the closing of these valves. (3) Six to eight seconds into the incident, the electromechanical relief valve on the pressurizer tank opened as designed to release small amounts of steam and reduce the reactor coolant system pressure. A few seconds later, as the pressure decreased, this valve failed to close as designed and continued to release steam.

In the first few minutes into the accident, the temperature, pressure, and pressurizer level in the reactor coolant system began to return to what the operators normally expected to happen after a main feedwater flow shutdown. This continued to mislead plant operators into dealing with the situation in a way opposite to what they would have done had they known the true situation.

General Public Utilities Corporation

tion was incorrect and the valves were left closed after the test, the investigation found no information to explain how the closed valves would have gone unnoticed during the 42 hours between the test and the accident."

How these valves got closed therefore, remains a mystery to the NRC. The report then proceeds to the sixth possibility that "the valves were closed by the overt act of an individual." Using a convoluted argument, the NRC report concludes that this isn't very likely either. The NRC says it simply does not know how the valves were closed.

On review of their information and

reasoning on this sixth possible cause, it is clear that the NRC staff never really investigated the possibility of sabotage, nor did they want to. Yet, based on their own information presented in the report, sabotage or criminal negligence is the only possible cause remaining for the closure of the two valves.

The report does devote a small section to the "Possibility of Plant Sabotage"—included "as a result of the high degree of public concern associated with the possibility of sabotage or adverse human actions having caused or contributed in some manner to the severity of the March 28

incident at TMI" (p. I-1-35). The questions were asked by a technical NRC inspector to a technical plant operator or employee in an informal discussion. The report states that the "responses ranged from direct negative responses to disbelief that sabotage could even be considered" (p. I-1-36). Under such circumstances, who would admit to closing or knowing who closed the emergency feedwater valves?

The report goes on to note (p. I-1-36): "Vocal antinuclear sentiment appears to have been relatively absent prior to the incident. Relationships between the local governments

and licensee management appear to have been of a tolerant nature."

Therefore, the report says, "Those conditions commonly associated or viewed as causative factors precipitating industrial sabotage were not identified by the investigation as being present at the time of the incident."

Such a statement comes from the mouths of babes—or of liars. Nuclear power and the nuclear industry have been barraged with environmentalist attacks for years and, particularly since the formation of the Department of Energy, they have faced budgetary cutbacks, court delays, and program cancellations. As many in the industry admit, as a result of this "antinuclear sentiment," the U.S. nuclear industry is for all intents and purposes shut down.

Having thus reasoned, the commission then discusses the amount of effort needed to determine who closed the valves in question and why the question is not worth pursuing (p. I-1-37):

"This investigation evaluated the effort that would be required to attempt to identify the party or parties who closed the emergency feedwater system block valves for whatever undefined reason that may have motivated them. The investigation revealed that the two valves in question were capable of being operated from three specific locations: the control room, the 480V Substation panels at the 305 elevation of the auxiliary building and the physical location of each valve.

"Checks of the licensee's security access badging records showed approximately 470 licensee personnel and 260 contractor/vendor personnel would have had unescorted access to one or more of these locations on any of the two work days preceeding the March 28 incident. Records exist whereby the identity of the contractor/vendor personnel entering the protected area could be retrieved. However, the 470 licensee personnel are only logged in at the site perimeter and need only display their photo ID badge (issued only after psychological screening and preemployment checks are complete) to secure access to the TMI protected areas (Units 1

and 2, auxiliary building, turbine building and environs).

"Further investigative effort of the magnitude that would be required to specifically identify which of the more than 600 personnel did access the protected areas during the period March 26, 1979 through March 28, 1979 was deemed unwarranted at this time in view of the absence of any intelligence that adverse human activity was involved in the accident."

Far from being an argument against further investigation, the NRC report outlines the sort of major investigative effort that was undertaken a month after TMI by the Virginia Electric Power Company, owners of the Surry-II nuclear plant whose fuel rods were mysteriously damaged. In one month's time, with the help of the FBI, lie detector tests for all personnel, and a thorough investigation of the sabotage possibility, the two individuals responsible for sabotaging the plant were identified and arrested.

Contradictions

One might ask at this point why the NRC concluded that it was not worth trying to find out how the valves got closed. Was it not important in the chain of events? Would not the electromagnetic relief valve have stuck open anyway?

Again, the NRC is caught in a contradiction. At the same time that it says the matter is not worth investigating, the NRC's evaluation of the effect of these closed valves is (p. I-4-10): "The delay in automatic initiation of emergency feedwater for eight minutes contributed to an early recovery toward normal values of certain RCS [reactor coolant system] parameters upon which the operators concentrate. This recovery of key turbine trip/reactor RCS parameters misled the operators into believing that their actions had been successful in limiting the severity of the transient. This erroneous belief led them to initiate the routine subsequent operator actions that were normal for the assumed transient. These actions occupied the operators' attention and detracted from their opportunity to establish a correct analysis of the plant conditions.

"This investigation did not conclude what the ultimate course of events of

the accident would have been, had emergency feedwater been introduced to the OTSGs [once through steam generators] as designed."

Essentially, the NRC is saying, the closure of these valves caused particular pressure, temperature, and pressurizer level conditions in the reactor that led the plant operators to act essentially the opposite of how they would have acted if the valves had been open. In other words, these conditions misled the operators into believing that the EMOV valve had closed when in fact it remained open.

It took nearly 20 minutes (after the valves were finally opened) to get feedwater flow completely reestablished in the two steam generators, which had boiled dry, so that decay heat could be normally removed from the reactors.

The closed valves caused reactor conditions that misled and confused the operators for at least the first 30 minutes into the incident.

Another question unresolved by the investigation is just how the loss of main feedwater flow (and turbine-trip) was initiated in the first place by the filter maintenance crew—a question that also bears on the issue of sabotage.

The loss of main feedwater flow is expected from time to time because the reactor plant protective system is extremely sensitive to the slightest malfunction or abnormal operating condition. The slightest "mistake" by the maintenance crew—intentional or unintentional—during the filter cleaning procedures ongoing at the time could easily have caused the automatic loss of main feedwater flow and trip-out of the turbine.

It is not surprising, therefore, that the report's conclusions, upon which the press accounts of the NRC's findings focused, did not even mention the two initiating events of the incident: the loss of main feedwater flow followed by the loss of all emergency feedwater flow.

Instead, the NRC's conclusions blame the event and its severity primarily on operator error, misjudgments, "mind sets," and equipment failure—conclusions not backed by their own findings.

—Jon Gilbertson

The Rogovin Report

A Schizoid View of TMI

The final report of the Nuclear Regulatory Commission's Special Inquiry Group on Three Mile Island, released Jan. 24, is especially interesting because it presents the distinctly different viewpoints of two groups of people: engineers and scientists on the one hand and antinuclear lawyers on the other. In fact, the report is almost schizophrenic in nature, in that portions of the conclusions and recommendations bear no resemblance to the actual technical evidence presented in the report.

The Special Inquiry Group was hired as an independent investigative body by the NRC, which chose the Washington, D.C. law firm of Rogovin, Stern & Huger to conduct the inquiry, with Mitchell Rogovin, a senior partner in the firm, as study director. The key to the report's schizophrenia is Rogovin and his career as an environmentalist and antinuclear advocate (see box).

The Special Inquiry Group itself was a mixture of technical specialists and lawyers. Most of the technical people and technical support staff appear to have been of high quality, and some of the technical consultants are well-known names in the nuclear industry. The report gives the distinct impression, however, that these technical people carried out investigations and evaluations, wrote up the results, and turned them over to the lawyers—Rogovin and staff—who then wrote the conclusions and recommendations without any regard for the technical report. It looks like the summary of the technical evidence presented in volume 1 of the report was also written by the lawyers.

Competent Technical Analysis

The report's technical presentation of what happened during the first week after the March 28 incident is probably the best summary that has been made by any of the investigative groups of what actually happened.

This part of the report makes it absolutely clear that the incident that began at 4:00 AM March 28, 1979 was over at 7:50 PM that same evening, less than 16 hours later. The events that occurred after that, especially during the next four days, were either contrived or completely misinterpreted by the news media, the NRC, or other government

agencies as a result of ignorance, poor judgment, or incorrect information due to poor communications.

For example, the report states: "At 7:50 PM after a successful bump [running the pumps for a few seconds] the operators put the 1A coolant pump into normal operation. This puts the reactor into the forced-cooling mode, at high pressures, and terminates the major phase of the accident. For the first time since a few minutes after 4:00 AM that morning, the plant has

been returned to a relatively stable condition. The reactor will now remain in this forced-cooling high-pressure mode for several weeks, gradually cooling down" [emphasis added].

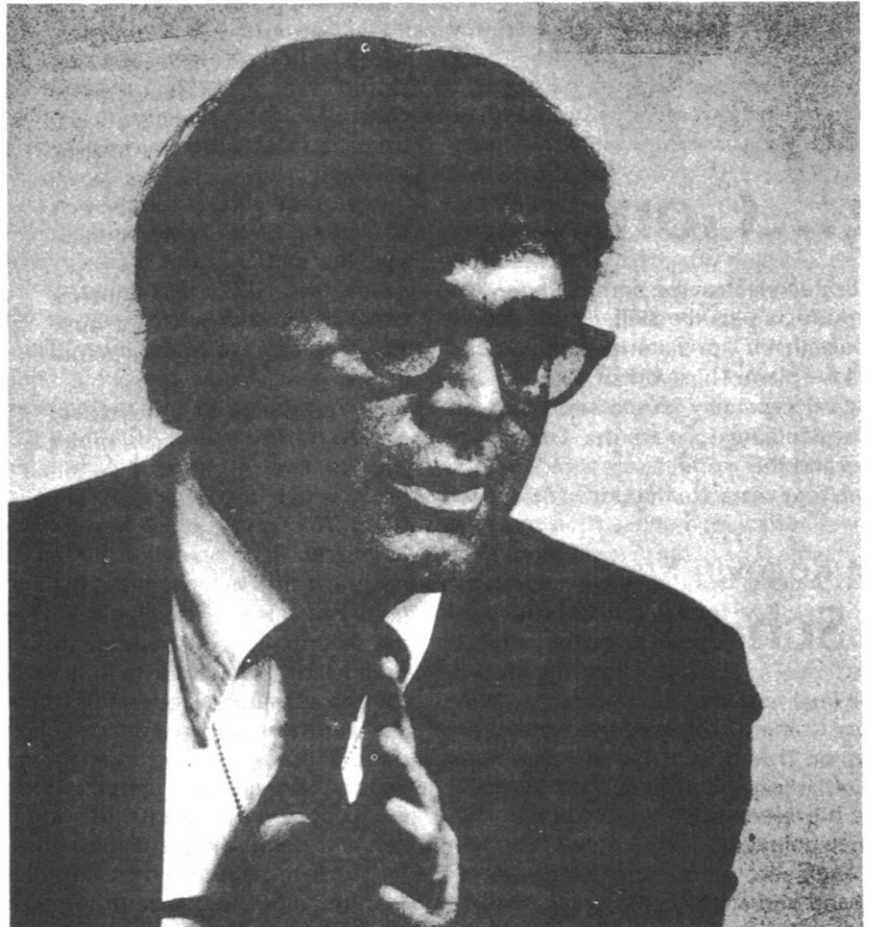
As for the events that took place in the next few days—the radioactive fission gas release scare, the evacuation hysteria, and the hydrogen bubble fraud—the technical summary states the facts:

"The accident at Three Mile Island did not result in radioactive release levels that posed any threat to public health, even in the long run. Public alarm over radioactivity fueled by the governor's evacuation advisory to pregnant women and preschool children two days after the accident, and the fear caused by reports the next day and afterwards of a possible hydrogen bubble explosion, turn out to have been vastly exaggerated by the NRC's disorganized response to the emergency."

Bedtime Story

The report continues to point out how badly these next few days were handled:

"Wednesday it was a reactor out of control; Thursday everything was fine; Friday morning, there is a radioactive release scare and an evacuation false alarm; and the bedtime story Friday night is a possible meltdown. Now NRC Chairman Hendrie is working on



Mitchell Rogovin

Dennis Brack/Black Star

an interpretation that will eclipse them all before the day is out.... To this day, months after the TMI-2 accident, no one seems quite sure what started Joe Hendrie worrying about a hydrogen explosion inside the Unit 2 reactor vessel; only that it seemed to hit him Friday night...."

Finally, the report concludes, "Hendrie's fears will prove groundless, as he will be the first to admit. The hydrogen never explodes in the reactor vessel; it blows up instead, in the media."

The technical report vindicates Metropolitan Edison, the operator of TMI that was made the scapegoat for most everything that went wrong during those days. Even though mistakes were made during the early hours of this incident, the report says, the TMI engineers and operators performed their job quite well and, on the whole, did what they should have done. Most of the "mistakes" made are attributed to the government agencies, the NRC, the Pennsylvania Emergency Management Agency, and the Federal Emergency Management Agency.

As for Met Ed being told to quit making public statements the report says: "On balance, the quality of Met

Ed's information has not been that bad—overall at least as accurate, if not more so, than the NRC over the course of the accident....NRC's continuing refusal to collaborate with the utility on plant status briefings is consistent with the agency's original fixation on avoiding the appearance of conflict of interest. The NRC has been inordinately touchy about appearing in any way to assume joint responsibility for plant operations with Met Ed during the accident. Be all that as it may, just now seems an unfortunate time for Met Ed to lose its voice, since at the moment the utility is accurate in its evaluation of the plant status, is making the right moves to bring it to cold shutdown, and seems inclined to give more details. After a sorry start, Met Ed has regained its composure."

The Bubble Story

On Met Ed's response and handling of the hydrogen bubble, the report relates:

"The Met Ed, GPU (General Public Utilities), and B & W (Babcock & Wilcox) people who are controlling the plant do not follow Hendrie's new line of reasoning for a minute—they are convinced that the excess hydrogen in the system prevents the freeing of

oxygen. Nevertheless, such is the state of their image with the media that they are not eager to make the matter public."

However, Met Ed overcomes this hesitation: "Herbein [Met Ed vice president] has some news; the hydrogen bubble has been reduced to two-thirds its Friday dimensions, and the crisis at TMI 2 is over. Herbein, it will turn out, is correct; but who is paying attention to Herbein these days?"

"An hour later, Denton [Harold Denton, the NRC's on-site man in charge] says the crisis is not over, gladdening the hearts of a nation of Sunday headline-writers with a perfect balance of stories; 'It's Over'—'It's Not Over.' Denton also takes issue with Met Ed's figures on the bubble size. Four days later, on Tuesday, April 3, Denton finally announces in a press conference to the world 'the bubble has been eliminated, for all practical purposes.' "

The report continues: "Asked why the bubble had gone away, Denton replied: 'I think it was a little bit because of our actions and maybe a little bit of serendipity.' Although probably not intending to do so, Denton seemed to have given credit to the NRC for removing the bubble. To the contrary, as NRC inspector Charles Gallina, who had been at the site from the beginning of the accident, observed, 'The hydrogen bubble did not miraculously disappear, it was systematically and professionally eliminated by Met Ed operators.' In fact, studies performed for the Special Inquiry Group show that the bubble was probably all gone some two days before Denton made it official."

Finally, the report concludes: "In an investigation like this, the very purpose of which is to focus on what went wrong and what needs changing, it is inevitable that less attention than is deserved will be given to what 'went right'—the strong points in the system. Chief among these is the fact that the 'defense in depth' concept worked to protect public health and safety. In spite of multiple equipment malfunctions, human failures, and the creation of conditions in the reactor and auxiliary buildings that were never contemplated in the design of the plant's

Who Is Mitchell Rogovin?

Here are the credentials of Mitchell Rogovin, the attorney whom the Nuclear Regulatory Commission selected to head its independent investigation of Three Mile Island.

- He is a fellow of and general counsel to the Institute for Policy Studies, a group that is on public record as involved in the funding, training, and deploying of environmental-terrorist groups, including the Baader Meinhof, the Weathermen, and Black September.
- He is a member of the New York Council on Foreign Relations, whose stated policy in its 1980s Project is the "controlled disintegration" of the world economy.
- His law firm, Rogovin, Stern, & Hugel has been taking the lead in environmentalist cases in California, including the "water case," which seeks to establish that federal waters will not be available to persons who own more than 160 acres.
- He has been vice chairman of the Center for Law and Social Policy, an avowedly antinuclear group that, among other things, has filed three suits to prevent the export of nuclear fuel to the prodevelopment government of Indira Gandhi.
- He has been general counsel to Common Cause, one of the most antiindustrial, zero growth operations on the U.S. political scene.

safety systems, the utility and its engineering support staff were able to bring the system to a stable condition without releases of radioactive materials to the atmosphere that could have resulted in significant health effects to those living near the plant."

Technical Report Junked

Given all these conclusions, it is hard to see the connection of the report's technical assessment of the TMI incident to the report's overall conclusions—except that the technical assessment was completely ignored by the Rogovin team.

For example, the report proposes that some private or public consortium take over Met Ed's and presuma-

bly all of GPU's reactors, as well as reactors from many of the other utility companies. It recommends: "The chartering of an operating consortium with the capability to operate the plants of a number of utilities on either a contract or 'receivership' basis." This is nothing less than a complete takeover of the utility industry by the government.

The Rogovin report then makes two crucial recommendations sure to set the U.S. nuclear industry back even further—if not kill it completely. The first is a recommendation to "establish an Office of Public Counsel; and agency funding of intervenors who

make material, substantive contributions to licensing and rule making procedures."

This will simply provide full government funding for groups like the Union of Concerned Scientists, the Natural Resources Defense Council, various Ralph Naders, Barry Commoners, and Common Cause John Gardners to do more of what they are already doing—shutting down the nuclear industry. This recommendation may satisfy attorney Rogovin and his various environmental clients, but it certainly does not follow from the technical conclusions of the report.

Finally, although the report does

not propose a moratorium on nuclear plants (even though the *New York Times* claimed that an earlier draft version of the report did), it recommends the next nearest thing:

"For existing reactors; the promulgation by the NRC of specific criteria for determining the minimum evacuation planning zone around each plant; the conditioning of operating licenses on such plans being approved and workable; and the closing down of existing plants that cannot meet these new criteria."

As the antinuclear groups have emphasized, New York, Chicago, and other large metropolitan areas can-

not easily be evacuated, even in the event of a nuclear war. As a minimum, then, what this recommendation really means is that plants like New York's Indian Points 2 & 3, Chicago's Zion plants, and many more, must close down. Again, since the report's technical conclusions make it very clear that all the evacuation nonsense around the TMI events was exaggerated and unnecessary, why is evacuation getting such a big push in the overall recommendations?

Again, the answer lies with Mitchell Rogovin and his career as an antinuclear environmentalist attorney.

—Jon Gilbertson

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