GANSAYER

NEWSLETTER for GEORGIANS AGAINST NUCLEAR ENERGY FALL/WINTER 1991/1992

TURNING THE TIDE!

KEEP SHUTTIN' 'EM DOWN!

INSIDE THIS ISSUE

SEQUOYAH FUELS • OAK RIDGE

Senate Stops National Energy Tragedy!

Senator Bennett Johnston (D-La) has withdrawn S. 1220 from the Senate floor following a stunning vote the morning of November 1 in which the Senate decided to continue a filibuster against the bill.

The vote was 50 for ending the filibuster and 44 for continuing it, but Johnston needed 60 votes to stop the filibuster. Momentum was clearly with those opposing S. 1220; a few days before filibuster supporters had counted only about 34 votes solidly in their favor.

In his conciliatory speech after the vote, Johnston tipped his hat to environmental groups, who he said had effectively mobilized the public and the Senate against the bill!

This was the bill that called for drilling for oil in the Arctic National Wilderness, a multi-billion dollar taxpayer bailout for the uranium fuel industry, one-step licensing for nuclear power plants and other giveaways to the energy cartel. What the bill did not include was fuel efficiency standards for automobiles or any efforts toward conservation and renewables.

The struggle to establish a sound national energy policy is clearly not over, but the first battle has been fought and the oil, coal and nuclear industries have lost. GANE salutes all of you who called, wrote and otherwise acted to stop this bad bill. Our efforts were a major factor in this vote.

And many thanks to Sen. Wyche Fowler for his key support in this battle!

YANKEE ROWE

Since this article was written the NRC has ordered an immediate shutdown of the Yankee Rowe Plant. This stunning reversal of the NRC's previous position followed a major campaign by the Union of Concerned Scientists convincing the NRC that the condition of the plant's reactor pressure vessel is unknown and that it may be too embrittled to allow continued operation.

Just east of the Berkshire Mountains in northeastern Massachusetts the first commercial nuclear power plant reached full power in July of 1961. It was the prototype pressurized water reactor and for thirty years produced 172 megawatts of electricity, enough to power a small town. Yankee Rowe will soon become the first plant to reach the end of its licensing period (1960-2000) and the first to seek a license extension.

Over the past few months there has been an absurd and familiar chain of events regarding the future of Yankee Rowe. On June 4, the Union of Concerned Scientists and the New England Coalition on Nuclear Pollution filed a petition for the immediate shutdown of the plant because the reactor's pressure vessel — a critical component, containing the water that surrounds the fuel core — has become so weakened by radiation over the past 30 years that it could rupture. If this happens and the water escapes, the exposed core could melt down.

In late June, the Kenneth Carr-led NRC rejected this shutdown request. On July 8, however, new chairman Ivan Selin accompanied a congressional delegation on a tour of the plant. The NRC tried and failed to exclude UCS participation. Robert Pollard of UCS did end up attending the meeting between the NRC and Yankee Atomic. Two public hearings in July, well attended by concerned citizens, were followed by two closed meetings

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FALL/WINTER GAINSAYER

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Dear GANE —

I wanted to write you this letter about a disturbing sight I saw on July 13. I was driving on Interstate 77 going South toward Charlotte, NC and I saw a truck carrying a load of nuclear waste. It was obviously a liquid because the container was swaying side to side. Two chains were strapped across it trying to keep it down. It looked like it would turn over at any minute.

The truck hauling the waste was from the *CHEM NUCLEAR SYSTEMS of BARNWELL, SC*. Furthermore, I did not see an escort with this truck. Is this a normal practice? It is a rather scary thought to me!

On another topic, I am curious to know what is going on out at RSI. Has anything been resolved? Keep up the good work.

Sincerely,
Britt Williams

Hi Britt! Great to hear from you! Hazardous materials on the highway are a bit of a problem on many levels. Elsewhere in the GAINSAYER we are publishing a list of the numbers that should appear in the diamond shaped window on the truck and their meanings for the nuclear class. Unfortunately there is a lot of shady dealing in the hazardous waste and trucking business and the numbers aren't always true. This obviously complicates matters for emergency clean-up crews in case of an accident. Keep an eye out and let us know what you're seeing on the highways.

As to RSI, the issue there is not resolved but has been further complicated and completely stopped by Savannah River Site (Plant) refusing to accept the contaminated water. (Radiation Sterilizers Inc. in Decatur, Georgia suffered a serious accident three years ago. See previous GAINSAYERs for background.) SRS has issued a memo to the highest levels of DOE of their refusal. Georgia officials are dismayed at the development which hints at a lack of commitment and follow-through from the federal Department of Energy which is responsible for the accident and cleanup. The latest DOE scheme is for interim storage of the water in two portable tanks at the site. This would provide Chem-Nuclear clean-up crews access to the more seriously contaminated aspects of RSI, the pool walls, containment room and seepage from the pool.

We are told that the situation at RSI has remained stable since clean-up operations ceased in March 1991. The water in the cooling pond continues to evaporate, and as the level of water is reduced, the contaminated steel walls of the pool are exposed to the air, causing radiation levels in the contaminated area to rise. Georgia officials assure us that continuous monitoring of the water has shown no increase in contamination.

— GAINSAYER

Dear GANE Supporters!

What a great year for GANE!

Our core of active folks has swelled with great new energy. We've got some money in the credit union thanks to many of you supporting our yard sale, our great Halloween party and our summer phone effort.

We're intervening on safety issues at Plant Vogtle with the Nuclear Regulatory Commission. In one effort, we backed Georgia Power down on a major safety issue. In another case, we have issues being considered in appeal to the Commission itself.

We've had a great turnout at our continuing Hard Facts Cafe programs, and subsequent great turnouts for hearings and letter-writing campaigns.

And the whole movement continues to flourish. The National Energy Tragedy has been forced back to the drawing board by environmentalists like us. Disarmament is on the bargaining table. The U.S. is finding itself in the spotlight as the only holdout for a comprehensive test ban and people are asking WHY? The New Production Reactor proposed on our border is on hold, due in no small way to the voice our own Governor Miller raised for logic and common sense ...

We've been too busy and too much in a state of flux to tell you about all of it! But now as this great year winds down we offer you this giant edition of the GAINSAYER. We think you'll find lots in it of interest, things that you and your neighbors have been bringing about, things that affect the lives and health of us all. So, keep it around awhile, it may take a couple of sittings to absorb it all.

And for the future, start thinking about how we want things to be. We have the attention of the folks we might look to assist us in bringing about the changes that can save our planet. Our vision and voice are needed to describe the direction we can take to wholeness and harmony. Conversion of our economy we call it.

As we enter the Season of Light we wish for the wisdom and energy to create peace on Earth.

Keep the faith!
The Hard Workers at GANE

YANKEE ROWE

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and an NRC decision that the plant continue operating until the scheduled April 1992 refueling. Selin had given testimony before the House Interior Subcommittee on Energy and the Environment, admitting "there are very large uncertainties, far beyond what I'm comfortable with... there are more uncertainties about this plant than any other I'm aware of."

The NRC is aware that the Yankee Rowe vessel does not comply with the two primary safety standards for pressure-vessel integrity. The UCS only became aware of the violations through records that were made public as a part of Yankee Rowe's bid to continue operating after the expiration of its 40-year license.

Utilities such as Yankee Atomic Electric Company which run Yankee Rowe, are demanding that their plants be given longer lives than the 40 years mildly dictated by the Nuclear Regulatory Commission. According to one U.S. Department of Energy study, extending the lives of the nation's nuclear plants (108) could save the industry $230 billion by 2030. Since the industry has been kept from constructing new plants, extending the licensing period to 60 years is coming to be seen as an only and profitable hope.

The Commission admits to having little knowledge about the vessel's exact condition — its chemical composition for example, or whether any flaws exist that could increase the danger of a fracture. The NRC asserted that critical vessel pressure testing requirements did not apply to Yankee Rowe.

On July 31, however, the NRC ordered Yankee Atomic to explore options that would reduce the risk to the pressure vessel. Yankee Atomics' August 26 report claimed that the risk of a reactor-vessel rupture could be reduced by a factor of 20 by using one or two of the four reactor coolant pumps to mix the cold emergency water with the other water in the reactor. For such a procedure to be undertaken, more NRC requirements would have to be ignored and the public safety would be further threatened.

A study by the Idaho National Engineering Laboratory found that nearly one-third of the more than 17,000 safety equipment failures reported at a number of U.S. reactors over the past 20 years were due to the effects of aging. The original licenses for as many as 36 power plants, nearly a third of those operating today, expire between 2000 and 2011 and many of the operators will undoubtedly seek extensions.

Utility executives throughout the country have watched the proceedings at Yankee Rowe with their fingers crossed, hoping that their own ancient reactors will be able to legally remain on-line once the effects of years of radiation, high temperatures, harsh chemicals, metal fatigue and thermal degradation set in. *— Ray McKee*

(SOURCES: Nucleus [UCS], Gwinnett Daily News, Atlanta Journal/Constitution)

SEQUOYAH FUELS PLANT CLOSED

On October 4, just days after ordering the Yankee Rowe reactor to close, the NRC ordered that General Atomics' Sequoyah Fuels uranium processing plant be shut down immediately. Besides closing the plant, the NRC said that the plant's environmental manager must be immediately relieved of her duties — and not be reinstated for at least a year — and told the company to show cause why several other top officials should not be removed from their posts.

The action came after revelations that General Atomics had repeatedly lied about the presence of offsite radioactive contamination caused by the plant, which processes milled uranium into uranium hexafluoride for use in uranium enrichment plants. In fact, the NRC determined that offsite groundwater near the plant contained as much as 8.1 grams of uranium per liter of water, which is not only radioactive, but also contains toxic chemicals used in the fuel enrichment process. NRC regulations require workers to wear protective gear when working in areas up to 1.5 grams per liter (above that level is illegal). The regulatory level for public exposure is 0.045 grams per liter.

The NRC's shutdown order also said that the plant cannot restart until a committee of outside experts has prepared a restart plan, the NRC has approved the plan, and General Atomics has agreed to implement the plan.

The NRC order is a major victory for Native Americans for a Clean Environment, which have been fighting General Atomics' efforts to obtain a license extension for the plant (the plant's license actually expired last November). And the closure order is a major blow to General Atomics which has been trying to convince Congress that it should receive taxpayer funding to build a so-called "inherently safe" nuclear reactor. If General Atomics cannot even run a basic fuel production facility safely, then how can it expect to build a safe nuclear reactor, was a common reaction among industry observers.

— Nuclear Information Resource Service
Nuclear Monitor

OAK RIDGE REACTOR

Oak Ridge National Laboratory has received orders to shut down and decommission another of its research reactors, further eroding the lab's test capabilities and eliminating a tool for grooming nuclear workers.

The Bulk-Shielding Reactor, a two-megawatt reactor built in 1949, has been on standby status since a 1987 investigation of the laboratory's reactor program. The Bulk-Shielding Reactor and the Pool Critical Assembly, located adjacent to the reactor, were used as training facilities for generations of nuclear engineers.

Officials are developing a closure plan for the reactor, and it likely will take several years to decommission the facilities. The reactor is the third in a string of reactor shutdowns at the national laboratory.

Oak Ridge is the laboratory which made the uranium used in the first atomic bomb and is located in the Smoky Mountains, 18 miles from Knoxville, Tennessee.

— from an article by Frank Munger
Knoxville News Sentinel

GANE
STATEMENT TO DOE
AUGUST 21, 1991 - PUBLIC HEARING

My name is Carol Stangler and I represent GANE, Georgians Against Nuclear Energy. GANE is an all-volunteer organization of approximately 500 people throughout the state who oppose construction and continued operations of nuclear power plants. We also oppose the existence, development, proliferation and use of nuclear weapons. We advocate the implementation of energy conservation, solar, and other renewable, ecologically safe and decentralized energy systems.

This January I toured Japan and made a point of visiting both Hiroshima and Nagasaki. I knew that this would not be the fun part of my trip, that it would be emotionally difficult. But I felt it was my karmic responsibility as an American to return to the scene of the crime, so to speak. To witness, 46 years later, through photographs, artifacts and eyewitness accounts, the devastation that our government inflicted upon fellow human beings. Nothing that I had read or visualized prepared me for my experience. I saw photos and drawings that I will never forget: of men, women and children fleeing and screaming in horror, their raw burned skin literally falling off their bones. I saw photos of people whose bodies were riddled with glass from the force of the blast, and masses of black, bloated bodies floating on the river in Hiroshima, where people had jumped in to escape the unbearable burning of their bodies from the 9000° heat of the blast. It was horrible beyond words and took great personal courage for me to confront the unspeakably hideous act of my country. I cannot describe the shame and guilt I felt as an American, and the hours I spent in the "Peace Parks" at the epicenters of the blasts were among the saddest of my entire life. In Nagasaki, there was a massive guest book in which visitors were invited to write their names and addresses and make comments. I remember writing something to the effect that "if every government official in the world were to tour this museum, all nuclear weapons would surely be abolished. No human being with a heart could see the real-life effects of a nuclear explosion and wish it upon their neighbor.

With these thoughts as background, GANE contends that the DOE must include in its Reconfiguration Programmatic Environmental Impact Statement the rationale for producing more tritium and plutonium for more nuclear weapons. We want to know, and as U.S. citizens and taxpayers, have the *right* to know, the reasons for increased weapons when our country alone has enough to make the entire planet look like ground zero at Hiroshima and Nagasaki. We are not content with the one measly paragraph of Appendix A in the Restart Reactors EIS which says that the rationale for continued production is "classified." This "classified" information is theoretically the reason you want to continue on this deadly course of action. And since we will be forced to foot the bill, and since we and our children's children's children *ad infinitum* will be forced to live with the deadly waste, we must know the rationale.

Secondly, GANE contends that the New Production Reactor on the drawing board at the Savannah River Plant must be included in the scope of the Reconfiguration PEIS. We think it is very strange that DOE is planning on building this reactor at SRP but is ignoring it in its Environmental Impact Statement, since the new production reactor is the cornerstone of the modernization process, creating tritium for weapons. It also obviously must be considered since it will add untold quantities of radioactive waste to the already enormous amount at SRP.

We suspect that one of the reasons that you are trying to slip this under the rug with no EIS or public input is for its blatant link with the commercial nuclear power industry. It is known that two designs are being tossed about for the new production reactor: one, a heavy water reactor, the "technically proven" method of producing tritium and plutonium; and two, a "Modular High Temperature Gas-Cooled Reactor," a new type of reactor which on the drawing board claims to be "inherently safer." Interestingly enough, the gas-cooled reactor also can be used to generate electricity. The commercial industry is lobbying heavily for the gas-cooled reactor. With the nuclear industry in such a mess, with no new construction in over a decade, and near-miss accidents occurring regularly, they are practically salivating at the possibility that the government (taxpayers) will foot the bill to design, build and test a new type of electric generating reactor.

This is the stepping stone the industry needs to launch its "new generation" of commercial nuclear plants that will inevitably spring up like wildfire once the prototype is up and running at SRP. To add insult to injury, we suspect the industry will tout this new reactor as not only "safe" but as "environmentally friendly." But regardless if the new production reactor is heavy water or gas-cooled, the winners are the nuclear industry giants who will construct and operate the multi-million, probably *billion* dollar plant. With nuclear construction presently at a standstill, this will keep Westinghouse, Bechtel, General Atomic, General Electric, Stone and Webster, Fluor Daniel and the others in business a little while longer.

So we ask ourselves, "What's really going on here anyway? Who is this for anyway? Surely not us, members of GANE and the millions of like-minded citizens who believe the way to peace is to live and act peace, to stop the cycle of fear and ecological destruction, and put our precious resources toward human growth and development, not destruction. Let the record reflect that we are opposed to all aspects and phases of DOE's modernization plan at SRP, Oak Ridge or any other place on this planet. We urge all of you at the Department of Energy, and the lawmakers and corporate industrialists who support you, to stop the nuclear weapons program before it stops us.

— Carol Stangler for GANE

BORN AGAIN ACTIVISM

HEEDING THE WAKE-UP CALL

I first became aware that a welcome new phase of my life had begun during the drive to Augusta in May for a Department of Energy (DOE) hearing. I was becoming an activist. Although activism included a scale of involvement, from letter writing to civil disobedience, it meant to me a commitment to act in a way that challenges my preconceived personal limitations. I was to deliver a statement opposing the construction of a new production reactor to produce tritium for nuclear weapons, in particular at the Savannah River Site (SRS).

My challenge was not to simply overcome my fear of speaking in public, but to dare to speak to an unreceptive, even hostile, audience. The first indications of this hostility came after I left the registration table. A stream of men in suits emerged from the hearing room with red-lettered "New Production Reactor" support stickers on their chests. One approached our little Atlanta group in a confrontational manner, and one of our group conceded to meet his onslaught. With some trepidation I applied a green "No Production Reactor" sticker to my person and entered the hearing the room. The pro-nukers were clearly an overwhelming majority here.

I found a seat in the second row, in front of the speaker's table. To the left of this table was the DOE moderator's table, on which a panel of green, yellow and red lights gauged the beginning and end of each speaker's time. To the far left stood the recorder's table. The woman at this table had a funnel-like device over her mouth. Shortly after the session began, I was called to speak. At the sound of my name, I rose — like a soldier marching toward the front line of a battle — on shaking legs. I was nervous until I started to read the statement. Then I felt strength replace fear. I marveled at how I maintained eye contact with the DOE moderator while pacing my delivery and feeling the meaning of the words.

When I finished, I gratefully heard applause — coming from my fellow Atlantans of course. Fortunately, no other kind of response registered with me. I gave a copy of the statement to the recorder and returned to my seat. Denise Laffan spoke next and her speech was interrupted several times by a widespread reaction of rude sounds and comments. She was against the reactor of course. I had never before experienced anything like the behavior of those pro-nukers in that room. The man who had accosted our group earlier in the hallway told us Atlantans to go back where we came from when his turn came to speak. (Atlantans were especially not favored, due to Governor Miller's statement opposing the reactor of the previous day.)

A local pharmacist spoke of people who had cancer in the area and was actually booed by the audience. One man said with a touch of levity that no one had been killed from radiation there, "I'm fairly sure." A union leader said that the health and safety standards were in fact considered too stringent according to many employees. Laughter resounded through the room when an outdoorsman declared that he had been around the SRS for a long time and hadn't seen any three-headed turtles or mutant deer.

Later I had a chance to read the DOE literature available at the hearing. Over and over I read about DOE's commitment to "environmental protection in all of its activities." I can imagine the blind motivation of a community that supports nukes and bomb building so that the flow of money can continue. What scares me deeply is the power-hungry insanity of a government that pushes "safer" ways for constructing inherently unsafe nuclear weapons and power plants.

I ended my silence in the face of this insanity at the hearing and expect to do it again and again. — *George Blanchard*

Nuclear Madness Index

Year of First Nuclear Bomb Test
1945

Time from 1st Test to 1st Use, in Days
12

Number of Nuclear Weapons in U.S. Arsenal 10 Years Later (est.)
1200

Minimum Number of Nuclear Weapons to Produce Nuclear Winter
500 to 2000

Number of Nuclear Weapons on Earth Today (est.)
55,900

Peak Production Capability of U.S. Nuclear Weapons Plants, per Year (Numbers of Weapons)
32,500

Year of Israel's 1st Nuclear Bomb Test
1979

Number of Nuclear Weapons in Israel's Arsenal 10 Years Later (est.)
500

Year of South Africa's 1st Nuclear Bomb Test
1979

Number of Known Nuclear Weapons Tests for All Countries to End of 1990
1,911

Number of Expected Cancers and Birth Defects from Weapons Testing
22,000,000

Number of Licensed Nuclear Power Plants in the U.S.
112

Expected Cancers & Birth Defects from U.S. Reactors, NRC Figures, No Accidents
1,700,000

% Increased Risk of Leukemia Living 10 Miles from Pilgrim Nuclear Plant
400

feast of the Holy Innocents

In December 1991, we gather at the gates of the Kings Bay Naval Base to remember the Holy Innocents that were killed as King Herod sought to protect his power and exterminate the threat of the two-year-old child Jesus by slaughtering all the male babies in the land.

We gather to recognize that by our complicity (our cooperation and our tax dollars) our country is sacrificing untold Innocents. Many go without adequate food and shelter while we squander billions of dollars so that the weapons at Kings Bay might guard the power of this nation and of the multi-national corporations whose interests direct U.S. foreign policy.

In 1991, at the dawn of the observance of the 500-year anniversary of Columbus' invasion of the Americas, we gather to remember the slaughter of the Holy Innocents and of Native American Peoples — and to celebrate the beginning of conversion of our local economies.

To bring peace to the planet we must rebuild the meaning of community in our communities. We must learn to house, feed and fuel our bodies with the resources of our local economies. We must create work that does not degrade the spirit or the land, to live within the means of our local ecosystems.

This year's Feast of the Holy Innocents has adopted the theme *From Genocide to Peace: Celebrating the Conversion of Our Economies*. Please join us Friday, December 27 through Sunday, December 29 for a weekend filled with vigils, a march, meals, fellowship, communion, a Listening Project and other activities. Relax, reflect and commune with the extraordinary people of the Southeast peace and justice community, and with the beautiful face nature shows on the Atlantic Coast in December.

For more information and directions call 404/377-7019. *— Hugh Esco*

Oconee Nuclear Plant

While many Americans were enjoying a long weekend of Thanksgiving feasting, crews at the Oconee nuclear plant 20 miles from the north Georgia border were trying to stop a leak that spewed radioactive steam from the reactor cooling water into the containment building. In the middle of the night on Sunday the NRC gave permission for gases to be vented into the atmosphere. Although the NRC produced their patented "No Danger to the Public" statements, they also confessed to nuclear watchdogs that they didn't know exactly what was coming out of the stack! Since that time, almost 80,000 gallons of contaminated water has been "treated" and released into Lake Hartwell. The releases are being called legal and routine by the NRC.

NUCLEAR WASTE at YUCCA MOUNTAIN

Yucca Mountain, Nevada, long touted by the Department of Energy as its "final solution" for the problem of storing nuclear waste, may turn out to be a good deal less suitable for that purpose than was originally thought. One of the Department's own geologists, Jerry Szymanski (sha-MAN-ski) has voiced concerns over calcium deposits he observed while conducting studies of Yucca's suitability as a long-term storage site for high-level waste. Such deposits are a common geologic indication that groundwater has risen up through the mountains at some point in the past. The obvious implication to which most geologists point, is that where water has been in the recent geologic past it is likely to be again.

"You flood that thing and you could blow the top off the mountain," says Charles Archambeau, geophysicist at the University of Colorado. "At the very least, the radioactive material would go into the groundwater and spread to Death Valley, where there are hot springs all over the place, constantly bringing water up from great depths. It would be picked up by the birds, the animals, the plant life. You couldn't stop it. If you want to envision the end of the world, that's it."

Perhaps of equally great cause for alarm is the way the DOE has handled the allegations that Yucca isn't quite all it's cracked up to be. Rather than initiate a full-scale inquiry into the hydrological make-up of the area in an effort to resolve the uncertainty, it has elected instead to put pressure on the scientist himself to change his views. His report was ignored and he was personally shunned.

"My desk was moved closer and closer to the door," Szymanski says. "I was a forgotten man."

As long as there is any doubt whatsoever as to its suitability, the idea of using Yucca for any other purpose than what it is — a mountain — should be held in abeyance. There's simply too much at stake here for the DOE to proceed by its time-honored process of trial and error. And if it means the project has to be delayed by a few more years, fine — we can look our children in the eyes easier if we get it right. And there's another saying which goes "Haste makes waste." Unfortunately, so do nuclear reactors. Which is, of course, how this whole problem got started in the first place.

— Kevin Murray

SOURCE: New York Times Magazine

SUN APRIL 22 · 1992 DAY!

NUKE NOTES

6/12/91: BE FIRED: Three workers at the Browns Ferry Nuclear Plant in Athens, Ala., will be fired for failing to close a pair of airlock doors leading to a recently restarted reactor, the Tennessee Valley Authority said. The Unit 2 reactor has been shut down since the doors to the primary radioactivity containment area were found open a week earlier. Unit 2 had just been restarted in May after a six-year hiatus.

6/27/91: FLORIDA NUCLEAR PLANT FINED: An emergency cooling system to keep the St. Lucie, FL, power plant from melting down during a nuclear accident was disabled for five months, a Nuclear Regulatory Commission spokesman said. NRC staff levied a $37,500 fine on Florida Power & Light Co. for its failure to check the containment building spray system in the nuclear plant on Hutchinson Island near Fort Pierce.

7/9/91: NUCLEAR PLANT BACK ON LINE: General Electric Co. is resuming production at its nuclear fuel plant in Wilmington, NC where a recent uranium spill prompted an alert. The NRC authorized the restart after NRC inspectors reviewed corrective actions by GE since the May 28 spill.

7/21/91: PLAN TO DISMANTLE POWER PLANT UPHELD: Chief Justice William H. Rehnquist refused to block the transfer of the Shoreham nuclear power plant from the Long Island Lighting Co. to New York state, which plans to dismantle the never-used plant. The NRC was seeking to halt transfer of the facility's title. The plant has been the focus of a decade-long safety battle.

New York state long opposed operation of the plant on grounds there was no way to evacuate nearby residents on Long Island in case of an accident. The utility agreed to turn Shoreham over to the state in return for a guarantee of future utility rate increases. The Justice Department intervened on behalf of the Energy Department which has maintained that it would be a waste to destroy the $5.5 billion plant without ever using it. (**NIRS Monitor** adds: Long Island Lighting has, almost literally nailed the coffin shut on the plant by driving a spike into the reactor vessel to test its radioactivity, thus making the vessel permanently inoperable.

7/22/91: N.Y. TO BUILD NUCLEAR DUMP?: New York state will follow the Ashford town board's decision to build a nuclear waste dump at West Valley, despite majority opposition among residents and property owners, Gov. Mario Cuomo said. Mr. Cuomo said the five-member board was a more reliable indicator of the community's opinion than the referendum even though more than 80 percent of the voters took part and rejected the proposal 702-533.. The board voted unanimously to accept the low-level radioactive waste dump in return for millions of dollars in tax revenue and other benefits.

7/22/91: SEABROOK LEAK: A radioactive steam leak in the containment dome shut down the Seabrook nuclear power plant in New Hampshire July 18.

7/27/91: RADIATION LEAKS IN BULGARIA: Two more radiation leaks have been discovered at Bulgaria's troubled Kozlodui nuclear power plant. Energy official Zhack Karakash said the leaks, known as "hot spots," were probably caused by cracks in concrete and the burning of radioactive clothes. Experts say the Kozlodui plant is unsafe, technically outdated and almost impossible to repair.

8/3/91: RADIOACTIVE FROGS NOT A JOKE: Radioactive frogs are on the loose at the Oak Ridge National Laboratory in Tennessee. Officials at the Department of Energy installation west of Knoxville thought they had the situation under control until a frog was found at a building near the contaminated pond where the frogs hatched this spring.

8/12/91: NUCLEAR SITE PROTEST: 28 people were arrested during an anti-nuclear weapons demonstration against the reopening of a reactor at the Savannah River Site. Each was charged with failure to obey a police officer, for blocking traffic, and refusing to move. A protest by about 100 people capped two days of demonstrations at the plant's Freedom of Speech area. The protest was sparked by plans to restart the nuclear weapons production plant's K-reactor to produce tritium, which is used in nuclear warheads.

8/14/91: NUCLEAR PLANT ALERT: A power failure knocked out warning lights and other control room instruments at Nine Mile Point, a nuclear energy plant in New York's Lake Ontario. Backup power systems also failed during the 8/12 incident, authorities said. Plant officials declared a site area emergency, the second most serious classification under federal guidelines. No radiation was released.

Among the instruments plant operators lost was "the display that tells them where control rods are," NRC spokesman Joseph Fouchard said. "They have five power supplies that were supposed to be non-interruptible and they proved to be interruptible," he also said. Plant workers eventually got one backup power source to work.

8/15/91: NUCLEAR PLANT LEAK: Hundreds of gallons of radioactive water poured from a leaky pipe at the Diablo Canyon nuclear plant in San Luis Obispo, Calif., before it was halted. Brad Thomas, spokesman for Pacific Gas and Electric Co., said no one was injured or exposed to unsafe radiation levels during the nearly 14-1/2 hour leak at the plant's Unit 2 containment building.

9/23/91: WASHINGTON: WASTE MANAGEMENT: The waste giant, Waste Management, Inc. has announced plans to build a $100 million incinerator project near Hanford to burn chemical and mixed radioactive/toxic wastes from both Hanford and commercial projects in the Northwest. Waste Management says it is tired of waiting for DOE to decide how to dispose of Hanford's wastes, thus it is going ahead and building plants to handle the project's wastes in the hopes that DOE will be forced to send waste there for lack of a viable alternative. Waste Management and its subsidiary Chem-Nuclear hopes to have the facility operating by 1993. *(NIRS Monitor: NIRS opposes any incineration of radioactive or mixed waste. Studies have conclusively proven that incineration cannot eliminate release of radiation to the environment.)*

9/25/91: RADIOACTIVE CONTAMINATION IN LOS ALAMOS: A 150-member team from the Energy Department has assembled to investigate whether radioactive materials from Los Alamos National Laboratory, where the first atomic bomb was built, contaminated the community. LANL already released a "self-assessment" in which executives said past managers were guilty of "arrogance" and "complacency" as they rushed to turn out nuclear weapons at the expense of safety. That 300-page report also acknowledges that small amounts of plutonium has been released into the environment over the years, along with other radioactive byproducts and toxic wastes, and that in some cases the people of Los Alamos, New Mexico, may have built houses over the waste.

9/30/91: WATKINS WANTS WIPP, READY OR NOT: Impatient with congressional slowness in clearing the way for ship-

continued

NUKE NOTES

continued

ments of nuclear waste to a storage depot in New Mexico, Energy Secretary James D. Watkins says he is going to start shipping the waste anyway. Watkins wrote to New Mexico's congressional delegation on Sept. 20 warning them that within one week he would seek a formal land transfer from the Dept. of the Interior in order to get started on delivering waste to the Waste Isolation Pilot Project (WIPP). It is "extremely important" to start the test phase soon, Watkins says, in order to see whether the underground storage facility near Carlsbad is suitable for permanent disposal of transuranic waste.

New Mexico's senators think it should be up to Congress to legislate the use of this federal land. If Watkins tries to push ahead before Congress finishes a bill, "We intend to do all we can to oppose Watkins' action," they promised. *(Engineering News Record)*

9/30/91: MORE LEAKS AT DOE HANFORD SITE: Leaks of radioactive waste at the U.S. Department of Energy's Hanford nuclear weapon site in Washington State were vastly underreported, the U.S. General Accounting Office has found.

GAO takes issue with a 1989 report in which DOE and site operations and maintenance contractor Westinghouse claimed that about 750,000 gallons of liquid waste had leaked from 66 single-shell tanks. GAO investigators later found that one tank alone had leaked as much as 500,000 gallons, not the 5,000 gallons reported for that tank earlier. The same tank may have leaked more than 1 million gallons of contaminated water over a 10-year period ending in 1978, says a DOE memo. Westinghouse also acknowledges that even the higher, current leak estimates do not include other possible leaks, such as continued seepage and the addition of rainwater. Sen. John Glenn has noted a "continuing pattern of behavior . . . to downplay the seriousness" of Hanford's contamination problems. DOE estimates the cleanup at Hanford will take 28 years and cost $100 billion. *(Engineering News Record)*

9/30/91: SOLAR LAB GETS A BOOST: An existing federal solar research institute has been redesignated the National Renewable Energy Laboratory. The Solar Energy Research Institute in Golden, Colorado has struggled financially since the Reagan administration tried to kill SERI several times as funding for renewable energy research declined during the 1980s. Despite vacillations in financing and enthusiasm, renewable energy developers have scored impressive successes. During SERI's brief lifetime, the cost of producing solar thermal power has declined by 83%. *(Engineering News Record)*

10/4/91: NEW DOUBTS ON SRS REACTOR: Tests of the K-reactor at the Savannah River Site have raised new doubts within the Department of Energy about whether the reactor's air ventilation system is strong enough to trap radioactive iodine particles. "Flows are higher than expected, therefore, estimates of effluent releases and the effectiveness of iodine filters are in question," said a September report to DOE headquarters.

10/14/91: DOE DOES END RUN ON WIPP SITE: Circumventing Congress, Energy Secretary James D. Watkins got clearance from the Interior Department to use an underground site in New Mexico for the $800-million Waste Isolation Pilot Plant. WIPP, located near Carlsbad, consists of caverns excavated from salt formations 2,150 ft. below the surface where plutonium-contaminated waste from DOE facilities will be buried. The administrative move allows DOE to temporarily store high-level wastes during a five-year test phase. DOE was ready to begin shipping in late October but court challenges are expected to change those plans. *(Engineering News Record)*

10/22/91: NRC PENALTY IN VIRGINIA: The NRC staff has proposed a $125,000 civil penalty against Virginia Electric and Power Company for alleged violation of NRC requirements at the Surry Power Station located near Newport News, Virginia.

NRC officials said there were two problems involving full operability of certain safety systems. The first problem involved Units 1 and 2 operating with the common emergency diesel generator inoperable from May 9, 1991 to August 2, 1991. The second problem involved the operation of the two units since 1980 in a manner which resulted in an inoperable automatic start feature for the safety pumps. *(NRC Press Release)*

10/24/91: NRC IN ALABAMA: NRC officials said a problem, which was identified by the plant staff at the Farley Nuclear Plant in Dothan, Alabama, occurred from May 17 until May 22, 1991, when Unit 1 went from hot standby to power operations over that period of time with its auxiliary feedwater pump inoperable due to a valve misalignment. The auxiliary feedwater pumps are used during emergencies, to provide secondary water to the steam generators so that heat can continue to be removed from the primary cooling water following a shutdown. The ability to deliver emergency water would have been degraded with the pump out of service. *(NRC Press Release)*

10/24/91: REPORT SAYS K-REACTOR UNSAFE, WASTE OF MONEY: The Energy Department is wasting billions of taxpayers' dollars trying to restart a Savannah River Site reactor that will never meet commercial safety standards and isn't even needed, according to a report released in October, 1991. Basic design flaws with the K-reactor also could lead to a severe accident, but all safety systems won't be reviewed to ensure they work before the reactor is restarted, according to the report from MHB Associates.

10/27/91: 3 FILE SUIT OVER DISMISSAL: Three former Savannah River Plant workers have filed a lawsuit against the nuclear weapons plant's former operator and a subcontractor alleging they were fired because they exposed illegal drug use. They lost their jobs after one worker reported to SRP officials in April 1985 that fellow employees were openly using and selling drugs at the nuclear weapons production facility near Aiken, the suit alleges.

10/28/91: NRC ACTS ON ACCIDENTAL CRITICALITIES: The NRC staff has directed licensees who possess more than a critical mass of special nuclear material (uranium and plutonium) to inform the agency of their procedures and criteria for assuring that any breakdowns in controls designed to prevent accidental criticalities (nuclear chain reactions) are promptly evaluated and reported to plant management and, where necessary, to the NRC. The action follows a potential criticality event at General Electric's uranium fuels fabrication plant in Wilmington, NC, in May 1991 and two, earlier advisory notices on criticality safety issued by the NRC staff in March 1989 and October 1990. *(NRC Press Release)*

11/1/91: SRS PLANT TAINTING GA'S WATER? Near Girard, Ga., about a mile from the Savannah River, two state work crews are hastily digging a deep well to determine whether pollution from the Savannah River Site nuclear plant in South Carolina is poisoning Georgia's ground water. The water will be tested for radioactive tritium and other hazardous chemicals that Georgia environmental officials fear have migrated from the 300-square-mile SRS, just across the river. Several more test wells will be dug in coming

weeks, and some of those may go as deep as 1,000 feet. Georgia officials contend that the tritium came from SRS and may be the first sign of a major contamination of Georgia's ground water, its source for drinking, irrigation and industry.

11/3/91: NUCLEAR SHIPMENTS BLOCKED: A federal judge in Boise, Idaho, has blocked further shipments of high-level nuclear waste from Colorado into Idaho until the U.S. Department of Energy obtains a state air quality permit. State officials said that could take six months to a year, and the ruling gives Idaho a little breathing room in its battle against the shipments. Three shipments of waste from the decommissioned Fort St. Vrain commercial reactor near Denver came into the state in October. Public Service Co. of Colorado, under contract with the Department of Energy, wants to ship another 244 truckloads during the coming year. U.S. district Judge Edward Lodge issued an order agreeing with state contentions that the federal energy agency must comply with state air quality requirements before the shipments can resume.

11/7/91: CHERNOBYL FALLOUT: In the five years since the Chernobyl disaster, high doses of radiation have caused a steady worsening in the health of people in the Soviet republic hit hardest by the fallout, a researcher says. More than 60 cases of thyroid cancer among children have been detected in Byelorussia in the first nine months of 1991, up from 42 cases in 1990, Dr. Tamara Gelookaya, a radiologist who treats victims of the 1986 disaster, said. In an article published in June, she wrote that people in contaminated areas suffered from anemia, baldness, tuberculosis, and pulmonary, bronchial and other diseases. "It is quite clear now that medical and biological consequences of the accident are much more grave and complicated than it had been expected earlier," she wrote.

11/8/91: NUCLEAR-FREE SOUTH KOREA: South Korean President Roh Tae-woo pledged today to remove all weapons of mass destruction from South Korea and urged longtime rival North Korea to open its nuclear facilities to international inspections.

11/8/91: JAPANESE PLAN TO SHIP PLUTONIUM: Starting next year Japan plans to ship 40 tons of plutonium from Europe in what critics say is an invitation to piracy on the high seas by groups or nations wih terrorist aims. Worries about what could happen to the deadly cargoes during the 7-week, 17,000-mile voyage – with their only protection a Japanese coast guard cutter – are prompting sharp opposition.

The Japanese government insists the protection is adequate. Under a postwar agreement, the US controls Japan's nuclear imports, and the Bush administration appears prepared to sanction the shipments despite earlier misgivings by the Pentagon.

A ton of plutonium – the likely size of each shipment – would yield 150 nuclear bombs. Japan plans to use it for energy. Two retired US admirals, ex-CIA chief Stansfield Turner and Thomas Davies, wrote in the New York Times last year, "It is difficult for us to imagine a more tempting target. Seized by terrorists, plutonium would be a valuable commodity for sale to states seeking entry into the nuclear club, and it would be a powerful instrument for political blackmail," they wrote.

11/11/91: UTILITY TO CUT RISK OF MELTDOWN: Virginia Power is making several physical improvements and procedural changes at its 1,650-Mw Surry nuclear power plant to reduce the risk of catastrophic flooding in the plant's electrical system. Following a recent analysis of potential hazards at the two-unit, 19-year-old plant, the utility told the NRC in late August that there was a 1-in-1,000 chance that a rupture in the plant's low-pressure service-water intake pipe from the James River could inundate a key electrical room and cause a reactor core meltdown, possibly releasing radiation.

Alarmed at what is a relatively high probability of a serious accident, NRC officials visited the plant in eastern Virginia in late October. NRC spokeswoman Sue Gagner says the agency supports the utility in its efforts to reduce the chances of an accident and "thinks it's alright for the utility to continue operating the plant." *(Engineering News Record)*

11/12/91: NO TRITIUM PRODUCTION NEEDED, REPORT SAYS: The Department of Energy (DOE) used obsolete and inaccurate calculations to justify production of nuclear weapons material at the Savannah River Site, a report released 11/11/91 says. William Weida, a professor of economics and business at Colorado College in Colorado Springs, said the findings show there is no need to restart the aging K-reactor, or build a new production reactor, before 1999 to produce radioactive tritium for nuclear bombs.

11/12/91: RADIOACTIVE CESIUM IN EMORY PARK: Emory University is in the process of moving a 4-inch-long, 30-year-old radiation source from Lullwater Park. The source is cesium, a material used from about 1960 to 1970 to study the effects of radiation on the ecosystem. It has remained buried 5 feet underground, covered by 30 inches of oil and encased in lead and steel. Henry Karp, Emory's radiation safety officer, said that a commercial sanitation company has been contracted to transport the source to a waste disposal site 75 miles north of Las Vegas. However, the Nevada disposal agency has not agreed yet to take the cesium, Mr. Karp said. The cesium source was used to study the effects of radiation on plant and animal life.

Unless otherwise noted, all sources AP Wire Service.

Some Truck Codes for Nuclear Materials

- **2909** Radioactive Material – articles manufactured from natural or depleted uranium or natural thorium
- **2908** Radioactive Material – empty packages
- **2918** Radioactive Material – fissile, n.o.s.
- **2911** Radioactive Material – instruments and articles
- **2910** Radioactive Material – limited quantity, n.o.s.
- **2912** Radioactive Material – low specific activity (LSA), n.o.s.
- **2982** Radioactive Material – n.o.s
- **2974** Radioactive Material – special form, n.o.s.

n.o.s. = not otherwise specified

PLANT VOGTLE

If Georgians Against Nuclear Energy were not watching the Vogtle scene closely, Georgia Power would have further compromised the reliability of the diesel generators which power the safety systems at the nuclear plant in an emergency.

On Earth Day 1991, April 22, Georgia Power requested permission from the Nuclear Regulatory Commission to lower the standards by which the reliability of the generators are established. The NRC gave conditional permission unless someone intervened in the process and proved a reason not to grant Georgia Power's request.

On June 14, 1991, GANE protested the decision before the NRC and Georgia Power. After a bit more dialogue back and forth, Georgia Power withdrew its inappropriate request and thererfore, will continue to follow the originally licensed schedule of testing to verify the reliability of its back-up power sources!

photo courtesy Georgia Power

The emergency diesel generators in question at Plant Vogtle are the same generators which failed to respond to the emergency in March 1990, resulting in what has been called the second worst reactor accident in U.S. history (Three Mile Island is the worst).

The case which GANE has brought before the NRC concerning the switch which caused the generator to fail on that fateful day in March 1990 is proceeding slowly. We were left hanging by a Safety & License Appeals Board which was not empowered to relieve GANE's concerns. However, emboldened by the seriousness with which the Board considered our concerns, we appealed the "indecision" to the Commission itself. The Commission published a notice on October 7, 1991, that it has hired an expert to advise them about the concerns we have raised. Our experience with the NRC inspires our confidence on one level since the parties to our proceedings have exhibited an appreciation of the gravity of the situation at Nuclear Plant Vogtle. In spite of the extreme slowness with which the agency addresses safety questions and a historic tendency by the NRC to weak enforcement of rules with the industry we have hopes that this process will ultimately improve safety at Plant Vogtle. In the meantime, we have a change in command on the Commission, and several indications around the country (see Yankee Rowe and Sequoyah Fuels articles) that the NRC may be coming into the actual role that their name implies.

GANE contentions before the Commission are given a tremendous boost by separate allegations of Plant Vogtle management misconduct brought forth by Allen Mosbaugh, a top-level whistleblower from Plant Vogtle. The NRC is investigating the reliability of the all-important diesel generators at the prompting of the former insider's "show-cause" petition. (A "show-cause" petition demands that a nuclear licensee "show-cause" why it should continue to be licensed given the circumstances brought out by the petition.) At presstime several violations have been posted against Plant Vogtle by the NRC and the question of whether officials knowingly falsified information during the NRC investigation of the accident is still being examined.

Unit I had a brush with a horrifying loss of coolant on September 26, 1991. Like the March 1990 accident with Unit II, the process of refueling was underway. Like the March 1990 accident, a sensor in vital equipment that serves the Emergency Core Cooling System failed.

During refueling, a process which requires the lowering of the cooling water for access, the Emergency Core Cooling Water in the reactor dropped suddenly. When the water level dropped below the pump which keeps cooling water flowing around the hot reactor core, the pump began pumping air instead of water. Within 25 minutes, the water level had dropped seven feet to within five feet of the fuel (normally the fuel is under 25 feet of water). An NRC investigation was launched immediately and we will report to you when the NRC issues its conclusions. On the surface of it, it appears that if the pump had continued to pump air and the water continued to drain for another 25 minutes the fuel would have been exposed. The fuel is so hot that if it is not cooled by water it begins to melt, the unthinkable occurrence which gives "meltdown" its name and which we all know we do not want to experience. Keep your fingers crossed, folks, that none of these serious situations at Plant Vogtle become environmental radiation nightmares!

— Glenn Carroll

POGO ENERGY STRATEGY

(With apologies to Walt Kelly)

The Great Philosopher Pogo was recently asked what he thought on the subject of nuclear power versus coal power:

"Well lessee here . . . . . on one side we have the anti-nuclear folks who say we're playing with fire, and that makes sense. But then we have people who say that the coal-powered electricity plants have a lot to do with the Greenhouse Effect and I'm not too crazy about that, either. Hmmmmm.

"The most important question at this moment for both of these people seems to be this — how do these people live? How much juice do they use? Do they turn off the lights when they leave the room? Do they use air-conditioning and if they do, how much do they use? How much T.V. do they watch and if they do watch a lot of T.V., I'd like to ask them why but then that's another subject.

"In short, the nuclear guys and the coal guys can't be taking the anti-nuclear guys and the anti-coal guys too seriously unless these people are using at least half the juice that most other folks use. Otherwise, they are at least half the problem.

"Now me, I don't have air-conditioning. Don't have a T.V. either.

"Don't believe these people on the News that tell you they're keeping you in touch with the world.

"They problee don't know their neighbors three doors down.

"Do you?"

— John Kunz

VIEW from the CLOSET

The DOE and the respected Mr. Watkins think this is a great time to fire up the K-reactor at the Savannah River Bomb Plant again. Well, when you have spent a couple of billion to try to make it safe, I guess you tend to skim over the details such as electrical glitches and radioactive water leaks and other signs that the investment might have been a bad one. When you have people in South Carolina screaming for economic relief, I guess you tend to overlook the radioactive groundwater and the fish kills and the radioactive rainwater and milk as far as 25 miles from the plant. When you have a rapidly changing world situation and your principal paranoia of the past 40 years is suddenly a collection of separate nation-states, I guess you tend to overlook the fact that you really don't need all those bombs or the tritium to enhance their destructive power.

Maybe I'm out of touch. But, on the neighborhood nuke plant, I've got some credible cohorts for a change!

Good ole Governor Zell has stated publicly that he would be "derelict in my duty" if he were to support a new reactor. He even suggested an alternative source of employment and economic largesse in the form of an aggressive clean-up of SRP to "provide something a new reactor never will: a clean and safe environment."

Before my heart had slowed to its normal palpitation rate, the Atlanta Journal-Constitution published an editorial: "Miller right to oppose new reactor." Will wonders never cease?

The paper went so far as to castigate the DOE and its military-industrialist predecessors for poor management, little attention to safety, and overemphasis on production needs. Seems "technologies are coming on line to produce tritium without an expensive reactor." There's even reference to "recycling" the stuff.

Shortly after the Governor's views were published, 14 of us signed a letter to express our thanks and support for his stance. According to advertising and public relations gurus, each person who expresses thoughts to the media or public officials is considered to represent similar feelings on the part of up to 700 people too busy or too lazy to write themselves. So, on the high end, our letter equated to 10,000 people (14 x 700) supporting Governor Miller.

There have been multiple articles and opinions published since the above events in late summer, but they're still talking about restarting the K-reactor. Now is the time for you to slip into your activist attire and put your 700 voices in front of the Governor or the Journal-Constitution, or better yet, Sam or Wyche who have both been pro-reactor in the past.

It's the American thing to do. Activism is as much a part of our tradition as apple pie and the flag. Just check your kids' history books, or read the news stories about property tax uprisings in Fulton and Gwinnett Counties this year!

Get out your tri-corner hat and your quill pen and some parchment. Express yourself. It takes about five minutes and a 29¢ stamp. Handwritten letters are not only OK, but are considered more powerful than typed ones.

There's an undercurrent building in the good old USA. Lots of former closet radicals are expressing themselves regarding everything from abortion rights to dissatisfaction with the political process. The only way to change the status quo is to make yourself heard. Some politicians are scared, and starting to listen.

Robert Zimmerman, from the Mesabi iron range in Minnesota, caught the imagination of the dissatisfied some 30 years ago with his plaintive rendition of "The Times They Are A-Changin'." You can help make it happen again. *— Dennis Bishop*

WRITE THE GOVERNOR: The Honorable Zell Miller, State Capitol, Atlanta, GA 30334

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YES! I'd rather be active than radioactive!

I am a "Georgian Against Nuclear Energy."
I support the goals of phasing out the use of nuclear energy as soon as possible, optimizing the use of energy conservation and renewable energy, and opposing the use of nuclear weapons.

☐ $10 Active!*
☐ $25 Active!
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☐ $ ____ Active!
☐ I can't afford to send money but I want to receive the newsletter.

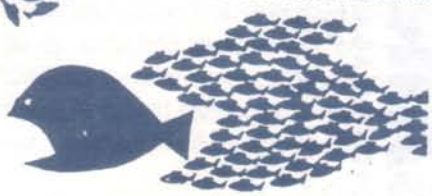
Signature _____ *Date* _____

Name _____

Address _____

City _____ State ____ Zip _____

Phone _____ ☐ Call me about actions!



* minimum donation to receive newsletter

Fill out and return today before it's too hot! **Georgians Against Nuclear Energy** • P.O. Box 8574 • Atlanta, GA 30306 • 404/525-7306

ATOMIC PRIMER

Why Nuclear Power Instead of Solar?

The technology for using solar power on a modern mass scale has been proven and available for decades. In 1952 a blue-ribbon commission reporting to Harry Truman on the state-of-the-art for solar energy predicted that by 1975 there could be 13 million solar-heated homes in the U.S.

But in 1975 a Federal Energy Agency study reported that half the 866,000 single-family homes built that year were equipped not with solar power, but with electric heat, the most costly and inefficient source on the market. The FEA report also pointed out that given 1975 electrical costs, every one of those houses could be more cheaply heated with solar features.

What happened in those 23 years between the Truman predictions and 1975?

One thing was Dwight D. Eisenhower's "Atoms for Peace" speech, which held out the promise of cheap, infinite nuclear energy. Hidden in that message were some political decisions of enormous impact.

For nuclear power held (and holds) one inescapable attraction: it is a monopoly product. Atomic reactors require huge sums of capital to build. Their basic operations can be mastered only by a technocratic elite. And they make sense only in a system of extreme centralization. Their capital and organizational structures are beyond the control of the individual or small community. They fit only into a society with a highly centralized vision of political and economic power, which the United States of the 1950s certainly was.

An integral part of the vision was the electric utility industry. Essentially the invention of Thomas A. Edison and a business promoter named Samuel Insull, the early utilities built their capital base by selling electricity for community services such as street lighting and public transit.

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But private factories found they could build their own on-site power plants and supply themselves with juice a lot cheaper than it could be gotten from distant utility generators. In fact, because so much power was lost in transmission (at least 10 percent), the factories could supply not only themselves but their near neighbors and still beat the utilities.

For Insull and Edison, that would have meant the end of the game. Their business depended on one thing — no competition.

So they charged the factories less than it actually cost to produce and ship the juice. Their prices were just cheap enough to guarantee that the factories wouldn't generate their own power. Then they built their profit margins on the municipal customers and individual home owners who had nowhere else to go.

Utilities further persuaded the legislatures to give them special status as private monopolies (the only ones in the U.S.) with guaranteed immunity from bankruptcy. They also got a booster known as the "rate base," allowing them to automatically base their profits on how much they spent to build generators. The more they spent, the more they could make.

With a noncompetitive rate schedule, with a profit system designed to encourage capital expenditures, and with public guarantees against bankruptcy, the utility system was custom-made for the introduction of massive power plants, including atomic reactors.

Indeed, the whole American energy grid was geared for both centralization and spiraling consumption. With an apparently infinite supply of fossil fuels and with atomic power holding the promise of still more, there seemed no reason to question the limitless expansion of the network, or the propensity of American industry and consumers to waste energy with little care for efficiency or the future. Between 1950 and 1979 the American population increased 45 percent, energy use 250 percent, and electrical consumption 600 percent. By the mid-seventies the U.S., representing six percent of the world's population, was consuming more than a third of its energy resources.

*SOURCE: **Energy War — Reports from the Front** by Harvey Wasserman*

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