NEWSLETTER for GEORGIANS AGAINST NUCLEAR ENERGY

FALL/WINTER 1990/1991

GANE Intervenes Over Safety at Plant Vogtle



The question is . . . can an operator cover the vast distances at Nuclear Plant Vogtle fast enough to carry out certain emergency procedures?

1991 finds GANE involved in an official process with Georgia Power and the U.S.

Nuclear Regulatory Commission over an emergency electrical generator. The genera-

Test Ban Treaty: The Time Is Ripe

In January, the Test Ban Treaty Conference convenes at the United Nations in New York, to discuss the possibility of a worldwide ban on the testing of nuclear weapons. The reason for the conference is the U.S. government's outright refusal to halt its own weapons testing, despite continuing pressure from both inside and outside its borders to do so.

When the Soviets stopped their own testing for 18 months and called on our government to do likewise, the moratorium was ignored by the U.S. We quibbled over verification procedures until the Soviets, in frustration, resumed testing.

Similarly, when a bill to cut off funding for the weapons testing program was in danger of passing through Congress, the White House stepped in at the last moment and jinxed the vote, claiming that any sign we were becoming slack on testing would weaken our position in upcoming summit talks. The result was, the talks accomplished next to nothing, and the testing went on, as it does to this

With the lessening of Cold War tensions, it would seem that the need to design, build, and test nuclear weapons would have diminished. And yet, the Department of Energy wants to expand the operations of its various weapons production facilities (such as SRP). While it may take years to prevent new weapons from being designed and built, a ban on their testing can be achieved through Congress in a relatively short time. Such a ban will clearly slow down the build up of arsenals worldwide.

Write your congressmen or Senators today. We won't let them talk us out of it this time. — Kevin Murray tor is supposed to ensure an unbroken flow of electrical power to Plant Vogtle's safety systems.

Yes, this is the same generator involved in Plant Vogtle's accident on March 20, 1990. During scheduled maintenance at Plant Vogtle, a fuel truck struck a utility pole and knocked out an electrical transformer — eliminating the off-site electrical power supply to the Vogtle I reactor. With one of two back-up diesel generators also out for maintenance, the only remaining source of power to cool the nuclear core started automatically. Within 70 seconds, however, this diesel generator tripped (shut itself off automatically).

This left the plant in a "black-out" condition. In a blackout condition, no external or internal electrical power maintains the plant's safety systems, which pump coolant to the fuel rods in the reactor core. Without coolant, the fuel could melt and escape.

In the blackout on March 20, the radioactive core at Plant Vogtle was losing water at a rate that it would be exposed within three and a half hours! This would have led to a meltdown, and release of radiation throughout a wide geographic area.

NRC probability assessments have projected that the chances of a core melt occurring in a U.S. reactor within the next 15 years are as high as 45%. A separate NRC risk assessment gives as much as a 90% probability of a core melt being caused by a station blackout.

Plant Vogtle has been under investigation by the NRC since the accident. Although the NRC and the utility have not conclusively proven it — their best theory at this point to explain the failure of the emergency diesel generator to operate was the presence of foreign matter on the sensor tips that activate a shut-off switch when the generator is over

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Greetings

and a Peaceful New Year, loyal GANE supporters! What a great year GANE has had! Earth Day 1990 brought us many new friends and we have had a jampacked year of activity.

Shortly after Earth Day, a dozen GANE members met and reassessed GANE's first decade in anticipation of the coming decade. Many of you have participated in one of the concrete developments of that meeting, our bimonthly Hard Facts Cafe program.

We've had several successful collaborations with other groups like Greenpeace and the Atlanta Green Party, and great turnouts for protests over the new Below Regulatory Concern policy for nuclear waste, Hiroshima Day, radioactive contamination of Radiation Sterilizers Inc. in Decatur and the future of the U.S. nuclear bomb

We also launched an intervention with the Nuclear Regulatory Commission about safety at Plant Vogtle, to which they responded by launching an investigation to see if our concerns have merit.

Busy, busy, busy! No excuse, but the only one we have for being so late with this newsletter . . . the price of success!

So much news, some of it of our own making, we're bringing you this special new year double issue, and hope that you'll keep it on hand, save it, savor it, since there's so much nuke news for one sittina!

It's the new year, and our army for peace and sanity is growing. We will make every effort to keep on schedule with the newsletter. Your moral support and precious dollars are very important to us, thanks, and look around you, the change you are working for is happening . . . let's keep the pressure on through the '90s!

> Peace. The Folks at GANE

FALL/WINTER GAINSAYER

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heating. The trip switch "thought" erroneously that the generator was overheating when it wasn't.

However, the power company has not been able to figure out how to make this switch work properly, so their solution is to by-pass it. This can be compared to removing an electric circuit breaker in your home because it keeps shutting off the circuit when you overload it.

In May of this year, Georgia Power applied to the NRC for an amendment to their operating licence, to permanently bypass this problematic safety device. In June, the NRC staff announced that they saw "no significant hazard" and would issue a temporary waiver, if no one objected.

In July, GANE objected and petitioned for the right to intervene, observing that the switch, though faulty, is necessary to protect the generator from becoming completely crippled from burning up during a station blackout, causing Plant Vogtle to lose its last defense against a meltdown. We see that the best interests of Georgians and South Carolinians in the area are served by fixing the safety switch, or upgrading the archaic pneumatic air system which is probably the root cause of foreign matter in the system.

The dialogue that has unfolded has been quite an exercise in knowledge of minutiae. Georgia Power has generated about two reams of paper to date about the switch, which GANE has waded through to uncover woeful discrepancies in the operator's manual which almost ensure an operator error, and a significant mistake in arithmetic which leads the utility to a fatal assumption about the amount of time an operator would have to act to avoid generator burn-out.

The NRC's response to our input has been to launch an investigation into the problem. Interestingly, the day after their investigation was scheduled to have begun, a fire broke out in a transformer which supplies power to

CESIUM HOT POTATO LANDS IN DEKALB'S LAP

Since June 1988 DeKalb County has been having a nuclear accident.

That's when radioactive cesium from the U.S. Department of Energy's (DOE) nuclear bomb program spilled into 25,000 gallons of water at a private company.

How extremely hazardous radioactive material comes to be a concern to DeKalb's neighborhoods provides a sad illustration of the world's nuclear dilemma. However, the response of the DeKalb County Commission has set a nationwide precedent that gives us reason for hope.

Nuclear explosions are far from the only thing we have to fear from nuclear weapons. The atom bomb manufacturing process in and of itself is deadly enough to destroy life on earth if it gets totally out of hand.

Millions of tons of waste, very long-lived and mind-boggling in its toxicity, is generated in the atom bomb industry. No solution for disposal of this dreadful waste has been forthcoming in 50 years of deadly practice in the creation of radioactive components of bombs.

So, they put cesium-137 in the Byproducts Utilization Program at DOE. Let's put our nuclear waste to good use and give it commercial value, they said.

They repackaged the cesium and rented it to Radiation Sterilizers, Inc. (RSI) to generate heat for their sterilization process. Bless 'em, they even persuaded the Nuclear Regulatory Commission (NRC) to let them bypass the last six months of the testing period of these new, experimental cesium devices.

The new irradiation industry (clandestinely promoted by the DOE - remember, it's a nuclear waste solution for them) met no regulatory barriers on the way to setting up shop in a DeKalb County office park. RSI was licensed by the Department of Human Resources to operate in the same neighborhood as a day care center they had also licensed.

Cesium-137 is what Chernobyl spewed out so disastrously a few years ago. RSI contained 12 TIMES the amount of cesium that Chernobyl released worldwide! Unbelievably, Georgia's environmental protection agency, the Department of Natural Resources (DNR), only became aware of the facility when the accident was discovered and reported.

A federal evaluation report released in December found that federal and state officials "discounted the possibility of capsule failure to the extent that public health and safety could have been compromised."

So, now the DOE, NRC and DNR are



Low-tech trips high-tech again . . .

several cooling pumps at Vogtle. The reactor was shut down manually. The fire in the transformer was caused by wiring which shorted out for unknown reasons. The press has carried no comment from the NRC.

Concurrently, with GANE's case, a former top-level operations manager from Plant Vogtle has allegations before the NRC that Georgia Power has willfully violated NRC regulations and seriously compromised safety at Plant Vogtle.

You may have been following Allen Mosbaugh's case in the newspapers. Since he produced some 400 hours of audiotape as evidence for the NRC beginning with the March 20

accident, he has been fired from Plant Vogtle. The NRC has been reviewing and investigating his allegations in an open-ended time frame — "to continue indefinitely."

The story broke, to GANE's surprise, in September, the day before GANE's prehearing conference with the NRC. This could not fail to improve the credibility of our case.

Mosbaugh's allegations, while ranging much further than GANE's which are limited to the safety switch, address the same concerns we have for the reliability of the emergency diesel generator.

The NRC is treating the Plant Vogtle situation quite seriously. Georgia can consider itself mighty lucky to have a situation this grave promote close scrutiny of a dangerous nuclear plant, without having suffered actual exposure to dangerous radiation in the process. This accident has been classified as the second worst reactor accident in U.S. history, Three Mile Island being the worst.

Until this situation is resolved, safety at Plant Vogtle should be considered to be extremely compromised, as even the normally nonchalant NRC is moved to crack down on the cavalier attitude toward safety prevalent at Georgia Power.

- Glenn Carroll

SOURCES: The Atlanta Journal and Constitution, Atlanta Business Chronicle, Nucleus (publication of the Union of Concerned Scientists)

making up ways to fix the mess as they go.

They've created a way to remove the cesium capsules and take them back to Washington State, although beleaguered with mishaps all along the way.

They've demineralized the water and dumped the cesium they've collected on hapless South Carolina who plays host to the Southeast's "low-level" nuclear waste dump.

Once they dispose of the still-contaminated water, they plan to finish cleaning the building and remove the huge water tank. All of this has already set U.S. taxpayers back \$30 million and is expected to cost another \$5 million, yet.

In November, DeKalb County was asked to contribute its sewer system to the clean-up process. Specifically, the plan was to dump 25,000 gallons of radioactive water into the sewer, where it would flow to the Snapfinger Sewage Treatment Plant (which is not designed to treat radiation) and then to the South River flowing through densely populated areas of DeKalb and Henry County. DOE described the water to the DeKalb County Commission as only contaminated as to lowest threshold of detection.

DOE, who recently lost lawsuits with residents of Hanford, Washington, and Fernald, Ohio, for having lied to them about deliberate radiation releases in the past, monitored the water and assured us it is safe.

DeKalb citizens responded in force, urging the county commission to reject the ill-conceived dumping plan. In turn, the Commission denied the proposal by a 4-3 vote on November 13 with the leadership of Commissioners Sherry Sutton and John Fletcher.

This still leaves the question of whether there is any truly safe solution for the 25,000 gallons of contaminated water. Two options being considered are: 1) make concrete with it and send it to a radioactive waste disposal site or 2) tank the contaminated water to a DOE evaporation facility.

In the meantime, DOE is continuing to push the development of the irradiation industry — hoping eventually to have thousands of companies like RSI leasing (and releasing) nuclear waste. DOE is lobbying for laws to transfer responsibility for this "commercially valuable" waste to states, counties and towns. Hopefully, the lessons of DeKalb County will help stop these dangerous practices nationwide.

DeKalb County, Georgia, finds itself party



Since the stuff's so harmless . . .

to the first problem of this nature. America is dependent on this county for setting the precedent. How the rest of America's towns and hamlets will fare in the "commercialization" of nuclear waste depends greatly on the resolution of this case. In the process, we are learning hard lessons about how our waste finds us again when we try to send it away.

- Glenn Carroll and Dennis Hoffarth

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Safe Solutions to the Energy Crisis

Economic uncertainties imposed by the Persian Gulf situation come when great growth in power generating capacity is projected worldwide. As we learned twice during the 1970s, vacillations in the cost and supply of oil can cause havoc in planning such expansion.

Fossil fuels provide most of the world's electricity and a huge proportion of other energy needs. The easiest way to reduce dependence on them is by exploiting alternatives to burning oil, gas and coal to generate electricity. Conservation is scoring impressive gains in the U.S. There is potential for similar savings in less-developed countries as their economies expand.

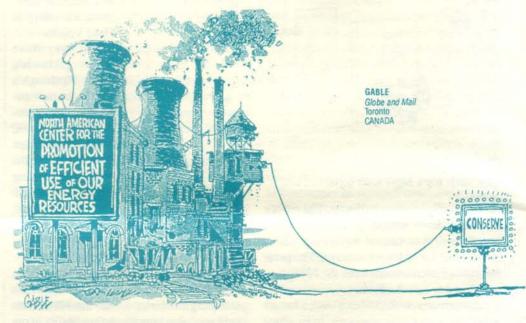
Energy efficiency costs less — economically, socially and environmentally — than producing more electricity with more power plants.

More than 500 U.S. utilities have energy conservation programs for residential, commercial and industrial customers that provide energy use audits, rebates and loans to retrofit existing homes and equipment, or promote energy efficiency in new homes and equipment. For example, some utility programs subsidize the cost of putting efficient lighting in business offices, or give rebates to residential customers for installing insulation and storm windows.

Specific examples of this can be found in several areas of the country. For instance, the Conservation Law Foundation of New England estimates that New England Electric System's 1990 conservation investments will

save \$82 million because of the reduced need for power plants and fuel. In the 1980s, the Bonneville Power Authority and other utilities in the Northwest saved electricity at an average cost of 1.4 cents per kilowatt hour — about 10 times cheaper than the kilowatt-hour cost of power from a new nuclear power plant.

Late last year, Georgia Power, after conferring with Campaign for a Prosperous Georgia, Southface Energy Institute and other organizations which promote progressive energy policies, presented the Public Service Commission



with a pilot conservation program for industrial electricity users. That program emphasizes efficient lighting to be installed by the utility and interruptable service rates. They are currently preparing a pilot residential program which will be ready for the PSC, we hope, early in 1991. This is major movement in the direction we have long been advocating, but there are still many details to be worked out.

But even efficiency's dramatic savings alone will not do the job. Renewable power sources can. Solar, wind and geothermal generating technologies have advanced tremendously in the past 20 years. Producing electricity from ocean tides and temperature gradients is a strong possibility. Those advances occurred even though direct government financial support in the U.S. has declined precipitously, and federal investment tax credits lapsed completely.

Although enthusiasm for alternative energy dried up in Congress and some state legislatures once oil became plentiful and cheap again, private developers maintained a sense of mission and found money to press on. What is needed now is a restoration of investment tax credits to help demonstrate that alternatives can actually move into a long-term, cost-competitive range.

Experts say that 28,000 Mw (28 Vogtle reactors) in alternative energy came online in the 1980s. These include a mix of cogeneration, biomass plants, small hydro, wind, solar and geothermal.

Southern California Edison has been the leading U.S. utility in this area, adding near 5,000 Mw in the 1980s from alternative sources, including wind farms and solar fields.

Brazil is intensifying efforts to turn bagasse, waste from sugarcane production, into a major source of electricity. Official estimates are



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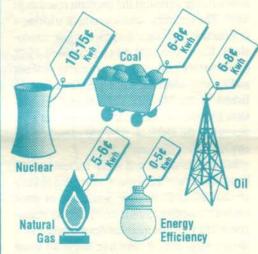
that Brazil has a potential of about 3,200-Mw of biomass-fired generating capacity using currently available steam turbine technology. Applying new turbine technology, considered to be more efficient, the power output could be much higher. Most of Brazil's current generation is hydroelectric. Winrock International, the sponsoring organization from Arkansas, has identified 10 locations in the Third World where bagasse-fired power from sugarcane offers real potential.

A Swiss consortium plans to build a 500-kw photovoltaic array atop a mountain. It will be Europe's largest solar electric generating plant, and it is designated as a national research, development and demonstration project.

The undertaking is particularly important for Switzerland, which is now being forced to exploit alternative energy sources. The country's hydroelectric potential is exhausted and five nuclear units now provide 40% of its electricity. But in a national referendum September 1990, citizens backed a 10-year moratorium on nuclear activity. Already a second 500-kw photovoltaic installation is planned on a

The Cost of Energy

Consumers are billed for how much electricity they use. A quick comparison shows improving energy efficiency is cheaper than conventional energy sources like nuclear power.



Source: Komanoff Energy Associates Safe Energy Communication Council Zurich rooftop.

The program is based on five years of research and supported by a consortium of electric utilities and industrial firms.

And if you didn't know it, Saudi Arabia is one of the leaders in use of solar energy.

Increased use of alternative energy schemes could reduce purchases of foreign energy sources, cut air and water pollution, and add great flexibility to power supply systems. They also can establish a large export market for services and equipment, boosting employment and further decreasing the U.S. balance of payments. That's not a bad investment!

If you have an interest in working to advocate sane alternatives to nuclear energy, contact Dennis Bishop (371-8414). The more involved you become, the more successful the movement will be!

SOURCES: Engineering News Record (8) 22/85, 5/7/87, 9/13/90, 9/27/90), Safe Energy Communication Council, Campaign for a Prosperous Georgia, Renewable Energy: The Power to Choose

GANE Protests Linguistic Detoxification of Radiation

This summer, GANE activists pooled their resources with Greenpeace and the newly formed Atlanta Green Party for a highly visible display of public concern in crowded downtown lunch-hour pedestrian traffic at the Peachtree Plaza

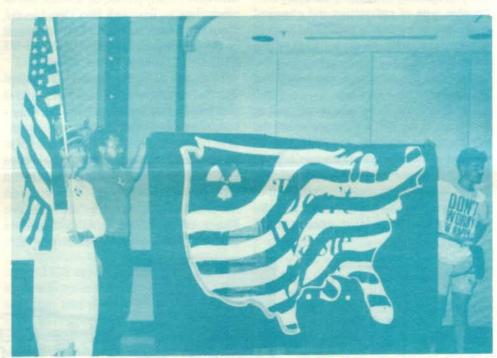
For two hours prior to a public meeting with the Nuclear Regulatory Commission about their new "Below Regulatory Concern" (BRC) policy for deregulating dangerous nuclear wastes, the colorful activists answered the question "What's BRC?" for passersby.

At the meeting later more than 30 folks from as far away as Brunswick, Georgia and the North Carolina mountains convened and attempted to help our government find some sense about dangerous nuclear activities.

"Nothing that causes people to die is below regulatory concern." This was the

principal theme as stated by Kevin Murray, a GANE member. Joan King of North Georgia reminded the NRC that background radiation has already caused harm and they should not be complacent about adding to this problem. The negative effect on recycling efforts was pointed out by Dennis Hoffarth of Atlanta, who noted that people will not accept recycled products if they are radioactive.

Tom Clements, speaking for Greenpeace Action USA, formally requested that the NRC withdraw their BRC policy, saying "real patriots would do no less."



Pictured showing their patriotism are Glenn Carroll from GANE and Tom Clements and Glen Stark from Greenpeace with the banner from "Don't Waste U.S."

Photo courtesy Rochel Haigh Blehr and Alternatives Newspaper

COMPLEX 21

Nuclear Horror Theme Park Slated for

You may have heard that the Cold War is over, but the message hasn't gotten through to the Department of Energy (Department of Nuclear Weapons Production).

DOE, 60% of whose budget goes to nuclear weapons, is in the middle of a massive, yet quiet, expansion and modernization program. If DOE, at the direction of George Bush and the Pentagon, is allowed to get its way, there are some ugly things in store for our neighborhood nuclear bomb factory — the Savannah River Plant (SRP).

Secretary of Energy Watkins has called SRP the "flagship" of DOE and there is strong evidence that SRP is the chosen site to which the bulk of U.S. nuclear bomb production will be relocated. Secretary Watkins has dubbed this super-site "Complex 21." This site, according to Watkins, would be "my vision of a fully modernized complex, planned to be in operation by about 2015."

Watkins' "vision" is a sensible person's psychotic nightmare — a huge industrial complex spewing and puffing out every conceivable type of radioactive and chemical waste, producing totally unjustified nuclear weapons and eating our money up in billion dollar bites.

Who said the arms race was over? Not Westinghouse, that's for sure.

To replace the three antique reactors at SRP (built in the 1950s, these are among the world's oldest reactors), the DOE and legions of money-hungry contractors hope to build a new reactor. And it is becoming clearer that DOE is now engaged in a secret shift of plutonium operations from the troubled Rocky Flats plant to SRP. But first, more on restart at SRP.

RESTARTING OLD REACTORS

With \$11 billion committed to nuclear bomb programs in 1991, a record amount, DOE is now rushing to restart the decrepit reactors at SRP. The reactors, which produce tritium, a radioactive gas that boosts nuclear explosions, have been shut down since mid-1988 due to safety problems. The reactors will not and cannot meet safety standards as established by the Nuclear Regulatory Commission for commercial reactors. But that's no worry for the DOE — they are exempt from any safety regulations!

Militarists argue that more tritium, which has a half-life of 12.5 years, is needed to keep all 20,000 U.S. nuclear warheads at peak explosive design. Small minds in the Pentagon are busy at this moment desperately trying to find an enemy at which to target all those weapons.

But, it appears that Westinghouse, the contractor which runs SRP, is running into problems in their restart effort. Those problems have already pushed the announced December restart date well into 1991. So far, about \$2 billion of our money has been wasted on the reactor patch up job.

BUILDING A NEW REACTOR

To replace the aging reactors, a New Production Reactor (NPR) would cost from \$5 to \$10 billion. \$363 million is in this year's budget for research and development of the SRP reactor and another reactor that DOE wants at Idaho National Labs. It appears that DOE will be able to push through actual construction funds for one reactor, although the final decision won't be made, as one Senate Armed Service staffer says, until we get into "real money." According to him,

"real money" begins at about \$500 million. Meanwhile, the draft Environmental Impact Statement (EIS) on the NPR is due out in early 1991. Stay tuned to GANE about hearings on the EIS.

The nuclear power industry is quietly pushing for a government funded NPR, for in it they are placing their hope of a "new generation of nuclear power."

MOVEMENT TO A SUPER-SITE

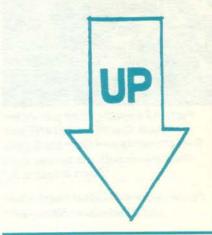
Frightening as it is, there are strong indications that Rocky Flats is moving our way. Political sentiment in Colorado is strongly against the plant, which processes plutonium, so it may just move to the place of least resistance — SRP.

Already, DOE has secretly constructed the New Special Recovery Facility at SRP. DOE is refusing to answer any questions about that new plutonium facility, which was constructed without an Environmental Impact Statement, in violation of the National Environmental Policy Act. (Greenpeace Action is waiting for a Freedom of Information Act request on the new facility to be answered.)

THE MESSY WASTE

On the nuclear waste front, there are some rumors going around that SRP is going to have trouble solidifying the high-level nuclear waste that now sits as sludge in large tanks. The waste is a by-product of plutonium extraction from nuclear fuel rods. The plan is to mix the waste with a glass material and store it on-site for 30 years (and then ship it to some hole in the ground out West).

The process of mobilizing and transporting the sludge will be especially hazardous to workers and a danger of explosion exists due to the use of benzene. Nobody knows if this









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Savannah River



waste-processing experiment will work or not, but DOE has already planned to build a similar facility at its Hanford site in Washington State.

Early in December 1990, 31 citizens participated in the Atlanta DOE hearings for clean-up of the nation's nuclear weapons facilities. The scoping hearings (there were 27 throughout the country) are the forum for the DOE to learn what our areas of concern are so that they may address them in their Environmental Impact Statement. The folks who made it to the Holiday Inn six miles outside I-285, found themselves in a very formal process in a large meeting room with a Christmas tree! School teachers, physicians, artists, high school students, and other regular people delivered in a variety of expression much the same message: Who on earth are we afraid of that we kill ourselves to make bombs? We challenge the notion that DOE, responsible for the frightful mess at our facilities throughout the U.S., is qualified to assess the damage, or oversee the clean-up. Making more nuclear waste is insanity when the most imaginative solution our society has for the deadly, long-lived stuff is a hole in the ground.

The day ended on a fitting note with testimony from two high school seniors, members of the Green Club at St. Pius X. The courage of the young people to take a public stand, and their simple expression of the helpless feelings and fear that come to most people when they learn of the betrayal of the

American people by their leaders was quite moving.

HEALTH STUDIES

D O E continues to drag its feet in helping instigate any type of independent health study at SRP. But a September report by the government's National Cancer Institute reported that a person liv-

ing near the facility was twice as likely to get leukemia as someone living further away. Expect no further independent studies at Complex 21 until reactor restart is firmly in place.

WHAT CAN YOU DO?
The Above DOE Enviro-Terror Can Be
Brought Down — If You Act!
UP-COMING HEARING

In late spring/early summer of 1991, a hearing will be held on DOE "modernization." This is a great opportunity for citizens of this area of the country to register their objections to an expanded nuclear operation at SRP. Your attendance at these hearings, to be held in Atlanta, is essential and you'll be hearing more about it as the date firms up. CONTACT NUNN

Senator Sam Nunn holds some keys to DOE's Complex 21 scenario. With enough public pressure he can be forced to reconsider his heretofore unquestioning support of a bigger DOE complex. Greenpeace plans to lean on Nunn in the coming year. Urge that no restart take place at SRP until after the impact on nuclear bomb materials of START arms reductions treaties is determined. Write him and call him NOW (speak with Madelyn Creedon) — U.S. Senate, Washington, DC 20510. 202/224-3521. — Tom Clements

Tom Clements heads the Southeastern Nuclear Disarmament Campaign for Greenpeace Action. You may contact him through the Atlanta Greenpeace office. A New Activist Talks About . . .

Coming Out of the Closet

I've been avoiding too many things for too long. Even joked about some of them with references to being a "closet radical." Just never gave a big enough damn to do more than critique things—from my closet!

Funny how many things you can know about — but fail to register — while you subsist on a diet of overviews from the 11 o'clock news and the headlines. Funny how wrapped up you can get in the rat-race or the Jones ethic or the family or the church or pet projects or immediate need and gratification.

Not that they're not important—not that they don't matter. They just tend to draw limiting parameters, help us construct the walls of our own closets.

My walls started to crumble with a separation — and panic over impending divorce. Might as well lose my arm as loser her. But, I realized how much of a rut I had put us in.

Suddenly, I had all the time in the world to look at things I had been avoiding. I analyzed myself to death, Got real tired of drowning my sorrows. Even got tired of books and tapes and music.

So, I called my "radical" friend, inquiring into possible direction as I emerged from my closet. She's anti-nuke and proenvironment and anti-this and pro-that—and not one bit embarrassed to express her views. Tell the truth, I've always kind of envied her.

Sort of like I envied the folks in the '60s who were blowing up banks. I didn't agree with them(!), but sure did wish I was committed enough to anything to go that far out on a limb to bring about some change.

Since those days, the air has been dead.

A lot of people seem to care only for themselves and their wallets. Not that they're not important—not that they don't matter. They just tend to draw limiting parameters, help us construct the walls of our own closets.

My unfettered friend sent me some "propaganda" and plugged GANE. I told her I wasn't against nuclear power, but I was a little worried about the waste.

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Coming Out of the Closet

continued from previous page

Well, when you've been in a closet for as long as I have, you don't just kick open the door and jump on the first bandwagon that rolls past!

And, even in my closet, I had been conscious of some needs and environmental problems. We "recycled" — well, my step-daughter supplemented her allowance by cashing in aluminum cans. I had envisioned a scenario of water shortages and rationing even more pronounced than today — a payback for our messing with Mother Nature.

Subsequently, another newsletter arrived — and got more than a perfunctory scan. Then, an announcement about a GANE meeting.

Maybe it's my weird sense of humor, but the concept of Georgians Against Nuclear Energy presenting a movie called "Building Bombs" in a place called "The Atomic Cafe" held too much potential for paradox for me to pass up!

Whatever I had expected, I didn't find it. It was like a time-trip with the '60s energy and setting . . . like a town meeting with the variety of people attending . . . like an adult education class with the indictment of Savannah River Plant as a disaster waiting to happen.

The movie really brought home just how short-sighted we can be. I was stunned to see radioactive waste buried in cardboard boxes—to see buildings sealed 30 years ago in which the concrete floors have turned to mush from the radiation—to see that we have 30,000 detonators for H-bombs stockpiled there. But, when I realized how close SRP and its buried and sealed toxic materials are to the aquifer that serves people from Alabama to North Carolina, it heightened my earlier concerns about water. I slipped into the math mode.

Math? Yeah!

Frightening as radiation is, I don't think it had ever occurred to me — never really sank in, if you will — just how long it hangs around.

You and I are looking at 75, 80 years, or so. You've probably got more than me, since I live on caffeine and nicotine. But, those Plutonium-239 isotopes sitting over at SRP are looking at a half-life of 24,360 years. HALF-



A shocking scene from the movie Building Bombs . . . radioactive waste in cardboard boxes!

LIFE! 24,360 YEARS!

Get your calculator ready. Every 24,360 years, one-half of the remaining mass of radiation will be neutralized. Why, in almost no time at all - say by the year 102,000 AD -95% of the radiation now at SRP will be gone. That's reassuring! But, just one-millionth of a gram of Plutonium-239 is carcinogenic. Wonder how many grams it takes to make 30,000 detonators? And, even if things were better built 30 years ago, before planned obsolescence and a throw-away mentality took over - what are they gonna do with those buildings with the mushy floors (and the radiation inside)? Somehow, a 100,000 year urban renewal program is a little hard for me to swallow.

If you figure 25 years for a generation, SRP today is a potential threat to our children's children's children for about 4,000 generations (give or take a teen bride or two). And, if seepage hasn't reached the aquifer yet, who wants to bet that it won't at some point during that short term? Cement, steel, aluminum, etc. all have deterioration points. Radiation only dissipates over time, oblivious to any natural or chemical processes.

My initial reaction to all this was a strong desire to renovate my closet — and hide! Then, I began to wonder if I — one measly little entry on the roll-call of humanity through time — could possibly do anything about it. I opted for the heroic, passive role. Stuck a bumper sticker on my car: "Love Your Mother" with a graphic of the globe. Added glass and plastics to the cans I had been recycling. Quit buying plastic garbage bags. Rah, rah! I'm involved!

Subsequently, I remembered some beloved

attitudes that have been in suspended animation for too long. Those activists of the '60s—whether stuffing flowers into rifle barrels or blowing up banks—believed that they could make a difference, that a better world was possible, that nothing was too big for a popular movement to overcome, that a common good and basic human rights were attainable goals... if enough people came out of the closet.

Such altruism paled, of course . . . replaced by BMWs and IRAs. Not that they're not important — not that they don't matter. They just tend to draw limiting parameters, help us construct the walls of our own closets.

But the old attitudes struck a responsive chord. I'm still not sure how I can make a difference, but "I think I can, I think I can..." And I think it is worth the effort. If enough people voice an opinion, it might payoff.

Look at South Africa, Eastern Europe, China. Why, the kids are even protesting on campus again. Maybe the time is right!

But there's one problem. The focus is wrong. I need to change my bumper sticker.

My "mother" will survive. Our parameters don't concern her. She'll just blow down our closet walls when she's had enough. She's adjusting to us, environmentally, even creating a new island off Hawaii.

She's got more time than me, you, garbage and landfills, greenhouse effect, ozone hole, fallout or SRP. Time will heal all her wounds. No, try as we might, we can't kill the earth. We can kill ourselves. And our children's children's children.

Hiding in a closet won't do anyone any good.

— Dennis Bishop

NUKE NOTES/International

9/6/90: POLAND TO SCRAP NUCLEAR PLANT: Construction of Poland's only nuclear power plant has been halted under a new policy stressing coal and other energy sources, the official news agency reported.

Work on the four 440-Mw reactors began in 1983, but concerns about rising costs and environmental dangers have plagued the plant at Zarnowiec on the Baltic coast northwest of Gdansk. Prime Minister Tadeusz Mazowieckie's Cabinet voted to stop work on the plant and try to sell off components.

9/8/90: CONTAMINA-TION FROM FRENCH TESTS: An article published in the British journal New Scientists challenges repeated claims by the French government that debris from its nuclear tests at Mururoa Atoll do not leak

into the ocean. According to the report, tests conducted by the oceanographer Jacques Cousteau in 1987 found the atoll's lagoon to be contaminated with cesium-134 and ce-

sium-137.

9/12/90: EXPLOSION AT SOVIET NUCLEAR PLANT: An explosion and fire hit a plant in Soviet Central Asia that produces fuel for nuclear power stations, spewing toxic gas into the air before the blaze was extinguished. No one was killed, although several people were injured by the blast and fire, which occurred at the Ulbinsky metallurgical plant in Ust-Kamenogorsk. The city in the republic of Kazakhstan is about 105 miles east of Semipalatinsk, where the Soviet Union conducts its nuclear weapons tests.

Officials in Kazakhstan demanded that the Kremlin declare a state of ecological disaster following the explosion at the nuclear fuel plant. Toxic gases from burning beryllium filled the streets in some parts of Ust-Kamenogorsk, and several people were injured. The plant is one of the largest producers of fuel for nuclear power plants in the Soviet Union and is located near the border with China and Mongolia.

The same week that the explosion occurred, a top Soviet researcher revealed that 500,000 citizens living near the Semipalatinsk test site in the central Kazakhstan region near the accident, have suffered from the effects of radiation, and 100,000 of them died of cancer. Dr. Boris Gusef, head of the Soviet Radiology Research Institute, told reporters

that the victims all lived within a 345-mile radius of where the Soviet Union carried out more than 200 tests above ground between 1949 and 1965. He also said that cases of leukemia increased there by 70 percent between 1955 and 1960, and infant mortality doubled.

9/26/90: MRS. MARCOS BACK IN COURT: Imelda R. Marcos testified with immunity in Pittsburgh before a federal grand jury investigating allegations that Westinghouse Electric Corp. bribed her late husband to secure a nuclear power plant contract. The grand jury subpoenaed Mrs. Marcos in connection with allegations that Pittsburgh-based Westinghouse paid \$17.3 million in bribes to associates of former Philippine President Ferdinand E. Marcos and to Mr. Marcos himself. Officials haven't named targets of the criminal investigation.

9/27/90: SWISS MORATORIUM ON NUCLEAR POWER: Last weekend Swiss voters approved a 10-year moratorium on building new nuclear power plants. The moratorium is seen by some as a first step toward abandonment. (Engineering News Record)

10/9/90: BRAZIL'S PRESIDENT HALTS SECRET ATOM BOMB: Brazil's new government has uncovered a 15-year-old secret military program to make an atom bomb, the nation's top science official says.

Brazilian physicists have concluded that the military was one or two years away from having the materials - 20 to 35 pounds of

> weapons-grade enriched uranium - to make a Hiroshima-type bomb. That, physicists say, was the only technical obstacle to creation of the bomb until the project was discovered. (New York Times)

> 10/27/90: SOVIET NUKE TEST: The Soviet Union carried out its first underground nuclear test in more than a year on October 24. The bomb was detonated at the alternate Soviet test site on the arctic island of Novaya Zemlya, and had a force of 20 to 150 kilotons. Testing at the main Semipalatinsk test range in the Central Asian republic

of Kazakhstan was suspended after widespread protests in nearby cities and a threat by miners to go on strike if further explosions occurred (see related story above).

10/27/90: PLUTONIUM LEAK NEAR PARIS: Concrete drums containing nuclear waste have leaked plutonium into the ground on the outskirts of Paris, close to where hundreds of children play each day. The daily newspaper Le Parisien said that an independent German scientific team from the University of Bremen concluded that the leaked plutonium in soil samples is a threat to residents of Saint Aubin.

11/5/90: BRAZIL NIXES NUKE SUB: A judge in Rio de Janeiro, Brazil, ordered the U.S. submarine Greelings out of Brazilian waters, saying it poses an environmental danger because it is nuclear-powered.

11/10/90: SOUTH KOREA CANCELS NUCLEAR WASTE DUMP: South Korean President Roh Tae-woo fired a Cabinet minister and a provincial police chief on Friday after thousands of villagers rioted to protest government plans to build a nuclear waste dump.

It was the nation's most violent anti-nuclear protest - with about 22 people reported injured - and officials said plans would be

continued on next page

GAINSAYER 9 FALL/WINTER 1990/1991

NUKE NOTES/INTERNATIONAL continued from previous page

scuttled for a waste disposal facility on scenic Anmyon Island, 90 miles southwest of Seoul. 11/17/90: CONTAMINATION IN AUSTRALIA: Australia announced that cleaning up the Maralinga nuclear testing site in the South Australian desert, where Britain exploded nine bombs in the atmosphere during the 1950s, could cost more than \$490 million. Twelve square miles of land originally owned by the local Tjarutja aboriginal people were declared still unfit for permanent settlement because of plutonium contamination. However, an offical spokesman said:

"All of this land is suitable for casual access by aborigines during the course of hunting or in transit."

11/17/90: BRITISH TEST NUKES IN U.S.: Scientists from Great Britain and the U.S. conducted an underground nuclear test at the Nevada Test Site on November 14. High-rise buildings in Las Vegas, 105 miles away swayed from the force of the explosion, estimated to have had a yield of 20-150 kilotons. Activists from the Greenpeace environmental organization delayed the blast by hiking close to ground zero, then running in front of remote television cameras just prior to the scheduled detonation. [Editor: Did you know]

that the British test their bombs on U.S. soil?]
12/16/90: GERMANY CLOSES
NUCLEAR REACTOR: Workers began
shutting down eastern Germany's last Soviet-designed nuclear power reactor, which
was once on a blacklist of nuclear installations prone to catastrophe. The four-reactor
power station near Greifswald on the Baltic
Sea coast had supplied 10 percent of the
electricity used by the 16 million people of
the former East Germany.

Taken from AP Wire Reports in the Atlanta Journal and Constitution unless otherwise noted.

NUKE NOTES/National

8/9/90: RADIOACTIVE JAM SPREADS CONTAMINA-TION MESSAGE: Ruby-red mulberry jam made from fruit grown near the Hanford nuclear plant has been sent to Energy Secretary James D. Watkins and [Washington] Governor Booth Gardner. The jam is labeled "Radioactive. Do not eat."

Two scientists said they made the jam during the weekend from mulberries gathered along the banks of the Columbia River beside the Hanford complex in south-central Washington. They say the jam is contaminated with strontium-90, a deadly isotope present in radioactive fallout.

9/21/90: HIGHER BLAST THREAT FEARED AT HANFORD NUCLEAR SITE: An Energy Department advisory panel says that the chance of an explosion at the Hanford nuclear weapons plant in Washing-

ton State could be greater than plant operators

believe.

The Advisory Committee on Nuclear Facility Safety said plant officials have "only sketchy information on conditions" in the facility's nuclear waste tanks. "The Hanford tanks present a serious situation, if not an imminent hazard," the panel said.

9/21/90: HANFORD PLANT LEAK POS-SIBLY LASTED A YEAR: Radioactive water may have leaked for nearly a year from a plant at the Hanford nuclear reservation before being discovered, the federal project's manager disclosed.

Westinghouse said it didn't know how much radioactive water leaked. "We would assume

HEY GLYS.
WHICH WAY
S DOWNWIND?

it either evaporated or is in the soil beneath the building," spokeswoman Marilyn Druby said.

Westinghouse manages many Hanford operations for the U.S. Department of Energy. 9/27/90: FOOD IRRADIATION PLANT TO BE BUILT IN FLORIDA: After an uphill struggle to obtain permits for the nation's first food irradiation plant, Vindicator of Florida Inc. now plans to build the plant in Mulberry, Florida. The city commission recently voted 3-2 to approve the construction of the \$6.5 million plant. The commission was lobbied strongly by local residents and others who feared that the process might cause cancer to workers, neighbors and consumers. A 6-foot-thick concrete wall will help protect workers from radiation.

Poultry, pork, beef, citrus fruits, strawberries and vegetables will be processed with massive doses of cobalt 60 radiation, to kill bacteria and extend shelf life. The plant's construction was to have begun November 1, 1990. (Engineering News Record)

10/6/90: SPACE SHUTTLE CARRIED PLUTONIUM-POWERED LOAD: A judge gave the thumbs' up and NASA counted down toward a launch of the space shuttle Discovery carrying the nuclear-powered Ulysses spacecraft.

A group of 20 demonstrators gathered at a restricted entrance to the space center and protested Ulysses' nuclear power supply.

The danger lingered for 7-1/2 hours after lift-off, when the plutonium-powered satellite was released for its five-year solar journey. (Athens Daily News)

10/11/90: CANCER DEATH RATE LINKED TO NUCLEAR PLANT: Adults who lived within 10 miles of the Pilgrim nuclear power plant in the late 1970s and early '80s were four times as likely to develop leukemia as those who lived farther away, a state report concludes.

11/24/90: FIRE CONTAINED AT PLANT IN FAYETTE: Stored radioactive materials were contained in a PSI Industries building in Fayette County, Georgia, destroyed by fire on November 23, 1990.

There was leakage of the three radioactive materials being stored at the facility, according to Capt. Peggy Glaze of Fayette County Emergency Services.

Examination and monitoring showed no runoff in the water from fire hoses, Captain Glaze said.

Cesium, americium and beryllium were all stored in the facility. The radioactive materials are used in the testing of concrete products, which PSI produces.

12/1/90: PAPER SAYS RADIATION LEAK WAS KEPT SECRET: The Energy Department discovered groundwater contamination five years ago from a 1977 radiation leak but never informed the state of Nevada, the Las Vegas Review-Journal reported. The newspaper said scientists discovered the contamination at the sprawling Nevada Test Site in 1985 from a nuclear test in 1977 and have been studying the problem quietly ever since.

12/1/90: REPORT SAYS NUCLEAR PLANTS GET SUSPECT PARTS: Nearly two-thirds of the nation's licensed nuclear plants have installed or are suspected of receiving screws, electrical equipment or other parts that do not meet safety standards, according to a General Accounting Office report. The issue demands attention, but the parts are not now a safety threat, Joseph Fouchard of the Nuclear Regulatory Commission said.

12/4/90: HARASSMENT COMPLAINT TO BE INVESTIGATED: The U. S. Department of Energy says that it is investigating an engineer's complaint that she was harassed after warning that emptying two tanks at the Hanford nuclear reservation in Richland, Washington, could cause an explosion. Inez Austin, who says employer Westinghouse Hanford Co. is destroying her career because of her alert, has been vindicated by a General Accounting Office report that says too little was known about the explosive potential of the tanks.

12/14/90: LIMITS ON RADIATION EX-POSURE TIGHTENED: The Nuclear Regulatory Commission tightened radiationexposure limits for nuclear plant workers and residents near atomic power facilities, the first revision in more than 30 years.

The agency says the new regulations, which will take effect in two years, reflect recent scientific studies and will provide an extra margin of safety. Yet, the commission says, current standards do not put workers at risk.

The NRC's revised standards, approved unanimously, will replace radiation-exposure limits in effect since 1957 for atomic plant workers and people living near nuclear facilities.

12/19/90: SOUTHERN COMPANY GETS OK TO FORM NUCLEAR DIVISION:

The Securities and Exchange Commission has approved formation of a new Southern Co. subsidiary that will manage the company's three nuclear power plants. The subsidiary, Southern Nuclear Operating Co., will be based in Birmingham. The three nuclear plants are: Farley near Dothan, Alabama; Hatch near Baxley, Georgia; and Vogtle near Augusta. A Southern Co. spokeswoman said there was no connection between creation of the centralized management structure and recent allegations about irregularities at Vogtle. [Editor's Note: Marvin Hubbie, an executive with Georgia Power has a case pending with the Nuclear Regulatory Commission in which he alleges that this Southern Company subsidiary is not a legal arrangement. Concern is also high over the ramifications of such an intrastate arrangement in such a risky business as nuclear operations and what effect it would have on state's rights or jurisdiction over the plants.]

1/6/91: 700 ARRESTED AT NEVADA TEST SITE: More than 700 people were arrested at the Nevada Test Site in Mercury, Nevada, during a protest of nuclear weapons and the Persian Gulf buildup, officals said. An Energy Department spokesman estimated the crowd at 2,200 to 2,500. A sponsor of the protest, American Peace Test, said the crowd was 3,000 to 4,000.

1/7/91: U.S. TO BUY SOVIET NUCLEAR REACTOR: The United States is completing a deal to buy an advanced type of nuclear reactor built by the Soviet Union to power systems in space, federal officials say. The transaction, the first major sale between the former antagonists of a sensitive space technology with military potential, is to be announced today in New Mexico. The reactor is an advanced version of devices that have powered Soviet spy satellites for decades.

1/11/91: U.S. REJECTS TOTAL BAN ON NUCLEAR TESTING: The United States announced that it favors continued underground testing, dashing the hopes of antinuclear activists for a comprehensive ban on tests of atomic weapons.

"We believe that this is neither the time nor the appropriate forum for negotiations on a comprehensive test ban," U.S. delegate Mary Elizabeth Hoinkes told delegates to a 70nation conference at the United Nations to amend the 1963 partial test ban treaty.

The proponents of a total test ban had said it would prevent about 15 nations on the verge of developing nuclear weapons, including Iraq and Pakistan, from perfecting sophisticated weapons.

1/20/91: U.S. BOMBS IRAQI NUCLEAR PLANTS: Allied bombing has crippled four of Iraq's primary nuclear reactors. [Editor's Note: No report available on any resulting radiation release.] (CNN Radio News)

Taken from AP Wire Reports in the Atlanta Journal and Constitution unless otherwise noted.

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ATOMIC PRIMER What is Plutonium?



Plutonium is a "fiendishly toxic" material. It was once made only in secret government installations in remote areas. Now it is made by electric utility companies in towns all around the U.S. Plutonium is produced as waste by commercial nuclear power plants.

The world was created out of oxygen, hydrogen, carbon, iron and other elements — there are 92 altogether. Man, however, has made a few new elements: "plutonium" is one of them.

Plutonium's threat to life is more than just the result of the atomic ex-

plosions it can be used to produce. A very small particle of plutonium — the size of a grain of pollen — causes lung cancer, if inhaled. A typical nuclear power plant annually produces several hundred pounds of plutonium. A pound of plutonium, if it were efficiently spread around the country, would be more than enough to give lung cancer to everyone.

Plutonium is, in addition, very persistent. All radioactive materials, over time, lose their capability to harm human beings. They run out of steam, so to speak, as they continuously give off their hazardous energy. Some



radioactive materials disappear within seconds after their creation. For plutonium, however, tens of thousands of years are required before it loses its ability to harm human beings. Plutonium (and other long-lived radioactive wastes from nuclear power plants) will have to be stored — somewhere, somehow — for hundreds of generations. The present generation will get whatever convenience there is from nuclear power plants and bequeath radioactive wastes from these plants to future generations. Some people call this the moral problem of nuclear power.

All nuclear power plant owners concerned

say that they are careful and, yet, plutonium was recently discovered in the Erie Canal, outside a government facility in Ohio that uses plutonium. A spokesman said, "We have no idea how the plutonium leaked out of the factory into the mud. This comes as a complete surprise."

A leading cancer researcher — Harvard's Nobel Prize winner, Professor James D. Watson — says"I am increasingly worried that the current blossoming of the nuclear power industry will be an irreversible calamity for the human race. Particu-

larly scary is the thought that we shall senselessly march into wide-scale employment of breeder-produced plutonium, the most dangerous atom man has yet tried to assimilate into his industrial life. Only the tiniest traces of plutonium are needed to induce cancer and [if the] use [of plutonium] becomes widespread, the possibility must be faced, of awful incidents, either accidental or deliberate, that will cause wide regions of our earth to become forever uninhabitable."

—excerpted from a publication of Environmental Action of Colorado, 2239 East Colfax, Denver, CO 80206.



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