

GANESAYER

GEORGIANS AGAINST NUCLEAR ENERGY

SPRING 2002

PLUTONIUM SOLUTION!

Immobilization at SRS unites two urgent missions — plutonium safeguards and nuclear waste management

When the U.S. Department of Energy (DOE) announced in 1996 that it would dispose of nearly 50 tons of weapons-grade plutonium, it committed no less than 50% of the U.S. inventory of plutonium to be removed from the stockpile of weapons of mass destruction.

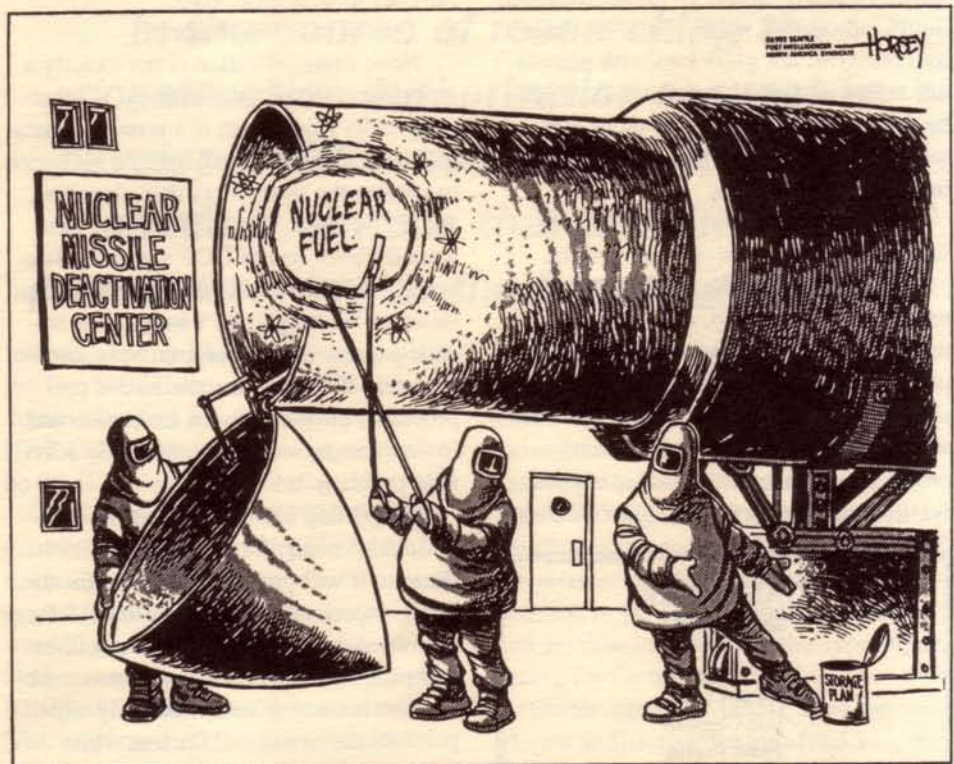
50 tons of plutonium — enough to make about 10,000 nuclear weapons! 50 tons of life-threatening plutonium no longer available for atom bombs!

In the storm of controversy ensuing from this sweeping decision, let's not lose sight of the fact that it constitutes no less than a watershed moment in human history. Think about it — society seems to be moving in the right direction!

GANE opposes MOX fuel as the means for plutonium disposition for many reasons, chief among them is MOX manufacture creates a plutonium economy plus a serious risk that weapons-grade

Write, call or e-mail South Carolina Governor Hodges and share your views with him. These are complex issues and he needs your information and support.

Governor Jim Hodges
Office of the Governor
P.O. Box 11829
Columbia, SC 29211
803-734-9400
803-734-9413 FAX
governor@govoepp.state.sc.us



PLUTONIUM (MOX) PRIMER ON P. 5

plutonium could be diverted or stolen for use in nuclear weapons.

Closer to home, MOX manufacture is proposed for the Savannah River Site (SRS) in South Carolina directly across the Savannah River from Augusta, Georgia. MOX production is just plain too messy and environmentally dangerous to accept.

SRS is a vast, 300-square-mile complex and host to the largest, hottest inventory of radioactive waste in the nation. A shift in priorities at the U.S. weapons complex in 1990 from weapons production to environmental clean-up has ground to a near halt. 35,000,000 gallons of extremely radioactive, hazardous, liquid waste leftover from plutonium pro-

duction during the Cold War is beginning to leak from 50-year-old tanks which sit atop the largest freshwater aquifer recharge area in North America.

For more than a decade the public was led to believe that the liquid waste inventory at SRS was being solidified into one-ton glass logs and stored as high-level solid waste. In fact, Westinghouse, primary contractor at SRS, concealed the fact that a process which prepared the waste for the glass factory was failing miserably, producing large quantities of flammable benzene gas. Only one of the 50 million-gallon tanks was ever emptied.

This expensive failure may turn out to be a stroke of luck, however.

continued next page

PLUTONIUM SOLUTION!

continued from front page

Where MOX manufacture would generate hundreds of thousands of gallons of new liquid waste and add to the already overburdened waste problem at SRS, immobilization reduces the existing waste burden because it actually *requires* such hot waste to provide a radiation barrier to theft. Plutonium, you see, is radioactively cool and can be held in the hand — therefore easily stolen. In immobilization, liquid radioactive waste would be made into massive, hot glass logs with plutonium safely nestled at the center. A would-be thief approaching one of these logs would receive a lethal dose of radiation in a matter of minutes.

MOX is expensive, messy, risky to workers and the environment, and the protective radiation barrier is not formed until the very last step, after it has been used in reactors. Until the last step the plutonium is vulnerable to theft or diversion. By contrast, immobilization is a relatively inexpensive, straightforward process, and generates significantly less waste while supporting the glassification

program to reduce the existing waste burden at SRS. *And immobilization is a truly effective safeguard for weapons-grade plutonium.*

To manage our huge national inventory of plutonium demands a huge inventory of hot radioactive waste. So, our greatest problem at SRS, the tanks brimming with obnoxious, hazardous waste, could turn out to be a great asset.

This an exciting prospect!

Now, immobilization is not exactly a no-brainer. Handling plutonium is inherently risky (plutonium is a powdery metal that is deadly if inhaled) and we still need to perfect the technology that glassifies the liquid waste. The glass factory has actually been one of DOE's greatest success stories — it was the pre-process that failed in Westinghouse's hands. But scientists, even DOE scientists, have known for years that there are alternative pre-processes such as solvent extraction and ion exchange, so it is an eminently solvable problem.

Supporting immobilization is a safe political position for local leaders because it will provide good jobs for the large, experienced workforce at SRS for many years to come. Environmentalists and peace advocates can support immobilization because it simultaneously supports disarmament and nuclear waste management.

So, what's the problem?

Considering the expense and effort to create plutonium in the first place, it is understandable that the industrial and bureaucratic forces that drove plutonium manufacture to such an extreme in the first place resist writing off plutonium as mere nuclear waste now.

And the nuclear and defense industries are production-oriented, not waste management-oriented. A true nuclear waste industry has not developed because a true commitment to nuclear waste management has not been cultivated.

There are pesky political barriers to plutonium immobilization, too, not the least of which is that funding was recently canceled in one stroke by the White House. Now the administration is making noises about manufacturing nuclear weapons again, and the evidence is strong

that SRS is targeted for the central role of — get this — manufacturing plutonium triggers for new atom bombs.

Governor Jim Hodges of South Carolina has proven a strong force in the plutonium game. He refuses to accept shipment of plutonium to his state until he has legal and financial assurance that the plutonium will be processed and leave South Carolina. Governor Hodges' stand is admirable, but the simple fact is that there is no suitable place to store weapons-grade plutonium, and a suitable permanent repository for high-level waste has not been designated.

States' rights are already under attack in DOE's nuclear waste program which seeks to force Nevada and Utah to host the nation's waste (*see related stories*). Governor Hodges' efforts to protect South Carolina are honorable and not really different than the efforts of Nevada's Governor Guinn and Utah's Governor Leavitt. The states will be wise to hang together and not stand aside while DOE attempts to isolate and abuse them one by one. South Carolina's and Georgia's nuclear problems are not solved by making them Nevada's and Utah's.

But we shouldn't be reluctant to deal with our most urgent problems because there are not ultimate solutions in sight. Protecting the nation's plutonium inventory while stabilizing the dangerous, leaking tanks at SRS in a unified program solves these particular urgent problems in the short-term. A hot glass log with plutonium in it is really no more dangerous than a hot glass log without plutonium in it. And hot glass logs are a marvelous interim solution to leaking tanks even if they are stored in South Carolina for a good while longer than we'd have hoped.

Plutonium immobilization is an honorable mission for the workforce at SRS. It will safeguard plutonium and make the beautiful environment of the Savannah River safer by dealing with the tanks.

Can we find the vision and the will to welcome plutonium to the Southeast for the weighty task of protecting it, in the course of managing the dire contents of the waste tanks?

We'll be doing a service for ourselves and humanity when we do.

GANESAYER Spring 2002

Editors/Contributors

Glenn Carroll
Tom Clements
Diane Curran
Tom Ferguson
Erica Frank
Corbin Harney
Hopi Elders
Joan King
Robin Mills
Ann Mahoney
Gary Oliver
Bob Paine
Carol Stangler
U.S. Department of Energy
Randall White

Layout & Production

Glenn Carroll

with support from

Fund for Southern Communities
W. Alton Jones Foundation
Sapelo Foundation
Turner Foundation

2002 GANE Officers

Glenn Carroll *Coordinator*
Tom Ferguson *Secretary*
Betsy Rivard *Treasurer*

MOX Legal Intervention

On February 28, 2001, an international consortium of companies made up of Duke Power Company, French nuclear company COGEMA and engineering giant Stone & Webster (Duke COGEMA Stone & Webster, or, DCS) filed a construction authorization request (CAR) with the U.S. Nuclear Regulatory Commission (NRC) to build a MOX fuel factory at Savannah River Site (SRS) in South Carolina just across the Savannah River from Augusta, Georgia. MOX (*see Plutonium Primer, p. 5*) manufacture would be performed under contract with the U.S. Department of Energy (DOE) as a scheme to "dispose" of surplus weapons-grade plutonium, but would be regulated by the NRC as a commercial project because the plan calls for burning the fuel in commercial reactors.

GANE filed a petition to intervene opposing the construction request and the arcane process known as NRC legal intervention began. As in the past, in interventions over Plant Hatch, Plant Vogtle, and the Georgia Tech reactor, GANE is conducting the intervention *pro se*, "for themselves," which means that we are representing ourselves instead of being represented by a lawyer. This time, however, Diane Curran, a public interest lawyer based in Washington, D.C., is providing legal assistance to GANE. Diane has more than 20 years experience in nuclear law and the distinction of winning the only case in which the NRC has ever denied a license – Louisiana Enrichment Services (LES), a nuclear fuel facility proposed for Louisiana.

At the outset of the legal proceeding, GANE petitioned the Commission for improved public process. In support, GANE gathered signatures of over 100 groups and individuals working to stop MOX all over the world. Many of our requests were granted by the Commission. GANE was happy to be granted an Atomic Safety and Licensing Board (ASLB) of three judges (instead of just one) and several other public process rights including discovery, cross-examination and oral hearings (instead of just a paper process). The ASLB judges are

Thomas S. Moore (ASLB chairman and also chair of the ASLB that denied the LES license), Charles N. Kelber and Peter S. Lam (who was one of our judges in the Georgia Tech intervention).

The parties to the case are DCS, GANE, and the Staff of the NRC. The three ASLB members are the trial judges,

processing facility without having seen the plans for operating the facility. The lack of consideration of practical operations in the facility's design poses an obvious safety and environmental threat.

Realizing the importance of this procedural issue, and concerned because this is the first plutonium fuel factory that has

In the course of researching the construction authorization request to develop GANE's contentions it became painfully obvious that the NRC had prematurely begun the licensing process.

and we take any administrative appeals to the five NRC Commissioners. If we decide to appeal any decision by the NRC Commissioners, the next step will be the U.S. Court of Appeals.

During the summer of 2001, GANE established standing to be party to the licensing proceeding. Even the NRC staff agreed with GANE that a plutonium fire would have serious radiological consequences as far away as 20 miles. But the NRC and GANE agreeing is rare, the NRC staff most often agrees with the license applicant, in this case, as it has in previous GANE interventions.

In the course of researching the construction authorization request to develop GANE's contentions it became painfully obvious that the NRC had prematurely begun the licensing process. Although NRC regulations and the National Environmental Policy Act (NEPA) required DCS to file a completed license application that covered both construction and operation, DCS's application relates only to construction issues. As a result, the application lacks fundamentally important information about plans to control and account for nuclear materials, prevent criticality accidents, manage nuclear waste, and other issues related to the safety of operation. The NRC is in the untenable position of reviewing environmental impacts on the entire plutonium

been attempted in more than a generation, GANE filed a Motion to Dismiss the entire MOX proceeding. The ASLB denied the motion, and we appealed immediately to the Commissioners. On March 7, 2002, we got a decision from the Commissioners refusing to dismiss the proceeding. We intend to appeal the decision to the U.S. Court of Appeals, and are now investigating the appropriate timing for the appeal.

On the same day GANE filed the Motion to Dismiss, we also filed 13 contentions regarding inadequacies in the construction authorization request. Glenn Carroll, GANE's intervention coordinator, and Diane worked with physicist Edwin Lyman of Nuclear Control Institute and Colorado seismologist Peter Burkholder to develop contentions on issues including: materials control and accounting of weapons-grade plutonium, allowable doses to the public, inadequate safety analysis, inadequate seismic analysis, inadequate comparison of the costs of alternatives, nuclear waste disposal, and transportation impacts. GANE also filed a contention challenging the lack of analysis of malevolent acts of terrorism or insider sabotage based on testimony in EIS hearings transcripts by the State of Georgia.

continued on next page

continued from previous page

The date for the NRC staff and DCS to respond to GANE's contentions was September 12. Predictably, they opposed the issues that GANE raised, but given the shocking events of September 11, it seems cold and inappropriate that both the NRC and DCS maintained that terror-

seemed to share GANE's disbelief at the studied insistence that terrorist threats against a plutonium facility were not foreseeable. The junior members of the NRC and DCS legal teams argued against admitting this vital and timely issue which added to the generally surreal

DCS to resist instituting required measures because of the likely high expense of retrofitting security infrastructure.

On December 6, the ASLB issued an Order accepting nine of GANE's contentions (*see box on p. 7*) for public hearing, including the security contention on terrorism and insider sabotage, stating that it was impossible to argue that environmental threats from terrorist attacks were not foreseeable in a post-September 11 world.

Our satisfaction at the stunning success of our efforts to bring so many important issues under the increased scrutiny of a public hearing was balanced by the daunting prospect that we would now enter the period of discovery which is both strenuous and expensive. And sure enough, the holiday season was crowded with several conference calls attempting to establish a discovery schedule. GANE pressured the ASLB to rule on our Motion to Dismiss which they denied in a short Order which deferred authority to the Commission. It said that the Commission had already ordered the illegal process, whether it was an informed decision or not, by having accepted the CAR for NRC review.

The intervention got pretty wild at this point. GANE requested Commission review of our Motion to Dismiss. DCS requested review of several of GANE's contentions. The ASLB issued a discovery schedule to begin almost immediately. GANE's security contention, along with similar contentions filed in three other interventions, was accepted for review by the Commission. And George Bush forced sweeping changes to the MOX program by deleting all funding for immobilization. In response, DOE added more than six tons of contaminated plutonium to the MOX program which is sending DCS, literally, back to the drawing board on the MOX facility design.

And the briefs were flying!

With the help of Diane and Ed Lyman, GANE was able to make strong arguments in each situation. GANE seized the opportunity to file in-depth arguments to the Commission on the security issue

continued on page 6

The date for the NRC staff and DCS to respond to GANE's contentions was September 12. Predictably, they opposed the issues that GANE raised, but given the shocking events of September 11, it seems cold and inappropriate that both the NRC and DCS maintained that terrorist events were not foreseeable.

ist events were not foreseeable and therefore not required to be analyzed under NEPA (which requires analysis of all foreseeable environmental impacts). This persistent blindness to reality on the part of both nuclear regulators and nuclear industry was noted by *The Washington Post* in a front-page story on nuclear security risks that cited GANE's intervention experience as a sad example of the state of affairs at the NRC.

On September 21, GANE and the other parties met with the ASLB in North Augusta, South Carolina, for a pre-hearing conference. With preparatory assistance from Diane, GANE was able to deliver informed counters to NRC and DCS arguments against the admission of GANE's contentions for a hearing. The tone of the day was benign towards GANE while the judges revealed noticeable impatience with DCS. It was heartening to see the judges' appreciation of the dire situation with the leaking waste tanks at SRS (*see cover story*) and overall they indicated a thorough understanding of GANE's issues.

The discussion of malevolent acts of terrorism and insider sabotage was decidedly grim. The judges pressed the NRC staff and DCS with pointed questions and

atmosphere attending this time of national grief, a mere 10 days after the attacks on the World Trade Center and the Pentagon. Judge Kelber closed the topic, bowing his head and saying, on the record, "God help us all."

In October, GANE and NCI jointly filed a Petition to Suspend the MOX Proceeding while the NRC finished a comprehensive review of its security regulations which it undertook in response to the tragic events of September 11. In the Petition which was filed with the Commission we argued that it was important to defer licensing the first plutonium processing facility in over 20 years until the NRC's new standards to protect against terrorism were developed. The Commission denied our Petition, asserting that since the MOX plant proceeding was far from complete construction authorization could proceed concurrent with NRC's security review. We then pointed out that DCS was expecting to start construction in less than a year but our request for reconsideration was denied with assurances that any new standards would be imposed upon the MOX facility whether it was under construction or completed. The Commission dismissed GANE's concerns that it would allow

PLUTONIUM (MOX) PRIMER

MOX, short for mixed oxides of plutonium and uranium, is a new type of reactor fuel that would be made with weapons-grade plutonium from retired atom bombs. Uranium is a naturally occurring element and the basis for conventional nuclear reactor fuel. Plutonium is a man-made element resulting from fissioning uranium. Plutonium is the essential ingredient in every nuclear weapon, and so toxic it is named after Pluto, the God of Hell.



Plutonium metal puck. Plutonium is handled and stored in small quantities like this to prevent it from spontaneously starting a nuclear chain reaction. Photo courtesy DOE.

Because plutonium is easily converted into nuclear weapons, and is not radiologically hot enough to prevent its theft, the plutonium must be corrupted somehow to safeguard it from being used in weapons. GANE

supports plutonium immobilization as the most effective, cheapest and least environmentally dangerous method to safeguard plutonium (see cover story).

The idea behind MOX is to make the plutonium into reactor fuel and then use the fuel in a reactor. After use in a reactor, the plutonium (MOX) fuel would become so radiologically hot that it would be nearly impossible to steal and recover the plutonium for use in bombs. Unfortunately, this extraordinarily hot fuel would be even more problematic to store than the conventional uranium reactor fuel which causes such a storm of controversy (see Yucca Mountain and Southern Company stories).

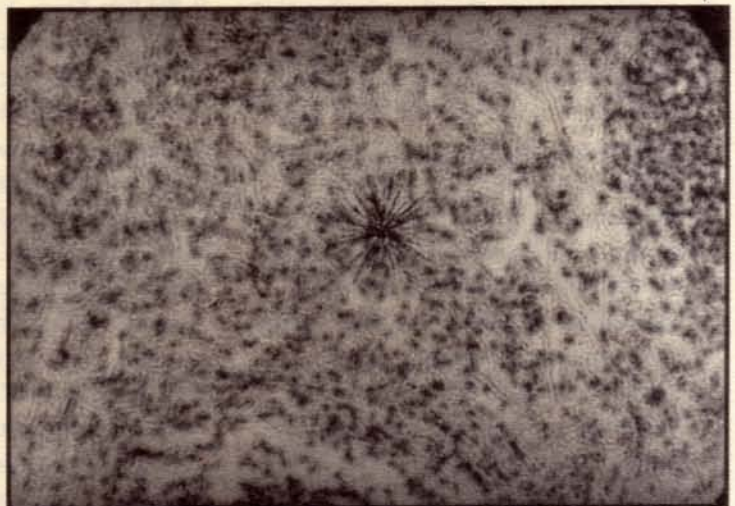
The process of converting the old plutonium triggers to reactor fuel would be horribly messy. The plutonium in the triggers was alloyed with other metals that made the normally powdery plutonium handle better in the machining process. The triggers, also called pits, were then clad with uranium to preserve the special bomb shape. Making MOX would involve melting the plutonium pits in hazardous industrial solvents, then processing the mess to extract pure plutonium. The waste stream – industrial solvents laced with plutonium and uranium – would add to the horrific liquid radioactive waste burden that has persisted at SRS for two generations, wastes that were ironically produced in the effort to make the plutonium in the first place. Some 30 tons of plutonium are proposed for MOX, which would require varying degrees of processing, so this is a huge problem.

Gallium, one of the metals in the triggers, would attack the cladding on the reactor fuel if it were not removed completely which could lead to fuel failure and a meltdown. There are other

problems with burning MOX in old reactors never designed for plutonium fuel. Plutonium fuel burns hotter, both thermally and radioactively, than conventional uranium fuel, which would add considerable stress to reactor parts already degraded in the intense radiation environment in a nuclear reactor. Additionally, the operators' reaction time to a runaway criticality involving plutonium fuel is significantly reduced from the reaction time conventional fuel affords. Perhaps most alarming of all is that the Westinghouse reactors proposed to burn MOX, all of them owned by Duke Power, are of a peculiar ice-condenser design which have notorious "eggshell" containments, a thinner-than-normal containment. The fragile containment, intended to provide a barrier to escaping radiation in case of an accident, is extra thin because of misplaced confidence in the effectiveness of the ice-condenser cooling system.

So, bottom-line, after making a big, expensive mess which would place workers and the environment in danger, transporting fresh MOX fuel (which could still be made into bombs if it were stolen), using the MOX fuel in unsafe reactors, and creating an especially problematic spent nuclear fuel, a mere 1% of the plutonium would have been burned. Meanwhile, the uranium content in the fuel would have created more – plutonium!

In contrast, the immobilization option which GANE advocates would require minimal processing of the plutonium, avoid the messy purification process, and actually utilize existing inventories of high-level liquid waste to make a 2,000-pound radioactive glass barrier which would create a stable waste product too hot and too heavy to be stolen for more than 300



Particle of plutonium in lung tissue. The black star in the middle of this picture shows tracks made by alpha rays emitted from a particle of plutonium in the lung tissue of an ape. Magnification about 500 times. Photo courtesy DOE.

years. Therefore, immobilization would effectively manage the plutonium problem and SRS's longstanding liquid waste problem while providing a meaningful mission for the large experienced workforce at SRS.

Dream Team



DIANE CURRAN is a partner in the public interest law firm of Harmon, Curran, Spielberg and Eisenberg, L.L.P. For 20 years, she has represented citizen groups, state and local governments, and individuals in a wide range of environmental cases relating to nuclear facility safety, radioactive and chemical waste disposal, National Environmental Policy Act compliance, and environmental justice. A nationally recognized expert in the field of nuclear safety law, she was instrumental in winning an NRC decision denying, on environmental justice grounds, a license for a proposed uranium enrichment plant in Louisiana; the shutdown of the unsafe Yankee Rowe nuclear power plant in Massachusetts; and the closing of the Sequoyah Fuels uranium processing plant in Oklahoma. In addition to serving as legal advisor to GANE in the MOX licensing case, she currently serves as deputy Attorney General in the State of Utah's opposition to licensing of the Private Fuel Storage nuclear waste dump. Other clients have included Nuclear Information and Resource Service, Citizens Awareness Network, Native Americans for a Clean Environment, and the Union of Concerned Scientists. Diane received a law degree from the University of Maryland in 1981 and a B.S. from Yale University in 1976.



EDWIN LYMAN has served as scientific director of the Nuclear Control Institute, a Washington, D.C.-based nuclear non-proliferation research and advocacy organization since 1995, becoming president of the organization this spring. He earned a doctorate in physics from Cornell University in 1992, where he was an A.D. White Scholar. He received a B.A. summa cum laude in physics from New York University in 1986 and was elected to Phi Beta Kappa. From 1992 to 1995, he was a postdoctoral research associate at Princeton University's Center for Energy and Environmental Studies. His research focuses on security and environmental issues associated with the management of nuclear materials and the operation of nuclear power plants. He has published articles in journals and magazines including *The Bulletin of the Atomic Scientists* and *Science and Global Security*. He is an active member of the Institute of Nuclear Materials Management. From 1997-1998, he participated in the Processing Needs Assessment conducted by the Department of Energy's Nuclear Material Stabilization Task Group. Earlier this year, he served on a Nuclear Regulatory Commission expert panel on the role and direction of NRC's Office of Nuclear Regulatory Research and briefed the Commission on his findings.

continued from page 4

believing strongly that history demands the Commission to bring its policies in line with real-world scenarios. The prize in this case, though, is to have the ASLB decision to hold public hearings on the security issue upheld. The arguments were much more legal in nature than they were attempts to convince the Commission that terrorism is a clear and present danger. The Commission has basically been operating under 35-year-old policies, developed to exempt the nuclear industry from responsibility for threats such as the Cuban Missile Crisis, except for one update to acknowledge truck bombs in response to the 1993 bombing of the World Trade Center. But we believe that NEPA, several regulations, and even a few precedents, highlight the way that the Commission must proceed in the 21st century. Certainly it is in the nuclear industry's self-interest to avoid radiological catastrophe brought on by a terrorist attack.

As DCS and NRC scramble to salvage their ambitious schedule for rushing the MOX factory through the licensing process and construction, the ASLB canceled discovery in a terse Order. That was a happy day! The Commission denied DCS' request for review and upheld GANE's contentions for a public hearing. That happy news arrived just hours ago.

GANE's security contention is still under review by the Commission.

One of the pressures of the intervention is its mystery. But, whatever happens with the intervention process, it is clear that the MOX factory construction is delayed by at least a year, probably longer. GANE thinks that the construction authorization process should be similarly delayed. The Motion to Dismiss can be appealed in Federal court, but the appropriate juncture to take that up is down the road when the MOX factory construction or its authorization would be imminent.

The U.S. MOX program is in a state of confusion. DCS must redesign the facility to perform more purification steps for the several tons of "junk" plutonium which have been added to the program. The NRC Staff has suggested that

The U.S. MOX program is in a state of confusion

the EIS publication will be delayed by 18 months although they are under extreme pressure to reduce the delay to 11 months.

The Governor of South Carolina remains firm in his commitment to prohibit shipments of plutonium to South Carolina from the Rocky Flats plant near Denver, Colorado, without complete assurance that the disposition program is on track and plutonium will not remain in

his state. The European MOX market is experiencing wholesale cancellation of orders and the Japanese plutonium program is suffering setbacks at every turn.

GANE's intervention has turned out to be an important piece of the Nix MOX puzzle. We have received generous support from the community, most significantly from Ed Lyman and Tom Clements at Nuclear Control Institute.

The U.S. has avoided attempts to institute MOX for many decades. Former Governor and President Jimmy Carter cancelled a similar program 25 years ago. We may not know exactly where the road leads but MOX is so wrongheaded, and immobilization is such a win-win, especially for the Southeast, that we will continue to resist and pray for more breaks in this longstanding campaign to Nix MOX.

— Glenn Carroll

A GANE volunteer for nearly 15 years, Glenn is GANE's intervention coordinator and the first paid staff in GANE history.

GANE CONTENTIONS ACCEPTED FOR PUBLIC HEARING

1 & 2 MATERIALS CONTROL & ACCOUNTING

Plutonium is a material sensitive to theft or diversion because it can be readily turned into nuclear weapons. Yet, the Construction Authorization Request (CAR) does not include information on how Duke COGEMA Stone & Webster (DCS) plans to safeguard or account for plutonium. DCS argues that it can add safeguards and accounting procedures once the facility is built. GANE argues that these are among the principal structures, systems, and components required at the design stage by NRC regulations.

3 INADEQUATE SEISMIC ANALYSIS

The CAR relies on decades-old seismic studies and Westinghouse (Savannah River Site contractor) reports that are not publicly available. SRS is in an active seismic area that experienced North America's strongest earthquake — the Charleston quake a century ago. A paper published in 2000 by prominent South Carolina seismologist Pradeep Talwani shows that seismic activity in the area is more prevalent than previously thought, as shown by the paleoliquefaction record of shaking so severe that soil flows like liquid. (Since the intervention began there was an earthquake at SRS. The epicenter was where the MOX facility is proposed.)

5 & 8 DESIGNATION OF CONTROLLED AREA BOUNDARY

NRC regulations require that DCS must establish a "controlled area" around the MOX facility. Inside the controlled area, workers may be exposed to higher radiation doses than members of the general public who are outside. DCS proposes that the controlled area of the MOX facility should be the same as the boundary around SRS, a 300-square-mile site. GANE argues that the boundary is the area that the licensee, DCS, would be able to control, that is, the area around the much, much smaller 40-acre MOX facility. GANE argues that SRS workers outside the MOX area should be treated like the public and protected from radiation associated with MOX activities. Obviously, DCS will have to make a

much greater effort to contain radiation within the smaller area. It is significant that the SRS site has public highways, CSX rail lines and a public waste dump on site. It is ludicrous for DCS to claim that it can shut the borders of SRS and exclude or expel people from the DOE/Westinghouse site at will.

6 INADEQUATE SAFETY ANALYSIS

The CAR is lacking in detail to show that the design contains reasonable protection against natural phenomena and accidents.

9 INADEQUATE COST COMPARISON

The National Environmental Policy Act (NEPA) requires that DCS must identify alternatives to the proposed MOX facility and discuss their relative costs and benefits. DCS's Environmental Report does not provide any discussion of the costs of the proposed MOX Facility, or make a comparison to the costs of other alternatives.

11 INADEQUATE NUCLEAR WASTE MANAGEMENT PLAN

DCS understates the impacts of the waste stream from MOX manufacture and adds to the burden of radioactive waste at SRS without designing a plan for managing the waste, as required under NEPA.

12 INADEQUATE ANALYSIS OF MALEVOLENT ACTS OF TERRORISM AND INSIDER SABOTAGE

NEPA requires that all foreseeable environmental impacts be analyzed in an Environmental Impact Statement prior to undertaking a project. GANE argued that the threat is foreseeable and must be analyzed to form emergency procedures in case of such an event. The NRC has historically not considered terrorism in its safety design procedures, but since September 11, is revisiting its policies and regulations on terrorism. This contention is currently under review by the Commission for whether it should be heard by the ASLB.

HOW WE BUILT THE MOST CONSERVATIVE HOUSE

Enjoying time both in the city and the country is an ideal for many Americans, but one which only a few can afford. Many compromise by living in suburbs; American suburbs, however, seldom provide the best of both urban and rural, but a contrived netherworld.

Spending time outdoors, hiking in the mountains, and exploring the forests is not a luxury for us but an essential part of life, and when we moved back to Atlanta we knew that we wanted to spend lots of time in the mountains. We began looking for property, and found a piece adjacent to a national forest wilderness area, with a south-facing building site and a stream.

realized that someone would buy this land and, given its situation, abuse could affect the surrounding wilderness ecosystem. We hoped to justify building on the site by exercising sensitivity to the environment.

TO BE ON OR NOT TO BE ON

We found two builders who shared our commitment, Butch Duryea and John Clarke, and an architect interested in sustainable design, Maria McVarish of San Francisco. Our first decision involved energy — would we be on the grid or off? If on, power lines would come in, either on poles (requiring unacceptable disruption of the forest) or underground

poorly over distance we needed an inverter to transmit AC electricity. Once we began generation, the construction got underway. John and Butch initially rented a generator in case they needed more power, but they never did — the compressors and electric saws operated beautifully on our 110-volt current. The system has required modifications since we've begun inhabiting the house, but we have more than enough power for our needs. When the stream is high, we can generate 400 watts, and we continuously store the energy in a 24-volt DC battery system (two 12-volts in series). We use an electric stove-top and 750-watt microwave to cook, and a Sunfrost refrigerator. Compact fluorescents provide illumination throughout, a ceiling fan helps in cooling, and excess electrical power helps heat water.

We decided against all fossil fuels, including propane, hence the all-electric appliances. This meant wood for supplemental heating. The passive solar design, with which Southface Energy Institute assisted us, provides 50% of our heat in the winter. The heart of our water and supplemental interior heating system is a Hicks Waterstove, essentially 450 gallons of water serving as a heat sink. The energy input comes from two solar collectors (Gobi Heliodyne) on the roof and a wood-burning fire box in the Hicks unit. The water can circulate from the stove into the concrete slab floors on both levels providing thermostatically — controlled heat. For bathing, water is heated as it flows in a coil through the tank. In summer the solar panels alone provide plenty of hot water, and in winter one wood fire per day usually provides enough for baths and heating the house. A free-standing wood stove in the main living space provides quick warmth when needed.



We certainly realize that second-home development is an environmentally unsound practice. Much of humanity has no shelter at all, yet affluent Americans want two. The energy used in one American household represents a huge, ongoing expenditure of nonrenewable resources. Disturbing private land near national forest boundaries causes problem such as habitat loss, stream siltation and invasion of exotic plant species. All these issues concerned us, but we also

(requiring lots of money). Our stream, with year-round flow, provided the answer, "Off!" — and our engineer, Mark Sardella, built it — a micro-hydroelectric system, the most inexpensive and reliable kind of renewable energy. High annual rainfall and steep slopes make the Southern Appalachians the ideal environment for this kind of system.

We selected a house site up-slope, with good sun exposure and a view of the wilderness, and because DC transmits

circulate from the stove into the concrete slab floors on both levels providing thermostatically — controlled heat. For bathing, water is heated as it flows in a coil through the tank. In summer the solar panels alone provide plenty of hot water, and in winter one wood fire per day usually provides enough for baths and heating the house. A free-standing wood stove in the main living space provides quick warmth when needed.

IN GEORGIA

OLD MATERIALS FOR A NEW HOUSE

Our design for the house included as many materials sustainably manufactured or recycled in origin as we could find and afford.

We researched a lot of possibilities with our builders and architect and we'll mention a sampling of those we used. The exterior of the house includes masonry blocks from recycled aggregate manufactured by Blue Circle Williams in Atlanta, and fiber-cement shingles by Superdur. The walls are constructed from foam core panels, CFC and HCFC-free (Vermont Stresskin), and the screened porch from recycled plastic lumber (Phoenix Plastics). Additional insulation material where required is recycled-cotton batts from Greenwood. The interior wood trim is reclaimed American chestnut sawn by Henderson Hardwoods. We used the chestnut along with Environ composite material, made from soybean and cellulose waste products by Phenix Biocomposites, for the kitchen cabinets which were built by Mike Wright of Brasstown, N.C. A toilet-tank-top sink for pre-using water for flushing was custom-made by Rob and Kim Withrow of Hayesville, N.C. Finally, our landscaping consists of planting native species to restore the disrupted areas around the house as much as possible.

We have inhabited the house since March 1995, and have been extremely comfortable. During the summer we spend much of our time on the porch, where we can eat, sleep and bathe. Overheating was not a problem during the spring and fall because of our good ventilation. During the cold months, the main living space upstairs stays warmer than the downstairs, where we sleep. We have been burning wood on cloudy, cold days but on clear days the house heats up well. Our activities are dictated somewhat by the weather, but we find this appropriate. When we have lots of solar gain, we have lots of hot water so



we celebrate with a hot soak in the outdoor tub. If cold and overcast, we watch the fire in the wood stove.

ANATOMY OF AN ANNOYANCE

One day after an autumn storm, following a period of low stream flow, Randall noticed the sound of the stream had intensified, and walked down to see the rushing water. He found the system was producing only five amps, less than before the storm. He checked the turbine and found the pressure in the penstock down from 23 to 10 psi. The problem lay upstream, at the intake. He trudged up and found the forebay low and the primary intake flow much reduced, and isolated the problem to the inlet. The inlet lies in the bed of the stream and takes

whatever the stream gives, including pebbles, leaves and salamanders. The forebay serves as the filter. Pulling leaves and twigs from the inlet, the flow to the forebay surged.

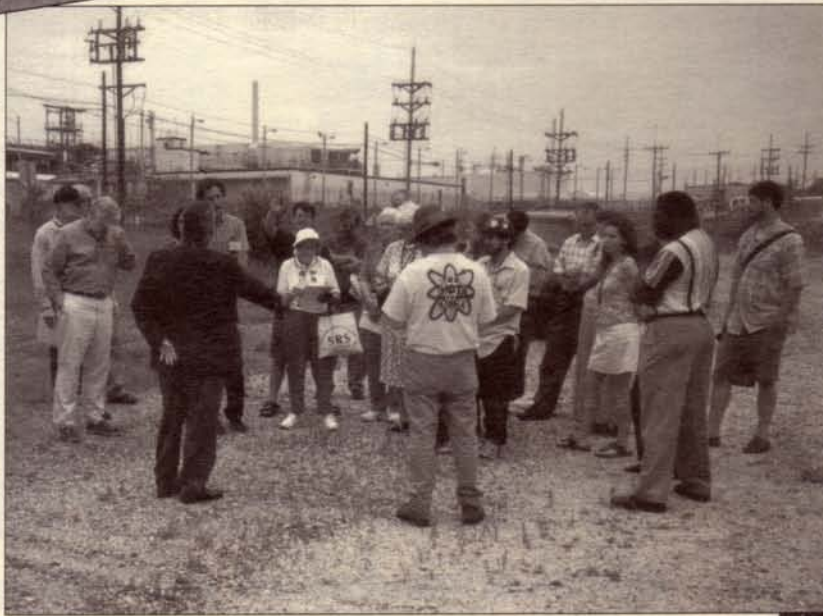
Although his stroll had become a task, he didn't mind. Walking along the renewed stream, through the green, dripping woods, and solving a puzzle, he enjoyed the satisfaction of taking responsibility for our own power supply. If the power goes out (which so far it never has), we can try to fix it rather than wait helplessly for someone else to. We've learned how to minimize these minor disruptions in operation, and will continue to learn. If we ever feel annoyed, we just remind ourselves how much more annoying a nuclear accident would be!

Our activities are dictated somewhat by the weather, but we find this appropriate.

When we have lots of solar gain, we have lots of hot water so we celebrate with a hot soak in the outdoor tub.

If cold and overcast, we watch the fire in the wood stove.

SAVANNAH RI JULY



SACRED GROUND

The group dialogues with DOE spokespeople on the site proposed for the MOX facility. The F Canyon where plutonium was separated, generating the waste in the tanks, is barely visible in the left background. We are working hard to protect this bit of land from the harm that has been inflicted on so much of the 300-square-mile nuclear weapons complex.

TANKS . . . AS FAR AS
35,000,000 gallons of high
are in 50-year-old, under
manufacturing pluto

The group was exposed to hi
Readings were 20-30 times ba
sloppy safety style when
contamination prior to



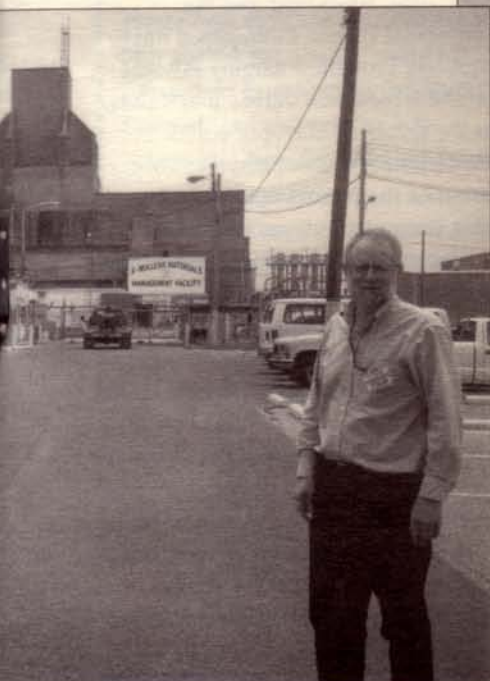
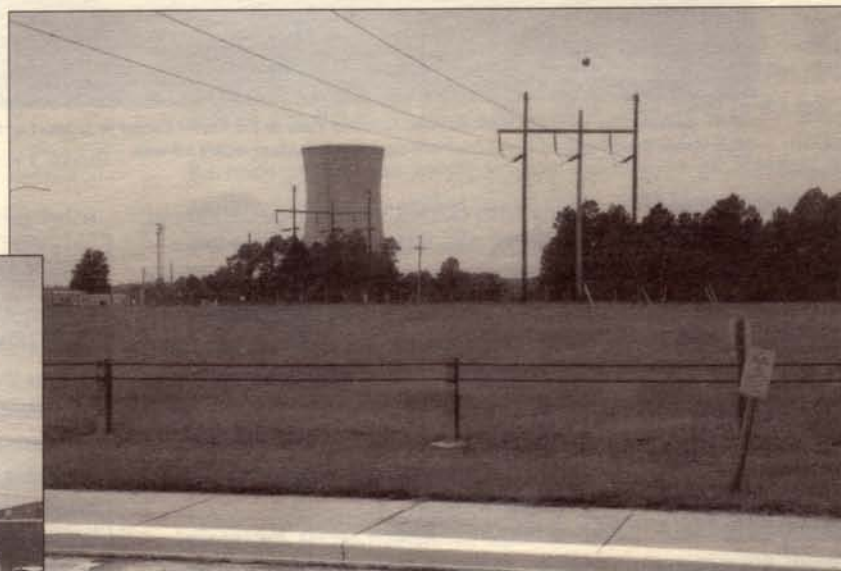
VER SITE TOUR 2001



THE EYE CAN SEE . . .

level liquid radioactive waste
ground tanks, leftovers from
um in the Cold War.

radiation levels by the tanks.
background and DOE displayed its
e were not monitored for
eboarding the tour bus.



VICTORY TOWERS

Tom Clements stands in front of the defunct K Reactor that he and other Southeastern activists shut permanently 10 years ago. Now it is slated to store plutonium for MOX although it is unsuitable for the purpose. To the right of the K Reactor stands its cooling tower, another win for activists who demanded it be built to protect the Savannah River from further damage from hot reactor discharges. The cooling tower was never used since the K reactor was shut and stands in mute testimony to the promise of change for the better.

UPDATE

Will Southern Co. Export Nuclear Waste to Skull Valley for Profit?

Southern Company has teamed up with several U.S. utilities to form the consortium Private Fuel Storage, LLC (limited liability corporation). Private Fuel Storage (PFS) is seeking a license from the U.S. Nuclear Regulatory Commission (NRC) to dump 40,000 tons of highly radioactive used nuclear fuel from the nation's nuclear reactors on the Skull Valley Band of Goshutes, a tiny band of Indians in Utah.

This spring public hearings are being held in Utah before the NRC's Atomic Safety & Licensing Board and in Federal court. Governor of Utah Mike Leavitt remains firm in his opposition to the dump and his statement that shipments of dangerous nuclear waste will enter his state "only over my dead body." Realizing the pressure that the nuclear industry is putting on constitutionally protected states' rights, the Utah legislature passed a resolution out of committee supporting Nevada's opposition to the proposed permanent nuclear waste dump proposed for Yucca Mountain. The resolution will be taken up by the entire legislature when it is back in session, possibly as early as this summer.

Many complex issues have been accepted for airing by the NRC and Federal courts. The U.S. Air Force is making a limited appearance in the case, supporting Utah's concern that the adjacent aircraft testing grounds are a recipe for disaster. The parties contend that the above-ground concrete and steel casks would not withstand a 600 m.p.h. airplane crash. Questions about environmental impacts of the necessary rail spur brought by Sierra Club and hydrology issues raised by the State of Utah will be heard. Two full weeks have been set aside to consider seismic concerns, an

issue that has remained unresolved throughout the entire licensing proceeding.

A State of Utah contention that the Environmental Impact Statement must consider the impact of a terrorist attack such as a hijacked commercial jetliner is currently before the NRC Commission

to recognize the leadership only of those individuals which support the U.S. government's agenda.

Leon Bear, when he was tribal leader of the Goshute band, negotiated the financial arrangements with Private Fuel Storage and the details have never been shared with the Skull Valley Band as a whole. Money paid to Bear has not been distributed equitably within the Band with dump opponents being left completely out of both the information and financial loops. Bear was defeated in recent tribal elections, but the BIA continues to recognize him as the Band's leader.

Melinda Moon and Sammy Blackbear who are newly elected by the Skull Valley Band succeeded in getting an NRC mandate to make a public record of the millions of dollars that have traded hands during PFS' negotiations with Bear. This was a major victory for tribal opponents who have long said that a small number of

tribal members have been bribed to support PFS' deal. Blackbear and the Environmental Justice Foundation have subsequently brought a lengthy lawsuit against the BIA which delves much deeper into the issues of corruption and bribery and the NRC has stayed public revelation of the financial agreements until this lawsuit plays out in Federal court. Blackbear expresses optimism that this particular strategy will go a long way to prevent the PFS dump.

As the GANESAYER goes to press, the State of Utah will be in Federal court showing that the Nuclear Waste Policy Act mandates Congressional oversight for high-level nuclear waste disposal. PFS's entrepreneurial proposal is being considered outside of Congressional view and therefore is inherently illegal. At the same time, Utah will be fielding charges



GANES gathered for an Earth Walk through Freedom Park to the Carter Center in support of the Skull Valley Band's opposition to Southern Company's nuclear waste scheme.

along with GANE's similar contention in the MOX case. Also at issue is how to deal with the possibility that a permanent repository for the waste, such as the dump proposed for Yucca Mountain, may not materialize, since the PFS dump would only be licensed for 20 years (with option for a one-time 20-year extension) and is not intended nor designed to be a permanent dump.

Ohngo Gaudadeh Devia Awareness, led by Margene Bullcreek, has had environmental justice concerns accepted for hearing, although the NRC staff is currently challenging their standing in the case before the Commission. The NRC staff's challenge is a direct result of confusion as to the Band's leadership, a problem symptomatic of the cultural gap between tribal and U.S. governments and the Bureau of Indian Affairs' tendencies

by PFS that bonding and inspection requirements imposed by the State of Utah are unconstitutional.

GANE believes that the powerful and rich Southern Company should be embarrassed to exploit a tiny, impoverished band of Indians as a so-called remedy to a problem created in the course of making a profit for shareholders. The national high-level nuclear waste "program" is headed down a dead-end track in its attempts to dump the waste problem on politically weaker Western states. States' rights must become a concern of all states and it is up to us to help our local leaders understand that there is no "away" when it comes to nuclear waste.

The technology proposed for the PFS dump is the same as the dry-cask storage now instituted at Southern Company's Plant Hatch near Baxley, Georgia and at several other nuclear plants in the U.S. GANE advocates that we begin preparations to keep Georgia's waste in Georgia and that we change the debate from who to dump the waste on to how the waste can be most safely handled here, near the sites of generation. In the meantime, a genuine national debate on nuclear waste disposition must be undertaken and sustained until the nuclear waste problem is addressed democratically.

— Glenn Carroll

Please help Utah and the Goshutes stand firm against the gigantic, rich PFS consortium by contacting the Southern Company and encouraging it to:

- withdraw from the unethical Private Fuel Storage scheme
- plan to manage nuclear waste safely in Georgia for the next 20 years
- phase out nuclear power in favor of renewables and efficiency

Allen Franklin
CEO

Southern Company
270 Peachtree Street NW
Atlanta, GA 30303
404-506-5000


STATEMENT OF CORBIN HARNEY, WESTERN SHOSHONE SPIRITUAL LEADER TO GEORGIANS AGAINST NUCLEAR ENERGY AND THE EARTH WALK GATHERING APRIL 28, 2001

I'm really glad to hear that you people are gathered today to put your voices together and put a stop to this nuclear energy and nuclear waste. We're the people concerned about our Mother Earth cause the Native people lived there for many thousands of years on what was put here by the nature. The food that was put there for them to use, the different kinds of food, different kinds of medicine for the native people to use, different kinds of creatures survive on those things, whether if it's a food, berries, roots or whatever. We don't want this to be contaminated by radiation and chemicals, but the nuclear energy department doesn't seem to understand and doesn't know what to do with the waste. We are the ones who for thousands and thousands of years took care of what was put there for us to use by the nature, but the nuclear energy department doesn't know what they're doing. All they're doing is creating problems for the nature.

Money is a very important thing to the nuclear industry, the nuclear energy department. They think money is what keeps us alive on this Mother Earth of ours. There we have begun to see money can't buy clean water for all the living things, only for some of the people. What about the creatures, the animal life, the plant life? Who's going to buy water for them? I hope that we the people unite ourselves together, and bring this attention to our nuclear energy department because too many lives have been taken by radiation. All different kinds of sickness came about since they developed a nuclear weapon to destroy the human race, so this is what we as a people are going to have to look at together. Too many peoples had their lives taken, not only the humans, but all the living things have begun to disappear from the earth. The nuclear energy department knows damned well that they're destroying all life. Too many young lives today are affected by radiation. Let's not let this continue. Let's stand up for our rights, our voice should be heard around the globe. Come out to the Nevada Test Site in the spring, or come to Skull Valley in the fall.

It's really good of you people to come out here, to get together, to work with one another. I appreciate all that you're doing, and I hope that you come out to Mother's Day gathering at the Test Site, or come for the Nuclear Free Great Basin gathering in Utah in October, and we'll unite ourselves together and put a stop to this nonsense of our government.

Corbin Harney



MOTHER'S DAY GATHERING
May 10-13, 2002 • Nevada Test Site
800-471-4737

Shundahai is a Newe (Western Shoshone) word meaning
"Peace and Harmony with all Creation"

SHUNDAHAI NETWORK
www.shundahai.org

Tom Ferguson, editor

research: Ann Mahoney, Bob Paine

AJC = Atlanta Journal & Constitution
 NYT = New York Times

12/17/00 **EAR MITES?** British health officials warn that children should limit cell phone use to emergencies because their growing tissue may be more vulnerable should cell phones prove risky. The radiation-emitting consumer object is also emitting various safety studies that so far merely cloud the air with inconsistent but worrying results. AJC

1/4 & 2/9/01 **HARD AS NAILS** Dr. Asaf Durakovic has found, in the body fluids of more than 40 U.S., British and Canadian gulf war veterans, evidence of depleted uranium, which is used in munitions because of its ability to penetrate thickened steel. NATO veterans of the Yugoslavia bombing where depleted uranium was also used are turning up with cancer in suspicious numbers. AJC/NYT

2/15/01 **GROAN!** For the sake of "political stability and economic development" Taiwan's President Chen Shui-bian has decided to proceed with a nuclear plant he had cancelled. Shui-bian had swept the Nationalists in the last election with promises to close down the plant. The opposition however retained a majority in the legislature and was showing the new president what gridlock means. NYT

2/19/01 **MONEY DOESN'T TALK IT SWEARS** Two men who audited efforts to clean up the nuclear mess at the Idaho National Engineering and Environmental Laboratory say, in a federal lawsuit, that government contractors, paid hundreds of millions of dollars to clean up contamination, only made it worse. When the auditors

complained, they said, they were harassed until they resigned. NYT

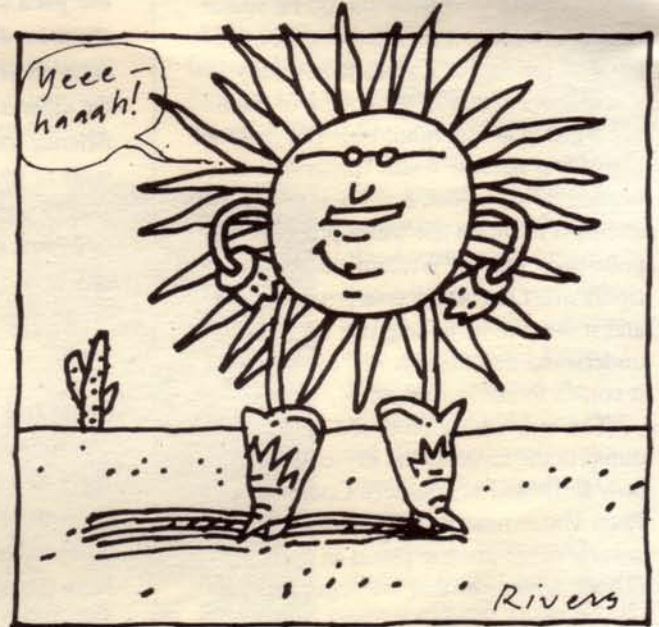
4/8/01 **LOST AND FOUND** Millstone nuclear plant in Connecticut, having one of the worst safety records of all U.S. plants, has "misplaced"

two 12-foot-long spent fuel rods. The plant, which has pleaded guilty to 23 federal felonies and been fined \$10 million, assures us that the rods, missing since 1980, wherever they are, present no danger to the public. Whew! for a minute there I was worried. NYT

4/16/01 **NEW NUKES** The Defense Department is studying whether to develop a new, low-yield nuclear weapon with an earth-penetrating nose cone that could knock out hardened targets or bunkers (think Saddam). The appeal is low "collateral damage." NYT

7/10/01 **SAVANNAH RIVER SITE** More than 20 activists toured the federal nuclear weapons site to examine up close plans to manufacture plutonium (MOX) nuclear reactor fuels there (see center spread). A botched stop on the tour did little to ease their concerns. SRS workers failed to monitor the group for radiation exposure when they left the F-Area "tank farm," where highly radioactive liquid waste is stored in underground tanks. Augusta Chronicle

7/31/01 **TERRORISM BY ANY OTHER NAME** The NRC, whose mandate is to protect public health, has marked at least 2,400 members of the public for death. This is the official government estimate of the numbers of deaths that will



be caused by the 103 nuclear reactors in the U.S. over their lifetimes. Renew their licenses, add some extra deaths. The Bush/Enron Energy policy plans to expedite just such renewals with its pro-nuke, pro-coal, pro-oil-drilling-about-anywhere, anti-environmental to-hell-with-you-there's-money-to-be-made obsession.

Accidents and non-routine radiation releases, of which there is a deplorable history, are not included in the estimate. The administration, not known for its fidelity to accepted norms of behavior, ethics-wise, truth-telling, etc., likes to describe nuclear energy as emissions-free, overlooking the radiation emissions we've outlined here. Add to that the greenhouse gases emitted in uranium processing operations and you've got some funerals. On the bright side, some of the dead might be terrorists. Nuclear Information Resource Service press release
 8/12/01 **METHINKS YOU PROTEST TOO MUCH** A federal grand jury has charged 15 Greenpeace activists and two foreign journalists arrested in a protest of the Star Wars Nuclear Missile Defense (NMD) program last month with felonies in the disruption of the Pentagon's antimissile defense test at Vandenberg Air Force Base near Lompoc, California. The fantasy of missile defense, known by some psychologists as missile envy, is a malady affecting many male members and descendants of the patriarchy.

PAST ENERGY EFFICIENCY SUCCESS

- Total primary energy use per capita in the United States in 2000 was almost identical to that in 1973. Over the same 27-year period economic output (GDP) per capita increased 74 percent.
- National energy intensity (energy use per unit of GDP) fell 42 percent between 1973 and 2000. About three-quarters of this decline is attributable to real energy efficiency improvements and about one-quarter is due to structural changes and fuel switching.
- If the United States had not dramatically reduced its energy intensity over the past 27 years, consumers and businesses would have spent at least \$430 billion more on energy purchases in 2000.
- Efficiency savings are providing one-quarter of U.S. energy needs.

SOURCE: Howard Geller, American Council for an Energy Efficient Economy, Testimony before U.S. House of Representatives, Committee on Science, Subcommittee on Energy, Hearing on Energy Realities, May 1, 2001. www.aeee.org

The charges carry a maximum sentence of more than 11 years in prison and fines totaling over \$500,000 – among the stiffest ever handed down to nonviolent protesters around the NMD issue. The prosecutor has stated that the case is one of public safety. The defendants couldn't agree more, that's why they were out there. But it seems the prosecutor is confused about who is actually threatening public safety — those who protest an action that threatens the whole life system of the planet or those who perpetuate the threat. NYT

8/26/01 **ON THE ROAD** South Carolina is matching DOE promises with some of its own — no plutonium will be accepted in the state until a written commitment is in place guaranteeing an exit strategy. SC will not become a plutonium dump, according to officials there. Governor Hodges has even threatened to call out the National Guard and personally lay in the road to stop shipments. DOE, accustomed to a free hand, aside from those environmental crazies who don't count, doesn't like this interference with manifest destiny and is anxious to make a deal, or a promise. The problem here is that its reputation precedeth it in the promises department. AJC

8/31/01 **BLOWIN' IN THE WIND** Bill Becker, a professor of industrial design at the University of Chicago, sees urban wind as something that, with the right tool, can be mined. Put the right tool in the right place and voila! Energy. Wind turbines usually stand out in fields, on hills, creating electricity with low environmental consequences. Becker's invention goes one better and mounts on city building roofs to produce energy, at lower cost — about 3 cents per kilowatt hour — than either nuclear or coal. Since the wind doesn't blow constantly except in Washington, DC, Becker supplements his machine with solar. Nuclear and coal, aside from their health impacting waste streams, cost more like 8 cents a kilowatt hour. Chicago Sun-Times

10/14/01 **RISKY BUSINESS** Edward Radford was one of those people who turn out to be right more than is common and whose public disagreements over the years with other scholars constitute a kind of history of radiation standards. His opinions always seemed to end up being verified by the data — the data usually consisting of death rates from cancer.

Radford's early opinions regarding cancer and cigarettes were at odds with the distinguished scholars who worked for Philip Morris, *et al.*, just as later the hacks, excuse me, *academicians* working in the nuclear industry tended to stand on the opposite side of his opinion there. Ever resistant to change, the consensus, however, has gradually swung toward Radford's

view that there is NO safe dosage of radioactivity. A long, good life, Edward Radford died at 79. NYT

11/1/01 **WARNKE & PEACE** Another significant voice was silenced with the passing of Paul Warnke who probably turned back the Bulletin of the Atomic Scientist's "Doomsday Clock" a few minutes, giving us time for another nine holes or perhaps to intervene in the mad slide towards catastrophe. Warnke, President

Carter's head of the Arms Control and Disarmament Agency, believed that once the U.S. was able to pulverize the Soviet Union six or eight times over, building more warheads to bounce the rubble around didn't really increase our security. Naturally he was called "soft on communism," a "screwball" and attacked by "hawks" like our own born-again dove, Sam Nunn. NYT

continued next page

The ICE Proposal received 7.6% of the vote in 2001, qualifying it for the 2002 Southern Company stockholder ballot. Stockholders may vote by proxy ballot or at the meeting.

Southern Company Stockholder Proposal Invest in Clean Energy (ICE)

Be it resolved that the shareholders recommend that Southern Company should invest sufficient resources to build new electrical generation from solar and wind power sources to replace approximately one percent (1%) of system capacity yearly for the next 20 years with the goal of having the company producing 20% of generation capacity from clean renewable sources in 20 years.

STATEMENT OF SECURITY HOLDER

Utility deregulation demands the Company present a good public image, and the public is demanding progress towards clean energy.

Efforts must be made to slow down changes in global climate so that we can continue to survive on Planet Earth.

The proposal allows flexibility in schedule for the Board of Directors to implement this proposal. The 20% figure is just a reasonable and conservative goal to aim for.

A 1% yearly addition to generation capacity allows for small pilot plants to be built and tried as the program advances.

Although initial building costs might be larger, solar and wind power sources do not require the purchase of fuel, which can make these additions to generation capacity very attractive economically over the long term, especially if the cost of fossil fuels rises. The company should look to building facilities that are made to last a long time.

Solar power towers, wind farms, solar photovoltaic arrays and parabolic solar thermal collectors already exist in other places in this range of power production, proving that Southern could realistically build such facilities in Georgia and elsewhere.

— ROBERT B. MILLS - Stockholder

Southern Company Stockholders Meeting

Wednesday, May 22, 2002, 10 A.M.

Ritz Carlton Lodge
1 Lake Oconee Lodge
Greensboro, Georgia

Contact: Tommy Chisholm 404-506-0540

Southern Company owns Georgia Power, Savannah Electric, Gulf Power and Alabama Power

WISDOM OF THE ELDERS

.....

There is a river flowing now very fast. It is so great that there are those who will be afraid. They will try to hold on to the shore. They will feel they are being torn apart and suffer greatly.

Know the river has a destination. The elders say we must let go of the shore and push off into the middle of the river. Keep our eyes open and our heads above water. See who is there with you and celebrate.

At this time in history we are to take nothing personal . . . least of all ourselves. For the moment we do, our spiritual growth and journey come to a halt.

The time of the lone wolf is over.
Gather yourselves.

Banish the word struggle from your attitude and your vocabulary.

All that we must do must be done in a sacred manner and in celebration.

WE ARE THE ONES WE'VE BEEN WAITING FOR

Hopi Nation
Oraibi, Arizona

continued from previous page

11/1/01 **IT'S NOT ALL BAD NEWS** Ukraine's last intercontinental ballistic missile silo was destroyed October 30th. When the Soviet Union disintegrated in 1991, Ukraine inherited Russian warheads on its territory. Unlike some Western nations we could mention, this new country refused to buy into the notion that holding a gun to your own head impressed folks. They returned all nuclear warheads to sender. In a further demonstration of real tough love, Ukraine destroyed all its nuclear bombers and, lest there be any doubt, all 170 missile silos. NYT

11/3/01 **IT'S FRONT-PAGE NEWS** GANE made the front page of the Washington Post in an article titled "Are Nuclear Plants Secure?"

On the day after the terrorist attacks on America, the NRC happened to file a legal brief about terrorist attacks on nuclear facilities. GANE had lodged a complaint because no one had even analyzed the risk of a "malevolent act" at a proposed plutonium plant on the Savannah River. "No, it hadn't," the commission responded. "Federal agencies need only address reasonably foreseeable environmental impacts."

"It was an untimely argument to make on September 12, 2001," said the Post. "But that was the argument nuclear regulators had been

THE TRUTH FALLS OUT

When the U.S. was conducting above-ground nuclear testing in the '50s, the government gave film manufacturers prior warning in order to protect their film supply. Yet dairy farmers were not similarly warned to protect their product and customers from harm. Is there a pattern here? Are profits routinely put before public health? Is there anything to be learned here?

The Institute for Energy and Environmental Research (IEER) thinks so. In a recent press release they call for the formation of a United Nations Truth Commission to examine the effects of fallout on the population over the years 1951 to 1960 and beyond. IEER concludes from analyzing government studies that as many as 80,000 incidents of cancer among the U.S. population born between 1951 and 2000 can be attributed to nuclear bomb testing. 15,000 of those or more would be fatal. A 1997 government report indicates that some farm children were as severely exposed as the worst exposed children after the 1986 Chernobyl nuclear power plant accident. A government campaign to inform the public would have reduced those numbers. Early detection of cancer is always an advantage, yet uninformed victims experienced symptoms well before finding out they were in advanced stages of thyroid cancer. IEER's analysis is based on government reports and studies by the National Cancer Institute and Centers for Disease Control and other official data.

The U.S. was not alone. Russian and British nuclear testing also contributed to what amounts to an assault on the people of the planet. "Hot spots" occurred thousands of miles away from the test sites. Tests in Nevada left hot spots scattered as far away as New York and Maine. The government was very reluctant to admit the harm they had caused, doing so only after prolonged pressure from the people and some elected representatives. But the harm is still occurring and the government needs to inform the people fully.

The government has a compensation program for Nevada Test Site neighbors who are geographic downwinders but the definition of downwinder needs to be expanded to include all hot spots and all victims. A U.N. Truth commission should look at all victims of the nuclear age and arrange compensation.

Fallout maps, fact sheets and the most recent government study can be found at www.ieer.org.

— TOM FERGUSON

Tom is an artist who works part-time for the Atlanta Chapter of Physicians for Social Responsibility as well as serving as GANE secretary.

making for decades. Now, federal and state officials are scrambling to ramp up security at nuclear plants, banning planes from their airspace and dispatching the National Guard." Washington Post

12/13/01 **EASTERN MACHO** India tested an improved(!) version of its nuclear-capable, surface-to-surface Prithvi (pithy name hey?) missile from a remote testing center off the east coast. Their east coast, not ours . . . yet. AJC

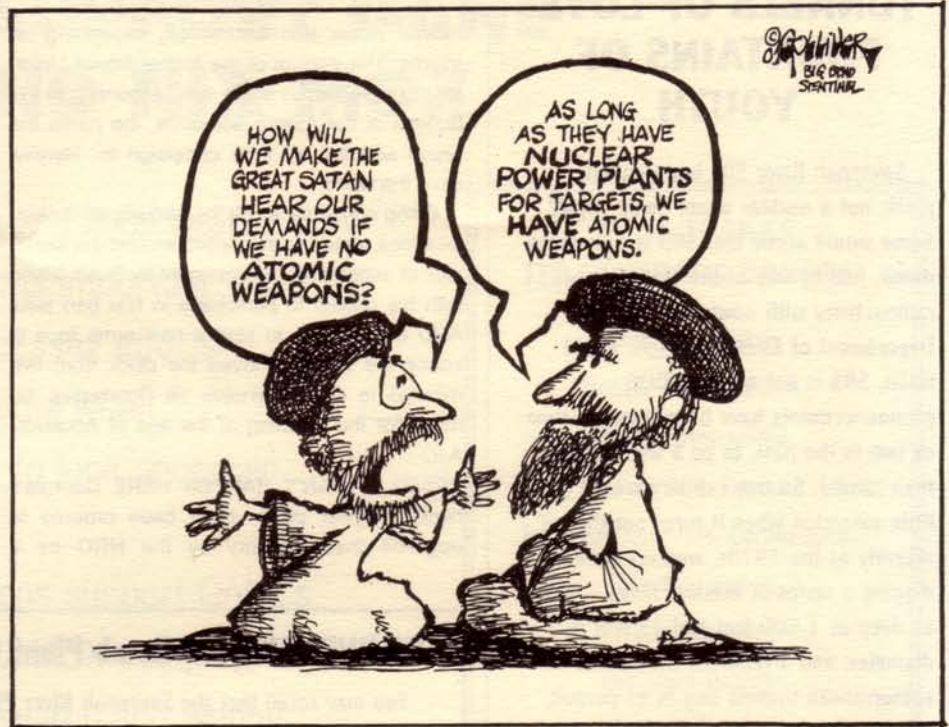
12/20/01 **LIKE WABBITS** Very odd to hear a Secretary of Energy say that there were no customers for DOE's breeder reactor at Hanford Nuclear Reservation and even if there were it would cost perhaps \$2 billion to set up for the work. So it was closed.

What's unusual about this scenario? When has DOE ever let a little multi-billion dollar hemorrhage stop them from pursuing their interesting and technically challenging projects? Well, this one went on for years, keeping the reactor at several hundred degrees while DOE tried to think of something to do with the albatross. So they did get quite alot of mileage out of it, jobs you know.

A breeder reactor by the way is one that creates more fuel than it burns. The product then would be nuclear fuel to sell to other nuclear reactors. You may have heard of the fuel. It's called plutonium and it has another useful function, if you find world-class nightmares useful. It can be used to make nuclear bombs. Visionary, huh? That DOE, they're such kidders. But ya have to give 'em credit when they do something right. Building the damned thing was never a good idea but closing it qualifies. NYT

1/23/02 **TOO CHEAP TO METER HUH?** Complacency around nuclear power plant security is getting more difficult to maintain since 9/11. We can always count on NRC assistance but still, some facts are so glaring that even experienced, indeed expert, ostrich-class denial develops cracks. Even though the day after 9/11 NRC was arguing that terrorist attacks on nuclear plants were not a "credible" threat, new security measures are being taken. Environmentalists point out that solar panels or wind generating turbines don't need massive security, nor do they generate waste toxic for hundreds of thousands of years, vulnerable the whole time to theft and convertible into nuclear bombs.

Pro-nukers attempt to stifle elaborate yawns when it is pointed out that intruders could break into a plant, assemble a nuke from materials there and explode it on the spot. Or they could use conventional explosives to blow up nuclear waste or uranium or plutonium, spreading the material around and making a big mess. Many plants are near highly populated areas. A mass



© 2001 Gary Oliver

of uranium dropped on another mass of uranium from a height of about six feet would create an explosion somewhat smaller than Hiroshima. Then there are cooling ponds where spent fuel is stored. Spent fuel bursts into flame when exposed to air, making radiation airborne. Lose control of a reactor and you have a meltdown. There are enough scenarios to make one nervous. Have we mentioned 747s? Add to that the fact that, despite Nuclear Energy Institute magazine ads showing fierce security personnel, with guns and everything, mock intruders have had a 47% success rate in *scheduled* NRC drills. One begins to want to move to another planet. NYT

2/1/02 **A REAL FIND** Three lumberjacks who found highly radioactive material in a forest near Tbilisi, Georgia, were hospitalized in serious condition, and hundreds of villagers were thrown into a panic. The tree cutters found two containers of strontium-90, thought to have been used in signal beacons during construction of a hydroelectric plant 30 years ago. The hot containers had melted the surrounding snow and the men had placed them in their campsites for warmth. NYT

2/5/02 **RECOGNITION** Jane Ross Hammer, long-time GANE supporter, has been selected to receive the American Medal of Honor. She is also the recipient of the Outstanding Woman of the Century, Most Admired Woman of the Decade, and Woman of the Year 1995 awards. Ms. Hammer was chosen because of her perseverance and dedication toward contributing to a better society by building better communities

through outstanding service on local, state and international levels. American Biographical Institute

2/9/02 **FUR'IN AID?** Sam Nunn and Ted Turner unveiled plans in Moscow to spend \$6 million to help Russia minimize risks from nuclear, biological and chemical weapons. Co-chairing the Nuclear Threat Initiative, the dynamic duo, former sailor, former hawk, are attempting to find ways to reduce the risk of nuclear catastrophe. They see this initiative as filling gaps in the funds the U.S. is providing for this same end. The U.S. has spent over \$500 million a year since 1992 to make the old Soviet arsenal safer, eliminating roughly 5,000 warheads. That money was made available through a 1991 law written by then-Georgia Senator Nunn and Senator Lugar of Indiana. The cash-strapped Kremlin has neither the will nor the means to take on the task of securing the country. "This is not foreign aid," says Nunn. "This is direct security for the U.S., indeed, for the world." Turner has pledged \$350 million over five years to reduce the global threat of weapons of mass destruction. AJC

2/28/02 **MIDNIGHT IN THE GARDEN** In 1947 a group of Manhattan Project scientists, regretting the day they signed onto that project, and recognizing the obvious, created a Doomsday Clock as a tool for alerting us to the drift toward catastrophe we had now embarked upon. The clock was originally set at seven minutes to midnight (doomsday) and over the years has

continued next page

TUNNELS OF LOVE FOUNTAINS OF YOUTH

Savannah River Site is a weapons plant, not a nuclear waste dump, right? Some would argue that SRS is a de facto dump, just by way of the vast piles of radioactivity with nowhere to go. The Department of Energy, though, would insist, SRS is not a dump. DOE pronouncements have been found, a time or two in the past, to be a wee bit less than candid. So one can be excused a little suspicion when it turns out that as recently as the 1970s, workers were digging a series of massive holes – some as deep as 1,500 feet and 15 feet in diameter, and a reported 8,000 feet of subterranean tunnels dug in its pursuit, into the hard rock beneath the site just across the Savannah River from Augusta, Georgia.

Since funds for clean up have been cut and re-allocated for new projects one might ask, where goes the waste? Have the tunnels been capped or filled?

No one's saying.

Since the tunnels are lined with steel, and steel rusts . . . and recent studies have shown water from the South Carolina side of the river is migrating into Georgia, and contaminants in water don't stay behind when water migrates . . . and the original plan for the tunnels included filling them with a slurry of liquid waste, and another plan called for burying plutonium beneath the Middendorf aquifer, our region's major water supply . . . and studies of a surface well in Burke County, Georgia show evidence of tritium, a radioactive product of Savannah River Site . . . can we trust these folks with high-level radioactive waste? Do they need over-the-shoulder, constant adult supervision? Do they need their hands slapped?

– TOM FERGUSON

Thanks to Pamela Blocky-O'Brien, Greg Land and Creative Loafing for putting the spotlight on these mystery tunnels.

continued from previous page

moved closer and backed off, depending on events. The decline of the former Soviet Union for example lent us some time, according to the Bulletin of the Atomic Scientists, the name the group adopted for their campaign to, literally, save the world.

Citing concerns about the security of nuclear weapons materials stockpiled around the world, lack of support for disarmament by Bush, along with his refusal to participate in test ban talks AND his decision to start a new arms race in space the Bulletin moved the clock from five minutes to seven minutes 'till Doomsday. So much for the dawning of the age of Aquarius. AJC

2/28/02 **IT CAN'T HAPPEN HERE** Georgia's nuclear power plants have been ordered to upgrade their security by the NRC as a

response to the 9/11 attacks. Nuclear plants have been designed to withstand trauma such as a hurricane or earthquake but the possibility of a direct hit from a commercial airliner was never considered. Nuclear plants are so safe that the industry insures itself. Hold it! Correction! This just in . . . Price-Anderson Act was renewed, and the taxpayer is required to take on the liability from any major nuclear accidents . . . but don't give it another thought, those suckers are as safe as campfires. AJC
3/7/02 **GET OUT YOUR CALCULATOR, BOB!** The government will spend an additional \$450 million to speed cleanup of the Hanford nuclear reservation in Washington state. Cleaning the nation's most contaminated site will be accelerated by 35 to 45 years under an agreement reached between the state, DOE and federal regulators. AJC

WARNING!!! New Bomb Plant Coming Your Way? WARNING!!!

You may recall that the Savannah River Plant used to be called "The Bomb Plant" back when it produced plutonium and tritium for nuclear weapons. That name seems to have fallen out of use given the change in mission at the site. BUT, it may be time to dust the name off 'cause the New Bomb Plant could be headed your way.

According to a DOE contact, DOE is set to publish a "Notice of Intent to Prepare an EIS" on the new "pit" plant. A pit is the plutonium core that is in all bombs. Pit production was a job carried out at Rocky Flats before that site was closed in the early 1990s, and is viewed as the key facility in nuclear bomb construction. SRS has never before had the mission of actual bomb construction, but rather the production of the nuclear materials used in the bombs.

It looks like the EIS will evaluate the new pit mission at SRS, Oak Ridge, Pantex and maybe Los Alamos. One DOE document indicates that if a single site is chosen for the plant that it will be SRS – if two sites are chosen (to maximize use of DOE skills and resources), then the sites would be SRS and Oak Ridge. It is uncertain when (or if) the announcement will be published but there are indications that scoping hearings on the EIS could begin late this summer, perhaps. DOE is evidently already looking for a contractor to prepare the EIS. Construction of the pit facilities could be as close as a decade away, though.

General John Gordon, Administrator of DOE's National Nuclear Security Administration, said in testimony before the Senate Armed Service Committee on February 14 that DOE was accelerating planning for the "Modern Pit Facility" (MPF) and that "relevant activities about to begin include preliminary MPF design, associated technology development, and initiation of the National Environmental Policy Act." Given that the capacity of the small, new pit production facility at Los Alamos "will be insufficient to meet future requirements for pits," planning for the MPF is about to go into high gear. This year's DOE budget also includes funds for design of the pit plant.

I urge everyone to start thinking about how to turn out a crowd for any scoping hearings which loom over the horizon.

– TOM CLEMENTS

Tom was executive director of Washington, D.C.-based Nuclear Control Institute until last month when he announced he would become join Greenpeace International's plutonium campaign.

NOW IS A GREAT TIME TO SUPPORT GANE AND NIX MOX

GANE's NIX MOX campaign and legal intervention are going great! It is important to sustain our successful efforts at this crucial time when MOX's future is starting to look uncertain.

Your generous contributions support GANE's work with the global NIX MOX campaign. Help us finance legal research and writing, expert witnesses, public meetings, networking, printing, postage and phone.

Please show your support for GANE's globally significant effort to NIX MOX once and for all!

GANE THANKS ITS GENEROUS DONORS!

Bev Jean Baker
Bobbie Wrenn Banks
Susan Bloomfield
Edward M. Brown
Fund for Southern Communities
Rita M. Furman
Terri Gardner
Jane Ross Hammer
Raylynn Hughes
W. Alton Jones Foundation
Joan O. King
Sapelo Foundation
Sevananda Natural Foods
Carol Stangler
Turner Foundation
Working Assets

**N
I
X**

I support GANE's efforts to NIX MOX!

\$15 \$30 \$50 \$100 \$250 \$500 \$1000 \$_____

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

PHONE _____

e-mail _____

Give generously to GANE today!

GANE • P.O. BOX 8574 • ATLANTA, GA 31106 • 404-378-GANE

**M
O
X**

YUCCA MOUNTAIN UPDATE

Yucca Mountain is a beautiful rolling hill, 90 miles from Las Vegas, in the heart of Western Shoshone territory. There are 33 earthquake faults in the area and hot water rises into the mountain which is in an active volcanic region.

Yucca Mountain contains thousands of traditional sites used by the Western Shoshone Nation and still used today for its annual spring gathering. The Shoshone call it "Serpent Swimming West" observing its constant movement.

The U.S. Department Energy (DOE) has selected Yucca Mountain for the sinister purpose of hosting the nuclear industry's dangerous high-level waste but the federal government cannot prove that they own the land.

The proposal is to move more than 77,000 tons of high-level commercial nuclear waste to the site, with shipments starting as early as 2010 and continuing for 30 years. These shipments would roll through 43 states, and past the homes of over 50 million people.

Less than 24 hours after receiving 80 pounds of documentation on the subject, Bush reneged on his campaign promise to Nevadans to base a decision about Yucca Mountain on sound science by declining to review more than 20 years worth of study and rubberstamping DOE's recommendation of the site.

Noting that the General Accounting Office concluded in December that nearly 300 scientific and engineering questions about the Yucca plan remained unanswered, Nevada's top officials accused Bush of kowtowing to the pro-Yucca nuclear energy lobby.

Nevada Governor Kenny Guinn filed a lawsuit hours after Bush approved the plan, contending that DOE did not let the state review the final environmental impact statement (EIS) before the recommendation. That suit joins another filed by Nevada last year accusing DOE of ignoring its Nuclear Waste Policy Act (NWPA) mandate to find a geologically sound burial ground.

Nevada intends to veto the repository project within the 60 days allotted by the NWPA. The decision then moves to Congress which has 90 days to support or overrule Nevada's veto.

"People — and I mean the politicians — think of this as Nevada's problem," Guinn said. "But it's not just Nevada's problem. It's America's problem. God forbid there should be an accident during transport."

States' rights are constitutionally protected and it is in Georgia's self-interest to support Nevada's stand against the nuclear industry and its government henchmen. We can work to safely manage the waste that has been generated at Southern Company's Vogtle and Hatch nuclear plants while a legal and scientific inquiry into genuine nuclear waste solutions are sought.

An aide to Senator Zell Miller has indicated that Miller will vote in support of Georgia Governor Roy Barnes' views on Yucca Mountain. So, in addition to calling Georgia's senators, it would be useful to let Governor Barnes know where you stand.

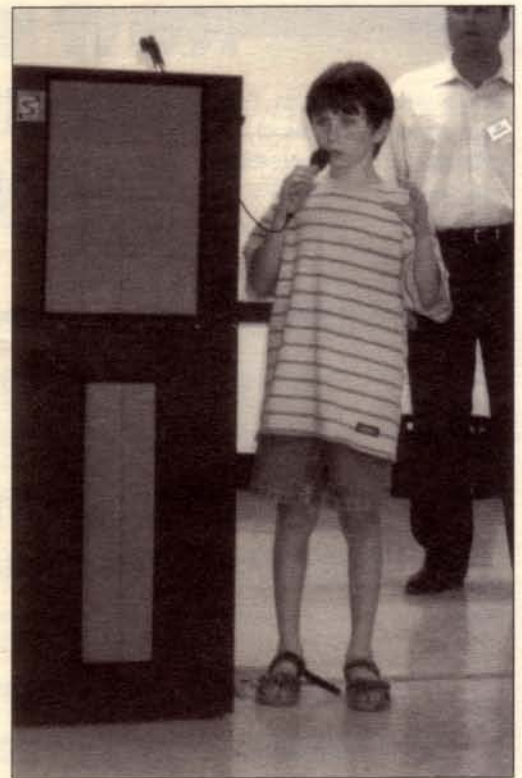


photo by Glenn Carroll

The issues that make Yucca Mountain unsuitable for high-level nuclear waste storage are so simple and obvious, a child can understand them. Tyler Henning addresses his government and defends his future at the Yucca Mountain EIS hearings in Pahrump, Nevada.

Mail is not recommended in D.C. these days, so call toll-free:
Senator Max Cleland
Senator Zell Miller
877-762-8762

The Honorable Roy Barnes
Office of the Governor
State Capitol
Atlanta, GA 30334
404-656-1776
www.ganet.org

GANESAYER
GEORGIANS AGAINST NUCLEAR ENERGY
P.O. BOX 8574 • ATLANTA, GA 31106
404-378-GANE