

October 1980

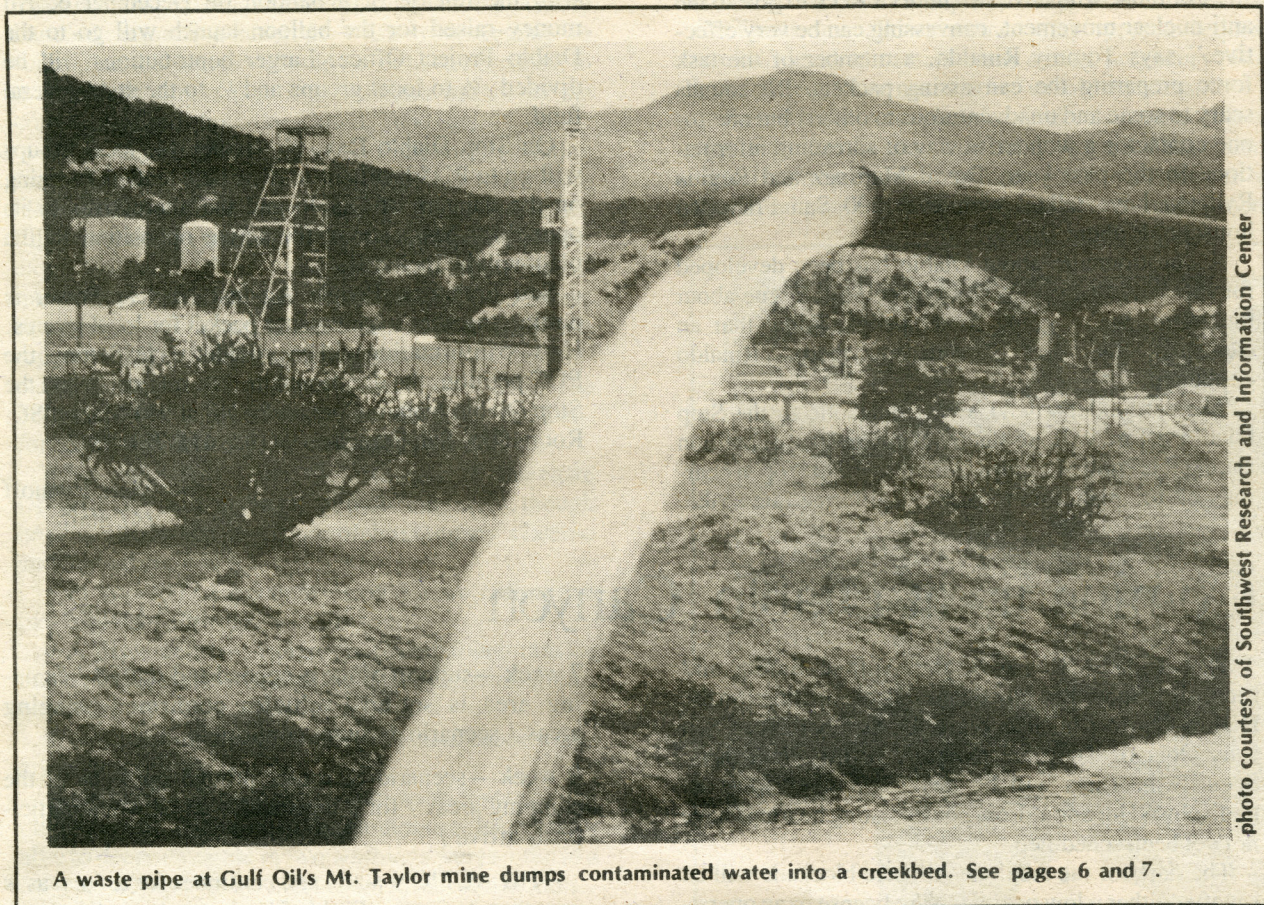


photo courtesy of Southwest Research and Information Center

A waste pipe at Gulf Oil's Mt. Taylor mine dumps contaminated water into a creekbed. See pages 6 and 7.

Secret memo PG&E's new Diablo sales pitch

A confidential PG&E memo obtained by Center for Law in the Public Interest reveals company plans for a new advertising strategy to defuse local opposition to the Diablo Canyon nuclear plant. The memo analyzes a company-commissioned opinion survey conducted this June in San Luis Obispo by consultant Hugh Schwartz.

The survey found that many people are unconvinced by PG&E claims of Diablo's safety.

"While 89% are familiar with the argument that Diablo buildings are strong enough, 45% do not believe it."

"While 89% are familiar with the argument that Diablo buildings and structures are strong enough to withstand any earthquake, only 47% believe it to be true. Forty-five percent do not believe it," Schwartz suggested that PG&E simply avoid the

earthquake issue, since mentioning "the very issues that residents perceive as most alarming...only serves to reinforce the concerns of both supporters and opponents."

The memo notes that 62% of those polled favor reopening earthquake hearings on the plant. It suggests asking Dr. Richter of Richter Scale fame to be a company spokesperson, not for his expertise but because "he is known to be pro-nuclear."

This political use of scientific "experts" is one of the survey's key recommendations. "Politicians are not convincing spokespersons. As in past studies, disinterested and distinguished scientists emerge as the most effective spokespersons for nuclear energy in terms of their propensity to be listened to and believed." The analysis recommends that pro-nuclear Nobel Laureates be used because of their high credibility, but notes that there are very few of them and that "obviously, many other scientists are perceived as Nobel Laureates...The high credibility of Cal-Poly science professors and PG&E

"OPEC continues to be an effective buzz word. We should stress Diablo as an alternative to OPEC."

engineers is interesting in that neither of these resources has received significant exposure. We should work with Bob Adamson and others at Cal-Poly to get a higher visibility."

These recommendations have resulted in a series of advertisements now being run in San Luis Obispo area newspapers. The series is billed as a "forum of views on nuclear energy," but only pro-nuclear scientists appear. Each ad contains a quotation from a scientist, his picture and signature, and several paragraphs of pro-nuclear assertions. PG&E seems to believe that anyone with the title "Doctor," even in an unrelated field, will be credible as an expert. The "experts" have included a microbiologist who claims that nuclear plants emit negligible radiation and a computer scientist who claims waste disposal is no problem (see page 12).

PG&E's strategy extends beyond the use of dubious authorities to impress the public. The poll analysis suggests that "we should capitalize on the

(continued on page 10)

Farallon fish fry

Suppressed studies on radioactive ocean dumping released in early September by the Environmental Protection Agency revealed plutonium levels in the edible portions of coastal fish up to 8,500 times greater than levels expected from weapons-test fallout.

The new information also shows that the previously available EPA summaries of these studies were full of contradictions and distortions. One summary, for example, concludes that "concentrations of radioactivity in fish collected in the vicinity of the Farallon Islands are within the ranges occurring from atmospheric fallout." But the report also states that plutonium levels in fish flesh ranged from 2.3 to 188 times the expected levels. A later and more thorough study found fish with plutonium levels from 10 to 8,500 times those expected, and sea cucumbers, which are used in Chinese food, with plutonium levels up to 57,000 times expected.

Most of the fourteen reports which the EPA turned [continued on page 10]

"Fringe benefits" at San Onofre

In mid-September a classified ad in the *San Diego Union* attracted hundreds of applicants with the lure of \$500 for five days' work. But the ad didn't say that those hired will take home the equivalent of 25 years of background radiation exposure along with their money. The advertised jobs will be repairing San Onofre Nuclear Power Plant's steam generator system, where hundreds of cracked or leaking tubes have kept the plant idle since April 9.

A news story in the *Union* about the San Onofre ad drew another thousand applicants. But one unemployed worker had some reservations. "You don't want to come out all shriveled up or with your sex life ruined," he said.

The repairs will involve "sleeving" or slipping a tube inside more than 7500 defective steam generator tubes. Before the work can begin, some of the highly radioactive "crud" that has built up inside and outside the tubes must be removed. Westinghouse, which designed the steam generators, has been trying since early September to remove the "crud" by sandblasting in order to reduce the level of radioactivity. According to the industry publication *Nucleonics Week*, between twelve and 73 workers involved in this decontamination process have been exposed to twice the radiation doses allowed by law. The overexposures occurred because plant owner Southern California Edison provided workers only with chest dosimeters despite the fact that the radiation was coming from overhead pipes. The Nuclear Regulatory Commission requires monitoring at the "organ of highest exposure," so workers should have had head badges. The utility has been told that fines are likely.

As of September 22 radiation levels in the system were ten rems per hour, which would give workers their maximum allowable quarterly dose in only 15 minutes. According to Southern California Edison, Westinghouse workers stay in the area for a minute or less. The utility wants the radiation field reduced to one rem per hour before they bring in the temporary workers.

Depending on the success of decontamination those enticed to take the jobs will work for a few minutes to a few hours before receiving their allowed dose of three rems. They will wear radiation badges strapped to the head, chest and other portions of the body. Southern California Edison plans to expose about 700 workers until their badges indicate two thirds of the maximum dose, since the devices are limited in accuracy.

Dave Barron of Southern California Edison explained that it's not unusual to hire large numbers of

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if there is an * on your label your subscription expires with this issue. see page 12

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Letters



THE GOOD LIFE

Dear Friends:

"Conscription or conservation" is Tom Hayden's analysis of our choices for avoiding World War III, according to Gus West's report on draft resistance in the September *IAT*. Other liberals—John Anderson, Barry Commoner, David Harris—shame Americans for our "wasteful lifestyles."

The only thing we have to give up for *the good life* is our military budget.

The MX missile system is scheduled to cost \$54 billion, but will cost US taxpayers at least \$80 billion. We are currently spending more than 63¢ of each tax dollar on war preparations. (See War Resisters League literature.) It costs \$45,000 for *each person* employed in the military in this country. The CIA, FBI, even the nuclear weapons budget, are not included in military allocation statistics. The nuclear weapons outlays are 30% of the Department of Energy budget—the same folks who research and promote the "peaceful atom."

The notion that a reduced lifestyle is essential for the continued security of our borders comes out of an ignorance of technology. We already have the technology to develop solar power and effective mass transportation, and at the same time, employ virtually everybody in meaningful work. The only security any government has is the popular consent of the governed.

Sincerely,
Susu Jeffrey

CONVERSION CALL

Dear Editors:

Thank you for your paper. It is needed.

I am surprised to find each issue containing so little about the avenue of conversion of nuclear power plants to alternative fuels. Could an issue be devoted to this topic?

Putting ourselves in front of the momentum of billions of dollars already invested in an entrenched vision may be necessary, but there are other means simultaneously available to us. The profit motive, the fascination with technological frontiers, the desire for simplistic solutions are strong movements in our society and ourselves. Can we acknowledge them and work *with* them?

That is energy conservation.

In hope,
Rob Harlan

AA JOB OPEN

The Abalone Alliance has a six-month, full-time fundraising job available. The fundraiser will work out of the San Francisco office. Pay is \$500 for the first month only, then 25% of all money raised. Terms are negotiable with the hiring collective.

Desired qualifications for the job include fundraising experience, commitment to grass-roots organizing and familiarity with Abalone Alliance structure and process. If interested, contact the AA office, 944 Market Street, Rm. 307, San Francisco, CA 94102, (415) 543-3910. Applications will be accepted until October 20.

SUBSCRIBERS! PLEASE READ:

In an effort to expand the circulation of *It's About Times*, we are considering exchanging mailing lists with a few other publications. This would be a one-time-only exchange; you would receive one offer from the other publication, but wouldn't be put on anyone's permanent "junk mail" list. If you object to your name being used this way, please let us know before November 1.

Thanks,
The *IAT* Staff

Fall protest season begins

A series of Abalone Alliance actions designed to highlight the fight against Diablo and build support for blockading the plant when it is licensed will begin on October 12. Coordinated statewide canvassing will inaugurate the outreach program. On November 14 leaflets will be distributed at every PG&E office in the state, and a massive balloon launch and pilgrimage at the gates of Diablo will culminate the fall events on December 6.

"For those who have two hours a week to give to the anti-nuclear movement, canvassing can be very effective," says Tommy Rinaldo, a member of the task force preparing the canvassing packets. "It sounds scary to some and unadventurous to others, but one-to-one contact is a wonderful way of spreading information. In the past year, David Martinez and Regina Ryerson have talked with over 500 San Francisco households about Diablo."

A questionnaire about Diablo has been developed for the canvassing. "We're not going to argue about the plant, we're going to let people know that an earthquake fault lies 2½ miles off shore," Rinaldo explained.

The respondents who are sympathetic to the Stop Diablo effort will be encouraged to sign a petition asking the Public Utilities Commission to reopen hearings on the plant and to participate in the rate strike.

Coming up at Diablo Canyon

The Appeals Board of the Atomic Safety and Licensing Board has scheduled seismic hearings on the Diablo Canyon nuclear plant for October 20 in San Luis Obispo. They are expected to last eight days. Security hearings will be held November 10 at an undisclosed location. Low power testing hearings have not yet been scheduled.

The date for the Abalone Alliance blockade will be set after either a low power testing license or an operating license is issued. Loading of the fuel rods will take place two months after either license is issued. If present licensing procedures continue on schedule, the blockade will be set for late February or March.

The timeline for blockade preparation is presented below.

Tasks that need to be done once the date has been set:

1 week—confirm sea equipment / try the alert system-phone affinity groups with the date / poster to the printer / housing together for organizers coming to the area to help / press conference—start the media blitz / start getting together last-minute logistical needs /

2 week—newsletter out to affinity groups / send out the National Call with the date / poster ready for distribution / accelerated trainings start & keep going/

3 week—statewide speaking tour starts /

3 weekend—canvass with door hangers (SLO-training dates, etc.) /

Save the office!

The Abalone Alliance State Office and the Diablo Project Office are just about out of funds. The fundraising collective has circulated a proposal to give top priority to hiring a fundraiser in the next budget period. A letter sent to past donors may help get us through the next couple of months and assure a salary for the fundraiser until she or he gets started.

Meanwhile money is needed to keep the operation afloat. Continuing blockade preparations and maintaining our network will require the financial support of member groups. Sending out one mailing to all the Abalone member groups costs over \$30 just for postage. Many groups have responded to the last distress call, but this support must continue.

An office provides access to fiscal sponsorship for tax-deductible donations, maintains contact with other national and international groups, helps new groups with resources and provides a public place to go for information. But this requires steady staffing, since volunteers burn out.

Building a movement against the nuclear power plants in California requires a statewide movement. The Alliance's planned Fall Actions will provide an excellent opportunity for joint fundraising. This need not be a one-way venture. Offices can supply printed resources for the actions. Workshops can be given in fundraising and other organizational skills.

If we are going to be an alliance, we are going to have to participate and share the responsibility of fundraising.

—Mark Evanoff
IAT staff

The petition and rate strike are ways to actively show opposition to Diablo without travelling long distances or even going to meetings. Those who wish to do more will be encouraged to hold house meetings for their neighbors, get involved in their local group and take non-violence training for the blockade.

Fundraising will be integrated into the canvass. A minimum \$2.00 contribution will be considered an active registration against Diablo and will be marked with the release of a balloon on December 6. All money raised for the balloon launch will go to the Diablo Project Office. Larger contributions will be divided, ⅔ to local groups and ⅓ to the state general fund.

On Stop Diablo Day, November 14, local groups will go to PG&E offices to distribute leaflets focusing on the dangers of Diablo and the alternatives to its operation. Suggestions for active opposition to the plant will be included.

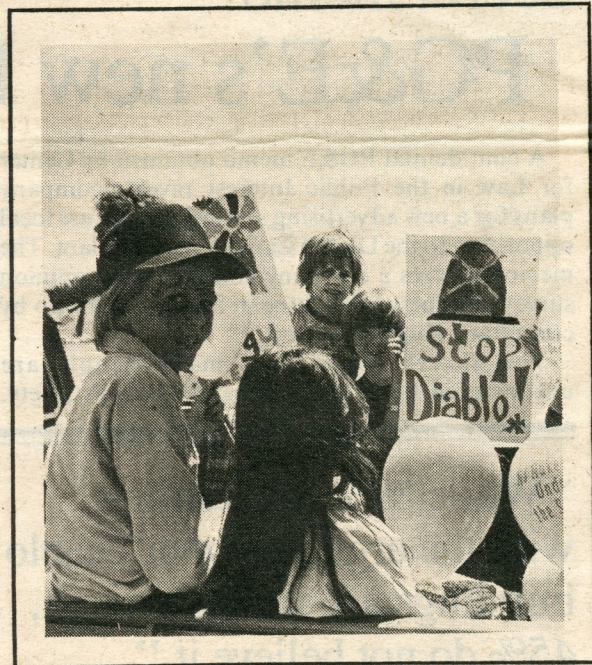
San Francisco People Against Nuclear Power is putting together a canvassing packet for local groups. How-to information will be provided on leafletting, the PUC petition, the questionnaire, the rate strike and the Stop Diablo leaflet. Contact PANP at 944 Market St., Room 808, San Francisco 94102, 415-781-5342.

—Mark Evanoff
IAT staff

7 week—support office is opened and staffed / camping area is set-up / vehicles confirmed / staging areas / scenario & routes confirmed/

8 week—scenario & routes printed up to be at the camping areas / for a logistical briefing when participants arrive /

THE ACTION starts and continues for as long as is necessary to prevent Diablo from becoming radioactive.



Abalone Alliance Newspaper

It's About Times

It's About Times is the newspaper of the Abalone Alliance, a California anti-nuclear/safe energy organization consisting of over 60 member groups (see page 11). The opinions expressed in *IAT* are those of the authors and are not necessarily endorsed by the Abalone Alliance.

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Nuclear laundry in hot water

It all ends up in the wash. But quite a few residents of Pleasanton, California are fed up with the Interstate Industrial Uniform Rental Service, located in the middle of town, which does the nuclear laundry for most facilities handling radioactive materials in California. Now the laundry wants to expand.

Marsha Taylor has lived next to the laundry for a year and a half, but a notice of expansion in the mail eight months ago was her first inkling that the laundry handled radioactive materials. "After investigating we found that this laundry should never have been built in a residential area, that it is a health hazard to the community and should be closed," she said.

At an August 13 hearing of the Pleasanton Planning Commission, Taylor, her attorney, Leonard Post, Howard Kornfeld of Physicians for Social Responsibility and others testified against the proposed expansion. The staff of the Planning Commission recommended approval of the expansion, but opponents countered with a state health department inspection report which detailed numerous violations of the company's license and a number of shoddy practices. The February 1980 inspection by Jack Brown of the California Department of Health Services found:

- For over two years the manager of Interstate Uniform has been in charge of radiation safety, though he didn't know the provisions of the company's license and had no copy of it.

- In late 1977 the laundry stored more radioactive material than allowed by its license.

- A discarded two-square-foot filter found outside the building gave readings of about eight millirems per hour.

- No radiation counters were present to check workers as they left the laundry.

Interstate Uniform's policy is to wash contaminated clothes twice. But some of the clothes they hadn't been able to decontaminate in two washings were stored in a hallway adjacent to the lunchroom for several months.

Brown mentioned that workers who unload and re-load contaminated clothes are at particularly high risk. According to unconfirmed accounts reported to *It's About Times* by former General Electric nuclear engineer Richard Hubbard, Interstate trucks arriving at nuclear plants were often too radioactive to be allowed to enter. In these cases drivers would go to a nearby car wash in order to wash off enough contamination to get

through the nuclear facilities' radiation alarms.

The local group trying to alert residents of Pleasanton to the dangers posed by the laundry is also concerned about the health of workers in the plant. One washing-room worker employed for sixteen years received five times the annual background level of radiation in 1979. Women workers have asked state health department officials about the effects of radiation on their unborn children. Jack Brown explained to *It's About Times* that California law allows women employees to request work in less radioactive areas during pregnancy. But he admitted, "I'm not sure we've told them that."

Two of the five planning commissioners voiced opposition to the expansion and suggested that Interstate Uniform should relocate. When the manager of the laundry refused to testify all five commissioners

voted to deny the permit. Interstate Uniform has appealed the decision to the Pleasanton City Council where the case will be heard in mid-November.

There are no state studies on the laundry that address its transportation problems, airborne emissions, waste water dumped into the city sewer system, or the level of radioactivity in soils around the plant. "The State Health Department has said it is too busy investigating plutonium leaks at Livermore to be taking issue with the Pleasanton laundry," remarked attorney Leonard Post.

Lawrence Livermore Lab probably sends its laundry to Interstate Uniform.

—Ward Young
IAT staff



photo by Steve Stallone

A September 26th volleyball battle between mutant sponges and mad scientists atop UC Berkeley's own nuclear reactor was interrupted by war-crazed soldiers who dragged the players away.

PG&E fears public takeovers

It's About Times has obtained a copy of a recent PG&E internal memo detailing the company's fears that public pressure will lead to municipally controlled electricity systems in California cities. We found the memo so interesting that we reprint it here without comment.

High utility bills are generating more than customer inquiries. With no end in sight for necessary increases, government take over of the utility industry is certain to become a major issue in California.

History has shown that people turn to government for relief when they perceive conditions as unacceptable. It is not unreasonable to suggest radical government action may be demanded by customers in the face of escalating utility costs.

Municipal utilities, through the Northern California Power Association, have banded together for the purpose of presenting a united front. One of their standard claims

"Protection of Company interests in these areas will become a significant problem as public interest in geothermal development escalates"

is "cheaper than PG&E". They also claim to generate considerable earnings to assist other city services. More recently they have moved into their own generating capability (geothermal) and are also moving toward recapture of our hydroelectric generating licenses. It is interesting to note that they are highly successful in laying most of their rate increases at our doorstep yet we are not too successful in passing this blame on to natural gas suppliers (Canada), fuel oil suppliers (OPEC) or general inflation...

Future significant rate increases may provide consumer initiative to move in the direction of a government take over.

A corollary to public interest in a government take over is the pressure in Sonoma, Lake and Mendocino Counties for locally controlled utilities. This local pressure has the same basis as the pressure for a State government take over, but is influenced by expansion of the Known Geothermal Resource Area (KGRA) and planned

geothermal development in and around these counties. Protection of Company interests in these areas will become a significant problem as public interest in geothermal development escalates.

There is a possibility the cities from Petaluma to Ukiah could build or acquire from PG&E a transmission line to provide power from the Geysers.

The draft proposal for the Mendocino County General Plan, in fact, specifically states energy self sufficiency as a County objective to be reached by the year 2000. Goals in the proposal include:

1. Identification of the use of power from large,

centralized utilities which rely on nonrenewable fuels by 1981. Eliminate such use by 1990, shifting demand to local utility districts based on renewable resources where feasible.

2. Export energy resources from the County only when a surplus exists.

3. The County should encourage by 1985, and require by the year 1990, the formation of local utility districts and on-site power production from wind in areas of average annual wind speed of 12 miles or more per hour.

Most of these goals will hopefully be eliminated from the final draft of the General Plan.

UC's miracle plutonium treatment

A new chemical developed at the Lawrence Berkeley Laboratory is being touted as a major breakthrough in the treatment of plutonium poisoning and the removal of plutonium from nuclear wastes. But Dr. John Gofman calls these claims "a standard public relations fraud operation."

The University of California announced on September 12 that the chemical, LICAM-C, can absorb from 70 to 90 percent of plutonium injected into laboratory mice and beagles. In a process known as chelation, the LICAM-C engulfs plutonium ions and allows them to be released through the kidneys. The LICAM-C researchers have found none of the toxic side effects that detract from the use of many other chelates.

Dr. Fred Weigl, the organic chemist who synthesized the chemical, told *It's About Times* that all the tests so far have been done with soluble plutonium. But the real hazard from plutonium comes when it is inhaled in fine particles that are insoluble. Dr. Gofman explains, "Soluble plutonium has nothing to do with the real-world problem. I can assure you that if you gave an injection of this stuff [LICAM-C] or fed the compound, it wouldn't do a damn thing to get insoluble plutonium oxides out of the lungs." Only in extremely limited cases, like a lab accident, would LICAM-C be useful.

Despite the extravagant promises implied in the media (the *Chronicle* headline read, "New Chemical Aid in A-Plant Mishaps"), Weigl was cautious in a phone interview with *IAT*. On the usefulness of

LICAM-C for the inhalation of plutonium he said, "We haven't carried out the experiments so it's pure conjecture."

Chemistry professor Kenneth Raymond, who initiated the LICAM-C research, has told the press, "We believe that future technology for treating and storing nuclear waste could be based on this new chemistry." But Weigl told us that "the whole question of low-level nuclear wastes was brought into this without any experimental data. . . . It's sort of a leap of faith."

Even if a successful LICAM-C separation method is found, of course, the plutonium will remain just as deadly and long lasting as ever. In fact, its more concentrated form will in some respects make matters worse. Nevertheless, Weigl plans to pursue the investigation of LICAM-C and nuclear waste. "That avenue is open to me," he said. "It's of much interest to the Department of Energy. And they're the ones that are funding this research."

Grants from the Department of Energy have totaled half a million dollars since the research was proposed five years ago. Dr. Gofman, a former associate director of the Lawrence Livermore Labs whose own research funds were suspended when his work began to show significant hazards from low-level radiation, commented, "The Department of Energy isn't interested in the truth. They're interested in buying science."

—Marcy Damovsky
IAT staff

Bombs Away!



Regents vote to continue lab ties

Despite protests, a three-hour public hearing and an impassioned speech by Governor Brown, the UC Regents voted 15 to 5 to open negotiations on the renewal of their contract to manage the Lawrence Livermore and Los Alamos nuclear weapons laboratories.

In his opening remarks at the September 19 meeting, UC President David Saxon responded to charges that the university provides "a cloak of academic legitimacy" to the labs by saying that it instead acts as an "academic shield which protects and preserves the independence of thought and judgment of those who work at the laboratories." Brown countered that the university is "an insulating mechanism allowing the labs to do what they want, free from control by the university, the President, Congress and the public."

When Brown asserted that "there is a moral vacuum in this university," Lt. Governor Mike Curb responded indignantly, "I wonder if denying the young people in this university system their only window into our nation's defense institutions is moral." But Curb gave up on his point when someone from the audience called out, "You're forgetting the draft!"

Many of the 250 spectators hissed and booed the speakers who supported the continuation of university management of the labs. The Regents were told by several speakers that they would be directly responsible if a nuclear war should occur.

The Regents may be forced to vote on the contract issue again, depending on the outcome of a threatened Labs Project suit charging five Regents with conflict of interest. And since Brown has just appointed four new Regents, the vote could be very close when the final contract decision is made next fall.

—Sue Bloch
UC Nuclear Weapons Labs
Conversion Project

Where has my little bomb gone?

If you've ever dropped a wrench while working in a tight spot under the hood, you can sympathize with an Air Force technician in Damascus, Arkansas who dropped one while working on a huge Titan II missile. Your wrench only clattered to the pavement, but he wasn't so lucky. The tool fell 70 feet, punched a hole in a fuel tank and ultimately caused an explosion that killed one crew member and injured 22 others. The September 19 accident demolished the silo and blew pieces of the missile high in the air and into the nearby woods. Among the pieces was a nine-megaton nuclear warhead, capable of producing a blast 750 times more powerful than the one that devastated Hiroshima in 1945.

Like the near-disaster at Three Mile Island, the Arkansas explosion brought front-page publicity to an accident similar to many others that had passed unnoticed. The Titan's frightened neighbors recognized the resemblance. "We're in the same boat now as those TMI people," said a local schoolteacher angrily.

The bland assurances of government officials were also strikingly familiar. But even the Air Force worried that damage to the bomb could release some of the extremely toxic plutonium it contained. The prospect of someone else finding the bomb wasn't too thrilling either. So roadblocks were set up and a search of the nearby woods began.

Air Force spokesmen steadfastly refused to "confirm or deny" that a nuclear warhead was involved. Meanwhile, members of the press corps kept hearing military conversations on their scanner radios to the general effect of "have you found it yet?"

The Air Force was equally close-mouthed about the progress of the search efforts, but apparently located the lost bomb after a few days of looking. If they *didn't* find it, they certainly made a good show of bringing in a crane and a special truck with two massive containers, which departed amidst a security convoy. At last word the warhead was going home to the Pantex plant in Texas, the final assembly facility for all US nuclear weapons.

Local residents, however, were not amused by the Air Force's exaggerated secrecy. Several discovered the nature of the accident by running into the wrong side of a roadblock when attempting to leave home on normal business. Many felt that the government's failure to warn them was inexcusable. "Hell yes, I'm mad," said Joe Greene. "They put those things in here and don't give us any protection or warning. It's a damned shame you can't feel safe in Damascus, Arkansas—a little bitty place nobody in the country heard of before yesterday."

Only a few days before the Arkansas accident, state officials in North Dakota had picked up an Air Force radio message about a B-52 bomber that had caught fire on the ground. The radio message mentioned "bro-

ken arrow," a code indicating that a nuclear warhead has been damaged.

The Stockholm International Peace Research Institute (SIPRI) has compiled a list of 32 major accidents in which nuclear weapons are believed to have been destroyed or seriously damaged. Only thirteen of them have been specifically identified by the Pentagon. According to SIPRI, adding estimates of "lesser" accidents (those involving nuclear weapons that may have been placed in danger of destruction or serious damage) brings the number to 125 between 1945 and 1976, or about one every two and a half months.

Some examples of major nuclear accidents

1. On January 23, 1961, a B-52 bomber flying over Goldsboro, North Carolina was forced to jettison a 24-megaton bomb. The bomb fell in a field without going off, but five of its six interlocking safety devices were set off by the fall. When Air Force experts rushed to the farm to examine the weapon, they found that a single switch had prevented an explosion which would have been 1800 times more powerful than the Hiroshima bomb.

2. On January 17, 1966 an American B-52 bomber collided in mid-air with a KC-135 refueling tanker near Palomares, Spain. The B-52 crashed, killing five crewmen and dropping four hydrogen bombs. One landed intact in a dry river bed and a second was retrieved from the ocean after an intensive three-month search. The other two bombs were severely damaged and scattered plutonium all over a populated area.

3. On March 11, 1958, a B-47 bomber accidentally dropped a nuclear weapon in the megaton range over Mars Bluff, South Carolina because of a malfunction in the plane's bomb-lock system. The conventional explosive "trigger" of the nuclear bomb detonated, leaving a crater 75 feet wide and 35 feet deep. One farmhouse was obliterated.

4. On January 21, 1968 a B-52 attempting an emergency landing at the Thule Air Force Base in Greenland crashed and burned on the ice of North Star Bay. The high-explosive components of all four nuclear weapons aboard detonated, producing a plutonium-contaminated area at least 300 to 400 feet wide and 2200 feet long.

—Bob Van Scoy and Marcy Darnovsky
IAT staff

Sources: *Nuclear Armaments, An Interview with Dr. Daniel Ellsberg*. This twelve-page tabloid is available from The Conservation Press, Box 201, 2526 Shattuck Avenue, Berkeley, CA 94704. First copy, \$.50; each additional copy, \$.10.

SIPRI Yearbook of World Armaments and Disarmament, 1968/69. Stockholm, 1969, Stockholm International Peace Research Institute.

East Bay reactor reopening contested

Earthquake probabilities were bandied about like blackjack odds during hearings conducted by the Advisory Committee on Reactor Safety (ACRS) on June 16 and 17. General Electric, operator of the Vallecitos Nuclear Center (VNC) near Sunol, California, offered a presentation designed to convince the ACRS that the odds of the earth rupturing beneath their 50-megawatt test reactor were on the order of one in a hundred thousand per year.

General Electric and a battery of consultants have been trying to get the small reactor turned

back on since the NRC shut it down in October of 1977 because of new evidence of earthquake threats. Friends of the Earth (FOE) has been involved as a legal intervenor in the relicensing process, attempting to shut down the facility permanently.

The Vallecitos site has been a GE proving ground for reactor design, plutonium fuel processing and radioactive isotope manufacturing since the mid-fifties. The reactor is now deactivated, but its sealed coolant system still contains about 2500 gallons of water contaminated with radioactive cobalt and cesium at levels 50 times the maximum permissible

concentrations listed in federal guidelines.

Other nuclear paraphernalia clutters the Vallecitos site. But the hearings in Sunol addressed only the seismic safety of the reactor itself and had nothing to do with the ability of the numerous laboratories and radioactive storage areas to withstand an earthquake. That subject is supposedly covered by another branch of the NRC which licenses VNC to handle up to 330 pounds of plutonium and 2205 pounds of uranium-235.

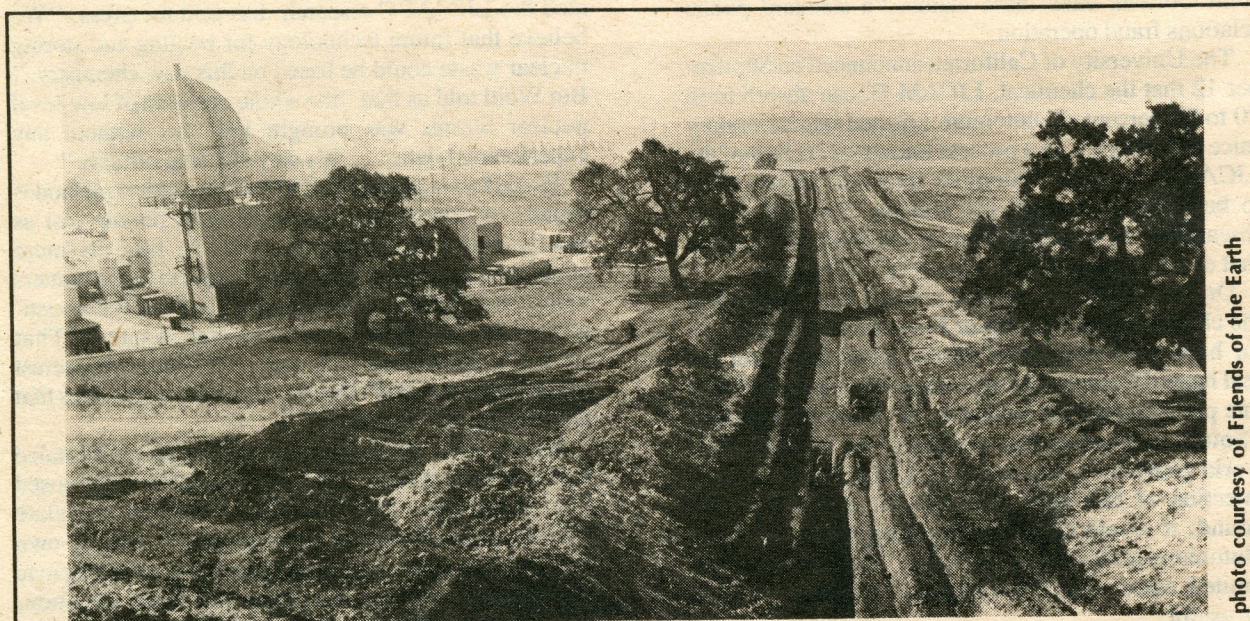
At the Sunol hearings, Darrell Herd of the US Geological Survey described the test reactor as being "set in a cluster of parallel faults." Three faults capable of quake magnitudes of 6.5 to 7.5 — the Verona, the Calaveras and the Los Positas — form a triangle around the VNC. Nearby reservoirs supply drinking water to hundreds of thousands of Bay Area residents.

General Electric's Robert Darmitzel, manager of the VNC, insisted in his opening presentation that "GE's assumption of a maximum 1.0-meter offset is more than safe." But the US Geological Survey states that ground movement beneath the reactor could be greater than 2.5 meters.

Glenn Barlow, a research consultant representing FOE at the hearings, reported that top seismologists "believe that this recent and sudden increase in the number and the magnitude of earthquakes in California is very similar to patterns that developed twice in the past, in the 1930's and in the 19th century, that led us to earthquakes of magnitudes between 7 and 8."

The decision on restarting GE's Vallecitos test reactor is currently under discussion in the NRC's Bethesda offices. GE has yet to submit an evaluation of the landslide hazards on site and further design changes for the reactor.

—Lee Purcell



General Electric dug these trenches near its Vallecitos nuclear reactor in an effort to prove that suspected earthquake faults were a safe distance from the facility. But the digging failed to resolve concerns about the reactor's seismic safety and the argument has moved to the legal arena.

photo courtesy of Friends of the Earth

Switzerland: Confusion follows narrow vote

Switzerland's four operating nuclear power plants produce one third of the country's electricity. Another plant is almost completed and the nuclear industry is asking for construction permits for two more. The plans and preparations for this familiar scenario were made in the '50's and '60's with government support and money. Today environmentalists are still fighting for public funding for research on alternative energy sources.

Despite a near meltdown at an experimental nuclear reactor at Lucens in 1969, opposition around the site of commercial plants grew slowly. As early as 1975 an occupation was staged at a reactor site at Kaiseraugst, along the Rhine River, after repeated legal interventions had failed. After a month the government agreed to hold hearings on the issue and the Kaiseraugst site is an empty field today, although the company that holds the rights for the site is again asking for construction permission.

After Kaiseraugst a small group of activists started to organize an annual march against nuclear power over Whitsunday Weekend where people who didn't yet want to take part in civil disobedience could come together. Out of these marches came a national coordination committee, Nationale Koordination (NK), for the growing movement.

Construction of the fourth nuclear power plant in Goesgen was finished in 1977. The local coalition against the plant asked for support to stop its operation and on two consecutive weekends in July groups of 4000 and then, 7000 tried to block the access routes where the fuel rods were to be brought in. Both times a National Police force armed with clubs and dogs dispersed the protesters with tear gas. Today Goesgen is operating, but the police brutality during the '77 event angered many people and is still remembered.

In February of 1979 a referendum which would



photo by Klaus Rozsa

Police break-up the 1977 occupation of the Gosgen nuclear plant.

have prevented further construction of nuclear power plants was defeated by less than one percent of the votes. The nuclear industry had spent over a million dollars on the campaign, going as far as to produce a pro-nuclear sticker which was almost identical to the international "Nuclear power, no thanks" symbol.

The movement sponsoring the referendum had little money but lots of creativity. We sponsored safe energy fairs, street theatres and movies and sent a troupe around the rural parts of Switzerland in a

trailer. We held silent marches and watches at imitation cooling towers which we set up in the cities. At our rallies we re-enacted an evacuation after a supposed accident. Everybody joined in the referendum effort, regardless of political beliefs. Most important was the support of the majority of the labor unions.

Nobody had expected to do so well on the vote, but its loss made many people very frustrated and disoriented about how to go on. Some simply dropped out of the active movement, disgusted with "politics" and feeling powerless. There were several acts of sabotage against the nuclear industry's (so-called) Information Pavillions on future plant sites and against cars of some of its high officials.

Many anti-nuke people organized in official political parties got together to launch a new initiative against nuclear power and a second one for safe energy. Among them were the Trotskyists, who are steadily gaining influence within the movement through the NK. The Trotskyists have gotten more and more votes among the delegates and are trying to impose their ideas on local groups through this decision-making body. Some grass-roots groups have left the NK because they feel more initiative should be left to local groups.

We have arrived at a crucial point in the Swiss anti-nuke movement. Within a few years it has grown from a very few people who were thought hopelessly crazy to a major force in the country backed by half the population. But we still lack an overall strategy which takes into consideration this new strength, which is nonviolent and which is diversified enough to include different levels of commitment and the different issues that have to be confronted. Hopefully, the Swiss anti-nuke movement will come together again, become still stronger and emerge as a movement for overall social change.

—Susanna Muehlethaler
Guyer Zeller Gut
8344 Neuthal, Switzerland

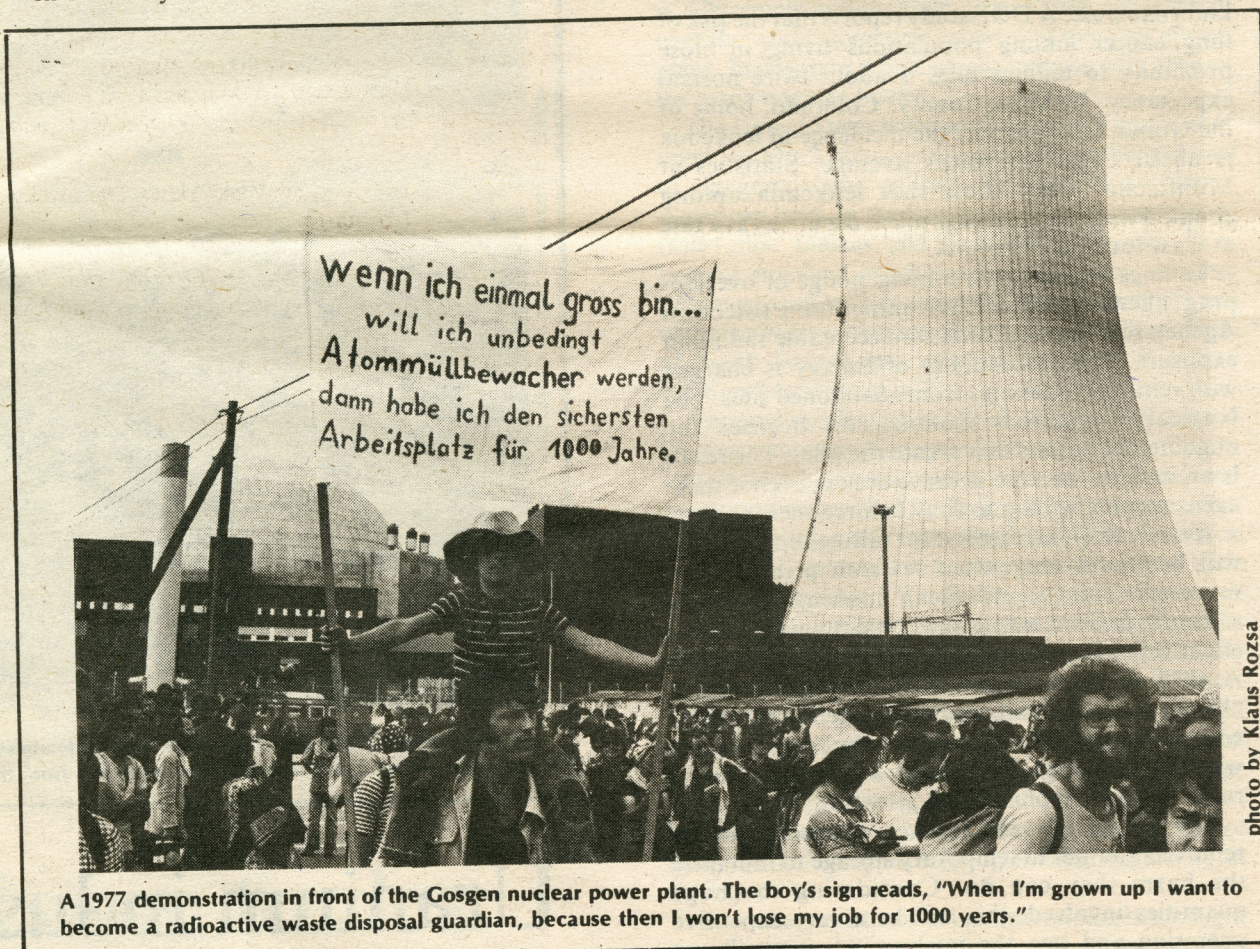


photo by Klaus Rozsa

A 1977 demonstration in front of the Gosgen nuclear power plant. The boy's sign reads, "When I'm grown up I want to become a radioactive waste disposal guardian, because then I won't lose my job for 1000 years."

Thai nuke plans resume

Proponents of nuclear power appear to be quietly planning to construct at least one nuclear plant in Thailand in the 1980's. On July 23 a small column in the Thai newspaper *Matichon* reported that a feasibility study on nuclear power will be completed in just three months. The announcement by Anuwat Watanapongsiri, the Minister of Science and Technology, was accompanied by an argument that Thailand needs to develop independence from oil suppliers and news that Thailand has recently developed the technological capability to produce nuclear fuel pellets.

Nuclear power in Thailand is ill suited to meet the needs of the majority of rural Thais. The financing of a single 600 megawatt reactor at today's prices could easily surpass one billion dollars, an amount which stands in stark contrast to what is being spent on Thailand's rural electrification program — \$110 million for a plan which will reach only about 10% of perhaps 40,000 unelectrified villages.

Nuclear energy was introduced in Thailand in 1962 with a small (1000 kilowatt) research reactor in Bangkok under the Atoms for Peace program. This was the first step in training the personnel required for more ambitious plans. By 1969 Thanom Kitikajorn, the dictator in power at the time, agreed in principle to the siting of a nuclear plant on the eastern coast of the Gulf of Thailand about 150 kilometers from Bangkok. The project gathered momentum until the government fell after the student uprising of 1973.

The more democratic elements which came into power showed considerably more hesitation about the program. Despite powerful opposition from the National Environment Board and the prime minister's Economic Advisory Committee, the Electricity Generating Authority of Thailand (EGAT) continued to formulate nuclear plans. In 1975 EGAT head Kasame Chatikavanij, who in Thailand is generally considered to be a Westing-

house man, said at an Asian conference on energy that Thailand would have a nuclear plant.

By August 1976 Thailand had made final payment for the reservation of uranium fuel and was talking to Westinghouse and General Electric about two 600 megawatt plants. But eventually the program was relegated to the back burner because of domestic opposition. The right-wing coup of October 6, 1976 which installed the hardline anti-communist Thanin Kraivixian authorized EGAT's plan in September 1977, but dropped it again amidst efforts to improve the government's image abroad.

Now comes news of a completely new feasibility study. One wonders what became of EGAT and all its elaborate plans. The study will undoubtedly draw heavily on the groundwork laid by EGAT and will likely repeat the tone of urgency about developing nuclear power to gain independence

[continued on page 10]

Tales of uranium mining

Mention the radioactive waste problem and images of leaking storage tanks or the slowly rusting underwater waste barrels near the Farallon Islands come to mind. But an equally serious hazard is created at the very source of the nuclear industry by the mining and milling of the uranium which fuels it.

Uranium occurs in nature with other radioactive elements such as thorium, radon and radium. Locked up in the natural structures of underground rock, these radioactive materials usually pose little threat. But when a mill crushes the rock and chemically treats it to extract uranium, the rock is turned into a fine, chemical-laden sand called "tailings" from which radioactive elements can easily escape into the environment.

The incredible volume of tailings waste makes the problem very serious. Over 50,000 tons of uranium ore are typically mined to fuel one large nuclear reactor for a single year. Presently there are more than 100 million tons of tailings wastes piled up at sites throughout the country. According to Cornell University physicist Dr.

Robert Pohl, the thorium-230 present in the tailings *already mined* may produce up to five million cancer deaths in future generations.

In July of 1979 an accident occurred which may prove much more serious in the long run than Three Mile Island. A tailings dam at a United Nuclear mill near Grants, New Mexico burst and released 100 million gallons of radioactive water and 1,100 tons of radioactive metal sludge into a tributary of the Colorado River called the Rio Puerco. Over 50 miles of the river are too contaminated for livestock and people to safely use for drinking water, but many have no alternative and continue to use the river anyway. The contamination may persist for generations.

Unlike TMI, this accident was virtually ignored by the established news media. We hope the articles here contribute to a better understanding of the dangers of uranium mining.

—Bob Van Scoy
IAT staff

They even eat asphalt New problems with tailings

What covers an area of 200 acres, is 80 feet high, 4000 feet long and over 2000 feet wide? What moves through barriers and eats up asphalt, plastic and other cover materials?

The Blob? No, a typical uranium tailings pile. Recent findings by government-financed researchers suggest that these gigantic mounds of pulverized rocks may be far more deadly, uncontrollable and difficult to safely dispose of than ever anticipated.

Professor Gergeley Markos and co-worker Kathy Bush, DOE-financed scientists from the South Dakota School of Mines and Technology, have discovered that "contrary to the common assumptions about tailings as inert materials, uranium mill tailings are highly reactive." Until now the NRC and DOE have assumed that tailings piles could simply be covered up with some yet-to-be-determined material and then periodically monitored (presumably for the thousands of years during which the tailings remain radioactive) for small, easily patched cracks. According to Laura Santos, research director for the NRC's Waste Management Project, "All solutions will require monitoring and at least the covers are cheap and easily repaired."

But Markos and Bush disagree. They say the NRC and DOE research priorities are backwards, emphasizing bandaid-type solutions like covers before basic questions about the behavior of the tailings piles have been answered. Markos and Bush explain that tailings piles release radon and other gases that can blow up plastic covers like balloons and explode them.

In addition to deadly radioactive elements such as radium, radon and thorium, the tailings piles also contain chemicals such as sulfuric acid that are used in the ore leaching process. The inevitable movement of corrosive chemicals to the surface of the piles can eat away asphalt covers and any other cover materials so far proposed. And Markos and Bush have observed that the salts in the tailings absorb water from the atmosphere or nearby water sources, producing puddles and quicksand boils on the pile surfaces.

At the DOE's test patch in Grand Junction, a six-inch-thick asphalt cover disintegrated in less than six months. The tremendous forces produced by the expansion and movement of the piles have cracked dikes and barriers. These little-understood effects may thwart any cheap and easy solution to the tailings disposal problem.

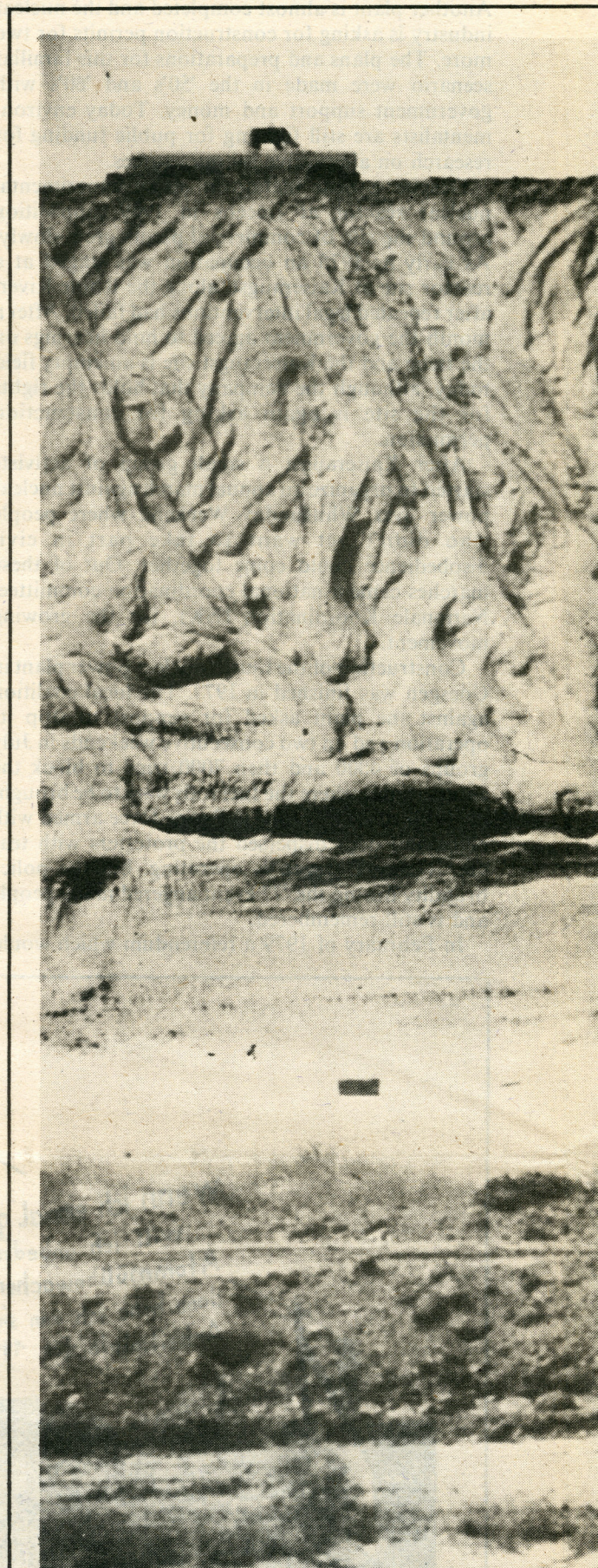
The new findings about the physical properties of the tailings exacerbate the health hazards they are known to pose. A DOE study reports that the risk of lung cancer among populations living in close proximity to tailings piles is about twice normal expectancy. In Mesa County, Colorado, home of the Grand Junction pile, the incidence of leukemia is about twice the state's average. Statistics at Monticello, Utah show that leukemia among people living near a tailings pile is occurring at a rate at least four times normal.

Tailings regulation is a hodgepodge of overlapping agencies. The Environmental Protection Agency sets the standards for acceptable radiation exposure. The Department of Energy is charged with removal of tailings from abandoned sites. The Nuclear Regulatory Commission licenses the ongoing operations that create the piles. The result is an inability to take decisive action, even if these agencies were willing to fully enforce their powers.

If a safe disposal method for tailings does exist, it will be found only when research priorities are reversed. This would mean looking for basic scientific understanding rather than a way to cost-effectively sweep the tailings piles "under the rug." A 1977 American Physical Society study asked, "Why have... mill tailings been treated so cavalierly when the magnitude of this problem is comparable with that... of high level waste, a problem which is receiving such sophisticated attention?"

The tailings piles in existence right now must be removed and put in temporary storage to minimize the harm they can do. Considering the huge quantities involved, this will be a very expensive operation and one the nuclear industry will not enthusiastically fund.

—Alan Ramo



A portion of a tailings pile at a United Nuclear Homestake mill in rainwater, which leaches radioactive materials from the tailings.

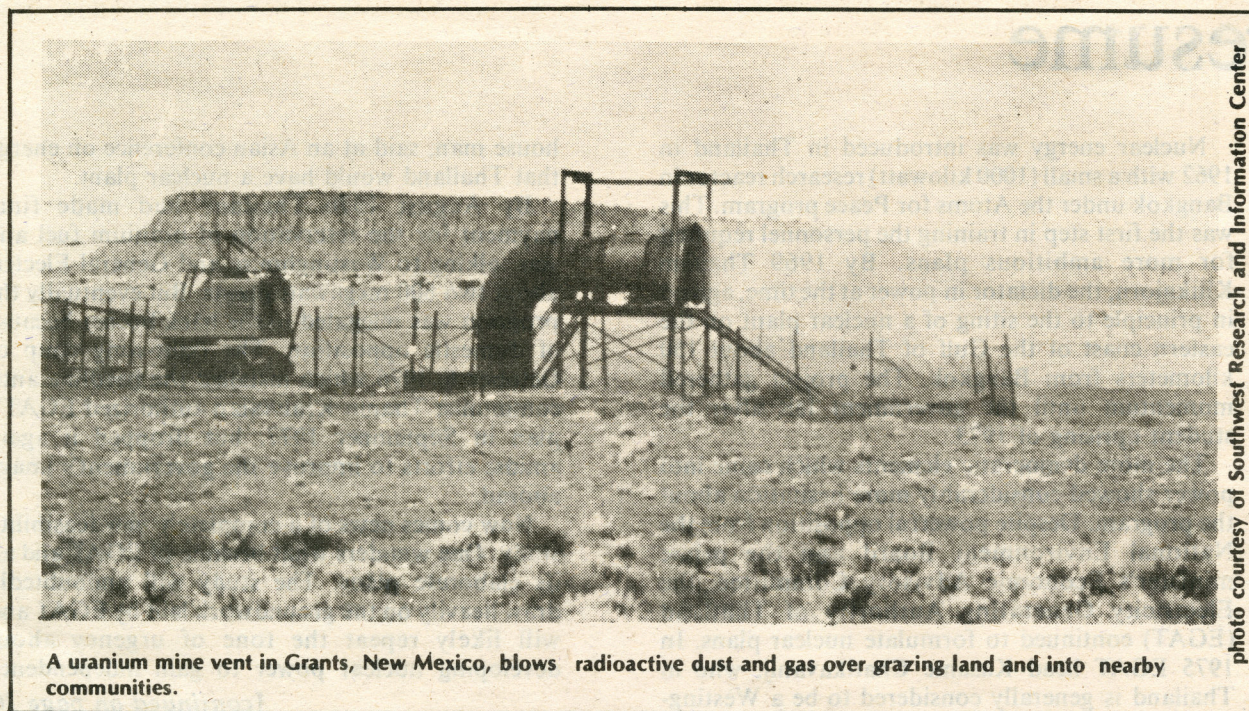
Uranium industry

Kerr-McGee closed two uranium mines in New Mexico recently and decided not to open its big Rio Puerco mine. The Anaconda Company announced that it would close the nation's largest uranium mine in February. And the opening of Gulf Oil's Mt. Taylor mine has been delayed until 1982 and may never occur.

Is this an anti-nuclear activist's wet dream or have the energy corporations seen the error of their ways? Neither is the case. The motivation for this unlikely series of events is the market itself, which gets out of the control of even the largest monopolies in the world. The current market price of uranium has plummeted from a high of \$53 per pound in 1977 to \$40 per pound last March and to about \$31 per pound now.

In the early 1970s the projected growth plans of the nuclear power industry were very ambitious. With visions of uranium as another source of huge energy profits, Exxon, Gulf, Mobil, Atlantic Richfield and Kerr-McGee descended on New Mexico, Colorado, Utah and Wyoming to develop the vast reserves. But things didn't work out as they had planned.

Slower-than-anticipated growth in electrical demand and the lack of the massive capital investment needed for nuclear plants slowed nuclear plans. Pressure from the anti-nuclear movement caused new and more cost-



A uranium mine vent in Grants, New Mexico, blows radioactive dust and gas over grazing land and into nearby communities.

photo courtesy of Southwest Research and Information Center

— where the waste begins

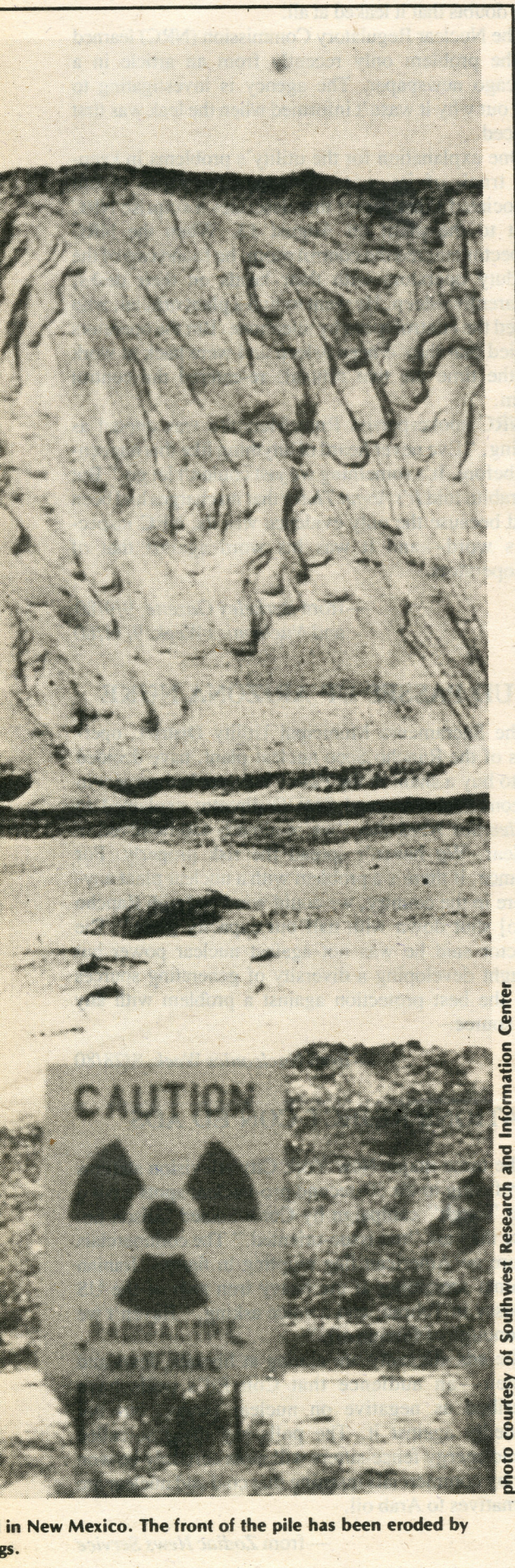


photo courtesy of Southwest Research and Information Center

in New Mexico. The front of the pile has been eroded by

y boom fizzles

ly safety requirements, making nuclear power a less profitable "alternative."

Since the nuclear power industry is the only significant non-military consumer of uranium, this slump is taking its toll on the mining interests. At a time when mines started in the early 70s should be reaping profits of planned investments, the slump has caught uranium producers expanding their supply for a shrinking market. To make matters worse, most utilities stockpiled uranium in the mid-70s and now have a two to three-year supply. Not surprisingly, the market price of uranium has dropped dramatically.

Adding to the uranium mining interests' plight is new concern in the state legislature over the health effects of uranium mining and milling in New Mexico, where there are more registered lobbyists for the uranium industry than state legislators. This concern has translated into a thirty percent increase in the industry's state taxes.

"In the past the uranium industry has been given a favored tax status because it has helped provide growth for the state," said Fred Muniz, New Mexico's tax secretary. "Today, however, we feel we deserve a fairer return from producers to take care of environmental problems we'll still be left with when the



photo courtesy of Nautilus Alliance

Undermining uranium

Where there's uranium mining, there's resistance to it. Grassroots anti-uranium groups have appeared all over the world, sometimes at the first rumor of mining plans. In this short article we can mention only a few of the many ongoing battles.

The United States is the world's leading producer of uranium. Much of it—and many of the millions of tons of dangerous mill tailings—is located on Native American land. In the Southwest growing numbers of reservation Indians and small-town Chicanos have become involved in anti-uranium activities. Another previously unlikely coalition of Indians, ranchers and urban activists is fighting plans to turn the Black Hills of South Dakota into what the government calls a "national sacrifice area."

Vermont residents discovered in early 1979 that the German company Urangesellschaft had begun uranium exploration in state forests and had bought mineral rights on private land in the south central part of the state. According to Vermonter Doug Smith, in March of that year "several towns spontaneously passed bans on uranium mining." The following year saw an intensive anti-uranium campaign, during which Urangesellschaft disappeared from the scene and Union Carbide took over lobbying efforts. At town meetings in March 1980 about 40 uranium bans were passed and by the end of April both the state House and Senate had agreed to bans of their own. "It wasn't hard to convince anyone," Doug Smith told *It's About Times*. When the state geologist put out a map showing 30 "hot spots" [uranium deposits] people started organizing on their own."

Australian resistance to uranium mining has brought tens of thousands into the streets in protest and has spawned a loose national organization, the Uranium Moratorium, to coordinate activities across the country. In 1978 the Australian Congress of Trade Unions decided that labor would not be made available for the opening or operation of new mines. The Waterside Workers in Melbourne slapped one of the famous

Australian "green bans" on all ships carrying uranium cargo. Only a few mines remain in operation. In the words of Joseph Camilleri in an April 1979 article in the *Bulletin of Atomic Scientists*, "The anti-uranium campaign in Australia is yet far from victory, but it has achieved significant success."

British Columbia recently passed a seven-year moratorium on uranium mining because of public pressure. The Confederation of Canadian Unions is working to make the ban permanent.

The world's largest uranium mine, at Rossing in Namibia (occupied South West Africa), is run by the UK-based Rio Tinto Zinc Corporation. It has come under attack from the British anti-apartheid movement. The South West Africa People's Organization (SWAPO) is debating whether to operate the mine after their anticipated victory.

Uranium is also mined in many parts of Europe and the European Economic Community has increased its uranium prospecting budget fourfold this year. Anti-uranium groups from Denmark, Scotland, Ireland, Finland, Italy, Spain, Sweden, Germany, Holland, Greenland and France met in July to share information and coordinate their activities. In August 7,000 people came to the third annual gathering of the Irish anti-nuclear movement at the proposed site of Ireland's first nuclear reactor. This year the focus was on uranium mining, Ireland's largest nuclear threat since the reactor plans were temporarily put aside by the government.

A good source of up-to-date international news on uranium mining is *Keep It In the Ground*, available from the World Information Service on Energy, 2e Weteringsplantsoen 9, 1017 ZD Amsterdam, The Netherlands. A one-year subscription is \$7.50.

For more information, contact the Coalition Against Uranium mining, 2611 McGee Avenue, Berkeley, CA 94703, or phone (415) 848-6302 or 234-5155.

—Marcy Darnovsky
IAT staff

uranium has run out in 40 years and the mining companies have packed up and left."

Uranium producers are responding to their dilemma in several ways. They are lobbying Congress to continue uranium import restrictions that are presently being phased out—while they go after export markets, especially in Japan, South Korea, Taiwan and the Philippines. They are closing mines and cutting back production in an attempt to both minimize losses and restrict supply until prices rise sufficiently to make mining profitable again. In the meantime many uranium producers are filling current contracts by buying uranium on the spot market for less than their own costs of producing it.

—Steve Stallone
IAT staff

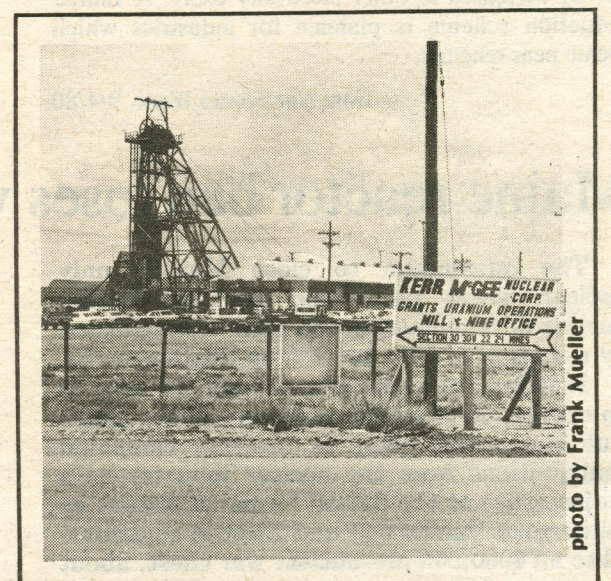


photo by Frank Mueller

Short Circuits

FIRMS QUITTING NUCLEAR?

Finding parts for present and future nuclear plants may become harder as manufacturers get out of the business, according to a report in the industry newsletter *Nucleonics Week*. The newsletter was told by a source in the Valve Manufacturers' Association that "companies are leaving nuclear . . . the demand is 'flat city' from here on out. The industry is moribund."

A General Electric spokesman was quoted as saying, "We're going to lose the little guys. I bet we buy supplies from 30 states . . . DOE [the US Department of Energy] thinks that big companies like GE and Westinghouse are so strong that, one day, the government can say 'give me six plants' and we can go out and do it [alone]. We can't . . . I'm afraid that next time there's a push for nuclear—and mark my words, there'll be one—there's not going to be anyone to bid on the vendor list [for the needed parts]."

—from *Nucleonics Week*, 8/28/80

NUKE PLANT OPERATORS SCARCE

Stephen Hanauer, the Nuclear Regulatory Commission's director of Human Factors Safety, says that the nation's utilities face a shortage of licensed nuclear power plant operators. The shortage, due mostly to higher training standards resulting from the Three Mile Island accident, has forced at least one utility to begin twelve-hour operator shifts.

Hanauer noted that many operators like the increased pay, but that the NRC doesn't want the operators working that long at a stretch. He acknowledged that the NRC could restrict the hours, but said "an operator can't just walk away from the plant" when these hours are up if there is no one there to take over. If a utility or the NRC becomes "too rigid" about the rules, Hanauer said, the only alternative may be to shut down the plant—an alternative apparently unthinkable to the NRC.

—from *Nucleonics Week*, 8/21/80



Bay Area parks were the site of a series of rally extravaganzas sponsored by the Reagan for Shah Committee. Such groups as Science in the Corporate Interest, the Peace Resisters League, Mutants for a Radioactive Environment, and the Association for the Advancement of Rich People also showed up.

THE EMPIRE STRIKES BACK

The US Department of Defense reportedly is planning a huge laser-beam weapon in space by 1983. According to *Inquiry* magazine, the project is code-named "Talon Gold" and is "a scaled-down version of Darth Vader's death star." Talon Gold would involve placing a multi-megawatt laser into stationary orbit 23,000 miles above the earth that could be used to destroy enemy satellites and ICBM's.

Another laser weapon said to be in the planning stage is an orbiting array of mirrors that would be used to reflect a laser beam fired from the ground. The cost of this project, according to *Inquiry*, is estimated at \$105 billion, five times that of the Apollo moon-landing project. The Pentagon is also said to be considering setting up a whole new branch of the Armed Services—a "space force"—to handle combat operations in outer space.

—from *Zodiac News Service*

NO CHARGE FOR THE MELTDOWN

The Japanese government plans to cut electricity prices for consumers living near nuclear power plants in response to complaints that plant neighbors get no compensation for tolerating the hazards of nukes in their backyards. Two government agencies are planning to reduce electric rates for two million people living in 75 villages and towns. The reductions, averaging \$1.81 monthly per household, will be paid for by increases to other electricity users. A similar reduction scheme is planned for industries which locate near reactors.

—from *Nucleonics Week*, 9/4/80

Maine reactor ban loses vote

The referendum to close Maine's only nuclear power plant and prohibit further nuclear development in the state was defeated by a margin of 59% to 41% on September 23.

Referendum opponents claimed the vote as an expression of public confidence in the plant. But supporters point to massive campaign contributions from the nuclear industry as a major cause of the defeat. Firms as distant as California's Pacific Gas and Electric contributed to an \$800,000 pro-nuclear war chest, about

CIVIL DEFENSE PLANS BOMB

The *Washington Post* reports that civil defense plans are being drawn up for use in a nuclear attack on US cities. But if Washington, D.C. is any example, we're in a lot of trouble.

According to *The Post*, the "crisis relocation plan" for the nation's capital calls for some 80,000 residents to travel 188 miles and descend on the resort spa of Hot Springs, Virginia. Evacuees reportedly would be issued instructions telling them to pack their cars with food, tools, medical items, and such documents as social security cards, insurance policies . . . and yes, their wills. Those who can't drive would be bused by willing volunteers, goes the plan.

There are a few problems admittedly not worked out. Ken McNaughton, the city's nuclear civil protection officer, says that his office would need at least a three-day notice prior to a nuclear attack in order to successfully put the evacuation plan into effect. How will they know when a nuclear attack is imminent? Says one official: "We've just got to watch the headlines."

Meanwhile, the effectiveness of underground bomb shelters has also been questioned. Doctors from fourteen countries meeting in Geneva say that bombs no larger than one megaton would turn shelters six miles away into ovens which would cook and asphyxiate their occupants. In a signed statement, the doctors add that even shelters farther away provide only temporary protection. They point out that the survivors would eventually be forced to emerge into a "living nightmare," a world of contaminated food and water and unburied corpses.

—from *Zodiac News Service*

five times the amount measure supporters were able to raise.

Anti-nuclear spokespeople reportedly feel that the referendum effort, although unsuccessful, has strengthened their organizations and established ties for the future. Another attempt to close the plant will undoubtedly be forthcoming.

—from *SF Chronicle*, 9/24/80

I'M AWAKE!

Instruments at the Dresden nuclear power plant in Illinois show that the facility's three reactors have lost between 300,000 and 400,000 gallons of radioactive cooling water since mid-July of this year. But the plant's operator, Commonwealth Edison, doesn't know where the contaminated water went and is expressing doubts that it leaked at all.

The Nuclear Regulatory Commission (NRC) learned of the problem only recently from an article in a Chicago newspaper. The agency is investigating to find out why it wasn't informed when the leak was first noticed.

One explanation for the utility's problems in keeping track of its water is suggested by a recent Associated Press report that describes a surprise NRC visit to the plant on August 13. When the NRC inspector entered the control room, he found two of the on-duty operators with their heads on their desks, apparently asleep. He went to find a plant official, who called the control room by telephone. But the operators denied that they'd been asleep and were back at work by the time the two officials re-entered the control room.

NRC spokesperson Russ Marabito was quoted as saying, "I've never heard of anything like this happening before. It's something we just couldn't let go." But Marabito told *It's About Times* that no charges had been filed because the only evidence was the NRC inspector's word—and it was his word against that of the operators.

—from *Berkeley Gazette*, 9/9/80
and *Nucleonics Week*, 9/11/80

SMUD PASSES UP ARIZONA NUKE

The Sacramento Municipal Utility District, operators of the Rancho Seco nuclear plant, have decided not to buy a share in the Palo Verde nuclear project in Arizona. An unnamed SMUD director explained to *Nucleonics Week* that "we're already too involved in nuclear. We haven't spread the risk properly. For instance, if there's a problem with a nuclear plant anywhere in the country, we could wind up [with Rancho Seco] shut down with half our capacity gone." The director said he was not against nuclear power but thought developing a diversity of generating sources was the best protection against a problem with any one source.

—from *Nucleonics Week*, 8/28/80

STATIONS REJECT CON ED ADS

The three major New York City television stations are refusing to air 30-second pro-nuclear spots from a "Get Tough" campaign by Consolidated Edison because they are "too issue-oriented." The commercials picture an American flag erupting in flames, Iranian students screaming at the heavy iron gate of the US embassy in Tehran, and a voice asking, "Haven't we had enough of foreign oil?"

The ads allegedly are aiming at liberals, Jews and women—an audience that Con Ed's polls have described as negative on nuclear power, but not decidedly against it. The polls say these so-called atomic energy fence-sitters will most certainly be won over by commercials insisting that coal and nuclear are alternatives to Arab oil.

—from *Zodiac News Service*

TMI BLOCKADE PLANNED

Residents of south central Pennsylvania say they will blockade at Three Mile Island if the Nuclear Regulatory Commission gives the go-ahead for restarting TMI's undamaged Unit One reactor. The NRC will make its decision at hearings to be held sometime in October.

Members of the March 28th Coalition are already organizing transportation, housing and training sessions in non-violent direct action. According to an official statement by the Coalition, "We will not tolerate the same mistake being made twice."

TROJAN OPERATORS SUE BECHTEL

The operator of the Trojan nuclear plant, Portland General Electric, has filed a multi-million dollar lawsuit against the Bechtel Corporation over design flaws that required the shutdown of the plant for at least four months.

Bechtel designed Trojan and supervised its construction, including the installation of 274 masonry walls. Last year, the NRC cited Trojan as being unsafe and unable to withstand earthquakes because 20 of the plant's walls weren't strong enough to meet federal standards. Portland General Electric is seeking \$35 million from Bechtel for power costs incurred while Trojan was shut down and \$7.5 million for the costs of repairs.

—from *Zodiac News Service*

Techno Threats

Technologies were never neutral. Today they are weapons.

The fossil fuel/nuclear economy supports the imposition of increasingly centralized and alien social architectures. It forms a colossal excuse for the transfer of public moneys into the coffers of the transnationals, terrorizes the population, and justifies the increased militarization of life.

Automation is a weapon. It attacks the last shreds of shopfloor control over production, and concentrates that control in the cybernetically boosted hands of the managers. The mass-media are weapons. They frame world events in a tidy, unthreatening little package, colonize our minds with advertising jingles, and leave us isolated and passive before our home entertainment systems.

Most of this is not new. Ever since the rise of industrial production hundreds of years ago science and technology have been the handmaidens of the capitalist system. They played a key role in the shaping of society into a form convenient for the ascendant corporations. They defined the parameters of one of the most violent areas in the conflict between the supporters and the opponents of the new system — the factory.

Today's battles for the socialization of technology and for the definition of new models of economic development are not entirely without historical roots. Workplace struggles over automation have a long and clearly discernible history. The roots of the environmental movement, however, are a good deal more diffuse, and originate largely outside the context of struggles over the control and transformation of the workplace.

Today the environmental movement has grown beyond the self-conceptions of its past. The ecological crisis is obviously one with the social crisis which produces it. Likewise, each struggle seems embedded in a larger struggle. The fight against nukes is key to the fight for safe, socialized technologies. The fight for safe technology is in turn key to the fight for the control of production. And the fight for the control of production cannot be won without winning the larger fight for the control of society.

The labor movement and the ecology movement may be "natural allies" in the larger struggle, for they have significant and **immediate** common interests: the fight for OSHA is a fight for a cleaner environment. The fight against automation and the rationalization of the work process is a fight against the imposition of technologies of centralization and domination, as is the fight against nuclear power. The fight for safe energy development dovetails with workplace demands for socially useful production.

But the mere presence of strong overlapping interests does not ensure harmonious cooperation between the labor movement and the environmental movement, for they have very different histories. Today, when strengthening of the bonds between labor and the ecology movement is so crucial, it may be a significant problem that so few environmentalists know much about labor history.

The working class has always fought the imposition of new technologies designed to reduce the power and skill of the individual worker. The Luddite movement, hundreds of years ago, opposed the technological rationalization of textile production with the "direct action" of smashing the new mass-production oriented equipment. Since then direct action in the workplace has continuously been used to oppose "technological progress" designed to get more work out of the same worker-hour.

These battles, especially when they move outside the legalistic framework, have often been opposed by the unions. Indeed the unions have largely evolved from organs of workers' struggle into organizations adapted to contain it and to bargain with management over labor's share of what is now a shrinking pie. It is truly horrible how few of those who talk of "forming links with labor" are even aware of this dark side of labor history.

Today, the economy is shaky and will probably get worse in the next five years even without the international turmoil certain to come. Profits will be endangered and the ruling elites will get more repressive. We can expect labor to become more combative as working conditions and pay rates are attacked to bolster profits. Environmentalists, too, will increasingly be looking outside an unresponsive legalistic framework. In all this the environmental movement will have to become increasingly an oppositional movement, and not merely a confluence of counter-planners.

—Tom Athanasiou

Is Idaho Wasting Away?

The Idaho National Engineering Laboratory (INEL) covers 839 square miles of high desert in southeastern Idaho.

Fifty-four nuclear reactors have been built on the site, of which 35 are still operating. INEL now carries on research on breeder reactors, conventional reactor safety, nuclear waste management and other nuclear problems. There is also a nuclear fuel reprocessing plant on the site.

Weekday mornings find 5,000 of the 9,500 INEL employees boarding buses which transport them to INEL from their homes in Idaho Falls. INEL and the buses are operated by the Department of Energy. Four contractors manage the facility. Edgerton, Germeshausen and Grier is responsible for research and oversight of the facility, Exxon Nuclear Idaho Co. Inc. operates the fuel reprocessing plant, and Argonne National Laboratory and Westinghouse Electric Corp. do additional research. The 1979 budget for INEL was 388.7 million.

INEL receives much of the radioactive wastes from the nation's nuclear submarines and federal and foreign research reactors. Nearly all of the wastes produced at the Rocky Flats Nuclear Weapons Facility in Colorado are shipped for storage at INEL. The disposal of these wastes has been a recurring concern of Idaho government officials and the Idaho public for the last 14 years.

Wastes Mix With Drinking Water

Of greatest concern is Exxon's practice of discharging liquid wastes, including strontium-90, cesium, cobalt-60, tritium and plutonium, into a deep injection well. The well feeds the wastes into the Snake Plain aquifer, which is one of the largest underground bodies of water in the world. Wastes totalling approximately 69 billion gallons have been discharged into the aquifer since 1953. The aquifer supplies water to many Idaho residents and to 3 million acres of farmland.

Employees at INEL use water pumped from on-site wells, which have been radioactively contaminated. Assuming a normal intake of water, an employee's exposure would be approximately 4 millirems per year.

The Atomic Energy Commission, predecessor to the DOE, has always maintained that the discharges pose no present hazard to the public. State officials and the Idaho public have periodically questioned the AEC position. Three state

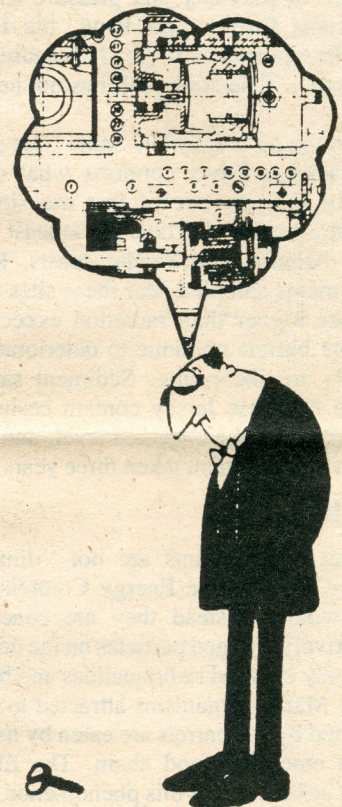
task forces have been established to investigate the waste disposal practices at INEL.

The first task force recommended in 1969 that a committee be set up to maintain a continuing check on the facility. The second task force, in 1974, concluded that the INEL was not a suitable site for long term waste storage. The AEC then said it would have all of the wastes removed from INEL by 1980. The DOE is now estimating the late 1980's as the earliest possible date for removal of the wastes to a permanent burial site.

Many Idaho citizens have shown concern over INEL's activities. A local fish farmer prompted creation of the first task force. Since then many people have become active in efforts to obtain accurate information about INEL practices. There are four citizens' groups that have formed around the issue—the Snake River Alliance in Boise, the Groundwater Alliance in Ketchum/Sun Valley, Idahoans for Safe Energy in Moscow, and Nuclear Counterbalance in Pocatello. These groups have organized letter-writing campaigns, made statements at public hearings and taken the issues into their communities.

If you would like more information, write to the Groundwater Alliance, P.O. Box 1795, Sun Valley, Idaho 83353.

—Liz Paul
General Delivery
Ketchum, Idaho 83340



Review

Poisoned Power

POISONED POWER. By John Gofman, Ph.D., M.D. and Arthur Tamplin, Ph.D. Rodale Press, 1979, \$9.95

This is a curious book. Originally published in 1971 when the authors were still employed at the Lawrence Livermore Laboratory, it combines a sound presentation of the hazards of nuclear power with the naivete of two experienced scientists just beginning to discover American political reality. Other than a new, post-TMI forward the book remains essentially unchanged from the version of nine years ago.

The authors' credentials are impeccable, which makes the book especially useful in convincing people who put their faith in "experts." Gofman, for example, is Professor Emeritus of Medical Physics at UC Berkeley. In keeping with their scientific backgrounds Gofman and Tamplin provide careful and lucid explanations of nuclear technologies, how they release radioactive materials and how people are exposed to and injured by these releases. They take special care to refute the myth of a "safe" level of radiation, explaining that naturally occurring "background" radiation levels already exact a toll in cancer, birth defects and other diseases. They provide a commendably thorough review of radiation "standards" and the false premises on which they are based, arguing that exposing everyone in the U.S. to the "allowable" radiation levels would cause an extra 32,000 deaths per year from cancer alone. The book also presents good overviews of nuclear reactor accident hazards, waste disposal risks and alternatives to nuclear power. The latter chapter has gained a section on energy efficiency (conservation) which points out that the "need" for nuclear power could be eliminated simply by reducing energy waste, resulting in lower energy costs and a *higher* standard of living.

But the last third of the book, which deals with public participation in issues such as nuclear power, becomes strangely inconsistent. The authors alternate between justified outrage at those who promote nuclear power with awareness of its dangers, and comments like, "Physicists, engineers, and utility executives could have been made aware of the true hazard of ionizing radiation. The rash proliferation of the nuclear electricity industry would surely not have occurred in the manner that it has."

Such charitable views ignore the reality that those very utility executives insisted upon the passage of the Price-Anderson Act before starting nuclear construction. And once the Act was passed, the utilities made little effort to inform the public that nuclear power was uninsurable or that the *victims* would pay the costs of a major nuclear plant accident. From the very beginning utilities spewed out "clean, cheap and safe" advertising designed to mislead the public about radiation—something they do to this day. In this context statements about electric utilities being "misled" are simply embarrassing, especially given the additional experience of the last nine years.

The book's main gap is the absence of a discussion of the hazards of nuclear weapons production, which are at least comparable to those of nuclear power. It is understandable that when Gofman and Tamplin still worked at the Livermore nuclear weapons laboratory they might seek to avoid such a sensitive subject. But it surely deserves a few extra pages in the updated edition.

I must make some comment on the book's price. The original edition of *Poisoned Power* sold for \$1. We live in inflationary times, but \$10 for a 350-page paperback is a bit much even by 1980 standards. This book is worth reading, but I suggest getting it from your public library, not a bookstore.

—Bob Van Scoy



Anti-nuclear speakers practice their technique on loaned video equipment at the Abalone Alliance skills sharing conference held in Ojai in mid-September.

photo by Mark Evanoff

Farallon fish fry

(continued from page 1)

over to the State Department of Health Services had been completed by private firms at least two years ago. Until the glare of publicity and pressure from California politicians forced their hand, the EPA had claimed that the reports weren't ready because of a lack of EPA personnel. One study still has not been made public.

A review of the reports by UC Santa Cruz professor of biology Jackson Davis confirms what critics of dumping have feared—except that the situation is worse than they expected. There are at least 50 dump sites off the Atlantic and Pacific coasts. Radiation levels in sediments sampled near these sites are thousands of times higher than radiation expected from fallout. As the barrels continue to deteriorate, radioactivity levels are increasing. Sediment samples in one dumpsite off New Jersey contain cesium levels 260,000 times above the expected level, and 70 times greater than a measurement taken three years earlier.

The food chain

The leaking contaminants are not "diluting and dispersing" as the Atomic Energy Commission had hoped they would. Instead they are concentrating because negatively charged particles on the ocean floor attract positively charged radionuclides and bind them to sediments. Marine organisms attracted to the environment created by the barrels are eaten by fish, so the radionuclides enter the food chain. The EPA summaries do not acknowledge this phenomenon.

Some commercial fish have been found to be severely contaminated. The Radiological Division of the California State Health Department tested fish caught off the Farallones and purchased in Bay Area markets. They measured significant quantities of cesium-137 and relatively high levels of beta and gamma radiation from an "undetermined isotope." Beta levels in excess of 2500 pCi/kg (net weight) were detected in butter fish, sable fish, red snapper, sea bass, rock cod, oysters, clams, mussels and others.

Depending on the source of the beta radiation, eating these contaminated fish could be harmful. But the EPA still refuses to release a report that contains information about the types of wastes and radioactive isotopes that were dumped. Davis and San Francisco Supervisor Quentin Kopp have sued for these documents under the Freedom of Information Act.

A second missing report describes the rate of deterioration of a barrel taken from a dump site in the Atlantic. Another, which describes how barrels are selected for testing, was released with two sentences missing. Davis obtained the omitted information from the report's author: "Many of the containers observed... were in worse condition than the one recovered. This particular drum was selected for recovery because it appeared to be in good enough condition to survive the trip to the surface."

One of the EPA summaries makes light of the giant sponges that have been found growing on leaking barrels in the Farallones dump site. According to the summary, "the report confirms that this sponge, a new species, is indeed a typical hexactinellid which is growing to a normal hexactinellid sponge size. It is not an aberrant organism."

But Davis found that "the word 'size' appears nowhere in the report. Neither does the document state or imply that the sponge 'is not an aberrant organism.'"

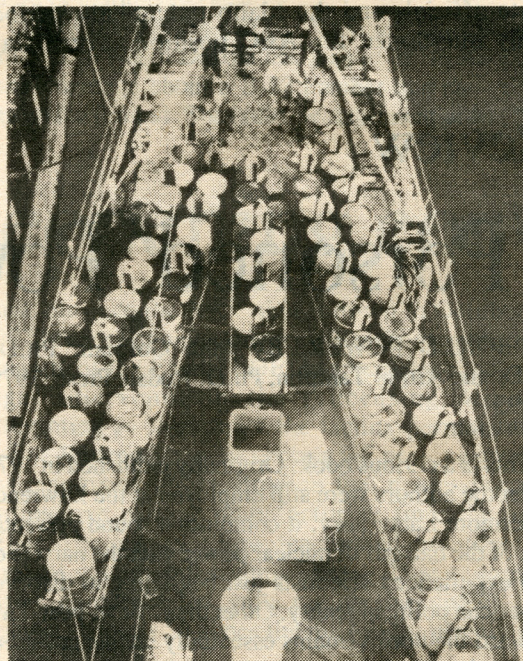
Future dumping planned

The EPA studies were never meant to evaluate the

environmental and human effects of dumping. A 1977 study, for example, was considered "a first step in developing effective controls on any ocean dumping of low-level radioactive wastes, in order to assess the effectiveness of past packing techniques" as lessons for the future.

Three styles of dumping are being planned. One program spearheaded by the EPA is developing guidelines for more of the same type of dumping that's now causing problems. Another is aimed at disposing radioactive wastes in deeper areas of the ocean. The barrels would be too deep to be retrievable—though it is unlikely they would survive the huge ocean pressures anyway.

The Palmyra Project is a joint program of several Pacific Rim nations that are considering dumping high-level radioactive wastes on various mid-Pacific islands. These wastes would be stored above ground in temporary concrete and steel tanks similar to the ones that leak at Hanford, Washington.



Barrels of radioactive waste on their way to be dumped offshore from Santa Monica in 1960.

More controversy coming

In the feud that has surrounded the ocean dumps, scientists from the Lawrence Livermore Laboratory have sided with the EPA even though they have admitted to not having read the actual reports. They maintain that "from a radiological standpoint, it would be inconsequential whether the drums leak or not" and insist that the entire controversy is "trivial."

But more and more people are worried about the dumping. The California Department of Health Services has hired the Scripps Institute of Oceanography to conduct further studies. Governor Brown has requested an expanded fish monitoring program and Congress will begin its own investigation on October 6. Affected counties have banded together to pressure the EPA to release the rest of its documents.

—Mark Evanoff
IAT staff

Source: Jackson Davis, *Radioactive Dumpsites in US Coastal Waters*, September 15, 1980.

PG&E

(continued from page 1)

core belief that nuclear is a necessary part of the energy mix... OPEC continues to be an effective pro-nuclear buzz word. In the McLuhan mold, we should stress Diablo as an alternative to OPEC. We can borrow from our successful "turn back the tankers" ads for energy conservation."

Emergency planning will also be a hot topic on the company's PR agenda. "It is interesting to note," the memo states, "that a 'negative' such as emergency planning is perceived by the public as a 'positive'. We should talk more about our emergency planning and continue to maintain control of the issue by selective use of briefings, releases, pertinent mailing pieces and ads."

According to the survey, 20% of the population firmly opposes the plant and another 20% firmly supports it. "The remaining population is 'softer' in their stance about the Diablo Canyon plant. Their sentiments suggest that, in time, if there are no negative incidents (e.g. explosion, radiation leakage), general support for the plant will grow."

Schwartz notes that plant opponents are younger, more liberal and more educated than supporters. The analysis concludes that "plant opponents are more firm in their anti-nuclear position than are plant supporters in their pro-nuclear position. This means that communications are needed to reinforce supporters' views and make them less susceptible to opponents' arguments about delaying the testing phase or the plant opening, or about reopening earthquake hearings."

The final paragraph of the memo is particularly curious. "As the plant nears the test phase, company officials must consider the potential for planned protest activities in the community. Opponents have indicated the likelihood of their participating in *peaceful* demonstrations, rallies and picket lines. *However*, because the community as a whole disapproves of most forms of protest actions, *excepting peaceful demonstrations*, PG&E's *careful handling of protest incidents* can serve to increase their base of support in San Luis Obispo County." (Italics ours.)

Is this just a badly written suggestion that PG&E deal gently with protestors? Or does it simply imply that PG&E might create or exploit violent incidents in order to swing public opinion over to the company's side?

—Bob Van Scoy
IAT staff

San Onofre

(continued from page 1)

temporary workers for San Onofre jobs. "We feel it is better to minimize exposure to large groups of people than to maximize the exposure to small groups," he said.

In fact, it is a widespread practice in the nuclear industry to hire large numbers of temporary workers—known as "sponges"—for radiation exposure. Atlantic Nuclear Services, which is running the ads in the *San Diego Union*, specializes in providing these workers to utilities throughout the country.

In the past permanent medical records on temporary workers did not exist. According to Bob Pait, Nuclear Regulatory Commission inspector at San Onofre, a new policy requires that records be kept. But Linda Newsum of the Community Energy Action Network in San Diego points out that the records will remain at each plant and that there will be no way to prevent an individual worker from receiving more than the maximum dose by taking jobs at multiple nuclear facilities.

Southern California Edison's leaky-steam-generator problem is shared by 21 other US reactors, all but four of Westinghouse design. (See *It's About Times*, mid-June to July, 1980.) Southern California Edison has decided that installing sleeves is less expensive than running their reactor at reduced power or replacing its three generators. The availability of hundreds of unemployed workers may sway other utilities to opt for the same "sponges" solution.

—Ward Young
IAT staff

Thailand

(continued from page 5)

from oil suppliers and to realize its alleged economic benefits.

Reliable sources indicate that there is still opposition to nuclear power in Thailand, even within military circles. But for this opposition to mature, greater information flow on particular issues will be required. The support of anti-nuclear groups in this country can be helpful in supplying information and in continuing actions to block the export of reactors.

—Alan George

Announcements

BLOCKADE AND BEYOND

What will become of the Abalone Alliance after the Diablo blockade? Where do we go if we stop Diablo? What should we do if we don't?

Are we setting ourselves up for defeat by believing that we can keep Diablo from coming on line? If the plant is licensed, how will we keep the Alliance together after a heartbreaking defeat? Or is it even appropriate to discuss a failed blockade?

Should we strategize now for shutting Diablo down if it goes on line? Should we be planning a statewide campaign to decommission Humboldt and stop the two new reactors at San Onofre?

Next month *Its About Times* will feature a discussion on the Diablo blockade and beyond. Your input is invited. Please limit your statement to 500 words, and make them typed and double spaced. Send articles to 944 Market Street, Room 307, San Francisco, 94102 by October 15. Be sure to keep a copy for yourself.

GOOD READING

Anti-nukers will find recent issues of Murray Bookchin's *Comment: New Perspectives in Libertarian Thought* of particular interest. "The Future of the Anti-Nuke Movement" and "An Open Letter to the Ecology Movement" can be had by sending a self-addressed, business-size envelope with \$.28 postage to P.O. Box 158, Burlington, VT 05402. Other recent titles, also provocative reading, include "Anarchism: Past and Present" and "The American Crisis." Subscription price, \$5.00 for seven issues.

RESOURCE CENTER FOR NONVIOLENCE WORKSHOPS

1. Study group on Martin Luther King, Jr., Nonviolence and Social Change. Discussions will be based on readings from and about Martin Luther King, Jr. Facilitator, Scott Kennedy. Wednesdays in October, 7:30 to 9:00 p.m. Pre-registration requested; suggested donation \$10.

2. Workshop on the Draft. This is a two-day workshop encompassing the new registration program, a history of the draft and resistance to it. It will be geared both toward draft-eligible people and those interested in draft counseling. Friday, October 17, 7:30 p.m. through Saturday, October 18. Pre-registration is a must; suggested donation \$5 to \$15.

3. Making Peace: Social Change Skills. Dan Hirsch, a peace activist in Los Angeles, will lead workshop participants in the aspects of lobbying for peace, research, media work and talking with people who do not agree with us. Friday, October 24, 7:30 p.m. through Saturday, October 25. Pre-registration requested; suggested donation \$10 to \$20.

For more information, contact the Resource Center for Nonviolence, P.O. Box 2324, Santa Cruz, CA 95063 or call (408) 423-1626.

Calendar

October 9: Public Forum on Radioactive Dumping. Jackson Davis will present slides and the information the EPA chose not to tell. Loudon Nelson Center, Santa Cruz, 7:30. Contact: People for a Nuclear Free Future (408) 426-9523.

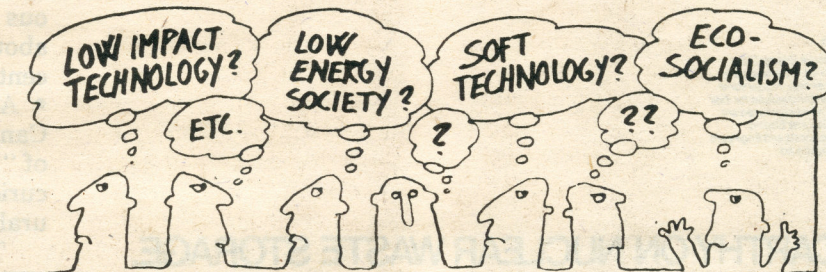
October 18: Kickoff for Statewide Canvassing Against Diablo. Canvassing packets are available from People Against Nuclear Power, San Francisco.

October 18: State Blockade Meeting. 12:00 noon. Diablo Project Office, 452 Higuera, San Luis Obispo.

October 19: Blockade Legal Collective Meeting. For the now non-existent legal collective to revive, a legal spoke is needed from each group. Diablo Project Office, 12:00 noon. A swim will follow. Contact: Eric Bruner, Box 249, Bolinas 94924. (415) 868-1401.

October 19: Blockade Outreach Meeting. Without outreach there is no need for a legal collective. Folks are needed to coordinate outreach in Northern and Southern California. Diablo Project Office, 12:00 noon. Contact: Meg Simonds, Box 249, Bolinas 94924. (415) 868-1401.

October 20-30: Seismic Hearings on Diablo, San Luis Obispo. The Appeals Board of the Atomic Safety and Licensing Board will hear testimony on why Diablo cannot withstand an earthquake. The public may attend, but will not be allowed to speak. Contact the Diablo Project Office for exact time and place.



AA Safe Energy Groups

*Denotes that several community/neighborhood and affinity groups are working in the vicinity.

ABALONE ALLIANCE OFFICE: 944 Market St., Room 307, San Francisco, CA 94102 • (415) 543-3910

DIABLO PROJECT OFFICE: 452 Higuera St., San Luis Obispo, CA 93401 805 543-6614

NORTH

ARCATA:
REDWOOD ALLIANCE, P.O. Box 293/95521 • (707) 822-7884

COVELO:
DOWNWIND ALLIANCE, P.O. Box 731 / 95428 • (707) 983-9969

MENDOCINO:
CITIZENS ALLIANCE FOR SAFE ENERGY, Box 887/ 95460

NAPA:
NAPA VALLEY ENERGY ALLIANCE, 2119 Brown Street, #4/94558

CALISTOGA:
UPPER NAPA VALLEY ENERGY ALLIANCE
2200 Diamond Mtn. Rd./94515 (707) 942-5856

SANTA ROSA:
COMMUNITY NETWORK FOR APPROPRIATE TECHNOLOGY, 709 Davis St./95401 • (707) 528-6543
*SO NO MORE Atomics, 883 E. Sonoma Ave./95404 • (707) 526-7220

SONOMA:
SONOMA ALTERNATIVES FOR ENERGY, P.O. Box 452/ 95476 • (707) 996-5123

TRINIDAD:
TRINIDAD ALLIANCE Box 60/95570 • (707) 677-3486

CENTRAL VALLEY & SIERRA

CHICO:
CHICO PEOPLE FOR A NUCLEAR FREE FUTURE, 708 Cherry St./95926 • (916) 891-6424

DAVIS:
PEOPLE FOR A NUCLEAR FREE FUTURE, 411 5th St./ 95616 • (916) 753-1630 M-F 12-6 P.M.

FRESNO:
PEOPLE FOR SAFE ENERGY, 366 N. Van Ness/93701 • (209) 268-3109 or 441-8839

MODESTO:
STANISLAUS SAFE ENERGY COMMITTEE, P.O. Box 134/93354 • (209) 529-5750

NEVADA CITY:
PEOPLE FOR A NUCLEAR FREE FUTURE, 419 Spring St. / 95959 • (916) 272-4848

NORTH HIGHLANDS:
SACRAMENTANS FOR A NUCLEAR FREE FUTURE, c/o Dan Eichelberger, 3430 E. St. Apt. 72/95660

RED BLUFF:
TEHAMANS AGAINST NUCLEAR POWER, 103 Glenn Lane/96080

REDDING:
VOLCANIC ALLIANCE, 431 Manzanita Lane 96002

SACRAMENTO:
Citizens for Safe Energy 1917-16th St./95814 • (916) 442-3635

SHEEP RANCH:
FOOT HILL ALLIANCE FOR SAFE ENERGY, P.O. Box 53 / 95250

VISALIA:
SEQUOIA ALLIANCE, 824 Goshen #C/93277 • (209) 625-1328

GREATER BAY AREA

BERKELEY:
PEOPLE'S ANTI-NUCLEAR COLLECTIVE, U.C. Berkeley, 607 Eshelman Hall/94720 • (415) 642-6912

BOLINAS:
BOLINAS AGAINST NUCLEAR DESTRUCTION, P.O. Box 708/94924 • (415) 868-1401

CONCORD:
CONTRA COSTANS AGAINST NUCLEAR POWER, P.O. Box 743/94522 • (415) 934-5249

EL GRANADA:
COASTSIDERS FOR A NUCLEAR FREE FUTURE, P.O. Box 951/94018 • (415) 728-7406

OAKLAND:
EAST BAY ANTI-NUCLEAR GROUP, 585 Alcatraz, Suite A/94609 • (415) 655-1715

PALO ALTO:
CITIZENS FOR ALTERNATIVES TO NUCLEAR ENERGY, P.O. Box 377/94302

PT. REYES:
PELICAN ALLIANCE, P.O. Box 596/94956 • (415) 663-8483
SAN ANSELMO:
*ABALONE ALLIANCE OF MARIN, 1000 Sir Francis Drake Blvd./94960 • (415) 457-4377

SAN JOSE:
GROUP OPPOSED TO NUCLEAR ENERGY, 300 South 10th St./95112 • (408) 297-2299

SAN FRANCISCO:
ALLIANCE AGAINST NUCLEAR POWER, UC Med Center c/o Vicky Sommers N319X/94143 • (415) 666-1435

AMERICAN FRIENDS SERVICE COMMITTEE, Liz Walker, David Hartsough, 2160 Lake St./94121 • (415) 752-7766

CITIZENS FOR A BETTER ENVIRONMENT, 88 First St., Suite 600/94105 • (415) 777-1984

DIRECT ACTION WORKING NETWORK, 1846 Church St/ 94139 • (415) 826-7776

GREENPEACE ANTI-NUCLEAR COMMITTEE, Building E, Fort Mason/94123 • (415) 474-6767

*PEOPLE AGAINST NUCLEAR POWER, 944 Market St. Room 808/94102 • (415) 781-5342

NURSES FOR SOCIAL RESPONSIBILITY, 1444 7th Ave/ 94122 • (415) 681-1028

SARATOGA:
ABALONE ALLIANCE CLUB West Valley College, 1400 Fruitvale Ave./95070 • (408) 867-1096 or 374-6459

STANFORD:
ROSES AGAINST A NUCLEAR ENVIRONMENT, P.O. Box 8842 / 94305 • (415) 325-4802

CENTRAL COAST

AVILA BEACH
A.V.I.L.A.
P.O. Box 344/93424
(805) 595-7208

LOMPOC:
LOMPOC SAFE ENERGY COALITION, P.O. Box 158/ 93436 • (805) 736-1897

PACIFIC GROVE:
SOCIETY UNITING FOR NON-NUCLEAR YEARS, P.O. Box 8/93950 • (408) 372-7476

SAN LUIS OBISPO:
PEOPLE GENERATING ENERGY, 452 Higuera / 93401 (805) 429-9525

SANTA MARIA:
THE UNIVERSAL LIFE CHURCH
512 W. Evergreen/93454
(805) 922-1309

SANTA CRUZ:
PEOPLE FOR A NUCLEAR FREE FUTURE, 112 Peyton St. / 95062 • (415) 426-9523

SOUTH

AVALON:
CATALINA ISLAND AFS, P.O. Box 1516/90704

BELLFLOWER:
SUNSHINE ALLIANCE/NO RADIOACTIVITY COMMITTEE, P.O. Box 1135/90706

CAMARILLO:
CAMARILLO COALITION FOR SAFE ENERGY, 1759 Marco/93010 • (805) 482-7321

LA JOLLA:
U.C.S.D. Abalone Alliance, U.C.S.D. Student Organizations, B-023/92093 • (714) 271-4248

LOS ANGELES:
*ALLIANCE FOR SURVIVAL, 712 S. Grand View St./ 90057 • (213) 738-1041

GEO., 1127 6th St./90402 (213) 394-4139

OJAI:
STOP URANIUM NOW, P.O. Box 772/93023 • (805) 646-3832

RIVERSIDE:
RIVERSIDE ALLIANCE FOR SURVIVAL, 200 E. Blaine St./92507

SAN DIEGO:
COMMUNITY ENERGY ACTION NETWORK, P.O. Box 33686/92103 • (714) 236-1684 or 295-2084

SANTA ANA:
SUNFLOWER COLLECTIVE, 206 West 19th St./92706

SANTA BARBARA:
PEOPLE AGAINST NUCLEAR POWER, U.C. Santa Barbara P.O. Box 14006/93107 • (805) 968-4238 or 968-2886

SANTA BARBARA PEOPLE FOR A NUCLEAR FREE FUTURE, 331 N. Milpas St./93103 • (805) 966-4565

SANTA MONICA:
UCLA ALLIANCE/SANTA MONICA-VENICE, 235 Hill St./ 90405 • (213) 829-7251

SOUTH LAGUNA:
LAGUNA BEACH AFS, 30832 Driftwood/92677

TOPANGA:
TOPANGA CANYON AFS, c/o Food Chakra, Top. Cyn Blvd. & Fernwood/90290

VAN NUYS:
SAN FERNANDO VALLEY AFS, 3615 Victory Blvd. #204/ 91401

VENTURA:
VENTURA SAFE ENERGY ALLIANCE, P.O. Box 1966/ 93001 • (805) 643-2317

WEST LOS ANGELES:
COMMON GROUND, 2222 S. Sepulveda/90064

CORPORATE LIES DEPARTMENT

As licensing of the Diablo Canyon nuclear plant grows nearer, PG&E is gearing up an advertising campaign aimed at short-circuiting local opposition (see page 1). This ad is one of a series in San Luis Obispo newspapers sponsored by the utility. It manages to pack more half-truths in fewer words than any we have recently reviewed.

The ad opens with the implication that all scientists agree the waste problem is solved and that anti-nuclear activists are somehow hiding this fact from the public. In reality, the scientific community is as deeply divided over nuclear waste disposal plans as is the general public. It is simply dishonest to claim otherwise.

The ad's second paragraph is based on the faulty idea that the future of a geological formation can be predicted by knowing its past. The fact that a salt bed has been undisturbed for hundreds of millions of years is no guarantee against someone digging it up a hundred or a thousand years from now. The salt on your table was undisturbed for hundreds of millions of years, too—until someone mined it. How does the nuclear industry propose to warn the salt miners of a thousand generations hence, when buried wastes will still have half their deadly plutonium?

Salt has other problems as a burial medium even if undisturbed by people. The intense heat generated by buried wastes can draw out the tiny amounts of water normally present in bedded salt, and the resulting hot brine can corrode almost anything. An article in the May, 1978 issue of the British scientific journal *Nature* reported experiments which found that even wastes solidified in glass dissolve into salt water in a few weeks at these temperatures. Once dissolved, the wastes are far more likely to escape or contaminate groundwater.

PG&E's hero, Dr. McCarthy, is somewhat behind the times. Due to

Nuclear Energy Forum
Scientists and Engineers for Secure Energy (SE) has invited distinguished scientists to participate in this forum of views on nuclear energy. No personal fee or payment has been made to individuals for their comments expressed here. The views expressed are those of the scientists. Pacific Gas and Electric Company, as a contributor to Scientists and Engineers for Secure Energy, is sponsoring this ad.

DR. J. MCCARTHY ON NUCLEAR WASTE STORAGE.

"There are several available methods for the safe, long-term disposal of all nuclear wastes."

John McCarthy

John McCarthy
Professor of Computer Science
Stanford University

Dr. McCarthy is a scientific leader in the field of nuclear energy. He is a member of the American Academy of Arts and Sciences and the American Society for the Advancement of Science. He has been a Sloan Fellow in Physical Science.



Formed in 1976, Scientists and Engineers for Secure Energy is a society concerned about incorrect, confusing and untrue information being spread by organized groups against nuclear technology. The efforts of these groups are designed to scare, bewilder and mislead Americans into abandoning a domestically available nuclear resource that's been thoroughly tested

and proven over the past thirty years. Nuclear energy has kept the lights on in much of the country during coal strikes, oil embargoes and natural gas shortages. The society does not claim that technologies, including nuclear energy, are free of faults. It also encourages frank and vigorous debates in search of better understanding. The society hopes this series of statements

"Anti-nuclear activists are trying to lead the public to believe that scientists still haven't discovered any way to safely store wastes produced by nuclear power plants. This information is absolutely untrue."

"A study group of the American Physical Society recently confirmed the feasibility of several waste disposal methods. Most of these methods would bury waste deep underground in geologically stable rock formations. For example, we know that many salt beds are stable and have been free from ground waters for hundreds of millions of years."

"The problem is that the U.S. Government still has not decided which method to adopt. Other countries such as Sweden have already moved ahead in the choice of waste disposal repositories."

"A typical nuclear station produces only about 2½ cubic yards of waste per year requiring long-term storage. This kind of waste requires about 500 years for its radioactivity to diminish to the point where it is actually less than that of the uranium ore from which the nuclear fuel was made in the first place."

"Unfortunately, opponents of nuclear technology are using legal and regulatory systems to cause delays in making a waste disposal decision. President Carter has promised that a method for permanent waste storage will be selected soon. Let us hope the U.S. Government will be able to keep this promise."

will contribute to the understanding that nuclear energy has the potential to bring enormous benefits to America and the world. It has served us well for a third of a century. The society supports the mastering of our best thoughts—not our worst fears—to continue to utilize this potential wisely and safely.

numerous problems, two "pilot projects" to dispose of wastes in salt beds have been abandoned, and many in the nuclear establishment now favor disposal in more solid materials such as granite. This scheme is being billed as "foolproof"—as was disposal in salt before its problems became obvious.

Some other countries have indeed "moved ahead" with *experimental* waste disposal projects. It is simply good sense for the US to await the results of these rather risky experiments before choosing a method for this country. Choosing a waste disposal *site* should be a public process involving careful consideration, not a private choice of corporate and government officials who force it down the throats of nearby residents in an effort to protect the profits of nuclear firms.

In the long run, however, the nuclear industry has us over a (waste) barrel. The nuclear wastes *already* created are far too dangerous to remain aboveground indefinitely. Nuclear opponents must someday allow waste disposal by the best available method, and simply hope that we—or future generations—don't wind up paying a tragic price.

Once disposal of high-level waste begins, the nuclear industry will surely argue that making a little more won't hurt now that we have a place to put it. But the volume of high-level waste is tiny compared to the volume of low-level wastes created by nuclear power. Disposing of *this* material properly would be very costly. Much of it winds up being buried in shallow ditches or simply left on the surface of the ground.

McCarthy claims that "a typical nuclear station produces only 2½ cubic yards of waste per year requiring long-term storage." That is a pure fantasy. Here are only two of the several little items he "forgot" to include in his calculation:

- Mining the fuel for a year's operation of Diablo Canyon will produce at least 100,000 tons of radioactive mill tailings, which remain hazardous for over a million years. These tailings would occupy a volume of about 37,000 cubic yards, equivalent to a cube ten stories high (see centerfold articles).

- According to PG&E's Final Environmental Statement, Diablo Canyon will each year produce 1,500 drums, or about 408 cubic yards, of "low level" radioactive waste. The drums will contain about 10,000 curies of radioactive material. (For comparison, a quart of water naturally contains a few *trillionths* of a curie of radioactivity.)

The ad next implies that nuclear power replaces naturally radioactive uranium ore with wastes that are no more dangerous. But uranium ore is not hazardous when it is deep underground, and its above-ground hazards come mainly from radioactive elements which remain in the tailings after the uranium is removed. So the nuclear industry isn't replacing one risk with another; it is creating two.

The Environmental Protection Agency estimates that over one billion cubic feet of "low level" radioactive waste will have been produced by the year 2000—enough to cover a coast-to-coast four lane highway to a depth of one foot. The nuclear industry promises to handle these mountains of trash so carefully that the radioactivity will be forever isolated from ourselves and our descendants. But newsprint promises are cheap, and the industry's history shows a far different reality:

- The Maxey Flats disposal site near Morehead, Kentucky, began operation in 1963. In 1972 radioactivity was first detected outside the dumpsite. A study by the Kentucky Department for Human Resources in 1973 found radioactive tritium, cobalt, strontium, cesium and plutonium had escaped from the dump. The state took over the site in 1978 because of continued leakage and is now pumping 5000 gallons of contaminated water per day from disposal trenches in efforts to slow down the migration of the waste. Kentucky has so far spent \$1.6 million on the cleanup, which is just beginning.

- The Nevada Human Resources Department has recommended that the Beatty nuclear waste dump be closed because waste containers frequently arrive at the site already leaking. Thousands of contaminated tools destined for burial at the dump have been stolen. Richard McClain, a former dump employee, testified at a Nevada Board of Health hearing that liquid wastes were illegally dumped in open trenches at the site.

- At Hanford, Washington, over 500,000 gallons of high-level liquid wastes have leaked since 1961 in 20 separate incidents.

The nuclear industry once again seems to have a credibility gap. How believable are promises of eternal perfection from an industry which has dismally failed to contain its deadly byproducts for even a few decades?

—Bob Van Scoy
IAT Staff

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| November 14 | Stop Diablo Day—Leafletting at PG&E offices |
| December 6 | Balloon launch registers Californians against Diablo Canyon |

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