

High Country

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Missiles, men and Armageddon

by Dan Whipple

“Attention all units. The president has issued an emergency war order for launch of missiles. Stand by for verification code.”

The code, when read by the voice over the loudspeaker and decoded, says:

KEYTUR
NINTW
OMINUTES

“Scott, I have a message that reads, ‘Key turn in two minutes.’”

“Me, too.”

The two lieutenants go to a red metal box above a drab green computer terminal. Each unlocks his own personal combination lock that has kept the safe sealed. They remove top secret orders and codes. On reading these, Second Lieutenant Scott Beckstrand sets an enabling code on a computer panel by moving a series of six dials to the proper setting. This code tells the computer how many and which of the 10 Minuteman III missiles under the launch facility’s command will be fired. First Lieutenant John Lucas has returned to the command console and called out instructions from the launch manual. When everything is checked and in proper order, Lucas says, “Key turn on your countdown, Scott.”

“Five . . . four . . . three . . . two . . . one . . . turn . . . two . . . three . . . four . . . five.” On the word “turn,” both men simultaneously turn two keys, set on separate consoles about 12 feet apart, and hold them for five seconds. It is these keys, not “the button” of popular legend, that actually launch a missile.

The console of thin rectangular lights at which Lucas is sitting now shows a progression downward on the board, reporting back the current status of each of the 10 missiles. “Enabled.” Then, “Launch command.” Then, “Launch in progress.” Then, “Missile away.”

There is a moment of silence. Then Lucas says, “That baby’s history. She’s gone.” He says it a little too cheerfully for me.

That, with some classified steps left out, is how nuclear warheads are launched. The whole procedure takes about two minutes. Then, that baby’s history. And so is Moscow.

The Rockies and Great Plains are home to virtually all of the United States’ land-based intercontinental ballistic missiles (ICBM). F.E. Warren Air Force

Base in Cheyenne, Wyoming, has 200 Minuteman III missiles under its command. Minot AFB and Grand Forks AFB in North Dakota each have 150 Minuteman IIIs. Malmstrom AFB near Great Falls, Montana, has 50 Minuteman IIIs and 150 Minuteman IIs. Ellsworth AFB in western South Dakota has 150 Minuteman IIs. Finally, Whiteman AFB in Missouri has 150 Minuteman IIs. The chief difference between the II and III classification is that the latter has three nuclear warheads, the former only one.

All this military might makes four of the Rocky Mountain and Northern Plains states a sizable nuclear force.

The scene described at the beginning of this story actually happened. It occurred at a training module for missile launch commanders located at Warren Air Force Base. Some of the details differ from actual launch conditions, because visitors are shown only the “unclassified” version of the procedure. And, of course, the simulator isn’t hooked up to any missiles, so when the little amber light says, “Missile away,” it is only kidding. Nevertheless, it gave me a chill through my spine.

Warren is the base at which the MX/Peacekeeper missile will be stationed when it is deployed in 1986. Coincidentally, I visited the base the day that the U.S. Senate approved budget authority for production of the first 27 MX missiles.

In effect, the Rockies host one entire “leg” of the U.S. defense triad. In order to understand the importance of the region to the nation’s defense posture, and to put the MX into context as a weapon, we have to digress a moment to look at the bigger picture.

The triad consists of three legs — land-based ICBMs, submarine-based ballistic missiles (usually called submarine-launched ballistic missiles or SLBMs) and the B-52 bomber squadrons. Each leg of the triad has certain strengths and weaknesses.

Until about 1962, the bombers were the most powerful segment of the triad. A B-52 is capable of carrying up to four hydrogen bombs of 20 megatons each. Production of B-52s ceased in 1961, but they have been upgraded and modernized several times since then. Currently, they are being retrofitted with the air-launched cruise missiles, which has a terrain-following guidance system and can carry warheads of various sizes depending upon the target.

The chief weaknesses of the bomber force are that it is slow — a plane takes about eight hours to reach the USSR — and vulnerable to attack while it is on the ground. However, planes can be launched at the first hint of an attack and, unlike missiles, can be

recalled without dropping their warheads. They can also be easily retargeted if their original target has been destroyed.

In the Rockies, all of the ICBM sites previously mentioned, except F.E. Warren, have bomber units attached to them. In addition, bomber units are located at Mountain Home AFB in Idaho, Hill AFB in Utah, Davis Monthan AFB in Arizona (which also hosts some of the old Titan missiles, now being decommissioned) and Kirtland and Cannon bases in New Mexico.

Currently, the U.S. has 32 ballistic missile-carrying submarines, half of which are at sea at any one time. These subs carry 16 multi-warhead missiles each, except for the one Trident sub in the fleet, which carries 24. The chief advantage of submarines is that they are virtually undetectable by the enemy underwater, even with the latest anti-submarine warfare. The Trident, which if stood on end would be as tall as the Washington Monument, could cruise within 100 feet of a swimmer and be so quiet that the swimmer wouldn’t even hear it. Subs give the triad “survivability.” That is, they assure that the U.S. would be able to respond to an enemy attack, even if the other two legs of the triad were wiped out.

However, missiles launched from subs are less accurate than land-based ones because it is more difficult to determine the exact location of the launching point. Even small errors in this regard are magnified as a missile travels 4,000 miles to its target. In addition, in order to assure that their positions are completely secret, subs are out of contact with U.S. bases for the entire

time they are at sea. Radio signals would give away the positions. However, this makes command-and-control of the subs difficult.

Believe it or not, there are nuclear submarine reactor cores in the Rockies. They are on dry land near the Idaho National Engineering Laboratory in southeastern Idaho. They are used for training of naval nuclear personnel.

The last leg of the triad is the land-based missiles. Their greatest advantage — their fixed and immovable position — is also their greatest disadvantage. They are very accurate and very fast. Once launched, they will reach a target in the Soviet Union in 20 to 30 minutes. And, current U.S. and Soviet technology allows an accuracy of about .2 miles within a radius around the target. The MX will increase that accuracy to about .05 miles.

However, since they are fixed, everyone knows where they are at all times and they are relatively easy targets for incoming missiles. And, once launched, they cannot be recalled.

A final advantage to the ICBM force is the “alert rate.” According to Col. Warren Hickman, Site Activations Task Force Commander at F.E. Warren, about 90 percent of the Minuteman force is available for launch at any given moment. As noted above, half of the submarine fleet is in port at any one time and, because of maintenance, crew availability and other factors, only about 50 percent of the bomber fleet is always ready.

Hickman said, “Twice a year, one of the missiles — we never know which one — is pulled from the silos and test

(continued on page 12)



WESTERN ROUNDUP



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WPPSS, there goes another billion

The Washington Public Power Supply System continued to shudder toward total collapse when formal default was declared July 25 on \$2.25 billion in bonds issued to finance construction of two now-terminated nuclear power plants.

The action, the biggest municipal bond default in U.S. history, came three days after King County, Washington, Superior Court Judge H. Joseph Coleman lifted a restraining order that had blocked Chemical Bank of New York, the trustee for the bonds, from starting default proceedings against WPPSS.

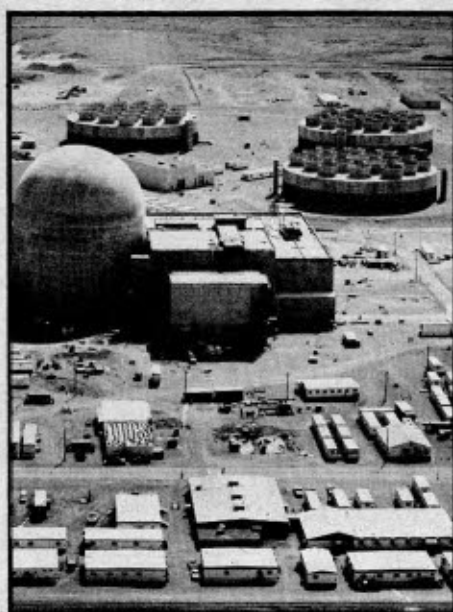
The power consortium had been unable to make its regular monthly \$15.6 million interest payments on the bonds for the terminated plants since May. However, Chemical Bank had been prohibited by the court order from initiating legal proceedings until the Washington Supreme Court completed a review of its decision to exempt the Washington utilities that are members of WPPSS from their share of the debt.

With interest, the bonded indebtedness comes to \$7 billion over the next 30 years.

With the review complete and the utilities freed of their liability, 45 of the 88 utilities that make up WPPSS are no longer liable. The remaining 43 currently are challenging their obligations in court.

When the legal question was resolved, Coleman lifted his restraining order and Chemical Bank asked for its money. WPPSS responded by saying it was unable to pay, an admission that constituted an "event of default."

Now begins the long process of settling bondholder claims against the system, a process which some observers fear could drag down the consortium's three remaining plants, two of which



WPPSS Plant 1

have been mothballed for indefinite periods of time.

WPPSS was formed more than a decade ago by 88 Northwest utilities to build five nuclear plants in Washington. As the total project grew to a \$24 billion size, and as the need for additional power in the Northwest diminished, WPPSS became less able to sell bonds to raise money. As a result, two of the plants, 4 and 5, were abandoned in January, 1982. In the next year and a half, the same conditions forced the mothballing of two more plants. The fifth, Plant 2, is about 98 percent complete and is scheduled to begin operating early next year.

If Chemical Bank is successful in its suit, the supply system's available assets, including the three remaining plants, could be attached. That would mean further disaster for the system.

To head off such a possibility, utility leaders and politicians are rushing to

create federal legislation that would empower the Bonneville Power Administration, the region's power wholesaler and a federal agency, to provide the necessary funds to complete Plant 2 and guarantee the completion of Plant 3, the 70 percent-finished project that was mothballed in recent weeks. The two plants require more than \$1 billion in additional financing.

Proponents of the legislation argue it is vital to enable the plants to begin producing and selling power. Opponents say there is no one to buy the power even if it were available.

Such action by the BPA would require federal approval and Sen. James McClure (R-Idaho), with the blessings of his fellow Northwest senators, recently introduced legislation to that effect. The measure would create a new financing entity that could issue debt for the WPPSS projects and would allow the BPA to back the debt with its rate-fed revenue base.

Rep. James Weaver (D-Ore.) a long-time foe of WPPSS, says the new entity would amount to a "super-WPPSS" and would saddle Northwest ratepayers with two unneeded nuclear plants and an even greater public debt. Other members of the House have joined Weaver's opposition.

Without some kind of federal action, the remaining plants will remain vulnerable to the claims of the bondholders of Plants 4 and 5. While many of the bondholders are individuals, \$1.85 billion of the bonds are held by 487 insurance companies, including State Farm Insurance Group, which holds \$257.2 million, the largest single ownership. Several lawsuits have already been filed in what lawyers and bankers say could be a decades-long battle.

— John Soisson

Dear friends,

This issue is dedicated, we hope, to peace. However, whenever people talk about a subject as complex and volatile as national defense, the distinction between keeping the peace and making war tends to blur.

Nuclear war has been called "the most important environmental issue." Certainly, if there is a nuclear war, it will be the end of the environment as we now know it. But nuclear war and nuclear weapons are much more than an environmental issue and, indeed, looking at them from that point of view tends to trivialize them.

In this special issue, we're trying to look at the defense complex in the Rockies and put it in context. How do the states in our region fit into the bigger picture and how can we think about our role in relation to them? These are, of course, very difficult issues and we have only begun to scratch the surface of them here. A far more difficult question is how each of us individually handles the peace and war decisions that our government makes in our names.

We hope that this issue of *HCN* helps you think about these critical issues.

Our intern for the past two and half months has been Jan Valdez. Jan is from Madison, Wisconsin, where she is a doctoral candidate in geography. She is married and has a 10-year old son.

Jan has been subscribing to *HCN* for three years and when she read about the possibility for an internship, she said, "Sign me up." She said, "I was interested in it for two reasons — to see what journalism was all about and to learn more about the issues."

And were these two curiosities satisfied? "Very well," she said. "It's a great experience for both purposes. It's a real intense look at journalism because you're doing it instead of just studying about it. And, you can't do it without being involved in the issues. I'd recommend it to anybody who is interested in either of those two things."

Jan arrived here in Lander with an unusual addition to our staff, her parrot Guero. She and her family will be going back to Madison after her stint here. She expects to complete her graduate work by next summer.

This issue is the last one that will bear a Lander, Wyoming, postmark and the last one put out by the current staff. There will be no issue dated August 19 as the paper takes its traditional two-week August vacation and we do the transitional work to move the physical plant to Paonia, Colorado, and turn the spiritual work over to Ed and Betsy Marston, the new editors.

The best, and unique, thing about working for *High Country News* has been you, the readers. We'd wager that there isn't another publication in the country whose readership takes such a proprietary and personal interest in what happens here. None of us have ever experienced anything like it, nor are we ever likely to again. Thanks.

Some staff personal notes before we leave. On August 6, Circulation Manager Claudia Bonham is getting married to Frank Elzay, Lander's premier fly fisherman. Then, on September 4, (former) Managing Editor Dan Whipple and (former) Design Director Kathy Bogan will be married. They will leave a few

days later for Eugene, Oregon, where Kathy will attend graduate school in graphic design and fine arts. Dan will freelance and has had a book accepted for publication by Peregrine Smith Books of Layton, Utah.

(Former) Director Jill Bamburg is leaving on September 5 for California, where she will be enrolled in Stanford's masters program in business administration. Colorado Bureau Chief Carol Jones will be getting married September 17 to Tim Martin, who manages the T-Cross Ranch in Dubois, Wyoming and runs a hydrological consulting service. He has dared, in the past, to argue with M.E. Whipple about some of the finer points of water law. Carol will be returning to Wyoming in September to run *HCN's* bureau here.

Finance manager Betsy Schimelpfenig will be going to nursing school. Production Assistant Phil Heywood is moving to Minneapolis where he will pursue his career as a musician. And, Typesetter Jazmyn McDonald is not getting married, nor going back to school, nor leaving Fremont County, she has asked us to report.

Mike McClure, our photographer, who has worked long and hard here for practically no money, is going to become chief of photography for the Casper (Wyo.) *Star-Tribune*.

We'd like to invite you once more to the *HCN* Farewell Bash to be held August 12 — that's a Friday, folks — at the Union Bar in Hudson, Wyoming. We plan to have a helluva good time, drink, dance and raise a little money for the Wyoming bureau. Hope y'all can come.

— the staff

Colorado shale gets SFC cash

Colorado's oil shale dreams were boosted July 28 when the federal Synthetic Fuels Corporation announced it had signed a letter of intent to provide the Cathedral Bluffs Shale Oil Project \$2.9 billion in price and loan guarantees. The letter of intent is non-binding and a contract between the two is contingent upon further negotiations.

If awarded, the \$2.9 billion in aid would be the largest amount the SFC has committed. Cathedral Bluffs, a joint venture between Tenneco, Inc. of Houston and Occidental Petroleum Corp. of Los Angeles, began negotiations with the SFC in January, 1983. Karen Hutchison, director of media relations with the SFC in Washington, D.C., said the SFC pledged the large amount to Cathedral Bluffs because "it is a strong project with good management." She also said the SFC has targeted coal and oil shale projects as top priorities for aid. It just happens that those kinds of projects are very expensive, she said.

Hutchison explained that negotiations on environmental concerns, technological rights and other matters must be worked out before the SFC will commit to the project. She said she hopes a contract can be worked out by the end of the year.

Assuming the project does receive the price and loan guarantees, Barney Phillips, president of Cathedral Bluffs in Grand Junction, Colorado, said construction on the proposed 14,100 barrel-a-day project would begin in 1984, with the first oil produced in 1987.

The project would mean jobs for



Cathedral Bluffs Shale Oil Plant

many of western Colorado's unemployed, who lost their jobs in May, 1982, when Exxon's Colony Shale Oil Project shut down. Phillips estimated 2,500 workers would be needed during the construction and initial stages of the project. After construction, the permanent work force would be maintained around 1,000. Most of the workers would be living around the small towns of Rifle and Meeker. Both areas have experienced the boom and bust of oil shale in the past.

Phillips also said the project would need about 2,500 acre-feet of water per year. Oil shale critics have claimed water waste is one of the primary reasons the state should not be considered as an energy source unless energy supplies become extremely critical. Three to five barrels of fresh water are required for

each barrel of oil produced (HCN, 6/10/83).

The Cathedral Bluffs project has already spent \$200 million on construction and operating costs since Occidental came on the project in 1976 and Tenneco in 1979. However, because of enormous costs, the project has not been able to move forward.

Hutchison explained that if the contract is awarded, the SFC will first provide 1.8 billion in loan guarantees to get the project started. After the company begins to pay the government back, the price guarantees would be awarded. She said the SFC has guaranteed Cathedral Bluffs \$60 a barrel in 1987. The current price of oil is \$29 a barrel.

Negotiations on the project will continue through the fall.

— Carol Jones

Groups tout Idaho wilds bill

Five conservation groups have presented a portion of their Idaho wilderness proposal — 10 areas identified as the "endangered Idaho wilderness core" — just two weeks before the first of Sen. James McClure's (R-Idaho) Idaho wilderness hearings.

The core includes some 2.2 million acres considered threatened by logging or other development plans.

The conservationists' initial proposal came at almost the same time the Idaho Department of Fish and Game released its wilderness recommendations of 11 areas totalling 558,782 acres. The IDFG limited its recommendations to areas of high wildlife values, but noted that other areas recommended for wilderness by the Forest Service under RARE II (the second Roadless Area Review and Evaluation) "would cause no management problems . . . and we have no objection to such recommendations."

The conservation groups expect to have a final wilderness proposal ready by October 1, a proposal which will add perhaps another 1.5 million acres to the 2.2 million in the endangered core proposal. Some 6.5 million acres of roadless National Forest land will be at stake when McClure writes his bill following the August hearings in Idaho. Idaho now has 3.8 million acres of designated wilderness. Conservationists are awaiting the completion of their field studies before preparing the final proposal.

The endangered wilderness core — identified by the Idaho Conservation League, Idaho Environmental Council, Sierra Club, Wilderness Society and Audubon Society — includes the controversial White Cloud-Boulder Mountains. This mountainous region in central Idaho has been coveted by ASARCO for potential molybdenum mining and was recommended by the Forest Service for further planning under RARE II.

While McClure's statewide wilderness bill will not necessarily deal with further planning areas, the senator has not ruled them out either. As a result, conservationists say they have little choice

but to include them in their proposal. Ironically, it is the great popularity of the White Clouds that disturbs conservationists. "We're afraid the White Clouds could dominate the whole wilderness discussion and lose a lot of other areas as a result," explained Idaho Conservation League researcher Bruce Boccia. "We don't want to have to deal with the White Clouds, but we're afraid if we don't indicate support for them, he (McClure) could use that now or later to release them."

* The other areas in the conservationists' endangered core are:

- *Salmo-Priest*, an area of old-growth red cedar in the upper Idaho panhandle, home to the only population of mountain caribou in the lower 48 states. The IDFG included Salmo-Priest in its wilderness recommendations. Logging sales are planned for this area.

- *Long Canyon-Selkirk Crest*, two areas also in the Idaho panhandle. The Idaho Conservation League calls Long Canyon "the keystone of the proposal... the last unroaded drainage in the Selkirk Mountains." Both areas are potential caribou habitat. Old growth forests in Long Canyon have drawn the eye of the timber industry.

- *Mallard-Larkin*, a subalpine area in northern Idaho that is highly prized for its fish and wildlife habitat and has the backing of the IDFG. The Idaho Forest Industry Council, which has a wilderness proposal of 590,000 acres for the state, would open 75 percent of Mallard-Larkin to logging.

- *Great Burn or Hoodoo*, high open country in northern Idaho swept by fires in the early 1900s and now an outstanding fish and wildlife area. The IDFG is throwing its strongest support behind this region, with particular emphasis on protecting Kelly Creek. Kelly Creek is one of the best fisheries for westslope cutthroat trout in the United States, according to the department. These increasingly rare trout, the department notes, "are very susceptible to the impacts of degraded habitat caused by sedimentation from roads and their construction."

- *Payette Crest*, a moderately high mountain region in north central Idaho. Proposed logging on its highly erosive batholith granite threatens the watershed and wildlife.

- *Sawtooth Completion*, a collection of three study units adjacent to the existing Sawtooth Wilderness. The area would be the closest wilderness area to the state's largest city — Boise. The IDFG is recommending wilderness for a portion of this area as a "logical addition to insure the protection of the lakes and adjacent elk summer range."

- *Northern Lembis*, a high mountain region in central Idaho that also includes forest land.

- *Palisades*, a further planning area on the Idaho-Wyoming border. Conservationists fear oil and gas development in this rugged mountain region.

- *Garns Mountain*, between Idaho Falls and the Tetons, is home to elk, deer, mountain goats and trout.

The IDFG included in its wilderness recommendations Borah Peak, the highest peak in Idaho, and its surrounding land. ICL Director Pat Ford said Borah Peak was not included in the endangered core because even the timber industry included it in its wilderness proposal. He said it will undoubtedly be part of the final conservationist proposal.

— Glenn Oakley

BARBS

Rabbit power. A Grants Pass, Oregon, man heated his greenhouse with 400 rabbits. Emitting heat through their ears — a rabbit's body temperature averages about 102.6 degrees — the bunnies provided 180,000 Btu an hour, keeping the greenhouse at about 56 degrees, even when outside temperatures were at 32. Bill Schultz, who ran the experiment, figured he saved \$25 a day in energy costs and sold an additional \$300 to \$400 of fryer rabbits each week to local food outlets.

HOTLINE

ETSI slurry battle continues

Energy Transportation Systems Inc. is going to court again. This time five western South Dakota landowners are fighting a condemnation notice by ETSI which would allow a 100-foot-wide right-of-way across their properties for a pipeline to transport water from the Oahe Reservoir to the Powder River Basin in Wyoming. The landowners have turned down money offered by ETSI, saying they simply don't want a pipeline crossing their ranch land. The water deal ETSI made with South Dakota for water for the Oahe Reservoir is also the object of a court battle. Two lawsuits challenging the sale have been set for trial for February 1984. Meanwhile ETSI is still seeking federal eminent domain authority for the right-of-way of its 1,400 mile coal slurry pipeline to go from Wyoming to Arkansas. Eminent domain authority bills are expected to be debated in the House and Senate this year. ETSI officials say construction on the project could begin next year.

Bill to aid parkland acquisition introduced

Rep. John Seiberling (D-Ohio) has introduced a bill that would automatically transfer land within park boundaries released by other federal agencies to the Park Service. Seiberling introduced the bill upon learning of a new General Services Administration practice which required the National Park Service to pay market prices for land within park boundaries that is released by other federal agencies. He said the policy would reduce the funds available for parkland acquisition, and noted that Congress has continuously overridden Interior Secretary James Watt's proposals for elimination of new acquisitions. "Obviously, to the extent that the administration could force a recycling of the appropriated funds merely to transfer lands within the national parks which are already in federal ownership, the intent of Congress would be thwarted," he said.

Indians want strip mining jurisdiction

The Navajo, Crow, Hopi and Northern Cheyenne tribes have been waiting since 1978 for legislation giving them authority to enforce the 1977 surface mining law, and have finally decided to wait no longer. They have drafted their own proposal for legislation and are seeking sponsors for the bill. The 1977 Surface Mining Act required Interior to prepare legislation giving the tribes authority by 1978, but as yet no such legislation has appeared. Phil Zahne of the Navajo tribe said "We can't afford to wait any longer."

Interior reviews causes of Colorado floods

Flooding in June along the Colorado River with damage estimates in the millions of dollars has raised questions about operating procedures for the river's reservoirs. The rapid melting of a late spring snowpack in the Upper Colorado River Basin filled the reservoirs along the river to capacity and caused the release of excess waters which resulted in flooding in communities along the river including floods in Mexico (HCN, 6/24/83). In response to the situation, Secretary of the Interior James Watt and Commissioner of Reclamation Robert Broadbent have asked Congress and the governors of the seven Colorado River Basin states to review the operating criteria for the Colorado River reservoirs.

HOTLINE

Rule changes facilitate development in WSAs

New rules published by the Department of the Interior will make it easier for lease holders to conduct mineral activities on Bureau of Land Management wilderness study areas. The new rules state that pre-1976 leases and claims are not restricted by the standard that forbids impairment of a wilderness study area's wilderness suitability. The rule states that "even if such activities impair the area's wilderness suitability, they will be allowed to proceed." The policy allows development of pre-FLPMA claims and leases, and allows access and rights-of-way to pre-1976 valid existing rights. The policy also modifies the reclamation standard requiring "contouring of the topography to a natural appearance," instead of restoration to the original contour.

Drilling may hit toxic gas

The Bureau of Land Management wants people to be aware of the hazards involved in a drilling project on the Blackfoot Indian Reservation but doesn't want people to be alarmed. An environmental assessment on the project, which is 3.5 miles northwest of Browning, Montana, states that toxic hydrogen sulfide gas, which is between five and six times as toxic as carbon monoxide, might be encountered. BLM and Husky Oil Company have developed a contingency plan in case of an accident, but say there is little possibility that any toxic gas will be released to the atmosphere. According to the report, it would take complete loss of well control for there to be any serious threat and a recent 10-year study in Canada showed only one loss of well control per 667 wells drilled.

Matheson urges Alton coal field leasing

Utah Gov. Scott Matheson (D) wants to spread coal development more evenly throughout his state and is recommending that the federal government offer leases on the controversial Alton coal field next year rather than on some other tracts selected by the Uinta-Southwestern Utah coal team. Coal development in the Alton field has been disputed for several years and was banned by former Secretary of Interior Cecil Andrus. The ban has been the subject of court battles since then, and a final decision has not yet been reached. Environmentalists warn that any company bidding on the tracts should be aware that the areas may be designated off limits in the future. Matheson is also urging that several lease sales be scheduled in the region next year rather than one and that they be spaced out to "assure sale of resources at true market value."

PRLA decisions may be held up

Bureau of Land Management field offices have been ordered to upgrade the environmental assessments on coal preference right lease applications (PRLAs) to environmental impact statements. A memo from BLM Director Robert Burford to the offices said that several of the EAs were insufficiently detailed, and failed to consider cumulative effects that several PRLA projects in an area or region would have on the environment. With few exceptions, EISs will be prepared on the PRLAs in the Powder River region, Green River-Ham Forks region, Uinta-Southwestern Utah region, Fort Union region and in eastern Colorado. Coal reserves of the pending PRLAs are estimated at 24.4 billion tons by the 1982 *Federal Coal Management Report*.



Anasazi ruin

Utah wilderness battle continues

The Bureau of Land Management has decided that 500,000 acres of BLM land in Utah formerly dropped from wilderness review do indeed have wilderness characteristics and should be designated wilderness study areas.

The recent decision is the result of an appeal filed in 1981 by the Utah Wilderness Association and 13 other organizations on 925,000 acres. An April 18 decision by the Interior Board of Land Appeals ordered the BLM to reinventory 825,000 acres and reversed the decision on another 16,000 acres, making them instant wilderness study areas (*HCN*, 4/29/83).

Conservationists are pleased with the results of the BLM decision, which results in about two-thirds of the appealed acreage being proposed as wilderness study areas. "We feel the agency realized their previous error in excluding these magnificent areas from further wilderness consideration," said

Gary Macfarlane of the Utah Wilderness Association.

However, while generally pleased, conservationists feel an additional 250,000 acres were dropped from wilderness review on the basis of the same faulty logic that caused the IBLA to order the reassessment. They will continue to participate in the public comment process which ends September 2 and hope to have more of the acreage included in the final decision, according to Macfarlane.

In another effort to save more of the BLM lands in Utah, the Sierra Club has sent a letter to the agency asking it to reinventory an additional 1.2 million acres that were also dropped from wilderness review after the final inventory in 1979. According to Jim Catlin of the Utah Sierra Club, these areas would have been included in the 1981 appeal but the limited time allowed for filing the appeal prevented the club from

challenging more of the decisions. As it was, the appeal consisted of 1,400 pages and was the largest ever filed with the Interior Board of Land Appeals.

Areas proposed as wilderness study areas by the BLM include the Death Ridge, Wahweap, Burning Hills and the Cockscomb units in the Cedar City District; the Winter Ridge unit in the Vernal District; Fiddler Butte in the Richfield District; and Desolation Canyon, Floy Canyon, Flume Canyon, Coal Canyon and the Mancos Mesa units in the Moab District.

The BLM has proposed dropping from further study the Dugway Mountains, Horse Spring Canyon, Carcass Canyon, Mud Spring Canyon and the Central Wah Wah units in the Cedar City District; the Mt. Ellen/Blue Hills and the Mt. Pennell units in the Richfield District, and the Newfoundland Mountains unit in the Salt Lake District.

— Jan Valdez

Vocal majority endorses Riley Ridge

The proposed Riley Ridge gas field in western Wyoming has gained resounding support from area residents despite the potential for acid rain in the nearby Bridger Wilderness. At four public meetings held in July to discuss the project's draft environmental impact statement, participants overwhelmingly endorsed the project and encouraged the perspective companies — American Quasar, Northwest Pipeline, Mobil, Williams Exploration and Exxon — to proceed.

The project plans call for tapping into a huge natural gas reservoir which underlies the eastern slope of the Wyoming Range. Extraction and processing of the fuel would entail construction of four gas sweetening plants and the drilling of up to 238 wells.

While area residents are pleased at the prospect of an employment boom, officials from the Bridger-Teton National Forest and the Wyoming Game and Fish Department are concerned that the project may contaminate the Wind River Mountains' Bridger Wilderness with acid rain. According to the draft EIS prepared for the Bureau of Land Management, the Riley Ridge Project in full operation would emit 15,833 tons of sulfur dioxide per year into the atmosphere. Forest Service officials are worried that when prevailing winds carry these emissions over the Wind River Range, acidic deposits will contaminate the 1,300 lakes which dot the wilderness.

According to Forest Service hydrologist Al Galbraith, the Wind River Range is particularly susceptible to acid precipitation. "First of all, it's a granitic mountain range, which means it has low weathering rates and little neutralizing

ability. Secondly, the airflow pattern will carry the sulfur dioxide from Riley Ridge directly over the wilderness."

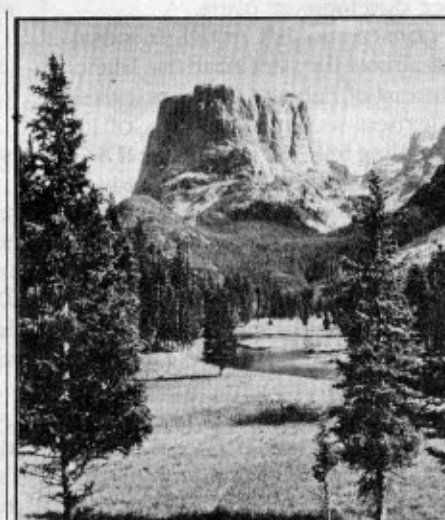
While the exact causes and impacts of acid precipitation remain a grey area of science, government officials are taking no chances. Beginning this summer, personnel from the Forest Service and Game and Fish will monitor water samples, vegetation and trout populations within the wilderness. The Forest Service expects to spend \$100,000 on the monitoring program and to continue it annually.

"We owe it to the public to find out what is going on. We want to establish baseline data this year so in the future we will be able to monitor and detect any changes," said Fred Kingwill of the Forest Service.

Paul Henderson of Exxon supports the Forest Service's monitoring program and assured local residents at the meeting that maintaining air quality was a high priority. "Exxon will use the best technology available to remove sulfur," Henderson stated.

In addition to the comments at the public meetings, the BLM received 40 comment letters in response to the draft EIS. According to Byron Shark of the BLM, the majority of the letters were in favor of the project, although many expressed concern over air quality, visibility and operating standards.

There's a strange irony in the broad public support for the Riley Ridge project. When the Forest Service proposed timber sales in the Upper Green River Valley three years ago, Sublette County residents were strongly opposed due to the potential impact on the area's wildlife. Yet, the equal uncertainty of the



Squaretop Mountain, Bridger Wilderness

impact of acid rain is being all but ignored.

As one observer at the Pinedale meeting told the Forest Service's Kingwill, "If you guys came here to discuss cutting a million board feet of timber, these people would tear you to pieces. I can't believe this reaction."

Undoubtedly, the vocal majority has endorsed the Riley Ridge project. The existing high unemployment and the potential for mineral royalties are popular incentives for local support. Yet Kingwill cautioned that local sentiment may not be as unanimous as it may appear. "I recognize that there are other people who are talking amongst themselves. People who are honestly concerned. They just weren't at the meetings or chose not to express themselves in that situation," Kingwill said.

The final EIS is due to be completed by the end of the year.

— Dan Gorham

Feds begin U-tailings cleanup

More than 20 years after the uranium mill closed down, the Department of Energy is close to cleaning up uranium mill tailings left abandoned by Susquehanna-Western Inc. near Riverton, Wyoming.

While pleased that something is finally being done, the tribes of the Wind River Reservation and the state of Wyoming are unhappy with DOE's recent announcement that it plans to stabilize the tailings on the site.

According to Nancy Freudenthal, acting administrator of the Land Quality Division of the Department of Environmental Quality, the state has not necessarily decided that the tailings should be moved. However, Freudenthal said DOE does not have enough information about the local hydrology to make that decision yet. She is concerned because the tailings have already contaminated the groundwater, which DOE does not plan to clean up. According to Mark Matthews, DOE's national cleanup manager, the agency also does not have to abide by state standards.

The Shoshone and Arapahoe Tribes of the Wind River Reservation have said in the past that the tailings should be moved from the present site, which is within the boundaries of the reservation but on land owned by non-Indians. However, they are reviewing DOE's plan to see if enough precautions are being taken to protect the area and tribal members. Because of conflicting jurisdiction over wells in the area, neither DOE nor its consultants know if tribal members are using contaminated water now.

DOE has taken the position that it is a non-Indian site, meaning that the state must supply 10 percent of the cost of

the cleanup and that the state, and not the tribes, has veto power over the clean-up plan.

The preliminary environmental assessment prepared for DOE proposes stabilizing the tailings in place. If they are to be moved, the document proposes two other sites — one along the Little Wind River on the reservation and the other 12 miles southeast of the present site in an area that is primarily federal land. Other sites could be considered, Matthews said. Responding to Freudenthal's concern, he said DOE recognizes it does not have all the data it needs to make a final decision. But he said DOE does have enough data — not all of which has been shared with the state — to come up with a proposed plan of action.

The agency is still analyzing the extent of the existing pollution, the speed at which the groundwater is moving and the permeability of the rock by which it is moving. The analysis is expected to be completed this fall, but the information will not be included in the environmental assessment, which has already been drafted.

DOE plans to move all the contaminated material to the 73 acres where the tailings now lie. A 20-foot deep slurry wall would be constructed around the perimeter, and the top would be covered with three to six feet of topsoil, rock and other material. Because of a lawsuit against the agency, DOE also plans to clean up hot spots away from the site if further testing confirms a problem. A total of 38 hot spots with elevated radiation readings have been located in the Riverton vicinity, which could indicate that tailings were used in building construction.

Because both the tribes and the state want a remedy for the current problem, they might not be too rigid in their demands of DOE. Freudenthal of Wyoming's DEQ said, "It would be nice if we had unlimited funds to move the tailings to a drier site." The present site is located between two rivers and in a high water table area, making the likelihood of water contamination much greater. However, she said the Wyoming legislature is going to be hesitant to spend an additional \$4 million or \$5 million.

DOE estimates its proposal to stabilize in place would cost \$11 million, of which Wyoming must pay 10 percent. Moving would cost several times as much.

Environmentalists, however, may not be so flexible. Concerned about the precedent this plan will set for other active and inactive mill sites, they might demand a full environmental impact statement, rather than an environmental assessment. EISs are being prepared for most of the other high priority sites.

Riverton is one of nine sites given a high priority for cleanup because of the amount of tailings and their proximity to populated areas or to flood plains. DOE expects to begin construction on all the high priority sites in 1985 or 1986. The others are Durango, Grand Junction, Gunnison, Rifle and Slick Rock, all in Colorado; Canonsburg, Pennsylvania; Salt Lake City, Utah; and Shiprock, New Mexico. They are among 24 abandoned uranium tailings sites slated for cleanup when Congress passed the Uranium Mill Tailings Radiation Control Act in 1978.

— Marjane Ambler



No home on the firing range

Some wild horses in Utah will be looking for new homes this month because of potential conflicts with military operations. Part of the Cedar Mountain herd, which ranges on both public and military lands in the Orr Springs area of Dugway Proving Grounds in northwestern Utah, will be captured and made available for adoption under BLM's Adopt-a-Horse Program. Recent rangeland fires in the Cedar Mountains have reduced the forage in the area and the BLM is worried that the horses will migrate into areas where they would conflict with military activities. Under BLM's Adopt-a-Horse Program individuals can adopt up to four horses a year with a \$125 fee per animal.

Great Plains to request aid from SFC

Anticipating up to a \$1.8 billion deficit during its first 10 years of operation rather than the \$12 billion profit originally projected, the Great Plains Gasification Consortium plans to request assistance from the federal Synthetic Fuels Corporation. The consortium will have to request that the SFC issue a special solicitation fitting its particular type of coal and plant size since the coal used in the Great Plains project is not of a type specified in any of the SFC-targeted solicitations. The solicitation would also be open to other companies, and then would go to the advisory board and board of directors of the SFC for approval. Two separate studies, however, done by Fluor Corp. and Schiff-Hardin indicate that Great Plains may have overestimated its potential losses by not considering the tax write-offs available, and the deficit may not be "nearly as serious" as originally thought.

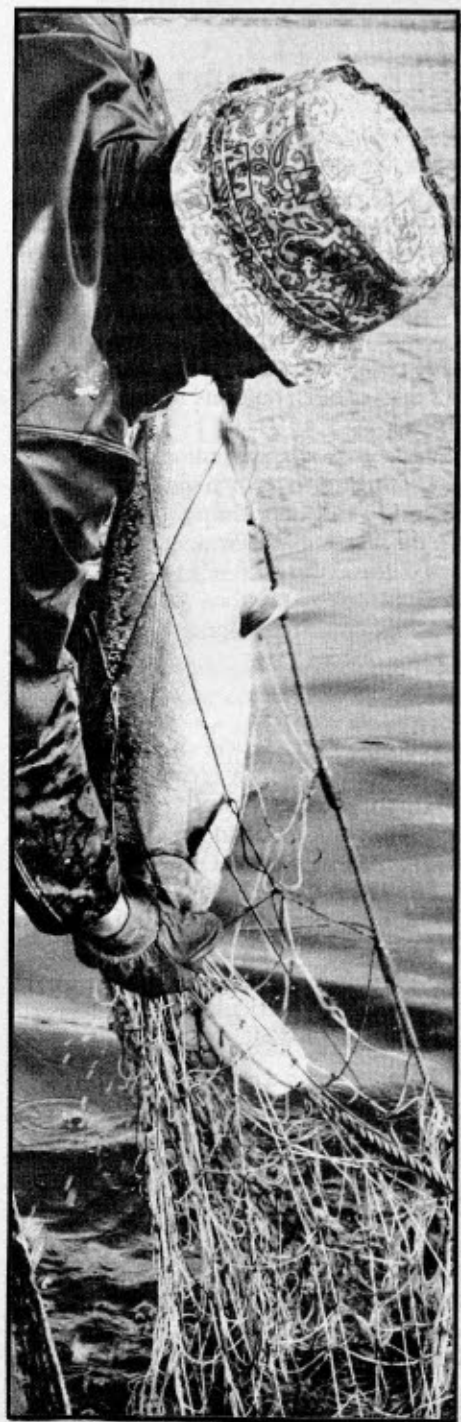
Indians get seed money

The Bureau of Indian Affairs has announced a new program to promote economic self-sufficiency and attract private investment on Indian reservations. Grants totaling \$7.5 million are to be distributed by September to provide "seed money" to attract private sector investment and to improve management of tribal programs. The BIA expects the grants to attract non-Indian investors who are interested in developing the land, water, minerals, forestry, oil and natural gas and other natural resources on Indian reservations. The objective of the program is to "improve economies on Indian reservations" and lead to "less dependence on the federal government."

Now why didn't we think of that before?

Two Oregon groups have come up with a new twist to the jobs vs. wilderness debate. The Northeast Oregon Group of Earth First! and the Union County Environmental Council have proposed establishing a three million acre Nez Perce wilderness in Oregon, Washington and Idaho while at the same time creating millions of dollars worth of jobs. The jobs would result from relocating the 10,000 people and their buildings from within the area, eliminating all roads, fences, dams, sign and utility poles, and then revegetating disturbed land, including all crop land. "This proposal is proof that wilderness does not eliminate jobs but rather creates jobs and improves the economy," said Thomas Moore, spokesman for the groups.

Idaho salmon decline



Chinook salmon caught in Columbia River

They travel 900 miles — against strong current, over eight major dams and without eating during the entire journey. This year so few of the spring chinook salmon made that journey from the Pacific Ocean to Idaho's mountain streams that the Idaho Department of Fish and Game (IDFG) ordered the closure of all state waters to Indian treaty salmon fishing. Until this year, the Shoshone-Bannock and Nez Perce tribes have continued limited salmon fishing under their treaty rights; sport fishing by non-Indians has been closed since 1979.

The Shoshone-Bannocks criticized the IDFG for waiting "until the last minute" to inform the tribes of the closure. The IDFG denied those charges, saying it has worked all along with the tribes and the tribes should have known closure was imminent because they have their own biologists monitoring the salmon runs. In contrast to previous selected stream closures, this statewide fishing ban is apparently not being overtly challenged by the tribes. On July 24, the Shoshone-Bannock Tribe joined with the state and imposed a formal fishing closure. The IDFG reported only two Indian fishing violations since the July 15 closure.

"They realize they have a serious problem through no fault of their own," said Herb Pollard, anadromous fisheries coordinator for the IDFG. "They have held themselves down to what is essentially a ceremonial and subsistence fishery." He noted that the Shoshone-Bannocks fish with "traditional spears," and the Nez Perce use spears, gaff hooks and dip nets.

Pollard said only about 10,000 spring chinook have been counted coming into the Salmon River drainage in Idaho, one-third the number needed to maintain the current — and already low — salmon populations. All hatcheries in the state, which intercept a portion of

the returning salmon to milk their eggs and sperm, are running far below capacity, Pollard said.

Dams are the main reason for the dangerously low returns, compounded by an ever-decreasing number of undisturbed spawning streams, heavy fishing pressure in the ocean, and additional fishing pressure in the Columbia River, according to Pollard. "We've been in a downward spiral for 20 years," he said, adding, "We've had five years in a row of record or near-record low runs."

Nevertheless, Pollard said he remains optimistic about the recovery — albeit slow — of the salmon runs. The Northwest Power Planning Council's efforts to manage water for better salmon runs is "one of the major reasons to be encouraged," Pollard said. The NWPPC's programs will make money available to aid in fish passage at the dams and for habitat rehabilitation. In Idaho, additional hatcheries now being built will triple the number of salmon smolt the state will be capable of rearing and releasing, Pollard said. But, he added, "Hatchery capacity is not going to do us any good if the fish don't make it back."

A treaty, yet to be ratified by the United States and Canada, would increase the number of returning salmon, Pollard said, by limiting the number of fish caught offshore. The treaty is designed to prevent U.S. and Canadian fishing boats from catching the other country's salmon. Pollard said an estimated 400,000 fewer salmon would be caught under the treaty agreements.

Pollard said initial indications show an increase in returning salmon expected over the next few years. "I don't think people should be discouraged," he said, "but they should be patient."

— Glenn Oakley

Hanford and INEL

Building bombs in the Rockies

by Don Snow

In 1944, the Japanese military launched hundreds of incendiary balloons over the Pacific, hoping that warm ocean winds would blow them into the large, combustible forests of America's Pacific Northwest. It would be good, the Japanese thought, to get their enemy fighting forest fires as well as Germans, Fascist Italians and Japanese. One of the balloons landed on a power line feeding into a brand-new atomic reactor near Richland, Washington, causing the machine to be shut down and the burnt line repaired before the machine could continue producing special nuclear materials for the U.S. War Department. Undoubtedly, the Japanese had no idea of what their one lucky balloon had done at the Manhattan Project's Hanford Engineering Works. A year later, the United States military answered Japan's gossamer assault on the mainland with another incendiary device — the atomic bomb.

The first nuclear weapon dropped on Japan contained many kilograms of highly-enriched uranium-235, a rare isotope of a common metal that had been concentrated to over 90 percent purity in a new factory at Oak Ridge, Tennessee. The bomb was nicknamed Little Boy. On August 6, 1945, it killed over 100,000 Japanese at Hiroshima.

The second bomb, dropped three days later, was called Fat Man. A plump black egg cased in steel and tipped with a box-kite tail, Fat Man was 11 feet long by five feet in diameter. Its fuel was plutonium — the very plutonium that was being created at Hanford during Japan's balloon assault. Three new "pro-

duction reactors" there had been dribbling plutonium for many months prior to its eventual use in a weapon.

Although there were many kilograms of this substance inside Fat Man, only one gram — less than half the weight of a dime — completely split, its minute mass converting instantly into an expansive fireball of energy and blowing a cloud of radioactive particles over what was left of Nagasaki. Many more Japanese died from the effects of Fat Man, bringing World War II to an abrupt and memorable close.

A few years later scientists working at Los Alamos Laboratories in New Mexico invented fission bombs as powerful as Fat Man in a package the size of a beachball. Fission bombs became so tiny and efficient they could be launched as artillery shells from tanks. Large howitzers could throw them, or they could be planted in the ground as land-mines, silently waiting to vaporize the owner of an errant foot.

When the Soviets set off their first nuclear device in 1949, President Harry Truman ordered the full-scale development of a thermonuclear bomb, one that used a nuclear fission reaction merely as a "trigger" to heat certain isotopes of hydrogen to the point at which nuclear fusion would occur. The result was "Mike," a 22-foot-long canister that produced a yield of 10 megatons — nearly a thousand times more powerful than the Nagasaki bomb.

Like the fission bombs before them, thermonuclear bombs became smaller and smaller until several of them could be packed together in the nose of a single missile. It became possible for a single high-yield H-bomb to contain the power of all the explosives used by all the combatants in World War II.

Plutonium-239 and uranium-235 are the two heavy isotopes used in nuclear weaponry. The latter exists in nature: seven per thousand atoms of natural uranium are U-235. The rest is uranium-238, nonfissile but indispensable in the production of plutonium, a man-made element. Bombarded with U-235 neutrons in a nuclear reactor, U-238 turns into neptunium-239 which decays in turn into Pu-239 in about three days.

The reactors in which humans created the first significant amounts of plutonium were all at the Hanford Engineering Works, now called the Hanford Reservation in Washington, where the government eventually built nine plutonium production reactors to create a substantial stockpile of plutonium to go along with the half-million kilograms of weapons-grade U-235 that the Atomic Energy Commission had squirreled away by 1970.

Today, only one production reactor, imaginatively named the N-reactor, and one fuel reprocessing plant called Purex (plutonium-uranium extraction) are still operable at Hanford. N-reactor has been running more or less continuously since its start-up in 1964, but the Purex plant closed following federal decisions not to proceed with spent-fuel reprocessing in 1971.

Ever since the Reaganauts took office, these two facilities have undergone significant upgrading. They are to be part of the technological team that produces plutonium for a new generation of atomic weapons. In putting this team together, the Reagan administration has forsaken more than a decade of nuclear

non-proliferation and has seriously undercut the thin strands that separate nuclear power from nuclear weapons technologies.

In 1958, the government coughed up \$198 million for construction of the N-reactor, a unique machine in the plutonium production arsenal. Unlike other plutonium producers, N could make fissile fuel and electricity for civilian use. Such a dual-purpose design has always made proponents of nuclear power nervous. One of the best arguments the nuclear club carried to a suspicious public was that nuclear power and weapons could coexist without becoming inextricably linked. President Dwight D. Eisenhower had said so in his famous "Atoms for Peace" speech in 1953, and virtually every president until Reagan reaffirmed the message.

But N-reactor — more than any other nuclear facility in the country — showed the artificial curtain that separates peacetime from wartime atomic technology. For two years after start-up, N operated in the plutonium-only mode, producing many kilograms of weapons-grade fuel for a new generation of weapons. Then in 1962, Congress authorized conversion of the N-reactor to a dual-purpose operating mode. The Washington Public Power Supply System, representing 19 utilities in the Northwest, spent \$125 million for a new electrical generator to use the waste heat from N. Four years later, N started generating 860 megawatts of civilian power, while its plutonium production switched from weapons-grade to fuel-grade plutonium, the latter isotopes committed to use primarily in experimental breeder-reactors.

The Reagan administration, however, is once again changing the operating mode of N-reactor back to weapons-grade plutonium, and resurrecting the mothballed Purex reprocessing plant. In order to fuel the 17,000 new nuclear devices the administration wants by 1990, much more weapons-grade "ploom" must be produced. Along with N, the mothballed L-reactor at Savannah River, Georgia, and a brand new machine called the New Production Reactor are being readied to satisfy the military demands.

Until 1971, the government purchased spent reactor fuel from utilities for reprocessing. Factories at West Valley, New York, and Morris, Illinois, extracted the plutonium from the spent fuel and shipped flasks of liquid plutonium nitrate to Hanford for storage. But the issue of plutonium proliferation, coupled with a reduced military demand for the strategic fuel, shut down governmental reprocessing. Private industry had no use for the fuel, since the breeder-reactor had not yet been developed commercially. Only the N-reactor at Hanford continued to create both plutonium and commercial electricity, thus maintaining one major link between nuclear power and weapons.

With the new Reagan initiatives, that link is strengthened considerably. In 1982, the Department of Energy received \$49 million to resurrect Purex, \$30 million to increase Pu-production at N, and \$63 million to bring the L-reactor back on-line. These activities are part of a billion-dollar effort to enhance nuclear materials production.

Today about 70 tons of plutonium exist in the spent-fuel rods stored at

commercial reactor sites around the country. Many of these depleted rods will be shipped to Hanford for storage in the Basalt Waste Isolation Project operated by Rockwell International. Reagan administration officials are now reluctant to discuss plans for extracting plutonium from the spent commercial fuel, but former Secretary of Energy James Edwards said in 1981 that reprocessing was the best way to treat nuclear "waste," since it guaranteed both the receipt of a valuable product and the partial detoxification of spent fuel.

Last year in hearings before the Procurement and Military Nuclear Systems Subcommittee of the U.S. House, Herman Roser, assistant secretary for DOE Defense Programs, said that Congress should not follow any initiative that would foreclose the option of reprocessing commercial fuel. "There is not another nation that has nuclear weapons that forecloses the use of that plutonium," Roser said. "I think it would be just foolish for us to do it."

Far from foreclosing plutonium production, the U.S. long ago embarked on a plan to build a commercial breeder-reactor, a machine capable of creating more fissile Pu-239 than the amount of U-235 it consumes. Hanford has been a leader in this technology, too, with a new breeder materials testing reactor called the Fast Flux Test Facility. Its heat and plutonium will both remain unused, but the information generated from FFTF testing will go a long way toward bringing the United States up to parity with other developed nations that are already using commercial breeder facilities. France, with its large Super Phenix breeder, is clearly the world's leader in the technology and the country most committed to replacing petroleum with plutonium to run its society.

With N-reactor recommitted to weapons material production, and L-reactor joining the other three existing plutonium producers at Savannah River, the Reagan administration is well on its way to creating enough strategic fuel for the neutron bomb, the cruise missile, the MX and other additions to the nuclear arsenal.

What this administration needs now — according to its own spokesman — is a good \$4 billion tritium producer. That would be the New Production Reactor, slated for construction in one of three likely places — Hanford, Savannah River or the Idaho National Engineering Laboratory.

Following World War II, while Hanford busily created a vast plutonium stockpile, acronyms began to flourish on Idaho's Snake River Plain. There were LOFT and NRAD, ZPPR, TREAT and BORAX. There were EBOR (rhymes with Egor), FRAN and SUSIE; SNAPTRAN, HOTCE, SPERT and WERF. And these were the unpronounceables, inarticulate in the desert: CFRMF and RWMC, LTSF, HFEF and CRCE.

Roger Scott, public relations director for an acronym known as EG&G of Idaho, works for one of the private contractors at the Department of Energy's Idaho National Engineering Laboratory near Idaho Falls. He occasionally leads tours through the acronyms of the Snake River Plain, taking his charges to places where he is allowed to go. He pilots a propane powered DOE automobile toward the distant Lost River Range at whose majestic foot stands one of the



Photo by Mike McClure

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Aug. 5, 1983 — High Country News 7



What this administration needs now — according to its own spokesman — is a good \$4 billion tritium producer to help produce enough strategic fuel for the neutron bomb, the cruise missile, the MX and the other additions to the nuclear arsenal.

world's most peculiar museums of high technology. Like an ancient soothsayer, he tells what the acronyms stand for, as best he can remember, and calmly recites that since 1949 when the lab stopped being a gunnery range, 53 nuclear reactors have been built right here in Idaho.

Scott is not the person you would expect to meet on a tour of nuclear power plants. He is a devoted fan of Ed Abbey and a contemplative fly fisherman who seems to enjoy nothing more than floating the Snake. His office walls are adorned with rock'n'roll posters. He gives the impression that he could not be forced into a three-piece suit at gunpoint. Casual is his style.

An unabashed proponent of nuclear power, Scott listens carefully to arguments from the other side. He believes that many anti-nuclear protesters who raise legitimate concerns blunt their own effectiveness by their choice of tactics.

"Wrapping up in a bedsheet and spilling something red on yourself to signify

the blood of nuclear pollution — you know, some old spud farmer out here isn't gonna go for that."

But Scott knows those spud farmers will listen to tales of ground water pollution from the Idaho National Engineering Lab, and so he explains the problem as clearly as he can.

In 1953, workers at the Idaho Chemical Processing Plant at INEL began re-injecting used process water back into the massive Snake River Plain from which it had come. The water was used in the process of recovering useful uranium-235 from spent naval reactor submarine cores. By 1978, when INEL became established as the national center for naval reactor reprocessing, the ICPP injected over 800 million gallons of slightly contaminated water into the subsurface aquifers.

A major controversy, touched off by a newspaper article, suddenly surrounded the relatively sleepy nuclear lab out in Idaho. Even the governor got into the act, issuing letters to high-ranking DOE officials, and asking that

the problem be brought to light and solved.

"We were accused of keeping re-injection secret," said Scott. "People got stirred up over the alleged dumping of plutonium into their ground water. But our environmental sciences lab had been publishing dozens of reports routinely every year, and they all go to the governor's office. They had the data in every report, just as it was collected.

It was tritium, not plutonium, pollution that concerned INEL hydrologists. Chemically identical to the hydrogen in water, the tritium formed from neutrons bombarding small amounts of deuterium naturally present in water used for cooling. When the water was re-injected into the wells, most of the other radionuclides present — plutonium, strontium-90, cesium-137 — could be filtered out, but not tritium. As a result, a "plume" of waterborne tritium is gradually growing underground and heading for the southeast border of the 893-square-mile reactor laboratory. In 1980 it was nine miles from the INEL

border; within the next few years it will reach the boundary and keep on spreading, eventually reaching six miles outside of INEL by the year 2000.

Jack Berraclough, a U.S. Geological Survey hydrologist, has been studying the radionuclide plumes at INEL for many years. He believes they must be measured and monitored closely, but at present there is no reason for great alarm.

"There is a large body of ground water beneath the Snake River Plain," Berraclough said. "We see great attenuation of the radioactive materials such that by the time they reach the boundary they are extremely low-level and diffuse — of drinking water quality."

Berraclough points out that because of the presence of organic material in the fractured basalt of the Snake River Plain, most of the plutonium is captured through natural sorption. "Less than a five percent fraction is mobile," according to Berraclough.

Roger Scott claims that all of the plutonium released into the aquifer in 1978 was the volume of an alfalfa seed. "It becomes a philosophical question," he said. "If our monitors were one step less sensitive — as they were not many years ago — we could legitimately say there is no plutonium in the injection water."

But many Idaho residents are concerned about the future of ground water pollution at INEL, especially in light of new facilities that may be built there because of Reagan administration initiatives. The New Production Reactor, a mammoth tritium producer itself, might end up in Idaho through the skillful maneuvering of Sen. James McClure (R-Idaho), Chairman of the Energy and Natural Resources Committee.

Jim Mitchell, a coppersmith who worked 18 years for Westinghouse at INEL, believes the New Production Reactor would pose pollution threats of a new order at the laboratory. Mitchell claims that the \$4 billion plant will make up to 200 man-made isotopes and be "20 times more dangerous than all the existing facilities combined."

"The largest reactor on the site today has a half-ton of fuel in it," Mitchell said. "The new reactor will have over a hundred tons. What does that say to you?"

But a design for the new reactor has not yet been selected, let alone the site. A more pressing issue related to bringing the new tritium-plutonium producer to INEL is the very nature of the New Production Reactor. Unlike the tiny reactors that have populated the lab since its beginnings in 1949, the new reactor is not a research, or prototype, or training reactor, but a full-scale producer of weapons-grade nuclear material. It will be the largest machine of its kind ever built, and that fact has a few — very few — INEL employees worried.

As at Hanford, many of INEL's historic activities have tended to underscore the links that exist between nuclear power and weapons. The first domestic nuclear power station, built at Shippingport, Pennsylvania in 1957, took its design from the pressurized-water reactor originally designed for atomic submarines. Under the direction of Captain Hyman Rickover, Westinghouse Electric built the first PWR's and tested them at INEL.

The boiling-water reactor, the second major type of commercial light-water power reactor, also got its start at INEL when Argonne National Laboratories, working closely with General Electric, built a series of BWR prototypes — called the BORAX series — in Idaho.

Today INEL still focuses much of its effort — and budget — on activities that support the nuclear Navy. Four of the 15 reactors now operating there comprise the Naval Reactors Facility, where novice reactor operators are trained on dry-land prototypes before learning to

(continued on page 13)

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***“Some things I
found along
the way”***



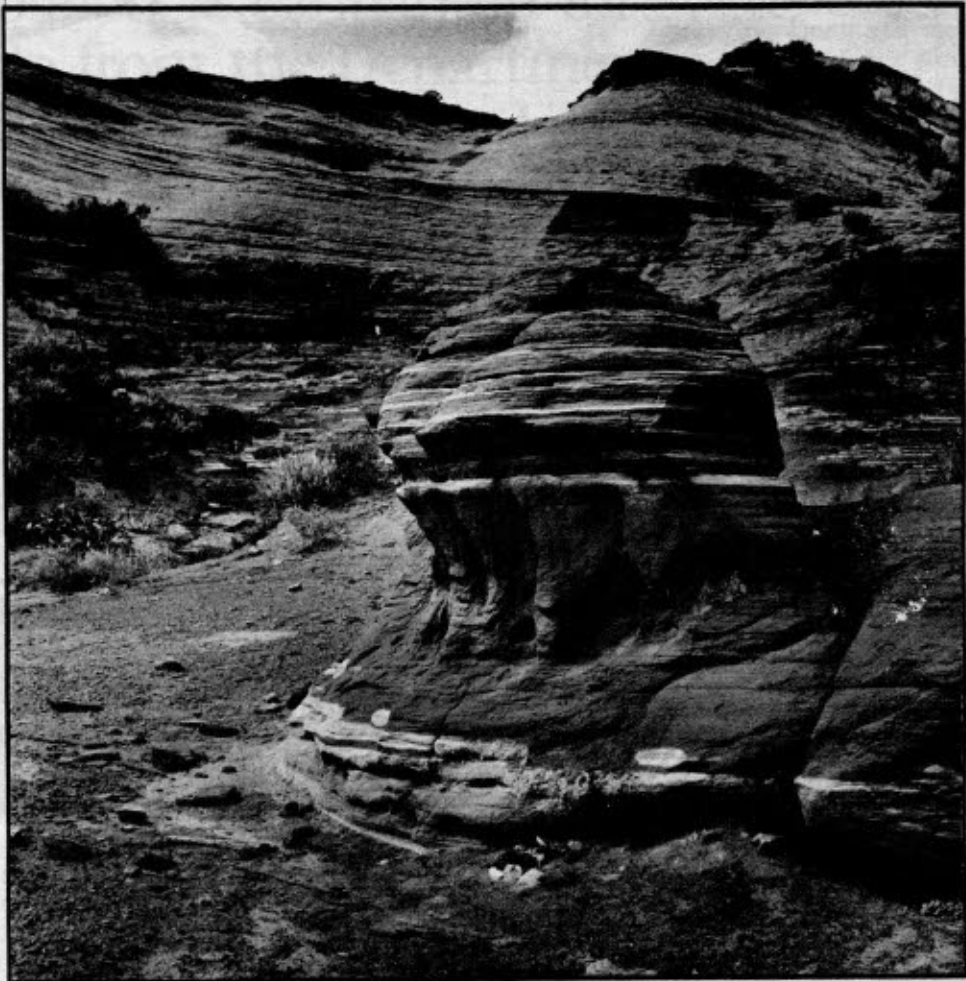
David Spear, 33, is a photographer with skills. He is presently coordinating darkroom for Photography and will be teaching one year. Then he'll go to the California Institute of Technology.

Originally from Middletown, Connecticut, he attended a college in California. He returned and spent time where he worked as a freelance photographer.

His long-term goal is to return to Montana at a higher level. "I want to give back to Montana and help," he said.

Spear has been a long-time contributor to the magazine.



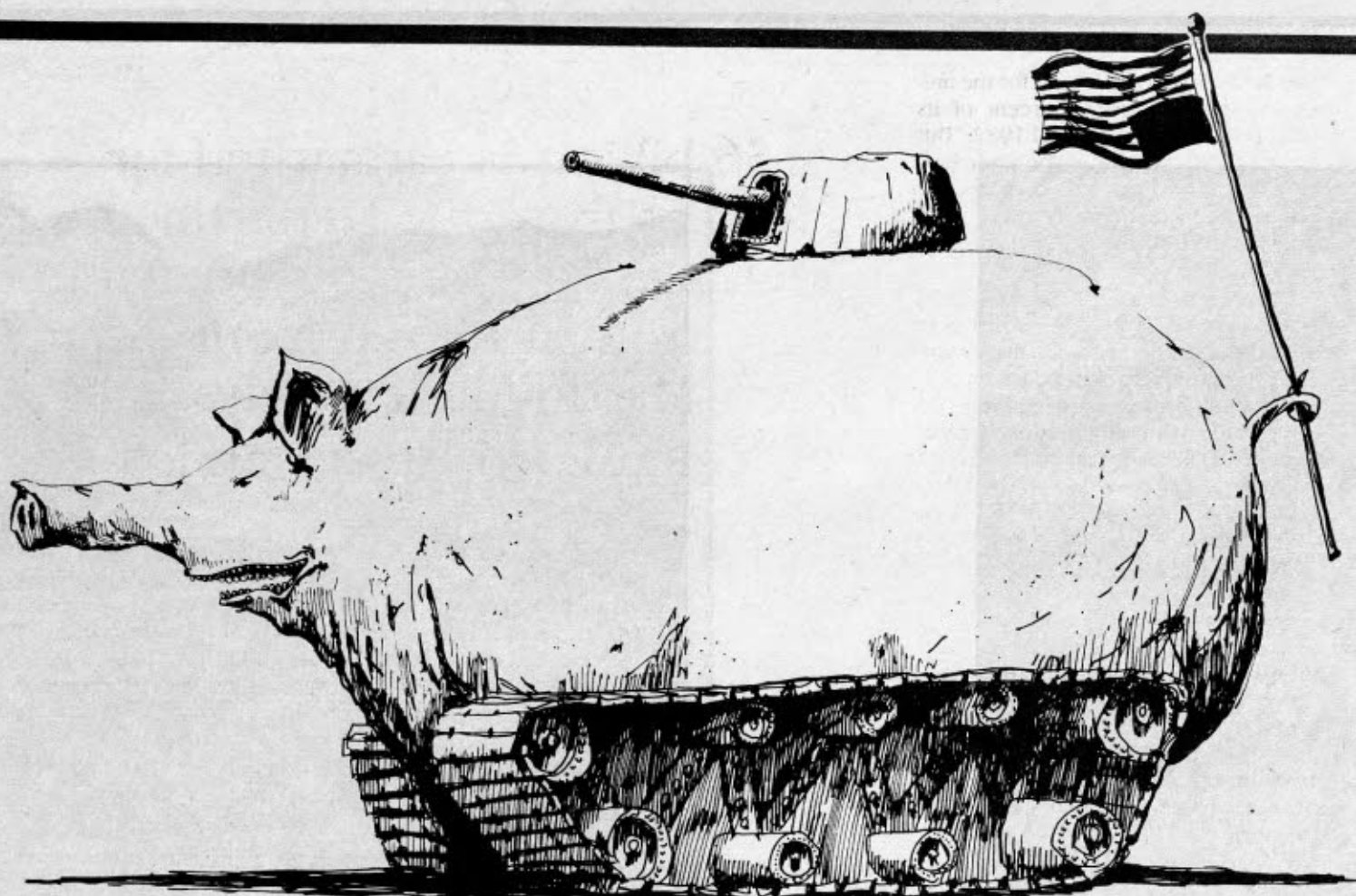


is a photographer currently living in New York City to "hone his
tly coordinating darkroom programs for the International Center
d will be teaching on the faculty there during the 1983-84 school
to the California Institute of the Arts to study more photography.
Middletown, Connecticut, Spear visited Montana on his way to
a. He returned and spent five years in Missoula and Columbia Falls,
as a freelance photographer.
al is to return to Montana and teach photography on the university
e back to Montana a little of what I got from its land and people," he
long-time contributor to, and supporter of, *High Country News*.

Paul J. Spear



10-High Country News — Aug. 5, 1983



Getting down to (defense) business in Colorado

by Donna Spohn

Against a black background, a giant hand holds four tiny components. A slender yellow light beam pierces the open palm's center, then shoots up and out again into blackness. The ad copy announces: "Perhaps the greatest concentration of defensive power in the history of the world. Rockwell International . . . where science gets down to business."

And, in Colorado, where science gets down to the business of defense. Although officials in the governor's office, the State Department of Revenue and the Division of Commerce and Development say they do not know to what extent the state's economy is wedded to the Department of Defense, Jacques Gansler in *The Defense Industry* lists Colorado as one of 11 states that derives 10 percent or more of its income from defense.

Today, defense expenditures in Colorado are at least three times higher than they were at the time of Gansler's writing in 1980. The DOD estimates it will spend nearly \$6 billion in the state fiscal 1983, excluding major procurements from businesses and civilian pay for civilian functions. Only three states — California, Virginia and Texas — will receive more money. Half the nation's top 20 Pentagon contractors for 1982 currently have divisions in Colorado, and others, such as United Technologies, gaze fondly at the state.

Military payrolls combined with those of Martin Marietta/Denver Aerospace, Rockwell's Rocky Flats and Ball Aerospace Systems, accounted, in personal income and sales taxes alone, for five percent of the state's total 1982 revenues. This figure represents only the front line of Colorado's defense spending, however. At least 100 companies in 10 Colorado counties regularly receive "prime" contract awards of \$10,000 to over \$900 million. About 97 percent of defense "procurement actions," however, amount to \$10,000 or less, and DOD no longer keeps records on these.

Military employees and the combined employees of Martin Marietta, Rocky Flats, Ball Aerospace, Ford Aerospace, Kaman Sciences and TRW/Colorado Electronics number more than twice the people employed by the State of

Colorado. The military payroll alone is greater than the state's total payroll for fiscal 1982.

Of Colorado's defense role, John H. (Jack) Boyd, Martin Marietta public relations director, said, "Good Lord, it's gigantic!" Boyd said he would be surprised if defense contributions to the state's revenue were as little as 10 percent.

Colorado companies involved with the defense industry range from American Coleman Company, Littleton (115 employees); Sinton Dairy Company, Colorado Springs (110 employees); and Creative Fabric Systems, Englewood (45 employees) to major contractors such as Rocky Flats (4,900 employees); Ball Aerospace, Boulder and Broomfield (1,500 employees) and Martin Marietta (8,900 employees).

The degree of defense dependence varies, but for most of these companies, defense dollars are important, in some cases essential, to their overall operations and continued health.

American Coleman depends for 25 to 33 percent of its business on an Air Force tow tractor used for staging intermediate and small military aircraft. The company has made the tractor, model number G-40, since 1950, but has now gone from two product lines to five because of the cycles involved in defense work.

According to Jeff Wright, vice-president for marketing, "In 1982, we were running about 115 people. In the mid-1970s, in the midst of our largest government contract, we had 470 people here. If you want to know about liabilities (of defense dependence), there's one right there."

Commercial business, depending on economic upturns and downturns, is relatively stable, Wright said, because of the diversity of people who use a product.

"With a government contract, you either have it, or you don't," added Wright. "That's why we've spread our base over more products to insulate us from these peaks and valleys."

On the other hand, Ball Aerospace controller George Powell sees DOD as a more stable marketing base "going out on commercial appeal and dealing with companies that may be here today and gone tomorrow. Financially, we're deal-

ing with an organization that we don't think is going to go broke," Powell said. "You can grow your industry by doing a good job for the government and getting repeat contracts."

On the debit side, however, Powell said, "You suddenly feel like you're working for the government. In a way, you're restricted to running your organization the way the government says. All the work you do is going to strictly conform to government regulations."

Powell sees major contractors as victims of the political party that is in power. "For example, in the past there has been more emphasis on NASA (National Aeronautics and Space Administration, which now accounts for nearly 50 percent of Ball Aerospace work), clear back to John F. Kennedy," Powell said. "When you get into the Reagan administration, there's probably a lot more emphasis on defense spending, and so suddenly you have to switch gears."

Martin Marietta's Boyd agrees that companies are politically vulnerable, and says at times they must basically restructure to suit government demands. He describes another type of uncertainty with which a major contractor must live. "Even after a company has won a contract, there's the threat of the government recompetiting at different levels for a lower price. They're doing that right now on this space shuttle program," added Boyd.

For Sinton Dairy, defense contracts are a significant part of business, probably 10 percent. Sinton supplies a variety of dairy products to commissaries, mess halls, military hospitals and the Air Force cadet dining room. General manager John Keating said the company hopes to arrive at a point where reductions in defense dollars would not harm them. "But it would hurt us very much right now," he added.

Keating suggests the impact of defense dollars is greater in Colorado Springs than anywhere else in the state. "The amount of dollars the military pumps in here is very significant," he said. "A lot of high tech work ends up being DOD work. And one thing brings in another."

Although unpublicized, subcontracting is another important component of

the defense picture, and state-to-state subcontracting is a common practice.

Ford Aerospace, in Colorado Springs, is a company heavily involved in defense subcontract work; DOD is by far its most important customer. Ford grew from a section of 20 to 30 persons around 1960 to the present independent operation level employing 650 — all with the help of defense spending.

David Kirkpatrick, industrial relations manager, said Ford often does jobs for California and New York companies, for example. When Ford itself needs subcontract work done, the company tries to go to a local concern, according to Kirkpatrick. "We try to keep the wealth in the family, but if they don't have the expertise or can't meet the requirements, we have to go outside the area."

Creative Fabric Systems thrives on defense subcontract work; right now this work is a very significant part of what the sewing and canvas goods company does, according to President Neal Weckworth. "Because the commercial industry has been in the throes of recession, we were unable to grow through them. So we've gone to the military and it has helped us enormously," Weckworth said. "We've given jobs to people here in the Denver area."

Defense involvement reaches beyond Colorado business and military installations. As a whole, more than 10 percent of the state's university graduate and faculty research programs are funded by DOD and the Department of Energy, which governs considerable nuclear research.

Since World War II, research funds have flowed in much greater volume from DOD sources than from the National Science Foundation, for example, which has the more favorable public image, according to Dr. Shirley Johnson, director of the University of Denver's Denver Research Institute. "Because of that public image, they're more vulnerable to Congress," said Johnson. So, DRI takes money when and where it can get it. "We're a defense contractor and a contract research institute. Our activities are on the defense side of defense, not the offensive side," Johnson added.

Larry Nelson, the University of Colorado's contracts and grants director, admits that funding from DOD, DOE

and NASA is very significant for the university, composing 23 percent of its total research funds in fiscal 1982. "But the one thing we take some pride in is that we have such a broad base of research that we're not in trouble if any one particular agency happens to be in the doghouse," Nelson said.

Jim Brown, Colorado State University's assistant vice-president for research, said any university with a viable graduate program is very dependent on outside support because state legislators do not provide support for graduate education. "DOD is just one avenue of many," Brown said. Since July 1, 1982, CSU has received about \$3 million in DOD and DOE contracts and grants for nearly 100 projects.

Most university defense work is unclassified. "We can go down to Rotary and talk about it if we want to," said Johnson. Faculty members do sometimes become involved with classified projects on an individual basis, however. But principles of academic freedom dictate that government cannot prohibit publication of university research.

"The only problem that the university has in its research funding," said Nelson, "is usually with private corporations in restricting publishing to protect patents. The institution cannot enter into any agreement that might compromise academic freedom," he added.

The Office of Naval Research, the Air Force Office of Scientific Research and the Army Research Office also support basic research of the why-is-the-grass-green-variety, which has no apparent military application.

"Without these three DOD agencies, the scientific endeavor in universities in this country in basic research would probably drop 50 percent or more," said Johnson. "Personally, I think it would be a real setback to this nation's development in science."

\$6 billion is earmarked for Colorado from the Department of Defense. Of Colorado's defense role, a PR rep from Martin-Marietta says, "Good Lord, it's gigantic!"

Over the years, defense involvement has created considerable debate in the academic community. Some are concerned about any university designing a weapon that can kill a million people, according to Johnson. "But there's equal concern within the university that if some of the best brains . . . are in the university and they're out there at the cutting edge in science, certainly the defense aspects should be available to the citizenry."

Others feel that without university scientists sitting on Washington's powerful committees, the system would lack conscience, Johnson said.

Critics of defense contractors often cite lack of competition and inflated costs as defects inherent in the system. But industry spokesmen say competition is tremendous and relative costs have increased no more than they have in the automobile industry, for example.

Tom Hendrix, chief estimator for Hensel Phelps, a large construction firm based in Greeley, said defense work was the company's bread and butter for many years. "But there's begun to be so many bidders on it now, for me it's a pain in the rear," Hensel Phelps is just finishing a \$29 million laser facility in White Sands, New Mexico.

Jim Sundstedt, vice-president and general manager of Woodward Governor, Fort Collins, agrees that competition has been "getting worse." Defense contracts are of fairly little significance to Woodward — less than 10 percent of sales — but the company pursues them nonetheless. "It costs you more to do business with the government — rules, regulations, paperwork," Sundstedt said.

Ball's Powell adds, "I've felt for years there's a public misconception about dealing with the U.S. government. There's always a sort of stigma attached to government contracts that there's no motivation to control costs because the trough never goes dry. Well, that's nonsense. If we don't compete, our market will dry up too."

But aside from any particular philosophical stance toward the arms race or defense activities in general the present reality is that Colorado's economy is significantly tied to an industry with a single customer (DOD), vulnerable to political whim and subject to government prescription, and in many cases too specialized for adaptation to commercial uses. State officials have not taken a close look at the extent or meaning of this involvement.

Jerry Allen, of C.U.'s Business Research Division, said no one has done a definitive study of Colorado's economic involvement with defense. Tom Dunn, of the State Department of Revenue's division of research and statistics, and Leonard Slosky, Gov. Richard Lamm's (D) adviser for science and technology, agree. Dunn said, "As far as I know, there has never been a study on how much of the state's income derives from defense. If somebody would try to tackle it, it would take a long, long time to figure it out."

Slosky said his office has started work on the subject, but "with great difficulty. Some aspects are very good — defense is doing research in everything from basic mathematics to language which only the most jaundiced eye would look askance at — but we're not very excited about the weapons themselves. We are not enthusiastic about the MX system, despite the fact that Martin Marietta has some of the major contracts."

Allen noted that Colorado's economy took "a bad beating" with Martin Marietta in the mid-1960s. "I happened to be out there then and they were laying off a thousand engineers at a time. It was bad news. In general, what happened was that their contracts just ran out — they were building all those Titans. It really dented the economy of the state in 1965."

As the governor promotes Front Range high tech and more large defense contractors eye the state for future expansion, a careful look at principles and priorities seems prudent. The best defense, after all, is a good offense — at least when it comes to making decisions for the future.

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Donna Spohn is a Denver-based freelance writer. This article originally appeared in *Westword*.

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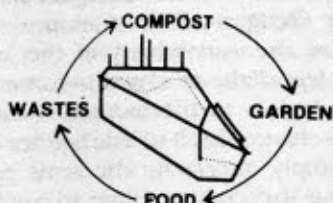
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WANTED. Letters written to your U.S. Senators and Senator Mark Hatfield (463 Russell Senate Office Bldg., Washington, D.C. 20510) urging support for House Bill 1149. This bill would designate 1.2 million acres as wilderness including the Lower Minam, Joseph Canyon (Chief Joseph's homeland), North Umatilla, Glacier Monument and 220,000 acres of the North Fork of the John Day. For more info write: Grande Ronde Resource Council, Box 1298, La Grande, Oregon 97850.

STATE OF WYOMING PUBLIC NOTICE

A public hearing before the Environmental Quality Council regarding proposed revisions to Wyoming Water Quality Rules and Regulations, Chapter V, Certification of Operators of Public Water and Public Wastewater Treatment Plants, Public Collection and Public Distribution Systems will be held on September 14, 1983 from 1:00 p.m. to 4:00 p.m. and from 7:00 p.m. to 10:00 p.m. in the Crawford Room of the Natrona County Public Library, 302 East 2nd in Casper, Wyoming. Anyone wishing to make an oral statement at the hearing should provide a written copy of his/her comments to the chairman. Those persons wishing to comment who cannot attend the hearing should submit their comments, in writing to: John V. Crow, Hearing Examiner, Environmental Quality Council, 401 West 19th Street, Second Floor, Equality State Bank Building, Cheyenne, Wyoming 82002, prior to the hearing date. Copies of the proposed regulations are available upon receipt from: Wyoming Water Quality Division, 1111 East Lincolnway, Cheyenne, Wyoming 82002.

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WANTED: INTERN for *High Country News* to start Oct. 1, 1983, in Paonia, Colo. This non-paying position guarantees participation in both writing and production of the newspaper plus a certain amount of drudgery. An interest in natural resource issues is helpful; a sense of humor is appreciated. Send expressions of interest, resume and any clips to HCN, Internship, Box V, Paonia, Colo. 81428.

Missiles...

(continued from page 1)

fired at Vandenberg Air Force Base in California. Our success rate is very good." Hickman did not note, however, that the firings are from test launch facilities. James Fallows, in his book *National Defense*, noted that a Minuteman has never been successfully fired from an operational silo. The Air Force tried it four times and finally gave up.

The point of the triad is that all of the legs work together to assure that the U.S. can respond adequately to a pre-emptive nuclear strike by an enemy, probably the Soviet Union. The fact that we can do this — and that the Soviets know we can it — is known as deterrence. They won't attack us if they know that is suicide, and vice versa. This phenomenon is known as mutually assured destruction, which has the unalluring but appropriate acronym MAD.

The triad concept, by the way, was

not a conscious strategic decision on the part of the military. It simply evolved as various arms of the military responded to various threats. Nevertheless, it has become an article of military dogma.

To belabor a cliché, what we're really doing here is thinking about the unthinkable — nuclear war. A one megaton bomb — the explosive equivalent of one million tons of TNT or 80 times the strength of the bomb that destroyed Hiroshima, Japan, in 1945 — would kill 99 percent of the people living within a five-mile radius of ground zero. That presumes that the bomb is detonated 8,000 feet above ground and it counts deaths from the explosion only, not from fire and radiation. The Hiroshima explosion killed an estimated 100,000 people. A one megaton explosion would destroy approximately 17 times the area of the 1945 blast. The Hiroshima bomb was 12.5 kilotons.

The entire missile launch procedure takes about two minutes. Then, that baby's history. And so is Moscow.



Further reading

In preparing this article, I relied heavily on two books about U.S. defense. Both try to explain defense to lay people in an intelligible manner, but from different approaches. I'd recommend both of them to anyone who is interested in a fuller understanding of what the U.S. defense posture really is and how decisions about it are made.

The first book is titled simply *National Defense* (Random House, \$12.95, hardbound) by James Fallows. Washington correspondent of the *Atlantic Monthly*, Fallows has written a thoroughly readable and insightful book "designed to give the general reader better ways of thinking about defense." It is pretty easy to get lost in the details of daily newspaper, TV and magazine reporting about various defense systems, basing modes, military questions and other matters. Fallows tries to give

an overview, a context in which the informed layman can evaluate these issues. He succeeds admirably. This book ought to be required reading.

The second book is entitled *What Kinds of Guns Are They Buying for Your Butter?* (Morrow, \$15.95, hardbound). It is subtitled "A Beginner's Guide to Defense, Weaponry, and Military spending." This book takes a different approach to the defense question, outlining what sorts of weapons we have, what their position in the defense picture is, how they have evolved and what the future is likely to hold. Despite some occasionally tortured writing, the book is a valuable reference and fills out the outline that Fallows gives with a substantial look at what we — and the Soviets — have and why. Read Fallows' book first, but both are good.

— DSW

DEFENSE CONTRACTS IN THE ROCKIES

Colorado	\$1.1 billion
Utah	\$561.8 million
Idaho	\$95.3 million
Wyoming	\$89 million
North Dakota	\$69.5 million
Montana	\$43.1 million

The warheads on the Minuteman III missiles at Warren Air Force Base are 170 kilotons. Since the introduction of multi-warhead missiles, the military has deliberately chosen to arm missiles with smaller warheads — less than .5 megatons — because they do quite enough damage, thank you, and are easier to lift into space and target. These missiles are known as MIRVs, for multiple, independently targetable re-entry vehicles. The MX will be a 10 warhead MIRV with each warhead having a yield of 335 kilotons, about twice the current warhead yield on the missiles to be replaced.

So, construction of the MX means a substantial net increase in the explosive yield of the U.S. nuclear arsenal. One hundred MX missiles with 10 warheads each of .335 megatons will replace 100 Minuteman III missiles with three warheads each of .170 megatons. That is an increase of 284 megatons in Wyoming, Nebraska and Colorado.

Warren Air Force Base seems an incongruous place to command all this ultramodern destructive power. It is one of the few places around Cheyenne that I would even call pretty, with lots of full grown trees and green open spaces. It was established as an army base on July 4, 1867, and some of the original buildings are still in use. It has a long and colorful history.

After 1910, Warren was the largest cavalry base in the U.S. In 1912, the famous General "Black Jack" Pershing was stationed there. At the time, Pershing was a mere captain, but he was promoted straight to brigadier general after marrying the daughter of then-U.S. Sen. Francis E. Warren, for whom the base was later named. There are still whispers of impropriety about that on the base.

There is no longer any cavalry at Warren. In fact, it is an air force base without airplanes. The nearest armed missile is about 25 miles away. The rest are spread out in four flights of 40 missiles each, covering 12,500 square miles of southeastern Wyoming, western Nebraska and northeastern Colorado.

Warren is the home base of the 90th Strategic Missile wing. There are about 250 crew members who actually man the launch control facilities, 450 people involved in direct maintenance of the missiles and 3,000 other officers and support personnel.

Actually, despite what you may have heard, the Air Force is not really crazy about missiles. The Air Force prefers things that roar and whiz, like F-16 fighters and B-1 bombers. Missiles just sit there, never get used and are a constant maintenance chore. Maintenance, while necessary, is not very glamorous.

Lt. Col. Don Christianson, chief of public affairs at F.E. Warren, said, "Most people who join the Air Force want to fly. It can be difficult to recruit people into missile work, but there are a number of incentives offered to those who do."

It is not hard to see why recruitment to these duties is difficult. The maintenance work is ongoing and done by enlisted personnel. The launch control centers are manned by officers and a tour does not seem particularly inviting.

Each morning at about 7:30, 20 two-man launch crews meet for a briefing at Warren. Then they drive from 25 to 180 miles to one of the 20 launch control

centers, which are buried about 60 feet underground. The door to the main launch control center can be opened only by the men already inside the launch control facility. When they go in, they transfer command, switching the locks on the red metal safe mentioned earlier — this is the only time this safe is opened except in case of a launch — and checking the seals on the various computer units to be sure they haven't been tampered with. Then the crew settles in for a 24-hour shift of duty. They do six to eight of these tours each month.

According to Lucas and Beckstrand, there usually isn't very much to do. The crews read, study, watch television and sleep. One crew member may sleep at a time, but one must be awake. If maintenance is being done on one of the silos under their command, they must perform the tests requested by the maintenance crew. This usually requires them both to be awake and alert.

Each launch control center has immediate command of 10 missiles. However, they have the ability to command as many as 50. For instance, if a missile at one of the other units were "enabled" — the first step toward a launch — for one reason or another, any one of the other four launch centers could inhibit the launch. Conversely, if, for some reason, the crew in another control center refused to launch its missiles, the others could do so under a valid order.

"Suppose," I asked Lucas, "That you were given a valid launch order and your partner went nuts and refused to turn the key? What would you do?"

Col. Dennis Murphy, who supervises the launch teams, answered for him, "That possibility is very remote. We have a very heavy screening policy and the officers are very closely watched during their whole career. If he has any misgivings about this kind of duty, he can be relieved. There would be slim and no chance of something like that happening. But even if it did, because of the way the system is set up, it wouldn't make any difference."

I should note here that, whatever one thinks of missiles and their potential for destruction, if Lieutenants Lucas and Beckstrand are any indication of the kind of people that are controlling the missiles — have their fingers on the button, as it were — the country is in pretty good shape. They were intelligent, conscientious and well-trained. They take their jobs seriously.

As I said, I visited Warren the day that the Senate approved the MX missile authorization. The purpose of the MX is twofold, according to the Reagan administration — to increase the survivability of the land-based leg of the triad and to force the Soviet Union to the bargaining table. Critics charge that it will do neither and will simply accelerate the arms race, bringing the country closer to nuclear war.

As we've reported before (*HCN*, 12/10/82), the MX has gone through a number of basing modes, from the ridiculous to the sublime. The two most seriously offered were the ill-fated race-track system that would have paved most of the desert in Utah and Nevada and the "dense pack" system, which was virtually laughed out of Congress. The

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latter system would have relied on the "fratricide" of incoming missiles to blow up each other rather than their target MX. Now, the administration has opted for placing the missile in existing Minuteman III silos.

One reason that Warren was chosen as a site is that the missile silos there are 10 feet taller (or deeper, depending on your frame of reference) than those elsewhere and the MX is 10 feet taller than the Minuteman III.

The pivotal document in the MX argument has been the Scowcroft Commission Report. This report, prepared by a commission of 18 prominent defense experts, including virtually every secretary of state and defense of the past 10 years, outlined overall U.S. defense posture and recommended the construction of the MX.

The really curious thing about this report is that both proponents and opponents of the MX cite the Scowcroft Commission to bolster their arguments. It is a report for all seasons. It pretty much admits that given current technology, it is impossible to insure the survivability of the land-based missiles.

However, it notes, "Although the survivability of our ICBMs is today a matter of concern (especially when that problem is viewed in isolation) it would be far more serious if we did not have a force of ballistic missile submarines at sea and a bomber force." This was precisely what MX opponents were saying. Why build a missile that can't be invulnerable when the whole point of the thing was to close this "window of vulnerability" in the first place? Food for the doves.

On the other hand, in recommending construction of the MX, the commission said, "Abandoning the MX at this time in search of a substitute would jeopardize, not enhance, the likelihood of reaching a stabilizing and equitable agreement" on arms control with the Soviets. Food for the hawks.

The report then went on to recommend development of a small, single-warhead, mobile missile, the so-called Midgetman, that could be easily moved on existing roads in trucks or some other form of transport.

Bill Holen, an aide to Sen. Gary Hart (D-Colo.), who filibustered against the MX funds, said, "The MX changes our

military position with the Soviet Union. We have to move toward a first-strike position to save our missiles. It forces us into a quick-fire." Holen said the best defense strategy would be to skip the expense of the MX and move toward the Midgetman immediately.

The entire MX missile program will eventually cost the U.S. about \$30 billion at current estimates. That is the equivalent of the entire disposable income of the state of Colorado for 1982. That includes 223 missiles — 100 deployed, the rest for testing and replacement — silo alteration costs, research and development and actual deployment.

Whether the deployment of the MX will actually bring the Soviets to the bargaining table to discuss arms reduction is an unknown. The situation is now, and apparently will continue to be, like that of two gunslingers who have their Colts pointed at each other's midriff from arms length. If one shoots, the other will certainly shoot before he hits the ground. On the other hand, neither one is going to lower his gun on his own initiative.



INEL...

(continued from page 7)

run actual ship reactors in Florida. Another test reactor, the Advanced Test Reactor, is committed to studying the effects of neutron bombardment on materials in naval ship reactors.

As the nuclear Navy has grown from a single *Nautilus* sub in 1953 to 135 operating nuclear-powered ships in 1983, the demands on the Idaho Chemical Processing Plant have become rigorous indeed. Operated by Exxon, the ICPP strips useable U-235 from spent naval cores and prepares it for shipping to Oak Ridge, Tennessee, where it is re-converted for use in the Savannah River reactors that produce plutonium and tritium. The leftover waste from ICPP — calcined into a grainy sandlike material — will eventually be shipped to the Waste Isolation Pilot Project in New Mexico for disposal.

Altogether, defense-related activities at INEL will cost \$243 million in 1983. INEL's total budget this year is \$475.8 million, giving the military functions of the laboratory a slight 51 percent edge in spending. Operation of the New Production Reactor at INEL would raise that percentage substantially, changing the focus of the lab from engineering and research to materials production for nuclear weaponry.

Not all of the 9,000 workers at INEL are happy about the prospect of the New Production Reactor coming to Idaho. Said one INEL worker, "You hear concerns about the massive work force coming to build NPR — 3,000 is a familiar figure. But more than that, a few of us are concerned about the use of the lab for military purposes. We already have the naval programs here. I'm not sure we should continue producing more tritium for new weapons — they call it upgrading stocks."

But even the nay-sayers to the New Production Reactor admit that they are a tiny minority among the thousands who work at INEL. An important project like the new reactor looks pretty good to a lab that has lived under the crippled shadow of the nuclear power industry. It is with some poignancy that Roger Scott discusses Three Mile Island Unit 2, a machine that his firm, EG&G, has the contract to disassemble and examine.

Assuming the damaged core from TMI ever leaves Pennsylvania — it is fully one-third a "rubble bed" of uranium pellets lying on the pressure vessel floor — it will travel to INEL for examination. The lab possesses one of the world's largest "hot cells," where intensely radioactive materials can be manipulated with remote-control handling devices and examined through five feet of leaded glass.

If nuclear power is indeed dead, it may be a fitting epitaph that a pressurized-water core be returned to its lovely birthplace in Idaho for autopsy. But for the New Production Reactor and the tritium plume it may help push downstream, the Idaho state motto may be most appropriate: *Esto Perpetua, Let It Exist Forever.* □

Civil Defense...

(continued from page 16)

day of the hearing. "It was exciting," Tchozewski said. "Sixty Minutes, the L.A. Times and the MacNeil-Lehrer Report all covered the meeting." Tchozewski said that Boulder had two "liberal commissioners" and one "conservative" commissioner at that time. "It was the conservative — Bob Jenkins — who suggested the plan be rejected," Tchozewski said. "He saw it was a political fiasco if it wasn't rejected."

Instead, the commissioners appointed a Nuclear War Education Committee and gave it the job of producing a nuclear war education booklet. The booklet is the alternative to the crisis relocation plan, Tchozewski said. Distributed in the fall of 1982, it gives a history of the arms race, explains how a war could start and what the effects would be, and it touches on how to prevent nuclear war.

Because the committee was comprised of 30 individuals with varying views, Tchozewski said the booklet is a book of compromises. He supported more information on war prevention. "The only true protection is prevention," he said.

Dickey, with FEMA in Washington, downplayed the Boulder event that got nationwide coverage last year. He said that after the rejection of the plan the director of the Colorado Division of Disaster Emergency Services said they still had to make plans for the whole state regardless of what Boulder did. He said one Boulder commissioner wrote him and said he disagreed with the rejection. Then, after a different commissioner resigned, Dickey said Boulder "very quietly came on board. The choice of how Boulder protects its people is up to Boulder," Dickey said. "There are no federal mandates. But if they have to evacuate for floods, they have to have evacuation plans."

Tchozewski said, "It is true that Boulder has incorporated an evacuation plan into its generic disaster plan and it has been accepted. But they (FEMA) are deluding themselves if they think the commissioners have accepted a nuclear evacuation plan and the community would accept it if they knew."

In Missoula, Montana, the crisis relocation plan met with the same criticisms Tchozewski raised in Boulder. Alderman Leon Stalcup said the city council decided "the proposal was crazy," and rejected the plan. He also pointed out that the Missoula city council passed a resolution supporting the nuclear arms freeze and that the

county passed an ordinance to keep itself "nuclear-free."

There are other examples of the struggles counties encountered in the decision of whether or not to accept crisis relocation plans. The Denver City Council first rejected the plan, then later accepted it. An area doctor speaking at the hearings said, "There would be no long-term survival and no possibility of being rebuilt." He called the plan unrealistic, ineffective and immoral.

In Delta County, Colorado, the planning commission heard arguments against the plan, which makes the city of Delta a host area. Critics questioned the small town's ability to handle the tremendous strain it would place on sanitation systems, housing, food supplies and hospital care. One woman from the Delta County Health Department pointed out that the county can treat only two burn victims. However, the plan was accepted under the pretext that any plan is better than no plan.

"It's a lot easier to sell to elected officials," said George DeWolf, deputy administrator of Montana's Disaster and Emergency Services. DeWolf said Montana's planning is in the infancy stage and the state plans to conduct "hazardous assessments" in all 56 Montana counties. After determining the particular vulnerabilities of each county, county-by-county plans can be drawn up. He said there are missile sites in nine Montana counties, making those areas "high risks" in case of nuclear war. He said evacuation of Great Falls — population about 60,000 — could be done in one and one-half days. DeWolf, who has been in emergency planning for 15 to 16 years, said he has definitely seen a big shift in the emphasis on emergency planning. "When I first came on, we were planning for nuclear war only," he said. "Now we're planning for all disasters."

Paul Massie, communications and resource officer with the Idaho Bureau of Disaster Services, said generic disaster plans were "our stand always." He said it is very difficult to separate disaster planning into specific cases because in general, "all functions hold true."

Massie said Idaho's high risk areas are an air base at Mountain Home, 50 miles east of Boise, and the Moscow area, which is located near an air base outside Spokane, Washington, just over the border. But Massie said his office doesn't have a time frame for developing evacuation plans currently because, "We have questions on the workability. We're trying to improve it."

William Reiling, coordinator with the Wyoming Disaster and Civil Division, said his agency also has always worked on comprehensive disaster plans.

Wyoming is also looking at each county's specific hazard vulnerabilities and will draw plans accordingly.

Although it seems certain that the MX will be housed in Wyoming outside the Cheyenne area, Reiling said that doesn't really change the state's planning for nuclear attack. "Those areas were already considered target areas because the Minuteman missiles have been housed there," he said. Evacuation plans for the Cheyenne/MX area call for residents in Laramie County to move into Albany, Carbon, Goshen, Converse, Niobrara and Weston Counties. In the other high risk area of Casper, residents would be asked to relocate into Fremont, Sheridan and Johnson counties.

And in Utah, where disaster plans were tested this spring with heavy flooding and mudslides, Ralph Findlay, chief of plans and preparedness for the state's Division of Comprehensive Emergency Management, said his agency must concentrate on day-to-day hazards. Findlay said when some Utah residents were evacuated this spring because of mudslides, the evacuation plans used were the same as crisis relocation plans. Shelter, medical assistance and food and water all had to be provided.

Findlay said, however, that his agency was still working on evacuation plans. Utah poses a difficult problem because 1.5 million of its 1.8 million people live along the Wasatch Front/Salt Lake City area. Findlay said it would take around 36 hours to evacuate those high risk residents.

There are, of course, many other components to all hazard planning. With civil defense now neatly tucked away into generic emergency planning, states are free to use monies that were once earmarked for civil defense on other disasters that affect the local level much more directly. State officials are happier, critics of the crisis relocation plan don't find as much fault with an all emergency disaster evacuation plan and the feds are still upholding their duty to protect the public in case of an attack or natural disaster.

Deyo said it doesn't really matter if it is called civil defense or an integrated emergency plan — it's the process that matters. He cited the Denver acid spill as an example. Because the planning process had been integrated into the minds of the emergency personnel, they were able to pull out the evacuation plan and go to work. He said it didn't work exactly the way the plans were designed, but no disaster will go the way planners visualize it. Deyo said emergency personnel will always be shooting from the hip when dealing with a disaster, whether it's a flood or a nuclear war. But with planning and familiarity with the actions to take, "it makes shooting from the hip much more accurate."

Hire some good hands.



The Lander crew.

Back row (lr): Sue Glandt (trainer), Gary Suryani, David Batchelder, Eldon Schoenfish, Patty Wietzel, Gary Olson (supervisor), Virginia Hillman, Kathy Fernandez. Front row (lr): Lyle Pfister, Cheryl Tams, Lorraine Umfress.

Mike McClure photo

Dignity, Incorporated is a non-profit, private corporation headquartered in Riverton, Wyoming. We provide training for developmentally disabled adults in vocational and practical living skills.

One is not considered a client but rather an employee of Dignity, Inc. There are 90 to 100 employees from Wyoming and several other Rocky Mountain states. We have around 30 people on our staff.

Our funds come in part from the State of Wyoming, but just as much comes through our own labor.

We have two workshops, Fremont Center in Riverton and Bohmert in Lander, Wyoming. Employees do sub-contract work such as compass assembly for Brunton Corp. at these shops. Assembly of camera lens covers for Butler Creek, Inc. of Jackson, Wyoming is another example of the work we do.

Employees at Bohmert bartered for this ad space by preparing those notorious *High Country News* free sample mailing packets.

If you or your firm have work that could be assembled in our workshops, please contact our main office in Riverton. We need the work. There are some real good hands willing to work for you. We hardly ever miss a deadline.

Recycling

Dignity has a second-hand store in Riverton called the Neat Repeat. Both workshops prepare goods to be sold in

the store. Cloth scraps are cut into rags and sewing patches. Buttons and zippers are salvaged to be recycled. Donations are solicited and tax-deductible.

Aluminum cans and steel cans are collected at both centers for recycling. Cans are purchased from the public, baled into 200 pound blocks and sold on the open market. Cans can be donated, too.

Hy-pride sprouts

Living sprouts are being grown at Riverton in Fremont Center. They are sold under our Hy-Pride label. These are quality alfalfa and alfalfa-radish sprouts, fresh and unblanched. Ask for them in your local grocery stores. We've just begun to cover Wyoming with sprouts, so it may be a while before we reach your area. Grocers, ask your distributor for Hy-Pride products. We need salespeople to market our sprouts. Contact the Riverton office for a sales plan and schedule of commissions.

A word about donations.

Dignity is a non-profit corporation. Therefore, donations to Dignity, Inc. are tax-deductible. This includes goods given to the Neat Repeat. Any donations are wholeheartedly welcomed. Our want list is usually very long and any help is appreciated. We need all sorts of things, from good sharp scissors to a two-ton truck. Please contact the main office for further details.

Contact Dignity, Inc.

Main Office
325 West Main
Riverton, Wyoming 82501
(307) 856-5576

Sublette/Teton Counties
Box 3297
Jackson, Wyoming 83001
(307) 733-7637

Bohmert Center
Route 62C, Box 3
Lander, Wyoming 82520
(307) 332-3999

LETTERS

INSENSITIVE POTHUNTERS

Dear HCN,

I am dismayed by the lack of sensitivity in the pothunting article (*HCN*, 7/8/83) which quoted Mike Wright, pothunter of Page, Arizona. He said, "We go in and determine to the best of our knowledge where the burials are, and that's what we dig up . . ." Many people object to the disturbance of burial sites even when done respectfully for the increase of knowledge. Wright is self-righteous about the law interfering with his digging rights. What about the right of the dead to have their remains lie in peace? Commercial exploitation of Native American graves is obscene as well as unlawful. Just as robbing those of Wright's deceased relatives would be.

This point aside, I find the newspaper excellent. I too am a bit nostalgic about *HCN* leaving Lander, but wish the new publishers well and look forward to the usual *HCN* quality, perhaps with a new twist.

Glenda Bradshaw
Helena, Montana

ENVIRONMENTAL EDUCATION

Dear HCN,

Thank you for running such a supportive article about our environmental education program (*HCN*, 5/27/83). The article can be useful to our Forest Service education program in several ways.

I have been a subscriber for only a short time but have read your paper for some years now. I like the direction you are taking and the increased professionalism you exhibit. Keep up the dialogue on important issues of our Intermountain West.

Vern Fridley
Regional Environmental Education Officer
USFS Intermountain Region
Ogden, Utah

CHEERS FOR CARHART

Dear HCN,

You'll never know how pleased I was to see the guest editorial by Peter Wild (*HCN*, 7/8/83). Art Carhart and I were close friends from about 1940 until the day he died in November, 1979.

Some of the things Wild wrote about are in the chapters on wilderness in my "biography" of the Izaak Walton League of America, titled *Born With Fists Doubled* and now seeking a suitable publisher. I, too, called on Donald Baldwin's book, *The Quiet Revolution*, and purely loved a passage from an in-house bulletin published for Forest Service personnel by the Denver office people. In it Carhart wrote this, in an obvious effort to steer the thinking of his sawlog forester colleagues toward a greater appreciation of the magnificent outdoors in which they were privileged to work:

Get a good draft working in you nostrils; smell the hot sun in the pine needles, the tangy odor of the sage, the scent of the fireweed in full bloom . . . Get off your earmuffs and hear the call of the jay, the splash of jumping trout, the roar of a waterfall. Brush the dust of habit away from your eyes and . . . take stock of the world in which you live . . .

It was Carhart who first alerted the Izaak Walton League in 1923, just after he'd left the Forest Service, that the "good roads" lobbyists were about to accomplish invasion of the unparalleled Boundary Waters Canoe Area of Superior National Forest with roads that would let in exploiters as well as a horde of "tin can tourists." As an outcome, the BWCA has been a primary area of activity and campaigning by the League to keep it relatively pristine over six decades. It has bought more than 7,000 acres in small private inholdings and turned them over to the service to manage in perpetuity.

I would differ with Wild only in the number of areas Carhart's work caused to be preserved as wilderness; he left

out the San Isabel National Forest west of Pueblo, Colorado, which is now administered, I believe, as part of a larger area put together in a merger some years ago. As Baldwin wrote it, and as I recall it from old tape recordings and letters and conversations over time, the tourism interests of Pueblo were unhappy. Pueblo wanted the service to install a prime outdoor recreation area that Pueblo could exploit to bring tourist money through the town. Carhart went to the San Isabel first of all, early in 1919, and recommended against the proposal by Pueblo. Right on its heels came the Trappers Lake thing of Wild's editorial, followed by, if memory serves me, an August canoe expedition through the Rainy River's headwaters country along the Minnesota-Ontario border. What I am saying, or trying to, is that the San Isabel remained in a wilderness condition, without honkytonk development, thanks to Carhart's reconnaissance, even as the borders of Trappers Lake did, too.

Wild's account of the communication between Carhart and Aldo Leopold is correct. The difference lies in the fact that Leopold recognized the vital importance of having his Gila National Forest Wilderness Area officially recognized by the USFS Washington office. Carhart's wildernesses — the San Isabel area, Trapper's Lake, and BWCA country — were *de facto*, not officially merged into the service's budding wilderness-

primitive-wild area system until after Leopold had had the Gila signed, sealed, and delivered.

In my book manuscript I say that, "I take nothing from Leopold's towering reputation" in setting forth what Carhart started; "I simply add to the public store a measure of recognition of Carhart's perception." I believe Wild will go along with me on that score.

Again, my thanks to Wild and HCN for an overdue tribute to a truly extraordinary conservationist and preservationist.

Bill Voigt
Blackshear, Georgia

STILLWATER EIS

Dear HCN,

I have just finished reading a feature story by Don Snow titled "Stillwater's platinum runs deep" (HCN, 6/24/83). I was surprised, however, at a particular statement attributed to me in the discussion of the Montana Department of State Lands public meeting held in Gardiner regarding the Homestake-Jardine mining project. Snow attributes to me the statement that the "department believed the Homestake permit does not involve a major state decision and would create no significant environmental impacts." After reading this, I began to wonder if Snow had attended the same public meeting as I. Had this statement been true, there would have been very little reason to travel to Gardiner and request the public to identify

issues and concerns to aid in the Department's decision.

As I explained at the public meeting, the department had not made a decision regarding the need to do an EIS, and would not reach a decision pending review of the information received at the public meeting, the company's conceptual mining plan, and the additional environmental baseline studies either completed or in-process by Homestake Mining Company. The Department of State Lands and the Gallatin National Forest issued a press release July 8, 1983 announcing the decision to prepare a joint state-federal EIS for the Homestake-Jardine project, should the company file future mining-related permit applications with the agencies.

A couple of other corrections should be noted in the article. The straw poll referred to on page seven was not called by "State Lands staff" but agreed to after a member of the public requested that a show of hands favoring an EIS be allowed. Polls of this sort are usually discouraged by the department, as they may give the public the false sense that the department's EIS decision is a simple matter of a "voting situation." As you know, EIS decisions by regulatory agencies are not a simple matter and must consider a wide range of issues and possible consequences. Depending upon the location of a public meeting, the mining company, the local community, or non-local special interest groups

could easily influence any voting situation involving an EIS decision.

Another correction involves a common misconception involving "who" prepares an EIS. On page eight of the article, Jerry Danni is indicated as having said "his company had every intention of preparing an adequate impact statement." Compliance with the Montana Environmental Policy Act through the preparation of an EIS is the responsibility of the Department of State Lands. With the exception of consultation with the company regarding the accuracy of the technical description of the proposed facilities, the company has no direct participation in preparation of the remainder of the EIS.

In closing, I would like to say that the Gardiner public meeting was better attended by the public than most other past meetings the department has held in other locations for other mining projects around the state. In addition, the questions asked and issues identified were of an unusually informed nature, which indicates the great concern and interest the public has taken in the Gardiner area. The Department appreciated the ability to meet with locally concerned citizens, and looks forward to a continued dialogue locally as the EIS process continues.

Ralph Driear
Environmental Administrator
Montana Department of State Lands
Helena, Montana

BULLETIN BOARD

LITTLE SNAKE RMP

The Craig, Colorado, District of the Bureau of Land Management is seeking public input on a Resource Management Plan and Environmental Impact Statement for the Little Snake Resource Area in northwest Colorado. The plan will cover BLM lands in Moffat and Routt Counties and a small part of Rio Blanco County. The BLM is also requesting information about coal resources located in the area. Comments should be mailed by Aug. 26 to the RMP/EIS team leader, Little Snake Resource Area, P.O. Box 1136, Craig, Colo. 81626. Information on coal resources should be sent to BLM, Assistant District Manager, Division of Minerals, P.O. Box 580, Grand Junction, Colo. 81502.

INDIAN SELF-RULE CONFERENCE

More than 40 Indian and non-Indian leaders of the last 40 years will address participants in a conference at Sun Valley, Idaho, August 17-20. The conference, "Indian Self-Rule: 50 Years under the Indian Reorganization Act," will combine poetry, films and panel discussions to explore the theme. It is one of a series of summer conferences sponsored annually by the Institute of the American West. For more information about the conference or about the limited number of fellowships available contact Richard Hart or Marcia Jones at the Institute, P.O. Box 656, Sun Valley, Idaho 83353 or call 208/622-9371.

BUTTE HOSTS ADVISORY COUNCIL

The Bureau of Land Management's National Public Lands Advisory Council will meet in Butte, Montana, August 25-27 at the Copper King Inn. The council is made up of 21 citizens from the western states who advise the secretary of the interior and the BLM director on issues dealing with the management of public lands. The council will feature a presentation by Gov. Ted Schwinden on August 25 and a tour of public lands on Aug. 26. The meeting is open to the public and oral statements addressing specific public lands issues will be accepted beginning at 1 p.m. on the 25. Those wishing to make statements are requested to submit copies of their testimony prior to the meeting. Proposed testimony should be submitted by Aug. 15 to the Montana State Office (912), BLM, P.O. Box 30157, Billings, Mont. 36800.

RENEWABLE ENERGY

The Jordan College Energy Institute is offering several renewable energy seminars this fall. Seminars include a two-day solar mini-course, a solar domestic hot water workshop, passive solar, earth-sheltered housing, active solar for hot water, pools and space heating and solar thermosyphon air panels. For more information on the seminars or the program contact the Jordan Energy Institute, 155 7 Mile Road, Comstock Park, Mich. 49321, 616/784-7595.

NEW HUNTING REGS

New restrictions on hunting the black duck have been proposed for this fall by the U.S. Fish and Wildlife Service in an attempt to halt the decline in population. The new restrictions will apply mainly in the Atlantic and Mississippi flyways where most of the harvest of black ducks occurs. The Fish and Wildlife Service is providing

leaflets and posters about the black duck to the states for distribution to hunters. Public comments on the proposed regulations will be accepted through August 19. To submit comments, or to obtain copies of the proposed regulations write the U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240.

PUBLIC COMMENTS SOUGHT

The Bureau of Land Management is seeking public comments about whether the Bitter Creek Wilderness Study Area, 25 miles northwest of Glasgow, Montana, should be recommended for wilderness designation. The BLM is beginning the study which will result in a draft environmental impact statement to be published in the spring of 1984. The BLM office in Glasgow will hold open house on August 10 and 11 between 1 and 8 p.m. to receive public comments. Written comments or requests for further information should be sent to the Area Manager, Valley Resource Area, Route 1-775, Glasgow, Mont. 59230. Written comments should be received by August 28.

IDAHO WILDERNESS HEARINGS

Sen. James McClure (R-Idaho) will hold four public hearings in Idaho in August to determine the acreage to be included in an Idaho wilderness bill. Each hearing will focus on the national forest land in the area of the hearing but comments will be accepted on any potential wilderness area in the state. All meetings are scheduled from 9 a.m. to 5 p.m. The hearings are scheduled for August 9 at the City Hall in Boise; August 11 at the Eagle Rock Jr. High School in Idaho Falls; August 16 at the Seiter Auditorium, North Idaho Jr. College in Coeur d'Alene; and August 17 at Spalding Hall, Lewis & Clark State College, Lewiston.

ACID RAIN CONFERENCE

All individuals and organizations concerned about acid rain are invited to attend the Founding Conference of the U.S. Acid Rain Coalition. The conference will be held September 11-14 at the Grand Portage Lodge and Conference Center on the north shore of Lake Superior. The purpose of the conference is to form a coalition of grassroots interests to share information, focus attention on the issue, and push for federal standards to halt acid rain. The conference is sponsored by the North American Water Office. For more information contact the North American Water Office, 1519-A East Franklin Ave., Minneapolis, Minn. 55404, 612/872-1097.

RED ROCK WITHDRAWAL

Copies of the Management Framework Plan Amendment/Environmental Assessment (MFPA/EA) concerning the proposed withdrawal of the public land and federal subsurface mineral estate in the New Mexico Department of Game and Fish's Red Rock Wildlife Experimental Area are now available. The purpose of the proposed action is to protect the breeding habitat of the desert bighorn sheep. Copies of the MFPA/EA are available at the Las Cruces District Office, 317 North Main, Las Cruces, N.M. 88004. Written comments on the document must be received in the office by August 22. For further information, contact Ed Webb at 505/524-8551.

NORTHWEST PUBLIC FORUMS

Two public forums are scheduled for August at the University of Washington. The Northwest Regional Power Plan is the topic of the forum to be held on August 11. The forum will provide an opportunity to discuss the *Northwest Conservation and Electric Power Plan*. The topic for the meeting on August 12 is "Perspectives on Cumulative Effects: e.g. Small Scale Hydropower." This forum will discuss identification, assessment, mitigation, and halting of activities that may result in cumulative effects on other resources. The registration fee is \$35 for either of the forums, or \$50 for both. For further information contact the IES Conference Registration, University of Washington FM-12, Seattle, Wash. 98195.

MORE TIME TO COMMENT

The Bureau of Land Management has extended the deadline for submitting comments about proposed changes in BLM grazing regulations to August 12 at the request of the National Cattlegrowers Association. The rules are an attempt to shorten and simplify grazing regulations. The revised regulations provide more incentive for operators to make investments in range improvements on their grazing allotments, and gives operators title to removable physical improvements such as fencing and waterings. Copies of the proposed regulations may be obtained from district offices. Written comments should be sent to the Director (220), Bureau of Land Management, Washington, D.C. 20240.

FLATHEAD DEADLINE EXTENDED

The deadline for the public comment period for the Flathead National Forest Proposed Forest Plan has been extended until August 10 at the request of the Inland Forest Resource Council. A 21-day extension was granted instead of the requested 30 days because the Forest Service is gearing up for the third round of its roadless area review which is scheduled to begin in mid-August. Comments on the plan should be addressed to John Emerson, Forest Supervisor, Flathead National Forest, Box 147, Kalispell, Mont. 59901. They must be postmarked by midnight, August 10.

TIMBER SALE PROPOSED

The public is invited to review an environmental analysis that discusses the proposed Beaver Creek Timber Sale on the Big Piney Ranger District of the Bridger-Teton National Forest. The proposed sale would be located 35 miles northwest of Big Piney, and would involve the harvesting of about three million board feet of mature and overmature trees from 300 acres. The sale will offer 18 units, fifteen to be clearcut and three to be selectively harvested. The analysis may be reviewed at the Big Piney District Ranger's Office, 335 South Front Street in Big Piney or at the Forest Supervisor's Office in Jackson, Wyo.

FLY FISHERS TO MEET

The 1983 Federation of Fly Fishers Conclave will be held in West Yellowstone, Montana, August 17-20. The Conclave will feature meetings, programs and workshops. Featured guests will be C.M. Butler II, Chairman of the Federal Energy Regulatory Commission and Art Flick, renowned fly tyer, fly fisher and author. For further information contact Brian Anderson, Chairman Conclave '83, 4160 So. Vincennes Ct., Denver, Colo. 303/289-0238.

MANAGING WILDERNESS

"Taking Care of What We've Got" is the theme of the First National Wilderness Management Workshop scheduled for October 11-13 at the University of Idaho. The focus of the workshop is the protection and proper use of existing wilderness areas. Individuals in mining, grazing, outfitting, wildlife, tourism and ecological and environmental protection are invited to attend. Topics will include fire management, handling insects and disease, wilderness wildlife, resolving conflicts in use, wilderness information and education, wilderness in the East, outfitters and their roles, and special problems in Alaska wilderness. Registration fee will be \$100. For more information and registration forms write Dr. Edwin E. Krumpke, Director, Wilderness Research Center, University of Idaho, Moscow, Idaho 83843, 208/885-7911.

Change of address.

Effective immediately, the new address of *High Country News* is

High Country News
Box V
Paonia, Colorado 81428

Phone (303) 527-4898.

Contact Ed and Betsy Marston.

16-High Country News — Aug. 5, 1983

Civil Defense

From fallout shelters to bailout plans

by Carol Jones

Fallout shelters were the craze in the 1950s and early 1960s. People bought plans and discussed whether to locate their shelters in the backyard or convert the basement; the yellow and black three-triangle design of the fallout shelter sign was familiar to everyone. The Soviets had the bomb, the cold war was icy and everyone was concerned about protection in case of a nuclear attack.

Although fallout shelters lost appeal later in the '60s and '70s, the concern over civil defense was once again brought to the public's attention about a year ago when county governments began releasing what was a new civil defense concept to the general public — crisis relocation plans. County officials told residents that if the United States had advance notice of a nuclear attack — 72 hours notice — people living in certain "high risk" areas would be asked to "relocate" to areas less likely to be nuclear targets. For example, a city like Denver would be moving thousands of people west into the mountains, east into the plains and north into a few other areas.

The concept was met with much less enthusiasm than the backyard fallout shelter idea of the '50s. Critics called the program ridiculous and unworkable. Boulder County, Colorado, and Mis-



"DEAR HEART, DID YOU REMEMBER TO TELL THE MILK MAN WE'D BE GONE?"

soula County, Montana, both voted to reject the idea, as did many other counties in the country.

Now, in the last few months, the federal government has had a change of heart. Through the last three decades, the federal agency responsible for public safety in case of nuclear war has aided states in the planning and design of civil defense programs — but at a much slower rate than the nuclear arms buildup. Now that agency, currently known as the Federal Emergency Management Agency, has told the states to

switch the emphasis of their planning process from "disaster-specific" to "disaster-generic." Civil defense and crisis relocation are terms of the past. Now states will operate under generic disaster plans capable of handling any natural or man-made disaster — from a flood to a tornado to a nuclear war.

The switch has been met with open arms by state emergency preparedness offices and has quietly slipped by most of the critics of the crisis relocation plans. State and local officials are much more concerned with handling problems relating to floods, mudslides and tornadoes than to nuclear war.

But the same emergency procedures needed for those types of disasters are also needed for nuclear attack. Shelters, food and medical supplies, communication systems and evacuation plans are needed in all cases, and all those needs are somewhat interchangeable in the planning process. Add a few appendices to the planning manual for certain disaster-specific problems and you have a nice, noncontroversial emergency disaster plan that doesn't force you to take a stand on whether or not we can survive a nuclear holocaust.

In 1950, one year after the Soviet Union exploded its first atomic device, Congress passed the Federal Civil Defense Act. The act read, "It is the policy and intent of Congress to provide a system of civil defense for the protection of life and property in the United States from attack." It said that civil defense was the joint responsibility of federal, state and local governments. It defined measures to be taken in case of an attack, including "the construction or preparation of shelters, shelter areas, control centers, and, when appropriate, the nonmilitary evacuation of civilian populations."

John Dickey, assistant associate director of emergency management programs with FEMA in Washington D.C., explained that the 1950 act was amended in 1980 under the Carter administration to emphasize evacuation. The amendment also emphasized that plans be adaptable for use with natural disasters and other peacetime emergencies. A 1981 amendment to the law strengthened the emphasis on an "inter-changeable" emergency plan, Dickey said.

It is what has gone into these plans since the 1980 and 1981 amendments that has caused the public to once again ponder civil defense. And it appears that it was the public's concern

over the direction those plans were going that prompted FEMA to change from supporting specific disaster plans to supporting one generic plan. "There are common elements in planning for all disasters," Dickey said. FEMA's change of direction came shortly after several counties across the country contested a program known as "crisis relocation."

According to the Colorado Division of Disaster Emergency Services, crisis relocation is "a working concept involving the temporary relocation of people who live in areas considered to be at high risk to areas of lower risk called host areas. High risk areas are those that are potential targets for nuclear weapons such as our missile sites, important military bases, industrial sites, transportation centers and/or high population cities."

After the 1980 and 1981 amendments to the act, every state began planning how it would move its "high risk residents" to areas of low risk. Those plans are still in the making and are now generic evacuation plans. They involve massive departures by automobile and public transportation out of large metropolitan areas. The population must be educated in advance about the program. People must do as instructed and not panic. And the plans depend heavily on the ability of the people who thought up this program to be able to handle panic, traffic jams, running out of gas, stalled vehicles, etc. They also rely heavily on the host areas to open up their doors to massive numbers of people who need food, medical supplies, housing and sanitation facilities.

Roger Pratt, emergency preparedness assistant with the Denver Office of Emergency Preparedness, said that if all goes smoothly, the residents of Denver could be evacuated in 68 hours. That is with an estimated 3.26 passengers per vehicle, with a traffic flow of 3,000 vehicles per hour.

Although that sounds like a lot of traffic, Pratt said a count done by the Colorado Highway Patrol on a winter Sunday afternoon on I-70 about 20 miles from Denver, recorded 7,760 vehicles per hour. That, as Colorado residents know, is the weekend ski jam back into Denver. Pratt explained that during crisis relocation, both sides of the interstate would be traveling in the same direction, increasing the flow. An estimated 198,589 Denver residents would be moving west on I-70 if the plan were put into effect, Pratt said.

The Crisis Relocation Plans proved to be a total flop in Boulder County, Colorado and in Missoula County, Montana. Chet Tchozewski, a member of the Boulder County Nuclear War Education Committee in Boulder and a member of the disarmament staff of the American Friends Service Committee in Boulder, said that he brought the crisis relocation plan to the attention of the Boulder County commissioners in the fall of 1981 and asked that the public have input into their decision to accept or reject the plan. Although the plan had already been accepted by five counties in the Denver area, the Boulder commissioners agreed to call a public hearing on the plan in February, 1982. Tchozewski said that over 300 people showed up for that hearing in a room that only seats about 70 to 80. The commissioners moved the meeting to March and rented the Boulder Theater, which seats 1,200. That hall was filled on the

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