ment Services Center in Boulder, Colorado, which is aimed chiefly at understanding the impact of solar disturbances on the earth's upper atmosphere.

• The Global Atmospheric Research Program. NOAA is planning to reduce the level of U.S. participation in several major international climate research programs, for a savings of $2.2 million.

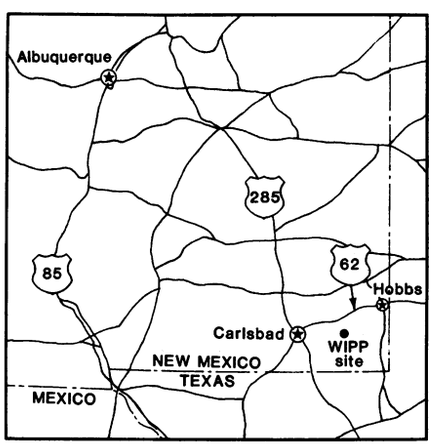
Although the cuts in NOAA's programs have received far less attention than those in many other agencies, they add up to a major shift in the agency's priorities, and they have caused considerable unease among NOAA's staff. According to one participant in the top-level staff meeting, adoption of a long-range plan for NOAA could be crucial in restoring morale by giving a sense at least of where the agency is headed over the next few years.—COLIN NORMAN

Radwaste Dump WIPPs Up a Controversy

A proposed pilot repository has sparked local opposition and there are doubts about the geological stability of the site

Tucked in the southeast corner of New Mexico is a desolate tract of land covered with sagebrush and shifting sand, a seemingly unlikely target of controversy. This 27 square miles of wasteland, however, is the heart of a battle over nuclear waste that has pitted New Mexico against the federal government. On this site next year, the Department of Energy (DOE) plans to begin contruction of a pilot facility for storing radioactive waste from defense programs. It will be the first of its kind in the nation and a model for future repositories.

But according to many environmentalists and state officials, the federal government has unfortunately fumbled its management of the $950-million project known as the Waste Isolation Pilot Plant or WIPP. "The Energy Department has badly mishandled the issue with the state," said Allan Kneese of Resources for the Future. In doing so the federal government has set a poor precedent for other radwaste sites to come.

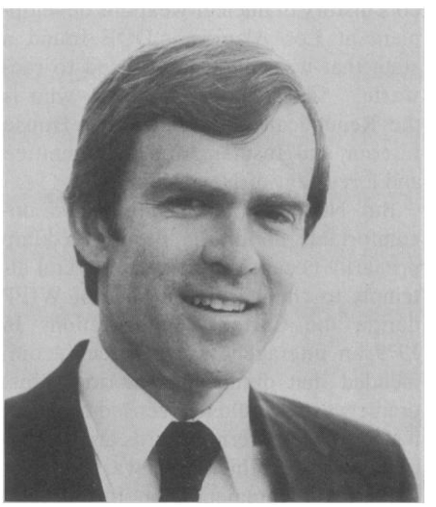


Relations between New Mexico and DOE deteriorated to the point that the state last spring sued the department, charging that it had violated state's rights and failed to consult adequately with state officials. New Mexico State Attorney General Jeff Bingaman said, "We obviously had a serious breakdown of communication" before the lawsuit was filed. Other states "have an awful lot to learn" from New Mexico, he said.

Some believe that WIPP was misplaced from the start for geological reasons. Last fall, DOE discovered a pocket of brine below the repository. The concern is that the brine might compromise the safety of the repository, although the issue is not settled. Tests on the brine are to be completed this summer. But the impact of the discovery has heightened the political and scientific controversy that has beleaguered the project since it was authorized in 1976.

The irony is that DOE believed that the New Mexico site, although not perfect, was as close to an ideal location as it would find—for geologic and political reasons. Deep below the sandy terrain of the WIPP site are beds of salt that are considered the best immediate option in which to bury radwaste. Salt beds are stable, isolated from ground water, and plastic, enabling fractures to heal in repository walls. Although other states have salt beds, this one in New Mexico is in an area that is relatively free of drill holes. (The site originally selected for WIPP, in Lyons, Kansas, was abandoned in 1972 after scientists decided that it contained too many mining boreholes that might jeopardize the safety of the repository.) DOE selected a site 25 miles east of Carlsbad to store two types of defense radwaste generated from nuclear weapons production. The site would permanently store mainly transuranic waste, which emits relatively low levels of radiation, and temporarily warehouse small amounts of high-level waste for research and development purposes.

But 4 days before Thanksgiving last year, a drilling rig boring a test hole struck what geologists had hoped would not be there, namely, the brine pocket. Others had been discovered before, but none as close as this one, which may be as near as 600 feet to the proposed repository. If the brine is connected with other reservoirs, DOE might have to disqualify the site and move the repository to yet another spot on the tract. The site has already been relocated twice because of geologic aberrations found in the area.



Attorney General Bingaman

One geologist who has studied the southeast portion of New Mexico believes that the federal government never should have placed WIPP where it is. Roger Anderson, a University of New Mexico professor of geology, contends that the proposed dump is located where salt beds are still actively dissolving in subterranean areas that are difficult to predict. His theory is not widely accepted by other geologists. But if the recently discovered brine pocket proves to be joined with others, "that will lend cre-

0036-8075/82/0319-1483$01.00/0

dence to Roger Anderson's theory," said Frank Parker, chairman of a National Research Council panel studying WIPP and a professor at Vanderbilt University.

In addition to the salt beds, DOE found the state an attractive location for the repository because its citizens are more accustomed to nuclear issues than those of other states, given New Mexico's history of nuclear weapons development at Los Alamos. "DOE found a state that was much more used to radwaste," said Timothy Glidden, who is the Republican counsel for the House Interior and Insular Affairs Committee and a resident of New Mexico.

Deputy News Editors Named

Two newly established positions in the News Department will be filled by Colin Norman and Roger Lewin. Norman has been appointed deputy editor for News and Comment. Lewin will serve as deputy editor for Research News.—B.J.C.

But New Mexico has remained uncomfortable about the proposed dump primarily because there were several attempts to change the purpose of WIPP during the Carter Administration. In 1979 an interagency task force recommended that dump sites storing transuranic waste should be licensed because, it said, the long-term hazards are comparable to those of high-level waste. Carter took this recommendation further and proposed that WIPP diverge from its original purpose and accept 1000 commercial spent fuel assemblies in addition to transuranic waste and high-level waste from the defense program. This would have given the Nuclear Regulatory Commission some licensing authority over WIPP. A complicated turf battle ensued involving the White House, DOE, and the chairman of the House Armed Services Committee, Melvin Price (D–Ill.). Price wanted WIPP free of any licensing oversight by an agency outside his committee's jurisdiction and was successful in convincing his congressional colleagues to restrict the project to defense wastes. Incensed at this turn of events, Carter then canceled the project in February 1980, but Congress restored $20 million to the WIPP budget to keep the project alive.

Meanwhile, New Mexico was alarmed at the possibility that if WIPP accepted commercial spent fuel, it could become the nation's warehouse for high-level waste. The state then proceeded to seek the power to veto the project at any stage, but DOE dug in its heels and took the position that national security interests superseded the state's rights. The department said it would go so far as to consult with the state about any changes or problems concerning the repository. But federal legislation passed in 1979 provided for a "consultation and cooperation agreement" that watered down New Mexico's rights even more. "None of us knew what the agreement meant," said George S. Goldstein, New Mexico's secretary of health and the environment.

New Mexico's troubles continued. According to the 1979 law, DOE was to sign the consulation and cooperation pact with New Mexico by the end of September 1980. But the federal and state governments debated the terms of the agreement for more than a year. New Mexico insisted on a pact that would be enforceable by law and subject to judicial review, but the DOE did not want to make it legally binding.

On 14 May 1981, New Mexico sued DOE, alleging that the department had "refused to agree to a legally enforceable document to resolve these issues." Less than 2 months later, the DOE and the state reached a compromise agreement and consented to stay the lawsuit, pending review at a later date of each party's compliance.

Before the lawsuit, "it was obvious we were not getting the timely, accurate information about WIPP that we felt Congress intended," Bingaman said. Since the lawsuit was filed, "communications have improved substantially," he said.

But the discovery of the brine pocket could test the strength of the latest federal-state agreement. "The critical test of the site is coming up," Goldstein said. "I've asked them [DOE officials] what are the thresholds of acceptability? Is it that brine is beneath the site? Beneath the site and 200 feet away? I asked the question rhetorically, but if there's ever been a critical time to answer it it's now." That sense of urgency is increased somewhat because this is an election year for gubernatorial and U.S. Senate seats, and WIPP could become a campaign issue.

New Mexico officials are trying to sort out the scientific issues for themselves. In 1979, the state requested that an independent scientific panel be established at

(Continued on page 1486)

A Plan to Give an Apple to Every U.S. School

Because Steven Jobs, president and founder of Apple Computer Corporation, happened to sit next to Representative Fortney H. (Pete) Stark (D–Calif.) on a flight from California to Washington last month, one of the largest corporate donations ever made to precollege education may soon take place. During the long journey, Jobs and Stark hatched a scheme that could result in the gift of an Apple computer system to every elementary and secondary school in the United States. The total donation would be valued at $200 million to $300 million at retail prices.

In return, Apple would be able to write off a substantial fraction of the cost of the computers against taxes. It would also, of course, score a major publicity coup and ensure that a whole generation of future consumers is introduced to computers in general and Apples in particular.

The key to all of this is a bill introduced by Stark on 23 February, which rapidly became known as the Apple Bill. (Its official title is the Technology Education Act of 1982.) In essence, it would permit Apple and any other company that donates scientific equipment to schools to deduct the full cost of the equipment from its pretax income. Gifts to schools would thus be treated, for tax purposes, the same as gifts to colleges and universities. In addition, the bill would raise the maximum allowable charitable contribution from 10 percent to 30 percent of a corporation's income. Both provisions would last for only 1 year after the act is passed.

Although the financial impact of the bill has not yet been calculated in detail, congressional staff members have estimated that it would permit Apple to take a deduction of about $75 million. This would represent the cost of manufacturing the computers, but not the cost of training manuals, servicing, and so on. (If Apple pays at the maximum corporate tax rate of 46 percent, this would result in a tax saving of about $35 million.)

The bill was introduced with two other cosponsors, Don Edwards and George Miller, both California Democrats. Within a week, however, it had

0036-8075/82/0319-1484$01.00/0

(Continued from page 1484)

DOE's expense that would help it monitor and evaluate the data obtained by DOE. Anderson and the Southwest Research and Information Center, an environmental group based in Albuquerque, complain that the panel leaves much to be desired because it has only one geologist on its staff. The committee, "is our only backup for scientific expertise," said Bingaman. "It would be ideal to have our own people, but the state legislators refuse to pay the bill."

The state relies somewhat on Anderson, who was a consultant to Sandia, one of WIPP's prime contractors, during the early stages of the project. It was Anderson who told Sandia in 1976 in a memo that another test hole should be dug where the latest brine pocket was found. Wendell Weart, who is in charge of nuclear waste management programs for Sandia, said, "Roger wanted us to drill a lot of holes. I doubt if the budget would have allowed it. We have been pretty responsive to his ideas."

The National Research Council panel could be the best independent source of information but its most recent comprehensive report on WIPP was issued 21 months behind schedule. Frank Parker noted that during those months the committee sent out "letter reports" dealing with specific issues in lieu of an in-depth analysis.

Parker said the panel has no plans to publish a special report on the brine pocket unless DOE makes such a request. "The brine is not good news," he said, but "we don't see anything yet to disqualify the site."

One of the nagging worries among many in New Mexico is that the brine at some future date will leach into the repository and carry radionuclides to the surface. The state's scientific panel postulated in a report, however, that if this scenario came to pass, the consequences would be "small." It estimated that in the year 2010, the projected population for the area could receive radiation doses that might result in "one or two fatal cancers."

What is troubling to state officials is the possibility that the federal government will suddenly assign the repository high-level commercial waste, a change that is quite conceivable given the flip-flops of WIPP's purpose during the Carter presidency. Goldstein said, "We're not sure the site will be used mainly for transuranic waste. DOE is only using a small portion of the tract for the site." Bingaman agreed, saying that "There's no question that for the amount of money DOE is spending on the site, it's doubtful that the repository's ultimate mission is storage of low-level military waste. There is suspicion on the part of many state officials, myself included, that Congress may change its mind and make it into a repository for high-level waste—commercial and defense." Larry Harmon, DOE project manager in Washington for WIPP, rebuts these claims: "It is absolutely unlikely that WIPP will become a high-level waste repository. It will remain R & D for high-level waste."

Some individuals argue that if the government is going to spend a half billion to a billion dollars to build a repository for transuranic waste, it should from the start find a site suitable for high-level waste. "You could then backfill it with transuranic waste," said Thomas Cochran of the Natural Resources Defense Council. But such an idea doesn't have much currency in the present Administration. The proposed 1983 budget would give WIPP its full request of $125 million. Harmon of DOE said, "We've never been in such a good position to finish."—MARJORIE SUN

News and Comment Wins Polk Prize

Science has won a George Polk Award in Journalism for the "lucidity and pertinence" of the News and Comment section. The Polk Awards, given this year in 12 categories, were established in 1949 by Long Island University "to honor the memory of a reporter who valued an important news story even more highly than his personal safety." George Polk, a CBS correspondent, was slain in 1948 during the Greek civil war while trying to reach insurgent leaders for an interview. The awards are based on recommendations by a 111-member national panel that includes former winners, media executives, and heads of journalism schools. This prize, only the sixth for science reporting since the Polk Awards were established, was given to News and Comment for the excellence of the section as a whole rather than for a single article or series. Barbara J. Culliton will accept the Polk Award on behalf of the staff on 24 March in New York.

Other winners of the 1982 Polk Awards are:

Foreign Reporting: John Darnton of *The New York Times* for reporting the complex story of the Polish crisis with discernment and clarity.

National Reporting: Seymour M. Hersh, Jeff Gerth, and Philip Taubman of *The New York Times* for an intensive investigation of the illegal activities of former intelligence agents who have used their connections and expertise to sell munitions and sophisticated technology to countries hostile to the United States.

Magazine Reporting: William Greider for "The Education of David Stockman," in *The Atlantic*.

Book: Edwin R. Bayley, for *Joe McCarthy and the Press* (University of Wisconsin Press).

Television Documentary: Pierre Salinger, Paris Bureau Chief for ABC News, for "America Held Hostage: The Secret Negotiations," a report on America's behind-the-scenes efforts to free the hostages in Iran.

Television Reporting: Ted Koppel of ABC News, managing editor and anchorman of "Nightline."

Radio Reporting: John Merrow for "Juvenile Crime and Juvenile Justice," co-produced by the Institute for Educational Leadership and National Public Radio.

Regional Reporting: Stephanie Saul and W. Stevens Ricks of the Jackson (Miss.) *Clarion-Ledger* for a series of articles, written at personal risk, exposing crime and official corruption on the Gulf Coast.

Local Reporting: The Orlando (Fla.) *Sentinel Star* for "The Federal Impact," a series of articles revealing the extent of federal spending in conservative Orange County.

Consumer Reporting: Phil Norman of the Lousiville (Ky.) *Courier-Journal* for an extensive investigation of the power of a dairy cooperative.

Special Award: George Seldes (91 years old), for a singular and often controversial career as a newsman.

0036-8075/82/0319-1486$01.00/0