Nevada Nuclear Waste Project Office Bulletin

July 22, 1988

Nevada Agency for Nuclear Projects
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Ron Hess
NV Bureau of Mines & Geology
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Reno, NV 89557-0088

Dear Reader:

This is a collection of clippings from various publications about recent developments in the high-level nuclear waste repository program. The controversial issue is covered by a wide range of the media, and we thought there might be interest in seeing how some newspapers and trade journals handled a few of the stories.

The Bulletin will be published every couple of weeks. It will include not only relevant news clippings, but also important correspondence, summaries, reports and some occasional original material. I believe that the Bulletin, which is intentionally informal, will be a valuable and more current adjunct to our existing newsletter and fact sheets. Please feel free to bring to our attention any materials, newsclippings or other information that you feel would be of interest and value to others.

Sincerely,

Robert R. Loux
Executive Director

Nuclear dump would scare off LV tourists — state expert

Nevada appeal
7-14-88

By ED VOGEL
Appeal Capital Bureau

Las Vegas could lose $200 million to $300 million a year in tourism revenue if the Energy Department builds a nuclear repository in Yucca Mountain, a top state official said Wednesday.

Preliminary studies show as many as 40 percent of tourists say they will not visit Las Vegas if the repository is placed in the mountain range, 110 miles northwest of the city, said Bob Loux, director of the Nevada Nuclear Waste Project Office.

Loux made the statement during a mock Senate Energy Committee hearing put on by students at Clear Creek, a state-owned youth camp about five miles west of Carson City.

His statements were challenged by Carl Gertz, the Energy Department official who heads up the Yucca Mountain investigations.

"I haven't seen his data," said Gertz about Loux's claim of a tourism loss.

"Very preliminary studies by us show that isn't the effect."

Gertz added it is difficult to gauge whether people will follow through on what they say they will do.

"The Las Vegas hotel fires did not have a significant effect on tourism," he said.

About 85 people lost their lives in the MGM Grand Hotel fire in November 1980. Three months later, another 13 died in a fire at the Las Vegas Hilton.

While Nevada tourism was somewhat stagnant in 1982-83, possibly because of a national recession, it has climbed to record levels in recent years.

Loux said the study on the nuclear repository's effect on tourism is "very tentative," but he reiterated that because of fears about the repository the Southern Nevada economy will lose "a couple hundred million a year."

For that last reason alone, Nevada will not accept a legal provision that would give the state $20 million a year if it accepts Yucca Mountain as the repository site, Loux said.

"To take the money, we would have to drop all opposition and give up claims for future impact money," he said.

Gertz repeatedly assured the students, including some from foreign countries, that the repository will not be built in Yucca Mountain unless studies find the site is safe.

Students posed as senators, including one from Nevada, and asked Gertz and Loux various questions about the repository.

In fact, Gertz said Las Vegans would not be harmed even if an earthquake popped open the repository and exposed radioactive materials.

"Nothing would happen to Las Vegans," he said. "Those closer to the repository, if not shielded, would get radiation."

Gertz said seven years of geological studies lie ahead before the Energy Department decides whether to seek a permit to construct the repository.

The repository, 1,000 feet under the mountain, would hold as much as 70,000 tons of highly radioactive spent fuel rods shipped from nuclear power plants.

"We aren't looking for the very best site, but a site that is safe and meets the regulations," Gertz said.

During his presentation, Loux reiterated his stance that the repository was shoved on Nevada by congressmen from politically powerful states.

He contended politicians in heavily populated states were able to have prospective repository sites in their states withdrawn from consideration.

"The evaluation is based on politics, rather than good science," he said.

"Science has played little, if any role, in selecting Yucca Mountain."

One of the student "senators," however, questioned Loux if he were not being short-sighted by his opposition since there is a national need for a central location to dispose of nuclear wastes.

Loux countered by saying that earthquake activity has occurred in Yucca Mountain in the last 35,000 years, while sites in Louisiana and Mississippi have been untouched for hundreds of millions of years.

He also pointed out that 90 percent of the wastes are created in power plants in the East.

"We ought not to look at sites in the West," Loux said.

Rather than a repository, Loux suggested that concrete storage bunkers might be constructed in the East to hold the radioactive wastes.

He also compared the movement to build nuclear plants without a disposal plan with "shooting John Glenn into space and then trying to come up with a way of getting him down."

Bryan warns nuke panel front for industry

Las Vegas Sun
6-22-88

By Mary Manning
SUN Staff Writer

Gov. Richard Bryan warned Monday that the Nevada Nuclear Waste Study Committee is a front for the nuclear industry to sell a high-level nuclear dump at Yucca Mountain to Nevadans.

Congress dealt Nevada a severe blow first by singling the state as the only study site for the nation's first commercial nuclear repository, and then cutting independent state money, Bryan said.

The governor said he supported using state general funds to conduct independent studies at Yucca Mountain, about 85 miles northwest of Las Vegas.

The governor released a letter by Nevada Nuclear Waste Study Committee co-chairman Bob Dickinson outlining plans for newspaper ads in major newspapers throughout Nevada.

"The name (of the committee) is a euphemism," Bryan said. "It is propaganda for the nuclear power industry and they have every right to their position, but the public should be aware of its stand."

"We believe that with larger membership, our input in public discussions of the proposed repository at Yucca Mountain will have a greater impact," Dickinson's letter said.

Bryan said he wanted to alert Nevada citizens who support the Nevada Nuclear Waste Study Committee. "It's the nuclear industry speaking," he said.

"They have every right to express their view," Bryan said. "They are not an objective, unbiased group."

Dickinson earlier said the committee wanted to inform the public in an impartial way.

But Bryan and state Nuclear Projects Office Director Robert Loux said Dickinson's committee is supported by the U.S. Committee on Energy Awareness, backed by the nuclear industry.

"This is a pro-nuclear power industry group," Bryan said. "They want to send us 17,000 tons of nuclear fuel rods stored at reactors across the country."

Bryan said the nuclear industry was a prime mover in persuading Sen. J. Bennett Johnston, D-La., to narrow DOE's choices for a nuclear repository down to Nevada. Washington and Texas were also considered for the dump.

Loux said if the state had not uncovered DOE scientist Jerry Szymanski's report that casts doubt on Yucca Mountain's suitability as a nuclear repository, the public would not know about it.

Szymanski and state investigators said that Yucca Mountain may be in "an advanced case of geologic decay," Loux said. Some state experts suspect Yucca's tuff is under stress from the U.S. nuclear weapons program active at the Nevada Test Site next door to the site since 1951, Loux said.

Loux said it will take two to three months to prepare a budget for the 1989 Legislature for funding to study the dump site.

Nevada asked Congress for $23 million, but received $11 million for state studies and another $5 million for local governments.

The governor said there was division over the repository — possible jobs and an economic boost to rural counties — in the 1987 Legislature, although the public overwhelmingly opposes it. The state Senate failed to pass a resolution against the repository.

DOE's nuke clean-up figures wrong

Nevada Appeal 7-4-88

BY DAVID KOENIG
Appeal Washington Bureau

WASHINGTON — Congressional investigators said Wednesday that the Department of Energy has under estimated the cost of cleaning up hazardous and radioactive waste at the nation's nuclear weapons facilities.

They said the cleanup and safe disposal of waste, and needed improvements in old weapons facilities would cost $100 billion to $130 billion, nearly double the Energy Department's estimate this month for the same work.

The safety problem is so serious it could threaten the production of nuclear weapons, said investigators for the General Accounting Office.

The comments were made in a report by the GAO, an arm of Congress, and in testimony by GAO officials to the Senate Government Operations Committee.

"We just have to do this cleanup," said Sen. John Glenn, D-Ohio, the committee chairman who called for the GAO study.

"It's going to be monstrous, but it just has to be done."

Glenn said toxic and radioactive waste problems at defense facilities dwarf the dioxin contamination discovered at Love Canal, N.Y., yet "we're not doing a blooming thing about it."

"For some reason, when you put 'nuclear' on something, eyes glaze over. Nobody wants to read about it, write articles about it, do television documentaries about it," Glenn said.

The Energy Department this month ranked the Nevada Test Site seventh in the cost of cleaning up and monitoring hazardous and radioactive waste.

A survey by the Energy Department found that nuclear blasts have released large amounts of tritium at the Test Site.

At one location 1,400 feet from a blast area, the water contained 5,000 times the tritium level allowed in drinking water.

But department officials believe migration of the tritium is slow because of the scarcity of water to carry the radioactive compound.

They say there is very little threat of contamination outside the boundaries of the Test Site.

J. Dexter Peach, assistant comptroller general of the GAO, said in a brief interview that he has no evidence to contradict the Energy Department's opinion that contamination does not pose a threat outside the Test Site.

Peach said he doubts the Test Site can ever be completely cleaned.

"I don't know, and I don't think they know," Peach said, referring to Energy Department officials.

"The only way to find out is to monitor it after 100 years (of cleanup). And in the meantime, it would have to be restricted."

Joseph F. Salgado, acting deputy Energy secretary, agreed that many areas cannot be returned "to their pristine state."

Salgado acknowledged that critics say the department is moving too slowly to fix the legacy of 40 years of atomic weapons production.

But, he said, it's a long-term problem that will require Congress and the administration to approve the money for a cleanup.

Two weeks ago, the Energy Department estimated that cleaning up toxic and radioactive waste pollution would cost $66 billion to $110 billion.

In a report released Wednesday, however, the GAO concluded that the cost would be $100 billion to $130 billion.

Further, the report said the Energy Department inflated its estimate by including the price of maintaining compliance with federal environmental laws.

Without that figure, the GAO estimate is double the department's figure.

Much of that money has to be spent replacing aging weapons plants to both reduce contamination and improve safety, Peach testified.

"Overall, the current condition of some facilities in the complex has resulted in safety concerns that could lead to prolonged shutdowns, thus threatening the nation's ability to produce nuclear weapons," Peach said.

Glenn criticized Energy Department officials who testified at Wednesday's hearing for not asking for more money to begin a cleanup campaign.

The department will spend about $1 billion this year and $1.4 billion next year on environmental, safety and health programs, officials said.

GAO investigators said the government should be spending $5 billion to $8 billion a year on the programs.

Nearly half of the estimated cleanup costs involve the Hanford nuclear reservation in Washington state.

The GAO investigators also said there needs to be more independent oversight of work at the weapons facilities.

Las Vegas Review-Journal 7-1-88

Utah anticipates more nuke shipments

Associated Press

SALT LAKE CITY — A state task force said Thursday that the siting of a nuclear waste repository in Nevada could increase the amount of radioactive material being transported through Utah from less than 10 metric tons a year now to 3,000.

At a news conference, the eight-member Utah High-Level Nuclear Waste Transportation Task Force released a report to Gov. Norm Bangerter containing recommendations concerning the movement of waste and spent reactor fuel through the state to a newly designated dump site at Yucca Mountain in Southern Nevada.

Currently, only a few shipments of the hazardous materials are made each year. Between 1979 and 1987 about 880 metric tons of spent fuel were shipped in the United States, with only one-to-eight metric tons passing through Utah, said Utah Public Safety Commissioner John T. Nielsen, who also served as task force chairman.

The Department of Energy estimates shipments to the Nevada repository will peak at 3,000 metric tons a year, most of which will be transported through Utah via interstate highways, railroads or a combination of both.

"We believe that if in fact the waste is sent to the site in Nevada, that it will have a significant transportation impact on the state of Utah," Nielsen said.

The task force report contained three major recommendations, including establishment and funding of a state nuclear waste representative to insure Utah's involvement in nuclear waste policy planning.

The task force also recommended that the governor ask legislators to allow Utah to join the Pacific States Agreement on Radioactive Transportation Management, a group of Western states cooperating on nuclear waste management.

Finally, the task force recommended that it continue to meet periodically to plan the state's response to various issues involved in the transport of radioactive wastes.

Las Vegas Sun 7-1-88

State nuke task force advisory board elects officers

A statewide advisory board for the Nuclear Waste Task Force has completed organizing and electing officers, said executive director Judy Treichel.

The task force is a non-profit coalition of citizen and public interest organizations in Nevada.

The Nevada Nuclear Waste Task Force, funded by a contract with the state, will provide educational information and programs regarding high-level nuclear waste and the possible construction of a dump site at Yucca Mountain. The task force was formed six months ago.

"Because the task force is open to membership for individuals as well as organizations who want representation, we will be enlarging and expanding the board from time to time," Treichel said.

Assemblywoman Myrna Williams was elected chairman, Chris Brown vice chairman and Kathy Thorpe secretary.

Williams holds an individual membership in the task force, while Brown represents the American Peace Test and Thorpe is public relations liaison for the Western Shoshone Council.

Other board members and their affiliations include Ted Travers, National Association of Retired Federal Employees; Solveiga and Jim Unger, American Civil Liberties Union; Martha Wood, American Association of University Women.

Also, Bob Dickinson, Nevada Nuclear Waste Study Committee; Karen Croxall, Nevadans for a Nuclear Test Ban; Norma Cox, League of Women Voters; Dart Anthony, Humane Society of Southern Nevada; Bill Vincent, Citizen Alert; Pat Van Betten, Nevada School Nurses Association; Mark Bird, Sierra Club; and Lorna Castro, Nevada Mobile Home Owners Association.

"Our rapidly growing membership is certainly proof that the people of Nevada are concerned about the Department of Energy project at Yucca Mountain and continue to seek information about its risks to Nevada," Treichel said.

The task force has scheduled a series of seminars throughout the state, she said. The group also provides speakers expert in the fields of nuclear waste management, transportation and related issues.

In addition, a 15-minute video produced by the Nuclear Waste Project Office of the state is also available for showing at meetings.

The Radioactive Exchange'

7/5/88

AMENDED HLW MISSION PLAN RAISES POSSIBILITY OF AN "EARLIER" MRS

The DOE Office of Civilian Radioactive Waste Management's Draft Mission Plan Amendment forwarded to Congress on June 30 postulates that spent fuel could be accepted at a Monitored Retrievable Storage Facility (MRS) prior to 2003 (the current year in which the HLW repository is scheduled to begin Phase I operations) if it is developed in the stages, and changes are made in the 1987 proposal.

Though not explicitly stated in the Draft, the possibility of this occuring would also require that new legislation be enacted that would void the current MRS-Repository coupling language in the Nuclear Waste Policy Amendments Act (NWPAA) restricting the beginning of construction of a MRS "until the [NRC] Commisssion has issued a license for the construction of a repository." As specified in the Draft Mission Plan amendment and previous DOE timetables, the receipt of the NRC repository construction authorization is not scheduled until 1998. To accept the fuel earlier than 2003, therefore, would require that the MRS be constructed in less than five years, and ready for operation.

According to the program time schedule in the Draft, DOE-OCRWM intends to issue the final Yucca Mountain Site Characterization Plan (SCP) in late 1988 and begin the construction of the Exploratory Shaft Facility in June '89.

Only One Repository Needed?

On the question of whether a second repository will need to be developed, the Draft Amended Plan document reports that, based on latest estimates on spent fuel generation from the DOE's Energy Information Administration, "given a no-new-order, end-of-reactor life" forecast, the "total quantity of spent fuel discharged from U.S. reactors now operating or in active construction will be about 87,000 MHTM." To this amount, by the year 2020, would be added approximately 9400 MHTM of defense and commercial waste, bringing the total amount of waste to be disposed of in the repository by 2020 to 96,400 MHTM.

According to the "Draft," "the data indicates that the Yucca Mountain site has the potential capacity to accept at least (emphasis added) 70,000 MTHM of waste but only after site characterization will it be possible to determine the total quantity of waste that could be accommodated."

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HOUSE RECEDES TO SENATE ON HLW FY89 APPROPRIATIONS; NV LOSES MORE THAN $s

If there are any doubts about who, almost singlehandedly, is steering the course of the HLW repository program, the House and Senate Conference approval of FY89 Appropriations for the HLW program puts them to rest -- its Senator Bennett Johnston. The Louisiana Senator demonstrated again to his colleagues on the Senate Environment and Public Works Committee, which has collateral jurisdiction over the HLW program, and to his counterparts on the House authorization Committees, Interior and Commerce, that through his chairmanship of the Energy and Water Appropriations Subcommittee and Senate Energy Committee, he can direct the HLW program, almost at will, particularly if there is no strong interest or consensus on specific issues among the House authorization Chairs and the Senate Environment and Public Works Committee.

The conference agreement which was approved by the full House on June 30 by a vote of 384-17 includes the language relating to the HLW program and Nevada's use of DOE funds as passed by the Senate, which was initially recommended by Senator Johnston's Energy and Water Subcommittee.

As reported in the previous EXCHANGE, the language limits the total amount of funds that DOE can provide Nevada in FY89 ($11 million to the state, $5 million to local gov'ts); caps the amount of funds that can be used for certain activities ($1.5 million for socioeconomic studies, $1.5 million for transportation); and prohibits the use of the funds to support Nevada lobbying activities.

Nevada - A Voice in the Desert

Johnston's success in using appropriations bills to accomplish his objectives also highlights another axiom of the waste program: Nevada has few allies in the Congress, and virtually none in the Congress to direct the HLW program. When Sen. Harry Reid (D-NV) tried in the Appropriations Committee to boost Johnston's cap on state funding from $11 million to $18 million, he was soundly defeated. On the floor of the Senate, he tried again. This time, he wasn't even allowed to offer his amendment. Johnston obtained a ruling from the presiding officer forbidding Reid from offering his amendment, on the grounds that it would be "legislating on an appropriations bill." Reid did not argue with the ruling even though Johnston had done exactly that to amend the Nuclear Waste Policy Act this past year.

In the House, Nevada has two junior members, neither of whom serves the Appropriations Committee. So there was little that they could do to prevent that Committee's senior members from agreeing to Johnston's changes as part of the final bill.**

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Nevada Nuclear Waste Project Office Bulletin

Vol. 1 No. 2 Aug. 1, 1988

O-1347

Constitution requires state sanction of nuclear dump

Elko Daily Free Press 7/8/88

There are at least two good arguments against the current federal proposal for creating a "high-level nuclear waste repository" in southern Nevada.

The first of these arguments, advanced most prominently by U.S. Senator Chic Hecht of Nevada, is based on the common-sense recognition that this so-called "nuclear waste" is material that should be converted into fuel rather than being stored uselessly and expensively in a "repository."

The second argument was cited last month by Grant Sawyer, chairman of a state-level commission on nuclear projects. This group adopted a resolution, signed by Sawyer, in which it called upon the Nevada Legislature to withhold approval of the proposed "repository" in the vicinity of Yucca Mountain.

This reference to Nevada sanction — not yet given — of the federal proposal calls attention to provisions of the Constitution of the United States that require such approval.

Folks in Washington, D.C., seem to think they can do just about anything they might want to do, anywhere in the nation. But the Constitution says otherwise, and members of Sawyer's commission are correct in calling would-be federal autocrats to constitutional accountability.

Officials in the District of Columbia trend toward arrogance because they fail, or refuse, to comprehend that the Constitution was written to limit the powers allowed to the national level of our government. This important and fundamental concept is summed up, for the benefit of those who pretend they didn't get the message earlier, in the Tenth Amendment. It says: "The powers not delegated to the United States by the Constitution, nor prohibited by it to the states, are reserved to the states respectively, or to the people."

With regard to the federal power to establish exclusive control over a particular site, the Constitution (in Article I, Section 8, Paragraph 17) says Congress shall have the power to "exercise exclusive legislation" over the District of Columbia (with state approval required through the process of cession) "...and to exercise like authority over all places purchased by the consent of the legislature of the state in which the same shall be, for the erection of forts, magazines, arsenals, dockyards and other needful buildings..."

This provision leaves room for some quibbling about whether or not a "nuclear waste repository" qualifies as a constitutionally sanctioned purpose for the exercise of exclusive federal authority; but it leaves no room whatsoever for debate as to whether or not state consent is required.

This constitutional limit of authority makes it absolutely clear that Nevada's consent is a prerequisite to the creation of a "repository" or any "place" within this state where exclusive federal authority is to be exercised.

All this means that if Capitol Hill masterminds should insist on proceeding with the folly of burying, rather than exploiting, a valuable fuel resource (called "nuclear waste"), they first must persuade members of the Nevada Legislature to bestow official consent upon the foolishness.—M

Reno Gazette-Journal 7-29.

Candidate calls nuke-dump study shoddy

By Mike Norris/Gazette-Journal

Democratic vice presidential candidate Lloyd Bentsen criticized the Department of Energy Thursday for its poor work in determining if Nevada's Yucca Mountain can safely house the nation's most dangerous radioactive waste.

He promised better monitoring of the work if he and Massachusetts Gov. Michael Dukakis, the Democratic presidential candidate, are elected in November.

But Bentsen cautioned it's probably too late to stop the dump from coming to Nevada.

"There's not enough votes in Congress to change that," he said.

The Texas senator, whose own state was also considered for the $30 billion dump until Congress decided to target Nevada last year, called the Department of Energy's data collection and processing procedures slipshod during a 4½-hour Reno campaign stopover at the National Conference of State Legislatures meeting.

In an earlier session, legislators from across the country heard a representative of the U.S. railroad industry raise serious concerns about the failure to address safety issues in the transportation of used radioactive fuel rods to Nevada from commercial reactors, most of which are in the East.

DOE officials questioned Bentsen's assertions and defended the quality of their work. "I don't know what basis he has for saying that," said department spokesman Chris West. "We feel that isn't the case, obviously."

The 67-year-old Bentsen vowed that if the Democratic ticket wins the White House in November, change will come quickly at the DOE with new leadership to provide more effective oversight at "whatever site it ends up being on."

Texas' Deaf Smith County, Yucca Mountain and the Hanford Nuclear Reservation in Washington were the three sites being studied for the proposed nuclear dump. Then, in the December 1987 pre-holiday rush of budget votes, Congress authorized the DOE to concentrate its studies on Yucca Mountain.

Sen. Harry Reid, D-Nev., an outspoken dump opponent, attempted unsuccessfully to detour the legislation with a filibuster and amendments. Bentsen praised Reid, who was in Washington Thursday, for a spirited defense.

Top Nevada Democrats on hand during the crowded news conference at Bally's Reno were heartened by the Texas senator's attack on the DOE. They said it demonstrated his concern for Nevada issues in particular and for Western problems in general.

"That's the point we've been trying to make, that the data collection has been poorly administered," said Gov. Richard Bryan, a candidate for the U.S. Senate.

Nevada Democratic Chairman Beecher Avants said "major, major goofs" have occurred in DOE's Yucca Mountain operations, including the misplacing of reports, the loss of some data and the failure to publish the results of some studies.

Carl Gertz, director of DOE work at Yucca Mountain, on Tuesday ordered a halt to a small portion of the work being performed there by the U.S. Geological Survey.

West said the order involved less than 2 percent of the studies going on at Yucca Mountain.

Dukakis Issues Nuke Policy Paper

Democratic presidential nominee Michael Dukakis says that, if elected, he would initiate a new nuclear waste disposal site selection process.

His promise that could change the current Department of Energy program that targets Yucca Mountain as the dump site is included in a national energy policy position statement in which he said "It is past time to reevaluate the nuclear option."

He said nuclear power is not the once-vaunted electricity that would be "too cheap to meter," but instead is the "most expensive way ever invented to boil water." He said 100 nuclear plants are in operation and about 20 more will come on line in the next five years. He said those plants must be operated as safely as possible and that people living nearby are adequately protected.

"There is also the problem of nuclear waste- a legacy which we seem intent on leaving for future generations," he said. "I do not intend to increase the burden of this legacy. Therefore, until safe and satisfactory methods of waste treatment and disposal are devised, until sufficient waste facilities are sited and approved, until a new generation of reactor design and safety control is developed, I will not support the construction of commercial reactors in the U.S.

"I will also initiate a new nuclear waste disposal site selection process, a process with public credibility, and with an important partnership role for states. As long as the federal government tries to dictate to the states, we will be without a disposal site."

Dukakis also said he would appoint Nuclear Regulatory Commission members who would be dedicated to strong enforcement of safety standards. He said he would reorganize it to ensure that the agency "has the tools and the mandate to effectively oversee the nuclear industry."

"The agency must be committed to straightforward and unbiased analysis of all safety risks, to the timely resolution of all safety problems, and to fair and open proceedings that allow the public full rights of participation."

He said there should be no artificial ceiling on the liability of nuclear utilities, nuclear contractors, or other members of the nuclear industry in the event of a nuclear accident.

"The idea of limiting liability for the nuclear industry is outdated and unnecessary," he said. There is no reason that the industry cannot insure itself. The taxpayers should not bear this burden in the event of an accident."

ANW/NWPO
July '88

some Yucca studies

Las Vegas Review-Journal

By Laura Wingard 1-27-88
Review-Journal

Some of the geological research to determine the safety of Yucca Mountain as a nuclear waste dump will be delayed under an order issued Tuesday by the U.S. Department of Energy.

The stop-work order applies to four or five categories of research being done by the U.S. Geological Survey for the Energy Department, said Chris West, a department spokesman.

"It's a midcourse correction. It's not a criticism of USGS. They just need to change their record keeping," West said.

But Robert Loux, head of the state's nuclear waste office and an outspoken critic of the Energy Department's nuclear repository work, said sloppy record keeping has been "the Achilles' heel of the program all along."

The department also issued stop-work orders in 1986 to the Geological Survey and other contractors working on the nuclear waste dump studies because of a flawed quality control program for tracking repository documents.

Quotable

"It's a midcourse correction. It's not a criticism of USGS."

— Chris West, DOE spokesman

West said the 1986 stop-work orders have since been lifted, but additional audits by the Energy Department showed new problems. He added that the department knows it will need as complete a record of the dump research as possible to persuade the federal Nuclear Regulatory Commission to license the high-level nuclear waste dump at Yucca Mountain, 110 miles northwest of Las Vegas.

Department officials have conceded that incomplete documentation has rendered almost useless much of the geological and hydrologic research done on the dump site dating to 1979.

The Energy Department, however, is "trying to do the job right" by turning up questionable paperwork practices and requiring contractors to make corrections, West said.

Even so, the latest stop-work order "is not a small matter," Loux said. "It's a prelude of more to come." Loux said the Energy Department is currently auditing other contractors and more stop-work orders are expected to be issued.

Steps to improve the department's quality control program include the opening last week of a $1.3 million archive where samples of rock drilled from Yucca Mountain will be stored during the seven-year, $1.5 billion study of whether the site is safe for a nuclear waste dump.

But Loux has been quick to point out that the archive was built on the Nevada Test Site by the Energy Department because it was required by the Nuclear Regulatory Commission.

Nevada Challenges BLM's Yucca Mountain Access Grant

The State of Nevada says the U.S. Bureau of Land Management violated the public land laws when it granted the Department of Energy access to Yucca Mountain for study as a potential high-level radioactive waste dump, and brought into question the constitutionality of the statutes and processes they relied upon in granting the access.

Deputy Attorney General Harry Swainston, in a brief filed in U. S. District Court in Las Vegas in July, said the bureau created a bogus instrument unknown to law when it granted a "right-of-way-reservation" to a portion of Yucca Mountain. The DOE requested the bureau to grant access so it can conduct site characterization studies to determine whether it would be suitable as the country's first high-level nuclear dump.

Swainston, in answer to DOE's request to dismiss the suit, said the right-of-way-reservation is a defacto reclassification of public land in violation of law. In effect, he said, the bureau created an illegal defacto withdrawal of land.

"Nowhere in the Federal Land Policy and Management Act (FLPMA) can one find reference to a right-of-way reservation," he said. "The term 'reservation' implies a tract or area measured in square units more commonly associated with an actual withdrawal or reservation pursuant to FLPMA. FLPMA limits rights-of-way to the common understanding of the term established by the common law. A right-of-way according to common parlance means the right of passage or of way over another man's property."

He said a right-of-way must be limited to a reasonable term, but the term of the proposed project would be potentially perpetual.

He also said the proposed site characterization would take the land out of multiple use. The DOE intendsto turn the characterization facilities into the repository itself, incorporating not only the two exploratory shafts, but also all of the underground workings as well," he said. "Access to mineral or other potential natural resources would be foreclosed, as the property must be institutionally protected against all entry. Defendants have created, therefore, a defacto classification of the public lands for a dedicated single use in violation of the law." He said DOE can obtain the land only through a land withdrawal by Congress, and that the Nevada Legislature must consent as was the case when land for the Nevada Test Site was withdrawn.

He said the right-of-way-withdrawal also raises four constitutional defects, including violation of Article One, The Tenth Amendment, the Equal Footing Doctrine and Public Lands Trust. Article One provides for federal authority over "all places purchased by the consent of the legislature of the state in which the same shall be." The Tenth Amendment limits the powers allowed to the federal government over the states. He said it should protect any state from abusive treatment by the other 49, such as when Nevada was singled out as the only state to be studied as a potential repository host. He said it should also apply to subsequent congressional action limiting Nevada's legally required oversight of the repository siting process within the state.

The Equal Footing Doctrine, according to Swainston, protects the state's police power to exclude toxic radioactive waste and prevents other states in the exercise of their rights from identifying Nevada sites to solve their waste problems. The Public Land Trust requires the federal government to look to state and local interests in making far-reaching public land commitments.

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Ron Hess
NV Bureau of Mines & Geology
UNR
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Broadbent eyed for nuke waste position

By Mary Manning
SUN Staff Writer 8-17-88 Las Vegas

Nevada Republican congressional representatives announced Tuesday that the FBI has begun a background check of Clark County Aviation Director Bob Broadbent for the post of nuclear waste negotiator.

Sen. Chic Hecht and Rep. Barbara Vucanovich said the White House assured them Broadbent had been moved to the top of the list.

Former Utah Gov. Scott Matheson had declined the position, created in the Nuclear Waste Policy Act Amendments of 1987.

Broadbent said it was "an honor" to learn he was under consideration as negotiator.

"The federal negotiator will be an extremely important part of Nevada's future, whether Nevada is ultimately the site of a nuclear waste storage site or not," Broadbent said.

Last December Congress picked Southern Nevada's Yucca Mountain as the only site for Department of Energy studies to find the nation's first commercial high-level nuclear waste dump.

"However, it now appears that Nevada will indeed be chosen, and it is also evident that our state opposes any nuclear waste storage facility," Broadbent added.

State and local officials have staunchly opposed the choice of Yucca Mountain, less than 100 miles northwest of Las Vegas.

"All of us have a responsibility as good citizens to guarantee the best protection and the best economic benefits possible for Nevada," Broadbent said. "The federal negotiator will be the person making these assurances and agreements for the federal government." He added that he enjoyed his job as aviation director at McCarran International Airport.

WESTERNERS SEEK TO MITIGATE IMPACTS OF NUCLEAR REPOSITORY

The Western Governors' Association (WGA) and the Western Interstate Energy Board (WIEB) have adopted resolutions expressing concern over transportation and other impacts a high-level nuclear waste dump at Yucca Mountain.

One WGA resolution, offered by Govs. Richard Bryan of Nevada and Neil Goldschmidt of Oregon, said the WGA urged the Department of Energy (DOE) in 1985 to prepare and adopt a comprehensive transportation plan to guide all transportation decisions, but DOE failed to do so. Current plans propose that spent reactor fuel and high-level waste be disposed of at Yucca Mountain, and transuranic waste to be buried in a facility in New Mexico.

"Western corridor states are concerned that without a national transportation plan, prepared in cooperation with corridor states, the safe and uneventful transportation of these wastes cannot be accomplished in a timely and coordinated manner,"

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...WGA adopted a resolution in 1985 urging DOE to adopt a comprehensive plan to guide all transportation decisions, but DOE failed to do so.
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the new resolution said. "Specific corridor state concerns include selecting routes; ensuring safe drivers, vehicles, and cargo; imposing restrictions for bad weather and road conditions; notifying state officials; tracking shipments; designating safe parking areas; educating and informing the public; supplementing existing state revenue resources; and developing effective state and local emergency preparedness and response. Effective emergency preparedness and response requires integrated plans and procedures, radiation detection equipment, training, retraining, and periodic drills."

It said corridor states have substantial responsibility in assuring the safety of their residents in the event of accident but, "in times of decreasing state budgets, the agencies charged with this responsibility do not have the resources to do the job being placed on them by these federal programs."

It said the Nuclear Waste Policy Act of 1982 established a federal policy for the management and disposal of spent nuclear reactor fuel and highlevel radioactive waste. However, "over objections by the Western Governors, the law was amended in 1987 to politically short-circuit the site selection process by designating Yucca Mountain as the only site for characterization. Regardless of the ultimate site for a high-level repository, a scientifically sound and publicly acceptable process is needed for the transportation of nuclear wastes."

To achieve safe transportation to more suitable interim or permanent repositories, the WGA asked Congress to:

-"Seek authority for DOE to take the overall responsibility for shipments. This responsibility includes the accountability for addressing the legal requirements of other federal agencies and for coordinating planning and shipping programs with corridor states, notwithstanding the distribution of legal authorities among federal agencies;

-"Seek authority for the DOE to intensify efforts in resolving state concerns related to shipments to the Waste Investigation Pilot Plant (WIPP) in New Mexico. This would include funding of state participation in resolving the concerns that require large state efforts;

-"Clarify congressional intent that DOE prepare in cooperation with corridor states, the WGA Task Force, and the Western Interstate Energy Board (WIEB), a comprehensive plan and program for the transportation of nuclear waste shipped under NWPA;

-"Give guidance to DOE in initiating the identification of national nuclear waste transportation corridors, as proposed by WIEB in a March 1988 resolution."

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The law was amended in 1987 to politically short-circuit the site selection process...
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In that resolution, WIEB said route selection is a "key component of a safe, publicly acceptable transportation system." It said, "The current practice of selecting routes shortly before shipments begin will not give states sufficient time to prepare for repository shipments." It said DOE should immediately assume responsibility for identifying routes to be used for shipments to a repository through the process developed by the Board's High-Level Waste Committee and attached to this resolution or through another process agreed upon by the DOE, states and tribes."

In a second resolution, the WGA said that any assessment of the impacts associated with the characterization, construction, operation, and closure of a waste facility must adequately address the concerns of the affected western states. The Act requires the (DOE) to prepare a report to Congress on the potential impacts of locating a repository at Yucca Mountain. The report is to include DOE's recommendations for the mitigation of these impacts and a statement of which impacts should be dealt with by the federal government, which should be dealt with by the states, and which should be a joint federal-state responsibility.

The resolution, offered by Gov. Norman Bangerter of Utah, said transportation impacts are likely to be felt in all corridor states through which waste will be transported to Yucca Mountain, but that DOE has indicated that in its required report it is only planning on addressing impacts within Nevada. It also said DOE should conduct meetings outside Nevada on Environmental Impact Statement (EIS) scoping activities.

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Nevadans fuming over atomic dump

State says it's done more than its share for the nuclear age

By Keay Davidson
EXAMINER SCIENCE WRITER

Nevada refuses to be the nation's atomic toilet.

"All For Our Country" is their motto, but Nevadans say they've already given too much — their property, their nerves, even their lives — to the nuclear age.

So they're defying an attempt by the U.S. Department of Energy to turn Yucca Mountain, 110 miles northwest of Las Vegas, into the nation's first permanent repository for high-level commercial nuclear waste — waste that will be "hot" for hundreds of thousands of years.

And some Californians are beginning to fear that whatever "radwaste" is flushed into Nevada may end up in California — specifically, in Death Valley.

In 18,000-resident Inyo County, which is 20 miles from the dump site, officials recently asked the Department of Energy for federal funds to study the possible long-term impact on the desert county of the dump site.

Roger DeHart, the county director of planning, said Friday that the Energy Department had told him Tuesday that it would consider the county's request.

The Nevada repository must contain its poisons much longer than the oldest engineering project on Earth — the pyramids of Egypt (circa 2680 B.C.). And the pyramids, one anti-dump site state official noted with grim satisfaction, "are slowly crumbling."

The dump site is "the No. 1 issue of concern to most Nevadans," said Robert Loux, head of Nevada's Nuclear Waste Project Office. "Ninety percent of all the state elected officials are strongly opposed and have vowed to fight it to the bitter end."

The waste will be placed within the mountain at a site roughly 1,000 feet above the aquifer.

The government hopes to finish environmental analyses in 1995, at a cost of $1 billion to $2 billion, and to begin storing wastes there in the year 2003.

No guarantees

For now, "there's no engineered storage we can (guarantee) will be safe for that long, or even that human institutions will be around to prevent people from meddling with the waste for that long," said Sierra Club lobbyist Brooks Yeager in Washington, D.C.

Recent studies indicate that dramatic changes in ground water levels or volcanic activity could crack open the 1-square-mile underground dump site, Nevada officials say.

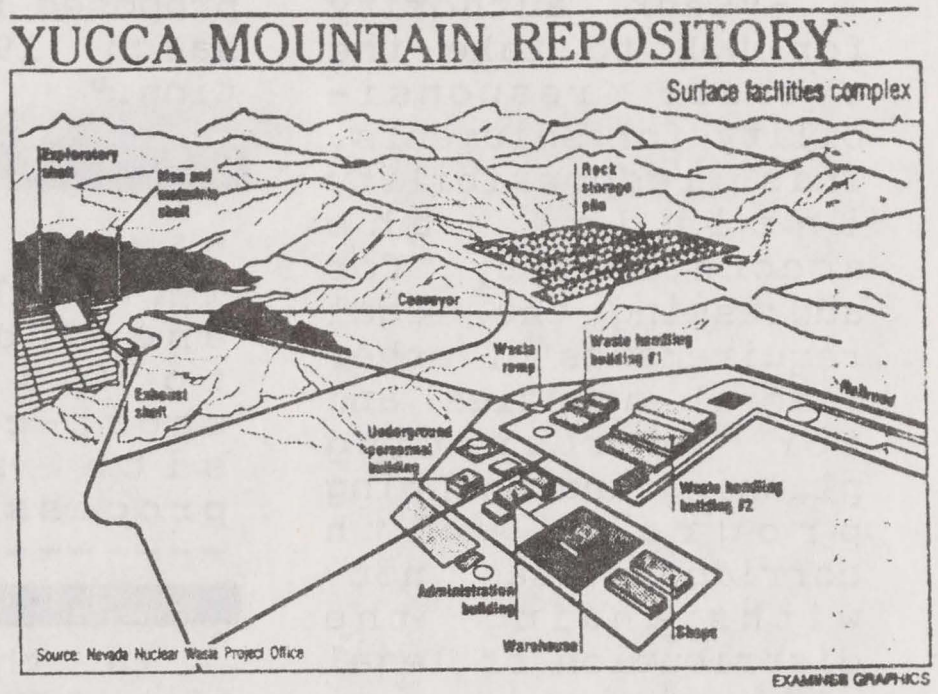
The repository "is nowhere near meeting the technical criteria for a suitable site and should have been disqualified," said Steve Frishman, also of the Nuclear Waste Project Office. "There are 32 known, active faults at the site."

Still, Department of Energy studies of the dump site's environmental risks have failed to consider an adequate range of environmental models for Yucca Mountain, according to staff memos at the federal Nuclear Regulatory Commission.

In a letter dated May 11 to an Energy Department official — a copy of which was obtained by The Examiner — the NRC staff said its "most fundamental technical objection" is the department's "failure . . . to recognize the range of alternative conceptual models of the Yucca Mountain site that can be supported by the existing limited data base."

Volcanic activity

Also, recent scientific research has indicated volcanic activity occurred there much more recently than previously thought — perhaps as recently as 20,000 years ago — whereas the old estimate was 270,000 years, said Bruce Crowe of the isotope geochemistry group at the University of California-run Los Alamos National Laboratory in New Mexico.



EXAMINER GRAPHICS

On the assumption of 270,000 years, the probability of a disruption was as low as 1 in 100 billion. Under the new date of 20,000 years, it's 1 in a billion, Crowe said.

But an even higher risk estimate — as low as 1 in a million — was cited by Carl Gertz, the Department of Energy's project manager for the repository in Las Vegas.

And late last year, Department of Energy scientist Jerry Szymanksi of Las Vegas wrote a memo suggesting Nevada might be a bad place for the repository.

The reason, he wrote, was that long-term changes in underground pressure due to tectonic movements (earthquake faults) and heat flow (from volcanoes) could force water upward, possibly as high as the repository itself.

If that happens, water conceivably could penetrate the repository, rust open the metal containers and leach radioactive materials into the soil.

But it's "very, very unlikely anything like that would happen," Gertz replied.

Even if wastes did escape, it would take them 20,000 to 80,000 years to travel just 3 miles, Gertz said.

Senate race issue

The dump site has become an issue in the U.S. Senate campaign in Nevada, in which Republican Sen. Chic Hecht is battling to defend his seat against state Gov. Richard H. Bryan, a Democrat.

Hecht has drawn scorn for supposedly flip-flopping on the issue and for gaffes, such as accidentally calling the dump site a "nuclear suppository" and for advocating "reprocessing" the waste to make it usable fuel again. The reprocessing of nuclear materials virtually died out in this country a decade ago because of its extreme cost and environmental risks.

But Hecht spokesman Mike Miller defended the senator and denied an oft-repeated charge that Hecht once said Nevadans should accept nuclear waste as their "patriotic duty."

The nation's embattled nuclear power industry has pushed for years to select a dump site, because otherwise it lacks a permanent burial site for high-level radioactive waste.

Over the decades scientists have considered a variety of ways to dispose of the wastes, ranging from depositing them on the ocean floor to launching them into space aboard the space shuttle.

Congress voted last year to bury the wastes underground in Nevada. Other states had been considered, but "Congress selected Nevada (for the repository) because the Nevada delegation was too weak to put up a meaningful resistance," said Yeager of the Sierra Club.

But at the grass-roots level, many Nevadans are saying they're mad as hell and aren't going to take it anymore. "Nevadans feel they have done more than their share in the nuclear arena," Loux said.

Indeed, "Nevadans have been used as guinea pigs since 1951 with the nuclear (weapon) test site here," said Bob Fulkerson, the head of Citizen Alert. "We've lost a lot of people through cancers, leukemias and infant deaths."

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Drilling at Yucca Mountain delayed five months

Mary Manning
SUN Staff Writer

U.S. Department of Energy officials announced a five-month delay Wednesday in drilling a shaft and building an underground laboratory at Yucca Mountain, the sole study site for the nation's first high-level nuclear repository.

Nevada Nuclear Waste Project Executive Director Robert Loux said the Nuclear Regulatory Commission — the agency responsible for licensing the nuclear dump — was dissatisfied with DOE's quality assurance program for drilling two shafts.

"We're not surprised, we've seen this coming for a long time," Loux said.

After meeting with the Nuclear Regulatory Commission, DOE headquarters staff and Nevada officials in Washington, D.C., Yucca Mountain project manager Carl Gertz announced the delay.

Instead of preparing to drill the shaft in January, DOE expects to begin work in May, Gertz said. Actual drill work will begin in November, instead of June, he added.

Gertz said the NRC has approved the DOE's quality assurance program to ensure government scientists produce detailed, technical work during the study program. "NRC found it fully acceptable," he said.

But drilling a shaft into Yucca Mountain for about 10 years of study has to be delayed until DOE officials satisfy NRC concerns over proposed methods and procedures, Gertz said.

Winning NRC approval for DOE's quality assurance program is "a major milestone" for the high-level nuclear waste program, Gertz said.

The NRC letter instructed DOE officials to incorporate five technical items to assure proper scientific records, including detailed science reports and proper signatures.

Altholgh NRC staff has been reviewing — and withholding approval — on the DOE quality assurance program for two years, Gertz said the government's latest effort was submitted three months ago.

"We've seen it (the delay) in the offing for a long time," Loux said. NRC was concerned with quality assurance in shaft design, he said.

"NRC has insisted on sticking to the requirements, established since 1983," Loux added.

DOE thought they could back down NRC from its stringent requirements, but NRC refused to participate in exploratory shaft meetings until DOE came up with proper quality assurance, Loux said.

DOE's nuclear track record a bit warped

If this comedy of errors weren't so serious, it would be funny. But when you're dealing with the fact that the government built a nuclear fuel plant knowing full well that it would contaminate the surrounding area, you not only become skeptical, but frightened.

It's just like the political candidate who goes around telling voters he will not raise taxes if elected. Next thing you know you're hit with a tax increase.

The Department of Energy, trying to put on its best "trust me" face tells people Yucca Mountain is safe to store nuclear waste.

This is the same department that is reeling from recent revelations about serious safety and security problems at U.S. nuclear weapon productions facilities across the country.

Don't worry. Energy Secretary John Herrington says things aren't that bad. He even called a press conference to say so.

Somehow, that doesn't make us feel secure. It only makes us more concerned.

According to news reports about conditions at the nation's 15 nuclear weapons production facilities, environmental contamination is widespread, with an estimated cleanup cost of $100 billion over the next 30 years. The cost of modernizing aging plants and bringing them into compliance with safety and health regulations is put at another $100 billion.

Add to that revelations that the government repeatedly refused to upgrade environmental protection at the nuclear fuel plant in Fernald, Ohio, despite warnings that radioactive contamination was spreading offsite.

Energy Department lawyers admit that over the past 35 years, the government knew its plant was emitting a massive amount of radioactive uranium in the air and contaminating local groundwater and rivers, but would not provide money for better pollution control.

Documents show that NLO Inc., the private contractor that operated the plant for the government from 1951 to 1985, year after year expressed concern about contamination and sought federal funds to fix and improve equipment to control dangerous discharges.

Federal officials, citing budget constraints, dragged their feet or failed to grant the requests and, in one case, ordered NLO to keep the plant in operation, even if it meant violating federal environmental laws.

Documents show that the government built the plant, knowing it would contaminate the Fernald area, 18 miles northwest of Cincinnati.

Who's to say that 15 years after a nuclear waste repository is built at Yucca Mountain, documents won't be found saying government scientists knew full well the site was unsafe — before it was built. But they had to put it somewhere and Nevada was the likely place at the time.

Stranger things have happened, as DOE's own records are revealing.

Las Vegas Sun, Oct. 17

Candor on Nuclear Peril

Finances and the Fear of Serious Accident Prompt Rare Openness on Weapon Plants

By KEITH SCHNEIDER
Special to The New York Times

WASHINGTON, Oct. 13 — In a remarkable public admission, the Energy Department has acknowledged over the last two weeks that the Government's mismanagement of the nation's nuclear weapon industry has resulted in many industrial mishaps, chronic safety violations and a legacy of environmental contamination.

News Analysis

The scope of the difficulties almost defies comprehension. Toxic and radioactive wastes that will remain dangerous for thousands of years contaminate underground water around many of the department's weapon plants. Three major plants have been shut down in the last three months, and aging and neglected equipment at the others may no longer be able to reliably supply critical materials for nuclear weapons. The nation may thus be in a uncomfortable position of weakness.

Why is the Energy Department, normally so secretive about its military nuclear operations, now declaring that conditions at its plants pose threats to national security and public safety?

Finances and fear of a serious accident are among the forces motivating the Energy Department, a variety of experts say. By admitting that the 46-year-old program to manufacture nuclear weapons is in crisis, this reasoning goes, the department believes it can make a case for proceeding with an extraordinarily expensive program of repair and rebuilding.

Congressional critics of the department argue that its candor is in many ways a political shell game. They note that many safety problems at the aging facilities stem from the Reagan Administration's decisions to pay for new weapon systems, like the B-1 bomber, by not maintaining laboratories, production plants, a waste repository and a test site in the system for producing nuclear warheads.

Another factor in the department's disclosures may have been the likelihood that if the department was not forthcoming about the problems, the press and Congress would be.

Last August, the Energy Department shut down a reactor at the Savannah River Plant in South Carolina after inspectors from Washington discovered that local operators neither understood nor cared about an unsettling power surge and other unusual events. The public learned about this not from the department but from press reports that began with The Washington Post.

Only weeks later, the Energy Department said it could not open the nation's first permanent nuclear waste repository near Carlsbad, New Mexico because its own inspectors were not satisfied the facility could be operated safely. The department's action followed a New York Times report about water seeping into rooms and corridors that were supposed to be bone dry.

And 10 days ago, top officials of the department and a predecessor agency, the Atomic Energy Commission, said subordinates never made them aware of a spate of serious nuclear accidents from 1957 to 1985 at the Savannah River Plant. The accidents had just been disclosed at a joint Senate-House committee hearing.

In recent years, national and regional newspapers have reported on a string of plant shutdowns, releases of radiation to surrounding communities, accumulation of toxic and radioactive wastes, equipment failures and management breakdowns. Taken together all these incidents convinced critics and the Energy Department's own safety officers that the system was heading for a disaster.

The Government-owned plants and laboratories are managed by some of the nation's largest companies, including E. I. du Pont de Nemours & Company, the Rockwell International Corporation and the Westinghouse Electric Corporation. For decades, these companies and others have managed the warhead production system almost as fiefdoms, free from the close scrutiny they would have received had the weapon plants been operated as private ventures and subject to the nation's environmental and public health laws.

The armed services committees in Congress, which have primary oversight of weapon production, have been intent on satisfying the the Pentagon and have not paid nearly so much attention to the Energy Department's nuclear weapon production.

As a result, despite substantial evidence of contamination and unsafe conditions at many of the 15 sites in the weapon production system, the dimensions of the problems now confronting Congress and the next Administration were not clear until very recently.

Perhaps most startling, however, is that the Reagan Administration, which has prided itself on rebuilding the nation's defenses, did not recognize the crisis building in the nuclear weapon complex.

In the fiscal year 1981, at the start of the Reagan Administration, the Energy Department's budget for nuclear weapon programs was $3.7 billion. In the fiscal year 1989, which began this month, the agency will spend $8.1 billion. (Almost $1 billion of that is directed to studying and solving environment and safety problems.)

Over the same period, though, the Pentagon's budget climbed to $291.2 billion from $178.4 billion. "We all ought to be asking why we are playing catch-up ball with something so critical as this system is," said Representative John M. Spratt Jr., a Democrat from South Carolina who is on the House Armed Services Committee.

Mr. Spratt said the Administration had periodically told the committee that its weapon facilities were old and that there was a risk of not being able to fulfill the nation's weapon production needs. "But," said Mr. Spratt, "we never heard from the Energy Department that they needed substantial new funding for staff, for repairs, for safety, or to take care of the entire weapon operation."

As for safety, C. Anson Franklin, the Energy Department's chief spokesman, said the department had to peel away the cloak of secrecy to break through the traditional "complacency" about safety that he said had overtaken the system. "We have known that this was a public crisis waiting to happen," said Mr. Franklin. "We could see there was going to be a day we had to face up to conditions in the weapons complex."

Other experts, including Senator John Glenn, a Democrat from Ohio, said the candor was necessary to alert Congress that the weapon production system was in danger of failing and needed an infusion of money.

The question now, though, is how much will it cost? The aged equipment and systems to manufacture materials and warheads are literally falling apart. Repairing the system sufficiently to keep it operating safely for 15 to 20 more years, until new plants are built, will cost $13.3 billionfrom 1989 until 1995, according to the Energy Department.

At the same time, the Energy Department has asked Congress for at least $17 billion over the next decade to build the huge atom smasher dubbed the superconducting supercollider, to begin the largest biological research project in history to analyze completely the total chemical structure of all human genes and to share the cost of a high-level nuclear waste repository in Nevada. The agency also wants to build a plant in Idaho for separating and purifying and two new reactors to produce tritium in South Carolina and Idaho.

These cost estimates do not include cleaning up the radioactive and toxic waste that accumulated at about 80 sites in 27 states and Puerto Rico since the nuclear weapon program began in the Manhattan Project in December 1942.

As the Energy Department tries to restart three nuclear reactors at the Savannah River Plant, the conflict over national security and public safety will come into sharper focus. The reactors produce tritium, a radioactive gas that is essential for maintaining warheads in readiness.

In any case, solving the immediate need will not assure reliable supply over the next decade or two.

"The Department of Energy and the Department of Defense have to outline a plan for what is needed to maintain production," said Senator Glenn.

For now and years to come, the nation faces an arresting paradox. The very system designed to protect the United States from foreign enemies is now being viewed by many in Congress, and millions of Americans, as a threat to domestic safety.

Critics Work to Lower Shields Protecting Energy Agency From Toxic-Waste Rules

By PAULETTE THOMAS
Staff Reporter of THE WALL STREET JOURNAL

WASHINGTON—When the Environmental Protection Agency imposed a $15 million civil penalty this year on Texas Eastern Corp. for dumping toxic wastes, the Houston company called it "inappropriate," but agreed to pay.

But when Rockwell International Corp. received a $110,000 civil penalty last year from the EPA for dumping the same type of wastes in its nuclear-weapons work at Rocky Flats, Colo., the company had greater latitude to fight. It wasn't Rockwell lawyers, but attorneys from the Energy Department, which runs the nuclear-weapons program, who argued Rockwell's case before the EPA and who reduced the fine to $79,000. Then the Energy Department reimbursed its contractor for the amount of the fine.

While the Energy Department admits that its hazardous and radioactive waste problems are staggering—it will cost roughly $180 billion to clean up the entire program at all 14 sites that produce material for nuclear weapons—the department and its contractors remain shielded to a great degree from environmental regulations, lawsuits and public scrutiny.

"There is no other federal agency that is as insulated from outside oversight as the Department of Energy," said Daniel Reicher, senior project attorney at the Natural Resources Defense Council, a public-interest group that today will announce new efforts to sue the Energy Department to comply with environmental laws on the restarting of aging nuclear reactors at the Savannah River nuclear-weapons facility in South Carolina. "Enforcement of environmental laws is the question," Mr. Reicher said.

The Energy Department holds its contractors harmless because the production of nuclear weapons is considered a public service.

"But I see a big distinction in indemnifying contractors in the case of a nuclear accident because it was producing materials for national defense and between complying with straightforward hazardous-waste laws," said Christopher Grundler, director of federal facilities in the EPA's hazardous-waste compliance office.

Nonetheless, the Justice Department has ruled that the EPA may not sue the Energy Department for not following EPA regulations, because both fall under the executive branch. Nor can the EPA order the Energy Department to comply with hazardous-waste laws.

Private citizens and state governments may file suit to force compliance, but financial settlements are limited, and enforcement actions are rarely spelled out.

Anthony Celebrezze, Ohio attorney general, refused to sign a consent agreement to force the Energy Department to curb hazardous-waste dumping at the plant in Fernald, Ohio, because the agreement contained no means to enforce it. "It was a useless piece of paper," he said.

Even the Natural Resources Defense Council, which has won nearly a dozen suits involving hazardous wastes in the past 15 years, has seen its victories limited to mostly procedural matters, such as preparing environmental-impact statements before starting up nuclear reactors.

"It's ludicrous to expect that states and citizens groups will have resources to enforce environment laws," said the council's Mr. Reicher. "We're one of the few private groups that can take on cases like these."

The Energy Department maintains it has taken a more forceful approach toward its contractors' environmental compliance, and has begun studies of the enormous clean-up jobs that lie ahead at the weapons sites, including Fernald. "The department is well aware of the need for remedial actions at the Fernald facility," Eric Fygi, acting general counsel for the department, last week told a congressional committee that heard the complaints of Fernald residents.

As previously reported, the department admitted last week that it ordered its contractor, NL Industries Inc., to continue dumping radioactive and hazardous waste at the site over a period of years.

Yesterday, Ohio Gov. Richard Celeste called the department's statement an "admission of deceit and mismanagement," and entreated President Reagan to close the site until the extent of contamination could be discerned.

Politics cannot prevail in dump site selection

The Nuclear Regulatory Commission says the Department of Energy used incomplete and ambiguous scientific data in a report about placing the nation's nuclear dump in Nevada.

"No problem here," says the DOE. "Everything will be fine."

Nevada's Nuclear Waste Project Report says the DOE's 10,000-page draft document is inadequate, incomplete and misleading. James Brune, director of the University of Nevada-Reno Seismology Lab, says that in years of consulting for federal agencies and foreign countries, he has never seen a scientific project justified on such incomplete data.

"No problem here," says the DOE. "Everything will be fine."

Sixteen U.S. Geological Survey hydrologists and staff technicians working on the DOE study say scientific research is taking a back seat to the political objective of placing the nuclear dump at Nevada's Yucca Mountain. They say stop-work orders have been issued on two crucial studies, and they have spent two frustrating years trying to get somebody in charge to listen to them.

"No problem here," says the DOE. "Everything will be fine."

Gentlemen: How can everything be fine when all these different people report the same fears, the same inadequacies and the same hasty decision-making? Is everybody wrong but the happy-go-lucky DOE? Not likely.

What is likely is that this study will continue to be hurried along just as it is being hurried now, so nothing will get in the way of Eastern senators as they try to thrust this dump into Nevada.

This farce must be stopped while there is still time. A proper study must be made, not just in Nevada but in the other likely sites. Politics must not prevail. If it does, we face not just a Nevada disaster, but a national disaster of the first order. And the radioactive blood will be on the hands of every indifferent member of Congress.

Reno Gazette-Journal, Oct. 27

DOE fumbles nuclear waste ball — again

The following, which appeared in the Seattle Post-Intelligencer, was written by Solveig Torvik, a member of the newspaper's editorial board.

What is the matter with the U.S. Department of Energy?

Is it incompetence? Unvarnished stupidity? Studied, outright deceit? Corruption?

Whatever the affliction, it's remarkable to find so much of it among so many people seemingly so intent on harming the interests of their country.

If this were the fearful days when Commies were imagined under every bed, someone would be charging that the DOE is infiltrated by Russian agents. But even evil-minded spies could not have bolloxed up matters more thoroughly than the DOE has screwed up its task of disposing of the nation's nuclear waste.

The latest twist in this witless saga is that the DOE has announced that it will "indefinitely postpone" opening a $700 million deep hole in New Mexico meant to hold some nuclear wastes. The facility, it seems, may not be safe.

• • •

Once again the nuclear priesthood has failed to deliver on its promises of salvation.

This, remember, is the same agency that seriously considered burying nuclear wastes forever under an aquifer in Texas that serves 6 million people or in fractured basalt adjoining the Columbia River at Hanford.

This melancholy tale is now almost half a century old, yet no end is in sight. The short version is that we built nuclear plants and nuclear bombs before we knew how to dispose of the deadly wastes they produce. We cheerfully assumed a technical fix would be found so the wastes would not pose a deadly threat to the next 400 generations. All along, we were assured the solution was at hand.

It wasn't.

So now we're stuck with staggering amounts of liquid and solid nuclear wastes, some of which will be deadly for hundreds of thousands of years. These wastes are scattered all across America, from Washington and Idaho to New York, Ohio, South Carolina, Texas, California and Colorado.

They are piling up in temporary storage, spent fuel rods racked like wine bottles under water in "swimming pools" at your neighborhood nuclear plant. They are buried in the sand or held in huge, decaying tanks at the government's weapons plants, where they have contaminated soil and water.

These wastes scare ordinary people because they don't understand them. And this ignorance has allowed the nuclear establishment to go about its misguided business with little public oversight.

But lately it has come to public attention that everything that has been touched by radiation — buildings, gloves, tools, machinery, reactors — must be disposed of, including the radioactive hulls of the Navy's outdated submarines.

• • •

This hot waste is destined to move on trucks and trains across the landscape from east to west, north to south, across the northern and southern Plains. Hardly a state will escape the burden of babysitting these shipments through its borders.

The department plans to send the deadliest waste to Nevada, where another 3,000-foot deep hole is being reached at Yucca Mountain. This one will hold liquid wastes that are to be turned into glass logs and stored inside metal containers.

The 2,100-foot deep hole near Carlsbad, N.M., is meant to hold less deadly waste such as lab coats and gloves. Barrels of this garbage from such highly contaminated places as Hanford were supposed to be shipped there for next month's now canceled opening.

Everything hinges on getting the wastes into Carlsbad and Yucca Mountain. Electric utilities are running out of storage racks in their pools. When that happens, dear reader, they're obliged to shut off your power.

• • •

And the soil and water around the weapons plants, where environmental effects were ignored for decades, are saturated with dangerous contamination. Hundreds of billions of dollars will be required to properly clean up and move these defense wastes to the repositories — if it's possible to move them.

But the National Academy of Sciences recently has warned of leaks in the Carlsbad Cave, which is near the Pecos River. This means radiation eventually may break free into the environment.

And Congress — not the department — revealed that the department's own engineers are not satisfied that the repository is safe. The DOE, as usual, was unable to produce any of the incriminating in-house paperwork requested by Congress.

Missing was documentation assuring the safety of the design and the quality of construction. DOE officials could not produce documents that assured ventilator shafts, fire prevention, electrical circuits or waste handling systems were built correctly and functioning properly. In 1986, a serious fire resulted from failure to properly install pipes. The response from department officials? Right in character.

"We're a month away from the opening and there are more Energy Department people lobbying for authority to emplace wastes in the repository than there are making sure the facility is safe," complained Rep. Mike Synar, D-Okla., chairman of the House Subcommittee on Environment, Energy and Natural Resources. He rightly called it "a formula for disaster."

This fiasco does not bode well for either the Carlsbad or Yucca Mountain repository. Nor does it inspire public confidence.

• • •

Whether you are enamored of nuclear energy is not the point. The waste exists and must be safely treated, whether it is stabilized and put into long-term, but temporary, above-ground storage or buried 3,000 feet underground forever.

It is true, of course, that until someone comes up with demonstrably safe nuclear waste disposal, chances are zilch that another U.S. nuclear plant will be built, "greenhouse effect" or no. This could turn out to be sorely lamentable. Whatever the liabilities of nuclear energy, warming the planet is not among them.

Only one thing is certain: No workable solution to this nation's monstrous nuclear waste trouble can be expected from the nincompoops who are calling the shots at the Department of Energy.

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Maybe this time Congress will heed DOE complaints

Monotonous, isn't it? Here comes yet another report bashing the Department of Energy for its nuclear dump site study. This time Congress' very own General Accounting Office proclaims the study a magnificent example of lax management.

Even more monotonous, though, is the DOE's insistence that everything is perfect, and that its critics may have had a little too much radioactive exposure themselves — to their brains.

Maybe this time the response will change. These aren't just scientists and technicians from the Nuclear Regulatory Commission who say the DOE is doing a sloppy job. This isn't just the U.S Geological Survey, or the University of New Mexico, or the University of Nevada, or the Nevada Nuclear Projects Agency. This is *Congress'* own agency.

You remember Congress, don't you? These are the people trying to shove the dump into Nevada by focusing the entire study on Yucca Mountain, so other states won't be considered. But even Louisiana's Sen. Bennett Johnston, author of the "screw Nevada" bill, might not be able to fend off the complaints of Congress' very own auditors.

There's another GAO report that Johnston might not be able to ignore, either. It says that at least 13 shipments of highly radioactive materials across the country were placed in containers that might not survive an accident. The DOE has assured everyone that long-distance shipping is perfectly safe, and that it is firmly in charge.

According to the GAO, energy department audits do not effectively evaluate the quality assurance programs of project contractors. Some work might not be usable in a licensing process. And, contrary to assurances from the DOE, no quality assurance documents reviewed by the Nuclear Regulatory Commission met its regulatory standards.

Dear Congress: It's time to reopen this study to all potential sites. Even more, it's time to take the highly politicized and incompetent DOE totally out of the site-selection process. This agency has become a tool of "screw Nevada" proponents and of the nuclear lobby and cannot be trusted to oversee a fair and scientific study, or, apparently, to regulate nuclear shipments either. It's time to remove the DOE from this process and find some responsible department to do the job.

Reno Gazette-Journal Nov. 13, 1988

New Breeder Reactor May Operate More Safely, Produce Less Waste

By Ron Winslow
Staff Reporter of The Wall Street Journal

BOULDER, Colo.—A new type of nuclear reactor under development at the Argonne National Laboratories can operate much more safely than the current generation of nuclear plants and might solve the most troublesome problems of nuclear waste, researchers claim.

The so-called Integral Fast Reactor could be operational by the turn of the century, its proponents say. Using a different fuel and reactor coolant than conventional commercial nuclear plants, the IFR is a breeder reactor using a technology called electrorefining to recycle spent fuel. In this process, it returns the longest-lived radioactive wastes to the reactor and consumes them in the fission process.

If such a process, already developed in small-scale experiments, proves workable in full-sized reactors, it would eliminate the need to find repository sites that would remain stable for the tens of thousands of years required for radioactive elements to decay safely.

'Revolutionary Change'

The experimental reactor's various advancements "constitute revolutionary change" in nuclear technology, said Charles E. Till, the associate laboratory director in charge of the Argonne program. He described the new reactor at the Council for the Advancement of Science Writing's annual meeting at the University of Colorado here.

The U.S. nuclear power industry is currently stymied by a combination of operational shortcomings and political gridlock that have undermined public and investor confidence in the technology. But interest in nuclear power is reviving as concern mounts over the greenhouse effect—the widely predicted warming of the Earth. Unlike nuclear power, fossil fuels such as coal, oil and natural gas—which together produce most of the nation's electricity—yield significant quantities of pollutants thought to cause the greenhouse effect.

The Argonne reactor faces enormous political and technological obstacles before it reaches commercial operation. As a breeder reactor, it produces significant amounts of plutonium, a key ingredient in nuclear weapons. Critics are certain to argue that the reactor will tempt U.S. energy officials to use the technology for military purposes, and that its wide commercial adoption would increase opportunities for terrorists to obtain plutonium. Mr. Till said the plutonium would be tainted with impurities and not readily suited for bombs. In any event, he said, all plutonium will be recycled and consumed in the reactor.

Efficiency Saves Scarce Uranium

Despite such concerns, the IFR promises significant advantages over present nuclear technology. In commercial reactors, just 1% of the uranium, in the form of uranium oxide, is actually consumed as the reaction in the core produces heat, Mr. Till said. The rest is waste. Fuel used in the Argonne reactor, however, is a metallic alloy of uranium, plutonium and zirconium, of which 15% to 20% is burned and the rest is recycled until nearly all useful components are consumed.

Such breeder-induced efficiency is crucial, Mr. Till argued, because the estimated world-wide supply of uranium isn't sufficient to ensure that nuclear power can play a long-term role in mitigating the impact of global warming. Indeed, Mr. Till said, if current reactors replaced 40% of the world's fossil fuel capacity, the uranium to power those reactors would last only about 30 years. "This is no solution to a long-term global concern."

The reactor has already established in an unusual experiment that it is what scientists describe as "inherently safe." In April 1986, scientists at the reactor, located in Idaho, provoked two separate loss-of-coolant accidents of the kind that occurred at Three Mile Island and Chernobyl. In both tests the IFR reactor's temperature spiked quickly. But, without any intervention, the chain reaction stopped and temperatures returned to normal in minutes.

The remaining waste would still take about 200 years to become harmless, posing a disposal problem with a much simpler solution than waste that must be stored for as much as a million years.

Mr. Till also said the new reactor would be easier to maintain because sodium is unusually compatible with the plant's steel components. Thus the plant would have few of the corrosion problems caused by water that have plagued current plants.

Little economic data have yet been gathered about the IFR, but Mr. Till believes the plant would compete on costs with the best plants in operation.

Sodium Coolant, Metallic Fuel

This safety improvement over current reactors is attributed to the IFR's coolant, liquid sodium, and to its metallic nuclear fuel. Most commercial reactors circulate water through the reactor core to extract its heat, and transfer it outside the reactor where it makes the steam that turns a turbine generator. But water in the core must be kept under more than 100 times atmospheric pressure to prevent its boiling away at the reactor's normal 900-degree operating temperatures. Loss of the water would allow the core to overheat and melt. Sodium has a boiling point of 1,650 degrees and readily absorbs the reactor's heat at normal atmospheric pressure, a safety advantage in itself.

At the same time, the metallic fuel is a far better conductor of heat than the oxide fuel used in commercial reactors. In any overheating, the excess heat is quickly conducted to the coolant. Moreover, as the heat spreads evenly through the fuel, everything expands, spreading the uranium atoms apart and slowing the nuclear reaction without any human or mechanical intervention.

Researchers are currently preparing for full-scale testing of the electrorefining process that both breeds new fuel and eliminates the worst of the reactor's waste. Under this process, a combination of high temperatures and electrochemical and chemical reactions separate the components of the spent fuel. The useful portions—including plutonium and other elements with very long half-lives—can then be returned to the reactor as fresh fuel.

Groundwater Tainted Near the Nation's 16 Nuclear Weapons Plants, Data Show

By Shoba Purushothaman
Staff Reporter of The Wall Street Journal

WASHINGTON — Groundwater around all 16 federal nuclear weapons production facilities is contaminated, according to the Energy Department.

In its first overall assessment of environmental problems at the aging facilities, the department confirmed that they are more serious than it previously has said. The report doesn't offer any definitive conclusions, but it does suggest that the problems uncovered to date are only the tip of the iceberg.

The report, a synthesis of individual surveys of the various production facilities, ranks risks linked to problems that range from groundwater contamination to hazardous gas release. Groundwater contamination is the most serious and prevalent safety problem, the department said.

According to the department, the most serious individual problems are groundwater contamination at its facilities in Rocky Flats, Colo., and Pantex, Texas.

However, the plant in Hanford, Wash., has the most problems overall, according to Ray Berubi, deputy assistant secretary for environment at the department. Of the estimated $34 billion to $65 billion in cleanup and corrective costs for all 16 sites, between $27 billion and $47 billion is needed for the Hanford plant alone, Mr. Berubi said. Christine Gregoire, director of ecology for the Washington state government, said the study marks the first time the department has acknowledged that the Hanford complex poses the greatest environmental problems.

Safety snags at the Energy Department's weapons production facilities has received unprecedented attention since April, when its Savannah River plant in Aiken, S.C., was shut down. Ensuing investigations and safety incidents at other facilities have showed a plethora of problems in all complexes.

This report doesn't indicate any new problems, nor does it address how the existing problems should be handled. "It's a road map," said Mr. Berubi. "It's not supposed to tell you how to fix the problems, but just what problems to fix first."

The Reagan administration estimates that the total cost of dealing with the plants' environmental problems, including cleanup and upgrading the facilities, will total more than $150 billion.

The Energy Department will use the report to determine which problems will be tackled first as well as to decide how much to spend for cleanup and corrective work. A final report is due next fall, and will expand on the areas touched on by the one released yesterday.

Sites with "secondary level concern" compared with the ones in Colorado, Texas and Washington include facilities in California, Ohio, Idaho and South Carolina. In ranking the problems, the department considered the size of the population in the vicinity, the toxicity and the concentration of the contaminants.

Fed panel hears Nevada's complaints on dump

By David Koenig
Review-Journal Washington Bureau

Las Vegas Review-Journal Dec. 2, 1988

ROCKVILLE, Md. — Nevada officials told the Nuclear Regulatory Commission on Thursday that federal plans for a radioactive waste dump at Yucca Mountain are moving too quickly before the government knows how, or whether, the repository will work.

State officials said the U.S. Department of Energy is using a simplistic model to determine whether Yucca Mountain can safely contain 70,000 metric tons of spent fuel rods from nuclear reactors.

It was the first meeting in more than a year between Nevada officials and the regulatory commission, which is charged with licensing the dump.

Thursday's session also was the first such meeting since Congress narrowed the search for a dump to only Yucca Mountain, 110 miles northwest of Las Vegas.

Robert Loux, executive director of Nevada's Nuclear Projects Agency, led the delegation of state officials. They presented a 45-minute report, raising technical and legal questions about the repository program, then fielded questions from the commissioners for about 40 minutes.

"These technical concerns are not new," said Carl Johnson, Loux's technical deputy. "However, to date the DOE has failed to adequately address these technical concerns."

Among the complaints raised by Loux, Johnson and two officials from the state attorney general's office were:

— The Energy Department is glossing over potential problems of underground water movement, earthquakes and volcanic activity at Yucca Mountain. They said the department is not examining evidence that the site is unsafe to hold spent fuel rods from commercial nuclear reactors.

— The department's investigation plan, called "site characterization," is too simple and doesn't consider the complexity of the area's rock formations. For example, they said the department's work will depend heavily on the sinking of one large exploratory shaft, but that the repository will extend far underneath Yucca Mountain, into rock formations that the department will know little about.

— The Energy Department has no plan to decontaminate the site.

The NRC also received a five-page statement from the Nye County Commission, which is officially neutral on the dump but wants federal grants it qualifies for while work is being done at Yucca Mountain.

During the past year, Nevada officials have not been the only ones to attack the Energy Department's plan to study Yucca Mountain. The NRC and General Accounting Office, the investigating arm of Congress, also have criticised it

A draft version of the plan was released in January, and a final version is expected later this month. The department wants to begin drilling the exploratory shaft at Yucca Mountain next November.

In May, the NRC staff identified five major problems with the plan that should be solved before serious work begins at Yucca Mountain. In September, the GAO issued a report with similar findings and recommended work at Yucca Mountain be delayed until the department could prove its work is sound.

Energy Department officials, however, have said they have spent most of the year addressing the problems noted by the NRC and have received tentative approval from the commission that the issues have been resolved.

While Nevada, the NRC staff and congressional investigators have questioned the department's work, the nuclear power industry has stood by the embattled agency.

Panelists debate nuke dump plan

By Courtney Brenn/Gazette-Journal

Reno Gazette-Journal Nov. 15, 1980

Despite a Department of Energy official's assurances that a nuclear waste dump won't be built in Nevada if the project is determined to be unsafe, suspicion of the government's motives ran high Tuesday night during a public debate on the proposed Yucca Mountain repository.

Many of the 150 people attending the public meeting cast a critical eye on the proposed nuclear repository site, beginning with Citizen Alert leader Bob Fulkerson, one of the dump's foremost opponents.

"The bottom line is we just can't trust them to tell us the truth about this stuff," Fulkerson said after blasting the DOE's public information tactics and listing a number of safety concerns expressed by scientists, including Yucca Mountain's location in earthquake and volcanic zones.

Nuclear dump project manager Carl Gertz and Fulkerson brought both sides of the debate to Tuesday's public forum at the University of Nevada-Reno. The forum, entitled "A National Nuclear Waste Dump in Nevada?" also brought panelists Bob Loux of the Nevada Nuclear Waste Project Office and Bob Dickinson, Las Vegas co-chairman of the Nuclear Waste Study Committee into the fray.

In opening statements, Gertz tried to convince a skeptical audience that Yucca Mountain, about 85 miles northwest of Las Vegas, hasn't been officially selected for the proposed deep-shaft repository and is only under study.

"If it's not safe we don't want to build it," Gertz said. "We have regulations to meet, we know what has to be done."

But the project manager slipped more than once, using the word "when," instead of "if," when referring to the prospect of high-level nuclear waste storage at the Yucca Mountain site.

"It sounds to me like in the minds of the DOE this is a done deal," one spectator said. "Given the fact Nevada is the only state being investigated, I don't feel comfortable believing statements saying that Nevada has not in fact been chosen."

Dickinson took a supportive stance, saying that if DOE tests proved it safe, the site could be beneficial to the economy by helping develop a research facet for the state. Loux argued that while the repository could create as many as 1,200 new mining jobs, it could hurt the state's tourism industry because people would be hesitant to visit Las Vegas knowing high-level waste is being transported nearby.

Gertz said about 10 truckloads of high-level nuclear waste would be transported to Yucca Mountain each day if the dump is built. That compares with about 200 truckloads a year of much smaller amounts of nuclear material that is transported to the Nevada Test Site, Loux said.

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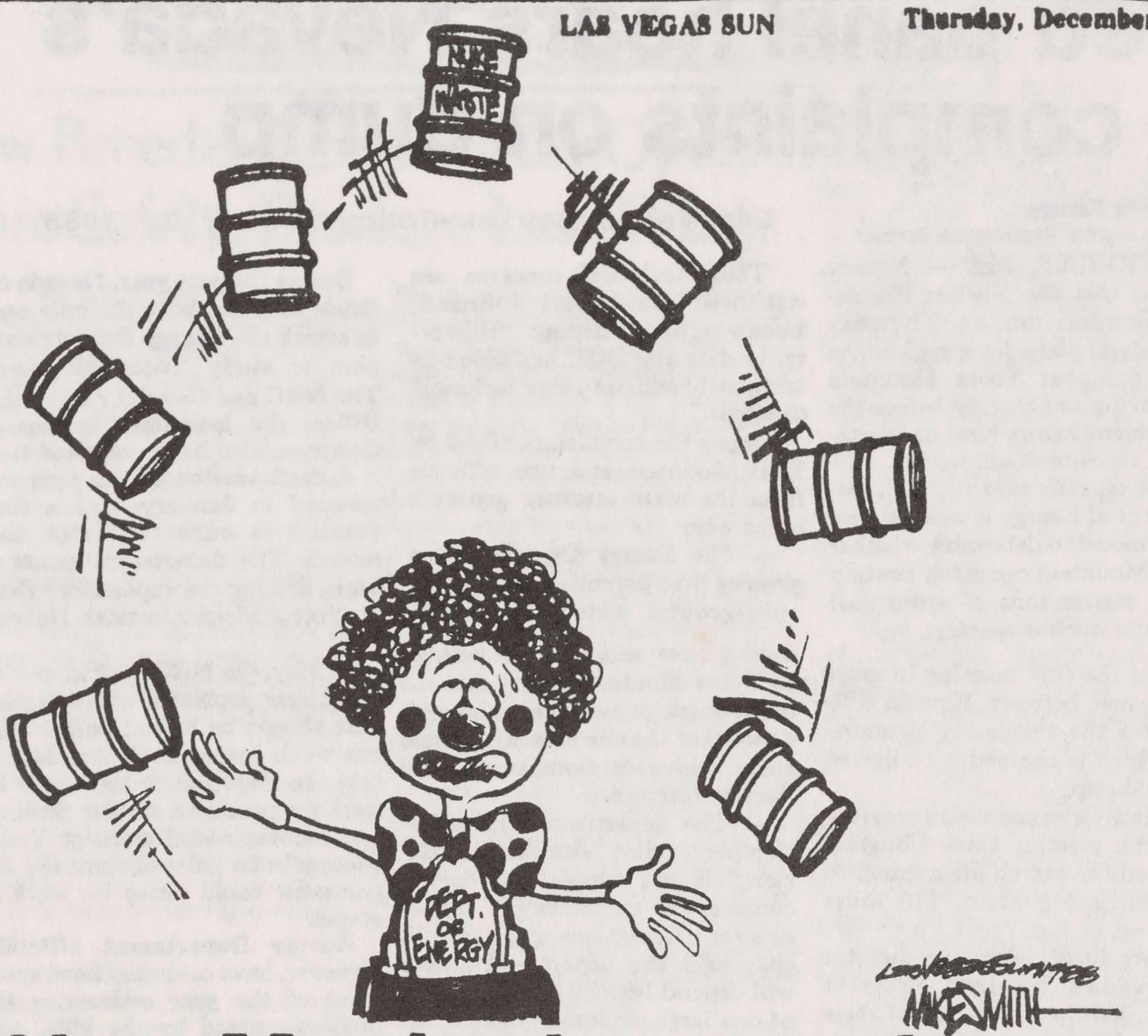

New Mexico's experience should nix Nevada dump

If New Mexico's experience with a federal nuclear repository is any measure, Nevada may never get a high-level nuclear dump promised by Congress at Yucca Mountain.

An underground cavern carved in a New Mexican salt block had become the U.S. Department of Energy's answer to storing radioactive Defense Department wastes — until a mountain of problems delayed its opening indefinitely.

The Waste Isolation Pilot Project (WIPP) near Carlsbad cannot open after DOE missed several vital program deadlines.

First, Congress did not approve a bill to withdraw the land for use as a nuclear repository. DOE needs a special withdrawal permit. The federal agency will need the same kind of permit if Yucca Mountain in Nevada ever becomes the nation's first commercial nuclear dump.

Second, the Nuclear Regulatory Commission — the agency responsible for approving nuclear shipping containers — has not approved DOE's TRU Pac II to transport wastes to the dump.

Third, DOE and independent scientists feared water flowing into parts of the salt caves could form brine and corrode sealed storage containers filled with nuclear wastes. Then radioactivity could escape into the environment.

In September DOE announced an indefinite delay to the opening of WIPP.

While all that nuclear waste piling up at DOE's 17 defense sites might come to the Nevada Test Site, DOE scientists say that is impossible.

First, the wastes are transported by railroad car and there is no way to get it from the edge of the Nevada Test Site to a storage area on the proving grounds.

Second, until NRC acts to approve a shipping container, there is no way to bring it thousands of miles to any nuclear repository.

And, third, the test site has not been requested to take the Defense Department's intermediate nuclear wastes.

Here it is, December 1988 and the Energy Department has not been able to open its New Mexico repository. New Mexico had been chosen by the federal government for its nuclear defense wastes in the late 1970s.

It doesn't take a math genius to figure out a nuclear dump at Yucca Mountain is expected to open 15 years from now, in the year 2003.

And DOE plans to study the volcanic mound 85 miles northwest of Las Vegas for seven to 10 years, get it licensed by NRC and operating by 2003? Based on New Mexico's experience, that is a blueprint fit for nightmares, not sound scientific thought.

DOE admits there is no reliable rail system to the Nevada Test Site. Then won't shipping high-level nuclear waste and spent nuclear reactor fuel rods by rail to the 21st century repository be both expensive and nearly impossible, unless DOE builds a new track?

Will the nuclear ratepayers willingly pay for shiny new railroad tracks to Yucca Mountain?

Then use trucks. But not only will trucking nuclear wastes to Yucca Mountain be expensive, but the public outcry may stop radioactive shipments in their tracks in states across the country.

In these times when "deficit" is a household word, we bet there may be an alternative solution to throwing nuclear waste into a hole in the ground — anywhere.

That solution will leave highly radioactive wastes near the nuclear reactors in dry cask storage, eliminating the need for transportation to a repository. It is the best way to save the expensive nuclear industry.

What makes on-site storage so attractive is pure economics. When Congress amended the Nuclear Waste Policy Act, they placed the nuclear waste program in the budget as a line item. What Congress gives, it can also take away — and funds for a repository can be cut.

In the end, economics — above both science and politics — may deliver a solution to the dilemma of nuclear waste disposal. And that solution may rest in on-site storage, rather than juggling casks with highly radioactive wastes across the country to a remote repository.