



View of the rear of the tunnel boring machine showing the laser guidance system in operation.

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Big Budget Cut for Nuclear Waste Dump

Congressional Democrats are forcing the Yucca Mountain nuclear dump in the home state of Senate Majority Leader Harry Reid to get by on its lowest annual budget in years, likely causing yet more delays in opening the first national repository for radioactive waste.

A year-end spending bill moving through the House and Senate in January would give \$390 million to the Nevada nuke dump in the 2008 fiscal year, \$104 million less than President Bush requested.

Edward F. "Ward" Sproat, the Energy Department official in charge of the planned dump, warned last week that such a cut would be "very serious" and could push back the date when the Energy Department can submit a required construction license application for the dump 90 miles northwest of Las Vegas.

Sproat has promised repeatedly to submit the license application by June 30, 2008, and his best-case scenario for opening the dump is 2017. The opening date had already been expected to slip by several years and the license application date now also appears in jeopardy.

The ultimate fate of the planned dump, meant to contain 77,000 tons of radioactive waste piling up in 39 states, is growing increasingly cloudy. The leading Democratic presidential candidates all oppose it.

"I am proud that I was successful in cutting \$104.5 million from Yucca's budget," Reid, D-Nev., said in a statement. "It is clear that the Yucca Mountain project

is a dying beast and I hope that this cut in funding will help drive the final nail into its coffin."

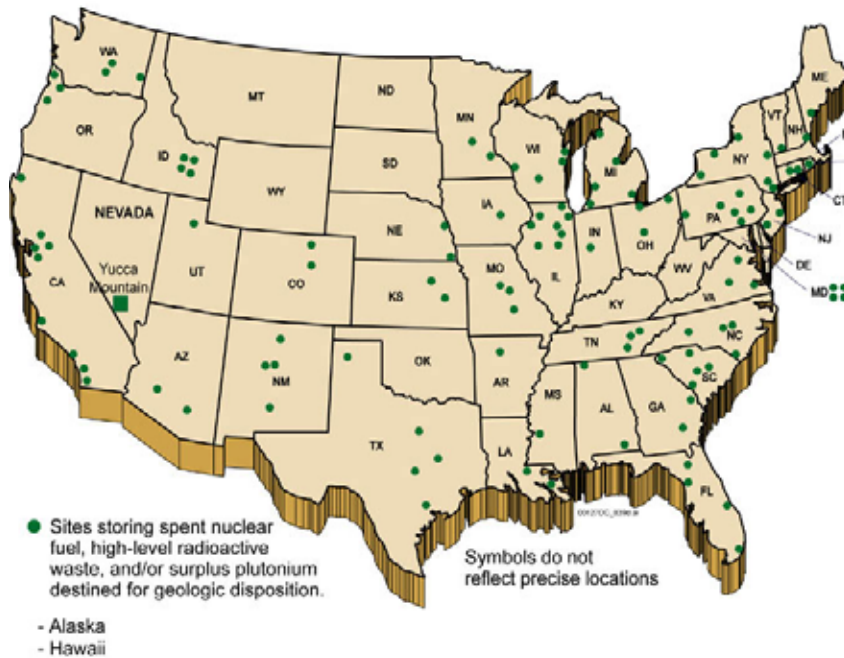
Yucca Mountain was originally supposed to open in 1998 and taxpayers are facing legal liability expected to exceed \$7 billion because the government contracted to begin accepting spent fuel from nuclear plants that year.

The 2008 budget number is paltry even considering that Bush has repeatedly gotten less than he wanted for the waste dump because of Reid's opposition, now given more force because Democrats are in the majority.

Last year the dump's budget was \$444.5 mil-

lion. It hasn't been below that since 2002, the year Congress approved the site.

Recognizing the delays afflicting Yucca Mountain, legislative language accompanying the spending bill also directs the Energy Department to develop a plan to take custody, at one or more interim sites, of spent nuclear fuel now at decommissioned reactor sites. According to the Nuclear Energy Institute, there are 13 such sites in nine states holding at least 3,000 tons of nuclear waste. *Source: Washington AP*



Lander County officials tour nuclear power plant

On December 11, 2007 Lander County Officials including 6 students from Battle Mountain and Austin High Schools toured the Palo Verde Nuclear Generating Station which is located just west of Phoenix.

Tour participants included: County Commissioners Chuck Chapin and Bryan Sparks, Lander County Executive Director

Gene Etcheverry, Deborah Teske and Rex Massey. Tour Participants from Battle Mountain High School included Tom Newland, Nathan Bryd, Scott Lawson, and Curt Harris. Tour Participants for Austin High School included Bill Cox, Ben Cox, Tiffany Young and Jeff Winrod.



The Palo Verde Nuclear Generating Station, located about 45 miles west of Phoenix, has been the largest power producer of any kind in the United States since 1992.

Because of its desert location, Palo Verde is the only nuclear plant in the United States that does not sit on a large body of water. Instead, it uses treated effluent from several area municipalities to meet its cooling water needs, recycling 20 billion gallons of wastewater each year.

Palo Verde, the largest single commercial taxpayer in Arizona, is operated by Arizona Public Service Company and is owned by a consortium of seven utilities in the Southwest.

Other facts about the Plant:

- Construction began in 1976. There are three units, the last of which was completed in 1988. The total cost to build the plant was \$5.9 billion.

- In 2000 the Palo Verde nuclear plant generated 30.4 million megawatts of power.
- About 4 million people in California, Arizona, New Mexico and Texas receive power generated by the Palo Verde plant.
- Palo Verde does not use fossil fuels to generate electricity. It is a zero-emissions facility.

- The reactors at Palo Verde are in an airtight, reinforced concrete structure designed to withstand the force of a jet airplane.
- The plant and its output are owned by a number of utilities which include:
 - Arizona Public Service: 29.1 percent
 - Salt River Project: 17.5 percent
 - Southern California Edison: 15.8 percent
 - El Paso Electric: 15.8 percent
 - PNM: 10.2 percent
 - Southern California Public Power Authority: 5.9 percent
 - Los Angeles Department of Water and Power: 5.7 percent. *Source: <http://phoenix.about.com/cs/utilities/a/paloverde.htm>*

Porter looks at recycling nuclear fuel

WASHINGTON -- After inspecting a nuclear fuel reprocessing plant in France, Rep. Jon Porter said Nevada universities should be at the forefront in researching the reprocessing of nuclear fuel.

"According to the French, there is a shortage of folks in this field; and if we can become the premier state in researching the recycling of nuclear fuel and alternative energy sources, the pressure to open Yucca Mountain might be reduced," Porter said.

During reprocessing, uranium and plutonium are separated from other materials in spent nuclear fuel. That could significantly reduce the 77,000 tons of nuclear waste which would be stored at Yucca Mountain, 100 miles northwest of Las Vegas.

But for more than 30 years, the United States has banned reprocessing of nuclear waste in an attempt to limit the proliferation of nuclear weapons material.

"I think we have ignored a viable option for a number of years, and we need to accelerate efforts to look at reprocessing as a way to diversify our energy portfolio," said Porter, a three-term Republican.

Porter said the cost of completing a nuclear waste repository at Yucca Mountain ranges from \$80 billion to \$90 billion compared to about \$15 billion to build a nuclear reprocessing facility.

Porter and Republicans Shelley Moore Capito of West Virginia, and Phil English and Bill Shuster, both of Pennsylvania, toured the Areva nuclear fuel reprocessing plant in LaHague, France, last week on a nine-day taxpayer-funded trip.

The lawmakers also inspected energy facilities in Azerbaijan and Turkey, including the Baku-Tbilisi-Ceyhan crude oil pipeline, which

(Continued on page 6)

Yucca funding probably not in time to save state money

The current appropriations legislation approved by Congress includes the \$5 million the state needs to continue its fight to block the Yucca Mountain nuclear waste dump.

But Nuclear Projects Agency director Bob Loux said the money probably won't get here in time to cancel a \$1.5 million emergency state appropriation that will be used to cover costs of preparing for that fight until the federal money arrives.

That money from the state's contingency fund was approved by the Board of Examiners (BOE) in December. It is on the Interim Finance Committee agenda for final approval in January. Loux told BOE the money was needed to pay the legal team, scientists and engineers preparing the state's case against licensing Yucca Mountain because the appropriations act was stalled in Congress.

Unfortunately, he said, the state wouldn't be able to recoup that funding from the federal dollars once they finally arrive.

"The only real problem is it takes the Department of Energy four months to get the money out," Loux said.

He said he has asked the legal team and others working on the state's case to hold off demanding payment as long as they can, and they have agreed.

"Last year, they floated us for almost three months while we waited for the money," he said. "The problem isn't as much the lawyers as the scientists and engineers, who may run out of money quicker."

He said it will be harder for them to do that this year because, with the DOE license application coming, "we're asking a lot more of them."

"If DOE files this application in June, we've got to have all our guys up and ready," he said.



Director of Administration Andrew Clinger said he hopes those consultants and lawyers can hang on, given the state's revenue shortfall. He said every dollar the state can save helps reduce budget cuts.

Source: Appeal Capitol Bureau

The Yucca Mountain Facility

The purpose of the Yucca Mountain project is to comply with the Nuclear Waste Policy Act of 1987 and develop a national site for spent nuclear fuel and high-level radioactive waste storage. The present prime contractor for the project is Bechtel SAIC (a consortium of government contractors Bechtel Corporation and Science Applications International Corporation). The main tunnel of the Exploratory Studies Facility is U-shaped, 5 miles (8 km) long and 25 feet (8 m) wide. There are also several cathedral-like alcoves that branch from the main tunnel. It is in these alcoves that most of the scientific experiments are conducted. The galleries (smaller tunnels perpendicular to the main tunnel) where waste will be stored have not been constructed.

The repository zone will cover 1150 acres (4.7 km²), be 1000 feet (300 m) below the surface of the mountain and 1000 feet (300 m) above the water table. The waste will be encased in a multilayer stainless steel and nickel alloy package covered by titanium drip shields that function also as rock shields.

The Department of Energy (DOE) estimates that it has over 100 million gallons of highly radioactive waste and 2,500 metric tons of spent fuel from the development of nuclear weapons and from research activities in temporary storage. The cost of the facility is being paid for by the public using nuclear generated electricity and the federal government for disposal of defense nuclear waste.

For physician's assistant, Yucca Mountain no problem, but health care is a big one

HAWTHORNE -- Death in New Jersey breathed life into this high-desert town five hours north of Las Vegas.

William Leaming, who manages the busy medical clinic in this city of 3,500, knows the story well. It is one he sometimes thinks about as the presidential caucuses near and candidates take stances on the proposed Yucca Mountain nuclear waste repository.

the desert. American flags and patriotic artwork fashioned out of used weaponry are scattered throughout the town, which is the Mineral County seat.

Since 1930, a couple of minor explosions have been contained without the loss of life, just as government experts promised.

"It has worked out well," says Leaming. "The government did the necessary work to make it safe,



Defunct bomb fins create art in the Hawthorne desert

In 1926, Lake Denmark, N.J., was blown off the face of the Earth. An explosion at a Navy ammunition depot killed or maimed nearly 100 people and did almost \$100 million in damage.

Congress, smarting from criticism about locating such a facility near a highly populated area, undertook a nationwide search for a site where collateral damage from another accident wouldn't be so extensive.

Hawthorne, a failing railroad town with a population hovering around 200, was chosen, becoming home to the Yucca Mountain Project of its time.

Today, the Hawthorne Army Depot covers 147,000 acres. Storage bunkers full of bombs, rockets and other explosives pimple

and it is good for Hawthorne and it is good for the country. Without the depot, I don't know what Hawthorne would be. It's our biggest employer."

"At some point when scientists study something so much and say danger is minimal, you have to believe them," the physician's assistant says.

"It makes more sense to have the waste stored at Yucca Mountain than just about anywhere else in the country. Yucca Mountain would be good for the country, just the way Hawthorne is." *Source: by Paul Harasim, Review-Journal*

Yucca Mountain: Good spot for nuke waste?

D.J. Andrews and colleagues at the U.S. Geological Survey in Menlo Park, Calif., said they determined Yucca Mountain offers unique characteristics -- chiefly a water table so low that it is possible to store steel canisters of waste 1,000 feet below ground and 1,000 feet above the water table.

Although seismic hazard assessments usually involve a 500- to 1,000-year period, the Nuclear Regulatory Agency is requiring an evaluation that considers what would happen with odds as low as 1 in 10,000 during a 10,000-year period -- equivalent to something that occurs only once every 100 million years, the USGS said.

Andrews' team looked at the worst-case scenario and determined the ground can move a maximum of 11.8 feet per second -- near the most intense ground motion ever recorded, but within the range of feasible engineering mitigation.

The scientists suggest their findings support a long-term stable seismic environment for Yucca Mountain.

A U.S. government study separate from the DOE suggests the proposed Yucca Mountain radioactive waste repository in Nevada is arguably the best location for such storage.

The research that included Thomas Hanks and John Whitney appears in The Bulletin of the Seismological Society of America. *Source: by United Press International*

Yucca Mountain layoffs imminent, official warns

The nation's nuclear waste chief painted a dismal picture on Tuesday, January 16th, of the Yucca Mountain Project's future, one that shows 500 layoffs and casts doubt on submitting a license application this summer.

Given the lack of funding to achieve program goals, the first deliveries of 77,000 tons of spent nuclear fuel probably will not arrive for entombment in the ridge in 2017 because the repository will not be open, said Ward Sproat, director of the Department of Energy's Office of Civilian Radioactive Waste Management.

"There are going to be significant layoffs, several hundred. They're going to come in waves," he told Nevada's Legislative Committee on High-Level Radioactive Waste.

He later told the committee, led by state Sen. Mike McGinness, R-Fallon, that "at least 500 people would be removed from the program in the next several months, the majority in Nevada, some in New Mexico from Sandia (National) labs."

Of the "65 to 70" workers at the Yucca Mountain site, 100 miles northwest of Las Vegas, where a fence stretches across the entrance to the 25-foot-diameter tunnel that loops through the ridge, "basically all are going to be let go in the next 30 days," Sproat said.

Project spokesman Allen Benson said the tunnel's ventilation system was shut down in late December to save on "substantial" electrical bills. The cost at the site for electrical utilities, water and maintenance was \$3 million last year.

Sproat said the program staffs some 2,400 full-time positions, but funding cutbacks by Congress of \$108 million from the 2008 budget this late in the fiscal year have left him no choice but to pursue layoffs.

The Bush administration requested \$494.5 million for the fiscal year that began on Oct. 1. Congress in December approved \$386.5 million.

The lack of money probably will push back the Department of Energy's self-imposed June 30 license application deadline.

"I cannot stand behind the June 30, 2008, date," Sproat said about the deadline he had set for submitting a license application to the Nuclear Regulatory Commission. The submission would start what he expected to be at least a three-year review.

Sproat, a political appointee who predicts he will be fired in 12 months under a new administration, said he hopes the license application will be submitted under his watch.

"I am mildly optimistic, cautiously optimistic, that we will get a license application done, but I just don't know yet," he said.

Because of the cutbacks, complete construction of a rail line across east-central Nevada to deliver spent fuel will slip at least two years to 2016. As for construction to be under way in October 2009, "that's not going to happen," he said.

"The transportation piece is off the critical path. That's where we took the resources from" to make up for funding reductions, Sproat said.

And, receipt of the waste in 2017, as planned, isn't feasible.

"I would say the 2017 date is not achievable given the funding we've got," he said.

Bob Loux, executive director of Nevada's Nuclear Projects Agency and a critic of the Yucca Mountain Project, said outside the meeting that many of the layoffs will involve contractor personnel whose jobs would end anyway as their roles in the licensing work are completed.

Despite Sproat's direction to scale back aspects of the project, Nevada is not going to soften in its opposition, Loux said.

Late Tuesday, attorneys representing Nevada filed a 30-page appeal with the Nuclear Regulatory Commission that challenged a three-judge panel's rejection of Nevada's challenge that a database of 3.5 million licensing documents should not be certified as complete because crucial studies and safety reports are missing or are works in progress.

Without the documents, Nevada would have difficulty completing its review of the licensing data in the required six-month span, the state said.

"For these reasons, the commission should reverse the ... board's decision, strike DOE's certification and require that DOE may certify only when it has provided all of the core technical documents necessary to permit 'focused and meaningful contentions,'" the appeal said. *Source: Las Vegas Review Journal*



Ward Sproat, Director of DOE Office of Civilian Radioactive Waste Management

Porter looks at recycling nuclear fuel (continued)

transports 1 million barrels a day and is projected to reach its capacity of moving 3 million barrels daily next year, according to Porter spokesman Matt Leffingwell.

Although not all of the oil goes to the United States, Porter described the BTC pipeline as a vital U.S. energy resource.

“The pipeline allows us to get oil and gas from that region without Russia and Iran who like to play games,” he said. *Source: LVRJ*



Reprocessing radioactive waste in France

Lander County Repository Planning and Oversight Program

- This newsletter is a publication of the Lander County Repository Planning and Oversight Program. Lander county is one of ten affected units of local government (AULG) involved in the proposed Yucca Mountain Repository.
- Funding provided to Lander County is paid by users of electricity generated by nuclear power plants. Under a general contract with nuclear generating utilities, the federal government collects a fee of one mill (one-tenth of a cent) per kilowatt-hour from utility companies for nuclear generated electricity. The money goes into the Nuclear Waste Fund which is used to fund all program related activities. Articles in this newsletter may not necessarily reflect the positions or opinions of the Lander County Board of Commissioners
- For more information on Lander County’s program contact Deborah Teske at the Community Development Department (775) 635-2860 or Joy Brandt at (775) 964-2447 in Austin, NV. Additional information can be obtained from the U.S. Department of Energy, Yucca Mountain, Site Characterization Project Office at (702) 794-1444 or contact them at ocrwm.doe.gov. The Nevada Agency for Nuclear Project, Nuclear Waste Project Office, Capital Complex, Carson City, NV. 89570, (775) 687-3744 or at their web site state.nv.us/nucwaste. Lander County’s Nuclear Waste Oversight web site is at landercountynwop.com. *Editors: Rex Massey, & Deborah Teske, Graphics, design & format, Loreen Pitchford*

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