

Yucca Mountain News

WINTER 2006

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Nuclear waste bills introduced

Nevada and Utah lawmakers sought to spark new debate over nuclear waste storage in their states by introducing bills on December 15th that would force the Energy Department to keep radioactive spent fuel stockpiled at power plants.

Sen. Harry Reid, D-NeV., a main sponsor, said the measures would stoke discussions about alternatives to the planned repository at Yucca Mountain, which has been set back by legal and technical questions since it won endorsement from President Bush and Congress in 2002.

"We have to move past

Yucca Mountain," said Reid, a leading critic of the nuclear dump plan. "We believe there is an opportunity to change the direction of this government as it relates to the storage of nuclear waste."

The bills submitted in the Senate and House drew immediate opposition from the Department of Energy and from coalitions of nuclear utilities and regulators in states that have nuclear power plants and want to get rid of the waste they generate.

More than 40,000 metric tons of highly radioactive

waste generated by 103 commercial nuclear plants are kept in pools and dry storage at reactor sites in 35 states.

Sen. John Ensign, R-NV., a co-sponsor of the measure introduced on Wednesday, December 15th, said he doubted Yucca critics could win a vote outright in the Senate now, where most senators remain supportive of the repository.

Rather, he said, the bills' purpose is to sow doubts about Yucca Mountain and promote alterna-

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Foes of nuclear power may soon run out of steam

It may be dawning on national environmental groups that nuclear power will be essential in the battle against global warming. Three leading environmentalists - Fred Krupp, director of Environmental Defense; Jonathan Lash, president of the World Resources Institute; and Gus Speth, co-founder of the Natural Resources Defense Council and now Dean of Yale's School of Forestry and Environmental Studies - said recently the global warming problem is so serious that nuclear power deserves another look.

In America and around the globe, the release of carbon dioxide from the burning of fossil fuels continues to grow, and the result has been alarming environ-

mental changes: rising sea levels, acidic oceans, melting tundra in Arctic regions, more intense hurricanes, catastrophic droughts, and the spread of mosquito-borne diseases.



Although there is greater public awareness of climate change than in years past, U.S. emissions of heat-trapping carbon dioxide continue to add grievously to the global burden of pollution. The long-term outlook is grim. The Energy Information Administration forecasts

that carbon dioxide emissions from burning fossil fuels in the United States will increase an average of 1.2 percent a year and reach 7.5 billion metric tons by 2025, a 28 percent increase over the amount released in 2004.

Because nuclear power is carbon-free and provides large amounts of "base-load" electricity, some environmental leaders are acknowledging it could play a decisive role in halting the increase in carbon dioxide emissions and eventually reducing them. Stewart Brand, a founder of the Whole Earth Catalog, wrote in a recent issue of Technology Review, published by the Massachusetts Institute of Technol-

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Nuclear waste bills (Continued)

Current methods for storing spent nuclear fuel

When spent fuel is first removed from a reactor, it is placed in a special pool of water contained in a steel-lined concrete basin.

The water cools the spent fuel and protects workers and the public from radiation.

After it has cooled considerably, some commercial power plants and government facilities move the fuel to dry-storage containers made of steel and/or concrete to shield radiation.

The containers are either placed upright on concrete pads, or stored horizontally in metal canisters in concrete bunkers.

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tives like on-site storage or waste reprocessing.

"We keep chipping away at this, and then people will think that is the reality," Ensign said.

Critics said they expect the bill will get an airing because of Reid's position as Senate minority leader. But, they said, the Nevadans are recycling arguments they advanced and lost three years ago.

"Reid's strategy for the last few years has been to leave the fuel on-site, which was an argument he was making during the 2002 debate," said Terry Freese, director of legislative programs for the Nuclear Energy Institute, the

industry's main trade organization.

Freese said Reid has added "new spin" by requiring the waste to be placed in dry cask storage, but his bill raises questions about costs and how the waste would be monitored and regulated.

"We have consistently held (that) the federal government needs to move used fuel off-site and to take responsibility for its permanent disposal," Freese said.

The bill requires nuclear utilities to move spent fuel into above-ground steel and concrete reinforced casks within six years after it is removed from reactors and placed in cooling pools.

The Energy Department would take ownership title of the waste and assume responsibility for managing it.

Money for the effort would be drawn from a utility-funded nuclear waste account, and that's another provision of the bill that drew criticism from industry executives.

DOE spokesman Craig Stevens said the measure was merely "kicking the can down the road."

"This bill in no way resolves the issue of permanent storage of spent nuclear fuel," Stevens said. "We continue to use sound science in our mission to get Yucca Mountain licensed and eventually opened."

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Foes of nuclear power (Continued)

ogy: "The only technology ready to fill the gap and stop the carbon-dioxide loading is nuclear power."

And Patrick Moore, co-founder of Greenpeace, who has broken with the group over its continuing opposition to nuclear power, voiced support at the United Nations' international climate conference in Montreal. "Nuclear energy is the only non-greenhouse-emitting energy source that can effectively replace fossil fuels and satisfy global demand for energy," said Moore, who advocated "an aggressive nuclear power program."

This marks a dramatic change in the way environmental leaders view nuclear power, and it sends a powerful, supportive message to markets and governments around the world. Nuclear

power has a key role to play in preventing carbon emissions. Of course, there are some environmental groups - Greenpeace, the Sierra Club, and the U.S. Public Interest Research Group, among others - that remain adamantly opposed to nuclear power, but increasingly they appear to be extremists who are blocking any realistic energy policies.

If nuclear power's environmental benefits and proven reliability aren't enough to convince every one of its merits, simple arithmetic shows its advantage over renewable energy sources. Currently nuclear power provides about 17 percent of the world's electricity, whereas two renewable sources that emit no

heat-trapping gases, solar and wind energy combined, account for less than 2 percent.

The world has enough uranium for a substantial long-term increase in nuclear power production. But expanding the use of nuclear power requires a lot more than the flick of a switch.

In the United States, where there hasn't been a new order for a nuclear power plant in 35 years, there are indications that may change soon. Electric utilities in seven states are preparing to seek licenses to construct and operate new nuclear plants, and three already have applied for early-site approval. Congress has authorized \$11 billion in tax credits and other incentives for construction of the first few nuclear plants. Overall, the

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Nuclear waste bills (Continued)

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Reid began promoting the so-called "take title" bill more than a year ago, but held off submitting it formally until now.

As introduced, the bill was co-sponsored by Ensign and Sen. Orrin Hatch and Sen. Robert Bennett, both R-Utah. Hatch and Bennett are opposing a short-term nuclear waste site the Nuclear Regulatory Commission has agreed to license on the Goshute Indian Reservation, west of Salt Lake City.

Senate sources said Reid is trying to persuade Senate Energy and Natural Resources Committee chairman Pete Domenici, R-N.M., to sign on in support of his bill. That would provide a boost because Domenici is highly influential on nuclear power matters.

Reid and Domenici reportedly were talking during the fall about collaborating on nuclear waste legislation that would combine Reid's on-site storage approach with a waste reprocessing initiative favored by Domenici.

Congress passed Domenici-crafted legislation in November directing the Energy Department to step up efforts to identify a favored nuclear waste reprocessing technology and possible locations for a reprocessing factory.

Domenici could not be reached for comment; but spokeswoman Marnie Funk said he did not plan to comment on the legislation introduced.

A similar bill was introduced in the House by Rep. Jim Matheson, D-Utah, and Rep. Shelley Berkley, D-Nev. Rep. Jim Gibbons and Rep. Jon Porter, both R-NV., and Rep. Rob Bishop, R-Utah, were co-sponsors. *Source: Las Vegas Review Journal*

Utah gains ally in nuclear waste fight

Late afternoon on December 15th, the prognosis was grim for Utah's bid to create a wilderness area at Cedar Mountain aimed at preventing a nuclear waste storage site in the state.

Nevada Republican Sen. John Ensign was dead set against it and refused to budge. Without some give on his end, the measure would once again go down in defeat, as it had repeatedly since 2000.

But in a series of meetings on the 15th, culminating in a private conference between Ensign and Utah Republicans Sen. Orrin Hatch and Rep. Rob Bishop, the Nevada senator relented. Ensign was finally convinced that the Utah delegation would work with Nevada to find alternatives to storing waste beneath Yucca Mountain, Nev., where the federal government wants to create a permanent disposal facility that is adamantly opposed by the state of Nevada.

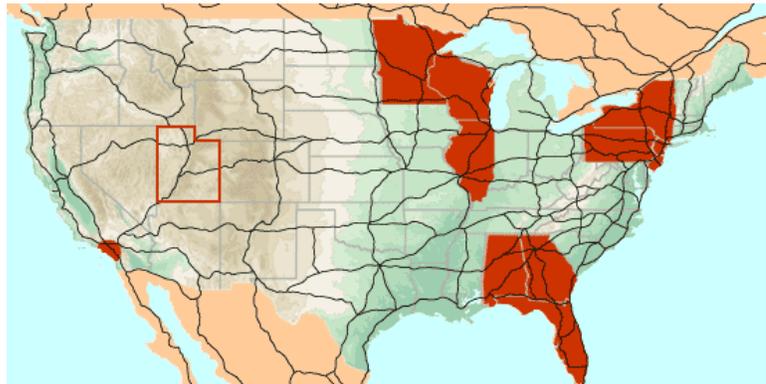
Approval of the wilderness measure was the culmination of a year of intensive politicking by the state's delegation, backed by GOP Gov. Jon Huntsman Jr., environmental groups,

Backers say the wilderness provision also preserves the Air Force's access to the Utah Test and Training Range, which could have been impeded if nuclear waste were placed in the flight path of fighter jets.

"We have protected the airspace around the range, we have put a big crimp in this plan, but we haven't finished the process, and we've done wilderness the right way," Bishop said.

The Cedar Mountain Wilderness proposal had passed the House with little opposition in the past, only to be stymied in the Senate. When Bishop introduced the House bill again in April, Sen. Bob Bennett, R-Utah, said he expected it to fail in the Senate again.

But the next day, Friday December



The radioactive waste will be removed from power plants located in PFS service areas (highlighted red) and placed in special shipping casks.

The proposed PFS facility may also accept radioactive waste from other non-member power plants located throughout the nation.

The casks will be freighted over railroad lines from across the nation to Skull Valley, Utah, where a special 30-mile long rail extension will be built to transfer the casks.

The deal allowed Utah to land its most significant legislative blow to date against Private Fuel Storage's plan to store 44,000 tons of spent nuclear fuel on the Skull Valley Goshute Indian Reservation for as long as 40 years, although a spokeswoman for PFS says the consortium can simply truck the waste down the highway to Skull Valley.

16, Bennett said there was "a different atmosphere over here" in the Senate, in part because of a push for nuclear power that changed attitudes about finding different solutions to the waste issue as a way of breaking the current stalemate.

It also was due in part to overtures from Huntsman and Bennett to Reid,

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Utah gains ally *(continued)*

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who had fought the Cedar Mountain wilderness bill in the past, angered by the Utah senators' support of Yucca.

"We reached out to a number of folks and found, at least on the Senate side, a new willingness to address issues that in previous congresses we couldn't move across United States Senator from Nevada John Ensign the goal line," said Bennett.

On Labor Day, Huntsman met with Reid in his Capitol office, making one in a series of overtures to the senator by offering to work with Reid in opposing plans to store nuclear waste in Yucca Mountain.

In the following days, Bennett also approached Reid, offering to reverse his support for Yucca Mountain and endorsing Reid's plan to store the nuclear waste near the reactors that generated it.

A few weeks later, Bennett stood on the floor of the Senate, making an extraordinary public admission that he erred in his Yucca vote. He was followed by the rest of the Utah delegation excepting Hatch, who said it would be wrong to kick the Bush administration in the teeth.

On Nov. 8, Reid issued a statement saying he no longer opposed the Cedar Mountain proposal. In fact, Reid had been quietly working behind the scenes at that point, trying to sway Ensign and the ranking Democrat on the Senate Armed Services Committee, Michigan Sen. Carl Levin.

The Reid statement came just as the Senate began debating the defense bill and the Utah delegation was intensifying its lobbying effort, focusing

mainly on Levin and Sen. John Warner, the chairman of the Senate Armed Services Committee.

Warner, R-Va., was a key piece of the puzzle. With the House Armed Services Chairman Duncan Hunter, R-Calif., and top Democrat on the committee, Missouri Rep. Ike Skelton, on board, and Reid making the case to Levin, Warner was the last crucial piece. Support from three of the so-called



United States Senator from Nevada John Ensign

"Big Four" would assure Cedar Mountain's passage.

Arrangements were made for Warner's daughter, who works for an environmental group, to weigh in with her father in support of the measure. Bennett and Hatch made repeated overtures to the senator.

In mid-November, Bennett again approached Warner on the Senate floor after a vote. Warner seemed almost exasperated with Bennett's repeated requests, and told his Utah colleague that he would

"help us in every way he could," Bennett said.

But then about a week later, a Friday evening, things began to unravel for Utah.

Warner's support had evaporated, caving to the opposition from Ensign, and Reid's work to bring Levin on board slid backwards. That made winning over Ensign the key to success.

The delegation hit the panic button. Huntsman wiped out his schedule and flew to Washington.

Pressure was put on the House members to stand tough against the senators and not back down on Cedar Mountain.

Compromise language was drafted to try to win back Warner and appease Ensign, but the Nevada senator was standing firm.

Bennett had written to the Air Force earlier, hoping an endorsement from Air Force Secretary Michael Wynne might help the cause. Hatch called White House Chief of Staff Andrew Card on Dec. 5 to expedite the letter, which was sent to the Utah senators and Warner and Levin the next day.

"That letter was a key letter that opened the door for us to win on this," Hatch said.

In it, Wynne said the Cedar Mountain wilderness would not create new restrictions on the Air Force's use of the Utah Test and Training Range, near the Skull Valley reservation, and that the bill would address the Air Force's concerns about the PFS plan.

The letter bolstered the state's argument that a bill that essentially creates wilderness and restricts use of

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Pressure was put on the House members to stand tough against the senators and not back down on Cedar Mountain, a Utah area being pushed for designation as a wilderness.

Approval of the wilderness measure was the culmination of a year of intensive politicking by the state's delegation, backed by GOP Gov. Jon Huntsman Jr., environmental groups,

Backers say the wilderness provision also preserves the Air Force's access to the Utah Test and Training Range, which could have been impeded if nuclear waste were placed in the flight path of fighter jets.

Foes (continued)

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Government's goal is to raise nuclear power's share of U.S. electricity production from 20 percent now to at least 25 percent by 2020.

Worldwide, expectations for nuclear power are also rising, in large part because of a sense of urgency over climate change. Great Britain and Canada are moving toward building a new generation of nuclear



power plants, and Australia is giving serious consideration to launching its own nuclear power program. Countries already committed to building new nuclear plants include France, which gets 78 percent of its electricity from nuclear power, and Japan, China and South Korea.

The real value of nuclear power would be to counteract the inherent tendency in many countries to keep burning more fossil fuels for electricity production. Using it for this purpose would provide a powerful weapon in the battle against global warming, reminding the markets not only that nuclear power exists, but that it is going to be an important part of the solution.

G. Ivan Maldonado, Ph.D., is an Associate Professor in the Department of Mechanical, Industrial, and Nuclear Engineering at the University of Cincinnati. *Source: Enquirer*

BLM paves way for proposed Yucca rail

The Bureau of Land Management (BLM) has agreed to place restrictions on public land in a 300-mile corridor that is being studied for a railroad line to carry nuclear waste to Yucca Mountain.

The BLM announced December 28th, that it has reserved the mile-wide corridor from Caliente to the Yucca site, a proposed underground repository where the Department of Energy wants to store radioactive spent fuel.

The BLM's land withdrawal cements the Energy Department's access to the property as it studies rail alignments to the site, 100 miles northwest of Las Vegas.

A two-year temporary land withdrawal was set to expire on December 29, said Dennis Samuelson, a BLM realty specialist in Reno. The new order extends the land withdrawal for 10 years on 308,600 acres.

The land withdrawal will prevent mineral prospectors from filing mining claims along the route. It also will deter BLM from selling any of the land or allowing other federal agencies to make use of it, Samuelson said.

Current valid mining claims, grazing rights, water rights and public access to the land will not be affected, BLM officials said.

The Department of Energy said in a draft study in August that its work would be minimally invasive, consisting of photographing topography and conducting land surveys.

But Nevada state officials and other critics of the Yucca program contend that the Energy Department underestimated the impact of the land withdrawal on ranchers and other land users. They argue that on-the-ground activities will be more disruptive than the Energy Department has advertised, with implications for property values, the local economy, and archaeological and cultural features.

"We are still contending the selection of the corridor itself was illegal and that BLM dropped the ball in

not requiring a more thorough environmental impact statement," said Joe Strolin, planning division administrator for the Nevada Agency for Nuclear Projects.

Attorneys for the state have sued the government over the Energy Department's transportation planning, and a three-judge panel heard oral arguments in the case in October. A ruling is expected early next year.

The land withdrawal may provide fodder for further legal action by the state or possibly from ranchers along the corridor, said Bob Halstead, a Nevada-hired transportation consultant.

"We are going to take a close look at this. If we can find anything that seems unacceptable, we are not going to be shy about going after them," Halstead said.

The land withdrawal "is our first really final action in terms of control of the specific corridor," he said.

Samuelson said the Energy Department completed BLM requirements for a land withdrawal three or four weeks ago, including finalizing an environmental assessment.

The land order was signed Dec. 21 in Washington by Mark Limbaugh, the Interior Department's assistant secretary for water and science, Samuelson said and was published in the Federal Register.

The Energy Department is pursuing a strategy of shipping nuclear waste from most commercial power reactors by rail to a rail yard outside Caliente, and then west around the Nevada Test Site boundary and south to Yucca Mountain on newly built rail.

Caliente is on the existing Union Pacific line between Salt Lake City and Las Vegas.

Department of Energy officials recently doubled the cost estimates for a Nevada railroad, to \$2 billion. *Source: Las Vegas Review Journal*

Utah gains ally (continued)

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BLM lands, also had a military component and belonged in the defense bill.

In the last two weeks of the House and Senate meetings, the status of the Cedar Mountain language changed hourly. It was in, then out, then partly in, then all out. Most of the signs from the conference made the outcome appear bleak, but Utah members of Congress said they would keep fighting.

The one advantage they had was

that a fight between the White House and Sen. John McCain, R-Ariz., over his effort to ban torture of captives dragged out negotiations on the defense bill for more than two weeks, a stroke of luck that gave Utah delegates time to press their case.

But when McCain and the White House struck a deal, there was new urgency to get Cedar Mountain resolved before it was cast aside. Hatch and Ensign had a series of discussions.

The breakthrough was reached late in a meeting in Hatch's Capitol hide-away office. Hatch wouldn't discuss what prompted Ensign to change his mind.

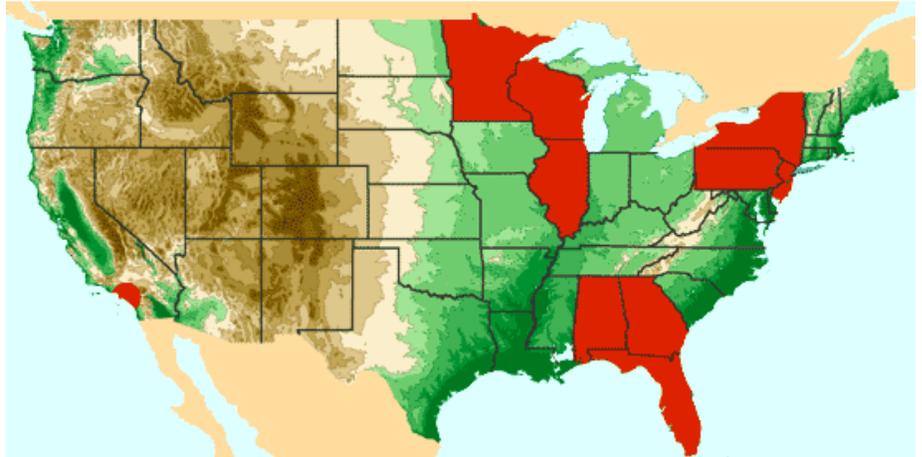
Ensign's spokesman, Jack Finn, said, "We have the Utah delegation's commitment to working with us to finding alternatives to Yucca Mountain on nuclear waste storage and we're very happy to have that ally."

Despite the dramatic, and once improbable victory, Bishop said the PFS proposal is by no means buried.

Source: Salt Lake Tribune

This map identifies the PFS Service Areas (darker areas) in the United States where the waste would be shipped and transported to the **Skull Valley Goshute Indian Reservation in Utah.**

The PFS Service Areas are located in California, Minnesota, Wisconsin, Illinois, Alabama, Georgia, Florida, New York, New Jersey, and Pennsylvania.



Source: <http://www.kued.org/skullvalley/road/index.html>

Skull Valley is located just 80 miles southwest from Salt Lake City. It is surrounded by a series of facilities for military training and weapons research, including:

- Hill Air Force Range
- Wendover Range
- Desert Test Center
- Dugway Proving Grounds
- Tooele Chemical Demolition Facility



For more information contact Churchill County Nuclear Waste Oversight Program at 85 North Taylor, Fallon, NV 89406, (775) 428-1592. Additional information on the repository program can be obtained from the U.S. Department of Energy. Yucca Mountain, Site Characterization Project Office at (702) 794-1444 or contact them at www.ymp.gov, or the Nevada Agency for Nuclear Project, Nuclear Waste Project Office, Capital Complex, Carson City, Nevada 89570, (775) 687-3744 or visit them at their web site at www.state.nv.us/nucwaste.

Churchill County's Nuclear Waste Oversight website churchillcountynwop.com.