

Nuclear Waste Review

White Pine County

September 2005

Yucca Mountain Funds: Bill offers counties greater freedom **Senate plan would limit DOE controls on how money to monitor project is spent**

Washington — Congress is moving to limit the Energy Department's controls on millions of dollars that the government sends to Nevada counties each year to monitor Yucca Mountain.

Under a Senate bill set for a vote this summer, county officials no longer would be required to submit work plans for DOE review and approval before receiving their annual funding.

The work plan reviews have irked some local government managers who say the counties should be given more independence. They chafe over delays in receiving grant money and work plan corrections directed by DOE reviewers.

"It is not the best use of everyone's time to go through an exercise of working and reworking a document that is pretty detailed," said Irene Navis, Clark County nuclear waste planning director.

The process is not so troubling to some other observers. Nye County Commission chairman Candice Trummell said the reviews can be useful to steer county leaders clear of inadvertent misspending and safeguard against audits.

The money involved is shared by Nye County, eight other Nevada counties and Inyo County in California. The other counties are contiguous to Nye, where the Yucca repository is being planned. This year the counties are getting \$8 million, while next year's budget calls for \$8.5 million.

As the host county, Nye County's portion is close to \$3 million, while the other jurisdictions receive smaller sums. Clark County gets about \$1.6 million for Yucca Mountain oversight.

With the Energy Department now preparing to seek a license for a nuclear waste repository at the Yucca site, key senators concluded that the DOE county relationship poses potential conflicts and needs to change.

The DOE work plan reviews are "inconsistent with its role as a license applicant" because the counties probably will oppose the DOE at repository hearings before the Nuclear Regulatory Commission, according to the Senate legislation.

The measure calls for the DOE to adopt an more informal "advise and consent" role in working with the local governments on their spending.

The directive was requested by Nevada county leaders and was inserted by Sen. Harry Reid, D-Nev., into a report that accompanies the Senate's fiscal 2006 spending bill for the Energy Department.

"The whole point of oversight is to maintain an independent review," Reid said in a prepared statement.

"Additionally, DOE and most likely all of the county governments will be legal adversaries on the Yucca Mountain project."

As the Yucca project evolved over the years, it fell to the Energy Department to distribute the county funding appropriated by Congress and to ensure that it was being spent according to rules set by the 1982 nuclear waste law and annual budget bills. Energy Department spokesman Allen Benson would not comment on the Senate bill. Benson said DOE officials "try to be as cooperative as they can be" in working with the local governments.

"They need their money to do their job, and our job is to make sure they spend it in accordance with the Nuclear Waste Policy Act," Benson said.

"You try to work things out amicably."

Nevada counties will not have free rein if the legislation becomes law. Their spending still would be subject to audits by the Energy Department and the department's inspector general.

A 2003 audit challenged \$2.08 million in Nye County spending for 2001 and 2002, and \$1.13 million spent by Lincoln County. The audit also questioned \$132,296 spent by Clark County.

Federal law allows the county governments to use federal money to hire consultants to evaluate

the repository's local impacts, to monitor DOE science work and to communicate with residents about the project.

The counties cannot spend federal money on lobbying or lawsuits or to seek allies against the project, but they can use the money to participate in upcoming license hearings.

Trummell said the audits have been more troublesome than the work plan reviews. Inspectors have adopted "overly strict" interpretations of the spending rules, she said.

"Nobody wants waste, fraud and abuse of taxpayer dollars," Trummell said.

"The basic consensus of the (counties) is that we need to have more independence with our oversight, but I am personally more concerned with what that means in terms of auditing."

Source: Las Vegas Review-Journal
June 28, 2005

Senators reject stopgap nuclear waste storage

**Reid calls House directive to move spent fuel
'half-baked'**

Washington— Two senators on Tuesday rejected the idea of storing nuclear waste at stopgap government sites while work continues to develop a repository at Yucca Mountain.

With the Nevada project facing undetermined delays, the House passed an annual Energy Department spending bill three weeks ago directing the department to start moving spent nuclear fuel from commercial utilities to one or two federally managed locations by 2007.

But Sen. Harry Reid, D-Nev., called the House proposal "half-baked," and Sen. Pete Domenici, R-N.M., said it was "totally inadequate."

Domenici is chairman of the Senate's energy and water subcommittee, while Reid is the top Democrat. They laid out their positions as the subcommittee approved a \$31.2 billion spending bill covering energy programs, the U.S. Army Corps of Engineers and an assortment of smaller agencies.

With Reid as an author, the energy and water bill customarily contains millions of dollars in spending targeted to Nevada. The latest earmarks \$333.2 million to the state. The list includes \$45 million for geothermal, solar and hydrogen energy research conducted at Nevada universities.

For Yucca Mountain, the Senate panel allocated \$577 million to continue the project in 2006. That is the same amount Congress passed for this year and \$64 million less than President Bush requested for next year.

The state of Nevada would be given \$3.5 million to monitor DOE activity on Yucca, while Nevada counties and Inyo County in California would share \$8.5 million. Nye County would get an additional \$500,000 as the repository host county.

With Domenici and Reid opposed, aides said the Senate bill does not address interim nuclear waste storage. That means a House-Senate conference committee will need to negotiate the issue later this year.

But senators said they are strongly opposed the approach taken by House lawmakers.

The House allocated \$10 million extra and told the energy department to spend another \$10 million from a transportation account to begin work on interim storage.

The bill directed Energy Secretary Samuel Bodman to identify candidate sites within four months, a prospect that alarmed states containing possible targets like former nuclear weapons plants and closed military bases.

Domenici said he was open to considering changes to U.S. nuclear waste policy that could include interim nuclear waste storage, but "you can't start a program of that importance with \$10 million and a paragraph."

Reid said changes are "going to be hard work and involve a lot of give and take and consensus building. All the House has done has been to stir up members in highly unproductive ways."

Source: Las Vegas Review-Journal
June 15, 2005

Yucca Mountain facing new delay **License application date pushed back**

Washington-The Energy Department probably will not submit its license application to build Yucca Mountain until March 2006 at the earliest, several months later than the most recent target date, according to an updated project timeline.

The Energy Department plans to update a Nuclear Regulatory Commission licensing board on the timeline this week. An Energy Department official, speaking on condition of anonymity so as not to interfere with the licensing process, disclosed the timeline.

Under NRC rules, the Energy Department cannot submit its license application to build the nuclear waste repository until it publicly releases background documents for the application.

DOE must certify, six months before submitting the license application, that relevant documents have been disclosed through Web-based Licensing Support Network, which can be seen by the public at <http://www.lsnnet.gov>.

Under the updated timeline, the certification would not happen until September or later, the official said. That would make March 2006 the earliest date DOE could submit its license application. DOE had hoped to submit the license application in December, and it certified in June 2004 that it had made the background documents available as required. That certification was rejected as inadequate by an NRC board.

After that setback, DOE said it would aim for this December. That date has slipped as well.

The Energy Department official said no new date has been set. The official said the department's priority is to ensure that this time, the certification passes muster.

The official said the Energy Department has completed 85 percent to 90 percent of the work of entering the millions of relevant documents into the Licensing Support Network.

Yucca Mountain, planned for 90 miles northwest of Las Vegas, has been beset by several problems, including an appeals court's rejection last year of the government's proposed radiation safety standard for the repository. This spring, internal e-mails became known suggesting government workers had falsified data.

Source: Las Vegas Review Journal
August 01, 2005

DEPARTMENT OF ENERGY POLICY STATEMENT FOR USE OF DEDICATED TRAINS FOR WASTE SHIPMENTS TO YUCCA MOUNTAIN

The Department of Energy (DOE) will use dedicated train service (DTS) for its usual rail transport of spent nuclear fuel (SNF) and high-level radioactive waste (HLW) to the Yucca Mountain Repository site in Nevada when the repository is operational.

On April 8, 2004, the Department issued a record of decision on using rail as the preferred mode for transport of SNF and HLW to the repository. Using rail would result in fewer shipments than using trucks and would reduce environmental impacts. The term "dedicated train" refers to train service dedicated to one commodity (in this case, SNF and HLW). Past and current SNF shipping campaigns by DOE programs, including fuel from Three Mile Island and the West Valley Demonstration Project, the Foreign Research Reactor SNF Acceptance Program, and commercial campaigns, have used DTS.

The benefits for the use of dedicated trains can be grouped into categories of safety, security, cost and operations.

SNF and HLW is shipped safely regardless of mode or type of service, primarily due to the stringent regulations in place and the robust nature of the transport packages involved. However, the radiological risk resulting from transport without incident may be lower due to decreased time in transit.

DOE shipments have been and will continue to be made securely using both DTS and general freight service. Escort and other physical protection features can be employed using either type of service. DTS does offer some potential advantages, such as:

- Increased command and control capabilities. Shorter DTS trains allow better visual monitoring from the locomotive and escort car.

- Avoidance of lengthy “dwell times” in rail yards.

Analyses indicate that the primary benefit of using DTS is the significant cost savings over the lifetime of the Yucca Mountain project. The cost DTS is offset by a reduced fleet size and its attendant operations and maintenance.

The use of DTS will result in several benefits for repository and transportation operations.

- Transit and turnaround times will be shorter using DTS, enabling the repository to operate with fewer casks and fewer railcars (I.e., equipment will not sit idle in rail yards). In contrast, using general freight service would increase the required size of the cask and railcar fleet by about 40 percent due to the increased transit time associated with general freight service.
- Use of DTS provides greater operational flexibility and efficiency for the waste management system due to reduced time in transit, and predictability in routing and scheduling.
- Repository operational resources could be better managed by taking advantage of more predictable shipment and receipt schedules.
- Transportation planning and operations would be simplified by narrowing mode and type to mostly rail coupled with the use of DTS.

Source: Intertech Services Corporation

DOE’s Announcement

The Honorable Kenny C. Guinn
Governor of Nevada
101 North Carson Street
Carson City, Nevada 89701

Dear Governor Guinn:

The purpose of this letter is to provide the State of Nevada notice of the Department of Energy’s (DOE) intent to prepare an Environmental Assessment (EA), in accordance with 10 CFR 1021.031 (National Environmental Policy Act implementing procedures) for the continued study of the Caliente corridor. This will support DOE’s land withdrawal application, dated December 19,2003, to the Bureau of Land Management for a Public Land Order withdrawing 308,600 acres of public land from surface entry land mining for a period of up to 20 years.

The public lands involved in this EA encompass the Caliente corridor and are the same as those specified in the public notice of the proposed withdrawal issued on December 29, 2003, at 68 FR 74965. The withdrawal will permit DOE to evaluate the land for the potential construction, operation, and maintenance of a branch rail line to transport spent nuclear fuel and high-level radioactive waste in the event the Nuclear Regulatory Commission authorizes a geologic repository at Yucca Mountain as provided for under the Nuclear Waste Policy Act of 1982, as amended. The draft EA will be forwarded to you for review and comment prior to DOE’s approval.

The Department is continuing to work on the issuance of a draft environmental impact statement, as noticed on April 8,2004, at 69 FR 18565, for the alignment, construction, and operation of a rail line to a geologic repository at Yucca Mountain, Nye County, Nevada. If you have any questions or comments, please contact Eric Knox of my staff at 202-586-6850.

Sincerely,
Paul M. Golan, Principal Deputy Director
Office of Civilian Radioactive Waste Management

Fact Sheet on Proposed Amendments to EPA's Public Health and Environmental Radiation Protection Standards for Yucca Mountain, Nevada (40 CFR Part 197)

The following fact sheet provides information about EPA's proposed amendments to its Yucca Mountain standards, which will protect public health for 1 million years:

EPA's Current Action

EPA is proposing public health standards for the planned high-level radioactive waste disposal facility at Yucca Mountain, Nevada that will protect public health for 1 million years. Under the standards, people living close to the facility would not receive total radiation higher than natural levels people experience routinely in other areas of the country.

The proposed standards set a maximum dose level for the first 10,000 years—more than twice as long as recorded human history. To provide safety beyond 10,000 years to 1 million years, EPA is proposing a separate, higher dose limit based on natural background radiation levels that people currently live that the facility must withstand the effects of earthquakes, volcanoes and significantly increased rainfall while safely containing the waste during the 1 million-year period.

The Yucca Mountain facility will open only if it meets EPA's standards to protect human health and the environment. The Nuclear Regulatory Commission will determine through its licensing process whether the facility meets the standards and should be allowed to open.

The proposed standards retain and add to EPA's original Yucca Mountain standards issued in 2001 and are also responsive to the ruling of the U.S. Court of Appeals for the District of Columbia Circuit issued in July 2004.

About the Proposed Amendments

The proposed amendments retain the protectiveness of the original standards, which were issued in 2001. They extend protection of public health from 10,000 to 1 million years from radioactive materials at the Yucca Mountain facility.

For the first 10,000 years, the proposed amendments to the individual protection and human intrusion standards:

- Retain the original 15 millirem (150 [microsieverts](#)) per year standard.
- Ensure that people living near Yucca Mountain are protected to the same level as those living near the Waste Isolation Pilot Plant in Carlsbad, New Mexico, currently the only operational deep geologic radioactive waste disposal facility in the U.S.

From 10,000 years up to 1 million years, the proposed standards:

- Add a limit of 350 millirem (3.5 millisieverts*) per year.
- Limit the maximum radiation from the facility so that people living close to Yucca Mountain for a lifetime during the 1 million-year time frame will not receive total radiation any higher than natural levels people currently live with in other areas of the country.

The standards further protect public health by requiring that DOE conduct analyses covering a 1 million-year time frame to assess the potential effects of natural processes or disruptive events that could affect how well Yucca Mountain contains the waste. These include:

- Earthquakes, which could affect the facility tunnels and breakdown of the waste containers.
- Volcanic activity, which could affect the waste containers directly or cause releases of radionuclides to the environment.
- Climate change, which could cause increased water flow through the facility,

resulting in the release of radionuclides to the environment

- Corrosion processes, which could cause breakdown of the waste containers.

In addition, the proposal extends the time frame for which DOE must assess events and processes that could affect the safety of Yucca Mountain from 10,000 to 1 million years.

Finally, the proposal also includes requirements for:

- Use by DOE of the middle, or median, value in calculating radiation dose. This ensures that compliance is judged using the most likely performance of the disposal facility, and not against either very optimistic or pessimistic projections of its behavior.
- Use of updated scientific factors to calculate radiation dose. These represent the most recent international consensus and guidance on estimating the health effects of radiation.

The NRC has its own Yucca Mountain requirements and must change these to be consistent with the EPA standards. Millirem, microsieverts and millisieverts are units of measurement for radiation dose, which reflect the effects of ionizing radiation on humans.

Background

Congress has established specific roles for the Federal agencies involved at Yucca Mountain:

- EPA sets the standards to protect human health and safety.
- The Nuclear Regulatory Commission (NRC) incorporates EPA's standards into its licensing requirements. Based on these requirements, NRC determines if the Yucca Mountain facility can safely contain nuclear waste and whether to license the facility to open.
- The Department of Energy (DOE) owns, constructs, applies for licenses for, and will operate the facility if its application for an NRC license is approved.

In the Energy Policy Act of 1992, Congress directed EPA to contract with the National Academy of Sciences (NAS) to provide recommendations on how EPA's standards could best protect public health and safety at Yucca Mountain. Congress also required that EPA's standards be based upon and consistent with the NAS' recommendations.

EPA issued 40 CFR Part 197 in 2001 to limit radiation doses received by the public from planned high-level waste disposal facility at Yucca Mountain. The standards set a 15 millirem per year dose limit for the first 10,000 years after the facility was closed. The NAS had recommended that EPA set a dose limit at the time of peak dose. The peak dose (highest annual radiation dose projected to be received by those living near the repository) will occur between 10,000 and 1 million years.

In July 2004, the US Court of Appeals for the District of Columbia Circuit ruled that the 10,000-year time period when the standards would be in effect was inconsistent with recommendations made by the NAS. The Court did not rule that EPA's standard was not protective. It ruled that the EPA standards were invalid to the extent that they were not consistent with or based upon a longer time period, when the highest doses of radiation from the waste are most likely to occur.

Source: EPA's website <http://www.epa.gov/radiation/yucca>