

# Nuclear Waste Update

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## Yucca Mountain Status:

Recent setbacks could cause significant delays

The Yucca Mountain project could face major delays in the near future as the project currently faces a budget crunch, a potentially crippling court ruling, and an undetermined delay in the licensing process.

The Department of Energy (DOE) continues to maintain that the nuclear waste repository will open on schedule in 2010. DOE must obtain a license from the Nuclear Regulatory Commission (NRC) to construct the repository before the project can move forward. DOE is currently racing to complete a license application for the facility by late December 2004.

However, keeping on schedule may prove extremely difficult if Congress approves a severe budget cut for the project. President Bush asked that \$880 million be appropriated to the Yucca Mountain project for the 2005 fiscal year, but the House of Representatives approved only \$131 million. The House

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## DOE Admits Yucca Workers Were Exposed to Toxic Dust

Worker says she was forced to falsify reports of dust levels

The Department of Energy (DOE) admitted this year that some of over 1,200 Yucca Mountain workers were exposed to dangerous levels of toxic dust in the 1990s.

While Yucca Mountain contractors drilled a large exploratory tunnel at a record setting pace in 1995, workers behind the giant boring machine were inhaling dangerous levels of silica and other toxic minerals, wearing only painters' masks.

But when an industrial hygienist tried to alert managers to the problem, it took them three months to equip workers with respirators to protect them from dust laced with silica and other harmful fibrous minerals. Six months later, it was found that the required gear, though better than painters masks, was still inadequate.

Silica is a mineral that exists naturally in desert soils and rocks at Yucca Mountain. Long-term exposure to inhaled silica has long been known to cause silicosis, a chronic and progressive lung disease that erodes lung capacity and can lead to death.

The issue was brought to light by whistle-blower Gene Griego in early January. Griego, a former tun-



*December 1995 photo shows the portal that is the defining physical feature of the Yucca Mountain Project. Photo: Las Vegas Review-Journal*

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nel supervisor at Yucca Mountain, has been diagnosed with chronic obstructive pulmonary disease. He holds DOE contractors responsible, alleging that they deliberately exposed him and his co-workers to toxic dust in the mid 90s while racing to complete the tunnel.



Gene Greigo, former Yucca worker.  
Photo: Las Vegas Review-Journal

Griego said he has been contacting current and former tunnel workers, in part through the laborer's union local in Las Vegas. In January, he had found 25 current or former workers who were diagnosed with silicosis or who have reported symptoms, such as coughing up blood. He said he believes two have died.

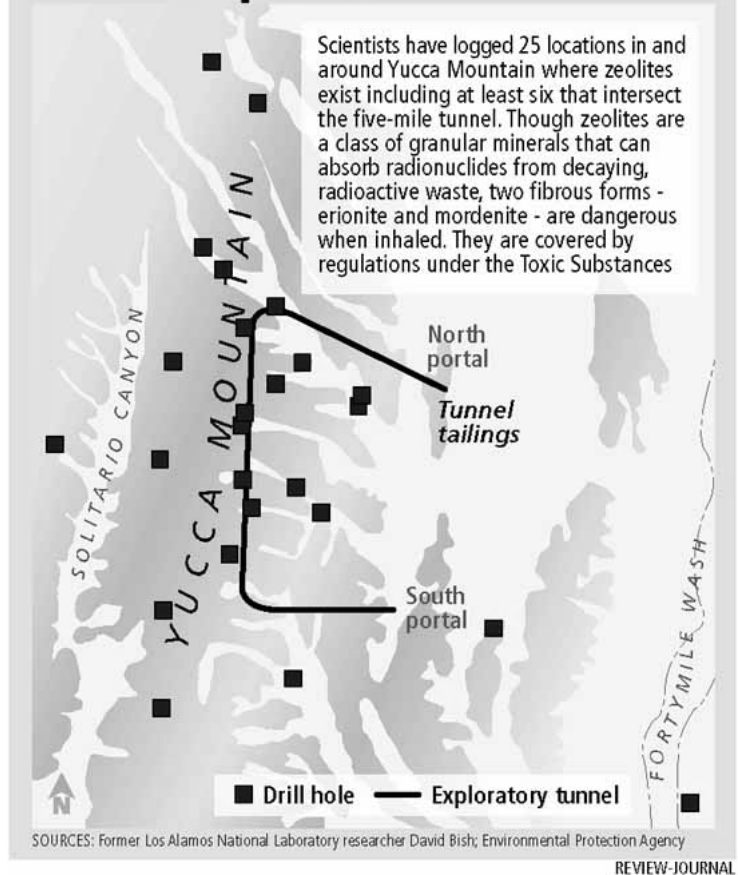
February brought other disturbing allegations to light. Judy Kallas, a former industrial hygienist at Yucca Mountain, said she was ordered to falsify her reports on the tunnel's toxic dust levels. Kallas made the accusation in October 2002 in an unrelated gender discrimination case against Bechtel Nevada, the main government contractor at the Nevada Test Site. She says she was forced to change her notes for the deposition, lowering the amounts of dust she had recorded in the 1990s.

In response, DOE Yucca chief Margaret Chu ordered a review of Kallas' allegations. Additionally, Chu wanted to know "why DOE management was not informed of the allegation contained in Ms. Kallas's October 2002 deposition until February 17, 2004."

***Griego had found 25 current or former Yucca workers who were diagnosed with silicosis or who have reported symptoms. He said he believes two have died.***

DOE and its Yucca Mountain contractors are responsible for the health and safety of its on-site workers. Normally, the Occupational Safety and Health Administration (OSHA) should have this responsibility, but OSHA relinquished its authority to the Energy Department in 1992. "Any safety and health program documentation developed with OSHA input remains the sole responsibility of

## Zeolite deposits



DOE," said a memorandum of understanding that sealed the agreement.

Documents Griego gathered suggest DOE was warned early on about airborne dangers from silica and other fibrous minerals disturbed during drilling of the portal. For example, a 1991 Los Alamos study warned that dry drilling at Yucca Mountain posed health concerns because of high silica content in the rock and an abundance of zeolite minerals whose inhalation "may result in asbestos-like lung diseases." Workers were exposed to these dusts nonetheless.

Shortly after Griego came forward, DOE announced it would offer free silicosis screenings for current and former Yucca workers and others who may have been exposed, for example during tunnel tours. DOE spokesman Allen Benson said health protections "were always in place but unfortunately were not enforced to the full extent. There was a lapse in enforcement, and that's why we've started the screenings." (Continued on next page)

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Energy and Water subcommittee, which made the cuts, criticized Mr. Bush for not giving them the revenue required for his budget proposals. (*see newsbrief, pg 7*). The Energy and Water bill is now moving through the Senate, where it must be approved before a final version of the bill, including Yucca Mountain funds, can be negotiated.

In addition to budget problems, the waste repository also faces a serious new obstacle raised by a federal court. In July, the U.S. Court of Appeals in Washington, D.C., ruled on Nevada's Yucca Mountain lawsuits. Although the Court dismissed most of the State's challenges, the judges threw out a crucial radiation safety standard that guided much of DOE's Yucca Mountain science. If an expected appeal fails, the Energy Department could face undetermined delays, with Congress wrangling to change the law governing the safety standard, or attempting to implement a new one. (*see article on page 4 for more details*)

The judges issued a stay on their ruling which allows DOE to continue work on the licensing process. However, in late July, an NRC Commissioner said that the NRC may not consider DOE's Yucca Mountain license application until a final ruling on the radiation safety standard has been reached (*see article, page 5*).

In the meantime, the Energy Department continues to work on its waste transportation program. DOE has begun studies of the Caliente rail corridor for an Environmental Impact Statement on the effects shipping nuclear waste would have in the area. Eureka County has submitted comments – *see article "Eureka County's Caliente Rail Scoping Comments", page 6, for more.*

To keep up to date on all the current Yucca Mountain news, visit the What's New page on Eureka County's [yuccamountain.org](http://yuccamountain.org) website. ☒

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Two Nevada environmental officials were also prompted to check the repository site to see if it poses a dust-blowing hazard. They concluded the project was in compliance with the Clean Air Act at the time of inspection, although they were not allowed access to all of the site. ☒

(Sources: *Las Vegas Review-Journal* & the *Las Vegas Sun*)

***For more information about the silicosis screening, call (866) 716-1542***



*A recent view of the Yucca Mountain tunnel.*

*Photo: State of Nevada, 2004*

## Management of Eureka County's Nuclear Waste Program has changed.



In July, long time public works director **Leonard Fiorenzi** retired after 31 years of county public service. He has been replaced by **Ron Damele**. Ron is now directing the county's nuclear waste program.

Daily nuclear waste activities are handled by **Laurel Marshall**, program coordinator at the county's Yucca Mountain Information Office. For more info on the county's program, call Laurel Marshall at (775) 237-5707 or email at [ecmarshall@eurekanv.org](mailto:ecmarshall@eurekanv.org)

## Court Ruling Could Delay Yucca Mountain

On July 9, 2004, the U.S. Court of Appeals delivered a ruling on Nevada's Yucca Mountain lawsuits that could stall the project indefinitely. The judges dismissed most of Nevada's claims, but they struck down a key Environmental Protection Agency (EPA) rule that set a 10,000 year limit on radiation containment at Yucca Mountain.

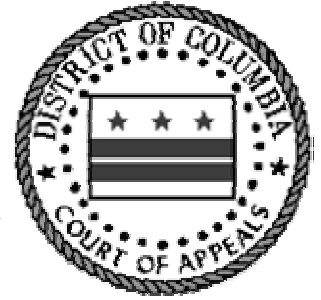
Under this rule, the Department of Energy (DOE) was required to prove that radiation would be safely stored at Yucca Mountain for 10,000 years. DOE has based much of its repository science and technology on this rule.

However, the State of Nevada challenged the 10,000 year period, saying it was both insufficient and illegal. The EPA had been required by law to base the safety standard on the recommendations of the National Academy of Sciences (NAS). The Academy, however, said the radiation safety standard should be set when the waste would be at its peak radiation levels - at least **300,000 years** from the time the waste is sent to Yucca.



inconsistent with [the] academy's recommendation?"

The Court also vacated all Nuclear Regulatory Commission licensing



standards that include a 10,000 year compliance period.

However, the judges dismissed the rest of the State's challenges, including the Constitutional case claiming Nevada's sovereign rights as a state were being violated, and the Recommendations case claiming DOE and President Bush acted illegally in recommending Yucca Mountain.

State officials claimed victory nonetheless, saying the EPA would have to form a new rule with a tougher standard. "This alone is a fatal blow to the repository," said Nevada Attorney General Brian Sandoval. He pointed out that DOE had already said they would not be able to meet a time period longer than 10,000 years. Such a standard would be "unworkable and probably unimplementable," according to former DOE project chief Lake Barrett.

However, shortly after issuing their decision, the judges ordered that their mandate on the EPA rule be withheld until seven days after the outcome

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***State officials claimed victory, saying the EPA would have to form a new rule with a tougher standard.***  
***"This alone is a fatal blow to the repository"***

**— NV Attorney General Brian Sandoval**

The Court upheld Nevada's claim, ruling that the EPA deliberately rejected the National Academy of Sciences' recommendation.

"NAS says there is no scientific basis for limiting it to 10,000 years," said Judge Harry Tatel during the January 14 hearing. "What could be more

### ***What's next?***

Both the State and DOE have different options to proceed. Parties to the lawsuit have 45 days to request a rehearing, or to ask the court for an en banc review by all the judges in the circuit. Another option is for an appeal straight to the U.S. Supreme Court, though it is not clear how the judges' stay order would come into play in that circumstance. Nevada could also file motions urging the judges to remove the hold on their ruling.

*(Source: LV Review-Journal, 7/13)*

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of any appeal. This could delay the court's order for an unknown amount of time, and it allows DOE to continue with licensing proceedings in the interim.

DOE remains positive about the Court of Appeal's ruling. "I am pleased with today's decisions handed down by the Court," said Energy Secretary Spencer Abraham in a July 9 statement. "The Court dismissed all challenges to the site selection of Yucca Mountain."

As for the 10,000 year safety standard, Abraham said, "DOE will be working with the EPA and Congress to determine appropriate steps to address this issue." Aside from the EPA setting a new standard, another option is for DOE to ask Congress to change the law and allow the 10,000 year period.

The ruling came 7 months after a January 14 hearing in Washington, D.C. ☒



## NRC May Delay Its Evaluation of Yucca

Commissioner says 2010 opening date is highly unlikely

In a related story, the Nuclear Regulatory Commission (NRC) said the Court's ruling may cause the Commission to delay its evaluation of the Yucca Mountain license application. Because both the 10,000 year radiation rule and corresponding 10,000 year licensing standard were thrown out by the Court, Commissioner Edward McGaffigan said it may be necessary to wait for a final decision before the NRC can consider the license application.

The Department of Energy (DOE) must apply for a license from the NRC to build the waste repository before any construction can begin. DOE has said the Court's decision will not delay the Department's projected submittal of the application in late December.

cation that do not involve the 10,000 year standard, but time and cost are issues. The Commission has asked for the advice of its attorneys.



NRC seal

A delay in the licensing process would mean considerable delays in the anticipated 2010 opening date of the repository. But in fact, McGaffigan said that DOE's 2010 date was not viable regardless of the Court's decision. He said that date was based on an estimate from the first Bush administration on a 2000 submittal of the license application.

***Commissioner McGaffigan said 2012 to 2015 is a conservative estimate for the opening of the Yucca Mountain repository***

But the NRC has only three years with a possible one-year extension to evaluate the complex license application. Commissioner McGaffigan said the NRC could do some work on parts of the appli-

***For more information on the Yucca Mountain licensing process, visit [www.yuccamountain.org/license/license.htm](http://www.yuccamountain.org/license/license.htm)***

"From the date at which clarity emerges legally and statutorily, from that point it's 10 years (to open the site)," McGaffigan said. He said the 2012 to 2015 time frame is a conservative estimate to open the site. ☒

(Source: Las Vegas Sun, 7/21/04)

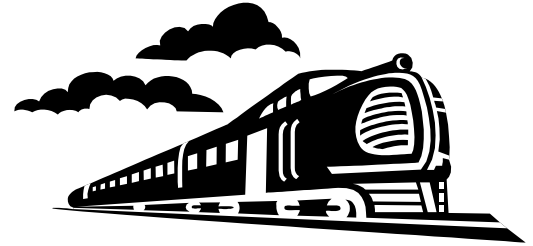
## Nuclear Waste Transportation:

### Eureka County's Caliente Rail Line Scoping Comments

Now that Caliente has been selected by the Department of Energy (DOE) as the preferred rail corridor in Nevada to haul nuclear waste to Yucca Mountain, the DOE must complete an Environmental Impact Statement on the rail line's social, economical, and environmental impacts (EIS).

Eureka County was invited with other Affected Units of Local Government to submit comments to the EIS as part of the public scoping process. Many of the possible impacts from a rail line in Caliente would be the same for Carlin, which was named the potential secondary corridor.

In a 20-page document of scoping comments, Eureka County identified over 20 different areas of concern and voiced several key questions about the rail line's impacts that should be answered fully in the EIS.



*DOE prefers a mostly rail scenario, but may have to ship waste in trucks on Nevada highways for 6 years while the Carlin rail line is being constructed.*

**Water Rights and Land Use.** Among the main issues are concerns over water rights, grazing, and mining. Construction and operation of a rail line would cut through grazing lands and utilize water resources – an estimated 63 temporary wells will have to be drilled to supply construction crews with water. Eureka County noted that water use could have significant impacts on water resources for locals and stakeholders within the area, and warned of possible water pollution during construction.

Land access and rights of way are of primary concern to ranchers. In the comments, Eureka County posed the questions, *who would own the tracks, trains, rights-of-way, and rail support facilities, and who would operate them?* The County also insisted that DOE disclose all potential impacts of the project on ranching and agriculture, remarking that land use and livelihood are “inextricably linked” in rural Nevada.

Mining in the area would also be affected. Nye County Commissioner Midge Carver told the *Pahrump Valley Times* that some 900 patented and non-patented mining claims exist along the proposed route. The rail line would prevent them from being developed.

**Truck versus Rail.** Another of the county's concerns involves the truck versus rail issue. In a March 2004 supplemental document, DOE revealed that legal-weight trucks might be used to ship casks of waste on existing Nevada highways for up to 6 years while the rail line is under construction. Under this scenario, waste would be shipped on existing rail lines across the U.S., then transferred to trucks at intermodal stations in Nevada. These intermodal stations would need to be constructed. Eureka requested that DOE fully describe and analyze this rail-truck option.

**Transportation Hazards.** Eureka also urged DOE to fully analyze and prepare for hazards involving transportation along the rail line. These hazards include radiation exposure, sabotage or terrorist attack, wildfire, shipment accident, and resuspension of radioactive particles left in the soil from nuclear weapons testing at the Nevada Test Site.

**Socioeconomic Impacts.** Eureka County noted that stigma and perceived risks associated with the rail line could adversely affect economies, property values, tourism, and recreation. At the same time, the project could bring some economic opportunities to the region. To this end, the County encouraged DOE to allow shared use of the rail line to benefit industries such as mining and agriculture. ☒

## Nuclear News... In Brief

### Skull Valley status...

In August, Private Fuel Storage and the State of Utah are scheduled to argue final Skull Valley issues in front of a Nuclear Regulatory Commission board. Private Fuel Storage, a consortium of nuclear-powered utilities, hopes to obtain a license to build a 40,000 ton nuclear waste storage facility on the Skull Valley Goshute Indian reservation, 75 miles southwest of Salt Lake City.



Private Fuel Storage

In March 2003, a Commission board ruled that the site did not meet all safety standards, specifically the risk of airplane crashes from nearby Hill Air Force Base.

The Department of Defense has been conducting a study on the waste facility's potential affects on the Air Force Range. Pentagon spokesman James Turner said the Air Force is preparing the report internally for the Defense Department and it is expected to be complete by the end of the year.

The Nuclear Regulatory Commission's decision is also expected sometime late this year.

*(Salt Lake Tribune, 6/28/04)*

### House drastically cut Yucca Mountains 2005 budget....

In June, the House approved a potentially crippling budget cut for the Yucca Mountain project.



The Energy and Water Appropriations Subcommittee proposed \$131 million for Yucca, far short of the Bush administration's requested \$880 million. Subcommittee Chairman Rep. David Hobson (R-Ohio) decried the Bush administration for making erroneous assumptions about new revenue streams that would have closed the funding gap for the project. "I don't have the money allocated for me," he said. Hobson also eliminated all funding for new U.S. nuclear weapons programs.

The committee's proposed budget cut for Yucca mountain was passed in the House Energy Bill in July. However, final spending on the project will

not be decided until the Senate has passed its own Energy Bill and both houses have come to an agreement on the final version.

*(Nuclear Waste News, 6/24/04)*

### Yucca waste transportation will dwarf past...

A recent study by the National Academy of Sciences concluded that one year of nuclear waste shipments to Yucca Mountain will exceed 30 years of total waste transportation in the U.S.



Kevin Crowley, director of a study being conducted by National Academy of Sciences, said research is showing 2,500 tons of spent nuclear fuel were shipped in the United States by truck or rail between 1964 and 1997. In the future, DOE estimates shipping 3,000 tons of spent nuclear fuel to Yucca Mountain annually for 24 years.

*(Las Vegas Review-Journal, 5/6/04)*

### NRC authorizes nuclear cask testing, but State representatives say test plan falls short...

The Nuclear Regulatory Commission (NRC) has authorized new safety testing of a full-sized cask designed to carry spent nuclear fuel to Yucca Mountain. Agency officials said putting a 150-ton shipping container through a 75 mph crash and a "fully engulfing" fire will confirm their safety requirements for nuclear waste casks that are largely based on scale model testing and computer calculations.

But Nevada officials said the planned testing falls short of what is necessary to measure cask safety. The State has advocated full-scale testing of several truck and railroad cask designs, as well as rigorous stress testing to determine a cask's breaking point.

NRC staff rejected the idea of "testing to failure," saying there are no realistic accident scenarios that could cause a cask to rupture or leak.

Nevada may ask Congress to intervene.

*(Las Vegas Review-Journal, 5/11/04)* ☐

## ***Nuclear Waste Update***

### **Eureka County Nuclear Waste Repository Program**

The Eureka County Nuclear Waste Update is published by the Eureka County Yucca Mountain Information Office, P.O. Box 990, Eureka, NV 89316, (775) 237-5707. The purpose of the *Update* is to provide information to the public about issues related to the proposed nuclear waste repository at Yucca Mountain.

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Articles in this newsletter may not necessarily reflect the positions or opinions of the Eureka County Board of Commissioners.

For more information on the Yucca Mountain project, contact Laurel Marshall at the county's Yucca Mountain Information Office: (775) 237-5707.

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### **Eureka County on the web! New updates on the Yucca Mountain project!**

Check out the county's website at [www.co.eureka.nv.us](http://www.co.eureka.nv.us). Log on to our nuclear waste website at [www.yuccamountain.org](http://www.yuccamountain.org) to get information on Yucca Mountain and its effects on the residents of Eureka County. Info includes news, maps, links, photos, and transportation updates.

Current Events ♦ Yucca Mountain Licensing ♦ Yucca Mountain Litigation



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