

Spring
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Yucca Mountain News

Lander County Oversight Office
825 N. Second St.
Battle Mountain, NV 89820

NRC Completes Audit of Yucca Mountain

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On May 6th the Nuclear Regulatory Commission (NRC) held a technical exchange on the results of a recent Yucca Mountain Project audit. In the audit, NRC focused on three important areas for licensing. Those areas include (1) general and localized corrosion of the waste package outer barrier, (2) commercial spent nuclear fuel waste form degradation model, and (3) drift (i.e. tunnel) degradation. NRC performed an audit to determine the technical completeness of information needed to support the aforementioned areas. The audit did not determine the accuracy of the information. Overall, NRC continues to see gaps in quality assurance measures, lack of supporting information, and problems with overall transparency of the scientific investigations supporting a license application. These audits are

important because NRC will not accept a license application for review until all information needed to support the license is made available.

The NRC is the agency responsible to review a license application from the Department of Energy to construct and operate a repository at Yucca Mountain. DOE plans to submit a license application by December of 2004.

NRC may be trying to head-off the submission of an incomplete application. NRC has only three years to review the application once it is submitted. If the process slows down while in the review period.

NRC Authorizes Nuclear Cask Testing

WASHINGTON -- Seeking to boost public confidence in radioactive waste handling, the Nuclear Regulatory Commission 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.

A disaster demonstration involving an 18-foot-long cask might also build public acceptance of a government campaign to transport 77,000 tons of

nuclear waste and spent fuel to the proposed Nevada repository, they said.

But the NRC's action, signed by the agency's three commissioners and disclosed in a May 5th staff memo, got a thumbs down from Nevada representatives. They said the planned testing falls short of what is necessary to measure cask safety.

"The staff requirements memo is completely unacceptable," said Robert Halstead, a Wisconsin-based transportation authority and Nevada nuclear waste consultant.

The tests will highlight an important element of the Yucca Mountain Project. Government and industry officials say the safety of a 24-year Yucca shipping campaign will depend in large part on the durability of the

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steel casks that will shield highly radioactive fuel assemblies.

Nevada officials had lobbied heavily to get the nuclear safety agency to order more comprehensive tests.

The state advocated full-scale testing of several truck cask designs, as well as casks that will be carried by railroad to a Yucca repository. Officials also pushed for rigorous stress testing to determine a cask's breaking point.

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

Halstead said state officials may ask Congress to intervene, saying taxpayers will be shortchanged by testing that will not yield the most useful information. He estimated the cask testing will cost between \$35 million and \$40 million.

A full-size rail cask could cost the government between \$1 million and \$3 million, industry officials have said.

Sen. Harry Reid, D-Nev., is drafting a bill that would require the NRC to conduct physical tests on full-scale versions of all designs for casks that would carry nuclear waste to the state by truck and by railroad and each design would be required to be tested to determine its failure point.

Source: *Las Vegas Review-Journal*

TRANSPORTATION PROGRAM: Yucca Waste Shipments to Dwarf Past



WASHINGTON -- Over three decades, 2,500 tons of spent nuclear fuel was shipped in the United States, an amount that would be eclipsed in only a single year of operations for the Yucca Mountain Project, an expert science panel was told.

Kevin Crowley, director of a study being conducted by National Academy of Sciences, said research is showing between 1,923 and 2,746 reported cask shipments of nuclear waste were moved by truck among U.S. sites between 1964 and 1997.

Railroads transported between 279 and 511 cask shipments, he said.

In terms of tonnage, Crowley said, "the total U.S. experience is slightly less than what we would expect to see shipped during one year of a Yucca Mountain transportation program."

Crowley made his presentation to a 16-member expert committee assembled by the academy. The board is developing recommendations on how the government might manage an ambitious campaign to move highly radioactive waste and spent nuclear fuel from 39 states to Nevada.

When it is fully operational, the Energy Department estimates shipping

3,000 tons of nuclear waste annually for about 24 years to a repository being planned to hold 77,000 tons of highly radioactive waste.

The department is forming a blueprint calling for 3,000 to 3,300 railroad shipments from government weapons plants and commercial nuclear utilities to the Yucca site. Another 1,000 shipments would travel by truck.

Crowley said that from 1949 to 1998 there were eight incidents where coolant or other liquid leaked from casks. On 49 occasions, contamination was found on shipping cask surfaces.

"There have been no reported accidents involving breach of the casks and a leak of the (waste) contents," he said.

Panel members sought comment on whether the record of shipments might be a safety indicator for the much larger Yucca Mountain operations.

Michele Boyd, a legislative representative for the Public Citizen advocacy group, said the past is not a good predictor.

"Simply extrapolating from past experience, the statistics of which are disputable, will not be sufficient to ensure that these shipments will be safe, and certainly will not convince the public that they are," she said.

Boyd said statistics do not tell the entire story. For example, she said, from 1986 to 1990 the Energy Department transported two dozen train

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Yucca Mountain Science Center brings "Discovery Day" to Lander

In an all day marathon students at the elementary level in Battle Mountain had the opportunity to build a volcano made of papier mache, create a fossil from clay and design a structure that is considered to be safe under extreme conditions. The Yucca Mountain Science Center team taught students about geology and engineered barriers. Nuclear waste is to be stored within engineered casks underground at Yucca Mountain. Using hands-on experiments, the team could explain the geology of Yucca Mountain at an elementary level. Students were told how scientists use fossils and study volcanoes to learn more about the proposed site. Using a Dixie cup, an egg, tape and bubble wrap students also assembled an "engineered barrier" then tossed from an 8-foot ladder where the goal would be not to break the egg. Teachers commented on how they can use these experiments to discuss Yucca Mountain with their students.

After the marathon "Discovery Day" at the elementary schools, DOE's Yucca Mountain Science Center team returned the next day to speak to the middle and high school groups. Students from Austin were also able to attend and hear the DOE's perspective of Yucca Mountain. The presentation focused on the scientific studies taking place at Yucca and students and faculty were pleased with the presentation and opportunity to talk about issues relating to transportation of high-level nuclear waste and the current licensing process to begin in 2005.



"Studying fossils gives us information that would otherwise be lost forever. We would not even know of the existence of dinosaurs if there were not any fossils."

Each student received a plastic cup and a piece of clay. Clay was molded into a pancake shape the size of the bottom of the cup. An assortment of shells and simulated fossils were used to create the fossils.



The cups were collected and filled with plaster. Students picked them up at the end of the session.

After 24 hours they break the cup and peel the clay off the hardened plaster and have a fossil mold. This is a technique paleontologists use to share fossils they find.

Three criteria for being a fossil:

- 1) Must be very old
- 2) Must be preserved in rock.
- 3) Must have once been alive



Counties Present Views at National Conference of State Legislatures



On May 12th, Lander County made a presentation to the National Conference of State Legislatures, High-Level Waste Working Group regarding its activities and concerns about the Yucca Mountain Project. Several other Nevada communities were also at the meeting to provide comments to the Working Group. Presentations were focused on: (1) specific impacts the proposed repository will have on Lander County, (2) concerns that have been raised by citizens in Lander County with regards to the proposed Yucca Mountain repository, (3) the prevailing view within Lander County with regards to the proposed Yucca Mountain repository; and any monitoring or planning work being done with respect to the proposed Yucca Mountain repository.



Representative for Lander County's Nuclear Waste Oversight Program, Rex Massey making a presentation to the National Conference of State Legislatures.

The working group, which also contained Nevada legislators, allowed nearly 3 hours for county presentations. There were common themes presented throughout the meeting such as emergency response impact to local communities, conflicts and impacts associated with high-level transportation, and concerns about the suitability of Yucca Mountain as a long-term repository site.

Yucca waste shipments *(continued)*

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shipments of nuclear fuel debris from the Three Mile Island plant in Pennsylvania to Idaho.

Along the way, she said, DOE violated speed limits and rush-hour rules through St. Louis. One shipment collided with a car stalled on the tracks, while another carried inaccurate placarding.

"These type of errors need to be evaluated in the context of a massive transportation program involving multiple truck casks per day or multiple train casks per week over a period of at least 24 years," she said.

Steve Kraft, waste management director for the Nuclear Energy Insti-

tute, gave a different view. "We believe experience to date is a valid indicator of the future," he said.

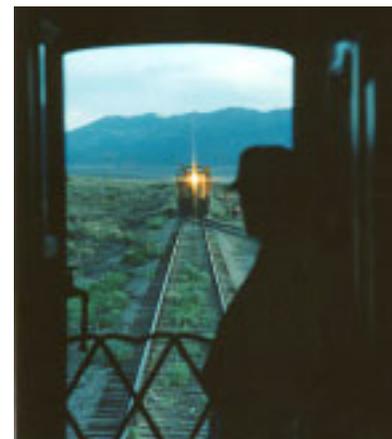
Kraft said nuclear waste cask designs and transportation safety plans have remained consistent.

"The quality assurance of the cask, the certification of the cask, the transportation plan, the first responder plan, the security plan, are shipment-independent," Kraft said. "Each shipment is the same."

Source: Las Vegas Sun



Waste shipment cask



Rail line and train

Budget cuts could delay Yucca project



WASHINGTON - Energy Department officials are preparing a report on the impact of potentially deep budget cuts in the Yucca Mountain Project, including calculations of layoffs and delays in the program to establish a nuclear waste repository in Nye County.

The report is being put together in the form of a letter to Rep. David Hobson, R-Ohio, chairman of a House subcommittee that is preparing to write an energy and water project spending bill for next year.

Hobson told Energy Secretary Spencer Abraham in an April 29 letter that DOE might get only a fraction of the \$880 million it requested for the repository in fiscal year 2005, which begins Oct. 1.

Hobson repeated his warning on Wednesday in a speech to the U.S. Transport Council, an association of nuclear waste shippers.

"I don't believe in coming here and telling you everything is rosy, because it is not," Hobson said. "I don't have the money."

The Energy Department plans to file a repository license application in December and has stepped up its strategizing to transport highly radioactive spent nuclear fuel from reactors in 34 states to the Nye County

site. The department has projected a 2010 repository opening.

But the Yucca Mountain budget has become complicated by a Bush administration request that Congress reclassify a portion of the fund that pays for the repository program.

The reclassification, essentially a change in how the money is counted for budgeting purposes, has run into roadblocks, creating a shortfall in how much money may be available for Congress to spend on the Yucca project, Hobson said.

As a result, Hobson said, the bill his subcommittee passes may be limited to \$131 million for the repository. The Senate or a conference committee could add money later in the year.

"I don't have the flexibility to steal money from other accounts in the energy and water bill to make up for shortfalls in Yucca Mountain," Hobson said.

This is not the first time the Yucca Mountain Project has faced a severe budget crunch.

In 1995, the Clinton administration requested \$630 million along with a budgeting change that proved unpopular in Congress.

The Energy Department ended up with only half its requested amount, forcing a major restructuring and hundreds of layoffs amounting to a third of its contractor workforce, officials said.

Hobson said he is trying to persuade the White House to send Congress an amended DOE budget that restores Yucca Mountain funding, or to

shift money from nuclear weapons programs or environmental cleanups to the repository effort.

Another possible option might be for the White House to carry out the budgeting change administratively, Hobson said.

But Rick Mertens, energy branch chief of the White House budget office, said, "In our view that is not something the executive branch can unilaterally do.

"We're looking at the options and there aren't any easy ones," Mertens said.

Hobson said the Bush administration took "a poor gamble" by pushing to reclassify the nuclear waste fund in the face of obvious opposition from Nevada's senators who oppose any initiative that would make it easier for the government to send nuclear waste to the state.

Sens. John Ensign, R-Nev., and Harry Reid, D-Nev., blocked the proposal in the Senate Budget Committee earlier this year. Aides said they are watchful for other attempts to get it passed.

Hobson characterized the administration's Yucca Mountain budget plan as "a three-way bank shot."

"I don't think you could pull this off in the Senate when the Nevada senators have their hands in all the pockets," he said.

Source: Las Vegas Sun

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 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.

For more information on Lander County's program contact Deborah Hinze at the Community Development Department (775) 635-2860 or Joy Brandt at (775) 964-2447. 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.

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Battle Mountain, NV 89820

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