

Nuclear Waste Update

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Yucca Mountain Project: is it Dead or Alive?

The White House has declared its intention to “terminate” the Yucca Mountain project. With support from Energy Secretary Steven Chu and Senate Majority Leader Harry Reid, the Obama administration has cut most of the project’s 2010 funding and has said it will provide no funding in 2011.

“The president opposes the Yucca Mountain project, and that is reflected in the FY 2010 budget and will be again in the FY 2011 budget,” a White House spokesman said.

Without funding, the project will come to a standstill. However, legally, Yucca Mountain still remains the nation's designated repository, as voted by Congress and approved by President George W. Bush in 2002. President Obama hasn't altered that fact.

“Changing Yucca would mean changing the law, which would need an act of Congress,” says David McIntyre of the Nuclear Regulatory Commission. “That hasn't happened yet, and we don't know if it will.”

The 2010 budget, currently being finalized by Congress, will still leave enough funds for the licensing process to move forward with the Nuclear Regulatory Commission (see article on page 4). However, Reid announced in late July that the White House and Secretary Chu have agreed to provide no funding

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From left: Secretary of Energy Steven Chu, President Obama, and Senator Harry Reid

If Not Yucca Mountain—Then What?

The Nuclear Waste Policy Act, which designated Yucca Mountain as the site for a permanent nuclear waste repository, contains no Plan B should Yucca be canceled.

Energy Secretary Steven Chu is convening a "blue-ribbon panel" of experts to examine and develop a long term nuclear waste disposal plan. The panel will consider all options for waste disposal, including recycling, use in advanced reactors, and burial at other sites.

Chu plans to convene the panel sometime this year. But he also says there is plenty of time to figure out a new course of action.

For the time being, the Nuclear Regulatory Commission has advised that nuclear waste can continue to be kept at utilities without risk to the environment.

However, until a long-term solution for waste disposal moves forward, the federal government faces increasing lawsuits from nuclear utilities.

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in 2011—which means the commission would likely be unable to continue the review.

“Withdrawing the funds certainly stops [the Yucca Mountain project] in its tracks,” Bruce Breslow, executive director of Nevada’s Nuclear Projects Agency, told the Las Vegas Sun. “Cutting off the money is like chopping its legs off. It can’t move.”

The Department of Energy (DOE) has acknowledged as much. “Yucca Mountain is not an option, and the budget clearly reflects that,” said spokesperson Stephanie Mueller.

However, unless Congress overturns its 2002 action or passes legislation in place of the Nuclear Waste Policy Act, the door will remain open for a future administration to resume the Yucca Mountain project. Changing the law would prove daunting, as even congressional allies of Reid and Obama represent states with nuclear power plants that want to get rid of the waste.

Aside from overturning the law, two other avenues remain for definitively killing the Yucca Mountain project:

1. Under the law, the energy secretary has the authority to withdraw the license application from the Nuclear Regulatory Commission’s review.
2. The energy secretary also has the authority to declare the Yucca Mountain site unsuitable, which would withdraw it from consideration.

Until one of these things happen, said Breslow, “Yucca still lives.”

Nonetheless, the agreement Reid reached with the White House is perhaps the most significant move to stop the project in the more than 20 years.

“This is a major victory for Nevada,” Reid said in a statement. “I am pleased that President Obama has lived up to his promise to me and all Nevadans by working with me to kill the Yucca Mountain project.

“I look forward to continuing my work with the president and his administration to find responsible, alternative solutions for dealing with nuclear waste,” Reid said. ☒

(Sources: Las Vegas Sun 7/30/09; Las Vegas Review Journal 3/6/09; CQ Article)



Energy Secretary Steven Chu is forming a "blue-ribbon panel" of experts to examine and develop a long term nuclear waste disposal plan.

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The utilities have already sued the federal government for failure to accept their spent nuclear fuel in 1998, as promised under the Nuclear Waste Policy Act. The government’s damages exceed \$7 bil-

lion, and the DOE estimates their liabilities will reach \$11 billion even if Yucca Mountain opens in 2020.

Notably, even if Yucca Mountain moves forward as planned, it would not solve the nation’s nuclear waste disposal problem. DOE reported last year that the legal capacity of Yucca Mountain could not hold all the nuclear waste Americans are projected to generate in the coming decades. ☒

For the latest news on the future of the Yucca Mountain Project, visit:
www.yuccamountain.org/new.htm

Reactions to Yucca Mountain Budget Cuts:

“This is a major victory for Nevada. I am pleased that President Obama has lived up to his promise to me and all Nevadans by working with me to kill the Yucca Mountain project.”

—**Senator Harry Reid**, D-Nevada

“[The Federal government] has a legal and moral obligation to continue the license application and let the appropriate agencies make recommendation on safety of the site.”

—**Paul Seidler**, senior director in Nevada for the Nuclear Energy Institute

“It took 22 years and \$8 billion to get nowhere on Yucca. Politics aside, how long will it take, and how much will it cost, to get U.S. storage sites opened?”

—**David Talbot** of *Technology Review*

“We didn't get nowhere. We learned quite a bit. We should set aside something on the order of a few decades to get this right. It will cost billions, but that's part of the price of nuclear power.”

—**Allison Macfarlane**, geologist and technical expert on nuclear-waste disposal

“Nuclear power is a critical component in securing our nation's energy future and reducing greenhouse gas emissions, and I believe that moving forward on Yucca Mountain is a key step in growing a strong nuclear industry.”

—**Senator John McCain**, R-Arizona

“We have learned a lot in more in the last 20-25 years. I think we can do a better job [than Yucca Mountain].”

—**Secretary of Energy Steven Chu**

“I, like a lot of people, believe the project is dead. But we do not want a Lazarus-like resurrection. We will not be able to rest easy until we drive a silver stake through its heart.”

—**Richard Bryan**, former Senator and former Governor of Nevada

“Senators and representatives from 39 states [where the wastes are currently stored] aren't going to be happy.”

—**Edward Sproat III**, former director of the Office of Civilian Radioactive Waste Management

“Canceling Yucca means we're going to have to continue to manage used fuel on site for the time being. It buys us some time. But you're going to need a geologic repository at some point.”

—**Steven Kerekes**, spokesman for the Nuclear Energy Institute

“Dry-cask storage is an excellent interim option. It can give us a lot of flexibility, and keeps the waste safe for 100 years.”

—**Philip Sharp**, former chair of the House Energy and Power subcommittee

Nuclear Regulatory Commission Licensing Update

Licensing Board accepts 299 contentions to application

The Nuclear Regulatory Commission (NRC) will continue to review the license application for the Yucca Mountain repository for the present, even though the Obama administration has made clear it wants to pursue other waste storage options (see article on page 1).

The NRC will have funds to continue the application review process in 2010. But the White House has said it intends to cut all funding from the Yucca Mountain project in 2011, including money needed for the licensing process to move forward. President Obama won't release his 2011 budget proposal until January.

New NRC Chairman Gregory Jaczko acknowledged in an interview with the Associated Press that the agency's ability to work on the license application for the Yucca Mountain project would be jeopardized by future budget cuts.

He added: "We've got a lot of things on our plate, making sure we do a good solid safety review whether it's with new reactors, license renewals, (or) nuclear material."

All commercial, industrial, and academic entities must apply for a license from the NRC before any facility containing or involving the use of nuclear materials can be built.

The NRC faces a full workload with applications for new reactors, re-licensing of existing nuclear power plans, and making sure that current plants are being operated safely.

In May, the Licensing Board agreed to hear further arguments on an unprecedented 299 out of 318 license application contentions.

Hearings

Based on current information, next fall, the NRC plans to hold hearings as part of the Yucca Mountain repository license application review process.



Licensing board panels called Construction Authorization Boards (CABs) were appointed by the NRC's Atomic Safety & Licensing Board. The quasi-judicial three person panels will hear arguments related to the license application.

The hearings will cover disputed issues or contentions about DOE's license application. Fourteen groups, including the State of Nevada, filed 318

"This is a huge victory for the State of Nevada that brings to validation over 25 years of scientific and legal work."—Bruce Breslow, executive director, Nuclear Projects Agency

contentions issues against the license application.

The contentions raise many safety and environmental concerns about the repository including that DOE's application

- ◆ fails to take into account expected changes in precipitation tied to global warming
- ◆ fails to use the right calculations for volcanic activity
- ◆ fails to properly anticipate how fast waste canisters will corrode.

The NRC staff argued that only about 19 contentions were valid concerns, but the CABs disagreed. After hearings in May, the board accepted 299 contentions—an unprecedented number.

Bruce Breslow, executive director of Nevada's Nuclear Projects Agency, said, "This is a huge victory for the State of Nevada that brings validation to over 25 years of scientific and legal work."

The hearings are currently scheduled to begin in October 2010. Due to budget cuts they expect to hear topics sequentially rather than simultaneously, but current plans could change further pending the outcome of the 2011 budget. ☒

Eureka County Pushing NRC to Stream Hearings Over the Web



This spring, the Nuclear Regulatory Commission (NRC) provided live web-streaming of a hearing by the licensing board considering which contentions to admit to the Yucca Mountain repository license application proceeding. (see article opposite page.) The hearings took place in Las Vegas at NRC's hearing facility, but members of the public not able to travel to Las Vegas were able to view them online, thanks in large part to Eureka County, who led the push by the ten Affected Units of Local Government to asking NRC to webstream the hearings.

Eureka County and the other affected local governments in Nevada are continuing to follow up with the Nuclear Regulatory Commission and the licensing board to request webstreaming of preliminary hearings as well as the actual licensing hearings, which are currently scheduled to begin in October 2010. ☒



Pete Miller to Run Nuclear Division at Energy Department

New appointment combines two previous positions



President Obama has nominated a single individual, Pete Miller, to serve as both assistant secretary for nuclear energy and director of the Office of Civilian Radioactive Waste Management (OCRWM).

By combining these positions, Obama is signaling the importance of resolving the nuclear waste issue for the future of nuclear energy.

Warren "Pete" Miller is a long-time senior official at Los Alamos National Laboratory. He retired from there in 2001, and most recently has been a part-time professor at Texas A&M University.

Miller is originally from Chicago, Illinois. He holds a B.S. from the United States Military Academy at West Point; is a Vietnam veteran; and has a PhD in Nuclear Engineering from Northwestern University. He was elected as Fellow of the American Nuclear Society in 1982. He was elected to membership in the National Academy of Engineering in 1996.



Warren "Pete" Miller

The Office of Civilian Radioactive Waste Management has managed the Department of Energy's effort to build the nuclear waste repository at Yucca Mountain. Chu, the Secretary of Energy, has been charged with figuring out a new course of action to manage spent nuclear fuel. In his OCRWM position he replaces Edward (Ward) Sprout III. ☒

(Source: Physics Today)

Congressional Research Report Summary:

“Nuclear Waste Disposal: Alternatives to Yucca Mountain”



In February, the Congressional Research Service released a report on possible alternatives to nuclear waste disposal at Yucca Mountain. This report was prepared in response to President Obama’s indication before he took office that he intended to terminate the Yucca Mountain project.

The report reviews the history of U.S. efforts to site nuclear waste facilities; the options for definitively ending the Yucca Mountain project; the likely impact of indefinite delays to the waste program; and the mid- and long-term alternatives to the Yucca Mountain project.

A summary of the report follows. The full report is available on www.yuccamountain.org.

Options for Halting or Delaying Yucca Mountain

The Obama Administration does not have the authority to change the law that designates Yucca Mountain as the nation’s sole site for a nuclear waste repository. Only Congress can do that. The report outlines the other ways in which the Obama Administration could effectively kill the project:

- ◆ the Energy Secretary could withdraw the NRC license application
- ◆ the Administration could significantly reduce or eliminate the project budget (which is now happening, see front page article)
- ◆ President Obama could appoint NRC commissioners who are against the project
- ◆ the Administration could implement a waste program overview

Consequences of a Yucca Mountain Policy Shift

Halting the project could have significant impact on:

- ◆ the federal budget
- ◆ liabilities: DOE estimates that nuclear utilities could successfully sue the government for billions of dollars. States currently storing defense-related nuclear waste could also sue.
- ◆ proposed new U.S. nuclear power plants: the Nuclear Regulatory Commission might not allow new utilities to be built without a long-term nuclear waste disposal plan in place. Six states already have laws to that affect.

- ◆ waste storage: radioactive waste will remain at existing reactor sites much longer than originally planned. The NRC has ruled that this is safe. But beyond 100 years, the risk level becomes much more uncertain.

Nuclear Waste Policy Options

By law, Yucca Mountain is the nation’s designated site for a nuclear waste repository. Without congressional action, alternatives to Yucca Mountain would consist primarily of indefinite on-site storage or licensing of new private storage sites.

New legislation would open up much broader possibilities, ranging from a search for a new repository site and federal interim storage to reprocessing and alternative disposal technologies.

The report outlines these additional options:

- ◆ An independent waste agency could be appointed to take control of the nuclear waste program, as there has been widespread public dissatisfaction with the Energy Department’s management.
- ◆ Federal interim central storage: temporary sites to store nuclear waste using dry-cask technology could be built while long-term disposal is being determined. Interim storage would allow for waste to be removed from costly decommissioned nuclear reactor sites, and would help prevent further lawsuits. However, past efforts to create interim storage sites have all failed due to public concern over safety and fears that such sites might become permanent. Moreover, under current law, DOE does not have the authority to develop interim waste storage sites.
- ◆ Private central storage: the NRC can grant licenses to non-governmental entities. But so far the private sector has not met with any success with interim storage. An attempt to build a facility on Goshute Indian tribal land in Utah (with their consent) has been blocked by the Department of the Interior and the State of Utah.

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◆ Spent fuel recycling: nuclear reactors could reprocess spent nuclear fuel into new fuel, thereby reducing the volume and radioactivity of nuclear waste. The downsides: reprocessing is an expensive alternative; it wouldn't eliminate the need for long-term geologic waste disposal; and it creates plutonium, a material used to build nuclear weapons. Moreover, to significantly reduce nuclear waste buildup, spent fuel would have to be reprocessed multiple times. Only advanced technology nuclear reactors—which would need to be built—could use such fuel.

◆ Non-repository options: burying nuclear waste in a deep seabed or shooting it out to space have been considered but dismissed as unviable options.

◆ New repository site: based on Yucca's history, any effort to select a new site would be slow-moving and extremely controversial. DOE was able to successfully open a mid-level waste storage facility near Carlsbad, NM. Opening a high-level waste repository should be possible, if the government approaches the search with better management and program design modifications. ☒

Nuclear News...In Brief

Former Reid staffer now chairman of NRC...Gregory B. Jaczko, a PhD physicist who



Gregory B. Jaczko

formerly served as a science advisor to Senator Reid, was tapped by President Obama to become the new chair of the Nuclear Regulatory Commission (NRC). Jaczko was already an NRC commissioner, appointed in January 2005 by President George W. Bush. Jaczko

believes nuclear waste can be maintained safely and securely for decades at the current nuclear power plants.

(Sources: AllGov.com, Associated Press 7/21/09)

Department of Energy shelves programmatic review for Global Nuclear Energy Partnership (GNEP)...in June, the DOE canceled its programmatic environmental impact statement for GNEP, the Bush administration's program to research and develop new nuclear facilities that would contain closed fuel cycles. The cancellation effectively ends the GNEP program.

(Source: Department of Energy)



Utilities seek to suspend nuclear waste payments...U.S. nuclear power plants say they shouldn't have to pay an estimated \$769 million this year toward a waste repository since the U.S. is "abandoning" the Yucca Mountain site and hasn't settled on another disposal plan. The Nuclear Energy Institute, which represents all operating U.S. nuclear reactors, sent a letter to Energy Secretary Steven Chu in early July asking for payments to be suspended. Utilities pay into the nuclear fund via a surcharge on electricity produced by nuclear power. As of the end of 2008, the fund totaled about \$29.6 billion.



(Source: Bloomberg.com)

President Obama close to filling nuclear commission's vacancies...The Obama administration is close to a decision on filling two vacancies on the Nuclear Regulatory Commission. The administration is believed to have settled on former Energy Department official William Magwood and Massachusetts Institute of Technology professor George Apostolakis as the nominees. Both would be welcomed by the industry, officials said. The appointments would come at a pivotal time for the industry's hopes of a revival, as NRC weighs operating license applications for a handful of new reactors and a review of its waste fuel policy.

(Source: New York Times 7/24/09) ☒

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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