

Nuclear Waste Update

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New President May Impact National Nuclear Waste Policy

With the election of Barack Obama as president on November 4th, the nation's policy on nuclear waste may take a new direction. During his campaign, Obama took a position against the storage of nuclear waste at the repository proposed for Yucca Mountain, 100 miles northwest of Las Vegas. It is unclear, however, if or how the new president will move to discontinue or redirect the Yucca Mountain project.

During the campaign, Obama pledged to reduce the nation's dependence on foreign oil and significantly cut carbon emissions. Experts have questioned how the new administration will achieve these goals without increasing the country's dependence on nuclear power, which currently accounts for 70 percent of the nation's "emission-free" energy. However, Obama has remained cautious when asked about nuclear power, citing the difficulties with the storage and disposal of nuclear waste.

In a letter written to the Las Vegas Review-Journal in May of 2007, Obama expressed concern over the Yucca Mountain Project. "There are still significant questions about whether nuclear waste can be safely stored there," he wrote. "I believe a short-term solution is to store nuclear waste on-site at the reactors where it is produced, or at a designated facility in the state where it is produced, until we find a safe, long-term disposal solution that is based on sound science."

"In the meantime," the letter continued, "I believe all spending on Yucca Mountain should be redirected to other uses, such as improving the safety and security of spent fuel at plant sites around the country and exploring other long-

See "Obama" continued on page 2



NRC Moves Forward With Yucca Mountain License Review

The Nuclear Regulatory Commission (NRC) announced in September that it will move forward with its review of the Department of Energy's (DOE) application for a license to construct and operate a nuclear waste repository at Yucca Mountain. After years of delay, DOE submitted the 8,600-page license application to the NRC in June.

After a preliminary 90-day screening period, the NRC determined that the application "contains sufficient information" for the agency to formally docket the application and move on to the next stage of technical and scientific review, according to NRC official Michael Weber. Approximately 40 NRC staff members and consultants reviewed the license application prior to the docketing decision.

According to Weber, the license application was not reviewed for merit during this screening period, but rather to determine whether it was complete enough for the NRC to proceed. "Accept for review does not mean approval," said Weber. "It will take several years of review to determine if the application complies."

In August, the NRC rejected a petition filed by Nevada Attorney General Catherine Cortez Masto calling on the agency to dismiss the license application as flawed and incomplete.

According to outgoing Energy Secretary Samuel Bodman, the NRC's docketing decision "is a significant step forward in solving the nation's problem of disposing of spent nuclear fuel and high-level nuclear waste." Bodman expressed confidence that the NRC's "rigorous review process will validate that the Yucca Mountain repository will safely store this waste in a manner that is most protective of human health and the environment."

See "License" continued on page 3

INSIDE THIS ISSUE:

Obama Names New Energy Chief	4
Director Named for Nev. Nuclear Agency	4
EPA Releases Radiation Standards	5
In Brief: Nuclear News Updates	6

“Obama” continued from page 1

term disposal options.”

According to aides, Obama has also expressed concern about the safety of transporting highly radioactive nuclear waste long distances. “He understands how dangerous this would be, for nuclear waste to be transported and stored in Nevada,” stated Obama spokesperson Kirsten Searer during the campaign. “It’s something he would take a look at as soon as he’s in office.”

Obama repeated his opposition to the project elsewhere, notably in a letter written to Senators Harry Reid of Nevada and Barbara Boxer of California in October of 2007. In that letter, Obama stated, “In short, the selection of Yucca Mountain has failed, the time for debate on the site is over and it is time to start exploring new alternatives for safe, long-term solutions based on sound science.”

Opponents of the Yucca Mountain project have expressed confidence that President Obama will make good on his anti-Yucca campaign platform. It is unclear, however, if or when Obama may begin the process of stopping or redirecting the Yucca Mountain program.

Proponents of the repository project are urging the new administration to let the Nuclear Regulatory Commission (NRC) continue its review of the license application submitted by the Department of Energy (DOE) in June of 2008. According to Ward Sproat, outgoing chief of DOE’s Office of Civilian Radioactive Waste Management, “We have a license application before the NRC. Let’s figure out what they are going to say and what the rationale is for their decision before we say we can’t do it at Yucca and that we have to do something else.”

Officials with the Nuclear Energy Institute (NEI), the nuclear industry’s lobbying arm, have told aides to President Obama that the proposed repository should remain a part of the nation’s long-term nuclear waste policy. However, according to NEI official Marvin Fertel, “We have no sense of what they are going to do.”

A decision to redirect the Yucca Mountain Project – or stop it altogether – could take a variety of forms. One alternative would be for the Secretary of Energy to withdraw the license application before the NRC has come to a decision on the site’s suitability. According to officials, a move to withdraw the license application would likely trigger industry lawsuits.

Additionally, even if Obama were to withdraw the license application, the project would not necessarily be discontinued. This is because the congressional act that requires the federal government to pursue a Yucca Mountain repository remains in place, regardless of ac-

tions of the president. According to Eric Herzik, political science professor at the University of Nevada Reno, the Secretary of Energy “could pull the plug, zero out the budget. But Congress does have the ultimate say because the Nuclear Waste Policy Acts of 1982 and 1987 designate siting of a repository specifically at Yucca Mountain.”

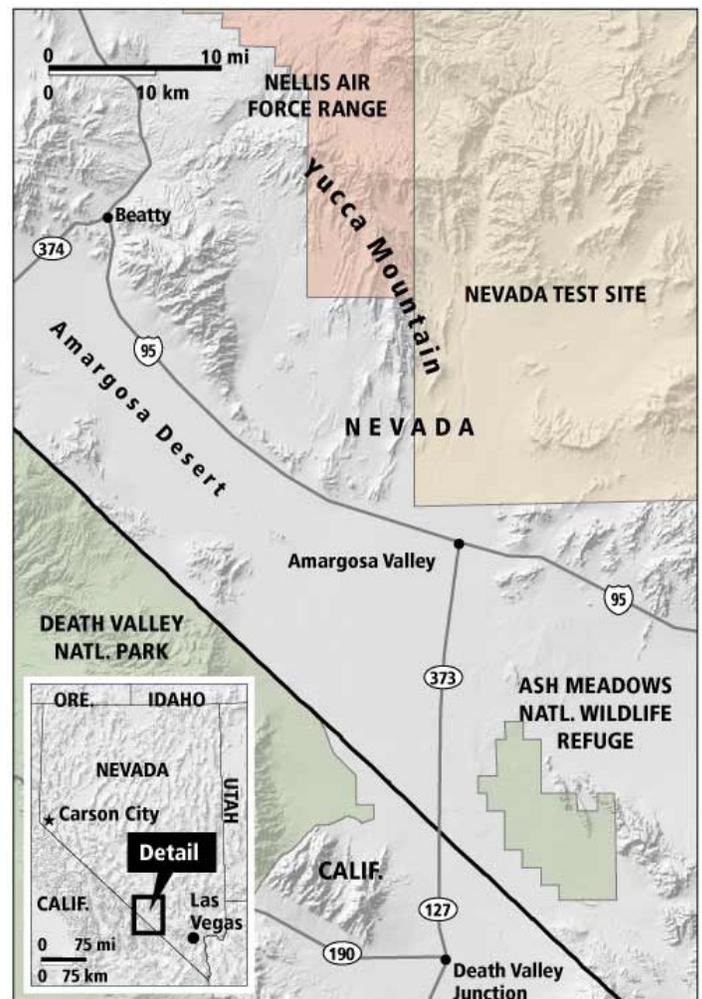
As an alternative to the withdrawal of the license application, the decision to redirect the nation’s nuclear waste policy could be implemented though legislation. A new direction for nuclear waste policy could be proposed, for example, as part of an energy bill expected to be debated this year. Congress could also act to amend or repeal the Nuclear Waste Policy Acts of 1982 and 1987. So far, President Obama and his team have not indicated which direction, if any, will be taken on the issue of nuclear waste. ❏

Sources:

Las Vegas Review-Journal: 11/10/08, 12/12/08

Las Vegas Sun: 10/13/08

Newsweek: 11/22/08



Map of the proposed Yucca Mountain Repository. Source: Associated Press

"License" continued from page 1

In addition to docketing the license application, the NRC also accepted DOE's environmental impact statements for the repository. However, there was one exception: the NRC called for DOE to expand its analysis of how repository operations would affect groundwater in the area.



According to Weber, "there appeared to be a gap in some of their analyses" that may take several months of additional work to rectify. The NRC is requesting a supplemental water study that will explore in more depth the potential for radioactive toxins to leak into the water supply.

DOE must be granted a license to construct and operate the facility by the NRC before it can begin receiving and storing waste at the proposed repository. The NRC's primary task in reviewing DOE's license application will be to determine whether the proposed repository's design will protect public health and safety and the environment for up to a million years.

Following NRC's move to docket the application, the State of Nevada in December formally filed 229 challenges to the license application. The majority of the state's challenges pertain to issues of safety. The State of California, Nye County, and Clark County have also filed petitions challenging the license application.

The challenges will be aired in legal hearings before panels of administrative judges. Many of the hearings, which are set to begin in spring, will take place in Las Vegas.

According to federal legislation, the NRC must complete the review of the Yucca Mountain license application within four years. However, there is no penalty if the NRC fails to finish the review in four years. Some experts believe it may take the commission years longer to complete the complex Yucca Mountain license case.

The NRC and Yucca Mountain

The Nuclear Regulatory Commission (NRC) is a federal agency that regulates all of the nation's nuclear facilities with the exception of the nuclear weapons complex. All commercial, industrial, and academic entities must apply for a license from the NRC before building any facility containing or involving the use of nuclear materials. This includes nuclear power plants, research reactors, scientific labs and other facilities that produce or store radioactive materials. The NRC also licenses transportation casks used for storing and moving nuclear waste. In its review of the Yucca Mountain license application, the agency is tasked with determining whether the application meets the standards of the following:

- ◆ The Atomic Energy Act of 1954
- ◆ The Nuclear Waste Policy Act
- ◆ The agency's own regulations

NRC officials have said that budget shortfalls could delay the agency's work on the application review. NRC's budget for Yucca Mountain in 2008 was cut by \$8 million.

According to DOE, the earliest a repository could start accepting nuclear waste, given the licensing process goes smoothly and funding remains stable, is 2020. The lifetime cost of the facility is estimated to exceed \$96 billion. ☒

Sources:

Las Vegas Review-Journal: 9/9/08, 12/20/08, 12/23/08, 12/24/08

Las Vegas Sun: 9/9/08

Nuclear Waste News: 9/23/08

Nuclear Waste Update: Summer 08

Nuclear Waste Update

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Obama Names Steven Chu as Energy Chief

President Obama has nominated Nobel laureate Steven Chu to become the nation's next secretary of energy. Chu is a physicist who shared the Nobel Prize in 1997 for discovering how to cool and trap molecular particles. Director of the Department of Energy's Lawrence Berkley National Laboratory since 2004, Chu has shifted the lab's work to research into advanced biofuels, artificial photosynthesis, and other emerging solar energy technologies.

A proponent of vigorous steps to control greenhouse gas emissions, Chu's main expertise is in the research and development of alternative energy and strategies to counteract climate change. Chu has advocated nuclear power as a source of clean energy, but has also expressed concerns over the management of its highly radioactive byproducts.

According to a December 5th profile in the New York Times, Chu has spoken "unenthusiastically" about the energy department's plans to construct and operate a nuclear waste repository at Yucca Mountain. However, Chu did sign on to a position paper on nuclear power, along with the directors of 10 other national laborato-

ries, that recommended the Yucca Mountain licensing process be continued. The position paper also recommended interim storage of waste as well as federal investment in the development of waste reprocessing and other forward-looking technologies.

As energy secretary, Chu will also be responsible for overseeing the maintenance and development of the nation's nuclear weapons stockpile, the modernization of the nation's electrical power delivery system, and the development of alternative energy sources. ☒



Photo: Stanford News Service

Sources:

Las Vegas Review-Journal: 12/16/08

Las Vegas Sun: 12/17/08

New York Times: 12/5/08, 12/11/08

New Director Named for Nevada Agency for Nuclear Projects



Nevada Governor Jim Gibbons announced in December his appointment of Bruce Breslow to head Nevada's Agency for Nuclear Projects. The agency coordinates the state's monitoring of the Yucca Mountain Project.

Breslow, a former television sportscaster, has held several local and state government posts, including terms served on the Sparks Planning Commission and the Nevada Transportation Services Authority. Breslow also served two terms as mayor of Sparks.

Citing his long history of public service, Gibbons chose Breslow from a list of three candidates proposed by the state's Nuclear Projects Commission. According

to former Nevada Senator Richard Bryan, who leads the commission, "Bruce has demonstrated a real enthusiasm for the job" as well as an "impressive" grasp of the issues surrounding the repository project.

Breslow will replace former nuclear projects director Bob Loux, who led the agency for 23 years. Loux stepped down from his post in September amid controversy that he gave himself and his staff unauthorized pay raises.

"The state policy is not changing toward a new direction," said Breslow. "My primary goal is to protect the health, safety, and welfare of the citizens of Nevada as it relates to the Yucca Mountain Project." ☒

Sources:

Las Vegas Review-Journal: 12/30/08

Nevada Appeal: 12/31/08



Eureka County on the Web! New Updates on the Yucca Mountain Project!

Check out the county's website at www.co.eureka.nv.us. Log on to our nuclear waste website at 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.

EPA Sets Yucca Mountain Radiation Standards

The Environment Protection Agency (EPA) has issued the regulation setting the radiation standards for the proposed Yucca Mountain nuclear waste repository. The final standards, released in September, are a key public health threshold that public officials will use when determining whether the repository should be built. The EPA took three years to finalize the standards after releasing a draft version in 2005.

The EPA issued a two-part standard. For the first 10,000 years following the opening of the repository, a theoretical person living 11 miles south of Yucca Mountain could receive no more than 15 millirem of radiation exposure annually due to radioactive material escaping from the repository. After 10,000 years and up to one million years, the allowable annual dose increases to 100 millirem.

For a comparison, a chest X-ray exposes a person to 10 millirem. Americans receive approximately 360 millirem annually from radiation occurring in the environment, from natural sources such as soil, water, and vegetation, and man-made sources like building materials, televisions, and video terminals.

In 2004, a federal court rejected the EPA's initial regulation, which limited the standard to 10,000 years. The EPA revised its standard based on direction from the National Academy of Sciences, which concluded that the most dangerous levels of radiation could exist far beyond the initial 10,000 year period of isotope decay.

EPA's draft standard originally recommended 350 millirem annually as the limit for the long-term period. However, the agency set aside this original proposal after receiving a number of critical public comments. According to the agency, the new 100 millirem standard "is well established as protective of public health under current dose limits, and as such represents a robust public health protection standard in the extreme far future."

The new regulation also requires Department of Energy to consider effects of climate change, earthquakes, volcanoes and corrosion of the waste packages when determining the ability of the repository to safely contain radiation during the one-million-year time period.

Now that the standard has been released, DOE must prove that the proposed repository can meet the EPA's safety requirement.

"We believe we can meet that standard," said DOE spokesman Allen Benson. The energy department has used complex computer modeling to make its case, which is detailed in the license application submitted to the Nuclear Regulatory Commission (NRC) in June of

2008. The NRC officially began its review of DOE's application for a license to construct and operate a nuclear waste repository at Yucca Mountain in September.

"With the issuance of the EPA standard for Yucca Mountain, the regulatory framework is in place for the nation to move forward to a regulatory decision by the NRC on Yucca Mountain," said Benson.

Nevada officials, however, questioned whether the standard is stringent enough to protect the health and safety of future generations. On October 10th, Nevada Attorney General Catherine Cortez Masto filed a federal lawsuit asking judges to throw out EPA's newly-issued regulation. According to Cortez Masto, the new standards will not adequately protect Nevadans "from cancer-causing radioactive contamination" if nuclear waste is buried at the Yucca Mountain site.

According to the EPA, "Developing a standard that will apply for 25,000 generations is unprecedented. In meeting this challenge, we followed international guidance and applied our best scientific judgment."

Nevada officials contend, however, that the EPA misapplied the international standard. The lawsuit also states that the EPA overstepped its authority and made incorrect assumptions in how it formed the regulation.

The lawsuit was filed in the U.S. Court of Appeals for the District of Columbia Circuit. 

Sources:

Las Vegas Review-Journal: 10/1/08, 10/11/08

Las Vegas Sun: 9/30/08, 10/2/08



Aerial view of Yucca Mountain site. Photo: Las Vegas Sun

Nuclear News . . . In Brief

DOE: Yucca Could Be Bigger Still...According to a report released by the Department of Energy (DOE), the proposed Yucca Mountain Repository could hold at least three times more nuclear waste than currently planned. Rather than initiate a search for a second repository, DOE recommends lawmakers lift the cap on Yucca and allow the site to be enlarged. Currently, the capacity for Yucca, set by law in 1982, is 70,000 metric tons of nuclear waste. DOE contends that this limit is insufficient to handle the nation's growing stockpile of nuclear waste. DOE analyzed the effects of building the site to hold 135,000 metric tons in an environmental impact statement last fall. (*Las Vegas Review-Journal*, 12/10/08)

UNR to Study Nuclear Waste Recycling...DOE has awarded a \$2.7 million grant to scientists at the University of Nevada Reno to study recycling spent nuclear fuel rather than storing it for millions of years in a geologic repository. Mano Misra, director of the Center for Materials Research and a professor in the Department of Chemical and Metallurgical Engineering said the



process to be studied “will be cost effective and safe, and solve the dilemma of disposal and storage of nuclear wastes.” It is anticipated that the study will help develop the methodologies that can be used to design efficient recycling systems. (*Nevada Appeal*, 11/16/08)

Yucca Mountain Rail Proposal Opposed...During a hearing held by the three-member Surface Transportation Board (STB) in December, speakers urged the board to suspend its review of federal plans to build a rail line from Caliente. The STB must grant DOE a permit in order for it to proceed with the construction of the 319-mile rail line, which would be used to transport nuclear waste to the Yucca Mountain repository. Testimony on the proposed rail line was given by members of Nevada's congressional delegation as well as representatives from the nuclear power industry, environmental groups, and two railroads. The board has not indicated a timeline for its decision on DOE's application to build the rail line. (*Las Vegas Review-Journal*, 12/5/08; *Las Vegas Sun*, 12/4/08)



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