



OFFICE OF THE GOVERNOR  
**AGENCY FOR NUCLEAR PROJECTS**

1761 E. College Parkway, Suite 118  
Carson City, NV 89706-7954  
Telephone (775) 687-3744 • Fax (775) 687-5277  
E-mail: [nwpo@anp.nv.gov](mailto:nwpo@anp.nv.gov)

February 17, 2022

Dr. Kim Petry,  
Acting Deputy Assistant Secretary for Spent Fuel and Waste Disposition  
U.S. Department of Energy  
1000 Independence Avenue S.W.  
Washington DC 20585

Dear Dr. Petry:

This letter is in response the Department of Energy's Notice of request for Information on Using a Consent-Based Siting Process to Identify Federal Interim Storage Facilities, dated November 30<sup>th</sup>, 2021.

Nevada supports the idea of consent-based siting for both interim storage and permanent repositories consistent with an integrated nuclear waste management plan. Governor Steve Sisolak has clearly stated that Nevada will not consent to disposal of commercial or defense spent nuclear fuel and high-level radioactive waste in Nevada, whether combined or disposed of separately.

The United States has struggled with the problem of disposing of spent nuclear fuel (SNF) and high-level radioactive waste (HLW) for decades. The problem first gained urgency in the 1950s. The National Academy of Sciences (NAS) recommended geologic disposal in 1957 and further recommended prompt development of an HLW repository in 1966. After five years of site-specific studies, in 1970 the U.S. Atomic Energy Commission (AEC) proposed construction of the first repository in a salt formation near Lyons, Kansas. Kansas political leaders initially took a wait-and-see attitude. The Kansas State Geological Survey soon found evidence that the site was technically flawed and requested a delay in final site selection. The AEC refused to back down, even after compelling evidence of unsuitability emerged in 1971. The Kansas congressional delegation, including former U.S. Senator Bob Dole, then intervened to legislatively restrict AEC site activities and land acquisition, and cut the AEC budget. The AEC was forced to abandon the Kansas site selection in 1972. "The commission's botched effort in Kansas had long-term repercussions. It spawned public distrust of the federal government's ability to select a safe means of disposing of radioactive waste, diminished states' receptivity to

hosting a federal waste repository, and helped fuel the anti-nuclear political groundswell of the early 1970s.”<sup>1</sup>

During the past fifty years, the federal government’s approach to repository siting has been to find a location that was either acceptable technically or could receive enough votes in Congress. The United States has made two efforts to designate a site for repository development – Lyons, Kansas, 1965 to 1972, and Yucca Mountain, Nevada, 1987 to the present. Both have been unsuccessful for the same reason: the failure to obtain the consent of the proposed host states. The ongoing Yucca Mountain story is well-known. The failure of forced siting in Kansas is less well-known, particularly Senator Dole’s proposal that the AEC adopt a siting process requiring approval by Kansas representatives appointed to a technical advisory panel. Senator Dole understood that in the United States, the need to obtain consent is a central part of siting a repository.

The first official Earth Day was observed on April 22, 1970. That week, less than ten months after the first human walked on the moon, Senator Dole opined "Compared to the problems we face in solving our environmental dilemma, a moon shot is easy." Speaking to insurance underwriters in Wichita, he continued “All it takes for a moon shot is the technology and dollars and the decision to harness them into one massive effort. In the environmental arena, political, economic, and social factors are all intermeshed. The government must become more conscious of the environmental impact of its various programs.”<sup>2</sup>

Full-blown political opposition by Kansas took off after the AEC published its final environmental statement in June 1971. The AEC dismissed the State’s technical concerns, expressed in detailed comments on the draft environmental statement, submitted to AEC in February 1971. The AEC confidently asserted: “The proposed facility will safely contain these wastes for the required period of time without any significant impact on the environment.”<sup>3</sup> The AEC concluded: “No significant impact on the environment resulting from either the construction or operation of the proposed repository is anticipated.”<sup>4</sup>

Senator Dole and his colleague from Kansas, Senator James Pearson, moved quickly to impose severe restrictions on the Lyons proposal, without killing the project. In July 1971, they introduced an amendment “to preclude the Atomic Energy Commission from acquiring land for the proposed nuclear depository to be located near Lyons, Kansas.” Dole explained: “The amendment would restrict the AEC from taking any action other than to proceed with the design of the project and undertake research and development until a Presidentially appointed Advisory Council has reported to Congress.... This Advisory Council will be in a position to publicly raise questions regarding the environmental and safety implications of this project and require their resolution, not only to the satisfaction of the scientific community but to the satisfaction of

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<sup>1</sup> Richard B. Stewart and Jane B. Stewart, *Fuel Cycle to Nowhere: U.S. Law and Policy on Nuclear Waste*, Nashville, TN: Vanderbilt University Press (2011)

<sup>2</sup> “Moonshot is Easy Compared to Solving Environmental Problems,” Folder 102, April 25, 1970, Digitized Press Releases, 1961-1996, Robert and Elizabeth Dole Archive and Special Collections, <https://dolearchivecollections.ku.edu/?p=collections/findingaid&id=40&q=&rootcontentid=188236#id188236>

<sup>3</sup> AEC, Environmental Statement, Radioactive Waste Repository, Lyons, Kansas, WASH-1503 (June 1971), pages 1, <https://www.osti.gov/biblio/4686485-radioactive-waste-repository-lyons-kansas-environmental-statement>

<sup>4</sup> AEC, Environmental Statement, Radioactive Waste Repository, Lyons, Kansas, WASH-1503 (June 1971), page 3, <https://www.osti.gov/biblio/4686485-radioactive-waste-repository-lyons-kansas-environmental-statement>

Federal, State and local public officials and the public at large, as well.” The AEC budget request for repository design and initial construction was cut from \$21.5 million to \$4.5 million for design and research.<sup>5</sup> The Dole-Pearson amendment was included in the Atomic Energy Commission Authorization Bill approved by the Senate with a vote of 90-3.<sup>6</sup>

In 1982, Congress passed the Nuclear Waste Policy Act. This new effort began with an attempt by the Department of Energy (DOE) to identify technically suitable sites for two geologic repositories. When that effort failed in 1987, Congress adopted the Nuclear Waste Policy Act Amendments of 1987. This act, passed through legislative trickery as part of a massive budget reconciliation act, picked a candidate repository site (Yucca Mountain) based on political science rather than earth science, and did not require the consent of the affected state (Nevada). By so doing, the NWPAA fatally compromised the repository project and the technical work done in support of the site. DOE and President Bush formally recommended the site to Congress in 2002. Nevada Governor Guinn submitted a notice of disapproval, over-ridden by a vote of both Houses of Congress in 2002. DOE submitted a license application to the U.S Nuclear Regulatory Commission (NRC) for authority to construct a repository at Yucca Mountain in 2008. The NRC began a formal licensing proceeding in 2008 but suspended it in 2011.

This program has limped along for 20 years, crippled by successful Nevada lawsuits and by Congressional unwillingness to fund a program to which Nevada would not consent, and given the failures of the Yucca Mountain site, simply could not consent to. In 2010, the Obama Administration attempted to withdraw DOE’s license application for the project. The NRC vote to suspend the licensing proceeding in 2011 was overturned by court order in 2013, but the court directed the NRC to continue the licensing process only so long as Congressional appropriations were available for this purpose. Since 2011, Congress has continued to refuse funding for the repository program. Attempts by the Trump Administration to restart the repository program stalled because congressional funding support was lacking. In February 2020 President Trump announced that the Yucca Mountain repository project should be abandoned. The Biden administration has also indicated that it will not proceed with Yucca Mountain.

Both the Lyons, Kansas and Yucca Mountain, Nevada sites failed for technical reasons, but also because the Federal Government failed to obtain consent from the repository host states.

The forced siting approach taken by the United States has been unsuccessful for decades. Other nations have recognized this flaw and tried something else.

Two alternative approaches could be taken in the United States. The first alternative is to defer centralized solutions recognizing that the waste problem is a political and social one that exceeds our current capabilities and enact legislation that will enable the waste to remain where currently it is safely stored. The second alternative is to enact comprehensive authorizing legislation that will engender a different systems approach to waste management, and a different approach to the siting of disposal facilities, and consolidated storage facilities, if needed.

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<sup>5</sup> “Amendment to Preclude AEC from Acquiring Land for Nuclear Waste Repository near Lyons, Kansas,” Folder 258, July 20, 1971, Digitized Press Releases, 1961-1996, Robert and Elizabeth Dole Archive and Special Collections.

<sup>6</sup> “AEC Amendment Passes 90-3,” Folder 257, July 20, 1971, Digitized Press Releases, 1961-1996, Robert and Elizabeth Dole Archive and Special Collections.

The DOE's RFI is narrowly focused on the problems posed by locating a Federally created and managed interim storage site. However, the problems of an interim storage site are inherently connected to the problems of finding a permanent repository. Without an integrated systems approach, including a permanent disposal solution, an interim storage facility is insufficient to address the problem. It is destined to fail, and result in a justified fear that "interim" could become "permanent."

The RFI issued by the DOE in 2021, like the RFC issued by the DOE in 2017 does not address the larger problem of an integrated approach to finding a workable solution to the problem.

Nevada hopes to make a helpful contribution to furthering the policy discussion by providing answers to the questions posed by the RFI. Thank you for the opportunity to provide input on this vital issue. The State of Nevada has extensive experience in this area and hopes to help the nation move forward to create a workable disposal program.

Respectfully,

A handwritten signature in black ink, appearing to read "Fred C. Dilger" with a stylized flourish at the end.

Fred C. Dilger PhD.  
Executive Director,  
Nevada Agency for Nuclear Projects

Cc: Office of the Governor  
Office of the Attorney General  
Congressional Delegation  
Chairman of the Nevada Commission on Nuclear Projects

Attachment

ATTACHMENT  
STATE OF NEVADA AGENCY FOR NUCLEAR PROJECTS  
ADDITIONAL COMMENTS ON THE NOV 30, 2021, REQUEST FOR INFORMATION  
FEBRUART 23, 2022

Area 1: Consent-Based Siting Process

1. How should the Department build considerations of social equity and environmental justice into a consent-based siting process?

Nevada response: The Department must first define “consent” in the context of interim storage siting and explain how the achievement of “consent” can be implemented over multiple generations. Expectations about social equity and environmental justice, within potential host communities, may change substantially over a single generation (twenty to twenty-five years). A consolidated interim storage facility might operate for five generations or more. The Department’s siting process must accommodate the possibility, perhaps the probability, that a future generation might reject the first generation’s definition of “consent” based on changed expectations about social equity and environmental justice. Therefore, all stakeholders should be consulted, and there should be a staged consent process that allows consent to be withdrawn as new information arises and, to the extent possible, prevents irreversible commitments of resources and irrevocable decisions. For example, spent fuel must be stored in such a way that it can be retrieved from casks and repackaged and, if necessary, sent elsewhere.

2. What role should Tribal, State, and local governments and officials play in determining consent for a community to host a federal interim storage facility?

Nevada response: Tribal, State, and local governments should have veto power over any site located within their jurisdictions and should be reimbursed for active oversight of the program.

3. What benefits or opportunities could encourage local, State, and Tribal governments to consider engaging with the Department as it works to identify federal interim storage sites?

Nevada response: Any benefits offered localities should be insulated from the vagaries of Congressional budget cycles. The funds should be disbursed for the purpose of ensuring effective oversight of the program and independent verification of results. Most importantly, DOE has fundamental problems of trust and confidence. Over an extended period of time, “bribery” in the form of generous grants and deception will be insufficient for siting and operating nuclear waste facilities. DOE or some other organization must prove to be a dependable partner.

4. What are barriers or impediments to successful siting of federal interim storage facilities using a consent-based process and how could they be addressed?

Nevada response: There are three primary barriers. First, fifty years of failure by the DOE and its precursor agencies to recognize and address technical and social problems

associated with all aspects of radioactive waste management – characterization, packaging, storage, transportation, and disposal. Second, there is a need to restore trust and confidence in the DOE specifically, and DOE’s ability to accomplish large programs. For example, DOE will need to overcome the reputational damage resulting from DOE’s secret shipments of weapons grade plutonium to Nevada in 2019. Third, the absence of an integrated disposal program makes it unlikely that an interim facility will be acceptable. Without a repository program any interim site could prove to be a de facto repository for a century or more.

5. How should the Department work with local communities to establish reasonable expectations and plans concerning the duration of storage at federal interim storage facilities?

Nevada response: The primary condition for an interim storage facility is the assurance that it will not become a repository. For that to occur, it is necessary to have a functioning repository program. The DOE should work with local communities THROUGH states and tribes. This requires large reservoirs of trust on all sides. DOE has often behaved in a way that undermines that trust. When Nevada was forced to sue DOE over the 2019 secret plutonium shipment to the Nevada National Security Site, Nevada joined a litigation community including every State hosting a major DOE nuclear waste facility (Idaho, New Mexico, South Carolina, Washington). It will take a long time to establish the trust and confidence necessary. DOE must not attempt to bypass States when working with local governments.

6. What organizations or communities should the Department consider partnering with to develop a consent-based approach to siting?

Nevada response: First, as stated in response to question 5, DOE or any other implementing entity must not attempt to bypass States in working with local governments. Second, DOE should engage an appropriate external agency to thoroughly evaluate past institutional relations between potential host States and DOE’s Office of Civilian Radioactive Waste Management (OCRWM), and similarly the experience of the Office of Nuclear Waste Negotiator. It is vital to understand the reasons for the failures that have led us to the current stalemate. Neither DOE nor its contractors can effectively undertake this task.

7. What other issues, including those raised in the Draft Consent-Based Siting Process ([www.energy.gov/sites/prod/files/2017/01/f34/Draft Consent-Based Siting Process and Siting Considerations.pdf](http://www.energy.gov/sites/prod/files/2017/01/f34/Draft%20Consent-Based%20Siting%20Process%20and%20Siting%20Considerations.pdf)), should the Department consider in implementing a consent-based siting process?

Nevada response: We emphasize the importance of issues previously identified in response to questions 1 through 6: (1) the multi-generational nature of this program; (2) the funding mechanisms necessary to implement the program over many years; and (3)

the absence of stakeholder confidence in the DOE, described by the Secretary's own advisory panel decades ago, as an absence of public trust and confidence.

## Area 2: Removing Barriers to Meaningful Participation

1. What barriers might prevent meaningful participation in a consent-based siting process and how could those barriers be mitigated or removed?

Nevada response: The first step in removing barriers to participation is attitudinal. DOE must acknowledge that every potential host government – State, Tribe, local – will have different requirements at various times, necessary to allow meaningful participation in the siting process. The needs and expectations of the participants can be expected to evolve during the siting process, and to continually evolve as a direct result of their participation in the process. DOE must be respectful, open-minded, and flexible at every stage of siting.

2. What resources might be needed to ensure potentially interested communities have adequate opportunities for information sharing, expert assistance, and meaningful participation in the consent-based siting process?

Nevada response: Potentially interested States, tribes, and local governments will need substantial financial resources – millions of dollars per year, guaranteed for several years, with minimal restrictions on allowable uses – to hire independent technical experts and legal advisers.

3. How could the Department maximize opportunities for mutual learning and collaboration with potentially interested communities?

Nevada response: DOE must acknowledge at the beginning of the siting process important lessons learned from DOE's failed relationship with the State of Nevada regarding the proposed Yucca Mountain repository. The DOE must always tell the truth and be transparent in its decision-making. Host governments need to be able to access as much information as they need, essentially all information, at any time. The State of Nevada eventually learned the hard way, from emails among DOE scientists, that DOE and their contractors were manipulating data and attempting to conceal their efforts.

4. How might the Department more effectively engage with local, State, and Tribal governments on consent-based siting of federal interim storage facilities?

Nevada response: First, DOE acknowledge that it may be necessary to remove the program from DOE, if the Federal government is to successfully site, license, construct and operate one or more consolidated interim storage facilities and/or a geologic disposal facility or facilities. Second, if DOE is to be the managing entity, the Department must acknowledge that the lack of trust and confidence in the DOE engendered by decades of

failure will require major changes in how DOE operates during siting and going forward with development of facilities. If siting is to go forward, resulting in submission of a license application to the NRC, with consent of the affected jurisdictions, DOE may not only need to accept regulation by Federal, State, Tribal and local authorities. DOE may need to accept new, additional safety and environmental regulations. DOE will also need to ensure that stakeholder economic concerns are addressed – benefits must be guaranteed, adverse impacts must be mitigated, compensation must be provided for impacts that cannot be mitigated, and liability for accidents and incidents must be assured, perhaps requiring a waiver of defenses for actions by DOE contractors.

5. What information do communities, governments, or other stakeholders need to engage with the Department on consent-based siting of federal interim storage facilities?

Nevada response: First, DOE must acknowledge that exceptionally long timeframes are involved - a consolidated interim storage facility must operate safely for at least 40 years, and possibly a century or more; transportation would occur for 40 years to one hundred years or more; a disposal facility must operate safely for at least one million years. Meanwhile the political, legal, and economic institutions at all levels will evolve, and the needs and expectations of citizens will evolve as well. Second, DOE must acknowledge that high-level nuclear waste transportation, storage and disposal may cause substantial adverse impacts, radiological and non-radiological. It is reasonable for State, Tribal, and local governments to condition their participation in the siting process upon guarantees of meaningful access to information about impacts and risks, mitigation measures, and compensation for impacts that occur, including low-probability, high-consequence events, and so-called “perceived risks” and stigma impacts. It is reasonable for State, Tribal and local authorities to insist at the beginning of siting, that if facilities are to be constructed within their jurisdictions, there will be agreed-upon procedures requiring operations to shut down in the event of safety violations or unacceptable environmental consequences.

### Area 3: Interim Storage as Part of a Waste Management System

1. How can the Department ensure considerations of social equity and environmental justice are addressed in developing the nation’s waste management system?

Nevada response: The State of Nevada believes it is essential to develop an integrated Waste Management System before attempting to develop a consolidated interim storage facility. The Blue-Ribbon Commission on America’s Nuclear Future recommended developing such a system ten years ago. A properly designed system would reveal if a Federal interim storage facility is even necessary.

2. What are possible benefits or drawbacks to co-locating multiple facilities within the waste management system or co-locating waste management facilities with manufacturing facilities, research and development infrastructure, or clean energy technologies?



Nevada response: An integrated waste management system must address transportation impacts, risks, and costs. Transportation of SNF and HLRW will be difficult, demanding a huge national effort. Optimizing the transportation system is critically important and should be considered as a part of any system development effort, with mode-specific and route-specific planning and impact assessment for all facilities included in the system.

3. To what extent should development of an interim storage facility relate to progress on establishing a permanent repository?

Nevada response: This is the pre-eminent question asked in this RFI. Without a functioning repository program, it will be impossible and ultimately futile to obtain consent for an interim storage facility. It will be difficult, and perhaps impossible, to site an interim storage facility without a functioning repository program. Any candidates for an interim storage facility may have the waste stored in their community for more than a century. They should be aware of the fact.

4. What other issues should the Department consider in developing a waste management system?

The program for developing an integrated waste management system must be designed to take into consideration the extremely long time periods required to find a site, and then design, license, and construct a repository. Experience to date in the United States, indicates that the lead time needed for repository development will be the major driver of the entire waste system development effort.