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October 24, 2011

Mr. Timothy A. Frazier  
Designated Federal Officer  
Blue Ribbon Commission on America's Nuclear Future  
U.S. Department of Energy  
1000 Independence Avenue, SW  
Washington, DC 20585

RE: State of Nevada Comments on the Blue Ribbon Commission's Draft Report to the Secretary of Energy

Dear Mr. Frazier:

Enclosed please find the State of Nevada's comments on the Blue Ribbon Commission's (BRC) Draft Report to the Secretary of Energy. Nevada applauds the Commission for the diligent, open, and inclusive process that was used in developing the report. The Commission and its staff have done an exceptional job of synthesizing and integrating input from diverse constituencies and sources. The Draft Report provides a comprehensive framework for successfully managing the nation's spent nuclear fuel and high-level radioactive waste.

Nevada finds that the single most important aspect of the draft report and the comprehensive approach it puts forth is the requirement that siting for storage, disposal, and other related facilities be consent-based, with full and voluntary participation on the part of potential host states and communities. Given the experience with the failed Yucca Mountain program over the past two decades, it would be impossible to overstate the importance of this aspect of the report. One constant in past failed repository and interim storage siting efforts (from Lyons, Kansas to the Nuclear Waste Negotiator's efforts under the NWPA, the Oak Ridge Monitored Retrievable Storage facility, the Private Fuel Storage facility in Utah, and Yucca Mountain) has been the failure to obtain the voluntary participation of the state within which proposed sites are located. The final BRC Report should make it unambiguously clear that the federal government or any other implementing entity must obtain the consent and voluntary participation of the potential host state. This is important even in a case where a site might be located within the geographic borders of a federally recognized Indian tribe.

Thank you for the opportunity to provide comments on the BRC Draft Report. Nevada looks forward to a final report that sets forth a comprehensive, fair, scientifically sound, consent-based and workable approach to managing spent nuclear fuel and high-level waste. If you have questions regarding the enclosed comments or if you would like additional information, please do not hesitate to contact me.

Sincerely,



Robert J. Halstead  
Executive Director

RJH/

Enclosure

cc Governor Brian Sandoval  
Attorney General Catherine Cortez Masto  
Nevada Congressional Delegation  
Commission on Nuclear Projects

**State of Nevada Comments on  
The Blue Ribbon Commission on America's Nuclear Future  
Draft Report to the Secretary of Energy  
Prepared by  
Nevada Agency for Nuclear Projects  
Office of the Governor**

**October 24, 2011**

### **1.1 The BRC Process**

The State of Nevada applauds the Commission for the process used in developing its Draft Report. The July 29, 2011 *Blue Ribbon Commission on America's Nuclear Future Draft Report to the Secretary of Energy* (BRC Draft) is built on three Subcommittee Draft Reports, from the Transportation and Storage Subcommittee, the Disposal Subcommittee, and the Reactor and Fuel Cycle Technology Subcommittee. Prior to these reports, the full Commission and its Subcommittees held numerous public meetings between March 2010 and May 2011, in which invited presentations and public testimony were heard and recorded (these were accessible for observation by webcam broadcast as well); accepted and posted thousands of public comments on its web page; commissioned and posted 24 "white paper" reports on a broad spectrum of topics relevant to its inquiry; and traveled internationally to tour facilities and meet developers and operators of fuel cycle facilities as well as other experts and knowledgeable public representatives in those countries.

The Commission also held Commission or Subcommittee meetings at operating locations in states that have facilities associated with nuclear waste management and transportation. Before issuing the Draft Subcommittee Reports, the Commission Staff issued, for public comment, a report titled "What We've Heard" that summarized, and to some extent prioritized the mass of information accumulated from the range of public activities of the Commission. This report and comment process, although an unusual process step, appears to have functioned well in its expected role of further informing the Draft Subcommittee Reports and this BRC Draft.

The process of bringing the Commission on line, with wide public accessibility, began somewhat awkwardly. Stakeholder interactions with the Commission reflected the urgency felt by many to have immediate access to the Commission and substantive input into its final report, due by the end of January 2012. Just as the Commission was being organized and established, the Administration was announcing its plans to not proceed with the Yucca Mountain repository license application, and preparing to file a motion with the NRC to withdraw the application. The intense interest and administrative and judicial activity only intensified the pressure on the Commission. In our opinion, the Commission did an admirable job organizing itself and staff into a functional, knowledgeable, and professional unit relatively quickly to respond to the need for wide accessibility.

## **1.2 BRC Assessment of the Yucca Mountain Failure**

The July 29, 2011 *Blue Ribbon Commission on America's Nuclear Future Draft Report to the Secretary of Energy* accurately describes the events and decisions leading to and following the 1987 amendments to the Nuclear Waste Policy Act. While the Commission took into account the lessons learned from the 1987 legislation and subsequent efforts to locate a geologic repository at Yucca Mountain over the strong objections of the State of Nevada, it wisely avoided taking any position on the merits of Yucca Mountain and becoming any kind of "repository siting commission."

In this regard, we note that the Commission's position of neutrality on the merits of a geologic repository at Yucca Mountain is required by the Federal Advisory Committee Act, which mandates that advisory committees operate within the scope of their federal agency charters. Two hundred eighty-eight contentions, all found by the NRC to raise genuine issues regarding the safety and environmental acceptability of Yucca Mountain, were pending before the NRC licensing board when it suspended the licensing proceeding on September 30, 2011. Taking sides on the merits of Yucca Mountain would have required the Commission to evaluate the technical and legal merits of all these issues and to pass judgment on the overall workability of the project, impossible tasks given the Commission's limited time and resources. A more limited recommendation whether to continue the NRC licensing proceeding would have encountered a similar problem. Any such recommendation would have required the Commission to make some tentative judgment on the merits of contentions and the workability of the project simply to eliminate the possibility that spending further time and resources to continue the proceeding would waste federal resources on a doomed project.

## **1.3 BRC Recommendations Regarding Consent-Based Siting**

The State of Nevada strongly supports the BRC Draft recommendation that a consent-based siting and development process for storage and disposal facilities should be a central feature of any new waste management policy for the United States. After the long and contentious attempt to site a storage and disposal system under the NWPA of 1982 and then under the NWPA Amendments Act of 1987, the most apparent lesson from America's nuclear past is that national nuclear waste storage and disposal facilities cannot be sited successfully over the persistent objection of the potential host state and its constituents. The United States is the latest in the list of nations attempting to develop a nuclear waste management system to confront this lesson.

The Commission should further specify what is meant by the term "consent-based" siting. Our past experience in nuclear waste facility siting efforts would suggest at least three prerequisites: 1) the host state and Indian Tribal governing authority must agree to the decision to initiate or continue consent (how that is done would be within the charter of that authority); 2) the most locally affected governing authority must agree with the host state and Tribal governing authority from the outset and at each decision stage (with the process for that being within its purview); and 3) the State, Tribal and local governments must have the guaranteed ability to opt out at any stage in the process until the License Application is docketed. Additionally, negotiations would be expected to define the roles of other potentially affected jurisdictions.

The BRC Draft refers to “affected communities” having the opportunity to decide whether to accept a proposed facility. One constant in past failed repository and interim storage siting efforts (e.g., Lyons, Kansas, the Nuclear Waste Negotiator’s efforts, the Oak Ridge MRS, the Private Fuel Storage facility in Utah, and Yucca Mountain) has been the failure to obtain the voluntary participation of the *state* within which proposed sites are located. The final BRC Report should make it unambiguously clear that the federal government or other implementing entity must obtain the consent and voluntary participation of the affected state. This is important even in a case where a site might be located within the geographic borders of a federally recognized Indian tribe, as dramatically demonstrated by the failed PFS interim storage facility experience.

Nevada strongly supports the resolution unanimously adopted by the Western Governors’ Association (WGA) defining consent-based siting for interim storage facilities:

In the event that centralized interim storage, either private or federal, is deemed necessary, no such facility, whether publicly or privately owned, shall be located within the geographic boundaries of a Western state without the written consent of the governor.

The BRC Final Report should adopt the WGA position on consent-based siting of interim storage facilities. Nevada and other states represented on the WGA High-Level Waste Committee urge the BRC to apply this standard to all future nuclear waste siting activities. The BRC Final Report should require the written consent of the governor for geologic disposal and storage siting decisions, and prohibit the implementing entity from conducting any siting activities in a potential host state, including contact with local or tribal governments, without prior written notification to the governor of the affected state.

#### **1.4 There is No Spent Fuel Emergency**

BRC Draft Recommendation Four calls for “prompt efforts to develop, as expeditiously as possible, one or more permanent deep geological facilities for the safe disposal of spent fuel and high-level nuclear waste.”

*We take issue with the purported need for prompt or expeditious action in developing deep geologic disposal capacity.*

As recognized in the Draft, it will likely take years of timely and deliberate action to rebuild the U.S. waste management program, but as the report clearly finds, spent fuel can be stored safely on-site at commercial reactor locations for a very long time, while high-level waste is being and can continue to be effectively managed within the DOE complex. There is no discernable need for moving ahead with facility development in the near term. To do so without spending the time required to craft a workable, comprehensive and acceptable approach that has broad stakeholder support is to invite many of the same problems that undermined prior efforts and would prove counterproductive to the overall effort envisioned in the BRC Draft.

The Commission’s report should not create the illusion that moving ahead expeditiously with specific facility siting efforts is necessary or even beneficial. On the contrary, such unnecessary

haste could be extremely counterproductive. This does not mean that planning for new approaches should not begin, but it should be focused on stage-setting activities, i.e., development and promulgation of site screening criteria, refining and developing needed regulations and regulatory changes, establishing the new waste management organization, etc.

We agree that “the generations who created these wastes and benefited from the activities that produced them have an obligation to ensure that the entire burden of providing for their disposal does not fall to future generations.” p. 6. We also agree that “this generation’s responsibility to future generations includes taking care not to foreclose options that future generations may see as being in their best interest.” p.7.

### **1.5 BRC Characterization of the WIPP Siting Process**

The BRC Draft Report points to the successful operation of the Waste Isolation Pilot Plant (WIPP) facility in New Mexico as “an affirmative demonstration that with adequate patience, flexibility, and political and public support, success is possible.” The BRC largely attributes the success of WIPP to the presence of “a supportive host community” and “a state government that was willing to remain engaged.” Nevada believes the WIPP program would not have been successful had DOE and New Mexico not entered into a formal agreement very early in the siting process that established the state’s willingness to work with DOE on the project. If DOE had sought to move ahead in the face of outright state opposition, WIPP would not have been successful regardless of the support evinced by the local community. The BRC Final report must reflect the importance of obtaining state consent, even if local governments and/or tribes within those states are supportive.

Nevada believes that there are limits to the applicability of the WIPP model to a future national system for management of spent nuclear fuel and high-level radioactive waste. Transuranic wastes, even the remote-handled portion, are considerably less radioactive than spent nuclear fuel and high-level radioactive wastes, and are perceived to be less dangerous. The wastes shipped to WIPP are owned by DOE and shipped from sites owned and managed by DOE. To date, trucks have been used for all WIPP shipments, allowing more flexible routing than rail shipments, and thus reducing concerns about shipments through highly populated areas. Perhaps most importantly, public and official acceptance of WIPP and shipments to WIPP is enhanced by strongly positive attitudes towards national defense and environmental remediation of nuclear weapons facilities in the West. The BRC Final Report should recognize these differences between WIPP and the facilities for commercial nuclear waste that will be needed in the future.

### **1.6 Early Progress on the Repository Siting Front**

Our agreement with the BRC Draft recommendations and rationale for consent-based siting is contingent on generic siting criteria and standards and regulations prior to initiating a siting process. We agree that “there is no reason to wait to start the process of developing generic regulations for future geologic repositories.” p. 104. We generally agree with the BRC Draft Recommendations for Developing Future Disposal Facility Standards on pages 102 through 106, with the exception noted below. Also we agree with the need for coordination between the NRC and EPA in a widely inclusive standard and regulation setting process.

*We specifically do not agree with the BRC Draft statement, "Given that we are recommending a flexible process for finding new sites, standards development need not delay early progress on the siting front." p. 104.*

The siting process should not be initiated until the recommended new organization has completed a public process resulting in acceptable site selection criteria, and the NRC and EPA have final standards and regulations in place. To do otherwise risks, once again, precluding any level of confidence that site selection has safety as its principle goal, and once again invites political interference at the very inception of a program meant to restore and instill confidence in decisions about safe long-term management and disposal of nuclear waste. The "flexible process for finding new sites" noted above should not include conditional consideration of a site without all potential interests involved knowing and understanding the "rules" for screening, and later decisions that apply to all voluntary candidates. To do so invites one or more of at least three undesirable consequences: 1) the criteria, standards and rules could be calibrated to best accommodate the early offered or politically chosen site; 2) political forces could be brought to bear to declare "success" before a defined deliberative process has even begun; and 3) sites of real merit may never be offered for consideration since the perception will be that "the fix is in." This is a formula for a safety failure, rather than just another policy failure.

The nuclear waste management organization, in its authorization statute, should be given the broadest possible scope to negotiate and fund oversight participation, and mitigation and compensation agreements, as discussed in the BRC Draft. Funding should also be authorized for participation by citizen groups and other interested non-governmental organizations.

We offer an additional thought regarding the development and application of disposal standards in repository site selection and licensing. We believe the Commission should acknowledge the tension between maintaining, on the one hand, that there is reasonable confidence that spent nuclear fuel (which is potentially dangerous for tens of thousands of years) can be disposed of safely and, on the other hand, drafting disposal regulations that limit safety evaluations and performance assessments to ten thousand years (or possibly less) because predicting the performance of a repository over longer time periods is too speculative. If we have confidence spent fuel can be disposed of safely in geologic repositories, it follows logically that we must also have equivalent confidence that the safety of geologic repositories can be evaluated and judged over the long time periods the materials pose a threat to man and the environment. If performance assessments of up to one million years, as now required by Part 63 (and the National Academy of Sciences) are too speculative, then the challenge to regulators and standard-setters is to develop another way to judge safety over very long time periods up to one million years.

### **1.7 Repository Regulatory Requirements for Retrievability**

We agree that regulatory requirements for retrievability until closure should be retained and that they "are intended to ensure that emplaced waste can be removed if the repository is not behaving as anticipated or if its performance is called into question for any reason prior to permanent closure - they are not intended for the purpose of retaining easy access to emplaced materials for possible later recovery and reuse." p. 35. But, it should be noted that NWP, in

Section 122, includes a requirement for retrievability also “for the purpose of permitting the recovery of the economically valuable contents of such spent fuel.” This provision should not be included in a revision of national waste management policy. If the intent is to keep the spent fuel for possible “reuse” purposes, it should not be emplaced in a geologic repository in the first place. This provision was written into the Act before dry cask storage was readily available and could have been a response to concerns prevalent at the time about spent fuel pools approaching their design capacity and to uncertainty about whether commercial reprocessing would become available. In any event, it has no place in a revised nuclear waste management policy.

### **1.8 BRC Recommendation for Waste Program Reorganization**

The institutions responsible for implementation of the waste management policy must be seen by all affected parties to be consistently trustworthy, both in their words and their actions. Trust in the DOE’s Office of Civilian Radioactive Waste Management began evaporating in the affected states within months of the enactment of the NWPA and the trend never reversed. The BRC Draft recommends that a new, single purpose organization (i.e., a public/private corporation) be chartered by Congress to manage implementation of a revised U.S. nuclear waste management policy. We generally agree with this recommendation as described and discussed in the BRC Draft, but an important aspect of this single purpose organization concept is that the organization would need to sustain its focus and purpose for as much as a century or more.

With the nuclear waste issue essentially “parked” in this organization, there is a danger that Congress would turn a deaf ear to concerns from various interests about the organization’s activities and, through time, have declining interest even in how the organization spends the Nuclear Waste Fund money, once it has full access to the fund reserve. *The Commission should express how long-term Congressional oversight of the proposed new organization would take place, and address the means whereby ratepayers who contribute to the Nuclear Waste Fund would have assurance that the funds are prudently invested and spent.*

### **1.9 BRC Recommendations Regarding Transportation**

The BRC Draft’s brief discussion of transportation issues (pages 53-55) does not adequately reflect lessons learned from the past 25 years of failed planning for transportation of spent nuclear fuel and high-level radioactive wastes to NWPA facilities. Current annual spent fuel shipments in the United States comprise 10-15 train loads (multiple casks) and 10-15 truck loads (single casks). Future spent nuclear fuel (SNF) shipments will certainly be dramatically larger than current shipments. Assuming no new reactors and license extensions for all operating reactors, the current SNF inventory will grow by about 2,000 MTU (metric tons uranium) per year. Once regular shipments to centralized storage and/or geologic disposal begin, annual shipments of at least 3,000 MTU are likely. At that rate, assuming mostly rail (95 percent) transportation of commercial SNF and all rail transportation of DOE SNF and HLW, there would likely be about 7,000 train shipments (3-5 casks per train) and 5,000 truck shipments (one cask per truck) over about 50 years.

That works out to about 100-150 train shipments and 100 truck shipments every year in the future. Put another way, under a mostly rail scenario, about 7-10 times more shipments would



occur each year, using larger capacity casks, and about 50 times more spent fuel would be shipped each year. Greater reliance on legal-weight truck shipments would significantly increase the number of shipments. About 14,000 to 20,000 truck shipments would be required to move 20 percent of the projected commercial SNF inventory.

Both routine shipments and accidents create the potential for radiation exposures to workers and members of the public, and for perceived risks in cases where actual radiation exposures are far below regulatory concern. Aside from a successful terrorist attack, the spent fuel transportation incident of greatest concern would be a severe accident in which a cask was engulfed in a long-duration, high temperature fire, resulting in a release of radioactive material dispersed in the smoke plume from the fire. On this point, the National Academy of Science (NAS), the NRC, the DOE, and the State of Nevada generally agree. In the Final Supplemental Environmental Impact Statement for Yucca Mountain, DOE estimated the probability of such an accident at 5 in one million per year, costing up to \$10 billion to clean up in an urban area. Studies prepared for the State of Nevada concluded that accident consequences and cleanup costs could be significantly greater than the DOE estimates.

Nevada has long advocated measures that would reduce the probability and consequences of severe accident fires. These measures include shipment of oldest fuel first, mandatory use of dedicated trains, and full-scale regulatory confirmation testing of shipping casks. Nevada has also advocated extra-regulatory testing to determine cask performance in very severe, but credible, fire environments, similar to those recently studied by the NRC (e.g., Baltimore Tunnel Fire, MacArthur Maze Fire, and Newhall Pass Fire).

We urge the Commission to expand its discussion of transportation issues into a separate chapter in the Final Report, and to adopt the following recommendations:

1. The implementing entity should give equal consideration to transportation as it does for storage and disposal, as part of planning and designing the national nuclear waste management system.
2. The implementing agency should address transportation requirements for storage and disposal facilities, such as mainline rail access and interstate highway access in the earliest stages of site selection and should seek to minimize the overall number of shipments.
3. The implementing entity should adopt all of the NAS 2006 recommendations for transportation risk management; adoption of the NAS recommendations regarding full-scale cask testing and social impact management would be especially helpful for storage and disposal facility site selection efforts.
4. The implementing entity should follow the WIPP transportation model in developing a national transportation plan in cooperation with States, tribes, local governments, and state regional groups.
5. The implementing entity should insist upon full NRC regulation of all shipments to storage and disposal facilities.

We disagree with one specific transportation recommendation in the BRC Draft. The report recommends that “DOE should complete the development of procedures for providing technical

assistance and funds (pursuant to section 180(c) of the NWPA) for training local and tribal officials in areas traversed by spent fuel shipments ....” DOE should not be given the task of preparing states and local communities for future SNF and HLW shipments, and section 180(c) of the NWPA is not an adequate vehicle for effectively and successfully preparing states and communities for such shipments. First, since DOE will not necessarily be the entity responsible for shipping SNF and HLW to storage and/or disposal facilities, leaving this task in DOE’s hands is inappropriate and could lead to problems later on. Second, DOE’s past approach to section 180(c) implementation has been inadequate. DOE’s overly narrow interpretation of the statute would limit assistance to only training for local public officials. It would not have funded planning, equipment, infrastructure improvements, and other activities that must occur to make such assistance relevant and effective. Third, without knowing where storage and/or disposal facilities would be located and the particulars of the transportation system (i.e., rail, truck, intermodal, etc.), it is impossible to accurately identify what states and local jurisdictions will be affected and where training and assistance resources need to be focused.

### **1.10 Enhancement to BRC Recommendations regarding storage**

*An enhancement to the BRC Draft recommendation for consolidated interim storage is in a bill introduced in the 110th Congress in 2007 as S. 784, titled the Federal Accountability for Nuclear Waste Storage Act of 2007, or better known as the “Take Title” bill. For various reasons no action was taken on this bill.*

The bill provides for spent fuel to be removed from reactor pools and placed in dry casks at the reactor site. Title to the spent fuel would be transferred to the Secretary of Energy, as would be the license of the Independent Spent Fuel Storage Installation, making DOE the responsible party for the facility and its stored spent fuel. While not required, it was expected that DOE would contract back to the plant owner for the operation of the facility. All expenses, even those for Hardened Onsite Storage if installed, would be payable from the Nuclear Waste Fund.

This bill could be recast as part of the legislation establishing the new waste management organization, with the responsibility for the dry cask storage facility included in the organization’s charge and its authority to spend from the Nuclear Waste Fund. This could provide an early path to reducing and then ending taxpayer liability for DOE’s partial breach of contract with the owners of spent fuel. This could also enable the BRC Draft recommendation for realizing benefits to the waste management system from cask standardization. It would put the organization in a position to make case-by-case decisions about the most effective and efficient means of dealing with the “orphan” spent fuel at closed reactors. It could eliminate the need for offsite shipment of “orphan” spent fuel prior to development of a geologic repository.

### **1.11 Near-Term Actions**

#### Financing the Waste Program

The BRC Draft proposes: “The [DOE] rulemaking should also address other potential revisions discussed in this report, e.g. to allow reprioritization of spent fuel receipt to increase transportation efficiency and facilitate closure of shutdown reactor sites, and to incentivize

actions by contract holders (e.g. use of standardized storage systems) that would reduce overall waste management system costs.” p. 133.

Involving DOE in a rulemaking on these two matters is premature and undercuts the needed flexibility of the recommended new waste management organization to develop through its own public planning process an acceptable comprehensive waste management program. These are process components of a plan and should not be “fixed” elements that unnecessarily drive or burden a later planning process when the details of future specific needs are not known.

### Storage

The BRC Draft proposes: “Using existing authority in the NWPA, DOE should begin laying the groundwork for implementing consolidated storage and for improving the overall integration of storage as a planned part of the waste management system without further delay.” p.133. Suggested DOE activities include “Preparing to respond to requests for information from communities, states, or tribes that might be interested in learning more about hosting a consolidated storage facility.” Also included is “Working with nuclear utilities, the nuclear industry, and other stakeholders to promote the better integration of storage into the waste management system, including standardization of dry cask storage systems.”

These suggested activities are premature and are inconsistent with the recommendation that a new waste management organization is needed to instill trust and confidence in the nation’s nuclear waste management program. Both of these elements would be crucial to any relationship-building expected of the new organization, and that organization should not be constrained in any way by actions initiated by DOE.