

**SUMMARY OF THE TESTIMONY OF MARTIN G. MALSCH
U.S. HOUSE OF REPRESENTATIVES COMMITTEE ON ENERGY AND COMMERCE
SUBCOMMITTEE ON ENVIRONMENT AND THE ECONOMY**

**HEARING REGARDING RECOMMENDATIONS OF THE BLUE RIBBON
COMMISSION ON AMERICA'S NUCLEAR FUTURE**

FEBRUARY 1, 2012

Two things stand out from the history of attempts to locate geologic repositories in Lyons, Kansas and Yucca Mountain, Nevada. In both cases project proponents made a premature commitment to the site in the face of incomplete scientific information. In the case of Yucca Mountain, the BRC correctly observed that the “short-circuiting of the initial site selection process ... had the effect of tainting all subsequent state-federal interactions over the project” and the process as a whole “created a widespread perception that the repository location was being determined on the basis of primarily political, rather than technical and scientific, considerations.” Also in both cases the site proponents ignored the legitimate objections of the host State. The BRC observed correctly that “determined opposition at any level of government can at a minimum significantly complicate and delay, and in many cases defeat, best efforts to site a facility.”

The BRC has now taken these lessons of the past into account and recommended a site selection process for a geologic repository based on the informed consent of the affected state, local and tribal governments, and an iterative, step-wise process that avoids premature commitments. I support the BRC's recommendations. We are not facing a nuclear waste disposal crisis and we have ample time to consider the BRC's recommendations and finally get things right, but we should start the legislative process to amend the Nuclear Waste Policy Act promptly.

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Mr. Chairman and members of the Subcommittee, I appreciate the opportunity to provide testimony today regarding the recommendations of the Blue Ribbon Commission on America's Nuclear Future (BRC), released late last week. My name is Martin G. Malsch. I am a partner in the law firm Egan, Fitzpatrick, Malsch & Lawrence, PLLC. I have practiced law in the nuclear energy and nuclear waste fields for over forty years, including many years as the Deputy General Counsel or Acting General Counsel for the U.S. Nuclear Regulatory Commission. In private practice I have advised both public and private entities regarding nuclear issues. I believe I am one of the few practitioners in the nuclear energy field who has represented both proponents and opponents of nuclear facilities. I currently represent the State of Nevada on matters related to the Yucca Mountain repository, but I am not testifying today in a representative capacity. My testimony today presents my personal opinions regarding the BRC's recommendations based on my experience and expertise in the nuclear energy and nuclear waste fields; it does not necessarily represent the views of Nevada or anyone else.

BACKGROUND

The BRC report includes a brief summary of the U.S. experience in developing geologic repositories and draws some conclusions based on this experience (report at pp. 19-24). I would like to add a few details about this experience, focusing on Lyons, Kansas and Yucca Mountain, Nevada, because I believe this will add substantial additional context and support for the key

BRC conclusion that “any attempt to force a top-down, federally mandated solution over the objections of a state or community – far from being more efficient – will take longer, cost more, and have lower odds of ultimate success” (report at pg. ix). I also believe that consideration of some additional historic details will support the conclusion that a premature commitment to a site before sufficient supporting scientific evidence is available also creates a high risk of program failure and erodes credibility. The BRC mentions this second point as well (report at pg. 23) but I think it warrants additional emphasis.

Lyons, Kansas

In the 1960s a clamor arose over the potential that liquid high-level radioactive wastes would leak from Atomic Energy Commission (AEC) storage facilities located at the National Reactor Testing Station in Idaho, the Savannah River Site in South Carolina, and the Hanford Site in Washington. As a result, the AEC promised Idaho Senator Church that the Idaho wastes would be transferred out of Idaho to a permanent geologic repository by the end of the 1970s. The AEC pinned all its hopes on an abandoned salt mine in Lyons, Kansas. However, rather than taking the time to complete necessary scientific investigations, the AEC offered disputable safety conclusions and pressed ahead. The AEC believed state and local support was essential, but it lost that support when it failed to give any credence to the legitimate concerns of Kansas experts. Ultimately, the Lyons, Kansas site proved to be unsuitable.

Yucca Mountain

After the failure of Lyons, Kansas, the AEC’s successor agencies continued to investigate other possible repository sites and the Congress enacted the Nuclear Waste Policy Act of 1982 (NWPA). In accordance with the NWPA, DOE selected five sites for more detailed study (characterization): salt deposits in Mississippi, Texas, and Utah; basalt formations in Hanford,

Washington; and volcanic tuff rock in Nevada. In perhaps a hint of what was to come, potential sites in Louisiana were excluded based on a political side agreement between Louisiana Senator Johnston and the Secretary of DOE. The NWPA then called upon DOE to narrow the choices to three, all three of which were to be fully characterized (studied) so that any one failure would not prematurely destroy the whole repository program. In 1986, the DOE Secretary announced that the final three choices were the ones in Deaf Smith County, Texas; Yucca Mountain, Nevada; and Hanford, Washington. The designation prompted angry protests from all three areas, whose representatives believed that the scientific investigations were not completed, and the protests became part of a nationwide movement when DOE cancelled the search for an eastern site, notwithstanding a clear informal agreement among NWPA supporters that the second site called for by the NWPA would be located in an eastern State.

The program was now in shambles and Congress reacted by enacting the NWPA Amendments Act of 1987. That Act directed DOE to limit its future site characterization and selection efforts to a single site in Yucca Mountain, Nevada, notwithstanding the advice from NRC (and others) that the scientific information was insufficient to make an informed safety conclusion about the suitability of the site. In fact, the selection of the Yucca Mountain site was based on DOE's so-called "Multiattribute Utility Analysis of Sites," which depended in important part on the assumption that little groundwater would move downward from the mountain top and seep into the tunnels where the waste would be disposed of. This assumption later proved to be false.

The NWPA Amendments Act of 1987 attempted to place the entire high-level waste disposal burden on one western state with no nuclear power plants or other high-level waste generating facilities. The Act's supporters ignored the incompleteness of the scientific

information and ignored the objections of the host State, which believed (with good reason) that Nevada had been singled out simply because it was "the small kid on the block." Lessons that should have been learned from the history of Lyons, Kansas were ignored.

In February 2002, DOE Secretary Abraham formally recommended the Yucca Mountain site to President Bush, notwithstanding the Nuclear Waste Technical Review Board's conclusion that DOE "has yet to make a convincing case that nuclear waste can safely be buried at Yucca Mountain," and President Bush recommended the site to the Congress. Citing numerous scientific flaws, Nevada Governor Guinn formally disapproved of the site, using the state veto procedure set forth in the NWPA. Congress then formally overrode Nevada's veto by enacting H.J. Res. 87. The designation of Yucca Mountain as a repository site became effective on July 23, 2002, when President Bush signed S.J. Res. 34 into law.

The NWPA required DOE to file its license application within 90 days after the President's site recommendation became effective, or by October 21, 2002. October 21, 2002 came and receded into history without any application being filed. This was not a surprising development, given the scientific and engineering challenges DOE still faced when Nevada's veto was overridden. Obviously, DOE's recommendation of the Yucca Mountain site to the President was another example of a premature commitment to the site, continuing the trend set in 1987. The application was not filed and docketed by the NRC until September 8, 2008, almost six years after the statutory deadline expired. Final repository safety regulations were not even in place until 2009.

DOE moved to withdraw its license application on March 3, 2010 and the presiding Licensing Board denied DOE's motion on June 29, 2010. On September 9, 2011, the Commission announced that it could neither affirm nor reverse the Licensing Board's decision

because it was evenly divided on the matter. However, because of budgetary limitations, the Commission also directed the Licensing Board to take steps that would facilitate an orderly suspension of the licensing proceeding. The Licensing Board suspended the licensing proceeding on September 30, 2011.

Thus, the Yucca Mountain license application proceeding before the NRC is now suspended indefinitely because of budgetary limitations. All four participating NRC Commissioners agreed with this result (one NRC Commissioner previously recused himself), including the two Commissioners who believed DOE lacked the authority to withdraw the license application. No party to the proceeding has asked the NRC to reconsider the suspension. Congress “zeroed out” Yucca Mountain in the final FY 2012 Appropriations Act and, as a result, there are not enough funds to come anywhere close to completing the proceeding.

PAST MISTAKES AND LESSONS LEARNED

Two things stand out in this brief history of the two most significant attempted U.S. geologic repository projects. First, in both cases project proponents made a premature commitment to the site in the face of incomplete scientific information. In the case of Yucca Mountain, the BRC correctly observed that the “short-circuiting of the initial site selection process ... had the effect of tainting all subsequent state-federal interactions over the project” (report at pg. 48). Indeed the process as a whole “created a widespread perception that the repository location was being determined on the basis of primarily political, rather than technical and scientific, considerations” (report at pg. 23).

Second, in both cases, the site proponents ignored the legitimate objections of the host State. The BRC observed correctly (report at pg. 58) that “determined opposition at any level of

government can at a minimum significantly complicate and delay, and in many cases defeat, best efforts to site a facility.”

While there may be some residual hope in some quarters that Yucca Mountain might somehow be revived, I believe most informed observers would agree with the BRC that tying the entire fate of the U.S. high-level waste program to Yucca Mountain “has not worked to produce a timely solution for dealing with the nation’s most hazardous radioactive materials” (report at pg. vi).

BRC RECOMMENDATIONS

I agree with the BRC’s recommendations. The BRC studied the lessons of history and its recommendations are well supported. We owe a large debt of gratitude to the BRC members and the BRC staff for their willingness to serve, their dedication to the task, their openness to divergent ideas and opinions, and their careful analysis of problems and possible solutions to the nuclear waste management issues confronting Americans today.

I would like to focus my testimony today on three key and closely connected BRC recommendations: (1) that there should be prompt efforts to develop one or more geologic disposal facilities; (2) that there should be a new single-purpose organization dedicated to implementing the waste management program; and (3) that a new consent-based approach to site selection should be adopted.

DEVELOPING A NEW GEOLOGIC DISPOSAL FACILITY

The BRC recommended that there should be “prompt efforts to develop one or more geologic disposal facilities” (report at pg. vii).

I agree there should be prompt efforts to develop one or more geologic disposal facilities, although not in the sense that we need to select and license a repository in the near term. We are

not facing any disposal crisis because vitrified high-level waste and spent nuclear fuel can be stored safely for a long time and we therefore have plenty of time to get things right. But amending the Nuclear Waste Policy Act, organizing and staffing a new waste management organization, and implementing a new consent-based site selection process, as BRC recommends, will take considerable time. We should start the process promptly, especially the necessary changes to the NWPA.

The BRC recommended an “adaptive, staged facility siting and development process” whereby “[p]roject managers are able and willing to reevaluate earlier decisions and redesign or change course when new information warrants” (report at pg. 54). This recommendation addresses the key lesson from the past that premature commitments to one site should be avoided. The development of a geological disposal facility can take decades, and a step-by-step, iterative process is required. The amount of time and effort required creates a grave danger that project momentum will overcome common sense and sound science. There should be multiple opportunities to assess the quality of the technical program and the safety case supporting the decision-making process and no reluctance to “pull the plug” when warranted.

A NEW ORGANIZATION

I support the BRC’s recommendation that there should be “a new organization dedicated solely to implementing the waste management program” (report at pg. vii). This means that the responsibility for the geologic repository program should be taken away from DOE and assigned to a new single-purpose organization, perhaps a government-chartered entity like TVA. DOE has not performed well here and a new single organizational approach is clearly needed. In fact, I made a similar recommendation several years ago at an NRC Regulatory Information Conference.

The new organization should be dedicated solely to implementing the waste management program and empowered with the authority and resources to succeed. It will also be important that the new organization be subject to independent licensing and regulation of its waste management activities (including transportation) in the same way that any other private entity would be.

CONSENT BASED SITE SELECTION

The BRC recommended “a new consent-based approach to siting future waste management facilities” (report at pg. vii). I believe a consent-based site selection approach is not just good government – it is a frank concession to reality and, as I indicated above, one of the two key lessons that must be learned from history. We should not assume that the objections of a host state or local government or tribe will melt away and that they will be “ready to deal” if the NRC grants the construction authorization. Nor should we assume that the pre-emptive powers of the federal government are so great, and that state and local rights and preferences are so undeserving of respect, that a site can always be thrust upon an unwilling host state, local government, or tribe. Even a site located on Federal land is subject to numerous state and local laws and regulations that can be used to vindicate states’ rights absent draconian and dubious Federal legislation preempting state law. The BRC put it well when it concluded that “determined opposition at any level of government can at a minimum significantly complicate and delay, and in many cases defeat, best efforts to site a facility” (report at pg. 58).

Therefore means must be found to enlist the cooperation, or at least the acquiescence, of the host state, local government, and tribe. Generous financial or other incentives (a so-called benefits package) can be provided to the affected governmental entities, but this approach can easily operate or be construed as a kind of unacceptable bribe in return for ignoring the safety of

current and future generations of citizens. Therefore an affected governmental entity should never be asked to agree completely with, and withhold its objections to, a site while site investigations and safety analyses are still underway. This asks for too much. Instead, as the BRC recommended, there should be a step-wise and iterative process that avoids premature commitments on all sides.

I suggested how such a step-wise and iterative process might be constructed in written comments I provided the BRC, dated November 10, 2010. But I agree with the BRC that a successful site selection decision will most likely result from “a complex and perhaps extended set of negotiations between the implementing organization and the potentially affected state, tribal, and local governments, and other entities,” and that it would be desirable for these negotiations to result in “a partnership agreement or some other form of legally enforceable agreement” (report at pg. ix). I also recognize that a state, local or tribal government’s ability to “veto” a repository project cannot last indefinitely; otherwise the uncertainty over whether the project could ever be successful would be so great that any significant investment in it would be imprudent. Ending the “veto” can be a matter subject to negotiations between the waste management organization and the governmental entity.

SOME RESERVATIONS

I agree with the BRC that independent regulation is “an essential element of a safe, secure, environmentally responsible and ultimately effective nuclear waste management strategy” (report at pg. 88) and also that site-specific regulations like those that apply now to Yucca Mountain “undermine confidence” (report at pg. 23). I also agree with the BRC that there is no need to readjust the assignment of generic repository regulatory authority as between NRC and EPA.

However I have some reservations about certain parts of the BRC's discussion of regulatory standards issues (report at pp. 89-92). I suspect the BRC would agree with me that these particular topics are best addressed by the NRC in a future standards rule making and I see no need to address them in any depth today. Suffice it to say here that there is some tension between (1) concluding, as most experts have, that very long-lived radioactive wastes can be safely disposed of if a suitable site is selected, but (2) cautioning that it may be unrealistic to have a very long requirement for demonstrating compliance with a traditional safety regulation and suggesting that a different standard of proof should be applied. If we are overly aggressive in limiting compliance time frames and relaxing the burden of proof we will undercut the first conclusion and detract from the credibility of the licensing process.

CONCLUSION

Almost everything that could go wrong with a geologic repository program in the United States has now gone wrong. It would be unfortunate if the nuclear power program in this country foundered because of poorly chosen policies for managing spent fuel and high-level radioactive waste, and the citizens living near DOE nuclear legacy sites deserve a better program than the one they got. The BRC has now offered a path forward. We have ample time to consider the BRC's recommendations and get things right. But history suggests that amending the Nuclear Waste Policy Act, organizing and staffing a new waste management organization, and implementing a new consent-based site selection process, as the BC recommends, will take considerable time. Therefore we should start the process now – especially the legislative process.

Moreover, the BRC has also recommended some significant useful steps that can be taken without new legislation, especially regarding the equitable treatment of Nuclear Waste Fund (NWF) fees (report at pp. 75-78). These also should be considered promptly.

Thank you for your consideration of my testimony. I would be pleased to answer any questions you may have and to assist the Subcommittee in its future efforts to develop a sound nuclear waste management policy.

Martin G. Malsch

Martin G. Malsch is a partner with Egan, Fitzpatrick, Malsch & Lawrence, PLLC, a United States law firm specializing in nuclear energy matters. He has practiced law in the nuclear energy field for over 40 years. Before entering the private sector in 1997, he served with the United States Nuclear Regulatory Commission (NRC) in various senior executive positions, including Acting General Counsel, Deputy General Counsel, and Inspector General. While at the NRC, Mr. Malsch participated in the licensing of over forty nuclear power plants, either as senior trial counsel or the senior legal official responsible for drafting all final NRC adjudicatory licensing decisions. He originated the concepts of design certification and combined licensing, developed the fundamental safety philosophy that now governs NRC safety decisions, and was responsible for the drafting of NRC's Part 52, which is the framework for licensing of new power reactors in the United States. In addition, Mr. Malsch served as the lead NRC counsel in the first round of nuclear power reactor design certifications. Since joining the private sector, Mr. Malsch has represented a variety of nuclear firms, including nuclear vendors and waste facility applicants and operators, as well as several states and foreign countries with an interest in nuclear matters.

Mr. Malsch received a J.D. degree from the School of Law of the University of Connecticut, after receiving an undergraduate degree in Physics and studying theoretical physics at the graduate level. He also has served as Adjunct Professor of Law at the George Washington University School of Law.