

WM2012 Conference Panel Report

PANEL SESSION 105: US Administration's Blue Ribbon Commission on America's Nuclear Future

Co-Chairs: Larry W. Camper, *US NRC*

John Longenecker, *Longenecker & Associates, Inc.*

Panel Reporter: Christopher Grossman, *US NRC*

Panelists:

1. Albert Carnesale, *BRC Commissioner and Chancellor Emeritus and Professor at the University of California, Los Angeles*
2. Bob Forrest, *Former Mayor of Carlsbad, NM*
3. John Parkyn, *Chief Executive Officer of Private Fuel Storage, LLC*
4. Everett Redmond, *Senior Director, Nonproliferation and Fuel Cycle Policy, Nuclear Energy Institute*
5. William C. Ostendorff, *US NRC Commissioner*
6. Dave Martin, *Cabinet Secretary, New Mexico Environmental Department*
7. Peter B. Lyons, *Assistant Secretary for Nuclear Energy, US DOE*

Larry Camper opened the panel discussion, introduced the panelists and provided an overview of the Blue Ribbon Commission, its mission, and its membership. He also requested that questions for the panelists be held until after all panelists had spoken.

Albert Carnesale was the first panelist to speak and described the origins and purpose of the Blue Ribbon Commission – to conduct a comprehensive review and recommend a new strategy for the back end of the nuclear fuel cycle to the US Secretary of Energy. He provided historical context of nuclear waste policy in the United States and discussed each of the eight recommendations to the Secretary and indicated that the first three were considered most important by the Blue Ribbon Commission.

For the first recommendation – a new consent-based approach to siting and development – he indicated that all the analogues that the Commission analyzed, including Sweden, Spain, and the Waste Isolation Pilot Plant in the US, had consent-based adaptively-staged siting and development.

In formulating the second recommendation – a new organization dedicated solely to waste management and empowered with the authority and resources to succeed – he indicated that the public had little trust in the current arrangement, and that the Commission believed a Congressionally-chartered federal corporation is likely the most attractive alternative.

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For the third recommendation – access to the nuclear utility ratepayer funds – he indicated that fee revenues have outpaced both budget requests and the cumulative waste fund appropriations. He stated that revenues from the ratepayers should go into a separate fund from the general Treasury.

For the fourth recommendation – prompt efforts to develop one or more geologic disposal facilities – he stressed that the Commission was not a site selection committee and was not charged with evaluating the future of nuclear energy. He conveyed that long-term isolation is the only known scientifically-defensible solution and safe disposal is needed because the waste currently exists. He discussed the viewpoints initially shared by some members of the Commission supporting reprocessing and how after analysis the Commission decided not to embrace it as a matter of policy because it was currently deemed economically unfeasible.

On the fifth recommendation – prompt efforts to develop one or more consolidated storage facilities – he indicated the Commission was neutral on whether consolidated storage facilities were publicly or privately operated. He also discussed that the Commission believes that consolidated storage can be pursued independent of any repository schedule and that consolidated storage is most important for spent fuel in stranded storage at shutdown reactors.

On the sixth recommendation – prompt efforts to prepare for eventual large-scale transport of spent fuel and high-level waste – he indicated the Commission viewed the current approach to transportation of spent fuel and high-level waste as adequate for current purposes, but possibly inadequate for future success particularly on a large scale. He cited past experiences with transportation concerns and stated the Commission believed that the nation should start planning now and involve stakeholders because it will take time to adequately address.

On the seventh recommendation – support for continued US innovation in nuclear energy technology and workforce development – he discussed the views that technological innovations could lead to “game-changers” in terms of how much waste will need to be dealt with. He saw workforce development as supportive of potential technological innovation. He also expected that they would support stability so that licensees can be sure projects can get licensed.

On the eighth recommendation – active US leadership in international efforts to address safety, waste management, non-proliferation and security concerns – he conveyed that the Commission believed the US may have to assist other nations in their efforts to

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avoid incidents which could hinder the use of nuclear energy, and that domestic policies may be needed to support international goals.

In his concluding remarks, he indicated the overall record of the nuclear waste program is one of broken promises and unmet commitments. However, he indicated that there is confidence that it can be turned around because we know what needs to be done, that we have to do it, and how to do it. He believed all that was needed was the political will and urged the Administration and Congress to act on the recommendations without further delay.

Bob Forrest then spoke of his 35 years of experience regarding disposal of radioactive waste at the Waste Isolation Pilot Plant (WIPP) in Carlsbad, New Mexico from the local government perspective. He stressed that the WIPP example, which was communicated to the Blue Ribbon Commission, is not a negative story. He discussed the need to have stakeholders on board, including not only the Governor and Secretary of the Environment in New Mexico, but also the people.

To develop stakeholder support, he stressed that safety was emphasized from day one and that they developed a great relationship with the US DOE, which he credited with leaving nothing on the table to make sure WIPP is safe. He discussed that WIPP is successful because of its location (i.e., salt) and an emphasis on safety including in the transport of over 10,000 shipments. He praised New Mexico Governor Martinez for allowing science to drive the decision-making. He also discussed the evolution of waste streams from low-level waste in the early days to contact-handled transuranic waste and remote-handled transuranic waste that is being disposed of currently.

He touted Carlsbad as an early leader in the acceptance of nuclear projects and stated that he believes interest is growing among local communities because of Carlsbad's experience and the safety record at WIPP. He then provided a status of planning at the site and indicated that two companies were selected from nine applicants to develop an interim storage facility and suggested that WIPP could be used to dispose of high-level waste as well.

In conclusion, he emphasized that partnerships were instrumental in moving WIPP forward in Carlsbad and that he expects the experience of WIPP will help Carlsbad move forward on other nuclear projects in the future.

Next **John Parkyn** discussed the need for interim off-site dry storage including the intent of the Nuclear Waste Policy Act of 1982, the cost of storage in multiple locations, growing public impatience, concerns about fuel storage security, and generation of

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confidence in future reactor construction. Specifically, he discussed the history of the proposed Private Fuel Storage facility in Tooele County, Utah which first applied for a license from the US NRC in 1997 that was then issued in 2006.

He summarized the scope of the Private Fuel Storage facility, which he indicated is approved for 40,000 metric tons (approximately 4,000 canisters) under the license. He also described the remoteness of the location relative to surface water, human populations, and the groundwater. He then described how Private Fuel Storage addressed transportation concerns with rail into the proposed site which included dedicated rail cars with articulated ends and multi-purpose canisters.

He provided a status of the litigation regarding lease approval by the Bureau of Indian Affairs and indicated he believed approval was withheld on political grounds rather than science or safety. Specifically, the US Court of Appeals declined to cancel the license, the Goshute band sued the Bureau of Indian Affairs, Federal Court ruled in favor of the Goshute band and Private Fuel Storage, and the Administration declined to appeal in late 2011.

He then summarized the process leading to operation of the Private Fuel Storage facility. He indicated that Private Fuel Storage is first awaiting resolution of the lease decision, and once approved expects to complete construction, startup, and testing in 24-36 months. Then there must be agreement with the US NRC and US Department of Transportation (DOT) regarding authorized shipping routes before shipping the spent fuel. He indicated Private Fuel Storage has selected a rail-only option for shipping spent fuel, but specific routes are ultimately the decision of US NRC and DOT.

In his concluding remarks, he emphasized the goal is to collect the spent fuel at a central location and reduce the cumulative risk posed by the spent fuel.

Everett Redmond then presented an industry perspective on the Blue Ribbon Commission's final report. He stressed the following key points: (i) the Commission's studies were thorough; (ii) the recommendations are consistent with industry strategy, and (iii) there is a broad consensus amongst major stakeholders including the National Association of Regulatory Utility Commissioners, the Nuclear Energy Institute, the Nuclear Waste Strategy Coalition, the American Public Power Association, the National Rural Electric Cooperative Association, and the Edison Electric Institute. He discussed these stakeholders' priorities which are to support all eight recommendations with priority placed on three recommendations. Namely, he indicated the waste fee should be fixed so that there isn't a competition for funding; consolidated storage can proceed now, and a new management entity should be authorized.

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On consolidated storage, he cited that there are communities interested in hosting such a facility including Carlsbad, NM among others who are giving it consideration. Proceeding now would also allow DOE to fulfill its legal obligation to take the spent fuel, thereby reducing stranded fuel from shutdown reactors. He also indicated that he believed DOE could perform the consolidated storage and that a new management entity is not needed since it does not need to be tied to a repository. He also stated he believed that the NRC licensing process is working as demonstrated by the licensing of Private Fuel Storage and numerous Independent Spent Fuel Storage Installations. He expects a consolidated storage facility could be open in 5-10 years barring significant local opposition. He also indicated that the major stakeholders believe transportation recommendation can be rolled into action on consolidated storage facilities.

He stressed that the major stakeholders believe the new management entity should be solely focused on the back-end of the nuclear fuel cycle. He also offered the Tennessee Valley Authority as a model example of a government corporation structure suitable for the new entity.

He discussed his forecast for when spent fuel could be moved including a consolidated storage facility by 2020, a Yucca Mountain repository, if restarted, by approximately 2030, and an alternative repository sometime after 2050. Based on these forecasts, he believes consolidated storage is the fastest way to reduce liabilities. He stressed legislation would be necessary to authorize the US DOE as the entity and for the necessary financial incentives, but believes there are challenges to passing in Congress.

He concluded by indicating the work of the Blue Ribbon Commission is complete and the time for action is now.

William C. Ostendorff provided personal perspectives regarding the Blue Ribbon Commission recommendations and emphasized they were not the perspectives of the US NRC. He indicated there was a great deal in the recommendations that he agrees with and focused his comments on three specific recommendations so as not to repeat the mistakes of the past. Overall he thought the Blue Ribbon Commission's work was positive given the political constraints placed on them. He indicated he believes there is an urgent need for a repository and that he voted to deny that the US DOE had authority to withdraw the license application, and that he voted to support completion of the Safety Evaluation Report and Environmental Impact Statement for Yucca Mountain. He stressed that we need to follow the laws and regulations, that the Nuclear Waste Policy Act of 1982 is the law, and that if it is not good, then we should amend it. The

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three recommendations he made his remarks on were the consent-based approach, interim storage, a new organization. He indicated he believes, based on his interactions with international colleagues that damage was done to the US reputation and that it is important to regain US leadership.

On the recommendation calling for a consent-based approach, he posited a series of questions regarding consent. Namely, (i) what is consent and who defines it; (ii) how should consent and stability be balanced; and (iii) which lessons apply and which do not? Regarding the definition of “consent”, he admitted it is a complex question and offered that it should be captured in statute. He also posited the question, ‘Who decides how incentives are apportioned?’. Regarding the question of balance, he indicated that he thought the Nuclear Waste Policy Act was clear about the process and when in that process a party could opt out. He stated that a new approach would need that clarity and be captured in law. In regards to his last question on lessons learned, he cautioned that other countries experiences of a consent-based approach may be an apples-to-oranges comparison as our governmental systems are very different.

On the recommendation for consolidated interim storage, he agreed with the benefits of moving spent fuel from decommissioned sites. However, he queried whether consent could be achieved without the assurances of a repository. He cautioned that potential host sites may require assurances that the spent fuel would be stored only as an interim step. In that light, he indicated parallel tracks for development of consolidated storage facilities and repositories is easier said than done. While he agreed that the benefits of consolidated storage to decommissioned sites are clear, he did not think the benefits are as clear for existing operating sites and that an analysis would be needed. He indicated that he, personally, sees neither a security concern at US reactors, nor clear benefits from moving spent fuel to a centralized facility.

Regarding the recommendation for a new management organization, he questioned whether a new entity is needed to meet the goals of the Blue Ribbon Commission. He cited the example, that in the end, the US DOE submitted a license application for Yucca Mountain to the US NRC. He encouraged policymakers to focus on what problems need to be solved and how to solve them rather than who should solve them. He related that it isn’t clear to him whether it is a problem with siting, a problem with the Nuclear Waste Policy Act, or a trust issue. He cautioned that no new organization should be established unless it retains exclusive authority to appropriate Nuclear Waste Policy Act funds, and that a balance between Congressional oversight and budgeting autonomy for the organization should be sought.

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In his concluding remarks, he called for prompt legislative action involving a joint Congressional oversight committee on the recommendations that is built upon initial solutions, a restructuring of the Nuclear Waste Fund, and prompt development of NRC/EPA generic standards for a repository.

Dave Martin provided New Mexico's view on the Blue Ribbon Commission's report. He highlighted that the report acknowledges the lessons learned from the Waste Isolation Pilot Plant that led to its success, and the report formulates key attributes of a new waste management strategy. He discussed the Commission's January 2011 meeting in Carlsbad in which the State presented its perspective on why the Waste Isolation Pilot Plant was successful.

He discussed his views on the overall strategy laid out by the report. He indicated that he felt the strategy stressed transparency, communication, outreach, cooperation and consultation; that the strategy relies on science-based risk assessment; that the strategy sets reasonable performance goals and milestones without inflexible deadlines, whereas Yucca Mountain was overly prescriptive and rigid; and that the strategy provided for cradle-to-grave considerations.

He provided his views on key requirements for siting success including an emphasis on safety and protection of public health and the environment. Further he indicated that a consent-based approach that builds consensus amongst the parties or at least develops a framework accepted by the parties is equally important for success. He conveyed that substantial incentive for host communities would further chances of successful siting. Finally, he indicated that partnership agreements would be needed at all levels of participation to ensure success. In terms of siting future facilities, he conveyed the need to identify requirements up front, and that a joint framework for regulatory management should be considered. He provided the EPA paradigm of handing authority for certain aspects to the States because he believes based on the Yucca Mountain experience proved that a Federal-only program is simply not workable.

He urged action on consolidated interim storage facilities. He indicated that sites could be located before disposal sites are chosen. He also stated the storage facilities could be in areas likely suitable for disposal.

On geologic disposal facilities, he supported them as the scientifically preferred method for disposition of spent fuel and high-level waste. He indicated he believed site considerations should include availability of a multi-disciplinary workforce and suitable infrastructure to support a repository. He also stated that he believes new repository approaches are likely to be implemented more quickly than back fitting Yucca Mountain

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to the recommendations. He encouraged linking waste characteristics to a functional disposition path by identifying the waste type, identifying a path for disposition and emphasizing physical compatibility of the waste type and site and long-term stability of the site over origins of the waste. He believed that swift Congressional action is needed, but will be difficult to attain; that adequate resources need to be allocated to the issue; and that multiple sites should be evaluated for suitability to eliminate orphan waste streams and decouple defense and civilian waste, which he believed wouldn't leave commercial waste behind.

He laid out requirements for future consideration by New Mexico including, most importantly, the protection of citizen, both workers and the public, and the environment through an emphasis on science-based risk assessments, new regulatory standards, economic and social impacts, and extensive monitoring. He also indicated that for consideration of the Waste Isolation Pilot Plant a modification to the Land Withdrawal Act would be necessary.

He discussed recent investigations to study the effects of heat on salt at the Waste Isolation Pilot Plant aimed at assisting the national strategy for disposal of spent fuel and high-level waste. He indicated that mining started in December 2011 and is expected to be completed in 2014. Then in 2014, he anticipated heaters and instrumentation would be installed. The testing and post-test forensics would be expected from 2015 through 2020. He cited this as an example of a commitment to base decisions on data and sound science.

He concluded by reminding the audience of the Waste Isolation Pilot Plant's success, its lessons learned, and offered it as a model for the future.

Peter B. Lyons commented on potential impacts to the US DOE program based on the Blue Ribbon Commission's report. He began by reviewing the eight recommendations from the Commission, and relayed that he was able to see up-close what happened when you have a consent-based approach as at the Waste Isolation Pilot Plant. He indicated that while the process wasn't always good, it kept moving. He echoed US Energy Secretary Chu's statement on the Commission's recommendations as critical steps to a sustainable approach that can be pursued in partnership with Congress and that the US DOE is beginning to implement the recommendations to the extent it can.

He indicated implementation within the US DOE is currently within the Used Fuel Disposition program. He relayed that the Used Fuel Disposition program is moving forward through non-site-specific activities such as research and development on geologic media and improved engineered barriers. The program is also continuing

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activities to research and develop transportation, storage and disposal alternatives. In the near-term, he indicated the program's objectives include addressing the recommendations for the Used Fuel Disposition program, increasing focus on advanced light-water reactor fuels with enhanced accident tolerance, and down-selecting fuel cycle options to help focus research. In the mid-term, he indicated that the program intends to complete an implementation plan for a Test and Validation Complex for extended storage of used nuclear fuel; evaluate disposal concepts in various media; and conduct science-based, engineering-driven research for selected fuel cycle options. In the long-term, he stated that the program's objectives were to execute the Test and Validation Complex for extended storage, conduct engineering analyses of disposal sites for selected geologic media, and demonstrate selected fuel cycle options at an engineering scale. He also discussed the US DOE efforts to build a foundation to support a potential new waste management organization.

He communicated that in fiscal year 2012, the US DOE is laying the groundwork for evaluating consolidated storage by building on previous work. The effort includes the development of communication packages to interact with potential communities. US DOE is also conducting research and development to better understand degradation mechanisms in long-term dry-cask storage. He relayed that the work included continued material testing, identification of data gaps to support license amendments beyond 40 years, and define what facilities are needed to conduct additional testing.

He continued by summarizing transportation activities for fiscal year 2012. These activities include the licensing of transportation casks, revisiting the 2006 National Academy of Science recommendations on transportation of used fuel and high-level waste, and finalizing policy for providing technical assistance and funds to States for training public safety officials. He indicated US DOE plans to issue a report to address the Academy's recommendations.

He then summarized US DOE activities related to disposal for fiscal year 2012. These activities include continuing research and development on generic geologic media and lessons learned from international disposal programs, furthering understanding of salt's response to heat, exploration of borehole disposal, and engaging international partners on disposal in granite and clay rocks.

He concluded his remarks by discussing other strategic near-term activities of the US DOE program for fiscal year 2012 including developing standardized casks systems (e.g., can-in-can), developing models for potential partnerships to manage waste (e.g., how a government corporation could function), and finalizing its report to the

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Administration regarding the Blue Ribbon Commission recommendations that is due six months after the Blue Ribbon Commission issued its final report.

Comments from Panelists on Blue Ribbon Commission Recommendations One through Four:

Albert Carnesale clarified that the recommendation regarding a new management organization is not a new idea. He relayed that the Commission often was told to by stakeholders to keep old ideas, but in his view many of those ideas had failed. Some old ideas, such as the new management organization haven't yet been tried.

Everett Redmond stated that he hoped a new management organization could alleviate the changes that occur in US DOE whenever an administration changes.

Peter B. Lyons stated that he believes it was difficult in the Yucca Mountain case to convince the public that one arm of the Federal government (i.e., US NRC) would be objective in evaluating another arm of the Federal government (i.e., US DOE). He indicated that he believed a new organization could be more convincing since non-government licensees applying to a government regulator seems to have more acceptance.

Q&A from the audience:

1. *Given contentious relationship between the State of Nevada and the US DOE, what can be done in next 6 months to address the Blue Ribbon Commission recommendations given the fact that we are still waiting on US Court ruling? How do we adapt to this litigation reality?*

Peter B. Lyons stated that if the court orders resumption, the US DOE will comply. But he believes that the court action can be set aside from how to move forward with the Commission's recommendations. Even if Yucca Mountain were back on, it would not take all the waste. The recommendations could apply to second repository. Thus there is a rationale for going forward on the recommendations.

William C. Ostendorff stated he would not address the court case. He did offer that to the extent the US DOE will propose a path forward to Congress; it should be done holistically and not piecemeal. He believes that the recommendations are inter-related.

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Everett Redmond indicated that the industry is supportive of continuing the licensing process at Yucca Mountain, but that he agrees with moving forward on the Commission's recommendations divorced from court action.

Albert Carnesale clarified that the Commission did not take a position on Yucca Mountain and that he agrees with **Peter B. Lyons'** comment.

- 2. How far do you need to go in the investigation of various media before engaging public in site-specific information so that you don't study options that aren't viable from the public's perspective given the current budget situation?*

Peter B. Lyons stated that he hoped Congressional decision on a new management organization is made soon so that decision can be made by the appropriate organization. He anticipated that there would probably be a request for expression of interest from communities, then give advice to those communities based on their geologic media, but that there would need to be more research and development on the specific media at the site.

Albert Carnesale explained that the Commission did not address this directly, but that the main message heard from stakeholders was a lack of confidence in the US DOE. He envisioned that it would not be a good start to begin exploring before talking to a community. He also indicated that there would need to be a balance between acceptability of the geologic media and a consensus of community.

- 3. Could we work some of these in parallel e.g., Recommendations 1 and 3, 2 and 4?*

Albert Carnesale pointed out that current law forbids Recommendation 4, so there is a need for legislative change, but the Blue Ribbon Commission does not have any order preference.

- 4. Can NRC develop regulations promptly?*

Everett Redmond agreed that new regulations would be needed if we are exploring a new site: one regulation is dated while the other is too specific to Yucca Mountain. He also foresees a need for a framework on reprocessing.

William C. Ostendorff cautioned that generic standards on a repository are not a small task. He indicated that the US NRC rulemaking process has outstanding public engagement and that there is a strong bias toward more rather than less

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public engagement to help ensure transparency and confidence. He thought that this is interwoven with recommendation on consent-based approach.

5. *If the Waste Isolation Pilot Plant were the repository, who would license it?*

William C. Ostendorff stated that US NRC and US EPA would have a role. Issuing a license would be NRC, whereas, development of standards could be a joint agency effort.

6. *If reprocessing is so essential to the waste disposition path, why didn't the Blue Ribbon Commission address it?*

Albert Carnesale pointed out that reprocessing is discussed in the section on the Fuel Cycle and Advanced Technology. He told that the Commissioners initially had different points-of-view, but became convinced reprocessing was not feasible given the current economics. He also conveyed that the Commission did not want to get sidetracked by reprocessing because the waste streams are almost identical in terms of risk, rather, there are more important things to focus on.

Peter B. Lyons articulated that one of arguments in favor of reprocessing is whether there is a sufficient quantity of uranium available. Right now, he indicated, uranium is anything but a limitation in the cost of nuclear power. He stated that US DOE is exploring the longevity of uranium supplies. And offered that there is enough in sea water, with uranium concentrations approximately 3 ppm, to have enough uranium for centuries.

Everett Redmond reminded the audience that there is currently about 60,000 metric tons of used fuel and that it will be at least 20 years until a reprocessing facility could be opened. At a production rate of about 2,000 metric tons per year, there would be about 100,000 metric tons by the time a reprocessing opens, and he anticipated that it would be unlikely that we'd reprocess that much fuel.

Peter B. Lyons expanded on **Everett Redmond's** comment. He indicated the decision to reprocess doesn't necessarily apply to all fuel. He stated that there may be a different attractiveness to fuel within existing stockpile of used fuel, and that it may not be a go/no go decision for waste

7. *40 CFR 191 starts off generic and then gets into specifics and has resulted in a repository that has no violations. Have you considered if Land Withdrawal Act is*

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revised, what would happen with old 40 CFR 191? Note that the regulation requires drilling after 100 years. All releases from drilling.

Bob Forrest stated that there are about 16 square miles at the Waste Isolation Pilot Plant while it only occupies about 1 sq. mile. Potash and Oil/Gas have good relationship.

John Longenecker indicated that had heard that US EPA and US NRC would work together, but that it can't be reconciled today.

8. *Why can't nuclear power plants on coast be mining uranium including desalination? Any comments on innovation regarding cold fusion?*

Peter B. Lyons stated that US DOE has committed \$170 million into the university community on research and development. He clarified that the use of nuclear power plants to mine uranium is not possible because the volume of water from a nuclear power plant is not sufficient. Research indicated that we are looking at gulf stream flows. He also stated that fusion would be in US DOE's portfolio, but that it is not to the point that it is ready to power the grid. First, DOE has strong basic research program and then moves to the applied science side.

9. *From perspective of the Blue Ribbon Commission, what was the Commission thinking about how long it'd take to amend the Nuclear Waste Policy Act?*

Albert Carnesale indicated that the Commission estimated the timeframe for getting a site out was about 15-20 years, but the Commission didn't look at how long to revise the Act or any of the other specific recommendations.

10. *What are your opinions on how to define consent? Should it be identified in legislation?*

Everett Redmond indicated that he believed it should not be specified in regulation; rather there should be flexibility on how to implement it for a particular community. He stated that the organization could figure out consensus as it builds relationships with the community and then end up with legally binding agreement.

Bob Forrest said that for Carlsbad it started with school boards, housewives, anybody and emphasized that tours of the Waste Isolation Pilot Plant were the best salesman.

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William C. Ostendorff stated that this was a huge intangible. He agreed with the Blue Ribbon Commission's comments on a consent-based approach. He warned that prescriptiveness at an early stage could be self-defeating. He can imagine a process where there are a series of public meetings, engagement with local, state officials and a determination at some point in time where the State's attorney general would participate in legal agreement after which the State could not opt out. He cautioned against a situation where future state governments can back out.

Dave Martin commented that legal definitions can be burdensome.

Comments from Panelists on Blue Ribbon Commission Recommendations Five through Eight:

Peter B. Lyons emphasized US leadership and that the world is concerned that the US is not leading.

Questions and Comments from the audience:

1. *How could Waste Confidence affect Independent Spent Fuel Storage Installation operators?*

Everett Redmond said that is not necessarily a hurdle for 10 CFR Part 72 and moving forward with consolidated storage.

2. *In regards to 40 CFR 191, how do you see this as an opportunity to bring consistency across US DOE, US EPA, US NRC?*

William C. Ostendorff said that if there is a conflict between regulations of various agencies then that needs to be resolved before licensing can proceed. Your point on consistency is one that needs attention.

3. *Where are US DOE, US NRC, and industry about what defines a retrievable waste form? Will it be on a fuel assembly basis or canister basis?*

Peter B. Lyons said he wouldn't want to hazard an answer to the question, but that retrievability will be an important debate maybe even in legislation. For instance, whether to require retrievability and how to define because it can be defined differently.

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4. *Undermining 40 CFR 191; New regulation can be prospective.*
5. *Is New Mexico willing to publish guidelines about consent, and would DOE be willing to consider them?*

Dave Martin indicated that guidelines could be presented to some other States and see if they want to make a decision.

Peter B. Lyons stated that consent may change between States and situations, and that we may not want to define it rigidly because part of having an adaptive process means there is no one solution including on consent.

6. *Seek out the international perspective*
7. *Is there any discussion about other end of consent? If a community doesn't decide on disposal, how to fold in viewpoints of where waste is now?*

Albert Carnesale clarified that was not a question that the Commission had to address. The Commission was aware that it did not want to be too prescriptive, and therefore said legally binding would be preferable, but not required. The Commission says there is a need to work together, but doesn't say how to do it because it wanted it to be adaptive.

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