

WM2013 Conference Panel Report

PANEL SESSION 118: The Blue Ribbon Commission on America's Nuclear Future Report – One Year Later, US and International Developments

Co-Chairs: **Larry Camper**, *US NRC*
George Dials, *B&W Conversion Services*

Panel Reporter: **Karen Pinkston**, *US NRC*

Panelists:

1. **Peter B. Lyons**, *Assistant Secretary for Nuclear Energy, US DOE*
2. **Everett Redmond**, *Senior Director, Nonproliferation and Fuel Cycle Policy, NEI*
3. **Keith I. McConnell**, *Director, Waste Confidence Directorate, US NRC*
4. **David Martin**, *Cabinet Secretary, New Mexico Environment Department*
5. **Francis "Chip" Cameron**, *President, The Zero Gravity Group, LLC*
6. **Magnus Vesterlind**, *Head, IAEA Waste and Environmental Section (Austria)*
7. **Risto Paltemaa**, *Director, Nuclear Waste and Material Regulation, Radiation and Nuclear Safety Authority (Finland)*
8. **Olle Olsson**, *Vice President, Strategy and Programme, SKB (Sweden)*

About 130 people attended this panel session which provided an update to the Blue Ribbon Commission one year later. This panel also included a discussion on international developments in waste disposal.

Summary of Presentations

Larry Camper opened the panel discussion with a summary of last year's workshop, which covered the actual Blue Ribbon Commission report and the eight recommendations in it. He stated that they felt it was worthwhile to have another session one year later which also included international perspectives.

Peter B. Lyons spoke about the administration's strategy for the management and disposal of used nuclear fuel and high-level radioactive waste. He described the Blue Ribbon Commission recommendation list and stated that consent based siting is imperative. He described the summary of the administration's strategy on used nuclear fuel and high-level waste that was issued last month. This included the administration's response to the Blue Ribbon Commission recommendations. He described the key strategy elements of the administration, which include consent based siting, system design, and governance and funding. He discussed the administration's strategy for the implementation of interim storage facilities and geologic disposal and transportation. He stated that if we are serious about consent based siting, it will require time to work and noted that we can expedite interim storage, but geologic disposal will take more time. He stated that the linkage between interim storage and deep geologic disposal is important because we do not want interim storage to become de facto permanent storage. He also stated that the implementation of a consent based process and a new organization dedicated to waste management requires multiple levels (e.g, tribal and state). He described the RAND study on models for the new organization. This study found that there are multiple workable models and no specific model is endorsed at this time. He concluded by saying that legislation is needed, and that we cannot move ahead on site specific progress without new legislation.

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Everett Redmond spoke about the Blue Ribbon Commission recommendations and DOE's strategy. He said that industry still supports continued licensing of Yucca Mountain. He provided an overview of industry stakeholder priorities. He said that they support the eight recommendations of the Blue Ribbon Commission and that three of these recommendations should receive priority (fixing the waste fee, consolidated storage, and the new management entity). He noted that the challenge moving forward is finding a site. He said that he thought that they should focus on the consolidated pilot storage facility. He then discussed areas that need to be addressed in the debate. These included legislative principles, the nuclear waste fund and fee collection, taxpayer liability and the judgment fund, and the comingling of defense and commercial waste. He then discussed legislation that is expected to be introduced in the Senate and House. He stated that he does not think that either defense or commercial waste should be solved first but that they should work together. He emphasized that stakeholders need to be part of the debate to keep momentum moving forward. He concluded by stating that used fuel management is one of NEI's top four priorities this year.

Keith I. McConnell provided a status report on the NRC's waste confidence decision and rule. He first provided a background on the waste confidence rule. He stated that the waste confidence rule is based on confidence in DOE's repository program and explained that waste confidence is a generic determination on spent fuel storage and repository availability. He noted that waste confidence only addresses a narrow part of the back end of the fuel cycle (i.e., the time after power plants cease operation and before a repository opens). He stated that the NRC is currently undergoing a significant effort to revise the waste confidence decision. He discussed the history of the waste confidence decision and stated that in 1984 there were five findings related to waste confidence. He then discussed the two findings that were questioned (i.e., that there was reasonable assurance that a repository would be open in 2007-2009 and that sufficient capacity will be available within 30 years of the reactor license and that spent fuel can be stored safely for 30 years). He explained that the finding about the opening of the repository was evaluated and that in 2010 the NRC said that sufficient mined geologic repository capacity will be available when necessary and that spent fuel can be stored safely for 60 years after license termination. He then described the three defects that the court of appeals identified in the NRC's Environmental Assessment (i.e., a no repository analysis was not done, spent fuel leaks were not considered, and spent fuel pool fires were not considered appropriately). He then explained that this decision has an impact to reactor and storage licensing and that while licensing and adjudication continues, no final licenses will be issued until the remand is resolved. He concluded with a description of the NRC's path forward for issuing a GEIS and rule within 24 months and the opportunities for public involvement that will be available during this process.

David Martin provided a perspective on America's path forward to implement recommendations from the Blue Ribbon Commission. He stated that high level waste storage is a national problem and that decisions on locations for storage and disposal need to have the support of the communities and states. He discussed the State of New Mexico's response to the Blue Ribbon Commission recommendations. He said that science will guide decisions by the state on new missions for WIPP and interim storage and management of Used Nuclear Fuel and High Level Waste and that no position is taken at this time. He described the Eddy Lea Energy Alliance and said that they are currently engaging independent partners for potential Used Nuclear Fuel management facility with storage and R&D. He then discussed the components of the ECOS resolution on the storage and disposal of defense and commercial high level waste.

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He then discussed community issues and noted that many communities lack experience in dealing with nuclear waste disposal. To address this, Energy Communities Alliance (ECA) released a report to assist local communities. He described the results of an ECA and ECOS, a Washington State firm, roundtable on high level waste in December 2012, which was an intergovernmental meeting in which communities shared information and state and community high level waste positions and priorities were identified. He said that the outcome of the roundtable was that they supported the ECOS resolution; they thought that the Nuclear Waste Fund should be used for what it was intended, and that they thought that consolidated storage should be implemented as soon as possible. He concluded by stating his thoughts on tomorrow's challenges, which included interim storage, congressional action, the implementation of a geologic repository regardless of Yucca, the comingling of defense and commercial waste, and the allocation of adequate resources.

Francis “Chip” Cameron provided a discussion on collaborative process dialogues: a path forward to storage and disposal. He discussed the court cases of the State of Nevada vs the NRC and the Aiken County case. He then provided an overview of the Blue Ribbon Commission charter and practice regarding public participation efforts. He said that the Blue Ribbon Commission practice includes formal meetings, public comments, transcripts, availability of information on website, opportunity to comment on draft reports, and stakeholder focus group discussions. He also said that according to the Blue Ribbon Commission the new waste management organization should involve a mechanism for public participation and there should be a stakeholder advisory committee and a special subcommittee to provide specific guidance on the siting process as a conduit for stakeholder input. He then discussed the DOE strategy paper and the NRC EIS process on waste confidence as well as congressional bills that are proposed. He then described his proposal for having a multi-party collaborative process now among affected stakeholders. He stated that it was not necessary to wait for agency or congressional action to do something. He then discussed what a collaborative process is and how a collaborative process is done, and who should be involved. He said that one model for starting now is to have a partnership for collaborative governance. In this model, decision making is in the hands of citizens and there is direct participation of stakeholders from a wide range of affected groups.

Magnus Vesterlind provided an international perspective on geological disposal. He began this discussion with an overview of what is said about disposal in international legal instruments, such as the Joint convention and the European directive within Europe. He then described the Safety Fundamentals in the IAEA, which include general safety requirements, specific safety requirements, and safety standards and safety guides on disposal. He also described the 26 safety requirements. He then presented what the IAEA conveys to member states regarding the management of spent fuel. He noted that spent fuel can be either a waste or a resource and that it is a national decision. He also stated that there must be a long term commitment and that wait and see is not acceptable. He stated that there is no conflict between direct disposal and reprocessing and that the time schedule is different. He then noted that there will always be a need for disposal when all waste streams are considered. He then discussed what is going on internationally with license applications for geological disposal. This included direct disposal in Sweden, direct disposal in Finland, and reprocessing of high level waste in France. He then described the success factors he has observed with these sites. These included political commitment, a clean and stable division of responsibilities, early involvement of regulators,

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strong local stakeholders, a stepwise siting process, a robust funding system, avoiding of narrow framing, international cooperation, and patience.

Risto Paltemaa gave a description of spent fuel disposal in Finland. He gave an overview of nuclear power plants and spent fuel management and disposal in Finland. He described the spent fuel disposal project and described the steps and phases, implementation, and regulatory oversight for the project. He then discussed the siting of the disposal facility, which started with over 100 potential sites. He described the preliminary site characterization and detailed site characterization that was performed as part of this process. He then presented the steps in the licensing of a spent nuclear fuel repository in Finland, which included design in principle, the construction license application, and the operational license application. He concluded by describing the rock characterization facility that is needed for safety demonstration and will form part of the final disposal facility.

Olle Olsson provided a description of the current status of waste management in Sweden. He described the present waste management system in operation in Sweden, which includes a final repository for short lived waste and a central interim storage facility. He then described the license application submitted in March of 2011 for a spent fuel repository and an encapsulation plant. He said that the licensing review was being performed according to the Nuclear Act and Environmental Code and that the Swedish Radiation Safety Authority was carrying out the review along with an independent NEA review. He provided a summary of comments received on the application, which included comments on the scope of the Environmental Impact Assessment, the demarcation between the Environmental Code and the Nuclear Act, the use of alternative methods, siting, long term stability, and environmental consequences. He then described the next steps towards implementation, which include the construction of the facilities, the further strengthening of the scientific basis, and developing and keeping public confidence.

Questions and Answers

Peter Lyons was asked how the new consent based process is different than the process used in 1986 with the Mescalero Indians. He responded that we now have the example of WIPP and international examples. He also noted that we now have proof of the challenge if the states are not involved and that the Mescalero does not have state consent. He stated that four states have expressed interest in moving ahead.

Peter Lyons was asked what the technical justification is for abandoning Yucca Mountain. He responded that he did not say that it was technically unworkable and that he was not commenting on the technical feasibility. He stated that he does not believe that they would ever get the state permits needed for the railroad to the site. He said that he wants to see success and wants to get out of the mode where Nevada will block the site.

Peter Lyons was asked how much progress can be made with the states before legislation is enacted. He responded that they probably could start the process, but probably could not finish selecting the site and that selecting the site prior to having new legislation probably would not be the smart thing to do. He stated that it is better to have more confidence that they have legislative backing before moving much further.

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A commenter, Bob Halstead, stated that on behalf of Nevada, he appreciates the position taken by the administration. The commenter noted that he had heard a rumor that the DC Court of Appeals would order the NRC to resume their review and stated that Nevada is prepared to prove the site is unacceptable. The commenter also stated that Nevada's intent is to help implement the Blue Ribbon Commission's recommendations. The commenter then asked how they would implement the Blue Ribbon Commission's recommendations if licensing resumes. **Peter Lyons** responded that he will not speculate on what the court will do. He said that if the court orders the NRC to resume their review, DOE would support the NRC within the available funding, which is limited. He also stated that they could move ahead with a second repository while Yucca is in the courts and noted that even if Yucca resumes, a second repository is needed.

Peter Lyons was asked whether he views spent fuel as a waste or as a resource and if it is viewed as a waste, what about retrieval. He responded that the Blue Ribbon Commission recommended that we need to move first to a repository to show that there is a solution on the back end of the fuel cycle. He also said that the Blue Ribbon Commission recommended that we maintain a strong program on the recycling of fuel. He said that in his mind whether or not we have reprocessing is driven by economics and there is not enough information available on this to have an answer today because the cost of a repository and fuel resources is unknown. He noted that in the future we will have information to make an informed decision on reprocessing. He stated that we need a path to a repository, so we should focus on a repository today.

Risto Paltemaa and **Olle Olsson** were asked how much communities need to rely on private investors versus government funds in developing data to see if sites are suitable. **Olle Olsson** stated that in Sweden communities were given money from the nuclear waste fund to fund work for their engagement in the process, such as hiring contractors, but this was not done extensively. He said that the communities relied on regulators to provide oversight, not private investigators. **Francis "Chip" Cameron** noted that in the core values of the Blue Ribbon Commission there is a commitment of financial and technical support for informed participation. **Risto Paltemaa** said that the situation in Finland is similar to Sweden and that the process of communicating with municipalities mainly relies on the regulator.

A question was asked regarding the status of having a shared disposal facility in Europe. **Magnus Vesterlind** responded that the recent EU waste directive states that waste disposal is a national responsibility, but it also recognizes that EU states who wish to cooperate can. He also noted that there is a project funded by the EU to explore the possibility of a joint facility. **Risto Paltemaa** stated that it is difficult enough to site a repository for a country's own waste and that would be impossible to site for international disposal. **Olle Olsson** said that the same is true for Sweden.

A question was asked regarding the thoughts of the panelists on how to make consensus siting last for decades. **Everett Redmond** responded that he thought that a legally binding agreement is needed. **George Dials** noted that WIPP relicensing occurs every 5 years. He said that because of this, a safe and compliant operation has to be run and trust must be maintained, which includes being transparent. **Francis "Chip" Cameron** said that this is a question for the collaborative stakeholder panel.

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David Martin was asked what the recipe for success was for WIPP. He responded that the part of the state near WIPP was very supportive and they refer to it as the nuclear corridor. He noted that Carlsbad was originally a mining town and the people there are used to taking risks. He stressed the importance of being transparent and open and involving competent people in communication.

Everett Redmond was asked what the strategy for getting to prompt action should be. He responded that they know that legislation will be passed at some point, but it is not known when. He said that new congressmen will have to be brought up to speed. He noted that people believe that no host would be willing, but if we can get the process started then maybe we can get moving. He stated that there are a lot of challenges ahead. **George Dials** said that there is a political reality that the Secretary of Energy is leaving and they are waiting for the next secretary. He noted that in the meantime, if the candidates are known, they could be briefed ahead of time.

A commenter noted that based on the history of WIPP the process takes time.

Risto Paltemaa and **Olle Olsson** were asked what their advice is to the US and if there is anything they did that we should not do. **Risto Paltemaa** stated that a lot of luck was involved, especially in the siting process and that small things can change public perception. **Olle Olsson** said that certain decisions should not be pressed for too early in the process.

Keith McConnell was asked for his initial thoughts on the preferred alternative for the Waste Confidence Rule EIS. He responded that the no action alternative is for there to be no rule. He also stated that he could see scenarios of having a repository in 2050, having a repository at the end of the century, and a no repository option.

The panel was asked how the viability of a site as a long term repository could be considered in the siting of an interim disposal facility. **Everett Redmond** responded that he would give preference to a site for an interim storage facility that would be willing to host a repository. He said that in his opinion they should focus on siting the storage facility.

In response to a question regarding the commingling of commercial and defense waste, **Everett Redmond** stated that we cannot wait 20-30 years on one issue to solve the other issue and that both issues should be worked on together. **David Martin** said that he agreed. He said that there are some in the ECA that feel that it is worthwhile to think of disposing of defense waste first. He noted that for commercial waste the main thing is the funding situation and how to handle a consolidated site.