

## WM2015 Conference Panel Report

**PANEL SESSION 074: Outcome of the US NRC Waste Confidence Decision Rulemaking on Spent/Used Fuel**

**Session Co-Chairs:** **Larry Camper, US NRC**  
**Lisa Edwards, EPRI**

**Panel Reporter:** **Zahira Cruz, US NRC**

### **Panelists:**

- **Keith McConnell**, *Special Assistant to the Office Director, Office Nuclear Material Safety and Safeguards, US NRC*
- **Carrie Safford**, *Acting Assistant General Counsel, High-Level Waste, Fuel Cycle and Nuclear Security, US NRC*
- **Francis “Chip” Cameron**, *Executive Consultant, Zero Gravity*
- **Pierre Paul Oneid**, *Senior Vice President and Chief Nuclear Officer, Holtec International*
- **Jonathan Rund**, *Esquire, Assistant General Counsel, NEI*
- **Geoffrey H. Fettus**, *Senior Attorney, Natural Resources Defense Council (NRDC)*

Panel Session 074 was convened at 2015 Waste Management Symposium. Focusing on the US NRC rulemaking to address waste confidence including the environmental impact statement (EIS) and public process to complete rulemaking and update the NRC position on the long term storage of spent/used nuclear fuel in the US. The panel was composed of representatives from US NRC, NEI, Holtec International and NRDC and stakeholder outreach expert. Panelists provided a broad spectrum of views representing the regulator, the industry, stakeholder outreach, and key technical considerations. The movement by the NRC to the concept of long term storage, along with the supporting EIS, rather than waste confidence is a significant change in policy regarding the long term management and disposal of spent nuclear fuel.

### **Summary of Presentations:**

As of December 2013, the amount of commercial spent fuel in safe storage at commercial nuclear power plants was an estimated 72,000 metric tons. That amount is expected to increase at a rate of approximately 2,400 metric tons each year. Most reactor facilities were not designed to store on site the full amount of spent fuel that the reactors would generate during their operational lives. In June 2012, the US Appeals Court for the District of Columbia Circuit struck down a provision in NRC regulations known as the “waste confidence rule.” Waste Confidence is a generic finding that spent nuclear fuel can be stored safely for decades at reactor sites in either spent fuel pools or dry storage casks, and that a repository will be available for final disposal of the spent fuel. It does not authorize extended storage of spent fuel at reactor sites, but it allows the NRC to proceed with environmental reviews of new reactors or reactor license renewal without considering the site-specific effects of spent fuel storage in the environmental analysis. Following the court ruling, the Commission directed the NRC staff to develop a new rule and a generic environmental impact statement detailing the environmental impacts of extended storage of spent fuel, including a scenario in which a repository is never available. The final rule and environmental impact statement were published in September 19, 2014 and became effective in October 20, 2014.

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Many notable changes reflected in 10 CFR 51.23 include:

- The name change from Waste Confidence to Continued Storage in response to public comments;
- There is no longer a separate policy statement or decision by the Commission regarding the safety of spent fuel storage, or a timeline for repository availability. The shift to a Generic Environmental Impact Statement (GEIS) from a more limited environmental assessment allowed the NRC to change the overall approach; and
- The Rule adopts the findings from the GEIS and incorporates them into future NRC licensing-stage environmental reviews, whereas previous versions of the Rule determined that impacts of continued spent fuel storage were insignificant and need not be discussed in licensing reviews.

### Synopsis of Panel Discussion

During the session, panelists and members of the audience provided perspectives and considerations related to spent/used fuel long term storage. The purpose of the panel was to foster communication of these perspectives and considerations. This section presents a synopsis of the discussion.

**Keith McConnell**, NRC, stated that in June 2012, the Commission was tasked by the US Appeals Court for the District of Columbia Circuit to include a provision in NRC regulations known as the “waste confidence rule.” US NRC had to make a generic determination about spent fuel storage specifically in the following areas: 1) waste confidence (fuel can be stored safely) and 2) rule codifying environmental impacts. This task was a high priority for the Agency and the period to complete the determination was 24-months. Licensing of reactors and spent fuel storage were put on hold until the final decision was made. The final rule and environmental impact statement were published in September 19, 2014 and became effective in October 20, 2014. Lots of public outreach and communications took place during the completion of this task.

During the development of the “waste confidence rule,” outreach and communications were very important for sending and receiving information from the public and stakeholders. Due to the high public interest in this topic, the use of plain language and a facilitator for communications was very important. US NRC maximized opportunities for public comments. During the Scoping phase it conducted 4 meetings and then 13 meetings during the Draft Environmental Impact Statement (EIS) publication. These opportunities served to explain the EIS and rulemaking process. Some examples of means used for sending information were: email, public website, blog, press releases, and twitter announcements. Examples of means used for receiving information were: correspondence, phone calls, emails, oral comments at meetings. During these meetings the NRC used a facilitator who helped to stay on schedule and have a neutral persona “running” the meeting.

In terms of the public outreach process, NRC’s facilitator, **Chip Cameron**, focused in three main areas: 1) public concerns – substantive public interest, 2) process to receive and provide information, and 3) psychological – how to treat the people. The facilitator commended the different means used to get the public involved in the process to comment on the draft EIS for the waste confidence rule. Even though NRC is not required to do so, it holds public meeting to

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discuss how it implement the National Environmental Policy Act process (NEPA). NEPA requires NRC to evaluate the environmental impact of any major federal actions. Overall, the key for success of good public communication and outreach was due to the planning and preparation.

The industry representative, **Pierre Paul Oneid**, Holtec International, presented their perspective on the future of the spent/used fuel. Fuel storage (casks/canisters) are designed for 20 years, renewed to 40 years, but not forever. For the past years it has been demonstrated that the storage canisters/casks have been stored safely. There are good aging management programs in place. But it was recognized that there is a need for a study to determine how long the canister/cask will last even with a good aging management program.

In Holtec's opinion, the future of spent fuel storage should consider: 1) one system fits all, 2) central interim storage, 3) possibility that there will not be a "Yucca Mountain Repository," 4) canisters should be able to be safely store spent nuclear fuel for more than 100 years – design might need to be modified, 5) used/spent fuel could be transferred to the Waste Isolation Pilot Plant in New Mexico, 6) fuel will be stored in place and monitored indefinitely through Institutional Controls (IC).

The representative from NEI, **Jonathan Rund**, presented some areas of the proposed rule which were challenged by some parties. The areas challenged are related to: 1) site specific severe accident impacts, 2) examination of other alternatives to continue power generation and resulting stored fuel, and 3) IC will be in place indefinitely. The current expectation is for the Court to brief on their decision related to these petitions by the end of the third quarter of this year of beginning of fourth quarter.

NRDC's perspectives on Waste Confidence were also presented. The NRDC representative **Geoffrey H. Fettus**, discussed various points in disagreement with NRC's proposed action under the waste confidence rule. NRDC major comments on the Draft GEIS are:

- 1) NRDC and NRC have different understandings of NEPA obligations, specifically on what the "major federal action" is;
- 2) NRC's failure to formulate and compare distinct and environmentally meaningful alternatives

These comments were formally submitted and described in detail during the Draft GEIS comment period summer of 2014. In its letter, NRDC requested that the NRC withdraw the Draft GEIS and perform additional analysis of extended storage of spent nuclear fuel with associated failure of ICs.

During the questions session, the first question/comment discussed was: "it was brought up to the attention of the panel that not only the spent fuel storage is an area that needs to have a long-term care program. Hazardous waste disposal sites and dams near the power plant or other nuclear sites need to be cared for long time too." The panel commented that they are aware of it and that they assure that there are monitoring programs in place that are related to these areas. But, one thing to think about is: What happened if the IC fails?

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The second question/comment discussed was: “How do we use “risk” and “low probability” to influence the information presented to the public to provide confidence?” All panelists agreed that the team working on the project has to be qualified. The staff should be aware of any specific areas of concerns about risk perspective. Efforts should be made to have a Probabilistic Risk Assessment staff involved in the projects so that they can explain why technology today is safe. It was acknowledged that the topic “risk” could be challenged at a Court. Public has to understand that NRC make risk-informed and performance based decisions.

### Conclusions

This panel discussed the status of the US NRC rulemaking to address waste confidence including the environmental impact statement (EIS) and public process to complete rulemaking and update the NRC position on the long term storage of spent/used nuclear fuel in the US. It was recognized that good planning and preparation were key elements in the success of public communications and outreach in seeking and transmitting information related to the waste confidence rule process. Representatives from NEI, Holtec International and NRDC presented their perspective and comments for NRC to consider on areas that still need additional analysis related to long term management and disposal of spent nuclear fuel. Dialogue continues among these entities to discuss any proposed additional actions needed to enhance public confidence in this topic.