

Got Confidence?

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Welcome

Good morning. Please allow me to add my welcome to this “Reg Con 2012.” From the sound of this title, it seems like we are on a military mission. We are on a mission, but it is a mission to ensure safety and security. It is great to see such a large and enthusiastic audience participating in this regulatory conference. Twenty years ago it would have been difficult to entice such involvement in an NRC meeting on the topic of spent nuclear fuel management. How events can change interest in a topic.

I bring you greetings from the Nuclear Regulatory Commission and Bill Borchardt, the Executive Director for Operations. The Commission is testifying this morning before the Senate Environment and Public Works Committee on progress in implementing the enhancements following the nuclear emergency at Fukushima-Daiichi. Concurrently, Assistant Secretary for Nuclear Energy Pete Lyons is testifying before the Senate Committee on Energy and Natural Resources on the Department of Energy’s used fuel management strategy and the proposed Nuclear Waste Administration Act of 2012. Just last Thursday, the Commission announced its decision on how to proceed with Waste Confidence. There is clearly a lot of interest and involvement at the highest levels of government regarding the safe and secure management of spent fuel.

I plan to focus my presentation this morning on waste confidence, including what is waste confidence, the Court of Appeals decision affecting waste confidence, impacts of this decision on NRC licensing activities, and how the NRC plans to restore confidence by resolving the deficiencies identified by the court.

Got Confidence?

So what is “waste confidence” in the context of NRC’s regulatory program? If we are attempting to answer that question, it is important to understand what waste confidence is. *Webster’s* offers several definitions of the term “confidence,” but the definitions that are most relevant here are “trust or faith” and “a feeling of assurance.” The Commission defines “waste confidence” as a generic finding that spent nuclear fuel can be safely stored for decades beyond the licensed operating life of a nuclear power plant without significant environmental effects. This finding is actually a set of five generic safety and environmental findings that are reflected in the Commission’s Waste Confidence decision and a corresponding rule in section 23 of 10 CFR

Part 51. “Waste Confidence” enables the NRC to license nuclear reactors and renew operating licenses without specifically examining the environmental effects of extended waste storage for each individual site pending ultimate disposal of the spent fuel. Consequently, “waste confidence” has little to do with the ultimate disposition of the waste, and much more to do with the generation of the spent fuel and extended storage.

Now I must provide a caveat up front that the Commission agonizes over every word of its waste confidence decisions. For the purpose of my presentation, I will attempt to present waste confidence in plain language. However, if there are any questions about the precise context or terms of the Commission’s waste confidence determinations, I would encourage you to actually read the publicly available findings made by the Commission for an authoritative view.

History on waste confidence

There is a long history to the development and evolution of Waste Confidence, which dates back almost to the establishment of the Nuclear Regulatory Commission. The Commission’s waste confidence decision initially responded to a lawsuit regarding spent nuclear fuel storage and disposition in the *Minnesota v. NRC* decision by the U.S. Court of Appeals for the District of Columbia Circuit in 1979. In that decision, the court directed the NRC to determine whether a disposal solution for spent fuel would be available by the time a reactor’s operating license expires and, if not, whether the spent fuel could be safely stored after that date. In response to the Court’s direction, the NRC published first its Waste Confidence decision in August 1984. This decision included five findings that addressed:

- The technical feasibility of a geologic repository
- The assurance that disposal would be available by a certain time
- The assurance that spent fuel and high-level waste could be managed safely beyond the expiration of the licenses for the operating nuclear power plants
- The absence of significant environmental impacts from spent fuel storage regardless of reactor site
- The adequacy of a generic assessment of spent fuel storage beyond the expiration dates of the nuclear power plant licenses.

As part of the first decision, the Commission committed to periodically review these findings in recognition that new information could surface that would legitimately prompt such reassessments. The Commission reviewed the first decision and issued its second waste confidence decision in 1990 with some clarifications and modifications.

The Commission again reviewed its waste confidence decision in 1999 and reaffirmed the 1990 decision. One year after the date mandated in the Nuclear Waste Policy Act for spent fuel acceptance by the Federal Government, the Commission decided that it would reevaluate the findings when development and regulatory activities for a geologic repository at Yucca Mountain were completed, or if “...significant and pertinent unexpected events occurred, raising substantial doubt about the continuing validity of the Waste Confidence findings.”

In 2007, the Department of Energy was committing to submit its license application for the repository at Yucca Mountain by 2008 and projecting that the geologic repository would begin operating no sooner than 2020 if approved by the Commission and if Congress provided sufficient appropriations. In this same year, the Commission decided to commence the fourth reevaluation of Waste Confidence to consider developments since 1990. The Commission completed its reevaluation and issued its latest update in 2010, substantially revising the timeframes associated with the availability of a disposal site and the length of time during which spent fuel could be safely stored. The Commission's decision served as the environmental assessment for the rule, which was published on December 23, 2010.

The 2010 Waste Confidence decision reaffirmed Findings 1, 3, and 5 and updated Findings 2 and 4.

Finding 1 – The Commission finds reasonable assurance that safe disposal of high-level radioactive waste and spent fuel in a mined geologic repository is technically feasible.

Finding 2 – The Commission finds reasonable assurance that sufficient mined geologic repository capacity will be available to dispose of the commercial high-level radioactive waste and spent fuel generated in any reactor when necessary.

Finding 3 – The Commission finds reasonable assurance that high-level waste and spent fuel will be managed in a safe manner until sufficient repository capacity is available to assure the safe disposal of all high-level waste and spent fuel.

Finding 4 – The Commission finds reasonable assurance that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 60 years beyond the licensed life of operation (which may include the term of a revised or renewed license) of that reactor in a combination of storage in its spent fuel storage basin and either onsite or offsite independent spent fuel storage installations.

Finding 5 – The Commission finds reasonable assurance that safe, independent onsite spent fuel storage or offsite spent fuel storage will be made available if such storage capacity is needed.

Concurrent with its 2010 Waste Confidence decision, the Commission directed the staff to conduct the necessary analyses and consider the potential environmental impacts of the extended storage and transportation of spent nuclear fuel and high-level waste for more than 60 years after a reactor's licensed life. These analyses could support additional, future revisions to the Commission's Waste Confidence decision and rule. The staff commenced this work in 2011 and referred to these potential revisions as the Long-Term Waste Confidence Update.

Court of Appeals Remand, 8 June 2012

In September 2011, the State of New York and several other petitioners filed a lawsuit challenging the Commission's 2010 Waste Confidence rule before the U.S. Court of Appeals for the District of Columbia Circuit. The Court issued its decision in this case on June 8, 2012, and found that the NRC violated the National Environmental Policy Act in issuing its 2010 Waste Confidence decision and the accompanying Temporary Storage Rule. Consequently, the Court vacated the Decision and Rule and remanded the case to the NRC.

The Court's decision is publicly available and is a relatively easy decision to read and understand. In summary, the Court found that the 2010 Waste Confidence decision was deficient for three reasons:

- NRC had not analyzed the environmental impacts if a repository were never built
- NRC's environmental analyses insufficiently considered the impacts of spent fuel pool leaks because they relied too heavily on past experience and on NRC regulatory oversight
- NRC's environmental analyses did not adequately consider the consequences of potential spent fuel pool fires because the agency assessed their probability of occurrence as low

It is important to stress that the Court did not question the merits of Waste Confidence generally, but rather identified these three specific defects that need to be remedied. In addition, the Court identified the need for the Commission to either conclude an environmental assessment with a Finding of No Significant Impact or prepare an Environmental Impact Statement to fulfill the agency's obligations under NEPA.

Impact on Regulatory Programs

As the Commission stated in its August 7, 2012, response to numerous petitions following the Court's June 8th remand (CLI-12-16), "Waste confidence undergirds certain agency licensing decisions, in particular new reactor licensing and reactor license renewal." Consequently, until the court's remand is adequately addressed, the NRC will not issue licenses dependent on the Waste Confidence Decision or the Temporary Storage Rule. The Commission emphasized that this decision extends only to the issuance of final licenses and directed that these same licensing reviews continue to move forward, including ongoing adjudications, except for contentions associated with waste confidence issues, and licensing reviews on existing schedules other than adjustments to address waste confidence issues. The Commission also assured that the public will have an opportunity to comment in advance on any generic waste confidence decision.

The NRC staff is currently assessing adjustments to review schedules for new reactors and renewal reviews for operating reactors, consistent with the Commission's direction. The staff is planning to advise the Commission later this month on any necessary changes in response to the Commission order.

Get Confidence!

So how are we going to get confidence in response to the court remand? Last Thursday, September 6th, the Commission directed the NRC staff to develop a generic environmental impact statement to support an updated Waste Confidence Decision and temporary storage rule. In recognition of the importance of resolving the defects identified by the Court, the Commission directed the staff to establish a schedule to publish a final rule and the environmental impact statement within 24 months or by September 5, 2014. This is an extremely demanding schedule and the staff is committed to meet this schedule by supporting the Commission with high quality EIS and rule and with ample opportunity for public involvement throughout the process. The staff has established a Waste Confidence Directorate in the Office of Nuclear Material Safety and Safeguards to develop the EIS and associated rule. Dr. Keith McConnell will head this Directorate and will succeed using experts from across the NRC.

In developing the EIS, we plan to draw on the long, rich history of Waste Confidence that I briefly summarized earlier in my presentation. We will particularly focus on developing any additional analyses to remedy the defects identified by the court. The EIS will also draw from existing analyses, to the extent necessary and appropriate, such as DOE's Yucca Mountain EIS, which the staff adopted in 2008, as well as several analyses of the environmental effects of spent fuel pool fires and leaks.

We are also committed to providing ample opportunity for public involvement and comment to ensure that the staff has a good understanding of a broad range of views. We will consider these views in developing and completing the EIS. We will be innovative in providing meaningful opportunities for stakeholders and the public to comment and be involved in the process, while seeking efficiencies to achieve the scheduler and resource constraints associated with this important assignment. We will draw on best practices that we and other agencies have developed over the years. To complete the EIS and rulemaking within the 24 months, you can expect the agency will move swiftly through scoping, development, publication, and comment on a draft EIS and a proposed rule next year with the final EIS and draft final rule to the Commission in summer 2014, well in advance of our September 2014 deadline. Work with us. Do not expect comment periods will be extended. Engage in scoping. Share your perspectives early for consideration. We look forward to meeting this challenge over the next two years and are confident that we will succeed.

Closing

So what does all of this mean for "Reg Con 2012?" Our focus in this conference is all about sharing perspectives and ideas on spent fuel storage and transportation. However we resolve the defects identified by the court, the United States will continue to rely on and expect nothing less than safe and secure storage of spent nuclear fuel. Consequently, we expect vendors and licensees to safely and securely manage spent nuclear fuel. We also expect that NRC will regulate spent fuel storage and transportation effectively and efficiently. We are counting on you and the NRC staff to make sure that we "get it right." Help us help you by actively engaging

in this conference and by sharing your ideas today and tomorrow and well after this conference has concluded. How can we accomplish our regulatory functions better, more openly, effectively, efficiently, predictably, and, of course, safely and securely? Your ideas, perspectives, and initiatives will help us accomplish these objectives. Sharing your thoughts on using operating experience and risk assessment, improving transportation regulation, resolving issues on storing and transporting high burn-up spent fuel, improving vacuum drying and shielding, and other related topics will help to enhance NRC's regulatory program for spent fuel storage and transportation.

Thank you for participating in Reg Con 2012 and have a great conference!

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