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Name: Louis Zeller
Address:
PO Box 88
Glendale Springs, NC, 28629
Email: bredl@skybest.com

General Comment

On behalf of the Blue Ridge Environmental Defense League, I submit the attached comments.

Attachments

140227 BREDL comments on proposed risk management framework

Blue Ridge Environmental Defense League

www.BREDL.org PO Box 88 Glendale Springs, North Carolina 28629 BREDL@skybest.com (336) 982-2691

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Cindy Bladey, Chief
Rules, Announcements, and Directives Branch (RADB)
Office of Administration
Mail Stop: 3WFN-06-44M
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

RE: Docket ID NRC-2013-0254

On behalf of the Blue Ridge Environmental Defense League, I submit the following comments. The Blue Ridge Environmental Defense League is a 30-year old public interest organization founded by residents to educate the public for the protection of their community from nuclear waste. Over the decades, our mission has expanded to include many issues but still centers on the goals of environmental protection, public health and social justice.

Background

The U.S. Nuclear Regulatory Commission has issued a white paper which sets forth the concept:

> for a possible Commission policy regarding the use of a structured decision-making model that results in risk-informed and performance-based defense-in-depth protections to: Ensure appropriate personnel, barriers, and controls to prevent, contain, and mitigate possible inadvertent exposure to radioactive material according to the hazard present, the relevant scenarios, and the associated uncertainties; and ensure that the risks resulting from the failure of some or all of the established barriers and controls, including human errors, are maintained acceptably low.

In 2011, at the request of Chairman Gregory B. Jaczko, a Risk Management Task Force (RMTF) was established to evaluate how the Nuclear Regulatory Commission should be regulating 10 to 15 years in the future. The RMTF was chartered to:

> develop a strategic vision and options for adopting a more comprehensive and holistic risk-informed, performance-based regulatory approach for reactors, materials, waste, fuel cycle, and transportation that would continue to ensure the safe and secure use of nuclear material.

I understand that the purpose of this docket is to gather information to help the agency further these goals.

Comments

In response to the nuclear melt-down at Fukushima, in June 2013 the Nuclear Regulatory Commission released its study of earthquakes and nuclear waste stored in fuel pools.[1] However, the NRC's finding was biased, inaccurate, and at odds with the conclusions of other scientific experts which is that fuel pools are unlikely to withstand severe earthquakes and are subject to leaking.

The NRC dismisses aging and deterioration of Irradiated Fuel Pool Systems by ignoring its own study which concludes, "*as nuclear plants age, degradations of fuel pools are occurring at an increasing rate, primarily due to environment-related factors. During the last decade, a number pools have had water leakage.*"[2] Another NRC study estimated that an earthquake-caused fuel pool fire could release approximately 2,500 times more radioactivity to the general public than a dry cask failure.[3]

In 2011 the Nuclear Regulatory Commission's Fukushima Lessons Learned Task Force concluded that enhancements to safety and emergency preparedness were warranted and made a dozen recommendations for Commission consideration (October 3, 2011 in SECY-11-0137). We now know that rapid combustion in the reactor building and refueling bay damaged the nuclear waste fuel pools at Fukushima; however, all of the waste in dry casks escaped damage during the earthquake and tsunami.[4] But these recommendations were ignored when the Commission approved the Plant Vogtle construction and operation license in February 2012, the first such license issued in 30 years.

The NRC uses "probabilistic risk assessment" to determine what can go wrong, how bad it could be and how likely it is to occur *based on current information.* The problem is that probabilistic risk assessments do not account for *unexpected* failures. A physicist writing for the Bulletin of the Atomic Scientists said, "The lesson from the Fukushima, Chernobyl, and Three Mile Island accidents is simply that nuclear power

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[1] *Consequence Study of a Beyond-Design-Basis Earthquake Affecting the Spent Fuel Pool for a U.S. Mark I Boiling Water Reactor Draft Report.* U.S. Nuclear regulatory Commission, Office of Nuclear regulatory Research, June 2013

[2] U.S. Nuclear regulatory Commission, A summary of Aging Effects and Their Management in Reactor Spent Fuel Pools, Refuelling Cavities, TORI and Safety-Related Concrete Structures, NUREG/CR-7111 (2011). P. vxiii. http://pbadupws.nrc.gov/docs/ML1204/ML12047A184.pdf

[3] U.S. Nuclear Regulatory Commission, Office of Nuclear Security and Incidence Response, RASCAL 3.0.5 Descriptions of Models and Methods, NUREG-1887, August 2007

[4] David Talbot, The Case for Moving U.S. Nuclear Fuel to Dry Storage, MIT Technology Review, April 14, 2011.

comes with the inevitability of catastrophic accidents"[5] Why are important safety warnings being ignored? Must we wait for an American Fukushima before the NRC acts?

Finally, we are well acquainted with radioactive waste proposals to potential waste dump communities. The Blue Ridge Environmental Defense League was founded because of one such program. Waste schemes invariably come with promises of jobs and economic development, promises which short-circuit debate and sway elected officials. For decades, centralized storage and the transfer of liability from private hands to public entities has been the underlying factor driving nuclear waste policy. The assumption of this liability by the people via any government agency would be an unacceptable transfer of wealth from poor to rich. Therefore, we see no justification for placing the burden of centralized nuclear waste dumps on communities anywhere.

Thank you for the opportunity to present these remarks.

Respectfully,

Louis A. Zeller

[5] Ramana, NV, "Beyond our imagination: Fukushima and the problem of assessing risk," *Bulletin of the Atomic Scientists*, April 19, 2011.