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33

March 12, 2006

Secretary
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
Attn: Rulemakings and Adjudications Staff

Re: Massachusetts Attorney General Petition for Rulemaking, Docket No. PRM-51-10

Public Citizen submits the following comments to the U.S. Nuclear Regulatory Commission (NRC) in strong support of the Massachusetts Attorney General Petition for Rulemaking, published in the November 1, 2006 issue of the *Federal Register* (Vol. 71, No. 211). The Petition for Rulemaking requests that the NRC (1) determine that environmental impacts of high-density spent fuel pools are significant; (2) revoke regulations that prevent the NRC from considering the environmental impacts of severe accidents and intentional attacks on spent fuel storage in its licensing decisions; and (3) analyze these impacts and mitigation measures in Environmental Impact Statements related to licensing decisions.

Spent Fuel Storage Poses an Environmental Threat

It is a fact that terrorists have considered nuclear reactors as potential targets. The 9/11 Commission concluded that al Qaeda's original plan for September 11 was to hijack ten airplanes and crash two of them into nuclear plants.¹ A 2006 National Research Council study on spent nuclear fuel storage also found that spent fuel storage facilities are potential terrorist targets.

Densely-packed spent fuel pools pose a heightened threat to the environment and public health. Fuel pools were designed for the temporary storage of a limited number of spent fuel assemblies in a low density, open frame racks. The amount of waste, however, has increased beyond the design capacity of the pools. In response, all of the spent fuel pools in the country have been re-racked into high-density configurations. If water is lost from a densely packed pool from an attack or an accident, ambient air would likely be insufficient to cool the fuel assemblies, which would result in a fire and the release of radioactivity. According to the 2006 National Research Council study, "a terrorist attack that partially or completely drained a spent fuel pool could lead to a propagating zirconium cladding fire and the release of large quantities of radioactive

¹ The 9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks Upon the United States, p. 154, <http://www.gpoaccess.gov/911/>.

*materials to the environment*² [emphasis added]. A spent fuel fire and subsequent release of radioactivity could impact hundreds of miles downwind and last for decades.³

Densely-packed spent fuel pools are also vulnerable to severe accidents caused by natural disasters, operator error and/or equipment failure. A 1997 NRC staff report revealed that human error has caused several pools to lose coolant water, two of which lost more than five feet of water.⁴ The National Research Council concluded that even a partial loss of water in a pool would increase radiation levels in the spent fuel building and could prevent workers from being able to perform mitigation measures, such as refilling the pools with fire hoses. Once water is lost from a high-density pool to the level of the tops of fuel assemblies, a fire and large release of radioactivity are highly likely.

The NRC's claim that the likelihood of a spent fuel fire is "highly remote" is based on a 1979 Generic EIS, which can only be described as outdated given the weapons development and the increase in terrorist activities and sophistication in the past 28 years. Recent studies, such as the 2006 National Research Council study, confirm that the NRC's stance is incorrect. The National Research Council study concludes that "attacks by knowledgeable terrorists with access to advanced weapons might cause considerable physical damage to a spent fuel storage facility..."⁵

While all spent fuel pools pose a security threat, GE Mark I and II Boiling Water Reactors are particularly vulnerable terrorist targets because they are elevated in the main reactor building, outside primary containment, without a reinforced superstructure, leaving them vulnerable from three sides and on top. Currently, 32 reactors in the United States have this design.

Federal Court Requires NRC to Consider the Environmental Impacts of a Terrorist Attack as Part of All NEPA Analyses

The Ninth Circuit Decision in *San Luis Obispo Mothers for Peace v. NRC* unequivocally rejected the NRC's claim that the National Environmental Policy Act (NEPA) does not require consideration of the environmental effects of potential terrorist attacks. The Court dismissed every one of NRC's arguments, including (1) the possibility of a terrorist attack is far too removed from the natural or expected consequences of agency action; (2) because the risk of a terrorist attack cannot be determined, the analysis is likely to be meaningless; (3) NEPA does not require a "worst-case" analysis; and (4) NEPA's public process is not an appropriate forum for sensitive security issues. In a very clear decision, Ninth Circuit Court concluded:

In sum, none of the four factors upon which the NRC relies to eschew consideration of the environmental effects of a terrorist attack satisfies the standard of reasonableness.

² National Research Council of the National Academies, *Safety and Security of Commercial Spent Nuclear Fuel Storage*: Public Report, 2006, page 5.

³ *Ibid*, page 50.

⁴ U.S. Nuclear Regulatory Commission, *Operating Experience Feedback Report, Assessment of Spent Fuel Cooling*, NUREG-1275, Vol. 12, 1997, Washington, D.C.

⁵ National Research Council of the National Academies, *Safety and Security of Commercial Spent Nuclear Fuel Storage*: Public Report, 2006, page 35.

The Supreme Court refused to hear the case when PG&E appealed this decision. Notably, the NRC itself did not appeal the Ninth Circuit decision. Yet, the Commission has irrationally decided to comply with the decision only in the Ninth Circuit. In the *Amergen Energy Co., LLC* (Oyster Creek Nuclear Generating Station) decision, Commissioner Merrifield argues once again that NEPA “only requires federal agencies to analyze the reasonably foreseeable environmental effects of proposed federal actions.” The Ninth Circuit logically dismissed this argument, writing:

We find it difficult to reconcile the Commission’s conclusion that that, as a matter of law, the possibility of a terrorist attack on a nuclear facility is “remote and speculative,” with its stated efforts to undertake a “top to bottom” security review against this same threat.

The unfortunate reality is that a terrorist attack is a “reasonably foreseeable event” and that the environmental effects could be very significant. The NRC must consider these impacts in its environmental reviews and take public comment on the impacts, as well as on reasonable measures for mitigating them.

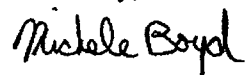
Bifurcating NRC Policy Is a Terrible Way to Regulate

Dividing NRC policy into a region of “the Ninth Circuit” and “the rest of the country” is a highly inappropriate response by a federal agency tasked “to ensure adequate protection of public health and safety, to promote the common defense and security, and to protect the environment.” The NRC’s refusal to apply the Ninth Circuit decision nationally means that the NRC is failing to protect the vast majority of the American public.

Separating the country into two parts also “will not provide regulatory stability or national consistency,” as Commissioner Jaczko correctly argues in his *Oyster Creek* dissent. Commissioner Merrifield’s counterargument that applying the Ninth Circuit Court decision nationally would ultimately lead to accepting any public challenge as national policy is a *non-sequitur*. The force of law provided by a federal court decision is not an arbitrary line that is difficult to distinguish from public comment.

Significantly, the U.S. Department of Energy also faced a similar question. The Ninth Circuit applied its *San Luis Obispo Mothers for Peace v. NRC* decision to the U.S. Department of Energy (DOE) in *Tri-Valley CARES v. DOE*, concluding that the DOE must consider the environmental impacts of terrorism in its NEPA analyses. DOE has correctly decided to apply the decision nationally. Clearly, the NRC is not only out of step with the public and the States, which have repeatedly urged the federal government to require that spent fuel storage facilities are protected, it is out of step with the rest of the federal government as well.

Sincerely,



Michele Boyd
Legislative Director, Energy Program

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Please send a confirmation that you have received these comments.

Thank you,
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