



## Bellefonte Efficiency & Sustainability Team

B.E.S.T.

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Comments to the TVA Board of Directors

11/17/11

Good morning. I am representing Mothers Against Tennessee River Radiation, and today we would like to continue our campaign to increase the safety of TVA's radioactive fuel waste. As you may recall, we are concerned about the dangers of aerial attacks on the Browns Ferry cooling pools, whether by terrorists or tornados. An airliner flying into a pool would likely cause a jet fuel fire, as we witnessed on 9/11; and a tornado could suck the water from the pools, also causing a catastrophic zirconium cladding fire, as we witnessed at Fukushima.

Congress commissioned a study from the National Academy of Sciences on the Safety and Security of Commercial Spent Nuclear Fuel Storage. The report was released in 2006, and we certainly hope that each member of this board of directors has read this report - and would not even consider voting on the issue of spent fuel storage without first reading the report.

The report states, "A loss-of-pool-coolant event resulting from damage or collapse of the pool could have severe consequences ... under some conditions, a terrorist attack that partially or completely drained a spent fuel pool could lead to a propagating zirconium cladding fire and release large quantities of radioactive materials to the environment ... Such fires would create thermal plumes that could potentially transport radioactive aerosols hundreds of miles downwind under appropriate atmospheric conditions."<sup>1</sup> Our valley winds do not go across the Pacific as Fukushima's did, but as you saw on April 27, 2011, they impact human lives. (See map.)

The report later says, "Dry cask storage for older, cooler spent fuel has two inherent advantages over pool storage: It is a passive system that relies on natural air circulation for cooling; and it divides the inventory of that spent fuel among a large number of discrete, robust containers. These factors make it more difficult to attack a large amount of spent fuel at one time and also reduce the consequences of such attacks."<sup>2</sup>

A May 2011 Institute for Policy Studies report on this danger says, "To reduce this hazard we recommended that *all* U.S. spent fuel older than five years should be placed in dry, hardened storage containers, greatly reducing the fire risk if water was drained from reactor cooling pools. These steps were taken by the German nuclear industry 25 years ago, after several jet crashes and terrorist acts at non-nuclear locations. In March 2010, NRC Chairman Gregory Jaczko told industry officials at an NRC-sponsored conference that spent fuel should be primarily stored in dry, hardened, and air-cooled casks that met safety and security standards for several centuries."<sup>3</sup>

The Academy report also suggests the use of partial earthen berms to further protect the dry casks from aerial or truck bomb attack. Certainly, lowering their profile would provide considerably more protection from tornados.

Another Academy recommendation, that we would particularly like you to note, is for "more constructive interaction with the public and independent analysts."<sup>4</sup> With all due respect, if each board member here has not carefully read both of these reports, then we ask that you please take your responsibilities on this board more seriously. The cost of moving fuel from cooling pools into dry storage may seem high to you now, but the cost of not doing anything could be catastrophic beyond imagining. These over-filled and under-protected cooling pools are putting hundreds of thousands of rate-payers lives at risk.

At the three Browns Ferry reactors there are about 3 million pounds of high level radioactive fuel rods stored in several-stories-high raised cooling pools, with only sheet metal roofs covering it. The population within a 10-mile radius is 34,794, and the 50-mile population is 977,941 souls.

Mothers Against Tennessee River Radiation asks each of you to ask yourselves, when you close your eyes tonight, "Have I done my homework? Have I exercised due diligence? Or am I gambling in ignorance with the lives of valley residents?"

Thank you for your time and consideration.

Gretel Johnston, Founder  
Mothers Against Tennessee River Radiation

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<sup>1</sup> National Research Council, Committee on the Safety and Security of Commercial Spent Nuclear Fuel Storage, "Board on Radioactive Waste Management," *The National Academies Press*, Washington D.C. (2006), p. 8

<sup>2</sup> Op. cit., pp. 49, 35, and 50.

<sup>3</sup> Robert Alvarez, Institute for Policy Studies, "Spent Nuclear Fuel Pools in the U.S.", IPS, Washington D.C. (May 2011), p. 21

<sup>4</sup> National Research Council, Committee on the Safety and Security of Commercial Spent Nuclear Fuel Storage, "Board on Radioactive Waste Management," *The National Academies Press*, Washington D.C. (2006), p. 9