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Subject: Oral Comments

Statement by Mark P. Oncavage, NRC Scoping Meeting
April 3, 2002, Port St. Lucie, FL

Good afternoon, Thank you for letting me speak at this scoping meeting for the St. Lucie Environmental Impact Statement.

In October 2000, the NRC published a document called a "Technical Study of Spent Fuel Pool Accident Risk at Decommissioned Nuclear Power Plants." For the purposes of my scoping comments, the St. Lucie spent fuel pools in will behave similarly to the spent fuel pools in decommissioned plants. The spent fuel rods in each of these pools need to be forcibly cooled for numbers of years. If the forced cooling is stopped, the internal heat from the radioactive material inside the fuel rods will boil off the cooling water. When the rods become uncovered, the internal heat will set the zirconium casing on fire. Studies show that a zirconium fire in a spent fuel pool would have consequences as catastrophic as a reactor meltdown.

This technical study lists 9 causes for a zirconium fire. The combined probability of these causes has been calculated by the NRC to be about 1 in 400,000 spent fuel pool years. But this study was published the year before terrorists attacked and destroyed the twin towers of the World Trade Center. The study does not include any sabotage or terrorism acts so these probability numbers no longer have any meaning.

Another part of the study looks into the mechanisms that can start a zirconium fire. If electric power is lost from the grid and diesel power does not start, it would be between 100 and 150 hours before the water in the pool boils away and the rods set themselves on fire. If there is an internal fire in the building, 85 hours to the fire. If there is a loss of cooling water due to failed seals, pipe breaks or siphoning, 40 hours. But if were to be an accidental heavy load drop creating a large leakage path from the pool, that would lead directly to a zirconium fire. These accident scenario time sequences were calculated without sabotage and terrorist activity. Scoping for the EIS must include probabilities and consequences for acts of sabotage and terrorism at St. Lucie. Also, emergency preparedness officials may erroneously think they have 40 hours or 85 hours or 150 hours to effect an evacuation in the event of terrorist activity when as a possibility they may have no time at all. A statement in the technical study says, "Only during the first several years and in the most severe events, such as severe seismic events, heavy load drops, and other dynamic events, that cause the pool to fail, would the accident progress so rapidly that emergency response measures might not be implemented in a timely manner." This information also belongs in the EIS.

The technical study refers to another NRC document to explain consequences. This document entitled, "A Safety and Regulatory Assessment of Generic BWR and PWR Permanently Shutdown Plants" states that a generic worst case reactor meltdown can permanently contaminate 2,000 square miles of land and a generic worst case zirconium fire could

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permanently contaminate 2,170 square miles of land. The number of fatalities from a worst case zirconium fire, generically, is 31,300 within 50 miles of the plant.

A zirconium fire cannot be extinguished with water or carbon dioxide. The buildings housing the spent fuel pools offer no barrier in that a zirconium fire in the presence of draining water produces hydrogen that is explosive and flammable. The study states that once the fuel is uncovered, there can be no mitigation, the dose rate at the edge of the pool would be in the tens of thousands of rem per hour. The fire could continue for days before it burns itself out. A theory, not stated in this study says that the zirconium fire would also set other spent fuel pools on fire. An article in the Bulletin of Atomic Scientists by Robert Alvarez says that the NRC knows of no practical method for extinguishing a zirconium fire. These issues need to be thoroughly researched and stated in the St. Lucie EIS.

Last month, Jim Medoff, an NRC engineer addressed the issue of terrorism to the Advisory Committee on Reactor Safeguards meeting in Florida City. Reading from the transcript, he said, "It is classified material, and we were not even permitted to talk about it at the agency for those that are not dealing with it in their branch. But, the Commission is definitely looking into the safety issues of terrorist attacks on the industry, and Florida Power and Light, and the Turkey Point and St. Lucie units will be part of that study." That answer given by Mr. Medoff is unacceptable. Until the NRC demonstrates that the spent fuel pools will not be successfully attacked by terrorists, a hardened, category A, containment building should be constructed around the spent fuel pools, St. Lucie is not a secret military installation, it's a power plant owned by a public company located in a densely populated area of Florida. The inaction of the NRC puts all of us at risk.

Governor Howard Dean of Vermont has said, "I'm "I'm not so worried about the core, I'm worried about the spent fuel pool. There's basically no protection there. Congressman Ed Markey recently released a report criticizing the lax approach the NRC has taken in regard to security measures since 9/11. I suggest you include it in the St. Lucie environmental impact statement. Thank you for your attention.