



City of Del Mar



TESTIMONY OF DR. DONALD MOSIER, CITY OF DEL MAR COUNCILMEMBER

Senator Boxer, Senator Vitter, Members of the Committee:

The shutdown of the Unit 2 and 3 nuclear reactors at San Onofre Nuclear Generating Station (SONGS) on June 7, 2013 was viewed a victory for the City of Del Mar as well as nearby cities from Los Angeles to San Diego, all of which had been concerned with the safety of their citizens. The declaration of victory was premature, however, since we now realize that storage and disposal of the radioactive waste at SONGS during the decommissioning process has numerous challenges, and that the risk of a nuclear accident that would impact the more than 8 million residents within a 50-mile radius is only slightly diminished. Here are some of the challenges:

1. All fuel rods since SONGS began operation in 1968 are still on site. They account for more than 4,000 tons of radioactive waste with almost 90 times more radioactivity than released in the Chernobyl disaster. Much of this radioactive waste is in spent fuel pools, not safer dry cask storage.
2. The two spent fuel pools at SONGS were designed to hold 1,600 spent fuel assemblies, but currently hold over 2,600. Overcrowding and storage of high burn up fuel assemblies has already caused problems; for example, in 2007, South California Edison (SCE) reported to the NRC that Boraflex neutron absorbing panels at the SONGS Units 2 and 3 spent nuclear fuel pools had deteriorated to the point where it was doubtful they could prevent criticality that could lead to a fuel rod fire as happened at Fukushima.
3. The switch to high burn up nuclear fuel with higher uranium concentrations results in fuel assemblies that generate more heat and must remain in spent fuel pools for longer times before transfer to dry cask storage. How much longer is unknown.
4. The higher heat and radioactivity of high burn up fuel assemblies may lead to degradation of metal cladding during dry cask storage, and no current dry casks have been demonstrated to be suitable for storage of high burn up fuel for 20 years or more. Safe dry cask storage is not assured without significant design improvements.
5. Onsite storage at SONGS continues the risk of earthquakes from nearby faults (see Figure 1), accelerated corrosion from the salt air environment, and terrorist attacks on the softer targets of spent fuel pools. The twin dome containment vessels are no longer protective.

In short, SONGS is a terrible site for a semi-permanent nuclear waste repository projected to last for 60 years or more. When fuel assemblies can be moved to safe dry cask storage and when those casks can be safely transported to waste repositories are critical questions that need answers as soon as possible. The Department of Energy needs to use funds collected from ratepayers to sponsor research into these questions.

The City of Del Mar believes that local and state governments need more input into decommissioning procedures. The NRC essentially leaves it up to SCE, with only token input from the utility-appointed Community Engagement Panel. The concept that all of the challenges facing safe decommissioning take place in the absence of any meaningful federal, state, or local regulation is mindboggling. Security and evacuation plans are already being dismantled by SCE without notification of any authorities. The safety of our citizens is the highest responsibility of elected officials, yet SCE has made 8 million citizens less safe without any public comment.

