Sample questions to ask on NRC’s Feb. 20th Webinar re: Steam Generator Replacements at Davis-Besse

1. Given the recent revelation of the inadequate oversight and inspection of the Shield Building during closing of the structure in November 2011, what assurances does the NRC provide the public of the closing of the Shield Building after the Steam Generator replacement? How could NRC Staff have missed the 6 to 12 inch wide gap in the Shield Building wall in late 2011, given the increased NRC inspectors on-site due to the severe cracking, as well as the widespread public concern, as represented by U.S. Congressman Dennis Kucinich’s involvement?

2. Since the Davis-Besse Steam Generators were designed and fabricated before the catastrophic Steam Generator failures at San Onofre were known under a process 50.59 not requiring NRC oversight, how can the NRC assure the public that lessons from San Onofre have been learned? How can inspections and design review not done by the NRC now be done?

3. How can NRC allow FirstEnergy to perform a “like-for-like” steam generator replacement at Davis-Besse, when the new steam generators are significantly different than the old steam generators.

Arnie Gundersen, Chief Engineer, Fairewinds Associates, Inc., expert witness for the environmental coalition challenging the Davis-Besse steam generator replacements before the NRC’s Atomic Safety and Licensing Board (ASLB), has identified and documented the following nine significant changes from the old steam generators to the replacement steam generators:

1.) The tube inspection lane was removed; 2.) An additional tube support plate was added; 3.) 150 additional tubes were added; 4.) The tube alloy was changed; 5.) The tube to tube sheet junction was modified extensively; 6.) The overall design of the steam generator support structure was changed from a cylindrical skirt to a pedestal cone; 7.) The thickness of the pressure retaining walls of the ROTSG [Replacement Once Through Steam Generator] is two inches thinner than the pressure retaining wall in the Original Once Through Steam Generator; 8.) The 180 degree elbow design will be extensively modified; 9.) The alloy of the hot leg nozzles was also changed.

As Gundersen has asserted, any one of these significant changes should have triggered a license amendment proceeding, as requested by the coalition of environmental interveners.
4. Given that San Onofre 2 & 3, CA, were permanently shutdown after a dangerously botched steam generator replacement, causing a multi-billion dollar boondoggle, how can NRC now allow FENOC to install replacement steam generators at Davis-Besse that are significantly different than the old ones they are replacing? Why hasn’t NRC conducted a careful review of the changes’ safety significance? How can NRC allow FENOC to conduct an un-reviewed experiment with new steam generators, risking catastrophic releases of hazardous radioactivity to the environment (cascading failure of steam generators tubes, Loss of Coolant Accident, reactor core meltdown, containment breach), and/or a financial meltdown?

5. Given that Crystal River, FL, was permanently shutdown after fatally cracking its concrete containment dome, causing another multi-billion dollar boondoggle, how can NRC now allow FENOC to re-start, and even extend the license for, a reactor with documented severe cracking in its own concrete containment Shield Building, and now documented 6 to 12-inch-wide air spaces or gaps, which extend 40% of the way through the 30-inch-wide Shield Building wall?

6. How can NRC ignore Shield Building cracking in the light of the environmental coalition’s intervention against the 20-year license extension, especially since FENOC itself admitted last September that the severe Shield Building cracking is growing worse over time.

7. Davis-Besse has breached its Shield Building four times: 1) in the 1970s for the Initial Construction Opening; 2) in 2002-2004 for the 1st vessel head replacement; 3) in 2011 for the 2nd vessel head replacement; and 4) now for the current steam generator replacement project. Hasn’t this 4th breach risked even worse cracking of the already severely cracked Shield Building? How can NRC Staff approve extending Davis-Besse’s 20-year license extension, given the risks of Shield Building cracking to fail the test of containment, as during a steam generator cascading tube failure, reactor core meltdown, causing a catastrophic release of hazardous radioactivity?

8. Davis-Besse has operated its atomic reactor for the past two years with steam generators degraded enough to require replacement, as well as a 40% (12-inch-wide) gap or air space in its 30-inch-wide Shield Building wall. What if the degraded steam generators had suffered a cascading failure of steam generator tubes, Loss of Coolant Accident (LOCA), reactor core meltdown? Would the Shield Building have contained the catastrophic amounts of hazard radioactivity, without leaking them into the environment to blow downwind and flow
downstream. What engineering analysis has FENOC or NRC undertaken upon which to base any assertion that the past two years of operations have been compliant with safety regulations, given the 40% gap in the Shield Building wall? Is sheer luck (that the containment was not tested over the course of the past two years of full-power operations) an acceptable form of atomic safety regulation?

9. How can NRC guarantee that very sloppy work done in late 2011 by FENOC in re-sealing the Shield Building breach, and the very sloppy regulatory oversight exercised by NRC, will not be repeated in 2014 during the current re-sealing of the Shield Building wall as part of the steam generator replacement project?

10. FENOC's Jennifer Young has stated this week in the media that this most recent gap or air space in the Davis-Besse Shield Building wall was not detectable before the breach to replace the steam generators was revealed by visual examination. But why hadn’t FENOC performed, and why didn’t NRC require, other tests (such as X-rays, ultra-sonics, etc.) that could have easily revealed the gap or air space before now, after full-power operations with a 40% through-wall gap in the Shield Building?

11. Both the Crystal River, FL, and San Onofre 2 & 3, CA, permanent closures represent multi-billion dollar boondoggles. How can NRC allow Davis-Besse to risk such a billion-dollar boondoggle, as well as a catastrophic radioactivity release.

12. Why did NRC Staff oppose the environmental coalition’s intervention against Davis-Besse’s steam generator replacement, and argue against expert witness Arnie Gundersen of Fairewinds Associate’s testimony warning about risks associated with NRC not carefully reviewing the nine significant changes to the new steam generators identified and documented by expert witness Gundersen? Why is NRC not supporting and requiring full license amendment proceedings, as requested by the environmental coalition?

13. Why did NRC allow FENOC to breach its Shield Building twice – first for the 2011 reactor head replacement, and again for the 2014 steam generator replacement – instead of just once for both replacement jobs, as FENOC originally planned? How can NRC allow such multiple breaches, given the likely damage it is doing to the Shield Building each time?