

**AP1000 Oversight Group, Bellefonte Efficiency and Sustainability Team,  
Blue Ridge Environmental Defense League,  
Citizens Allied for Safe Energy, Friends of the Earth,  
Georgia Women's Action for New Directions, Green Party of Florida,  
North Carolina Waste Awareness and Reduction Network,  
Nuclear Information and Resource Service, Nuclear Watch South,  
SC Chapter - Sierra Club, Southern Alliance for Clean Energy**

VIA MAIL AND EMAIL

April 21, 2010

Dr. Said Abdel-Khalik, Chairman  
Advisory Committee on Reactor Safeguards  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

Re: PETITION TO INITIATE SPECIAL INVESTIGATION  
ON SIGNIFICANT AP1000 DESIGN DEFECT

Dear Chairman:

The above local, regional and national organizations are requesting that the Advisory Committee on Reactor Safeguards ("ACRS") initiate a special investigation on an unreviewed safety issue which fundamentally calls into question the adequacy of the AP1000 reactor design to protect public health and safety in the event of an accident.

The basis for our concern is described in the attached report by Arnold Gundersen, Chief Engineer, Fairewinds Associates, Inc., "Post Accident AP1000 Containment Leakage: An Unreviewed Safety Issue," April 7, 2010 ("Fairewinds Report"). This report is further supported by an affidavit from Dr. Rudolf H. Hausler, Corro Consulta.

As the Fairewinds Report states, one of the design features in the Westinghouse AP1000 reactors is that in a post accident event, radioactive leakage from a containment failure could be deliberately wafted out into the environment. The result of this potential design flaw is that during containment breach, a significant volume of radionuclides will be released into the air with the potential for a significant public health catastrophe.

As the Fairewinds Report states, rather than resolve the real world impacts resulting from this unique design weakness, the Westinghouse analysis relies on several significant and extraordinary assumptions to "minimize" its impact. Westinghouse has failed in its efforts to prove that there is no need to modify the AP1000 containment and shield building in order to eliminate the possibility of releases directly into the environment and to protect public health and safety. In fact, containment failure through only a small hole similar to that at Beaver Valley is likely to exist when the design basis event occurs.

While your committee is investigating the potential defect in the AP1000 design, we have appealed to Chairman Jaczko for the NRC staff to immediately review it also.

We will be glad to meet with the ACRS to assist you in your investigation. Please contact me at the address below and I will inform the organizations that have joined in this petition of the scope of your investigation and what assistance we can provide.

Sincerely,

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Counsel for the AP1000 Oversight Group  
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ENC. Fairewinds Report

cc. Chairman Gregory B. Jaczko