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From: To: Date: Subject:

"Leslie Perrigo" <wntrlark@hotmail.com> <QuadCitiesEIS@nrc.gov> 1/27/04 5:36PM **QCNPS** comments

11/13/03 68FR 64372



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Attention: Duke Wheeler!

Although the final decision may not be made until June of this year, the license renewal of the QCNPS is an issue of grave signifigance to every resident of the Quad Cities and surrounding area. The plant at Cordova is one of twenty-one nuclear power plants along the Mississippi River watershed, and one of the oldest Boiling Water Reactors in the nation. The inherrent design flaws of this model pose a seroius threat to not only members of the Quad Cites, but all those down stream from us. Typical discharge points for gaseous and liquid releases to air, water and soil from nuclear power plants include planned releases from the reactor's routine operation and unplanned releases from leaks and accidents. The design of the Torus containment system employed by GE Mark 1 Boiling Water Reactors increases the risk of releases to the environment by venting any high pressure buildup of radioactive steam generated during an accident directly to the atmosphere through the 300 foot stack, UNfiltered.

A report published by the NRC in 1993 confirmed that age-related degradation will damage or destroy many vital safety-related components inside the reactor vessel before the 40 year license expires. We cannot afford to put the Quad Cities and our neighbors downstream at risk. It is time to seek serious solutions to solve our energy needs. Iowa and Illinois have a monumentous opportunity to set an example for the rest of the country and help our great nation claim its energy independence. Investing in renewable energy today could create thousands of new jobs and stimulate the local economy. Efficiency is a viable alternative that could actually eliminiate the need for over 127 power plants by 2010. And it does not take mass amounts of money, create toxic waste, or pollute the environment for thousands of years.

Also of concern to me is the draft supplement's blatant misrepresentation of alternative technologies. The investigators obviously made little effort to seriously work out the details of illeged technologies which they illegedly deemed unfeasible, too costly or needing too much space. Solar and geothermal alternatives are generally incorporated into existing structures, and wind turbines can share the field with crops, with farmers harvesting up to within 1 foot of the turbine tower. As a board member of the Iowa Renewable Energy Association, I know whereof I speak. I believe you have heard the same from Bennett Brown as well. So please, before you discount the benefits of renewable alternatives AND efficiency, I implore you to undergo an independent study of viable alternatives for the Quad Cities.

Respectfully,

Leslie Perrigo, Davenport, IA

563-445-0369

PS- The following text is a copy of my summation from the afternoon session at the Mark in December, which I had told members of the NRC I would get to them. I was told that these were more "security issues," yet the security of the plant and its aging components has direct bearing on the surrounding environment, and its neighbors downstream. Please encourage your counterparts to take these issues seriously in that they affect us in the Quad Cities, and the Mississippi River watershed immediately. Thanks.

Leslie Perrigo for IECAN

There are a couple of issues which I feel need to be addressed as they are legitimate concerns that relate directly to the health, safety and general well being of the environment surrounding the Quad Cities Nuclear Power Station.

Regarding plant performance; failure to comply with NRC procedures and complete basic routine maintenance on schedule has incurred preliminary wear and irreversible damage to vital reactor components, increasing the possibility of mechanical failure and the likelihood of a major accident.

In June of 1996 a fine of \$100,000 was proposed against the utility for failing to correct design deficiencies for components in one of the plant's emergency core cooling systems. Modifications to pipe supports and structural steel in the 1980's had resulted in additional loads on the steel beams- in some cases exceeding those permitted in the original plant design. These deficiencies were not corrected until 1996.

In June of 1997 a fine of \$50,000 was proposed for deferring repairs to the interior and exterior siding of the reactor building at QCNPS. Both interior and exterior siding are needed for the reactor building to fill its design function of containment.

In 1998 the NRC proposed fines in excess of \$450,000 for failure to implement an adequate program for monitoring maintenance; failure to develop adequate procedures and systems to safely shut down the QCNPS, and for performing a pressure test of the Unit 2 reactor vessel and piping AFTER the reactor had started up INSTEAD of BEFORE the reactor startup in order to detect any leaks in the reactor vessel and piping.

Between June of 1999 and September of 2002 the utility neglected to correct multiple switch failures which impacted the availability, reliability and (2min) capability of equipment used to respond to initiating events and prevent undesirable consequences from a plant fire.

In March 2003 the NRC staff identified a number of human performance issues, including damage to a control drive pump due to improper setting of a lubricating device; failure to recognize that the Unit 2 shut down cooling system was inoperable for several MONTHS and several instances of valves placed in the wrong position.

These are but a few of the events which have increased the amount of undue stress on reactor components and accelerated the aging process. The NRC has confirmed that age-related degradation in BWR will damage or destroy vital internal components well BEFORE the standard 40 year license expires, yet the readiness of the industry to meet projected maintenance and repair challenges is unclear. For some components, methodologies are still in the conceptual phase of development (12 of 29 in 1994).

The core shroud is one (3min) of many safety-related components that may be damaged or destroyed by age-related degradation in BWRs. A German utility operating a GE Mark 1 BWR (like QC 1 2) where extensive core shroud cracking was found estimated the cost of replacement at \$65 million. Germany's oldest BWR was closed in 1995 after wary German nuclear regulators rejected a plan to repair rather than replace the reactor's cracked core shroud. Extensive core shroud cracking was discovered at QC Unit 1 in 1994.

Reactor aging will require a major continuous effort by industry officials to anticipate emerging age-related problems and resolve them before they become a crisis. By dealing with the whole problem of age-related degradation NOW, federal and state regulators can ensure future safety and engineeering implications of multiple component failures in BWRs.

Lastly, the continued operation of any General Electric Mark 1 BWR relies upon a nuclear waste cooling and storage pond that is elevated 6-10 stories up in the reactor's secondary containment building, and does not appear to have any significant structure to reduce the likelihood of penetration by deliberate attack. Only 4 of the 103 operating reactors have design features intended to resist aircraft impact: Limerick 1 &2 and Seabrook reactors- 6 ton, Three Mile Island Unit 1-90 ton. No other US reactor was designed to withstand aircraft impact. 5.1.1 35-39

The identified structural vulnerability of the Mark 1 irradiated fuel storage and cooling ponds constitutes an unreviewed safety issue. Attack on a reactor could lead to rapid onset core melt with open containment and a raging fire. An NRC study concluded that a generic estimate of 100% of the radioactive isotope Cesium-137 would be released in the event of a spent fuel pool fire. A full spent fuel pool contains 74 million curries of Cesium-137.

Defense of US nuclear facilities should be seen as a key component to Homeland Security. As such, spent fuel pools should be re-equipped with low density racks, and all other spent fuel should be hardened and dispersed throughout the site to make it a less attractive target.

In conclusion, I would just like to point out that the useful lifetime of a nuclear power plant is 25 years in actual practice. It is becoming abundantly clear that aging of reactor components poses serious economic and safety risks at BWRs. The GE Mark 1 in particular has significant inherent design flaws and lacks containment integrity during a nuclear accident. Under the circumstances, it would be prudent to retire the QCNPS in 2012, and seek out safer, more financially viable options for the community. Thank you.

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