

June 12, 2014  
2461 E. High Street, Unit F-28  
Pottstown, PA 19464

NRC Commission Secretary  
The Honorable Allison M. Macfarlane  
U.S. Nuclear Regulatory Commission  
Mail Stop O-16G4  
Washington, DC 20555-0001

Dear Chairman Macfarlane,

We are writing to you because we feel that the NRC betrayed the public trust in May by releasing NRC's indefensible post-Fukushima seismic risk report that placed Limerick Nuclear Plant in the category of lowest seismic risk for all U.S. nuclear plants.

Why did the NRC allow Exelon to base Limerick's earthquake risks on a "one-size-fits-all" generic formula, rather than Limerick-specific facts, when Limerick's potential earthquake risks are so high?

It seems ludicrous that Limerick Nuclear Plant is in NRC's lowest tier of risk, but Limerick's defective Mark II BWRs, topped by substandard spent fuel pools, still sit on fault fractures so wide in places that cement had to be poured into them before Limerick could be built on top of them!

We don't understand why the NRC has abandoned its original mission to protect public safety by:

1. Allowing Exelon to minimize the *perception* of Limerick's earthquake risk by eliminating facts.
3. Reducing Exelon's burden of compliance at Limerick by weakening NRC regulations.

How could the NRC possibly have allowed the NEI (the powerful lobbying arm of the nuclear industry) to reduce NRC's original post-Fukushima seismic walkdown guidelines to the extent that it did? The resulting generic guidelines, that NRC accepted, allowed Exelon to hide Limerick's enormous earthquake risks!

Limerick's potential earthquake risks are not decreased by NRC's pretence of oversight, but are actually increased by what seems to be an intentional loss of institutional memory at Limerick. NRC inspectors are routinely rotated, leading to that loss of memory, so Limerick's historic hidden weaknesses and unfixable defects continue to increase, unrecognized by inspectors as Limerick ages.

As you know from previous information that ACE (the Alliance for a Clean Environment) sent to your office, Limerick's inspectors have been largely unaware of the extremely dangerous conditions that exist outside their narrowly designed sphere of specified oversight.

Inspectors are not encouraged to question the corporate version of Limerick's events or conditions. They rely almost exclusively on data and reports provided by Exelon, even though it is clear that Exelon's reports are self-serving at best and downright deceptive at worst.

We ask that you read our letter-to-the-editor, on the next page, where we list some of the Limerick issues that concern us and that the NRC has refused to address. Our letter was published in the Pottstown Mercury on June 21, 2014.

We are greatly disappointed that the documented evidence that ACE sent to you in March of this year did not impact the NRC's evaluation of Limerick's seismic risks and we believe the NRC should re-evaluate Limerick without Exelon's input, place it in the highest tier of U.S. Nuclear plant earthquake risk, and close Limerick to protect the safety of millions of people in the Greater Philadelphia Region and beyond.

Thank you in advance for your kind attention to our concerns.

Sincerely,

*Betty and Charlie Shank*

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ACE research Assistants

## **NRC Must Stop Sweeping Limerick's Earthquake Risks Under The Rug**

NRC's degraded regulations imperil public safety, especially NRC's weakened post-Fukushima earthquake regulations, which allowed Exelon's compliance to be based on generic reports that didn't expose Limerick's actual earthquake risks. That deception permitted the NRC, in May, to place Limerick in NRC's lowest category of earthquake risk for all U.S. nuclear plants, giving Exelon a free pass to stall for 6½ more years "to study" Limerick without accounting for:

1. Limerick's rank as 3<sup>rd</sup> on the nation's earthquake risk list.
2. Limerick's 141% earthquake risk increase.
3. NRC's unreliable definition of Limerick's earthquake fault.
4. Bechtel's long-buried documents showing Limerick fault zone fractures, so wide in places that cement fill had to be poured into them before construction could start: Limerick's defective reactors, substandard spent fuel pools, control room, turbine building, and radwaste storage building are constructed on these now inaccessible fractures.
5. Limerick's substandard construction.

From the start, the controversial Atomic Energy Commission (AEC/NRC) and Philadelphia Electric (PE/PECO/Exelon) knew that Limerick's reactors were dangerously defective and that the site was unsuitable for a nuclear plant, in part, due to its earthquake fault. Defying common sense and public safety, the headstrong AEC dismissed Limerick's fault to allow construction (around the time a fault at a Virginia site was dismissed to allow construction).

The NRC replaced the AEC in the 70's, equally determined to promote Limerick at the public's expense and safety. Residents filed a well-researched legal action against the NRC. Residents won in court. But in an incomprehensible abuse of power, the NRC refused to stop construction, and instead, adopted AEC's fault definition to license Limerick in '84. However, in 2011, Virginia's fault was at the epicenter of the largest earthquake east of the Rockies since 1897, jolting Limerick on its way to New England, showing NRC's definition to be unreliable.

In damage-control mode (2012), NRC/Exelon promoted Limerick's beyond-earthquake-design-basis as more important than fault definition, despite the fact that at NRC's 2011 public meeting, a quality-control engineer who was a Bechtel worker during Limerick construction testified that he witnessed mistakes and deviations from Limerick's design, passed over when earthquake risks were considered low, that jeopardize public safety now. The NRC dismissed his testimony, also refusing to account for:

- GE Hitachi's repeated warnings that Limerick's reactors may not shut down safely in an earthquake.
- Multiple fault zones: 1 under Limerick and 4 within 17 miles (1 of these active),
- A geo-expert's evaluation of Limerick's fault map, noting indications that Limerick's fault may be big and could, as easily as Virginia's, be at the epicenter of an unexpected earthquake (Mercury, 5/20/12).
- Exelon's elimination of a critical requirement for a one-time safety test for aging equipment required by Limerick's re-licensing application, increasing chances for earthquake-induced system and component failure.
- The increased frequency and intensity of earthquakes like Philadelphia's and Virginia's.
- Lack of enough water and backup power for sustained meltdowns.
- NRDC's petition to update Limerick's Severe Accident Mitigation Alternatives (SAMA).
- Limerick's miles of vital underground pipes and cables, uninspected despite 2011's earthquake impact (the AP reports that all nuclear plant underground pipes have had leaks during ordinary operations).
- Potential earthquake-induced radiation releases greater than Chernobyl's because Limerick's fuel pools are over-packed.
- The USGS verification that fracking can cause earthquakes. In Pennsylvania, since 2007, over 4,200 natural gas wells have been approved.

Exelon and NRC arrogantly assert that politicians and the public are not worried about Limerick risks. Many worry privately. NRC and Exelon's deceptive, continued promotional campaign coupled with money picked from ratepayer and taxpayer pockets, then doled out by Exelon in the form of contributions and sponsorships, predictably reduce open opposition.

NRC must stop trying to sweep Limerick's unacceptably high earthquake risks under the rug. No "earthquake study" can fix them. We urge officials and politicians to see [www.acereport.org](http://www.acereport.org) and, on behalf of public safety, tell the NRC Limerick needs to close.

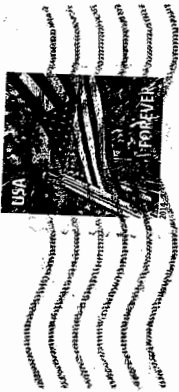
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