

**From:** Bower, Fred  
**Sent:** Wednesday, March 11, 2015 2:00 PM  
**To:** [aceactivists@comcast.net](mailto:aceactivists@comcast.net)  
**Cc:** Ennis, Rick; OPA1 RESOURCE; Bower, Fred  
**Subject:** RE: Limerick - NRC Responsiveness to the ACE - [EDATS R1-2015-0013]

The Alliance for a Clean Environment (ACE)

ACE - Failure to Address Public Concerns Before Relicensing Limerick [EDATS R1-2015-0013]

Dear Dr. Cuthbert (ACE),

I am responding to your February 2 email (ML15034A359) in which you again request information regarding the Limerick nuclear power plant. On January 27, 2015, I provided a response (ML15028A032) to your January 12, 2015, email (ML15021A078), which raised the same questions. Subsequently, in your February 2, 2015 email, you asserted that NRC has not made a good faith effort to answer your questions.

We disagree with your assertion. Our January 27th response fully answered the new questions posed in your email. Previous correspondence also has provided answers to these and other questions.

We have completed our final review on the questions/concerns in your January 12 and February 2 emails, and have determined that they are sufficiently similar to issues raised in previous emails and did not need further response. Thus, we plan no further action on any of these matters.

If you have any new questions or concerns about Limerick Nuclear Generating Station, please do not hesitate to contact me at (610) 337-5200.

*Fred Bower*

**Chief | Projects Branch 4 | Division of Reactor Projects | Region I | U.S. NRC**  
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**From:** [aceactivists@comcast.net](mailto:aceactivists@comcast.net) [mailto:[aceactivists@comcast.net](mailto:aceactivists@comcast.net)]

**Sent:** Monday, February 02, 2015 10:37 AM

**To:** Bower, Fred

**Cc:** Burns, Stephen; Evan Brandt

**Subject:** Limerick - NRC Stonewalling the Public

2-2-15

To: **Fred Bower, NRC**

From: Alliance For A Clean Environment  
Dr. Lewis Cuthbert, President

**RE: YOUR REPEATED REFUSALS TO ANSWER QUESTIONS AND CONCERNS THAT NEED AND DESERVE FULL AND ACCURATE PUBLIC DISCLOSURE**

We have repeated our legitimate questions and serious concerns to you time and again because you have failed to directly answer our questions or address our concerns to reduce the unprecedented risks we face related to Limerick Nuclear Plant operations.

Minimally, the public needs and deserves the transparency NRC claims to provide. Your responses suggest NRC is now little more than a shield for Exelon to avoid full and accurate disclosure.

**YOUR 1-27-15 E-MAIL REPLY STONEWALLED US AGAIN, STATING THAT NRC PLANS NO FURTHER ACTIONS ON ACE CONCERNS. THIS IS BOTH NEGLIGENT AND UNACCEPTABLE! YOU HAVE A RESPONSIBILITY TO ANSWER US. YOU WORK FOR THE PUBLIC.**

**WE ARE RESUBMITTING QUESTIONS THAT YOU NEVER ANSWERED AND CONCERNS THAT YOU FAILED TO ADDRESS, WITH THE EXPECTATION THAT WE WILL GET THE ANSWERS AND RESPONSES THAT THE PUBLIC NEEDS AND DESERVES.**

**1. Embrittlement And Degradation Of Limerick's Inherently Defective Reactors**

We Asked You:

- Has NRC or Exelon ever done borehole testing on Limerick's reactors?
- Was that a requirement for relicensing? If not, why not.

**You Failed To Directly Answer Questions Above.**

- If borehole testing for Limerick's reactors was done, why wouldn't you simply answer the questions stated above?
- Are we to assume it has never been done?
- If it was not done, we can't understand why it was not required BEFORE relicensing.
- **Both Failure of NRC to Require This Testing for Relicensing and Your Failure To Directly Answer Our Questions Are Indefensible.**

**2. Elimination Of Testing (Commitment No. 46) For Limerick's Aging Management Program Required For Relicensing.  
NRC Allowed Exelon's Elimination of This Vital Testing**

- It is negligent for NRC to relicense Limerick without this testing.
- NRC stated that when Exelon eliminated this actual testing requirement for Limerick relicensing: There Is No Way For NRC To Verify Whether Limerick's Aging Equipment Is Safe.

**IT IS INEXPLICABLE AND UNACCEPTABLE THAT NRC FAILED TO REQUIRE ACTUAL TESTING OF LIMERICK'S AGING EQUIPMENT AND SYSTEMS AS A CONDITION FOR RELICENSING.**

- NRC Should Have Required Actual Testing Of Limerick's Aging Equipment, Prior To Relicensing. NRC Dangerously Allowed Exelon To Delay Limerick's Aging Equipment Testing For At Least A Decade.
- Because NRC Allowed Exelon to avoid this testing prior to relicensing Limerick, **NRC cannot prove Limerick's equipment deterioration is not occurring faster than aging models predicted.** In reality, without testing, NRC has no actual idea how fast equipment deterioration is occurring at Limerick, or whether Exelon's aging management program is working.
- Your tactic of asking us for more information instead of answering specific direct questions with specific direct answers is evasive and unacceptable. You are responsible for oversight of Limerick's safety and should know where to find Limerick's records.

**NRC weak requirements have never insured safety at Limerick. To make matters worse, NRC has removed many of those requirements.**

- In your 12-8-14 response you claimed "Exelon is required to insure that both Limerick Units 1 and 2 meet requirements throughout the plant's operating lifetime."
- Your own staff found evidence that shows NRC concern about corrosion, thinning, pitting, and general deterioration of Limerick's aging equipment. You should have all that information at your fingertips. You should not be asking us for it.
- Additionally, historic evidence suggests Limerick's inherently defective reactors have NEVER met original NRC requirements for licensing. NRC weakened its requirements so that Limerick could "meet" them.
- NRC's regulations have been changed repeatedly from the start in order to license this dangerous nuclear plant.
- Limerick has already operated for 30 years. Relicensing means Limerick has been approved by NRC to operate for 30 more years, despite dangerous signs of aging.

**OTHER EVASIVE RESPONSES WHICH FAILED TO DIRECTLY ADDRESS OUR CONCERNS ABOUT:**

**1. HIGH-BURN NUCLEAR FUEL**

You Claimed, *"IT (HIGH-BURN FUEL USE) IS INFORMATION THAT IS NOT NORMALLY COLLECTED BY THE NRC"*. HOW CAN THAT BE TRUE? NRC's Mission Is To Protect Us From This Kind Of Radioactive Risk.

**The public has a right to know if Limerick is using high-burn fuel that releases more radiation and increases risks for storage and / or transport in our region. Given the increased health, safety, and security risks, NRC should be tracking all high-burn nuclear fuel use at Limerick.**

**High-Burn Nuclear Fuel Use At Limerick Significantly Impacts Our Health and Safety, Yet YOUR RESPONSE DID NOT ANSWER OUR QUESTIONS:**

- When did Limerick start burning high-burn nuclear fuel?
- If it is being burned in both reactors?
- Does NRC plan to continue to allow its use despite the fact that it releases 2 to 3 times higher radioactive fission gas and increases risk of fuel rod ruptures that can lead to radiation leaks in fuel pools, casks, and transport?

**THE LINK SHOULD BE CLEAR TO NRC BETWEEN CITIZEN-DETECTED RADIATION SPIKES AT LIMERICK (UP TO 30% HIGHER) AND THE FACT THAT HIGH-BURN FUEL RELEASES ARE 2 TO 3 TIMES HIGHER THAN REGULAR FUEL.**

NRC has NO PROOF that high-burn fuel use at Limerick is not what is causing higher than previous radiation spikes detected by residents. NRC DOES NO INDEPENDENT RADIATION MONITORING.

It is irresponsible for NRC to fail to do its own radiation monitoring instead of relying on Exelon's radioactive gas testing and reporting to NRC!

- How reliable is it when NRC allows a 36% margin of error in Exelon's radioactive reporting?
- How can you claim Limerick is not the cause of the radiation spikes found by residents, based on a 36% margin of error in the data you are using?

## **2. LIMERICK'S LOW-LEVEL RADIOACTIVE WASTES (LLRW)**

For Over A Year, NRC Went To Extraordinary Lengths To Avoid Full And Accurate Disclosure Regarding The Volume, Weight, And Destination Of Limerick's Low-Level Radioactive Wastes.

- **FINALLY, AN NRC OFFICIAL INFORMED US THAT NRC DOESN'T BELIEVE IT IS NECESSARY TO TRACK THE VOLUME AND DESTINATION OF LIMERICK'S LLRW.**
- **WITHOUT TRACKING THE WEIGHT AND VOLUME OF LIMERICK'S LLRW, NRC CANNOT ACCURATELY DETERMINE HOW MUCH IS PRODUCED OR WHERE IT GOES.**
- Limerick is out of room to store its LLRW. Barnwell, S.C. would no longer take Limerick's LLRW in 2009. Exelon was permitted to send it to Peach Bottom in 2009. **NRC OFFICIALS TOLD ACE IT WAS GOING TO PEACH BOTTOM, YET ON-LINE RECORDS DO NOT REFLECT THAT.**
- NRC repeatedly refused to provide written responses to the ACE question:

**WHY DOESN'T NRC TRACK THE VOLUME AND DESTINATION OF ALL LIMERICK'S LLRW, GIVEN THE POTENTIAL HEALTH AND SAFETY RISKS?**

- Your 3-1-14 e-mail to ACE was an attempt to avoid responding to our concerns on the record and avoid accountability. You said, ***"This is the third response on this topic [LLRW]. Rather than submitting additional questions...., I request that you contact me on the phone."*** Your unwillingness to provide written answers is not only troubling, it is unacceptable. It avoids accountability for you and can lead to deception and misunderstanding.

## **3. EXELON'S STALLED LIMERICK'S RADIATION REPORT THIS TACTIC DENIED THE PUBLIC TIME TO REVIEW THE IMPORTANT DOCUMENTS BEFORE NRC'S PUBLIC MEETINGS**

- Exelon's 2013 Radiological Monitoring Report for Limerick was due in March, 2014, yet the report was over 30 days late and not available in time for public review before NRC's 5-7-14 meeting on Limerick's 2013 operations.

- We e-mailed you to ask why it was so late. In your 4-24-14 response you inexplicably refused to tell us why in writing.
- You stated: ***"I suggest that you call me and I will explain the information I have regarding when I expect the 2013 (Radiological Monitoring) report to be submitted and why."*** At a later date, you forwarded us a link to that radiation report, but the link would not open. This tactic is unbelievable!

#### **4. LIMERICK'S UNPRECEDENTED EARTHQUAKE RISKS NRC FAILS TO MEANINGFULLY ADDRESS LIMERICK'S RISKS, EVEN AFTER THE FUKUSHIMA DISASTER.**

- ACE provided NRC with documented evidence showing why Limerick Nuclear Plant should be considered at tremendous risk for multiple meltdowns from an earthquake. NRC should close Limerick to avoid the potential for such a catastrophe.
- NRC dismissed the evidence and allowed Exelon to wait until 2019 (another 4 years) to complete an earthquake risk study for Limerick, inexplicably classifying Limerick in NRC's least risky category for earthquake risk without accounting for:

- 1) An earlier analysis ranking Limerick 3rd on the nation's earthquake risk list.
- 2) Limerick's construction directly over earthquake fault fractures.
- 3) Limerick's fuel pools built directly over reactors on top of earthquake fault zone fractures.
- 4) The fact that other vital Limerick structures, including the control room, turbine building and rad-waste storage building are also built over earthquake fault zone fractures.
- 5) Earthquake risks dramatically increasing at Limerick due to massive fracking in PA and surrounding states. USGS has determined that earthquakes can be triggered by fracking.

- **Due to NRC's repeated dismissals, deceptions, and denials of earthquake risks at Limerick, in 2014, ACE finally contacted NRC Chairman Macfarlane to close Limerick to eliminate such unprecedented risk for catastrophic meltdowns at Limerick from an earthquake.**

Ironically, at NRC's 5-7-14 public meeting, you appeared annoyed that ACE had contacted NRC Chairman Macfarlane. While your reaction was surprising, your dismissive attitude toward serious risks was not.

#### **5. SEISMIC WALKDOWNS**

**ACE researchers asked questions concerning Limerick's seismic walkdowns 11-4-13. On December 9, 2013 you replied by e-mail.**

- You were asked if Limerick had been included in the seismic hazard walkdown audit associated with the Near-Term Task Force Recommendation 2.3 that NRC requested on March 12, 2012. We asked if not, why not.
- While you stated that Limerick was NOT one of the sites audited, the reasons you cited for Limerick not being audited are exactly the reasons that LIMERICK SHOULD HAVE BEEN AUDITED.
- NRC's guidance is clearly flawed and not an acceptable measure of earthquake risk at Limerick because it is generic and not specific..
- You irrationally claimed that Limerick was not chosen because it was not a site with higher than average seismic risk.

- With Limerick's reactors, fuel pools, control room, turbine building, and rad-waste storage building built directly on top of an earthquake fault zone, and four other fault zones within 17 miles, **LIMERICK SHOULD QUALIFY AS VERY HIGH RISK AND HAVE REQUIRED IMMEDIATE INCREASED NRC OVERSIGHT, NOT DISMISSAL.**
- **WE BELIEVE NRC CHOSE TO DISMISS THE EARTHQUAKE FAULT RISK AT LIMERICK IN ORDER TO RELICENSE LIMERICK.**
- NRC's regulations, had they been followed at the time of original licensing, would have prevented Limerick from being licensed. NRC's regulations, weakened to permit Limerick licensing, have been weakened further to relicense Limerick.

## **6. WRITTEN RESPONSES VS PHONE CALLS**

**At NRC's 5-7-14 Meeting, you made it clear you prefer phone conversations rather than written responses to our questions and concerns, stating that written responses require you to get approvals.**

- But there can be no accountability without written responses. Written responses also avoid misunderstandings.
- ACE refuses to accept phone responses in place of our requested written responses.

**NRC'S CLAIMS OF RESPONSIVENESS AND TRANSPARENCY HAVE ZERO CREDIBILITY BASED ON ACE EXPERIENCES. OTHER NRC OFFICIALS HAVE BEEN JUST AS EVASIVE AS YOU HAVE BEEN.**

- It is the height of injustice that NRC never put as much effort into actually reducing risks at Limerick as it did to create the illusion of Limerick safety.
- Instead, NRC failed to be forthcoming, avoiding full and accurate disclosure, which keeps the public in the dark.

You deceptively assert that NRC has addressed the broad range of issues raised by ACE during relicensing. NRC did no such thing. What NRC did was avoid answering us clearly. NRC failed to provide full, accurate, and timely disclosure.

**IN ESSENCE, NRC IS SIMPLY DISMISSING THE ENORMOUS VOLUME OF ALARMING ISSUES IDENTIFIED BY ACE AT TWO PUBLIC HEARINGS, AT NRC PUBLIC MEETINGS HELD BEFORE RELICENSING LIMERICK, THROUGH ACE E-MAILS TO NRC ON-SITE INSPECTORS, AND EVEN TO NRC'S CHAIRMAN.**

It is sheer arrogance for you to be so dismissive of SERIOUS public concerns about NRC's approval of Limerick's license renewal application.

It is unacceptable for you to have relicensed Limerick without requiring actions to reduce risks. It is the height of injustice that NRC never put as much effort into actually reducing risks at Limerick as it did to create the illusion of safety.

It is an injustice of major proportions for NRC to have approved amendments to Limerick's license AFTER re-licensing.

NRC's failure to regulate Limerick's safety jeopardizes the future of millions of people in the Greater Philadelphia Region and beyond.

Rest assured that we expect to get answers related to the issues we outlined in this and previous e-mails. The public has a right-to-know and you have a responsibility to answer to the public. We do not accept your inaccurate assertion that NRC has addressed the issues we raised previously. Just because we raised issues earlier and you claim to have addressed them, did not reduce the threats we are concerned about.

You state that you forwarded our e-mail to the Office of Inspector General, but that accomplishes nothing and provides no answers to our important questions. We need full and accurate disclosure and protective action now. We urge you to consider your moral and ethical responsibilities to answer to the public.

Respectfully,  
Dr. Lewis Cuthbert

CC: U.S. Senator Casey  
U.S. Senator Toomey  
U.S. Congressman Dent  
U.S. Congressman Meehan  
PA Senator Rafferty  
PA Senator Dinniman  
PA Representative Vereb  
PA Representative Quigley  
PA Representative Hennessey  
NRC Chairman Burns  
Pottstown Mercury