

From: aceactivists@comcast.net
Sent: Monday, April 06, 2015 8:29 AM
To: Bower, Fred
Subject: Unanswered Questions - Inoperability of Limerick's Seismic Monitors

April 6, 2015

To: Fred Bower, NRC

**From: The Alliance for a Clean Environment, ACE
Dr. Lewis Cuthbert, President**

**RE: Inoperability of Limerick's Seismic Monitors
Unanswered Questions and Concerns**

Mr. Bower,

Thank you for your March 16th reply to Limerick-specific questions we asked in our initial e-mail to you on January 26th. Your e-mail on January 27th failed to answer our questions. We contacted you again on January 28th and restated our questions and concerns. Your March 16th reply still failed to directly answer all our Limerick-specific January 28th questions and concerns.

Therefore, we are resubmitting still unanswered questions and concerns. We hope to elicit more than the your repetitive responses which simply cited unprotective NRC regulations, as if they offer iron-clad public protections, which they do not. **PLEASE DO NOT TELL US YET AGAIN THAT YOU ALREADY RESPONDED TO OUR CONCERNS. IN REALITY, YOUR RESPONSES FAILED TO ANSWER OUR QUESTIONS AND CONCERNS.**

Why we contacted you on January 26th:

An ACE member informed us that an earthquake had occurred in the Downingtown area on January 25th. We were told that:

- USGS reported that a 2.7 magnitude earthquake had occurred in Downingtown.
- On the map, the quake appeared to be fairly close to the blasting quarry that abuts Limerick Nuclear Plant's boundary line.
- The quake's epicenter looked to be in line with the fault that heads to Limerick.
- The quake occurred on the Ramapo Fault, confirmed to be active.

You inaccurately categorized our questions as, "*similar questions to those that you provided a response to on January 27th*". The problem is that you have NOT responded to all the Limerick-specific questions and concerns we have been raising since January 26th.

The following information is a summary of our unanswered questions and concerns, as of your March 16th e-mail to us.

1. Was the 1-25-15 Downingtown earthquake, map-wise, in line with the fault leading to Limerick? Yes or No?

- **You ignored this question** by supplying the USGS information we already had, stating only that the quake was not felt at Limerick.
- You didn't answer whether the quake was map-wise in line with a fault leading to Limerick.

2. We asked why NRC would not request from USGS immediate automated notification of earthquakes at least within 100 miles of Limerick. We recommended that NRC request automatic notifications of any seismic activity within 100 miles of Limerick, especially since the 8/23/11 VA earthquake jolted Limerick.

- **You ignored our concerns.** We recommended **AUTOMATED IMMEDIATE USGS NOTIFICATION OF SEISMIC ACTIVITY** that could impact Limerick. Instead, you stated that NRC receives reports on seismic events.

R Reports are NOT the same as **AUTOMATED IMMEDIATE NOTIFICATIONS.**

I **IMMEDIATE notice to NRC is crucial since Limerick's reactors, fuel pools, and other vital buildings sit right on top of earthquake fault fractures and earthquakes can trigger meltdowns at Limerick.**

3. 3. Were all Limerick's gauges and monitors for underground infrastructure 100% operational at the time of the Downingtown area quake? Yes or No?

- **You ignored this question.** citing generic earthquake-related NRC regulatory requirements.
- While an earthquake as small as the Downingtown earthquake would not likely cause visible damage, it could impact the miles of aging buried pipelines and cables vital to preventing meltdowns. Many of these pipelines constantly transport highly radioactive and corrosive fluids. A weakness or dislodged fitting from even a mild earthquake could cause dangerous leaks that could go undetected for long periods of time.
- You stated that no NRC resident inspectors were on site at the time of the Downingtown earthquake. Unless NRC can independently verify that all gauges and monitors for underground infrastructure were operational at the time of the earthquake, it is impossible for NRC to know for sure if there was any damage. Clearly, damage can't be accurately assessed without operational gauges and monitors.

- NRC stated, after the 8/23/11 Virginia earthquake jolted Limerick, that NRC would not inspect Limerick's underground infrastructure. Instead NRC stated it would rely only on Exelon's gauges and monitors to reveal possible damage to underground infrastructure.
- Our concern: Limerick's gauges and monitors to several systems have often been inoperable for long periods of time without being noticed, including seismic monitors.

4. Was Limerick's entire seismic monitoring instrumentation for the control room operational at the time of the Downingtown area quake? Yes or No?

- **You ignored this question** citing generic earthquake-related NRC regulatory requirements, stating only that NRC regulations and licensing basis of Limerick require Exelon to declare and report an unusual event sensed onsite that can be measured on the LGS seismic instrumentation, and that no such report was required for the event 20 miles from Limerick on January 25th.
- However, when Limerick was jolted by the 8-23-11 VA earthquake and sensed by Limerick's control room operators who felt the vibrations, an Exelon declaration and report were required by NRC's regulations and licensing basis.
- Inexplicably, Exelon's report for the 8-23-11 earthquake that was sensed on-site at Limerick failed to mention that **Limerick's seismic monitors were inoperable on the day the Virginia earthquake hit Limerick.**
- **In fact, records show NRC allowed Limerick's seismic monitor instrumentation to remain inoperable for at least one year and four months prior to the Virginia earthquake that impacted Limerick. To our knowledge, NRC failed to even fine Exelon for this violation.**
- **NRC allowed Exelon to stall for another three months after the 8-23-11 earthquake before Exelon finally fixed one of Limerick's monitors. This was a violation of NRC regulations at the time. We believe NRC should have forced immediate compliance with regulations.**

Now, 3 1/2 years later, we need to know:

Are All Limerick's Seismic Monitors Currently Operational? Yes Or No?
Do They All Continuously Have Power? Yes Or No?
Are Monitors And Guages Calibrated To Detect Small Changes Due To Earthquakes That Can Disrupt Deteriorating Underground Pipes And Cables? Yes Or No?

Other Issues Related to Your Response:

It has been difficult, if not impossible, to get direct honest answers from you, which is why we contact on-site resident inspectors about issues of extreme concern at Limerick Nuclear Plant.

- You avoid direct answers to extraordinarily important questions. That is unacceptable!
- You don't want us e-mailing Limerick resident inspectors. That is unacceptable!
- You suggest that we contact you with a brief phone call that, in essence, is off-the-record.

This is unacceptable!

Your attempt to eliminate e-mails between the public and Limerick's NRC resident inspectors is inappropriate and unacceptable! You directed resident inspectors to, "forward to the regional office any public inquiries that cannot be resolved in a brief phone call". That, in essence, would be off the record, also unacceptable!

- Over the past 15 years, we have presented only a handful of inquiries about serious concerns to Limerick resident inspectors. The issues are complex and need written clarification to avoid misunderstandings in our responses to public concerns.
- It is not enough for PR people to declare that Limerick is safe, despite Limerick's documented unresolved and critical safety issues. The public needs and demands that Limerick actually BE SAFE.
- The public needs and deserves reliable information from NRC inspectors on-site at Limerick, not from public relations spokesmen. You and others in the NRC regional office are not on site and do not have direct access to critical information that residents inspectors would have.

You stated that the Downingtown event occurred on a Sunday evening and that NRC residents inspectors were not on-site at the time.

- Does this mean Limerick resident inspectors are not required to work on-site on week-ends? on holidays? With two resident inspectors for Limerick, why wouldn't their hours be staggered so that someone is on-site every day?
- This is cause for alarm! Problems or accidents do not observe week-ends or holidays. Do we just have to hope no serious problems or accidents occur on Friday night, Saturday, Sunday, or holidays?
- A serious accident could go unreported by Exelon and undetected by NRC inspectors from Friday afternoon to Monday morning (over two days).
- We clearly can't rely on Exelon officials. It took 16 hours for Exelon to report to NRC, Limerick's 3-19-12 radioactive spill into the Schuylkill River, a vital drinking water source. Neither NRC nor Exelon reported it to the public for 23 days, too late for families, water treatment companies, or municipalities to take protective action related to increased radiation in the water supply.

**NRC NEEDS TO PROVIDE EVIDENCE TO THE PUBLIC,
SHOWING THAT ALL LIMERICK'S SEISMIC MONITORS AND SYSTEMS
ARE, AND WILL REMAIN, CONTINUALLY OPERATIONAL.**

Why?

- Earthquake risks are increasing dramatically due to massive fracking in PA and bordering states.

- Limerick's reactors, fuel pools, control room, turbine building, and rad-waste building are all built directly on an earthquake fault. There are four other earthquake faults within 17 miles of Limerick, with one considered active.
- Even small earthquake disturbances could disrupt miles of aging vital buried pipes and cables under Limerick and not be detected with inspections. Seismic systems must detect these risks.
- An earthquake impacting Limerick could be devastating to the health, safety, and financial interests of millions of people living in the entire Greater Philadelphia Region for generations.

CC: Governor Wolf
Senator Casey
Senator Toomey
Congressman Dent
Congressman Costello
Congreeman Meehan
PA Senator Rafferty
PA Senator Dinniman
Representative Vereb
Representative Quigley
Representative Hennessey
NRC Chairman Burns
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