

Alliance For A Clean Environment  
P.O. Box 3063 Stowe, PA 19464 (610) 326-6433

April 14, 2008

Paul Krohn, NRC Branch Chief  
NRC, Region 1  
475 Allendale Road  
King of Prussia, PA 19406-1415

Re: **REQUEST for WRITTEN RESPONSES to questions and concerns related to NRC's oversight at Limerick Nuclear Power Plant presented by ACE at NRC's April 10, 2008 public meeting with Exelon in Limerick.**

Dear Mr. Krohn,

I attended the meeting April 10, 2008 on behalf of The Alliance For A Clean Environment and posed questions and concerns from ACE members and others in this region throughout the year. NRC's yearly meeting is the only opportunity for the public to discuss important concerns and ask questions related to the most serious potential threat to public health and safety in our region, Limerick Nuclear Power Plant,

Prior to this meeting I spent days reviewing many of the concerns and questions, news articles, and other information ACE members and others brought to our attention throughout this past year. I dismissed the least important issues and compiled the others into seven major points.

Only a few people attended the meeting. Only one other person wanted to speak. It was puzzling why a 10 minute limit was imposed under the circumstances. That made it more objectionable than usual to indulge NRC spin instead of straight talk about critical questions and concerns. It was inappropriate for NRC to be more concerned about people leaving to "enjoy the rest of their night" than allowing for full discussion on issues that have the potential for a major disaster.

NRC is responsible for the safe operations at Limerick Nuclear Power Plant and health and safety related to that nuclear plant, yet attempts to avoid responsibility for issues which are clearly related to safety. Caring and responsibility should include NRC's utmost attention and concern in all aspects of any Limerick Nuclear Power Plant threat related to the public interest. It is unacceptable for NRC to take a narrow view of its responsibility.

With that in mind I am now requesting written responses from NRC on behalf of ACE members and others at the April 10, 2008 meeting in Limerick. Included are concerns and questions about some of the responses we received at the meeting.

**The Alliance For A Clean Environment  
Requests NRC To Respond In Writing To The Following 7 Issues Within 30 Days To:  
ACE P.O. Box 3063 Stowe, PA 19464**

**1. Limerick Township Rezoning Of Exelon's Property**

January 24, 2008 Limerick Township Officials rezoned Exelon's property to Heavy Industrial and Energy District.

- NRC should be investigating exactly what Limerick's zoning change of Exelon's property means related to safe operations of Limerick Nuclear Power Plant. Your responses at the meeting suggest you didn't give much thought to this VERY serious issue.
- Is another kind of energy plant being planned on or close to Exelon's property?
- What are NRC's safety criteria related to distance requirements for another kind of dangerous energy plant and the safe operations of Limerick Nuclear Power Plant? There are major safety and security issues which are of concern to the public and should be of concern to NRC. Included:
  - A. Heat generated from potential explosions and fires at an energy plant too close to Limerick could impact high-level radioactive waste storage above ground which needs ample air flow.
  - B. Water needs of another plant competing and/or interfering with Limerick Nuclear Power Plant's water needs.
  - C. Security issues associated with so many people employed at another energy industry and some who would be transporting dangerous and explosive materials in and out of a plant so close to Limerick Nuclear Plant.
- Your response after the meeting was unbelievable. You said NRC wouldn't get involved until they broke ground. That is not only irresponsible, it is negligent. NRC needs to register objections about threats from dangerous energy plants too close to Limerick Nuclear Power Plant now, rather than after developers break ground. It's too late then.
- Exelon stated there are no plans for another reactor in Limerick, a great relief if true.
  - ✓ Still, I have concerns about why Exelon's property was rezoned. Why rezone Exelon's property when 2 reactors were operating on that property for over 22 years?
  - ✓ Why was there an NRC employee in attendance at the meeting this year involved with licensing? Licensing what and when?
  - ✓ New NRC handouts appeared on new reactors. Why, if no new reactor is planned?
  - ✓ We were informed Exelon can put casks for high-level radioactive wastes all over their property until there was no more room. Could that mean yet another reactor to produce still more deadly high-level radioactive waste?
  - ✓ Does NRC know for certain Exelon does not have plans for another reactor in Limerick?

## **2. Limerick Airport Concerns**

Exelon said they are in the process of trying to sell Limerick Airport. This should be of major concern to everyone since that airport is far too close to Limerick Nuclear Power Plant. Starting this summer high-level radioactive wastes stored above ground will provide terrorists with easy targets. Steel canisters holding the high-level radioactive wastes can clearly be penetrated with missiles, a fact proven by army testing. Terrorists' missiles could easily penetrate cement casks surrounding the canisters as well.

Since 9/11 ACE repeatedly urged Exelon to close the airport. NRC and Exelon repeatedly dismissed our concerns, using deceptive information to ignore precaution and prevention of a disaster from a terrorist strike. After 9/11 the National Guard protected Limerick. They were supposed to stay but didn't. There is still no provision at Limerick to strike down a missile. The only protection the public has is precaution and prevention. After the fact it is too late.

**NRC should be concerned about who owns and uses Limerick Airport in relation to a terrorist threat at Limerick Nuclear Power Plant. Preventive action needs to be taken now before there is a terrorist attack with missiles from planes or small planes loaded with fuel.**

- NRC has failed to do the right thing and help to get the airport closed. We hope NRC will at least insure background checks on the buyer and those who take flying lessons at Limerick Airport.
- We don't want to hear that it is not NRC's responsibility. It is your job to see that some appropriate agency is responsible to do extensive background checks on those who are purchasing Limerick Airport and those taking flying lessons there.
- Additional surveillance needs to be provided during events such as the fall breakfast when vast numbers of planes come in to Limerick Airport. NRC should at least see that this gets done.

### **3. FOUR Unplanned Shutdowns Within A Year**

Even after the 4<sup>th</sup> unplanned shutdown in a year, NRC is NOT planning more oversight.

There were 3 unplanned shutdowns just since February 1, 2008

3 unplanned shutdowns involved Unit 2

**What does it take to get NRC to increase oversight? If 4 unplanned shutdowns in a year do not trigger more vigilant oversight, NRC's method of determining oversight must be flawed.** We suggest NRC's use of a "rolling average" to dismiss concern shows why it is difficult for the public to trust NRC's conclusions and oversight.

**Exelon and NRC send out press releases claiming definitive causes for unplanned shutdowns are unknown and need to be investigated, yet then fail to follow up in press releases to fully disclose the results of investigations related to root causes of shutdowns.**

#### Shutdowns Reported In The Mercury:

- A. **February 2, 2008** In the Mercury article related to a Unit 2 unplanned shutdown, Dave Peterson, Limerick's PR person stated, "we're still in a full investigation to determine the root cause". Peterson said, "there was no risk to the public or the plant's 700 employees".
  - **What was the root cause of the shutdown reported 2/2/08?**
  - **It is indefensible to claim no risk when neither Exelon nor NRC fully understand the root cause of a problem. We suggest that deceptive practice be stopped.**
- B. **March 25, 2008**, after the most recent automatic unplanned shutdown on Unit 1, NRC's spokesperson told the Mercury that "Exelon is trouble-shooting. We still don't have a firm reason for the shutdown."
  - **Exactly what caused the shutdown reported 3/25/08?**
- C. **April 24, 2007** - For the 2<sup>nd</sup> time that month a Limerick generator shut down unexpectedly. **The Unit 2 Unplanned Shutdown Was Related To A Low Coolant Level. Exelon admitted at the meeting that low coolant level could lead to a meltdown.** 5 days after refueling, on April 9, 2007, this shut down occurred because a seal on a pump was not up to operating standards. **15 days later the cause of the shutdown was still under investigation.** Exelon PR person stated "the incident is under investigation", yet claimed there was no risk to the public and that no radiation was released."

- What was the result of that investigation into the LOW COOLANT LEVEL that caused the shutdown?
- Why wasn't the root cause and full disclosure reported to the public after the investigation was completed?
- Without knowing the cause of the shutdown for over 15 days, Exelon was irresponsibly claiming no risk to the public.

#### **4. Security**

We are deeply concerned about the sleeping guard incidents which highlight NRC's lax oversight. It is difficult to believe NRC's on-site inspectors didn't know and/or didn't find it their responsibility to be concerned with what was going on related to Limerick guards when this is clearly a high risk terrorist target. Resident inspectors are supposed to interact with plant workers to act as the eyes and ears of NRC. That certainly didn't appear to be happening at Limerick, unless they knew and just didn't do anything about it.

- If not for whistle blower video obtained by CBS News, showing security officers sleeping on the job at Peach Bottom, NRC would have failed to take reports of sleeping guards seriously. Even after that, NRC failed to take action related to Limerick.
- 3/1/07 in the Mercury Sound Off someone expressed anger about what was going on behind the walls of Limerick Nuclear Plant, saying the NO DATING policy among employees needs to be enforced. At NRC's April, 2007 meeting, ACE concerns about sleeping and inattentive guards at Limerick were basically dismissed.
- We hope on-site NRC employees at Limerick will pay closer attention and take guard activities more seriously in the future. Clearly, oversight is NRC's responsibility. In an 11/07 NRC response letter from Richard Barkley to a 10/08 e-mail about my serious security concerns at Limerick, NRC stated, "Our regulatory responsibilities are directed toward the qualification and performance of the guard force members, and we hold NRC licensee's [Exelon] accountable for their performance."
  - **NRC on-site employees failed in their duty related to Limerick Nuclear Power Plant guards. We urge NRC to make oversight of Exelon's security workers a top priority.**
  - **We urge NRC to be far more vigilant and responsible related to security oversight in the future, related to the number of hours worked by security forces as well as their attentiveness to duty.**
- In the 11/07 letter Mr. Barkely mentioned, *"new [NRC] requirements to further limit the number of hours that can be worked by security officers."*
  - NRC's new requirements should have been completed and in place long ago, given the importance of security at nuclear power plants.
  - We urge NRC to do a better job of oversight of Exelon's security at Limerick than they did with Wackenhut.
  - What will be Exelon's penalty for violations of NRC's new requirements?

#### **5. NRC Is Negligent For Failing To Provide Terrorist Risk Assessment For High-Level Radioactive Wastes Stored Above Ground At Limerick**

NRC refused to assess the risks faced if terrorists would attack the deadly high-level radioactive wastes being stored at Limerick Nuclear Power Plant, even though a federal judge ordered NRC to assess that risk at Diablo Canyon nuclear plant in California.

**NRC was ordered to assess the following threats posed by a terrorist attack for the nuclear plant in California, but NRC won't assess them at Limerick Nuclear Plant.**

- ✓ Land-based vehicle bomb
- ✓ Ground assault with use of an insider
- ✓ Water-borne assault
- ✓ Large aircraft impact similar in magnitude to 9/11 attacks.

**Deadly high-level radioactive wastes stored above ground will be inviting terrorist targets and add to the other enormous radioactive threats at Limerick Nuclear Plant in this very heavily populated region.**

- Army testing proves missiles can penetrate storage containers of deadly high-level radioactive wastes, yet there is no defense system for terrorists' missile strikes at Limerick Nuclear Power Plant casks, even though these deadly wastes will now be stored above ground providing a target that would be hard to miss.

**Above ground storage of deadly wastes will add a significant terrorist threat at Limerick, yet based on nothing more than opinion, NRC makes 2 unsubstantiated and unprotective conclusions:**

- 1) Unproven, Illogical NRC Conclusion: *"Robust strength of casks holding high-level radioactive wastes would not likely allow radiation to disperse much beyond the area of the plant itself."*
- 2) Unprotective Position: *"a terrorist attack that would result in a significant release of radiation affecting the public is not reasonably expected to occur."*

**People in this heavily populated region need and deserve the same assessment as those in California.**

- **ACE urges NRC to assess the threats posed at Limerick associated with high-level radioactive waste storage at Limerick.**

While all numbers are significantly higher in 2008, the following numbers for Limerick Nuclear Power Plant were reported to Congress in 1982 (if an accident occurred at either reactor):

- 74,000 early fatalities
- 610,000 early injuries (most of any U.S. reactor)
- 34,000 cancer deaths

Costs from an accident, in 1980 dollars:

For Limerick 1 - \$213 billion For Limerick 2 - \$197 billion.

Numbers would be astronomical today.

- **After the 4/10/08 meeting you informed me that NRC is filing an appeal to the ruling of the federal judge. Instead of NRC doing the right thing in California as ordered by a federal judge, NRC is appealing the ruling.**
- **Sadly, it appears NRC will go to extraordinary lengths to avoid taking action to protect the public's interests. NRC negligence is astounding, but not surprising given the far too cozy relationship between NRC and the industry they are supposed to regulate.**
- **NRC is inexplicably refusing to assess the terrorist threat related to missiles and aircraft and ground casks holding high-level radioactive wastes at all nuclear power plants. What is NRC afraid of? Is NRC afraid to admit what common sense tells us, that we are clearly not adequately protected?**

**6. Cask Design Flaws For Storage Of Limerick's High-Level Radioactive Wastes Still NOT ADEQUATELY ADDRESSED - NOW IT IS TOO LATE**

The utmost scientific scrutiny should have been done in the form of testing and modeling, specifically for Transnuclear materials and the corrosive conditions around Limerick Nuclear Power Plant. Containers used at Limerick will hold high-level radioactive wastes that can remain deadly for millions of years.

- Since the above ground storage of high-level radioactive wastes at Limerick was first announced, ACE has been asking questions and providing information which should have caused an intensive scientific investigation into Transnuclear design flaws. Yet, to our knowledge, NRC failed to adequately address the Transnuclear cask design flaws and threats as identified by a nuclear engineer related to quality of cement and type of steel and coating used in relation to corrosion over decades from exposure to corrosive air.
- Extremely corrosive air pollution from other sources, in addition to excessive moisture in the air due to Limerick's 35 million gallons of daily steam and being surrounded by a river should have triggered concerns and investigation by NRC. Yet, requests urging more stringent scrutiny and improved cask design were irresponsibly dismissed with spin and deception.
- Without site-specific testing for all corrosive chemicals and moisture content in the air around Limerick and modeling on the very kind of steel being used by Transnuclear for the casks, as well as on the cement housing, NRC deceptively based conclusions on only about 20 years of cask storage elsewhere. The wastes remain radioactive for millions of years. What if there is a problem in 50 years? If there is corrosion on the steel holding the wastes, they can't be removed. Then it is too late.
- **NRC's callous disregard of the long-term potential of threats from design flaws in casks to store high-level radioactive wastes above ground for hundreds of years, if not longer, at Limerick Nuclear Power plant is indefensible.**

4/10/08 I asked you for clarity on length of time fuel rods needed to remain in the fuel pools prior to removal to casks. In spite of repeated statements at meetings on casks and NRC's brochure stating rods had to remain in the fuel pools for an absolute 5 year period for safety sake, NRC later wrote 1 year, then when challenged, 3 years.

- **At the 4/10/08 meeting you stated 4 years. That's absolutely amazing! We now have 4 different versions. NRC needs to provide scientific proof why they now backtrack from a full 5 years.**
- **We don't think for one minute it is about anything more than Exelon's overload in the fuel pools and the need for them to hasten removal. We are worried about overheating of the deadly wastes in the casks.**

## **7. Back-Up Emergency Sirens**

ACE's repeated calls for back-up power for sirens have been ignored. It is patently ridiculous to expect local police and firefighters to alert residents door to door around Limerick Nuclear Plant during an attack or disaster. Limerick is one of the most heavily populated areas around a nuclear plant. The utmost precaution should be required. 6/29/07 it was reported that some emergency sirens were out of service again around Limerick. With over 1.5 Billion in profits in 2006 (a 73% profit increase over 2005), it is disgraceful that Exelon has failed to provide back-up power and sirens for emergencies around Limerick.

- **At 17 other nuclear plants there is back-up power.**

- **Yet, your response at the 4/10/08 meeting was once again to protect the profits of the industry over the safety of the public. Instead of encouraging Exelon to do the right thing, you said to me, "Exelon doesn't have to provide back-up emergency sirens."**

I look forward to receiving NRC's direct and complete responses to all our questions and concerns about the issues we have raised related to terrorists threats and the safety of the operations of Limerick Nuclear Power Plant as well as the storage of its high-level radioactive wastes as soon as possible. We will be reporting them to our members and the public.

Thank you,



Donna Cuthbert  
ACE Vice President

Cc: Senator Casey  
Senator Specter  
Congressman Gerlach  
Congressman Sestak  
Congressman Dent  
PA Senator Rafferty  
PA Senator Dinniman  
Representative Quigley  
Representative Hennessey  
Montgomery County Commissioners  
Montgomery County Planning Commission  
Pottstown Borough Council and Mayor  
North Coventry Supervisors  
East Coventry Supervisors  
East Vincent Supervisors  
Limerick Supervisors  
Spring City Supervisors  
Royersford Supervisors  
Schwenksville Officials  
Phoenixville Officials