

From: Krohn, Paul
Sent: Friday, February 06, 2015 4:37 PM
To: Heater, Keith
Subject: FW: Risky Limerick Permanent Plant Modifications Approved AFTER Relicensing

From: aceactivists@comcast.net [<mailto:aceactivists@comcast.net>]
Sent: Monday, January 19, 2015 3:35 PM
To: Krohn, Paul
Cc: Bower, Fred; Ennis, Rick; NRDC; Evan Brandt
Subject: Risky Limerick Permanent Plant Modifications Approved AFTER Relicensing

January 19, 2015

To: Paul Krohn, NRC Chief Engineering Branch 2

From: Dr. Lewis Cuthbert, ACE President

Re: Limerick Nuclear Plant Changes, Tests, Experiments, and Permanent Plant Modifications Approved by NRC, Based On Exelon's Self-Serving, Self-Assessment

It is alarming that problems identified by NRC in 1984, before Limerick Nuclear Plant's original license was approved, have persisted up to and through NRC's 10-14 relicensing of Limerick. Your 12-23-14 letter to Exelon exposes the unresolved complexity of Limerick's problems. Your letter and attachment to Exelon reveals an alarming NRC hands-off-safety trend at Limerick.

Limerick's safety problems were not resolved before Limerick was originally licensed. The NRC section chief in 1984 stated that his staff wanted four items cleared up before licensing Limerick (Mercury 8/31/84). Items he identified included:

1. Improper procedures
2. Incomplete safety measures
3. Faulty valves
4. A defective hydrogen remover

- **Three of the four items identified by NRC in 1984 remain unresolved to this day (Confirmed by NRC's safety reports for Limerick relicensing).**
- **It is unclear whether or not the fourth item, a defective hydrogen remover, was ever repaired or replaced.**
 - We are concerned because At Limerick, at least one accident occurred involving a hydrogen leak. This documented hydrogen leak, identified by

NRC in a safety report occurred after Exelon submitted its application for Limerick relicensing.

- We are concerned about Limerick's original defective hydrogen remover because at TMI, it was a hydrogen explosion that rocked the control room during the TMI partial meltdown.

UNACCEPTABLE

History repeated itself for Limerick relicensing. Your letter to Exelon indicates that permanent Limerick plant modifications were initiated by Exelon BEFORE NRC's approval of Limerick relicensing (10-14).

- **NRC allowed Exelon to put the cart before the horse and rubberstamped its approval of those modifications two months AFTER NRC relicensed Limerick (12-23-14).**

EVEN WORSE

Exelon assessed the "adequacy" of changes it made at Limerick based on its own reviews.

- **Of major concern: Exelon concluded that an NRC safety evaluation was NOT required for risky changes, including experiments, that Exelon had already begun implementing at Limerick.**

Changes include:

- Experiments
- Calculations
- Analyses
- Design Change Documentation
- Procedures
- NRC's Technical Specifications (TS)
- Plant Drawings
- Updated Final Safety Assessment Report (UFSAR)

NRC's reviews and acceptance of Exelon's self-evaluations put the public at risk.

1. **We have no confidence in Exelon's self-assessment of its own changes for Limerick operations because Exelon obviously has a vested interest in the outcome. Evidence shows Exelon's data and reports fail to provide full, accurate, and timely disclosure.**

2. **It is reckless for NRC to have failed to conduct its own independent rigorous testing for Exelon's risky changes at Limerick.**
3. **It is irresponsible for NRC to relicense Limerick without requiring Exelon to comply with Commitment #46, which required the testing of Exelon's aging-management program for Limerick.**
4. **NRC is putting on blinders and failing to protect the public, while mindlessly allowing Exelon's self-serving reports to substitute for actual safeguards.**

DANGEROUS PERMANENT LIMERICK PLANT MODIFICATIONS TO LIMERICK'S MOV SYSTEM:

Background:

In 2011, NRC issued a "white violation" citing Exelon with noncompliance of a legally binding requirement involving the failure of the feedwater Motor Operated Valve (MOV) which resulted in loss of Reactor Core Isolation Coolant (RCIC) for longer than specifications allow, according to NRC's Technical Specifications (TS).

- **NRC defined the violation as a “weakness in maintaining long-term plant stability”.**
- **NRC stated that this was a “Violation of a legally binding requirement”.**

In 2012, Exelon requested an amendment taking the MOV out of Technical Specifications (TS), under NRC regulatory control, and into the Technical Manual (TM), under Exelon's control and *not* regulated by NRC. NRC contacted an unnamed state official for comment on this amendment prior to its approval. It is far from routine for the NRC to ask a state official for comment on its amendment approvals. The NRC stated, in its approval, that the unnamed state official had no comment.

In 2013, the NRC inexplicably granted Exelon's request to remove the MOV valve from NRC's Technical Specifications (TS)

The reason this is a major concern is because at TMI, on March 28, 1979, the immediate cause of the loss-of-coolant accident that allowed the uncovering of the core and the melting of about half of it was a **valve** that stuck open and allowed large volumes of water to escape.

EXELON CHANGES CLEARLY CREATE A SEVERE SAFETY HAZARD.

- **In 2014, Exelon made design changes to the Motor Operated Valve system for delivering water to the reactor core that included:**
 - **permanently fixing the valves in an open position**
 - **cutting the power to the valve alarms**
 - **removing loss-of-power/overload alarms**
1. **How can this be? Isn't the opening and closing of valves essential to preventing core meltdowns?**
 2. **Was this done because the MOV valve stem broke? If so, when did that happen?**
 3. **The MOV valve was inoperable for a month, verified by an NRC inspection report letter to Exelon dated 11-4-11.**
 4. **The 11-4-11 letter shows NRC issued a white violation, stating that it may require additional NRC inspection, yet now NRC has abandoned rigorous oversight of the MOV and its associated systems and alarms.**
- **NRC IS WILLFULLY BLIND TO THE RISKS INVOLVED WITH THIS DANGEROUS EXPERIMENT.**
 - **NRC IGNORED LIMERICK'S HISTORY OF VALVE PROBLEMS TO RELICENSE LIMERICK.**

QUESTIONS RELATED TO YOUR 12-23-14 LETTER TO EXELON ABOUT LIMERICK:

1. **Because the MOV is associated with plant stability, the potential consequences of NRC's lax oversight could be catastrophic.**
 - **Why would NRC excuse Exelon from compliance with original NRC regulations?**
 - **It appears that Exelon's MOV experiment would violate NRC regulations if the MOV was still in NRC's Technical Specifications (TS). Isn't that true?**
2. **Was the defective hydrogen remover ever repaired or replaced? If so, when?**

3. Your 12-23-14 letter to Exelon refers to a "team". Was this team comprised of NRC engineers? If not, what company or contractor supplied the engineers? Are they a permanent engineering inspection team for Limerick?