

**From:** Khan, Cheryl  
**Sent:** Tuesday, April 14, 2015 11:02 AM  
**To:** lilliafrantinstudio@msn.com  
**Cc:** McKinley, Raymond  
**Subject:** FW: PILGRIM'S PROBLEMS: JUNO, SCRAMS AND USELESS BACK-UP PLANS

Ms. Frantin,

I am responding to your January 30, 2015, e-mail to Mr. Bill Dean concerning various events and issues at Pilgrim. The NRC is aware of the different issues described in the newsletter attached to your Email.

The NRC monitors and evaluates the performance of commercial nuclear power plants utilizing a reactor oversight process (ROP), which uses a variety of tools to accomplish this evaluation. The process is designed to focus on the plant activities most important to safety. The NRC's ROP is described on the NRC website at the following location:

<http://www.nrc.gov/reactors/operating/oversight/rop-description.html>

Under the ROP, color-coded inspection findings and performance indicators are used to assess plant performance. (Performance indicators are statistical measurements of plant and equipment performance which, if exceeded, trigger additional NRC oversight.) The colors range from green, connoting very low safety or security significance, to white, yellow or red, for an issue of high significance.

Overall, the plant was operated safely during 2014. However, the plant is receiving additional scrutiny from the NRC due to two performance indicators crossing from green to white last year.

Based on the update of data following the third quarter of 2013, Pilgrim saw its performance indicator for Unplanned Scrams (shutdowns) with Complications shift from green to white. This indicator tracks unplanned scrams that require additional operator actions and that are more risk significant than uncomplicated shutdowns. Subsequently, when 2013 fourth-quarter data was finalized, another indicator for the single-reactor plant also transitioned to white. That indicator covers Unplanned Scrams per 7,000 Hours of Operation and becomes white if a plant experiences more than three unplanned shutdowns during that period of time.

These changes led to Pilgrim moving to the Degraded Cornerstone Column of the NRC's Action Matrix (the third of five such columns that represent increasing levels of NRC oversight), resulting in more inspections by the NRC and greater interaction between NRC senior managers and plant management to reach a better understanding of actions taken or planned to address the problems.

Last fall, a team of NRC inspectors traveled to Pilgrim to evaluate whether the issues behind the unplanned shutdowns had been satisfactorily addressed. The eight-member team found that although the company's problem identification, root cause evaluation and corrective action plans

were generally adequate, deficiencies still existed in the implementation of corrective action plans, as well as in understanding of the issues' causes.

As a result, per agency processes, the NRC in January assigned two "parallel" "white" inspection findings to Pilgrim. The findings administratively replaced the two "white" performance indicators and mean that the plant will continue to receive heightened attention until the NRC can perform a follow-up team inspection and is satisfied the concerns have been resolved. The NRC will conduct that additional inspection once Entergy notifies the agency of its readiness for it.

As you can see, the NRC is focusing increased attention on Pilgrim. Additional information on NRC's latest assessment of performance at Pilgrim is posted at [www.nrc.gov/NRR/OVERSIGHT/ASSESS/LETTERS/pilg\\_2014q4.pdf](http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/LETTERS/pilg_2014q4.pdf).

The newsletter also discussed Pilgrim's January 27, 2015, plant shutdown and equipment issues experienced during the shutdown, including the partial loss of off-site power. As a result of this shutdown and related equipment issues, the NRC initiated a Special Inspection. The event and related issues are being evaluated and the results of the NRC inspection will be made publicly available in an inspection report this spring. In accordance with the ROP, the inspection results will be factored into the NRC's assessment of Pilgrim and their position in the Action Matrix. Appropriate follow-up actions will be determined at that time. Please keep in mind that although equipment issues were experienced during the shutdown, the reactor was safely shut down.

As the newsletter stated, some of the spent fuel at Pilgrim is being stored in dry cask systems. In accordance with the Certificate of Compliance (CoC) and associated Technical Specifications for the dry cask system (HOLTEC HI-STORM 100) being used at Pilgrim, a surveillance of the air inlet and outlet vents is required to be performed daily to ensure system operability. Specifically, Pilgrim performs a visual inspection daily to ensure that the vents on the system are not blocked from solid debris (e.g., snow) or floodwater. If blockage is detected the licensee is required to remove it within specified timeframes.

Concerns were also identified in the newsletter associated with the Pilgrim flooding hazard evaluation as well as the site's proposed FLEX plan. Both of these issues are currently under review by the NRC. The concerns associated with these issues have been forwarded to the technical and project management staff who will be reviewing the licensee's submittals.

Thank you for sharing your concerns with us. If you have any further questions, please contact Ray McKinley ([Raymond.McKinley@nrc.gov](mailto:Raymond.McKinley@nrc.gov), 610-337-5150).

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**From:** Lillia Frantin [<mailto:lilliafrantinstudio@msn.com>]

**Sent:** Friday, January 30, 2015 7:48 AM

**To:** Dean, Bill

**Subject:** PILGRIM'S PROBLEMS: JUNO, SCRAMS AND USELESS BACK-UP PLANS

I have received this newsletter amongst countless other media press reports. Are you aware of this situation? What is the NRC, watchdog of the industry or lapdog? As a citizen, tax payer, and grandparent I want to know you are shutting down this dreadful & UNNECESSARY energy facility before a tragic accident forces it to be shut!

AWAITING AN INFORMATIVE & COGENT REPLY,

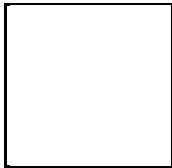
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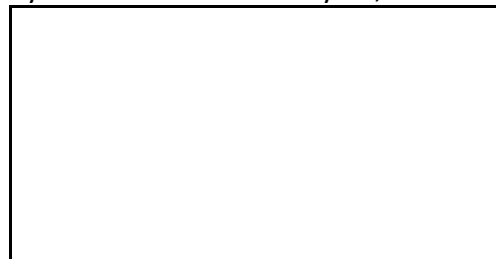
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# Pilgrim's Problems: Juno, Scrams, and Useless Back-up Plans

by Karen Vale on January 28, 2015



In a misleading press release issued yesterday, Entergy officials (Entergy is the owner of the Pilgrim Nuclear Power Station) stated that Pilgrim “stopped operating in accordance with procedure after distribution lines that send power from the plant to the electric grid became inoperable because of the weather.” It shut down at 4:00 am on Tuesday, January 27<sup>th</sup>. In other words, Entergy claims the facility shut down only because they couldn’t send power out of the plant to the electric grid. They then went on to say that Pilgrim “was being powered by emergency diesel generators and could tap into an offsite power source (23KV power supply) if needed.”

Entergy hasn’t exactly been forthright with the level of risk associated with the Pilgrim site and flooding and storms. Not only is the information being publicized misleading, but the information reported to the Nuclear Regulatory Commission (NRC) also appears to be misleading and inaccurate. The NRC needs to require Entergy to produce an accurate flooding risk assessment, and provide accurate information relative to storms. Check out the map at the bottom of this post that clearly shows there is more risk on the site than Entergy is reporting. Why would Pilgrim have to shut down during winter storm Juno only because power couldn’t be sent out, and why would they have to be reliant on back-up generators to operate, especially if offsite power was available?

One [news outlet](#) even went so far as to say “The power lines into Pilgrim are working, but the loss of transmission lines prevents the plant from delivering the electricity it generates.” But this was not the case at all.

Citizens made some calls to the NRC and MEMA (Mass. Emergency Management Agency) yesterday to clarify what was happening at the Pilgrim. An NRC spokesperson, Neil Sheehan, explained that the offsite power source that Entergy referred to in its press release, the 23KV line, is not set up to provide power load for the safety systems. While the only purpose of the 23KV line is to provide power for safety systems, it clearly was not available to do so – otherwise Pilgrim would not have been operating on backup generators. So Pilgrim could not tap into this offsite power source if needed. Furthermore, Pilgrim did lose its ability to access offsite power and had no option but to switch to its back-up generators.

While Pilgrim did in fact experience problems with sending outgoing power to the grid, it was not the only reason it had to switch to back-up generators. Apparently the transmission lines that deliver power from Pilgrim to the grid froze during the storm.

Finally, the Cape Cod Times published two stories late yesterday ([HERE](#) and [HERE](#)) about the

shutdown that delved deeper into the issue.

Something called “arcing” occurred in Pilgrim’s switchyard (an [electrical substation](#)), which was the likely cause of the offsite power loss. The question then becomes why did the arcing occur? The NRC stated in the Cape Cod Times article that “the exact cause of the loss of 345-KV power lines is still being investigated.”

Arcing occurs when electricity jumps from a transmission line to nearby metal. In the Cape Cod Times story, David Lochbaum (Director of Nuclear Safety for the Union of Concerned Scientists) was quoted as saying, “Storm conditions, particularly at a plant adjacent to wind-driven salt water, can cause arcing.”

So the arcing was storm-caused – possibly due to wind driven waves and flooding. High tide occurred at 4:33 am, a half-hour after Pilgrim shut down. Could Pilgrim have exceeded its “Design Basis” for flooding if the storm-force waves and flood water impacted the site during high tide? Maybe seawater flooded the switchyard, also causing arcing? A Design Basis Event is an accident, natural phenomena, etc. (such as flooding) that a facility must be designed to withstand and still operate properly and safely. When a facility exceeds its “Design Basis,” it means an event occurs that a facility cannot withstand.

Two event notification reports were issued by Pilgrim on January 27<sup>th</sup> at the height of Juno. The [first event report](#) was the reactor shutdown around 4:00 am due to loss of offsite power. The [second event report](#) was issued around 9:45 am when the High Pressure Coolant Injection (HPCI) system was declared inoperable. There was apparently a malfunction and the reactor pressure control had to be transitioned to safety relief valves. The cause of the HPCI malfunction is so far unknown and Pilgrim continues to troubleshoot the problem.

All of the problems experienced by Pilgrim yesterday coincide with NRC’s recent decision to continue to rank Pilgrim as one of the worst operating plants in the country.

In 2014 Pilgrim was identified by the NRC as one of the worst performing nuclear plants in the nation, based on a variety of problems and unplanned shutdowns in 2013 (it is also called being in a “degraded cornerstone”). Earlier this week, the NRC issued a [new report](#) stating that Pilgrim has “not provided the assurance level to fully meet all of the inspection objectives and have correspondingly determined that Pilgrim will remain in the Degraded Cornerstone of the Action Matrix by the assignment of two parallel White PI inspection findings.” In other words, after a year of additional scrutiny by many NRC inspectors, Entergy still has not fixed the problems and will remain as one of the worst performers in the nation.

In this new NRC report, Pilgrim’s switchyard and transmission system are identified as vulnerable to harsh weather, especially winter storms. Clearly Pilgrim already had problems during past storms and the NRC doesn’t think Pilgrim has adequately addressed the problems. Despite this, the NRC still did not require Pilgrim to shut down as a preventive measure as Juno was tearing its way toward Plymouth.

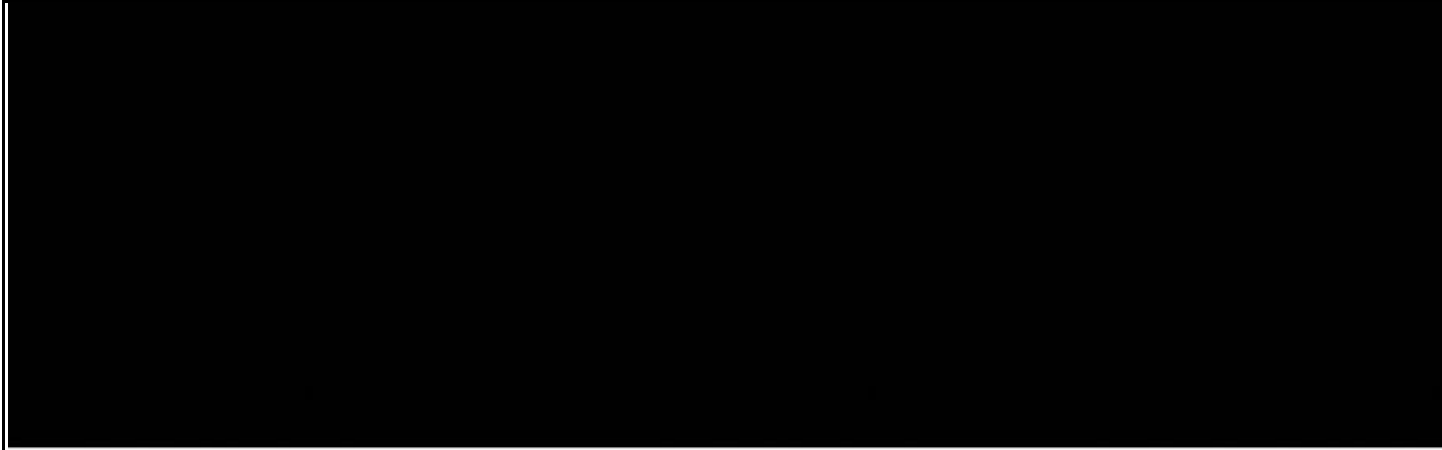
And then what about Entergy’s [Magical FLEX plan](#)? Remember, this is what has been referred to as the “RUBE GOLDBERG” project that Entergy proposes as a back-up cooling system if back-up generators are taken out of service. The plan would involve workers from Pilgrim (or even the Plymouth fire department) to drive along the shore, set up a portable pump and hose on the shoreline to pull water from Cape Cod Bay to manually cool the reactor and spent fuel pool. With the hurricane force winds, severe flooding, white out conditions, frigid temperatures and strong storm surges and waves – is it even a question whether this back-up FLEX plan would

work if an emergency would have happened yesterday during the storm?

Another hazard not mentioned in the FLEX plan is the potential for freezing. If transmission lines froze yesterday, can Entergy assure the public that the hose required as part of the FLEX plan, as well as the outhaul pulley system, will not freeze? During Juno, there has also been a [freezing spray advisory](#) as part of small craft advisories since the storm. The advisory was still calling for 0.3-0.7 in. per hour accretion on Jan. 28<sup>th</sup>, after the worst of the storm had passed. As of 4:30 PM on Jan 27<sup>th</sup>, Pilgrim went into “cold shutdown” until the power from offsite can be restored. There is no estimate for when it will come back online. At this point, with all the problems associated with the facility, we believe the NRC should not allow Pilgrim to restart at all.

Another issue that has yet to be addressed by Entergy is how the two, newly-filled dry casks weathered the storm this week. Entergy moved nuclear waste for the first time from Pilgrim’s wet pool into dry casks earlier in January. These casks – sitting a mere 175 feet away from the shoreline and only about 6 feet above FEMA’s flood level – are also at risk to the harsh coastal conditions during storms. In addition to flooding, approximately [30 inches of snow was reported](#) in the Plymouth area. There are air vents at the bottom and the top of each cask, which are designed to keep the nuclear waste inside cool. There is concern that these vents could become blocked or clogged (with flood water or a snow drift, for example) and the nuclear waste could overheat. Read more [HERE](#).

If Pilgrim is allowed to come back online, it’s clear that Entergy needs to be fully accountable to the public and produce an accurate assessment of its risks to flooding, storms, wind and waves. The NRC must require Pilgrim to develop an updated and honest assessment of the potential hazards on the site, which so far it has not done. Check out the maps below that we recently developed. It goes to show that there is more risk on the site than is currently disclosed by Pilgrim.



Topographical map of the Pilgrim site. Jan 2015. (click to view a larger image)

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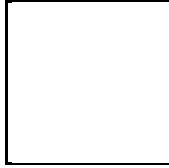
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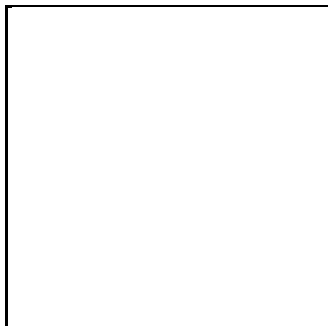


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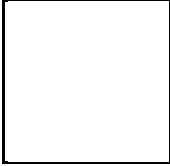
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