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SUBJECT: NRC's Engineering Inspections – Pilgrim Watch (PW) and The Town of Duxbury Nuclear Advisory Committee (DNAC) Object to Industry Self- Assessments

Pilgrim Watch is a non-profit citizen' organization that serves the public interest on issues regarding the Pilgrim Nuclear Power Station specifically, and nuclear power in general. The organization is located at 148 Washington Street, Duxbury, Massachusetts, 02332. Its membership extends throughout the Commonwealth. The Board of Selectmen appoint the Town of Duxbury Nuclear Advisory Committee to advise the town on radiological emergency response and all other matters pertaining to the potential impact on the town from the Pilgrim Nuclear Power Station, located near Duxbury.

PW and DNAC object to the proposal to replace NRC engineering assessments with industry self-assessments that the industry then would mail to NRC. Independent assessment is our only hope that safety will not be further compromised resulting from: aging nuclear reactor components; industry's unwillingness to invest in maintenance and replacement of parts; workers intimidated by management from reporting problems; ineffective management; and other factors. Despite industry claims that safety has improved, records show that it hasn't. Also, public transparency will be lost without NRC's Reactor Oversight Process.

Pilgrim - an example why NRC assessment is required

Pilgrim provides the perfect example why NRC nuclear safety inspections are necessary and why industry self-assessments would be dangerous. Pilgrim cannot be counted on to conduct any complete or accurate self-assessment. The NRC's own records prove that Pilgrim has regularly and consistently failed to follow established procedures, to report problems, or to take corrective actions even when the NRC tells it to do so.

Pilgrim, like other reactors in market economies, is losing money because it cannot compete in New England's competitive electric market with cheaper sources of electricity, namely natural gas and wind. At the same time Pilgrim is 47 years old and requires considerable maintenance. But, because Pilgrim is losing money, Entergy has been unwilling to invest in the reactor at the

very time Pilgrim needs it. Entergy's lack of investment in Pilgrim's maintenance and oversight resulted in getting Pilgrim into deeper trouble. Finally, NRC dropped Pilgrim into the lowest safety category, Category 4. It took multiple NRC inspections for the NRC to discover and document Pilgrim's failures. Does the NRC really believe that Entergy would have self-assessed and reported the reasons that Pilgrim is, and belongs to be, in the lowest safety category.?

We give very small odds that any Entergy self-assessment would look for, let alone report, anything that might require it to spend any significant amount of money. Entergy decided to shut the reactor for good by June 1, 2019 or sooner because Pilgrim is losing money, and has repeatedly asked the NRC to "excuse" it from making even NRC-ordered safety improvements.

We simply cannot understand how the NRC would conclude that changing from NRC inspections to industry assessment does not place citizens at significantly greater risk.. This is true not just for reactors like Pilgrim that are already in low safety categories. The likelihood of any reactor honestly reporting its problems and risking being placed in a lower category is slim-to-nonexistent if industry is allowed to self-assess itself. Welcome to nuclear Lake Wobegon, where every reactor is a star.

The danger of turning over Pilgrim's inspections from NRC to Entergy is clear from reading a leaked Preliminary Inspection Report (December 2016), written by NRC's lead inspector Don Jackson. . This report included a long list of flaws at the plant – none of which Entergy had bothered to report - that NRC inspectors observed during only the initial week of the inspection.

In the report, Donald Jackson, said that: "***The plant seems overwhelmed just trying to run the station.***" Who seriously believes Entergy would make that comment? The list of unreported Pilgrim failures that the NRC found and specified in the email were:

- failure of plant workers to follow established industry procedures,
- broken equipment that never gets properly fixed,
- lack of required expertise among plant experts,
- failure of some staff to understand their roles and responsibilities, and
- a team of employees who appear to be struggling with keeping the nuclear plant running
- "The corrective actions in the recovery plan seem to have been hastily developed and implemented, and some have been circumvented as they were deemed too hard to complete. We are observing current indications of a safety culture problem that a bunch of talking probably won't fix."
- Recurring problems with the emergency diesel generators at the plant highlight "poor engineering expertise, no communication with the shift manager and poor corrective action."

Subsequent quarterly NRC inspection reports show Entergy's continued pattern of ignoring maintenance on items that NRC considered "more than minor" because of their potential to compromise essential safety systems in a radiological emergency. (See, for example, Pilgrim Nuclear Power Station Integrated Inspection Report 05000293/2017003) Once again, the evidence that the NRC seems clear - if Entergy were to write its own reports, it would ignore inspecting and reporting on those same "more than minor" items.

Workers Intimidated: We are aware that Pilgrim workers, knowing that there are components that needed maintenance or replacement, did not report the problems to management because they understood management was unwilling to make the investment - better keep quiet, especially if the worker hoped to be offered a job at another site after Pilgrim's closure. NRC inspectors would not be subject to this type of pressure.

Bias: NRC inspectors, unlike industry, do not have a stake in the game and are not blinded by industry's tradition - the way the site has always operated works and nothing will go wrong. Workers also live in silos and do not see the big picture that an outside inspector can.

Transparency: NRC's ROP reports the results from the agency's assessments of safety performance at operating reactors and describes the tests and the grading processes behind the results. The public meetings, reports and press articles generate political pressure that are valuable in placing pressure on the industry and NRC to take corrective action. This would be lost if industry simply provided NRC written reports of its assessments. Few members of the public scour Adams so public input and pressure would diminish.

Diminished Safety- Accident Precursors Show the need for Increased NRC Inspection, not Self-Assessment. Accident Precursors: The NRC defines an accident sequence precursor (ASP) as "an observed event and/or condition at a plant, when combined with one or more postulated events (e.g., equipment failures, human errors), could result in core damage."

Industry claims the reactor safety record has continuously improved so that NRC inspection is not needed. But that is based on industry's view that no risk is significant unless there was an accident, and the NRC's 2016 Accident Sequence Precursor Program Report say otherwise. The record is particularly poor for BWRs such as Pilgrim. As said in Figure 8 (below) of the report, "The mean occurrence rate of precursors at BWRs exhibits a statistically significant increasing trend (p-value = 0.001) over the past twenty years;" and, Pilgrim has the most (23) precursors associated with a single unit NPP, including four over the past 5 years. (Report, p 21)

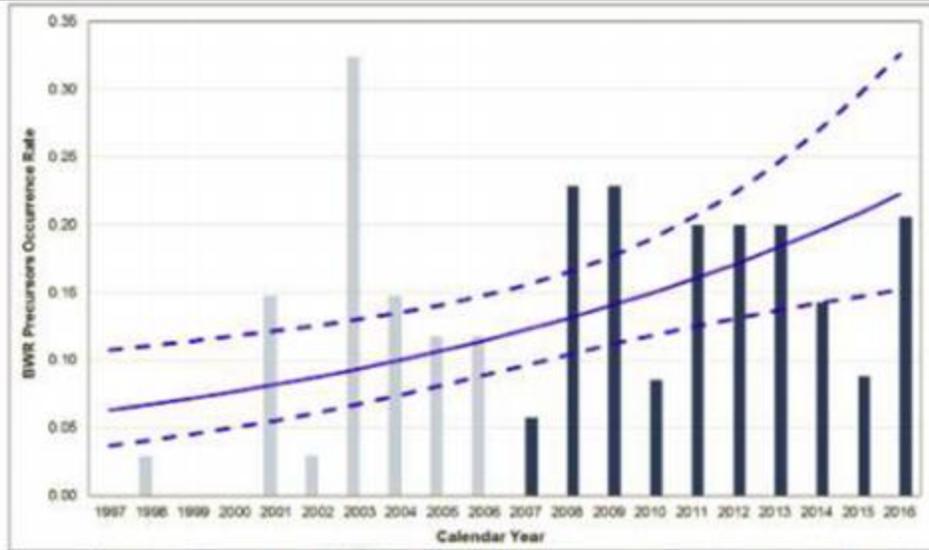


Figure 8. Precursors at BWRs. (The mean occurrence rate of precursors at BWRs exhibits a statistically significant increasing trend (p -value = 0.001) over the past 20 years (1997–2016). No trend was detected over the past 10 years (2007–2016).

Conclusion

Nobody would recommend letting students evaluate their SATs, GREs, LSATs or MCATs - although the worst that could happen if they did would be admitting unqualified students. But, the worst that could happen letting licensees self-evaluate is a catastrophe – a TMI, Chernobyl or Fukushima. It is time for NRC to recognize this, especially as reactors age and many operating on the cheap as merchant plants.

No, we do not want Entergy in charge of its own engineering inspections; and fail to understand how the NRC could rationally expect the operator of a failing – both structurally and economically - plant to do so in a way that would meet the NRC’s statutory obligations.

Thank you for your consideration.

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