

**Alliance for a Green Economy, Citizens Awareness Network,
Pilgrim Watch, Vermont Citizens Action Network**

June 28, 2013

Richard Guzman
G20130211 Petition Manager
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Mr. Guzman,

We'd like to thank you and the members of the petition review board again for your attention to our 2.206 Petition (G20130211) regarding the financial qualifications of Entergy Nuclear and its subsidiaries to operate the FitzPatrick, Vermont Yankee and Pilgrim reactors. We have been informed that the board's initial recommendation is to accept our petition for review. In preparation for the final decision and in advance of the next step in the process, we wanted to supplement our petition with some additional responses to queries asked us at the end of our hearing on May 7, 2013.

On May 7, members of your board discussed with us the difficulty of making the case that financial distress has a direct impact on safety, and pointed out that the financial qualifications regulation hasn't been used in the past to shut down reactors.

There are some historical examples we would point to in order to make the important connection between financial distress and safety. In 1996, an independent safety assessment of Maine Yankee found that a number of deficiencies were caused by economic pressure to be a low cost energy producer, which limited the resources available for corrective actions and plant improvements. It was also found that workers did not bring up issues for fear that highlighting negative issues could endanger the plant's continued operation.

The financial issues at Maine Yankee and their impact on the safe operations at the plant was one example of several that NRC staff considered important when considering the effects of deregulation on the U.S. nuclear fleet.

In 1998, L. Joseph Callan, then Executive Director for Operations at NRC wrote to the Commissioners:

“In addition, with respect to specific plants such as Maine Yankee, Millstone, and others, the inspection process has identified several manifestations of inappropriate responses to competitive pressures. These include: increased need for corrective actions; maintenance and operator work-arounds; temporary modification and procedure revision backlogs; decreased performance in operator licensing and requalification programs; increased frequency of significant operational and occupational safety events; decreased plant and system reliability; increased volume and acrimony of allegations; and increased frequency of regulatory violations and resulting penalties.

As deregulation proceeds, cost pressures may increase these types of reductions in safety margins at plants. Moreover, because the impact of budgetary reductions can cut across all plant

safety-related programs, other impacts in addition to those previously identified may occur as a result of deregulation. For example, a "merchant plant" with no assets other than the nuclear plant itself could be unable to make necessary safety expenditures after an extended outage if it did not have an adequate financial cushion to pay costs incurred during the outage. In such a situation, it is not clear that a transition from indefinite shutdown to permanent shutdown and decommissioning would be sufficiently smooth to prevent funding shortages from causing safety problems during the shutdown transition period. That is, given the requirements in 10 CFR 50.82 with respect to: (1) the limitation on the use of the trust fund to legitimate decommissioning activities; and (2) the timing of significant decommissioning trust fund withdrawals, a licensee could run out of funds for operational safety expenses before it was able to draw on its decommissioning trust fund. This, in turn, could force the NRC to make the decision for the licensee to permanently cease operations and initiate decommissioning pursuant to 10 CFR 50.8"

The petitioners do understand and recognize that accident prevention is complex and involves many factors, many of which are not financial. We also understand that not all cost-savings initiatives have safety implications. However, from our reading of the NRC's documentation on financial qualifications we know that the agency itself has historically recognized the dangers that can result from running a reactor under financial strain, and that it is the intention of the financial qualification requirement to *prevent* financial distress from impacting public health and safety.

A few examples of NRC documents in which this is clearly discussed are: SECY-98-153 (quoted above), SECY-98-083, and SECY-97-253.

These documents point to a range of problems that could result from financial distress that the NRC should seek to prevent through the application of the financial qualifications requirement. They also reveal an NRC staff and Commission in the late 1990s struggling with how best to identify whether operating reactors remain financially qualified and how to apply the regulations if reactors in financial trouble were identified. While it is unfortunate that the Commission rejected staff recommendations to clarify the process, the lack of clarity does not excuse the NRC from its duty to apply the financial qualifications rule so as to prevent struggling reactors from jeopardizing public health and safety.

Based on the financial analysis we have provided in our petition, we believe FitzPatrick and Vermont Yankee have entered into a dangerous period that the financial qualifications rule is meant to address. While it is true that we cannot say for sure that financial strain will compromise public health and safety, it is the plain intent of the regulation to ensure that they do not. Just because such action has not in the past been taken by the NRC, does not mean it should not be taken now. The cross-cutting nature of financial qualifications as a causal factor affecting everything from corporate management decisionmaking, to actual capital budgets, to the baseline safety culture at nuclear reactors makes such action imperative when it can be identified proactively, as it has been at FitzPatrick, Vermont Yankee, and Pilgrim. The petitioners believe that the financial problems at those reactors are so severe that the only safe option is to stop the reactors from operating. At the very least, the NRC should follow the staff recommendation discussed in SECY-97-253 to put these reactors under increased inspection designed to determine whether financial strain is compromising safety.

During the Petition Review Board hearing, we were asked to provide any information additional to the

UBS report that raised questions concerning the conflict of interest between Entergy's need to stave off financial losses and its need to ensure safe operation of Vermont Yankee, Pilgrim, or Fitzpatrick reactors. Vermont Yankee is presently petitioning the state of Vermont to receive a Certificate of Public Good (CPG) that would permit its continued operation in the state for an additional 20 years. Its case is being heard before the Vermont Public Service Board (PSB). During testimony Entergy stipulated on July 12, 2013 that:

1. Subject to receiving the results of a scoping study that has not yet been completed, Entergy VY estimates that the cost of replacing the tubing in the condenser at the Vermont Yankee Nuclear Power Station (the "VY Station") will be in the range of approximately \$30 to \$40 million. Because the scope of this project and its costs have not yet been determined, Entergy VY has not prepared a financial analysis to decide whether to proceed with the project. Based on the present physical condition of the condenser, **Entergy VY believes that it will not be necessary to replace the entire condenser at the VY Station in order to operate during the term requested** in its pending CPG petition, and therefore the company has not prepared a financial analysis of replacing the condenser. Entergy VY believes that the cost of replacing the entire condenser at the VY Station would be significantly higher than the cost of replacing the tubing in the condenser.

Until recently Entergy maintained that it would replace the condenser. Entergy sought and won approval from the NRC to delay the replacement of the condenser until 2016. It is the oldest condenser in service at a Mark I facility. This testimony is a dramatic shift from Entergy's previous commitments. It is clear to petitioners that Entergy's present position to replace tubing rather than replace the condenser is based on financial concerns. Its intent is to limit its financial costs; replacement of the condenser is estimated to cost well over \$100 million. Vermont Yankee's value has deteriorated significantly from over \$500 million in 2002 to \$160 million presently. The condenser replacement in 2016 could cost more than what Vermont Yankee is worth. What is clear from Entergy's testimony before the PSB is that it has no intention of initiating condenser replacement for 20 years. This is the length of time it is requesting from the Board to continue to operate under a new CPG. Given UBS's estimates of significant financial losses over the next three years, petitioners believe that Entergy's choice to repair rather than replace the condenser is driven by Entergy's financial vulnerability.

The idea that Entergy could draw money from the profitable aspects of its business to subsidize its unprofitable reactors was also raised during the hearing.

Upon purchasing these reactors, Entergy created individual limited liability corporations. In Vermont, for instance, this LLC is Entergy Nuclear Vermont Yankee (ENVY). Entergy has repeatedly made clear to the state of Vermont that Entergy and ENVY are not interchangeable in terms of any responsibility. We further refer to an August 2002 Synapse Energy Economics report, which describes deficiencies in Entergy's guarantees to and among its subsidiaries when it comes to providing monies to operate Vermont Yankee, FitzPatrick and Pilgrim through a time of financial strain.

(<http://www.riverkeeper.org/wp-content/uploads/2011/03/SYNAPS2.pdf>, pgs., 24-26.)

On the matter of whether lucrative parts of Entergy's nuclear fleet could subsidize FitzPatrick, Vermont Yankee or Pilgrim, we point out that many of Entergy's other energy facilities are in states that are not deregulated. It is highly unlikely that regulated states would accept Entergy using monies it has collected from their ratebase in these states to subsidize its failing reactors in the Northeast. There is no precedent for this.

Furthermore, reliance upon this eventuality would only amplify the financial qualifications problem. As indicated in the supplement to our petition (filed April 25, 2013), Entergy merchant power business unit is, while not sufficiently profitable, covering the operating deficits at the reactors in question with surplus revenues from operation of the Indian Point nuclear plant. Should Entergy need to draw on revenues from its cost-of-service regulated utility businesses to fund operations at these merchant plants, pressure on Entergy to cut costs, defer maintenance, and minimize losses at FitzPatrick, Vermont Yankee, and Pilgrim would be amplified further through its reactor fleet.

We would also like to respond to the suggestion that the current inspection and enforcement process is sufficient to address any issues that may stem from a plant being under financial strain.

The symptoms of financial distress may be subtle at first, but can have systemic consequences. History shows that nuclear accidents and near-accidents result from multiple things going wrong all at once at a plant. On their own, any one of those issues might not be considered serious, but taken in combination, they can have grave implications. It is not just accidents that can be caused by financial strain. In Vermont Yankee's case, Entergy refused to shut its reactor while it searched for leaks from underground pipes allowing highly radioactive contamination to continue to spread. This refusal to cease power operations in order to find a leak may very well be an example of Entergy's financial strain already having had a negative impact on public health.

As noted above and in other documents submitted with our petition, economic pressure and low or negative profit margins can lead to equipment disrepair, deferred maintenance, low worker morale, disincentives for workers to point out problems, corner cutting, shorter than necessary refueling outages, and resistance to upgrading safety equipment. Thus financial strain can be an underlying issue behind seemingly disparate problems that may not initially rise to the attention of inspectors, or which may not at first glance seem serious enough to warrant a deeper look. That is, the cross-cutting nature of financial qualifications problems could contribute to the possibility of events with multiple system and/or personnel failures, before problems with any one safety cornerstone have risen to a level that triggers increased regulatory oversight.

FitzPatrick, Vermont Yankee and Pilgrim have each seen recent issues that may stem from economic pressures (for instance the series of unplanned power changes at FitzPatrick), yet NRC has yet to consider whether financial pressure is having an impact on the running of the reactors. Nor has NRC analyzed Entergy's repeated requests to delay maintenance as a sign that Entergy's financial instability. At the very least, NRC must implement an inspection regime at these reactors designed specifically to prevent economic distress from negatively impacting the running of the reactors. We do not see the current inspections process as being robust enough to provide that kind of prevention.

It is imperative that NRC act now to ensure that Entergy's financial problems are not and do not impact public health and safety. If NRC refuses our request to suspend operating licenses at these plants, we expect to see proactive measures to prevent financial losses from impacting plant operations. The NRC cannot wait for problems to arise, but must instead ensure Entergy spends the funds necessary to repair and replace aging equipment, that the plants shut down for the proper amount of time for repairs and refueling, that safety upgrades are implemented to strict standards. The agency cannot ignore the inherent conflict between safety and profitability at marginal reactors and the public cannot afford for the NRC to turn a blind eye to the pressure nuclear operators will be under to cut costs. NRC must prevent the company from compromising public health and safety in an effort to save these troubled

reactors. If, as we predict, Entergy becomes unwilling or unable to finance necessary expenses because it is losing money on these reactors, the NRC must shut them down before nuclear safety is impacted.

Sincerely,

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Guzman, Richard

From: Jessica Azulay [jessica@allianceforagreenconomy.org]
Sent: Friday, June 28, 2013 7:27 PM
To: Guzman, Richard
Subject: G20130211 - Supplement
Attachments: 2206_FitzPatrick-Pilgrim-VY_sup2.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Mr. Guzman,

Please find attached supplementary information for the Petition Review Board on our 2.206 petition G20130211.

Sincerely,
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