

April 7, 2011

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
)
Entergy Nuclear Generation Co. and)
Entergy Nuclear Operations, Inc.) Docket No. 50-293-LR
)
)
(Pilgrim Nuclear Power Station))

NRC STAFF'S RESPONSE TO PILGRIM WATCH POST-HEARING MEMORANDUM

INTRODUCTION

The staff of the U.S. Nuclear Regulatory Commission ("Staff") hereby responds to Pilgrim Watch ("PW") Post-Hearing Memorandum ("PW's Memo"). PW's Memo asks this Board to take judicial notice of alleged facts concerning the events at the Fukushima Daiichi site in Japan. PW also asks this Board to stay its decision on Remanded Contention 3 until the "NRC has evaluated the lessons learned from Fukushima [Daiichi] to be assured that the Aging Management Programs for Pilgrim [Nuclear Power Station] are appropriate."¹

For the reasons set forth below, PW's Memo should not be accorded official notice² due to its speculative nature. PW combines the events at a foreign sited reactor operating under a foreign regulatory scheme with the management of aging effects at Pilgrim Nuclear Power Station ("Pilgrim"), without credible evidence or site specific factual support to connect that tragic event to the issues before the Board. Moreover, if supported, the issue raised is or would

¹ PW's Memo at 3.

² PW's Memo asks for "judicial notice" but the regulations use the term "official notice." The Staff's response adopts the regulation's terminology.

more likely be a current operating issue. Finally, PW did not address the factors for granting a stay and does not satisfy the Commission's stay requirements.

DISCUSSION

I. The Information on the Fukushima Daiichi Site Does Meet the Requirements for Official Notice

Under 10 C.F.R § 2.337(f), the Board may take official notice of any fact of which the U.S. Courts may take judicial notice. The regulation states in full that:

The Commission or the presiding officer may take official notice of any fact of which a court of the United States may take judicial notice or of any technical or scientific fact within the knowledge of the Commission as an expert body. Each fact officially noticed under this paragraph must be specified in the record with sufficient particularity to advise the parties of the matters which have been noticed or brought to the attention of the parties before final decision and each party adversely affected by the decision shall be given opportunity to controvert the fact.

If a decision is stated to rest in whole or in part on official notice of a fact which the parties have not had a prior opportunity to controvert, a party may controvert the fact by filing an appeal from an initial decision or a petition for reconsideration of a final decision. The appeal must clearly and concisely set forth the information relied upon to controvert the fact.

Boards may take official notice of matters which are beyond reasonable controversy and capable of immediate and accurate determination by resort to easily accessible sources of indisputable accuracy³ or scientific or technical facts within the knowledge of the NRC, among others.⁴ However, PW does not indicate precisely which facts or the basis for asking the Board to take official notice.

³ *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-91-2, 33 NRC 61, 74 – 75 (1991).

⁴ *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235 (1996).

PW asserts in six (6) numbered paragraphs an assortment of conclusions and arguments that are not relevant or material to issues before this Board. Many of the assumptions asserted by PW with regard to the events in Japan are simply speculative and premature at this point. As such, PW's request for the Board to take "judicial notice" should be denied. Each paragraph's assertions are addressed below.

A. Paragraph 1 – The Design of the Plants and Storage of Spent Nuclear Fuel

PW's first paragraph asserts two issues. The first issue is particularly unremarkable – that some of Fukushima Daiichi plants share a similar design with Pilgrim. This issue, although unobjectionable for beyond reasonable controversy, is neither relevant nor material to Remanded Contention 3 and the late filed contentions.

On a cursory review, PW's second issue identifying the difference between Fukushima Daiichi and Pilgrim appears to be incorrect. PW states that "[t]he major difference between the two appears to be that most of the spent fuel at Fukushima [Daiichi] is stored in casks or a separate common pool."⁵ Slides presented by Tokyo Electric Power Company ("TEPCO") on November 2010 during the ISSF-2010: International Seminar for Interim Storage of Spent Fuel, Session 6, include a chart detailing the storage of spent fuel assemblies for Fukushima Daiichi in spent fuel pool, dry casks, and the common spent fuel pool.⁶ Based on that chart, it appears that the majority of each reactor's spent fuel remains in the spent fuel pool for that unit.⁷ Thus,

⁵ PW's Memo at 1.

⁶ TEPCO, "Integrity Inspection of Dry Storage Casks and Spent Fuels at Fukushima Daiichi Nuclear Power Station" dated Nov. 16, 2010 available at http://www.nirs.org/reactorwatch/accidents/6-1_powerpoint.pdf (last visited April 5, 2011).

⁷ *Id.* at 9. The common spent fuel is shared between 6 reactors. See *id.* at 4.

as PW's second issue appears to be factually incorrect, the Board should not take official notice of this assertion.

PW's issues are not material or relevant to the issue before this Board. Although the general plant designs are similar and even assuming that the Japanese stored spent fuel in a materially different way than Pilgrim, this would not have any impact on determining whether the Severe Accident Mitigation Alternatives ("SAMA") analysis would be altered by alternative meteorological models. Thus, the Board should not take official notice of the unsupported and immaterial allegation.

B. Paragraph 2 – The Applicability of the Gaussian Plume Model for Emergency Planning at Fukushima Daiichi

PW's second paragraph essentially asserts that areas impacted and contaminated by the Fukushima Daiichi accident show that the Gaussian plume model is inappropriate. PW then asserts without basis that "mean average annual wind direction is from [w]est to [e]ast ..."⁸ PW goes on to conclude that the iodine found in Tokyo and other reports "if true" make clear that other inland areas have been affected.⁹ PW seems to acknowledge that its information is speculative and thus not deserving of official notice.

As with the other assertions, PW's alleged conclusions are not material or relevant to the issue before the Board, namely whether an additional SAMA would become cost beneficial based on alternative meteorological modeling for an unknown event occurring at an unknown time under unknown meteorological conditions. Simply, the comparison of the single Gaussian plume model run to an alternative model is inappropriate and not instructive of the performance

⁸ PW's Memo at 1 (emphasis in original).

⁹ *Id.* at 2.

of the model over an entire year's weather data.¹⁰ Thus, the Board should not take official notice of the allegations in paragraph 2.

C. Paragraph 3 – The Impact of Fukushima Daiichi Accident is not Beyond Reasonable Controversy

In paragraph 3, it is unclear what facts PW wishes the Board to officially notice. The first sentence asserts that the affected area is more than a two mile radius and a “narrow ‘wedge.’”¹¹ The next two sentences of paragraph 3 assert that the Japanese government and NRC have “acknowledge[ed] plume variability” based on their evacuation recommendations.¹² PW’s premise that the evacuation recommendation is based only on plume variability is not well taken. Evacuation recommendations are made for a multitude of reasons, including logistical reasons, that are unrelated to plume variability.

PW’s assertion points out its failure to understand that the Severe Accident Mitigation Alternatives (“SAMA”) analysis is different from and not comparable to emergency planning and response. Entergy Nuclear Generation Co. (“Applicant”) and the Staff have not stated, as PW suggests, that plumes are not variable. The Staff previously testified that variability of a particular plume when considering an unknown accident occurring at some potentially unknown time in the future would not alter the conclusions of the SAMA analysis in such a way that an

¹⁰ See NRC Staff Testimony of Nathan E. Bixler and S. Tina Ghosh Concerning the Impact of Alternative Meteorological Models on the Severe Accident Mitigation Alternatives Analysis (“Bixler/Ghosh Testimony”) at A40 (January 3, 2010); NRC Staff Testimony of James V. Ramsdell, Jr., Concerning the Impact of Specific Meteorological Conditions on the Severe Accident Mitigation Alternatives Analysis (“Ramsdell Testimony”) at A16, 29, 36

¹¹ PW’s Memo at 2.

¹² *Id.*

additional SAMA would be cost beneficial.¹³ The assertion that plume variability exists was not at issue in this case and does not provide any material or relevant information. Thus, the Board should not take official notice of the allegations contained in paragraph 3.

D. Paragraph 4 – The Cause of the Accident in Japan is Speculative

PW, without the benefit of a systemic and methodical review, prematurely assures the Board that “[t]he basic cause of the Fukushima [Daiichi] disaster was the loss of off-site power, due to the [t]sunami.”¹⁴ PW argues, based on this assumption, that a host of factors could cause loss of offsite power, including inaccessible cables “operat[ing] in a moist environment”¹⁵ PW’s assertion regarding the basic cause of the Japanese accident is without any evidence to support that conclusion. In fact, the Commission has established a Task Force to evaluate the events in Japan and develop preliminary recommendations and lessons learned for the U.S. nuclear fleet.¹⁶ When the Task Force issues its findings, those findings may include technically supported information as to the cause of the accident. But until then, definitive discussion of the cause of the accident is premature and speculative.

In order for the Board to take official notice, the facts must be beyond reasonable controversy and capable of immediate and accurate determination.¹⁷ Here, it is clear that the basic causes of the accident, the full scope of the accident, and a preliminary understanding of

¹³ See Bixler/Ghosh Testimony at A6.

¹⁴ PW’s Memo at 2.

¹⁵ *Id.*

¹⁶ SRM-COMGBJ11-0002 (March 21, 2011)(available via NRC web site for ADAMS (Accession No. ML110800456). Further, this Task Force will “develop recommendations, as appropriate, for potential changes to inspection procedures and licensing review guidance, and recommend whether generic communications, orders, or other regulatory requirements are needed.”

¹⁷ *Shoreham*, CLI-91-2, 33 NRC at 74 – 75.

each of the six Japanese plants and associated spent fuel pools performance is still in flux. The performance of Fukushima Daiichi plants after a magnitude 9.0 earthquake followed immediately by a tsunami is not relevant or material to managing aging effects at Pilgrim. As discussed below in Section II, the evaluation of Pilgrim's current licensing basis to provide adequate protection is a current operating issue that requires a careful systemic evaluation of the Japanese events. As such, the Board should not take official notice of the allegations in paragraph 4.

E. Paragraph 5 – The History of Unrelated Accidents

Although the timing of the Three Mile Island event, Chernobyl, and Fukushima Daiichi occurring over the last 32 years is not at issue, PW fails to show why the timing of these three accidents is relevant and material to issues presently before the Board in Remanded Contention 3 and PW's late-filed contentions on the Price-Anderson Act and inaccessible cables. As this former history of events is not material or relevant to determining whether the aging effects of passive components will be properly managed during the period of extended operation, the Board should not take official notice of this paragraph.

F. Paragraph 6 – The Use of MACCS2 at Fukushima Daiichi

In this paragraph, PW appears to ask the Board to take official notice of the absence of any facts. PW states that the consequences that would have been predicted by the MACCS2 code is unknown and that the actual consequences of the tsunami, earthquake, and subsequent accident at Fukushima Daiichi should be compared to the MACCS2 code calculations for the

plant. PW, then, asserts that “[it] is quite certain that the predicted consequences would have been very small, certainly far, far less than what actually happened.”¹⁸

PW’s assertion is based on pure speculation and is thus unreliable. Further, the performance of MACCS2 at the Fukushima Daiichi site for emergency planning purposes is not material or relevant to the issues to be decided by this Board with respect to Pilgrim. As such, the Board should not take judicial notice of the alleged facts in paragraph 6.

II. Operating Issues Raised by the Fukushima Daiichi Accident are Beyond the Scope of License Renewal Process

PW has now raised the specter of the Fukushima Daiichi accident twice to this Board in extra-regulatory filings.¹⁹ But, the issues that can be properly brought before the Board in a license renewal proceeding are limited. The Commission’s regulations in 10 C.F.R. Part 54 limit the scope of a license renewal proceeding to the specific matters that must be considered for the license renewal application to be granted. Pursuant to 10 C.F.R. § 54.29, the Commission considers the following standards in determining whether to grant a renewed license:

A renewed license may be issued by the Commission up to the full term authorized by § 54.31 if the Commission finds that:

- (a) Actions have been identified and have been or will be taken with respect to the matters identified in Paragraphs (a)(1) and (a)(2) of this section, such that there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the [Current Licensing Basis] CLB, and that any changes made to the plant’s CLB in order to comply with this paragraph are in accord with the Act and the Commission’s regulations. These matters are:

¹⁸ PW’s Memo at 3.

¹⁹ See Pilgrim Watch Memorandum Regarding Fukushima dated March 12, 2011.

(1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under § 54.21(a)(1); and

(2) time-limited aging analyses that have been identified to require review under § 54.21(c).

(b) Any applicable requirements of Subpart A of 10 C.F.R. Part 51 have been satisfied.

(c) Any matters raised under § 2.335 have been addressed.

These standards, along with other regulations in 10 C.F.R. Part 54, and the environmental regulations related to license renewal set forth in 10 C.F.R. Part 51 and Appendix B thereto, establish the scope of issues that may be considered in a license renewal proceeding. A proposed contention must demonstrate that the issue it raises is within the scope of the proceeding or the contention is subject to dismissal. 10 C.F.R. § 2.309(f)(1)(iii); *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 & 3), CLI-05-24, 62 NRC 551, 567 (2005).

Although the events in Japan are tragic, the impact of the combined earthquake and tsunami on the Fukushima Daiichi site are not necessarily related to aging effects of passive components at Pilgrim. PW's Memo does not provide any basis to conclude that the Aging Management Programs at Pilgrim are impacted or insufficient based on the preliminary information from Japan. Performance failures are more likely to be an operating issue covered by the regulations in 10 C.F.R. Part 50. As such, the information in PW's Memo is not material or relevant to the current license renewal proceeding. Thus, the Board should not take official notice of allegations in PW's Memo.

III. PW's Memo Does Not Satisfy the Requirements of a Stay

Under 10 C.F.R. § 2.342(e), the factors used to analyze whether a stay is appropriate are (1) whether the moving party has made a strong showing that it is likely to prevail on the

merits, (2) whether the party would be irreparably injured absent the stay, (3) whether the granting of the stay would harm other parties, and (4) where the public interest lies. The most important factor is irreparable harm.²⁰ The Commission stated that “‘raising the specter of a nuclear accident’ does not demonstrate irreparable harm.”²¹ A party urging a stay must show that any irreparable harm is imminent, certain, and great.²² Absent any showing of irreparable harm, the moving party must make an overwhelming showing of the likelihood of success on the merits.²³

PW has not addressed the four stay factors, which is reason enough to deny PW’s request.²⁴ Moreover, PW has not demonstrated that it is entitled to a stay. First, PW has provided no support that it is likely to prevail on the merits. Notwithstanding that the lessons learned have yet to be developed, PW speculates that the lessons learned from the Fukushima Daiichi site might impact the appropriateness of the Aging Management Programs for Pilgrim.²⁵ At no point in PW’s Memo are the tragic events in Japan tied to the control of aging effects at Pilgrim.²⁶ PW did not show any harm, much less irreparable harm, in the absence of a stay.

²⁰ *Sequoyah Fuels Corp. & General Atomics* (Gore, Oklahoma Site), CLI-94-9, 40 NRC 1, 6 (1994).

²¹ *Entergy Nuclear Vermont Yankee LLC & Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), CLI-06-8, 63 NRC 235, 237-38 (2006) (quoting *Massachusetts Coalition of Citizens with Disabilities v. Civil Defense Agency*, 649 F.2d 71, 75 (1st Cir. 1981)).

²² *Id.*

²³ *Sequoyah Fuels Corp.*, CLI-94-9, 40 NRC at 6.

²⁴ *AmerGen Energy Co., LLC*, (Oyster Creek Nuclear Generating Station), CLI-08-13, 67 NRC 396, 399 (2008).

²⁵ PW’s Memo at 3.

²⁶ See *supra* Sec. I.

Refusing to grant the stay here will not harm PW because other avenues exist for PW to advance its concerns—once the NRC has completed its careful systemic and methodical analysis of the events at the Fukushima Daiichi site—including petitions for rulemaking and 2.206 petitions, among others. Those avenues are more appropriate to address any potential operating issues identified by the careful analysis of the events in Japan rather than in a narrowly scoped license renewal adjudicatory proceeding, which explicitly excludes current operating issues.

The other two factors, also, do not favor PW. PW's request for an indefinite stay would harm the other party's and the public's interest in efficient and expeditious administrative proceedings. The request for a stay on an issue unrelated to the license renewal proceeding would harm Pilgrim's interest because it could result in the determination on the application being delayed indefinitely. As such a stay is inappropriate at this time, PW's request for a stay should be denied.

CONCLUSION

PW's Memo consists of controversial, currently unverifiable, and speculative information that is neither relevant nor material to the current Pilgrim license renewal remanded proceeding and should not be officially noticed by the Board. PW's request for an indefinite stay of the proceedings based on the tragic events in Japan is unsupported and the factors used to analyze whether to grant a stay do not favor PW. Thus, PW's request should be denied.

Respectfully submitted,

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NUCLEAR REGULATORY COMMISSION

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In the Matter of)
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ENTERGY NUCLEAR OPERATIONS, INC.) Docket No. 50-293-LR
)
(Pilgrim Nuclear Power Station)) ASLBP No. 06-848-02-LR
)

CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC Staff's Response to Pilgrim Watch Post-Hearing Memorandum" have been served upon the following, by the Electronic Information Exchange, on the following by this 7th day of April 2011.

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