

June 23, 2008

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
	)	
	)	ASLBP No. 06-848-02-LR
(Pilgrim Nuclear Power Station)	)	

NRC STAFF'S RESPONSE TO PILGRIM WATCH'S  
PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW

INTRODUCTION

On May 12, 2008, the Atomic Safety and Licensing Board ("Board") issued an order setting forth the schedule for filing proposed findings of fact and conclusions of law regarding Pilgrim Watch Contention 1 as well as responses to the proposed findings of fact and conclusions of law filed by other parties in this license renewal matter.<sup>1</sup> Pursuant to that order, the NRC Staff ("Staff") herein provides its response to the proposed findings of fact and conclusions of law filed by Pilgrim Watch.<sup>2</sup>

DISCUSSION

The PW Proposed Findings contain numerous defects, including, but not limited to, mischaracterizations of the evidentiary record, statements not supported by the record, incorrect

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<sup>1</sup> Order (Setting Deadlines for Provisional Proposed Findings and Conclusions on Contention 1, and for Pleadings Related to Pilgrim Watch's Recent Motion Regarding CUFs) (May 12, 2008) (unpublished) ("May 12 Order").

<sup>2</sup> Pilgrim Watch Post-Hearing Findings of Fact, Conclusions of Law (June 9, 2008) ("PW Proposed Findings").

characterizations of the applicant's<sup>3</sup> burden, introduction of issues not previously raised, discussion of issues beyond the scope of the contention, and incorrect descriptions of applicable legal standards. In light of these pervasive defects, the Board should not rely on the PW Proposed Findings when preparing its Initial Decision.

I. Mischaracterizations of the Record

The PW Proposed Findings purport to describe the evidentiary record, but often fail to do so accurately. These mischaracterizations of the record take several different forms, and examples of each are set forth below.

A. Misleading and Incorrect Characterizations of Specific Evidence

Statements presented as findings of fact must accurately describe the factual evidence in the record to be of value to the Board. However, several statements in the PW Proposed Findings describe particular record evidence in ways that are misleading or incorrect. The following is a non-exhaustive list of examples of this:

1. Pilgrim Watch claims that "Entergy stated that they relied, in part, upon the carbon metal claiming that it is 'corrosion resistant.'" PW Proposed Findings at 8 (¶ 15), citing Entergy's Initial Statement of Position on Pilgrim Watch Contention 1 at 8<sup>4</sup> (Jan. 8, 2008) ("Entergy's Initial Statement of Position"). This statement by Pilgrim Watch misstates Entergy's actual words, which were "[t]he preventive measures that [Pilgrim Nuclear Power Station ("Pilgrim")] employs to protect against corrosion include (1) metals and cured in place linings

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<sup>3</sup> The applicant here is Entergy Nuclear Generation Co. and Entergy Nuclear Operations Inc. ("Entergy").

<sup>4</sup> Pilgrim Watch's citation to Entergy's Initial Statement of Position appears to be incorrect, as there is no statement on page 8 that resembles the cited language. Such language does, however, appear on page 9.

that are corrosion resistant.” Entergy’s Initial Statement of Position at 9. Entergy later indicates that the metals it views as “corrosion resistant” are stainless steel and titanium. *Id.* at 10.

2. Pilgrim Watch characterizes the information presented at the hearing regarding CIPP liners as an “infomercial” and states that this information included “no particulars about Pilgrim’s CIPP.” PW Proposed Findings at 26 (¶¶ 98). This characterization ignores the substantial discussion of CIPP liners in the record, including specifics on the composition and installation at Pilgrim. *See, e.g.*, Exh. 1 at A43, A45; Tr. at 657-660, 678-684. Moreover, Pilgrim Watch fails to mention that its expert, Mr. Gundersen, stated that he has no experience with the type of liner used at Pilgrim. Tr. at 666, 668.

3. Pilgrim Watch states that the evidence does not support Entergy’s claim that surrounding soil is not corrosive and cites to subsequent paragraphs of its own findings for support of this assertion. PW Proposed Findings at 8 (¶¶ 16), citing *id.* at 12-16 (¶¶¶ 32-52). These cited paragraphs, however, consist primarily of generic statements about factors that generally contribute to corrosion and statements not supported by references to the record. *See, e.g.*, PW Proposed Findings at 13-14 (¶¶¶ 39-43). Pilgrim Watch also fails to discuss any of the prefiled or hearing testimony about site-specific soil properties or efforts to ensure low corrosivity of the soil at the Pilgrim site. *See, e.g.*, Exh. 1 at A82-A89; Tr. at 756-58.

4. Pilgrim Watch includes in its findings several statements from Mr. Gundersen’s testimony and from Exhibit 23 regarding the “bathtub curve.” PW Proposed Findings at 10-11 (¶¶¶ 28-31). The quoted statement in ¶¶ 30 (“As reactors approach . . . too often by failures than by condition-monitoring activities”) is incorrectly attributed to Pilgrim Watch’s expert, Mr. Gundersen. The actual source of this statement is Exhibit 23, the UCS Report by

David Lochbaum.<sup>5</sup> Because Mr. Lochbaum did not provide sworn testimony in this proceeding, was never named as a witness, was never made available for Board questioning, and apparently was never intended by Pilgrim Watch to serve as a witness, and because the document was not sponsored by a qualified expert, the Board should give no evidentiary weight to the views stated in that generic commentary.<sup>6</sup> Furthermore, Pilgrim Watch did not acknowledge that NRC's expert Dr. Davis questioned the relevance of the bathtub curve to the buried pipes at issue in this proceeding, stating that "the purpose of the aging management program [BPTIP] is to prevent region C of the bathtub curve from occurring." Exh. 41 at A9. Pilgrim Watch also misleadingly asserts that "Entergy did not dispute . . . the validity of the 'Bath Tub Curve.'" PW Proposed Findings at 11 (¶ 31). In fact, in its motion in limine, Entergy clearly challenged Pilgrim Watch's evidence regarding the bathtub curve and its applicability to the Pilgrim buried piping, stating that

Mr. Gundersen's discussion of the so-called "Bathtub Curve" is irrelevant. Mr. Gundersen's testimony on these points is so general, vague and unsupported that it has no probative value. He provides no data, study, or other technical support indicating that the buried piping within the scope of this contention will experience accelerated aging. His statement that "I would expect that most of Pilgrim Station's pipes, wraps, and coatings would be in the 'wear out phase' during the relicensed period" appears to be nothing more than unsupported speculation.<sup>7</sup>

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<sup>5</sup> David Lochbaum, *U.S. Nuclear Plants in the 21st Century: The Risk of a Lifetime* (Union of Concerned Scientists, May 2004).

<sup>6</sup> See *Louisiana Power and Light Co.* (Waterford Steam Electric Station, Unit 3), ALAB-732, 17 NRC 1076, 1088 n.13 (1983) (not accepting prefiled testimony of an expert who refused to appear at hearing); *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Unit 2) ALAB-27, 4 AEC 652, 658-59 (1971) (rejecting an intervenor's attempt to introduce a report that lacked proper sponsorship by a qualified expert witness).

<sup>7</sup> Entergy's Motion In Limine to Exclude Pilgrim Watch Testimony and Exhibits at 32 (Mar. 10, 2008) (internal citations omitted).

Although the Board ultimately allowed Mr. Gundersen's bathtub curve testimony as evidence, Pilgrim Watch's suggestion that Entergy did not dispute it is inaccurate and misleading.

5. Pilgrim Watch cites Mr. Gundersen's testimony for the proposition that the "crawler" inspection method used by Entergy would be "unlikely to detect smaller anomalies-bubbles." PW Proposed Findings at 24 (¶ 90). Mr. Gundersen's testimony on this topic to which the PW Proposed Findings refer, however, states merely that Mr. Gundersen was "not convinced" that such "smaller bubbles" would have been detected. Tr. 709-710. This is rather different than affirmatively characterizing such detection as "unlikely."

6. Pilgrim Watch states that "The OIG's audit revealed that the NRC Staff's license renewal review process is so weak that reviewers *often completely fail to address key* evaluation criteria such as the licensee's operating experience." (emphasis added). PW Proposed Findings at 60 (¶ 213). To provide a basis for this statement, though, Pilgrim Watch quotes a paragraph from this OIG audit<sup>8</sup> which clearly does *not* justify Pilgrim Watch's claim. See *id.* at 60-61. The paragraph from the OIG Audit indicates that NRC audit team members *do* address operating experience – the OIG takes issue only with the consistency of these reviews and suggests that some reviewers need to add a "verification" step to these reviews to double check that applicants are providing the NRC with all the operating experience data that they should be. Thus, Pilgrim Watch's claim regarding "complete failure" to address operating experience is based upon a misreading of the purported source for that claim.<sup>9</sup>

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<sup>8</sup> Exh. 35.

<sup>9</sup> The Staff notes further that Staff's safety evaluation is not an issue in this proceeding. See *Duke Energy Corp.* (Oconee Nuclear Station Units 1, 2, & 3), CLI-99-11, 49 NRC 328, 338 (1999) (quoting *Baltimore Gas & Electric Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-25, 48 NRC 325, 350 (1998)); see also Changes to Adjudicatory Process, Final Rule, 69 Fed. Reg. 2,182, 2,202 (Jan. 14, 2004) (stating that the "adequacy of the applicant's license application, not the NRC staff's safety evaluation, is the safety issue in any licensing proceeding").

B. Denying the Existence of Evidence

In some instances, Pilgrim Watch states that no evidence was provided when, in fact, it was. As a result, such portions of the PW Proposed Findings provide incorrect and incomplete accounts of the evidentiary record. Some examples are:

1. Pilgrim Watch claims that Entergy “provided no evidence to support” its estimate of a 35-year service life for the CIPP liners. PW Proposed Findings at 26 (¶¶ 99). In fact, Entergy provided substantial testimony to support its 35-year-lifespan claim. This included both prefiled testimony *and* testimony at the evidentiary hearing regarding the characteristics of CIPP liners and experiences with CIPP liners in nuclear and other applications. See, e.g., Exh. 1 at A43, A45; Tr. at 657-660, 678-684.

2. In another example, Pilgrim Watch seems to claim that Entergy has “ignored” the issue of external corrosion with respect to the SSW buried discharge piping. See PW Proposed Findings at 25-26 (¶¶ 96-97). In making this claim, Pilgrim Watch refers only to the testimony presented “[a]t the hearing.” *Id.* at 25 (¶ 96). Yet, the issue of external corrosion was covered *extensively* by Entergy, as well as the Staff, through prefiled testimony and exhibits.<sup>10</sup> Thus, Pilgrim Watch is “ignoring” the prefiled testimony and exhibits admitted into the evidentiary record.

3. Pilgrim Watch asserts, with respect to statements by Entergy witnesses regarding use of cured-in-place pipe (CIPP) liners at other facilities (Arkansas 1 and Indian Point 3), that “no evidence was provided as to ... particulars” of installation at Arkansas 1 and

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<sup>10</sup> See, e.g., Exh. 1 at A46-A90; Exh. 6; Exh. 41 at A10; Exh. 42; Exh. 45. Given Pilgrim Watch’s reliance upon its own prefiled testimony and exhibits in the drafting of its proposed findings, Pilgrim Watch clearly recognizes that such prefiled testimony and exhibits are no less significant than testimony provided at an evidentiary hearing.

“no evidence [was provided] as to [the] condition” of the installation at Indian Point. PW Proposed Findings at 29 (¶ 108). Contrary to these Pilgrim Watch statements, Entergy witnesses stated that, with respect to Arkansas 1, “I’ve not heard of any failures or any significant degradation of this type of cured-in-place lining,” and, with respect to Indian Point 3, there was “no reported failure of that particular application to date.” Tr. at 691-92.

4. Pilgrim Watch refers to a statement in certain Entergy documents which says that “the coating does not have a specified life.” PW Proposed Findings at 22 (¶¶ 79-83). Pilgrim Watch goes on to state that this statement by Entergy “can mean nothing else,” *id.* (¶ 83), and relies upon the statement to conclude that “there is no basis upon which the Board can properly conclude that the coatings will remain in good condition (provide reasonable assurance) for any period of time,” *id.* at 23 (¶ 85). Yet, Entergy *did* provide an explanation of what this statement means via witness testimony at the evidentiary hearing which is clearly at odds with Pilgrim Watch’s apparent interpretation of the statement. Tr. 748. Specifically, Entergy’s witness explained that the lack of a “specified life” is simply another way of saying that aging effects cannot automatically be ruled out, which in turn resulted in Entergy’s determination that an aging management program was appropriate. *Id.* This aging management program then relies upon coatings and inspections to manage the any potential aging effects. *Id.* Pilgrim Watch thus implied that the significance of Entergy’s statement was undisputed, and accordingly failed to acknowledge, much less address, the evidence presented by Entergy that contradicts Pilgrim Watch’s view as to the statement’s significance.

In sum, Pilgrim Watch’s various claims that “no evidence” was provided on certain material issues should not be adopted by the Board.

C. Unexplained Discounting of Viable Evidence

Similarly, Pilgrim Watch makes a number of quality-of-evidence judgments that attempt, without adequate justification, to portray evidence as unworthy of consideration.

For example, Pilgrim Watch states that “[t]here was no factual evidence provided by Entergy – such as inspection reports – describing an analysis of the actual condition of the coating and piping of the 40 foot sections examined. Therefore any opinion expressed about their condition is unsupported by facts.” PW Proposed Findings at 21 (¶ 72). In other words, Pilgrim Watch is claiming that expert opinion does not constitute “factual evidence,” and so must be backed up by supporting documentation in order to have evidentiary value. Contrary to Pilgrim Watch’s view, expert testimony, even if opinion, *is* considered evidence in NRC proceedings.<sup>11</sup> Furthermore, the Entergy witness testimony on this issue is more in the nature of fact testimony than opinion testimony.<sup>12</sup> Finally, Pilgrim Watch includes numerous portions of the prefiled testimony of its own witnesses in its proposed findings even though much of this prefiled testimony does not appear to be backed up by documentation, suggesting that even Pilgrim Watch does not view lack of supporting documentation as fatal to expert testimony.<sup>13</sup>

Also, Pilgrim Watch states that “[s]ince the [SSW inlet] piping was not removed from the ground or analyzed, there is no site-specific historical experience upon which Entergy can rely.”

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<sup>11</sup> *Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681, 720 & n.52 (1985). The Staff notes that Judge Young specifically clarified for Pilgrim Watch’s representative at the evidentiary hearing that “[t]he fact that something is not in a document doesn’t make it any less worthy as evidence for us to consider.” Tr. 703-04.

<sup>12</sup> See Exh. 1 at A74 (“The exterior wrappings of the [40-foot pipe sections] were found to be in good condition and no external corrosion of the pipes was observed. [Pilgrim] examined the removed piping after its wrapping was removed and found the outside surface of the piping in original, pristine condition.”).

<sup>13</sup> See generally PW Proposed Findings at 41-67 and the Pilgrim Watch prefiled witness testimony that those findings reference as support.



PW Proposed Findings at ¶ 78. Thus, Pilgrim Watch implies that any other evidence of site-specific historical experience, such as in-place inspections, should be ignored. No basis for ignoring such evidence, however, is provided, other than an unexplained assertion that “<20% of the piping” is not “an acceptable sample to be considered proof.” See *id.* at 20-21 (¶¶ 71, 74).

Pilgrim Watch also dismisses Dr. Davis’ statement at the hearing that “[e]very time they have looked at the external coating . . . it has been intact after years with no degradation . . . . [t]he only degradation they have seen is from the inside.” *Id.* at 21 (¶ 74). According to Pilgrim Watch, this testimony by Dr. Davis is “overboard [sic] and unsupported by fact,” and constitutes “speculation[.]” *Id.* (¶¶ 74, 75). But Pilgrim Watch does not explain how or why this description by Dr. Davis of Entergy’s experience with the SSW buried discharge piping external coatings is in any way inaccurate.

D. Setting Forth Pilgrim Watch Evidence without Addressing Contrary Evidence

Pilgrim Watch’s repeated failure to meaningfully address contrary evidence also takes another form: in much of the PW Proposed Findings, the testimony of Pilgrim Watch’s own experts is simply paraphrased, or copied verbatim, with no attempt made to even mention, much less address, any of the contrary evidence on those topics put forward by Entergy or the Staff. In these instances, Pilgrim Watch does not claim that such contrary evidence does not exist, or that it is somehow unreliable; instead, the contrary evidence is simply ignored.

For example, several sections of Pilgrim Watch’s proposed findings consist exclusively of virtually word-for-word recital of Mr. Gundersen’s testimony, with no mention of any contrary evidence. See PW Proposed Findings at 18 and 31 (¶¶ 58-60, 114-115) (Exh. 13 at 26); 41-44 (¶¶ 147-159) (Exh. 13 at 30-34); 45-48 (¶¶ 162-167) (Exh. 13 at 35-38); 49-54 (¶¶ 173-192)

(Exh. 13 at 41-49 and Exh. 14 at ¶¶ 12.4.2 and 12.4.4.3).<sup>14</sup> Similarly, other sections of the PW Proposed Findings consist of lengthy quotations from various documents. See *id.* at 37-39 (¶ 138) (quoting from Appendices A and B of the Pilgrim Updated Final Safety Analysis Report (UFSAR) Supplement); 55-56 (¶¶ 196(a)-(f)) (quoting from GALL XI M-28 (Exh. 71)). Still other sections contain long quotes from Pilgrim Watch's expert's oral testimony at the hearing. *Id.* at 36 (¶¶ 133-134).

In the Staff's view, proposed findings of fact should reflect consideration of the evidentiary record as a whole, not merely the evidence that supports the authoring party's position. Accordingly, proposed findings should not be used simply to restate a party's own testimony, especially on issues that are contested. The portions of the PW Proposed Findings that do so should be accorded no weight of their own.

E. Vague or Imprecise Statements about the Record

Numerous statements contained in Pilgrim Watch's Proposed Findings are vague or imprecise, and so do not provide useful information about the factual record. Examples of this include, but are not limited to, the following:

1. In the "Coatings Have No 'Specified Life'" section, Pilgrim Watch claims that Entergy has admitted that "coatings" lack a "specified life." PW Proposed Findings at 22-23 (¶¶ 79-85). But Pilgrim Watch makes no attempt to specify which of the various "coatings" used for Pilgrim buried piping have no "specified life." Pilgrim Watch also provides no explanation as to the significance of the term "specified life." Thus, this section of Pilgrim Watch's Proposed

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<sup>14</sup> The Staff also notes that the material in ¶ 175 and the table in ¶ 177 of the PW Proposed Findings was excluded by the Board in its ruling on the Staff's and Entergy's motions in limine. Order (Ruling on Pending Matters and Addressing Preparation of Exhibits for Hearing) at 2 (March 24, 2008).

Findings, on account of its vagueness, is presenting a finding of unspecified significance about unspecified coatings.

2. In a section on “Cured-In-Place (CIPP) Failure,” Pilgrim Watch states that “[t]here is no dispute that the SSW Discharge pipes will corrode from the inside if either the CIPP or interior coating fails.” *Id.* at 25 (¶ 95). Pilgrim Watch does not, however, explain what the “interior coating” is. Apparently it is meant to be distinct from the CIPP liner, which is itself an internal coating, but what precisely it is Pilgrim Watch does not explain.<sup>15</sup>

3. Pilgrim Watch proposes a general finding that Entergy’s Aging Management Plans (“AMPs”) “will not provide reasonable assurance that all of the buried pipes and tanks within scope of license renewal will protect the public health and safety over the license renewal period.” *Id.* at 37 (¶ 137). This statement, due to its imprecision, seems to bring into the scope of these proceedings even buried pipes and tanks that could not potentially contain radioactive water. Further, it implies that the Board’s goal is to make a general determination regarding protection of public health and safety rather than a specific determination regarding the specific intended safety functions at issue in a license renewal proceeding. Only the latter is required by the Commission’s license renewal regulations.<sup>16</sup>

The Staff thus requests that the Board place no reliance upon the vague and imprecise statements made by Pilgrim Watch when crafting its Initial Decision.

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<sup>15</sup> In addition to the CIPP, the SSW discharge piping has an internal rubber liner, Exh. 1 at A44, and two 40-foot sections that were replaced in 1999 also have an internal protective epoxy coating, *id.* at A42. The Staff further notes that Pilgrim Watch does not explain how the failure of one internal coating could cause corrosion of the piping even where another internal coating remains intact.

<sup>16</sup> See 10 C.F.R. Part 54.4(b); 54.21(a)(3); 54.29(a); see also the Staff’s discussion of the 10 C.F.R. Part 54 license renewal standards at Staff’s Proposed Findings at ¶ 23-24 (explaining how these Part 54 provisions interact with one another).

II. Statements Not Supported by the Record

The regulation governing proposed findings in Subpart L proceedings, 10 C.F.R. § 2.1209, does not specify requirements for format or content of proposed findings of fact. Nonetheless, § 2.1210(c), which governs initial decisions, states that such decisions “must be based only upon information in the record or facts officially noticed.”<sup>17</sup> Furthermore, the Commission’s general rules regarding admission of evidence<sup>18</sup> would be rendered superfluous if Board findings of fact could be based without restriction upon material that was never admitted into evidence. Logically, then, the findings that the parties propose for inclusion in a Board initial decision should also be based upon the record. Nonetheless, numerous statements in the PW Proposed Findings are general statements with no supporting citations (to the record or otherwise), or are statements that cite to documents that were never admitted into evidence. The Board should give no weight to such proposed findings.

A. No Citation Provided

Without reference to the record, neither the Board nor the other parties can be sure that the facts or opinions expressed were properly admitted as evidence. Additionally, if statements are not based upon evidence in the record, other parties will effectively have had no opportunity to respond to them with evidence of their own. Statements lacking supporting citations to the record should therefore be given little or no weight. A few examples of the many such statements contained in the PW Proposed Findings are provided below:

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<sup>17</sup> Commission regulations establish ground rules applicable to the taking of “official notice” of facts, requiring that presiding officer provide notice that such official notice will be taken and provide “each party adversely affected by the decision” with an “opportunity to controvert the fact” being officially noticed. 10 C.F.R. § 2.337(f)(1). The regulations further state that a failure by the presiding officer to provide this required prior opportunity to controvert officially noticed facts is grounds for appealing an initial decision. § 2.337(f)(2).

<sup>18</sup> See generally 10 C.F.R. § 2.337.

1. Pilgrim Watch states that “sand retains moisture” and goes on to give as examples corrosion of the sand bed area of the “drywell shell” at Oyster Creek and children building sandcastles. PW Proposed Findings at 13 (¶ 39). Pilgrim Watch then states that “over the years sand washes down and silt and clay soils above wash down into the area surrounding the pipe.” Later, Pilgrim Watch states that it “knows that the supply of oxygen is high in sand and would further the cathodic reaction.” *Id.* at 14 (¶ 41). None of these statements is supported by citation to the record or any reference whatsoever.

2. Similarly, Pilgrim Watch states that it doubts Entergy’s reported soil pH values “because soil acidity varies – over time and over a small geographic area,” and in the following sentence, Pilgrim Watch states that “a pH of around 6.3-6.8 is the optimum range preferred by most soil bacteria.” *Id.* at 15 (¶ 44). Pilgrim Watch further states that “[s]and and soil particles move in the subsurface and are abrasive.” *Id.* at 15 (¶ 47). Again, Pilgrim Watch provides no citation to the record to support these statements.

3. Pilgrim Watch discusses thermal expansion and possible stresses or cracking that could result from such expansion. *Id.* at 17 (¶ 56), 28-29 (¶¶ 105-06). There is no citation to the record for any of the statements in these paragraphs.

4. With respect to its allegations of use of counterfeit or substandard components in the SSW piping system, Pilgrim Watch states that “[t]he best current information is that there are four suspect flanges that have not been specifically tested.” *Id.* at 18 (¶ 61). Pilgrim Watch does not, however, explain where this purported “best current information” comes from.<sup>19</sup>

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<sup>19</sup> The Staff further notes that Pilgrim Watch itself submitted, as part of Exh. 28, a Declaration given under penalty of perjury by Entergy witness Alan Cox that responds to prior Pilgrim Watch claims regarding the significance of the 1990 GAO report and explains how the issue of potential counterfeit or substandard pipes was addressed at Pilgrim. See Exh. 28 (Declaration of Alan Cox, which is attached to General Accounting Office report). Pilgrim Watch does not mention this Declaration, and so is effectively (continued. . .)

5. In ¶ 74, after commenting on the Staff's statements regarding inspections of the external pipe coatings, Pilgrim Watch states that "[t]he amount of 'seeing' done by Entergy [in the BPTIP] does not constitute an acceptable sample to be considered proof." PW Proposed Findings at 21 (¶ 74). In the following paragraph (¶ 75), Pilgrim Watch asserts that "without looking at the outside [of the pipes] there is no reasonable assurance of structural integrity." No citation to the record is provided in support of either of these statements.

6. In ¶¶ 139 and 140, Pilgrim Watch asserts that "[t]he BPTIP is inadequate" and that "[i]t is based on a number of false or . . . inaccurate assumptions." *Id.* at 39 (¶¶ 139-40). These assumptions, delineated in ¶¶ 141-145, include "corrosion is gradual, linear and predictable"; maintenance of old pipes keeps them "as good as new"; and "corrosion is even across a component." There are no citations to the record indicating that Entergy or the Staff made such assumptions.

Such citation-free statements, including, but not limited to, the examples discussed above, should be disregarded by the Board.

B. Citation to Documents That Were Never Admitted as Evidence

Where Pilgrim Watch does provide citations, these citations are often not to documents that are in the evidentiary record. Because the evidentiary record has already closed for Contention 1,<sup>20</sup> and because proposed findings are meant to address the evidence that has actually been submitted into the record, the Board should disregard Pilgrim Watch's citations to

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(. . .continued)

ignoring the existence of this contrary evidence.

<sup>20</sup> Memorandum and Order (Ruling on Pilgrim Watch Motions Regarding Testimony and Proposed Additional Evidence Relating to Pilgrim Watch Contention 1) (June 4, 2008) (unpublished) ("June 4 Order") at 3-4; *see also Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-08-09, 65 NRC \_\_ (slip op. at 5) (May 16, 2008).

documents not in the record as well as any proposed findings of fact that rely upon these documents for support. Pilgrim Watch's extra-record citations include:

1. Footnote 4 on p.5, citing to three information notices contained on the NRC's public website;
2. Footnote 6 on p.10, citing to another document on the NRC's public website;
3. Footnote 9 on p.14, which cites to a Wikipedia entry regarding soil pH;
4. Footnote 10 on p.15, which quotes from a section of the Brookhaven Report that was not entered into the record (only part of the report was entered into the record, as Exh. 21).
5. Footnote 12 on p.28, citing to an NRC NUREG that was never entered into the evidentiary record;
6. Footnote 13 on p.31, citing to an NRC Bulletin that is not in the evidentiary record;
7. Footnote 15 on p.33, referring to "Section 5" of the Brookhaven Report, even though Section 5 of that report was not entered into the record as part of Exh. 21 or otherwise.
8. Footnote 22 on p.60, citing to an NRC web page that was not entered into the evidentiary record.

Reliance by the Board on such extra-record documents (or the proposed findings that are based upon them) at this point in the proceeding would effectively eviscerate the Board's prior ruling that the evidentiary record for Contention 1 is closed, as well as the Commission ruling ordering that record closure.<sup>21</sup> There are stringent standards under Commission regulations for reopening closed evidentiary records,<sup>22</sup> and Pilgrim Watch has not attempted to

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<sup>21</sup> See *Pilgrim*, CLI-08-09, 65 NRC \_\_ (slip op. at 5).

<sup>22</sup> See 10 C.F.R. § 2.326.

demonstrate that it has met these standards with respect to the various non-record documents it references in its proposed findings.

### III. Incorrect Characterizations of Entergy's Burden

In a license renewal proceeding, the applicant is required to demonstrate that there is reasonable assurance that aging effects will be adequately managed for structures and components within the scope of license renewal.<sup>23</sup> Pilgrim Watch, however, seeks to require Entergy to prove a variety of particular facts without explaining why proof of those facts would be necessary to support a reasonable assurance finding in this case. Examples include, but are not limited to, the following:

1. Pilgrim Watch states that "No proof was provided by the Applicant that [degradation] could not happen again. . . ." PW Proposed Findings at 3. The Commission's license renewal regulations, however, require only proof that aging effects will be "adequately managed,"<sup>24</sup> not that they will be prevented completely. Further, as the Board has explained to the parties on multiple occasions, the only degradation that is ultimately material to the NRC's license renewal determination is degradation that would be substantial enough to prevent the relevant buried piping from performing its intended safety functions.<sup>25</sup>

2. Pilgrim Watch states, with regard to deterioration of the SSW buried discharge piping's internal rubber liner discovered by Entergy in 1995, that "[t]here was no proof provided by Entergy that deterioration had not started to occur before that time." PW Proposed Findings

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<sup>23</sup> See 10 C.F.R. § 54.21(a)(3); § 54.29(a).

<sup>24</sup> 10 C.F.R. § 54.21(a)(3).

<sup>25</sup> See, e.g., Memorandum and Order (Ruling on Pilgrim Watch Motions Regarding Testimony and Proposed Additional Evidence Relating to Pilgrim Watch Contention 1) (June 4, 2008) (unpublished) at 9 (quoting from *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Plant), LBP-07-12, 66 NRC 113, 129 (2007)).



at 8 (¶ 13). Similarly, Pilgrim Watch also states that Entergy “presented no evidence to show how soon deterioration began after installation, therefore [Board must assume] that it began very soon thereafter.” *Id.* at 9 (¶ 23). Yet, Pilgrim Watch does not explain what would be gained via proof regarding the precise starting time for this degradation – especially since this was degradation of the *rubber liner* whose role as primary internal coating has since been supplanted by a different type of liner (i.e. the CIPP liners).<sup>26</sup>

3. Pilgrim Watch appears to claim that Entergy has not adequately demonstrated the redundancy of its SSW discharge piping because “of the fact that both [SSW discharge] Loops degraded simultaneously in the past” and because there is no “proof that this could not happen again.” PW Proposed Findings at 35 (¶ 131). Pilgrim Watch, though, does not explain the connection between mere “degradation” of the rubber liner that was *previously* (but is no longer) the primary internal coating for the SSW discharge piping and the issue that is of concern to the Board, namely the risk that the SSW discharge pipes could become blocked in the future so as to prevent the SSW system from performing its heat removal function.

4. Pilgrim Watch also states repeatedly that Entergy failed to provide certain evidence, and that the Board failed to ask for it, but does not explain the significance of either of these failures. For example, Pilgrim Watch states that “Entergy did not provide for the Board, nor did the Board request, Service Life Warranties. Entergy also did not provide for the Board, nor did the Board request, information about any CIPP liner testing results.” *Id.* at 26 (¶ 98). Pilgrim Watch does not, however, explain why such information is required or why lack of such information renders the AMPs for Pilgrim inadequate. Pilgrim Watch subsequently makes

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<sup>26</sup> See Exh. 1 at A42-A44.

similar statements about failure to provide or ask for evidence regarding installation and testing, also without support or justification. See *id.* at ¶¶ 102-103.

In sum, Pilgrim Watch, through its proposed findings, attempts to impose a number of unjustified and unexplained burdens upon Entergy. The Board should reject these alleged burdens as baseless.

IV. Presentation of Theories Not Previously Raised at the Post-Hearing Stage

Presentation of new facts, exhibits or arguments for the first time in post-hearing findings deprives interested parties of an opportunity to respond. See *Union Electric Co.* (Callaway Plant, Unit 1), ALAB-740, 18 NRC 343, 349-50 (rejecting new arguments made in findings as depriving interested parties a meaningful opportunity to respond to crucial facts); *Inquiry into Three Mile Island Unit 2 Leak Rate Data Falsification*, LBP-87-14, 25 NRC 671, 687-88 (1987) (refusing to consider materials attached to proposed findings which had not been offered (or attempted to be offered) before the record was closed). NRC proceedings must provide both an opportunity to submit evidence and an opportunity to challenge evidence as to any and all material facts. See *Union of Concerned Scientists v. NRC*, 735 F.2d 1437, 1444-45 (D.C. Cir. 1984).

Contrary to the above, Pilgrim Watch has included in its findings several topics that are not part of the record in this proceeding. For example, the PW Proposed Findings include proposed findings regarding thermal expansion, PW Proposed Findings at 17 (¶ 56), and cracking due to thermal stress, *id.* at 28-29 (¶¶ 105-06), topics that were not previously raised by any party in prefiled testimony, as part of other exhibits, or at the hearing. Therefore, Pilgrim Watch's assertions regarding possible thermal expansion and associated cracking or stresses are new arguments that neither of the other parties (Staff or Entergy) has had notice of or opportunity to respond to. The Board should therefore disregard these paragraphs.

Similarly, Pilgrim Watch has included findings concerning installation, *id.* at 27 (¶ 102), and testing, *id.* at 27-28 (¶ 103), of the CIPP liners. In these findings, Pilgrim Watch asserts that there was no evidence regarding possible installation errors, or what testing was performed on CIPP liners. Again, these new assertions are not supported by citations to the record and do not appear to be part of the hearing transcript or the admitted exhibits. Thus, the Board should disregard them, despite Pilgrim Watch's recommendation that the Board should consider any information it has regarding these topics, "whether or not formally in evidence." *Id.* at 28 (¶ 104).

V. Proposed Additions to Entergy's Aging Management Programs

The Board recently reiterated that its "responsibility is to determine whether the Applicant has proven by a preponderance of the evidence that its AMPs are adequate as they currently exist."<sup>27</sup> Therefore, the Board should not adopt those Pilgrim Watch proposed findings that seek to expand the bounds of this Board responsibility. Such proposed findings include the various statements regarding what additional features (in Pilgrim Watch's view) could be added to the proposed buried pipes and tanks AMPs to render them acceptable (e.g. monitoring wells<sup>28</sup>; cathodic protection<sup>29</sup>; additional inspections<sup>30</sup>; compliance with GALL AMP XI M28<sup>31</sup>; etc.). Instead, the Board should confine itself — as it has indicated it will — to determining whether the relevant Pilgrim AMPs are, or are not, adequate in their current form.

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<sup>27</sup> June 4 Order at 9.

<sup>28</sup> PW Proposed Findings at 66-67 (¶¶ 238-244).

<sup>29</sup> *Id.* at 64-65 (¶¶ 231-233).

<sup>30</sup> *Id.* at 65-66 (¶¶ 234-237).

<sup>31</sup> *Id.* at 57 (¶ 198).

VI. Incorrect Articulation of Legal Standards

Pilgrim Watch incorrectly characterizes applicable legal standards both in its “Preliminary Statement” section (pp.1-5) and its “Conclusions of Law” section (pp.68-78). The most notable of these mischaracterizations are the discussions of (1) license renewal scoping under 10 C.F.R. § 54.4; (2) defense in depth; and (3) risk management and 95% confidence.

A. Scope of License Renewal

First, Pilgrim Watch attempts to vastly broaden the scope of license renewal by relying on some portions of 10 C.F.R. Part 54 while ignoring the rest. According to Pilgrim Watch, 10 C.F.R. § 54.4 “simply says how components are to be determined to be within scope; it is not a restriction on what can be looked at once they are determined to be within scope.” PW Proposed Findings at 3 (emphasis deleted). In Pilgrim Watch’s view, this means that the Board incorrectly narrowed the scope of the issues in this proceeding by focusing only on the ability of in-scope components to perform the functions that are discussed in § 54.4. See PW Proposed Findings at 3.

Pilgrim Watch has correctly described the purpose of § 54.4(a)(1), which is the sole portion of § 54.4 that Pilgrim Watch quoted when purportedly quoting the entirety of § 54.4. See PW Proposed Findings at 3 n.3. Pilgrim Watch, though, neglected to acknowledge the rest of § 54.4, which includes, among other things, a subsection (b) that expressly states: “[t]he intended functions that these systems, structures, and components must be shown to fulfill...are those functions that are the bases for including them within the scope of license renewal as specified in paragraphs (a)(1)-(3) of this section.” Thus, another subsection of the regulatory provision that Pilgrim Watch has cited for its proposition expressly renders its proposition untenable. The Board should therefore reject this attempt by Pilgrim Watch to expand the scope of license renewal adjudications beyond what Part 54 permits.

B. Defense in Depth

Pilgrim Watch suggests that Entergy's AMPs for Pilgrim are insufficient because relying upon AMPs for aging management "contradicts the fundamental approach to safety in the nuclear industry, defense-in-depth." PW Proposed Findings at 4. There is, however, no regulatory "defense-in-depth" requirement under 10 C.F.R. Part 54,<sup>32</sup> and Pilgrim Watch has pointed to none. Moreover, "defense-in-depth" is clearly provided already by the various layers of NRC regulatory requirements applicable to any plant that is currently operating (whether on an initial license or a renewed one) and in each plant's current licensing basis; thus, an AMP merely adds another layer of protection to the existing framework. Finally, the implication by Pilgrim Watch that AMPs can never suffice to justify renewing licenses because they can never, on their own, provide "defense-in-depth" represents a challenge to the Commission's license renewal regulations in Part 54 and thus is impermissible in an adjudicatory proceeding such as this one.<sup>33</sup> The Board should therefore reject Pilgrim Watch's argument that the concept of "defense-in-depth" somehow precludes granting a renewed license for Pilgrim.

C. Risk Management and 95% Confidence

Pilgrim Watch attempts to redefine the standards governing license renewal determinations that the Commission's regulations require license renewal applicants to satisfy. One way Pilgrim Watch seeks to do this is by characterizing aging management as an exercise

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<sup>32</sup> See generally 10 C.F.R. Part 54.

<sup>33</sup> See 10 C.F.R. § 2.335 (generally prohibiting challenges in adjudicatory proceedings to Commission licensing regulations); see also *Vermont Yankee Nuclear Power Corp., et al.* (Vermont Yankee Nuclear Power Station), CLI-00-20, 52 NRC 151, 165-66 (2000) (holding that petitioners in individual adjudications may not challenge generic decisions made by the Commission in rulemakings); *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-87-12, 26 NRC 383, 395 (1987) (holding that a contention constituted an impermissible challenge to Commission regulations where is sought to impose more stringent standards than what the regulations require).

in “risk management.” PW Proposed Findings at 5, 72 (¶¶ 18-25). The Commission’s license renewal regulations at 10 C.F.R. Part 54, however, say nothing of risk management, and Pilgrim Watch has not cited to any authority for their proposition. As the Staff explained in its own Proposed Findings, what Part 54 *does* require is that license renewal applicants develop AMPs that will provide reasonable assurance that certain specified functions will continue to be performed consistent with the plant’s current licensing basis during the period of extended operation.

Pilgrim Watch recognizes that “[r]isk is the product of consequences and probability,” but does not explain how any such calculation would fit within the Commission’s scheme for determining the adequacy of license renewal applications. Part 54 gives no indication that the burden upon applicants with respect to any given in-scope structure or component depends in any way upon the *consequences* that would result from that particular structure or component’s failure to perform its § 54.4(a) intended function. So long as a structure or component performs one of the functions listed in § 54.4(a), the applicant must demonstrate that there is reasonable assurance that the aging of that structure or component will be managed so as to ensure its ability to perform its § 54.4(a) function. Therefore, there appears to be no basis for the Board to analyze the Pilgrim buried pipes and tanks AMPs from a “risk management” perspective.

In addition, Pilgrim Watch repeats the “95% Confidence” argument it has raised before<sup>34</sup> (an argument to which the Staff has already responded in its own Proposed Findings<sup>35</sup>), and

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<sup>34</sup> Compare PW Proposed Findings at 68-70 (¶¶ 4-11), with Pilgrim Watch Presents Statements of Position, Direct Testimony and Exhibits Under 10 CFR 2.1207 (Mar. 3, 2008) at 4-10.

<sup>35</sup> NRC Staff Proposed Findings of Fact and Conclusions of Law, and Order in the Form of an Initial Decision (June 9, 2008) at 15 n.50; see also NRC Staff Response to Initial Presentations on Contention 1, Rebuttal Testimony and Response to Board Questions (Mar. 6, 2008) at 6-8.

attempts to integrate this argument with its risk management argument. The result of this integration is an apparent (though vaguely described) claim by Pilgrim Watch that the Board must find that there is, at most, a 5% risk that Entergy's AMPs will not effectively manage aging. This appears to be materially equivalent to Pilgrim Watch's various attempts to define reasonable assurance as "95% Confidence," and so the Staff's objections to this argument are the same as its previously articulated objections to Pilgrim Watch's "95% confidence" arguments.

#### CONCLUSION

As discussed above, there are numerous defects in the PW Proposed Findings that, in the Staff's view, severely limit its value to the Board and undermine its credibility. The Staff therefore respectfully requests that the Board give little, if any, weight to the findings proposed by Pilgrim Watch.

Respectfully submitted,

**/RA/**

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**/RA/**

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Dated at Rockville, Maryland  
this 23<sup>rd</sup> day of June, 2008

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)	)	ASLBP No. 06-848-02-LR
	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF'S RESPONSE TO PILGRIM WATCH'S PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW" in the above-captioned proceeding have been served on the following by electronic mail and by deposit in the U.S. Nuclear Regulatory Commission's internal mail system, or, as indicated by an asterisk (\*), by electronic mail and by deposit in the U.S. Mail system this 23<sup>rd</sup> day of June, 2008.

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