

June 6, 2011

**UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION**

Before the Atomic Safety and Licensing Board Panel

In the Matter of	)	
	)	
Entergy Nuclear Generation Company and	)	Docket No. 50-293-LR
Entergy Nuclear Operations, Inc.	)	ASLBP No. 06-848-02-LR
	)	
(Pilgrim Nuclear Power Station)	)	

**ENTERGY’S ANSWER OPPOSING PILGRIM WATCH REQUEST  
FOR HEARING ON POST-FUKUSHIMA SAMA CONTENTION**

**I. INTRODUCTION**

Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc. (collectively “Entergy”) hereby oppose Pilgrim Watch’s Request for Hearing on Post Fukushima SAMA Contention, submitted on May 12, 2011.<sup>1</sup> Pilgrim Watch alleges that the Environmental Report (“ER”) supporting the Pilgrim Nuclear Power Station (“PNPS” or “Pilgrim”) license renewal is inadequate because the ER’s severe accident mitigation alternatives (“SAMA”) analysis ignores purportedly “new and significant lessons learned regarding the possible off-site radiological and economic consequences in a severe accident” brought to light by the Fukushima Daiichi accident. PW Request at 1.

Pilgrim Watch’s Request should be denied for a host of reasons: First, neither the Request nor the appended Chanin Statement addresses the standards for reopening a closed record to litigate a new contention, and neither meets the standards for reopening a closed

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<sup>1</sup> Pilgrim Watch Request for Hearing on Post Fukushima SAMA Contention (May 12, 2011) (“PW Request”). Appended to the PW Request (at pp. 20-21) is a Statement of David Chanin (“Chanin Statement”).

record.<sup>2</sup> The PW Request also does not meet the standards applicable to considering a late-filed contention, and it fails to meet the standards for an admissible contention because it raises issues immaterial to this proceeding, lacks specificity, lacks sufficient support, and fails to demonstrate a genuine dispute with the Pilgrim license renewal application.

## II. BACKGROUND

### A. STATEMENT OF CASE

This proceeding involves the application submitted by Entergy in January 2006 seeking renewal of the operating license for Pilgrim (“Application”).<sup>3</sup> On May 25, 2006, Pilgrim Watch filed an intervention petition seeking the admission of five contentions.<sup>4</sup> This Board admitted two of the five contentions proffered by Pilgrim Watch – Contention 1 relating to buried piping, and Contention 3 challenging certain input data used in the Pilgrim SAMA analysis.<sup>5</sup>

The NRC Staff reviewed the Application and issued the final environmental impact statement (“FEIS”) in July 2007<sup>6</sup> and the final safety evaluation report (“SER”) in November 2007.<sup>7</sup> Following summary disposition of Contention 3,<sup>8</sup> the Board held a hearing on

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<sup>2</sup> Attached to this Answer is the Declaration of Dr. Thomas L. Sowdon and Dr. Kevin R. O’Kula in Support of Entergy’s Answer Opposing Pilgrim Watch Request for Hearing on Post-Fukushima SAMA Contention (June 6, 2011) (“Entergy Decl.”). Among other things, Drs. Sowdon and O’Kula show that Pilgrim Watch’s Request fails to demonstrate that a materially different result would be likely under 10 C.F.R. § 2.326(a)(iii), one of the criteria for reopening a closed record.

<sup>3</sup> See 71 Fed. Reg. 15,222 (Mar. 27, 2006).

<sup>4</sup> Request for Hearing and Petition to Intervene by Pilgrim Watch (May 25, 2006) (“Petition to Intervene”).

<sup>5</sup> Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), LBP-06-23, 64 N.R.C. 257, 349 (2006).

<sup>6</sup> NUREG-1437, Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Supplement 29 Regarding Pilgrim Nuclear Power Station (July 2007) (“NUREG-1437”).

<sup>7</sup> NUREG-1891, Safety Evaluation Report Related to the License Renewal of Pilgrim Nuclear Power Station (Nov. 2007).

<sup>8</sup> Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), LBP-07-13, 66 N.R.C. 131 (2007).

Contention 1 and then closed the evidentiary record on that contention.<sup>9</sup> It then issued a decision resolving that remaining contention in Entergy's favor and terminating the proceeding.<sup>10</sup>

In CLI-10-11, the Commission reversed the summary disposition of the portion of Contention 3 that had raised meteorological modeling issues associated with the SAMA analysis.<sup>11</sup> The Commission therefore remanded Contention 3, "as limited by [its] ruling," to the Board for hearing.<sup>12</sup> In CLI-10-14, the Commission denied Pilgrim Watch's request for review of all other Licensing Board decisions that Pilgrim Watch had challenged on appeal.<sup>13</sup>

Following the remand, Pilgrim Watch sought repeated delays in the scheduling of the hearing on the remanded issues while it sought unsuccessfully to expand the scope of the remand to include issues never raised as part of its contention and issues that had already been resolved. See, e.g., CLI-10-15<sup>14</sup> (denying Pilgrim Watch motion for reconsideration); CLI-10-28<sup>15</sup> (denying Pilgrim Watch motion for clarification). Eventually, in CLI-10-28, the Commission stated:

We remanded contention 3 to the Board in March 2010. We expect the Board to make full use of its broad authority under our rules to establish and maintain a fair and disciplined hearing process, avoiding extensions of time absent good cause, unnecessary multiple rounds of briefs, or other unnecessary delay. We urge the Board and parties to work together to bring the proceeding to timely closure.

CLI-10-28 at 2.

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<sup>9</sup> Memorandum and Order (Ruling on Pilgrim Watch Motions Regarding Testimony and Proposed Additional Evidence Relating to Pilgrim Watch Contention 1) (June 4, 2008) at 4.

<sup>10</sup> Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), LBP-08-22, 68 N.R.C. 590, 610 (2008).

<sup>11</sup> Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-10-11, 71 N.R.C. \_\_\_, slip op. at 14, 18 (Mar. 26, 2010) ("CLI-10-11").

<sup>12</sup> Id. at 3.

<sup>13</sup> Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-10-14, 71 N.R.C. \_\_\_, slip op. at 3, 39 (June 17, 2010) ("CLI-10-14").

<sup>14</sup> Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-10-15, 71 N.R.C. \_\_\_, slip op. June 17, 2010 (Mar. 26, 2010) ("CLI-10-15").

<sup>15</sup> Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-10-28, 71 N.R.C. \_\_\_, slip op. (November 5, 2010) ("CLI-10-28").

Having been unsuccessful in its efforts to expand the remanded contention, Pilgrim Watch then commenced a campaign of requests for hearing on new contentions. To date, Pilgrim Watch has filed five such requests, including the one to which this Answer responds.<sup>16</sup> In each case, Pilgrim Watch has either refused to even mention the Commission's standards for reopening to admit new contentions, or failed to comply with the procedural requirements. In addition, since completion of the hearing record on the remanded contention in March,<sup>17</sup> Pilgrim Watch has filed four post-hearing memoranda improperly attempting to expand the closed record.<sup>18</sup> These repeated attempts to delay the completion of this proceeding, now in its sixth year, should not be countenanced.

B. APPLICABLE LEGAL STANDARDS

The NRC does not look with favor on amended or new contentions filed after the initial filing. Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-04-36, 60 N.R.C. 631, 638 (2004). As the Commission has repeatedly stressed,

[o]ur contention admissibility and timeliness rules require a high level of discipline and preparation by petitioners "who must examine the publicly available material and set forth their claims and the support for their claims at the outset." There simply would be "no end to NRC licensing proceedings if

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<sup>16</sup> Pilgrim Watch Request for a Hearing on a New Contention (Nov. 29, 2010); Pilgrim Watch Request for a Hearing on a New Contention: Inadequacy of Entergy's Aging Management of Non-Environmentally Qualified (EQ) Inaccessible Cables at Pilgrim Station (Dec. 13, 2010); Pilgrim Watch filed a Request for Hearing on a New Contention: Inadequacy of Entergy's Aging Management Program of Non-Environmentally Qualified (Non-EQ) Inaccessible Cables (Splices) at Pilgrim Station (Jan. 20, 2011); Pilgrim Watch's Request for Hearing on Post Fukushima SAMA Contention (May 12, 2011); Pilgrim Watch Request for Hearing on a New Contention Regarding Inadequacy of Environmental Report Post Fukushima (June 1, 2011).

<sup>17</sup> On February 23, 2011, the Board granted the parties' Joint Motion requesting that the remanded Contention 3 be resolved solely on the parties' pre-filed testimony and exhibits, with no evidentiary hearing. Revised Notice and Order (Regarding Hearing and Oral Argument) (Feb. 23, 2011). On March 4, 2011, the parties filed their findings of fact and conclusions of law on remanded Contention 3 and on March 9, 2011 the Board heard closing arguments on remanded Contention 3.

<sup>18</sup> Pilgrim Watch Memorandum Regarding Fukushima (March 12, 2011); Pilgrim Watch's Post Hearing Memorandum (March 28, 2011); Pilgrim Watch Memorandum – Entergy's Incorrect and Misleading Information Regarding Proven Tests to Detect Cable Insulation Degradation (April 11, 2011); Pilgrim Watch Memorandum – Entergy's Incorrect and Misleading Information Regarding Proven Tests to Detect Cable Insulation Degradation – Video Supplement (April 12, 2011). Entergy has objected to these filings. Entergy's Objection to Pilgrim Watch's Post Hearing Memoranda and Other Unauthorized Filings (Apr. 22, 2011).

petitioners could disregard our timeliness requirements” and add new contentions at their convenience during the course of a proceeding based on information that could have formed the basis for a timely contention at the outset of the proceeding. Our expanding adjudicatory docket makes it critically important that parties comply with our pleading requirements and that the Board enforce those requirements.

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 N.R.C. 235, 271-72 (2009) (emphasis added) (citations omitted).

Where, as here, the adjudicatory record has been closed, the Commission’s rules specify that a motion to reopen that record to consider additional evidence – including evidence on a new contention (see 10 C.F.R. § 2.326(d)) – will not be granted unless the following criteria are satisfied:

- (1) The motion must be timely. However, an exceptionally grave issue may be considered in the discretion of the presiding officer even if untimely presented;
- (2) The motion must address a significant safety or environmental issue; and
- (3) The motion must demonstrate that a materially different result would be or would have been likely had the newly proffered evidence been considered initially.

10 C.F.R. § 2.326(a). Further, under the NRC rules,

The motion must be accompanied by affidavits that set forth the factual and/or technical bases for the movant's claim that the criteria of paragraph (a) of this section have been satisfied. Affidavits must be given by competent individuals with knowledge of the facts alleged, or by experts in the disciplines appropriate to the issues raised. Evidence contained in affidavits must meet the admissibility standards of this subpart. Each of the criteria must be separately addressed, with a specific explanation of why it has been met. When multiple allegations are involved, the movant must identify with particularity each issue it seeks to litigate and specify the factual and/or technical bases which it believes support the claim that this issue meets the criteria in paragraph (a) of this section.

10 C.F.R. § 2.326(b) (emphasis added). In addition, where a motion to reopen relates to a contention not previously in controversy, a motion to reopen must also satisfy the standards for

non-timely contentions in 10 C.F.R. § 2.309(c). 10 C.F.R. § 2.326(d). As discussed later, Pilgrim Watch has not met any of these standards and requirements.

The Commission has repeatedly emphasized that “[t]he burden of satisfying the reopening requirements is a heavy one.” Oyster Creek, CLI-09-7, 69 N.R.C. at 287 (citing Louisiana Power & Light Co. (Waterford Steam Electric Station, Unit 3), CLI-86-1, 23 N.R.C. 1, 5 (1986)). “[P]roponents of a reopening motion bear the burden of meeting all of [these] requirements.” Id. (citing Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), CLI-90-10, 32 N.R.C. 218, 221 (1990)). “Bare assertions and speculation . . . do not supply the requisite support.” Id. (citing AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-08-28, 68 N.R.C. 658, 674 (2008)).

Moreover, where as here, a motion to reopen relates to a contention not previously in controversy among the parties, it must also satisfy the requirements for non-timely contentions in § 2.309(c). 10 C.F.R. § 2.326(d).<sup>19</sup> Section 2.309(c) provides that non-timely contentions will not be entertained absent a determination by the Board that the contentions should be admitted based upon a balancing of the following factors:

- (i) Good cause, if any, for the failure to file on time;
- (ii) The nature of the requestor's/petitioner's right under the Act to be made a party to the proceeding;
- (iii) The nature and extent of the requestor's/petitioner's property, financial or other interest in the proceeding;
- (iv) The possible effect of any order that may be entered in the proceeding on the requestor's/petitioner's interest;
- (v) The availability of other means whereby the requestor's/petitioner's interest will be protected;

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<sup>19</sup> See also Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Unit 3), CLI-09-5, 69 N.R.C. 115, 125 (2009); Oyster Creek, CLI-08-28, 68 N.R.C. at 668.

(vi) The extent to which the requestor's/petitioner's interests will be represented by existing parties;

(vii) The extent to which the requestor's/petitioner's participation will broaden the issues or delay the proceeding; and

(viii) The extent to which the requestor's/petitioner's participation may reasonably be expected to assist in developing a sound record.

10 C.F.R. § 2.309(c)(1).

In keeping with the Commission's disfavor of contentions after the initial filing, these factors are "stringent." Oyster Creek, CLI-09-7, 69 N.R.C. at 260, citing Florida Power & Light Co. (Calvert Cliffs Nuclear Power Plant, Units 1 and 2, et al.), CLI-06-21, 64 N.R.C. 30, 33 (2006). "Late petitioners properly have a substantial burden in justifying their tardiness." Nuclear Fuel Services, Inc. (West Valley Reprocessing Plant), CLI-75-4, 1 N.R.C. 273, 275 (1975).

Commission case law places most importance on whether the petitioner has demonstrated sufficient good cause for the untimely filing. Tennessee Valley Authority (Watts Bar Nuclear Plant, Unit 2), CLI-10-12, 71 N.R.C. \_\_\_, slip op at 4 (Mar. 26, 2010) ("CLI-10-12"); Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-00-02, 51 N.R.C. 77, 79 (2000); Millstone, CLI-09-5, 69 N.R.C. at 125. Indeed, failure to demonstrate good cause requires the petitioner to make a "compelling" showing with respect to the other factors. Texas Utilities Electric Co. (Comanche Peak Steam Electric Station, Unit 2), CLI-93-04, 37 N.R.C. 156, 165 (1993). In other words,

A petitioner's showing must be highly persuasive; it would be a rare case where [the Commission] would excuse a non-timely petition absent good cause.

Watts Bar, CLI-10-12 at 4 (footnote omitted). As discussed later, Pilgrim Watch has not shown good cause for its filing, and a balance of the lateness factors weighs against admitting this late-filed contention.

Finally, any new contention must also satisfy the standards for admissibility in 10 C.F.R. § 2.309(f)(1). These standards too are to be enforced rigorously. “If any one . . . is not met, a contention must be rejected.” Arizona Public Service Co. (Palo Verde Nuclear Generating Station, Unit Nos. 1, 2, and 3), CLI-91-12, 34 N.R.C. 149, 155 (1991) (citation omitted); USEC, Inc. (American Centrifuge Plant), CLI-06-9, 63 N.R.C. 433, 437 (2006) (“These requirements are deliberately strict, and we will reject any contention that does not satisfy the requirements.” (footnotes omitted)). A licensing board is not to overlook a deficiency in a contention or assume the existence of missing information. Palo Verde, CLI-91-12, 34 N.R.C. at 155; Oyster Creek, CLI-09-7, 69 N.R.C. at 260 (the contention admissibility rules “require the petitioner (not the board) to supply all of the required elements for a valid intervention petition” (emphasis added) (footnote omitted)). As discussed below, Pilgrim Watch also fails to meet these requirements.

### **III. PILGRIM WATCH’S REQUEST SHOULD BE DENIED**

Pilgrim Watch claims, erroneously, that the Pilgrim SAMA analysis is inadequate because it does not account for purported new and significant “lessons learned” from Fukushima. These are that ongoing recriticalities subsequent to the scrambling of the reactor can continue to produce fresh fission products for release into the environment and that releases can “extend into many days, weeks, and months.” PW Request at 3. In light of these purported inadequacies, Pilgrim Watch claims that Entergy should perform a “fresh analysis.” PW Request at 13.

As discussed in the sections below, Pilgrim Watch’s Request and claims therein fail to meet the standards governing reopening a closed hearing record, considering a late-filed contention, and admitting a contention.

A. PILGRIM WATCH FAILS TO MEET THE STANDARDS FOR A MOTION TO REOPEN IN 10 C.F.R. § 2.326

Pilgrim Watch’s Request does not mention and clearly fails to satisfy the standards for reopening a closed record in 10 C.F.R. § 2.326. It is not supported by an affidavit that meets the requirements in 10 C.F.R. § 2.326(b), and it fails to meet all of the requirements in 10 C.F.R. § 2.326(a)(1)-(3). Each of these failures by itself requires that the PW Request be rejected.

1. The Chanin Statement Fails to Address the Standards for Reopening

The Chanin Statement that Pilgrim Watch appends to its Request neither addresses nor satisfies 10 C.F.R. § 2.326(b). 10 C.F.R. § 2.326(b) requires that a supporting affidavit address separately “[e]ach of the criteria” in Section 2.326(a) and provide “a specific explanation of why [each] has been met.” On its face, the Chanin Statement does not appear to be a sworn document. It is not an affidavit, and nowhere does Mr. Chanin state that he made the Statement under penalty of perjury, which would be required for the Statement to be deemed a declaration in lieu of a formal affidavit. 10 C.F.R. § 2.304(d) (citing 28 U.S.C. § 1746). Nor does it appear that Mr. Chanin meets the competency requirement in 10 C.F.R. § 2.326(b), as discussed later in this answer. Moreover, the Chanin Statement nowhere mentions the relevant Section 2.326(a) criteria, let alone provides a specific explanation of why each has been met. This defect is alone sufficient grounds to reject Pilgrim Watch’s Request. Texas Utilities Electric Co. (Comanche Peak Steam Electric Station, Units 1 and 2), CLI-92-12, 36 N.R.C. 62, 76 (1992), citing Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), CLI-89-1, 29 N.R.C. 89, 93-94 (1989).

Pilgrim Watch likewise completely ignores the criteria for reopening the record. Pilgrim Watch may attempt to avoid the obligation to provide a supporting affidavit that specifically addresses the Section 2.326(a) criteria by arguing (as it previously has argued before this Board with respect to other proposed, late contentions<sup>20</sup>) that the standards for reopening do not apply because the record has not been closed with respect to previously unlitigated issues. This argument is incorrect. The standards for reopening apply not only when a party is seeking to introduce new evidence on a previously admitted contention after the evidentiary record is closed, but also when a party is seeking to introduce a new contention after the record has been closed. See 10 C.F.R. § 2.326(d) (“[a] motion to reopen which relates to a contention not previously in controversy among the parties must also satisfy the requirements for nontimely contentions in § 2.309(c)”). Arguing that the record has not been closed with respect to previously unlitigated issues would render 10 C.F.R. § 2.326(d) meaningless. Indeed, in a recent decision rejecting a petition for review of another reactor’s license renewal, the Third Circuit squarely addressed this precise issue and explicitly upheld the application of the reopening standards to new contentions not previously in controversy among the parties. New Jersey Env’tl. Fed’n v. NRC, No. 09-2567, 2011 WL 1878642 at \*10-11 (3d Cir. May 18, 2011).

Because Pilgrim Watch has not addressed the criteria for reopening the record, its Request must be denied.

## 2. The Request is Not Timely

Neither Pilgrim Watch nor Mr. Chanin demonstrate that the Request is timely. Mr. Chanin’s Statement does not even address the issue. Pilgrim Watch claims that its proposed contention is based on “lessons learned on new and significant information from Fukushima.”

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<sup>20</sup> See, e.g., Pilgrim Watch Reply to Entergy’s and the NRC Staff’s Oppositions to Pilgrim Watch’s Request for Hearing on a New Contention (Feb. 24, 2011) at 3-7.

PW Request at 3. Pilgrim Watch contends that the Fukushima Daiichi accident has revealed that radioactive releases can extend in duration beyond the time period assumed by the MACCS2 Code, and that a damaged reactor core can be subject to recriticality, which is not contemplated by the MACCS2 Code. See, e.g., PW Request at 1, 3. However, the bases for Pilgrim Watch's challenges are not new information and thus could have been raised long ago, rendering them untimely now.

10 C.F.R. § 2.309(f)(2) states that “[c]ontentions must be based on documents or other information available at the time the petition [to intervene] is to be filed, such as the application [and] safety analysis report.” An intervenor has an “ironclad obligation to examine the publicly available documentary material . . . with sufficient care to enable it to uncover any information that could serve as the foundation for a specific contention.” Sacramento Municipal Utility District (Rancho Seco Nuclear Generating Station), CLI-93-3, 37 N.R.C. 135, 147 (1993) (footnote omitted). Other than new or amended contentions challenging new data or conclusions in the NRC Staff's environmental impact statement (not applicable here), the NRC rules allow new contentions to be filed after this initial filing only with the leave of the presiding officer upon a showing that:

- (i) The information upon which the amended or new contention is based was not previously available;
- (ii) The information upon which the amended or new contention is based is materially different than information previously available; and
- (iii) The amended or new contention has been submitted in a timely fashion based on the availability of the subsequent information.

10 C.F.R. § 2.309(f)(2)(i)-(iii). In essence, a proponent of a new contention must show that it could not have raised its contention earlier. Intervenors are not free simply “to add new contentions at their convenience during the course of a proceeding based on information that

could have formed the basis for a timely contention at the outset of the proceeding.” Oyster Creek, CLI-09-7, 69 N.R.C. at 272 (footnote omitted).

Pilgrim Watch does not demonstrate that it could not have raised this contention earlier. First, the possibility of post-scam recriticality in a damaged reactor core is not new information. Multiple NRC studies have analyzed the potential for post-scam recriticality in a damaged reactor, and these studies have existed for decades. For example, WASH-1400,<sup>21</sup> published in October 1975, considered the potential for recriticality in a damaged reactor. Entergy Decl. at ¶ 20. NUREG-1150,<sup>22</sup> published in December 1990, considered a scenario where a damaged reactor core could potentially become recritical, but concluded that the possibility that such a recriticality could cause the failure of the reactor vessel was small. Id. Furthermore, as its title suggests, NUREG/CR-5653, Recriticality in a BWR Following a Core Damage Event,<sup>23</sup> also published in December 1990, addresses at length the potential for recriticality in a damaged reactor core, including unlikely circumstances involving recriticality in a damaged core’s debris bed. Id. at ¶ 21. Other NRC documents also discuss the potential for recriticality in the context of severe accidents.<sup>24</sup> In short, the potential for a recriticality after a reactor scram is not new information,<sup>25</sup> and Pilgrim Watch could have raised this concern vis-à-vis the Pilgrim SAMA analysis long ago.

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<sup>21</sup> WASH-1400 (NUREG-75/014), Reactor Safety Study, An Assessment of Accident Risks in U.S. Commercial Nuclear Power Plants (Oct. 1975) (“WASH-1400”).

<sup>22</sup> NUREG-1150, Severe Accident Risks: An Assessment for Five U.S. Nuclear Power Plants, Final Summary Report (Dec. 1990) (“NUREG-1150”).

<sup>23</sup> NUREG/CR-5653, Recriticality in a BWR Following a Core Damage Event (Dec. 1990) (“NUREG/CR-5653”).

<sup>24</sup> See, e.g., Generic Letter 88-20, Accident Management Strategies for Considering in the Individual Plant Examination Process, Supp. No. 2 (Apr. 4, 1990) at 3, 7, 13, 35.

<sup>25</sup> Indeed, a simple search for the term “recriticality” on the NRC ADAMS document management system produces a results list of 518 documents.

In addition, the fact that Pilgrim Watch has only now thought to challenge the MACCS2 Code's assumptions concerning the duration of a radioactive release does not make its challenge timely. A summary of the MACCS2 Code analysis performed for Pilgrim license renewal is provided in ER Section 4.21.5.1.3, and a full discussion of the Pilgrim SAMA analysis is contained in ER Attachment E, Severe Accident Mitigation Alternatives Analysis.<sup>26</sup> Attachment E, Table E.1-11 (p. E.1-50) provides (among other things) the release duration for each of the 19 collapsed accident progression bins ("CAPBs") considered in the SAMA analysis.<sup>27</sup> Further, the MACCS2 User's Guide,<sup>28</sup> relied upon by Pilgrim Watch in support of its new contention, was published in May 1998. Pilgrim Watch relies on the MACCS2 User's Guide to support its assertion that the MACCS2 Code "limits the total duration of a release to no more than four (4) days." PW Request at 3. Pilgrim Watch relied on the MACCS2 User's Guide in its initial pleading of Contention 3 in May 2006,<sup>29</sup> and hence was fully aware of the User's Guide at that time. The availability of this information since before this proceeding commenced means that Pilgrim Watch could have challenged the Pilgrim SAMA analysis MACCS2 assumptions years

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<sup>26</sup> Entergy also provided supplemental information on its SAMA analysis in four letters responding to NRC requests for additional information in 2006, and these four letters were included as exhibits for Entergy's January 3, 2011 written presentation on Pilgrim Watch Contention 3 (exhibit numbers indicated in parentheses). License Renewal Application Amendment 4: Response to Request for Additional Information Regarding Severe Accident Mitigation Alternatives for Pilgrim Nuclear Power Station (July 5, 2006) (ADAMS Accession No. ML061930418) (ENT000007-00-BD01); License Renewal Application Amendment 7 (Aug. 30, 2006) (ADAMS Accession No. ML062500117) (ENT000008-00-BD01); License Renewal Application Amendment 9 (Oct. 6, 2006) (ADAMS Accession No. ML062910173) (ENT000009-00-BDN01); License Renewal Application Amendment 10 (Dec. 12, 2006) (ADAMS Accession No. ML070100410) (ENT000010-00-BD01).

<sup>27</sup> CAPB-15, for example, begins 12.8 hours (4.62E+04 seconds) after shutdown (scram) and lasts for 2.5 hours (9.0E+03 seconds). ER Attachment E at Table E.1-11.

<sup>28</sup> NUREG/CR-6613 Code Manual for MACCS2, Vol. 1, User's Guide (SAND97-0594) (May 1998).

<sup>29</sup> See, e.g., Petition to Intervene at 32-33. The MACCS2 User's Guide is also referenced in ER Attachment E. See ER Attachment E at p. E.1-70.

ago, at the time its Request for Hearing and Petition to Intervene was filed in May 2006. Pilgrim Watch therefore cannot contend that its contention is timely.<sup>30</sup>

3. No Demonstration of the Existence of a Significant Environmental Issue

Neither Pilgrim Watch nor Mr. Chanin demonstrate the existence of a significant environmental issue, let alone an “exceptionally grave” issue required for untimely motions to reopen. 10 C.F.R. § 2.326(a)(1). Mr. Chanin does not address this issue at all in his Statement. At bottom, Pilgrim Watch offers only mere, unsupported speculation that, if Entergy performed a “fresh” SAMA analysis taking into account continuing radiological releases and (purported) post-scrum criticalities, the results might require additional mitigation measures. Such unsupported speculation is insufficient to demonstrate a significant safety issue. The Commission has made it abundantly clear that merely asserting that something might turn up to support an intervenor’s concerns does not raise a significant issue and is therefore insufficient to restart the hearing process. AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-08-23, 68 N.R.C. 461, 486 (2008).

For example, Pilgrim Watch contends, without one whit of support, that “a longer release can cause offsite consequences that will affect the cost-benefit analyses.” PW Request at 3 (emphasis added). But, Pilgrim Watch makes no attempt to quantify or make any showing that the continuing radiological releases or alleged recriticalities would make any difference in the Pilgrim SAMA analysis. Similarly insufficient is Pilgrim Watch’s unsupported assertion that offsite costs are “likely to significantly increase” with further consideration of the assumptions Pilgrim Watch asserts ought to be included in a new SAMA analysis. PW Request at 5-6. See also id. at 1 (claiming “new and significant lessons learned regarding the possible off-site

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<sup>30</sup> Indeed, Pilgrim Watch alleges that the recriticality “phenomenon was also noted at the Chernobyl Unit 4 accident of April 26, 1986.” PW Request at 2. It therefore can hardly contend that its concern for recriticalities is new.

radiological and economic consequences in a severe accident”) (emphasis added); and 16 (demanding a reevaluation of the SAMA analysis “to determine how changes to the assumptions regarding the duration of the release and figuring out how to model criticality occurring after a sc[r]am are likely to affect the cost benefit analysis”) (emphasis added). But, Pilgrim Watch never comes forward with anything other than unsupported, bare assertions and mere speculation that significant increases in offsite consequences are possible and that the SAMA results might be different. However, the Commission has directly held that “bare assertions and speculation . . . do not supply the requisite support” to satisfy the Section 2.326 standards. Oyster Creek, CLI-09-7, 69 N.R.C. at 287 (citing CLI-08-28, 68 N.R.C. at 674).

#### 4. No Materially Different Result Would Be Likely

Pilgrim Watch does not demonstrate that a materially different result would be likely had any newly proffered evidence been considered initially, as required by 10 C.F.R. § 2.326(a)(3). Mr. Chanin neither mentions this criterion – contrary to 10 C.F.R. § 2.326(b), which requires that a supporting affidavit include a specific explanation of why it has been met – nor provides any information whatsoever in his Statement from which any argument on this criterion could be gleaned.

Pilgrim Watch’s Request is equally deficient. Pilgrim Watch has a “deliberatively heavy” burden to demonstrate that a materially different result would be likely. Oyster Creek, CLI-08-28, 68 N.R.C. at 674. At this late stage of the proceeding, is it not sufficient simply to raise an issue. Rather, “longstanding agency practice hold[s] that a party seeking to reopen a closed record to introduce a new issue . . . must back its claim with enough evidence to withstand summary disposition when measured against its opponents’ contravening evidence.” Private Fuel Storage (Independent Spent Fuel Storage Installation), CLI-05-12, 61 N.R.C. 345, 348

(2005), citing Vermont Yankee Nuclear Power Corp. (Vermont Yankee Nuclear Power Station), ALAB-138, 6 A.E.C. 520, 523-24 (1973). This means that “no reopening of the evidentiary hearing will be required if the [documents] submitted in response to the motion demonstrate that there is no genuine unresolved issue of fact.” Id. at 350 (quoting Vermont Yankee, ALAB-138, 6 A.E.C. at 523-24).

As an initial matter, Pilgrim Watch provides no evidentiary support for its Request. First, the article from the Gerson Lehrman Group website carries no evidentiary weight. Its author is anonymous, and Pilgrim Watch otherwise provides no information demonstrating that the unidentified author has the requisite education, training, or experience to support the assertions concerning recriticality on which Pilgrim Watch relies.<sup>31</sup> As the Appeal Board succinctly stated long ago, “[b]ecause the competence (or even the existence) of unidentified individuals is impossible to determine, statements of anonymous persons . . . cannot be considered as evidence to support a motion” to reopen the record. Pacific Gas & Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-775, 19 N.R.C. 1361, 1367 n.18 (1984).

Second, Mr. Chanin has no qualifications to support Pilgrim Watch’s concerns regarding recriticalities and post accident radiological releases of a long duration. Aside from the fact that Mr. Chanin has not provided a sworn statement, a review of his Statement and his resume (which Pilgrim Watch did not submit here, but is available on Mr. Chanin’s website<sup>32</sup>) indicates that Mr. Chanin’s qualifications are in mathematics and computer programming. Nothing indicates any education, training, or experience in nuclear physics or engineering, or chemistry that could qualify him to support the numerous assertions in the PW Request concerning radiological

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<sup>31</sup> Further, as explained in the attached Entergy Declaration, the assertions made in the article demonstrate that its anonymous author is fundamentally unqualified to opine on post-scam recriticalities. Entergy Decl. at ¶¶ 14-20.

<sup>32</sup> See <http://chaninconsulting.com/index.php>

releases and recriticalities. Absent an appropriate sponsor for its assertions, Pilgrim Watch has failed to carry its heavy burden here.

Moreover, the attached Declaration from Drs. Sowdon and O’Kula demonstrate that there is no genuine unresolved issue of fact, as follows.

First, the evidence cited by Pilgrim Watch (the relatively higher observed levels of Iodine-131 compared to Cesium-137) is hardly conclusive that post-scrum criticalities have occurred at any of the Fukushima reactors. Such recriticalities are not the only possible source of the observed levels of Iodine-131 (“I-131”) compared to Cesium-137 (“Cs-137”) for multiple reasons. Entergy Decl. at ¶¶ 14-19. Among them are:

- The observed levels of I-131 and Cs-137 at Fukushima can be explained by many phenomena other than recriticality, including the different inventories of those isotopes available for release and their different chemical properties, including the different boiling points and solubility in water of iodine and cesium. For example, iodine boils at 365 degrees Fahrenheit (“°F”), while cesium boils at 1240 °F. This means that, as the reactor units cooled below the boiling point of cesium, the temperature would still be sufficient for the iodine to vaporize and be carried away from the reactor core and released into the environment, thus accounting for the higher observed levels of I-131. Id. at ¶ 15.
- Sufficient quantities of I-131 were available for release from the damaged Fukushima reactors to account for the observed levels of I-131 long after the initial reactor scram. Id. at ¶ 16.
- Pilgrim Watch has cited no direct evidence of recriticalities, including the presence of iodine isotopes I-132 and I-134. Id. at ¶ 17-18.

Second, even assuming the occurrence of localized recriticalities at Fukushima, none of Pilgrim Watch's claims of ongoing radioactive releases at Fukushima, including releases from alleged recriticalities, would result in large radioactive releases into the atmosphere that would result in changes to the consequences in the range of 10 to 50 miles of the 50-mile region considered in the Pilgrim SAMA analysis, where most of the population and economic consequences important to the SAMA analysis occur. Entergy Decl. at ¶¶ 25-33. As further discussed in the attached Declaration:

- Over 95% of the population dose risk ("PDR") and about 94% of the off-site economic cost risk ("OECR") occur in the 10 to 50 mile range of the 50-mile region analyzed in the Pilgrim SAMA analysis, and approximately 83% of the PDR and 79% of the OECR occur in the 20-50 mile range due to the intersection of high population levels with the high exposure and contamination conditions, driven by the large airborne releases assumed in the Pilgrim SAMA analysis. Id. at ¶ 28.
- Because of the loss of fuel geometry necessary to maintain full-power criticality, any post-scrum recriticalities occurring in the damaged Fukushima reactor cores would be small, localized, and intermittent compared to the criticality that occurs in a full-power, operating reactor core. The recriticalities would involve only very small fractions of the damaged core, and the radionuclides generated by the recriticalities would be many orders of magnitude less than the radionuclides produced by a fully-functioning core assumed in the Pilgrim SAMA analysis. Id. at ¶ 29-30.
- Furthermore, most of the fission products released from purported recriticalities would be scrubbed or absorbed by the water medium required for any recriticality to occur, which would further limit the airborne releases that could cause consequences to high

population areas within the 10 to 50 mile range that dominate the Pilgrim SAMA analysis. Id. at ¶ 29.

- Any ongoing radioactive releases (including airborne releases resulting from the disturbance of debris during post-accident cleanup activities, aquatic releases from the efforts to cool the damaged cores, and releases from alleged recriticalities) would be very small compared to the large airborne releases considered in the Pilgrim SAMA analysis. For example, long-term, low-level releases of I-131, whether by liquid or airborne pathways, would be greatly exceeded by the much larger, short-term releases of longer-lived, more dose-dominant radionuclides associated with a severe accident considered in the Pilgrim SAMA analysis. Id. at ¶ 31.
- Pilgrim Watch's concerns about consumption of contaminated food and water are immaterial because more than 80% of the population dose in the current SAMA analysis is incurred in the long-term phase after the accident, and contaminated food and water can be interdicted by authorities until contamination levels are sufficiently safe. The food and water ingestion pathway would thus not contribute significantly to the SAMA cost-benefit analysis. Id. at ¶ 32.

Third, the Pilgrim SAMA analysis includes severe accident releases that are many times greater than the releases that occurred at the Fukushima reactors. The severe accident releases assumed for the Pilgrim SAMA analysis more than bound the releases from all of the units at Fukushima, and would more than bound any continuing low-level releases such as those from postulated intermittent recriticality. Entergy Decl. at ¶¶ 34-43. Thus, it is immaterial and makes no difference whether the MACCS2 Code is incapable of modeling radioactive releases of long

duration or is incapable of modeling post-scrum recriticalities, as Pilgrim Watch contends (PW Request at 3). As explained in the attached Declaration:

- The duration of an accident release is not the controlling factor for a SAMA analysis because, for example, the doses that the public would receive from a low-level release occurring over an extended period of time will be greatly exceeded by the much larger, elevated releases due to the energetic events analyzed in a SAMA analysis. The overall source term considered for a SAMA analysis includes the type and amount of radionuclides, the heat energy in the plume associated with the release, the height of the release, the timing of release, and the maximum plume duration considered. *Id.* at ¶¶ 35-36.
- The Pilgrim SAMA analysis considered 19 collapsed accident progression bins (“CAPBs”) or accident scenario source terms analyzed in the Pilgrim PSA. The CAPBs represent a range of severe accident releases from small to very large that have different characteristics to reflect the occurrence of core damage, the occurrence of vessel breach, primary system pressure at vessel breach, the location of containment failure, the timing of containment failure, and the occurrence of core-concrete interactions. The CAPBs used for the Pilgrim SAMA analysis include severe accident releases that are far more severe in magnitude and are immediately airborne compared to those characterizing the recently reported releases from Fukushima. *Id.* at ¶ 36.
- The source term for CAPB-15 (which contributes over 80% of the PDR and OECR to the Pilgrim SAMA analysis) is illustrative of the bounding nature of the CAPBs compared to the identified releases for Fukushima, even including postulated recriticality events. The assumed releases of I-131 and Cs-137 from CAPB-15 are much larger than the releases

from all the Fukushima reactors combined. The assumed release of I-131 from CAPB-15 is a factor of about 3.6 larger, and the assumed release of Cs-137 from CAPB-15 is a factor of about 5.3 larger. Calculated on a per-reactor basis, the assumed Pilgrim SAMA release of I-131 from CAPB-15 is a factor of about 10.7 larger, and the release of Cs-137 from CAPB-15 is a factor of nearly 16 larger than the average releases from the three Fukushima reactor units that suffered core damage. Id. at ¶¶ 38-40.

- In total, for 14 of the 19 CAPBs evaluated in the Pilgrim SAMA analysis, the assumed releases for both I-131 and Cs-137 are larger than the average release of I-131 and Cs-137 from the three Fukushima reactors.<sup>33</sup> These 14 CAPBs constitute over 99% of the Pilgrim PDR and OECR. Id. at ¶¶ 41.
- Because of the large margins provided in the Pilgrim SAMA analysis, even if future estimates of radionuclide releases from Fukushima were to double, CAPB-15 would still bound the estimated I-131 combined releases from all of the Fukushima reactors by about a factor of two, and bound the estimated combined Cs-137 releases by about a factor of three. Id. at ¶ 42 n.16.

In summary, there would be no changes in the results of the SAMA analysis even considering the claims asserted by Pilgrim Watch. Pilgrim Watch has alleged no facts that would make another SAMA potentially cost beneficial.

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<sup>33</sup> The releases from five of these CAPBs are more than an order of magnitude larger than the average releases from the three Fukushima damaged units. Entergy Decl. at ¶ 41.

B. PILGRIM WATCH DOES NOT MEET THE LATE FILING STANDARDS IN 10 C.F.R. § 2.309(c)

Pilgrim Watch's late-filed contention should not be admitted because Pilgrim Watch has shown no good cause for its extreme tardiness, and a balancing of the remaining factors in 10 C.F.R. § 2.309(c) does not outweigh this failure.

Section 2.309(c)(1) provides that non-timely contentions will not be entertained absent a determination by the Board that the contentions should be admitted based upon a balancing of the following factors:

- (i) Good cause, if any, for the failure to file on time;
- (ii) The nature of the requestor's/petitioner's right under the Act to be made a party to the proceeding;
- (iii) The nature and extent of the requestor's/petitioner's property, financial or other interest in the proceeding;
- (iv) The possible effect of any order that may be entered in the proceeding on the requestor's/petitioner's interest;
- (v) The availability of other means whereby the requestor's/petitioner's interest will be protected;
- (vi) The extent to which the requestor's/petitioner's interests will be represented by existing parties;
- (vii) The extent to which the requestor's/petitioner's participation will broaden the issues or delay the proceeding; and
- (viii) The extent to which the requestor's/petitioner's participation may reasonably be expected to assist in developing a sound record.

10 C.F.R. § 2.309(c)(1)(i)-(viii). In keeping with the Commission's disfavor of contentions submitted after the initial filing, these factors are "stringent." Oyster Creek, CLI-09-7, 69 N.R.C. at 260, citing Calvert Cliffs, CLI-06-21, 64 N.R.C. at 33. "Late petitioners properly have

a substantial burden in justifying their tardiness.” Nuclear Fuel Services, CLI-75-4, 1 N.R.C. at 275.

Commission case law places most importance on whether the petitioner has demonstrated sufficient good cause for the untimely filing.<sup>34</sup> “Good cause” has been consistently interpreted to mean that a proposed new contention be based on information that was not previously available, and was timely submitted in light of that new information. Millstone, CLI-09-5, 69 N.R.C. at 125-26, citing Pacific Gas & Electric Co. (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-08-1, 67 N.R.C. 1, 6 (2008).

For the same reasons that the contention is not timely under sections 2.326(a)(1) and 2.309(f)(2), Pilgrim Watch has failed to demonstrate good cause for its very late-filed contention. The purported lessons learned from the Fukushima Daiichi accident identified by Pilgrim Watch are not sufficient grounds to submit a late contention here. The potential for post-scrum recriticality has been considered in severe accident analyses for some time. In addition, Pilgrim Watch could have challenged the ability of the MACCS2 Code to consider longer-term radiological releases, including those from alleged recriticalities, since the outset of this proceeding. Pilgrim Watch should have raised its allegations long ago.

Because it has failed to demonstrate good cause, Pilgrim Watch must make a “compelling” showing with respect to the other factors. Texas Utilities Electric Co. (Comanche Peak Steam Electric Station), CLI-93-4, 37 N.R.C. 156, 165 (1993). In other words,

A petitioner’s showing must be highly persuasive; it would be a rare case where [the Commission] would excuse a non-timely petition absent good cause.

Watts Bar, CLI-10-12, at 4 (footnote omitted).

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<sup>34</sup> Watts Bar, CLI-10-12 at 4; Private Fuel Storage, CLI-00-02, 51 N.R.C. at 79.

In balancing the remaining late-filed contention factors, the Commission grants considerable weight to factors seven and eight.

We regard as highly important the intervenor's ability to contribute to the development of a sound record on a particular contention. We also are giving significant weight to the potential delay, if any, which might ensue from admitting a particular contention.

Consumers Power Co. (Midland Plant, Units 1 and 2) LBP-82-63, 16 N.R.C. 571, 577 (1982) (citations omitted), citing South Carolina Electric & Gas Co. (Virgil C. Summer Nuclear Station, Unit 1), ALAB-642, 13 N.R.C. 881, 895 (1981). See also Commonwealth Edison Co. (Braidwood Nuclear Power Station, Units 1 and 2), CLI-86-8, 23 N.R.C. 241, 246-47 (1986).

Both the seventh and eight factors weigh heavily against admitting Pilgrim Watch's new contention.

With regard to the seventh factor, adding a new contention will, without a doubt, delay and broaden the proceeding significantly. The NRC Staff's final EIS for Pilgrim was issued in July 2007 and the final SER was issued in November 2007. Moreover, this proceeding itself has entered its sixth year, notwithstanding the Commission's goal to complete license renewal proceedings in two and one half years.<sup>35</sup> Clearly, starting another hearing to litigate a new contention at this very late hour would delay issuance of the renewed license by months, if not longer.

Concerning the eighth factor, it cannot be reasonably expected that Pilgrim Watch will assist in developing a sound record. "When a petitioner addresses this ... criterion it should set out with as much particularity as possible the precise issues it plans to cover, identify its

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<sup>35</sup> In contested license renewal proceedings, the Commission's long-standing goal has been the issuance of a Commission decision in about two and one half years from the date that the application was received. Baltimore Gas & Electric Co. (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-14, 48 N.R.C. 39, 42 (1998); Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3), CLI-98-17, 48 N.R.C. 123, 126 (1998). In this proceeding, Entergy's application to renew the Pilgrim operating license was filed in January 2006.

prospective witnesses, and summarize their proposed testimony.” Watts Bar, CLI-10-12 at 10-11 (footnote omitted). Here, Pilgrim Watch merely asserts that it will rely on government documents and expert testimony from David Chanin, but fails to set out with any particularity the precise issues it plans to cover or what its expert testimony will address. PW Request at 19. Pilgrim Watch refuses to disclose what testimony it might provide, asserting that it would be unreasonable to require it to do so. Id. And Mr. Chanin merely states that he has “read and reviewed the enclosed proposed contention and fully support all its statements.” PW Request at 21. This obviously falls far short of the Commission’s expectation for a summary of proposed testimony.

Further, Pilgrim Watch nowhere identifies any witness or summarizes any witness testimony for its many assertions regarding ongoing radioactive releases and purported recriticalities. Pilgrim Watch nowhere identifies the author of the article posted to the Gerson Lehrman Group website concerning alleged recriticalities. And although Mr. Chanin may “support” Pilgrim Watch’s recriticality related assertions, the education, training, and experience that Mr. Chanin cites in his Statement and his resume do not, on their face, qualify him to support those assertions. In sum, Pilgrim Watch makes no showing of any ability to meaningfully contribute to a sound record on any issue discussed in its Request.

Thus, factors one, seven and eight – the three most significant factors – count heavily against Pilgrim Watch. The other factors in 10 C.F.R. § 2.309(c)(1) are less important (see, e.g., Diablo Canyon, CLI-08-1, 67 N.R.C. at 6; Comanche Peak, CLI-93-4, 37 N.R.C. at 165), and therefore cannot outweigh Pilgrim Watch’s failure to demonstrate good cause or meet factors seven and eight.

C. PILGRIM WATCH'S NEW CONTENTION DOES NOT MEET THE STRICT CONTENTION ADMISSIBILITY REQUIREMENTS

Even if Pilgrim Watch had met the standards for reopening a closed record and the standards for a late contention (which it has not), its contention would still be inadmissible because it does not satisfy the pleading requirements in 10 C.F.R. § 2.309(f)(1). Even if a proponent of a new contention satisfies the requirements of 10 C.F.R. § 2.309(f)(2) and 10 C.F.R. § 2.309(c), it must still demonstrate that its new contention satisfies the admissibility standards in 10 C.F.R. § 2.309(f)(1)(i)-(vi). Sacramento Municipal Utility District (Rancho Seco Nuclear Generating Station), CLI-93-12, 37 N.R.C. 355, 362-63 (1993).

10 C.F.R. § 2.309(f)(1) requires that a hearing request for any contention be set forth with particularity and:

- (i) Provide a specific statement of the issue of law or fact to be raised or controverted;
- (ii) Provide a brief explanation of the basis for the contention;
- (iii) Demonstrate that the issue raised in the contention is within the scope of the proceeding;
- (iv) Demonstrate that the issue raised in connection is material to the findings the NRC must make to support the action that is involved in the proceeding;
- (v) Provide a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the requestor/petitioner intends to rely to support its position on the issue; and
- (vi) Provide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact. This information must include references to specific portions of the application (including the applicant's environmental report and safety report) that the petitioner disputes and the supporting reasons for each dispute, or, if the petitioner believes that the application fails to contain information on a relevant matter as required by law, the identification of each failure and the supporting reasons for the petitioner's belief.

10 C.F.R. § 2.309(f)(1)(i)-(vi). Pilgrim Watch’s contention does not meet these standards.

1. The Late Filed Contention is Not Within the Scope of the Proceeding and Material to the Findings that the NRC Must Make

The late-filed contention is inadmissible because Pilgrim Watch fails to demonstrate that it is within the scope of the proceeding, as required by 10 C.F.R. § 2.309(f)(1)(iii). Although Pilgrim Watch asserts that its contention challenges the Pilgrim SAMA analysis under the National Environmental Policy Act (“NEPA”), PW Request at 4-5, Pilgrim Watch in fact appears to be arguing that Entergy must implement SAMAs in order to protect the public health and safety. For example, Pilgrim Watch states:

The deficiency highlighted in this contention has enormous independent health and safety significance. Further analysis to evaluate how changes to the assumptions discussed herein are likely to significantly increase offsite costs that justifies requiring Entergy to add mitigation to reduce the risk of a severe accident such as adding plant modifications, operational changes, and training to increase public safety during license renewal.

PW Request at 5-6 (emphasis added). Pilgrim Watch also asserts that, if the Pilgrim SAMAs is not re-evaluated using the assumptions demanded in the late contention, then

the Petitioner’s health, safety, property, and finances of Petitioner’s members who live, recreate, conduct business and own property within the vicinity of the Pilgrim Nuclear Power Station will be jeopardized.

PW Request at 16 (emphasis added). These allegations exceed the limited scope of the safety review in a license renewal proceeding. See PPL Susquehanna, LLC (Susquehanna Steam Electric Station, Units 1 and 2), LBP-07-4, 65 N.R.C. 281, 307-09 (2007) (“The Commission chose, rather, to focus the NRC license renewal safety review ‘upon those potential detrimental effects of aging that are not routinely addressed by ongoing regulatory oversight programs.’”) citing Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 N.R.C. 3, 7 (2001). Certainly, nothing in NEPA “requires” implementation of any

SAMAs. Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 353 (1989). See also Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 N.R.C. 373, 388 n.77 (2002) (“NEPA does not mandate the *particular decisions* an agency must reach, only the process the agency must follow while reaching its decisions.”) (emphasis in original) (citations omitted).

For the same reason, Pilgrim Watch fails to demonstrate that this contention is material to the findings that the NRC must make to support license renewal. There is no requirement in the NRC’s license renewal rules that an applicant must take action to mitigate severe accident risk in order to protect the public health and safety. See 10 C.F.R. Part 54. Consequently, Pilgrim Watch’s contention also fails to meet 10 C.F.R. § 2.309(f)(1)(iv).

## 2. The Late-Filed Contention is Unduly Vague

Pilgrim Watch’s new contention is vague and thus fails to meet 10 C.F.R. § 2.309(f)(1)(i). 10 C.F.R. § 2.309(f)(1) requires contentions to be set forth with particularity, and 10 C.F.R. § 2.309(f)(1)(i) requires a “specific” statement of the issue to be raised or controverted. Pilgrim Watch’s new contention, set forth on page 1 of its Request, asserts that the ER is inadequate because Pilgrim’s SAMA analysis ignores purported new and significant “lessons learned” regarding possible offsite radiological and economic consequences from a severe accident. PW Request at 1. The asserted bases of the contention are that the SAMA analysis does not take into account radioactive “releases” of long duration, including those that might occur from recriticality. PW Request at 3-4. However, Pilgrim Watch nowhere explains or characterizes the radioactive releases for which it claims that the MACCS2 Code fails to take account, or how such “longer release[s] can cause offsite consequences that will affect cost-

benefit analyses.” PW Request at 3. Pilgrim Watch’s lack of specificity makes its contention inadmissible.

### 3. The Late-Filed Contention Is Inadequately Supported

The late-filed contention is also inadmissible because it is not supported by a concise statement of alleged fact or expert opinion, in contravention of 10 C.F.R. §§ 2.309(f)(1)(v). Pilgrim Watch does not present any expert opinion supporting its new contention. Pilgrim Watch claims that it will rely on testimony from Mr. Chanin (whose Statement accompanying the request says nothing other than that he supports the PW Request statements) and government documents. PW Request at 19, 21. These vague references do not provide the requisite, concise statement of facts or expert opinion. A mere reference to documents, without any explanation of their implications or significance, does not provide an adequate basis for a contention. See Baltimore Gas & Electric Co. (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-25, 48 N.R.C. 325, 348 (1998).

In addition, Pilgrim Watch also relies on an anonymously written article posted to a website, but this is insufficient to support admission of a contention. Without any indication of who authored the article, there is no way of knowing whether the article’s assertions are made by a competent person. The article makes assertions of the type that clearly require expert support. In this respect, as explained in the attached Declaration, Entergy Decl. at ¶¶ 14-20, the article makes fundamentally erroneous assertions that demonstrate that its author is unqualified to opine on potential post-scrum recriticalities, undercutting any support purportedly provided by the article.

4. The Late Filed Contention Fails to Provide Sufficient Information  
Showing that a Genuine Dispute Exists On a Material Issue of Law or Fact

Pilgrim Watch's new contention is inadmissible because it is not supported by sufficient information to show that a genuine dispute exists with the Applicant on a material issue of law or fact, as required by 10 C.F.R. §§ 2.309(f)(1)(vi). Pilgrim Watch's arguments are insufficient to demonstrate a genuine material dispute with the Pilgrim's SAMA analysis. Indeed, Pilgrim Watch's Request makes no reference or citation to the Pilgrim license renewal application and the SAMA analysis purportedly challenged here. Under the NRC's Rules of Practice, "a protestant does not become entitled to an evidentiary hearing merely on request, or on a bald or conclusory allegation that such a dispute exists. The protestant must make a minimal showing that material facts are in dispute, thereby demonstrating that an 'inquiry in depth' is appropriate." 54 Fed. Reg. 33,168, 33,171 (Aug. 11, 1989) (quoting Conn. Bankers Ass'n v. Bd. of Governors, 627 F.2d 245, 251 (D.C. Cir. 1980)).

As a threshold matter, Pilgrim Watch does not make any minimal showing that its claims would affect the outcome of the Pilgrim SAMA analysis and are therefore material. The Commission has defined a "material" issue as meaning one where "resolution of the dispute would make a difference in the outcome of the licensing proceeding." 54 Fed. Reg. at 33,172 (emphasis added). Here, the PW Request sets forth nothing to establish that the asserted deficiencies would, if accounted for as requested by Pilgrim Watch, alter the result of the SAMA analysis.

In order for an additional SAMA to become potentially cost-beneficial, the benefit (risk averted) would need to increase by more than a factor of two, i.e., more than 100%. Entergy Decl. at ¶ 25. Pilgrim Watch asserts no facts and provides no explanation showing that, were its concerns accounted for, the risk averted would even approach that mark. As the Commission

has held, it would be unreasonable to trigger full adjudicatory proceedings on a SAMA contention where a petitioner has done nothing to indicate the relative cost and benefit. Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-17, 56 N.R.C. 1, 12 (2002). Indeed, as explained by the Commission in this proceeding, Pilgrim Watch must show that it is “genuinely plausible that inclusion of an additional factor or use of other assumptions or models may change the cost-benefit conclusions for the SAMA candidates evaluated . . . .” CLI-10-11 at 39. Pilgrim Watch has not met this burden. For all of its claims that the SAMA analysis purportedly fails to consider information brought to light by the Fukushima Daiichi accident that would significantly increase offsite costs, nowhere does Pilgrim Watch ever indicate the costs that would be incurred if the SAMA analysis were to consider that information. Nor does Pilgrim Watch make any showing that the cost-benefit analysis using this information would change the results of the SAMA analysis.

Pilgrim Watch’s contention fails for another material reason. Pilgrim Watch fails to dispute or otherwise challenge, in light of Fukushima, the adequacy of the severe accident releases evaluated in the Pilgrim SAMA analysis. As discussed above, the severe accident releases used for the Pilgrim SAMA analysis represent a range of releases from small to very large based on the different possible severe accident scenarios for the Pilgrim plant, and include releases that are many times greater than the releases that occurred at the Fukushima reactors. Entergy Decl. at ¶¶ 34-38. The severe accident releases assumed for the Pilgrim SAMA analysis more than bound the releases from Fukushima many times over, and would more than bound any continuing low-level releases such as those from postulated intermittent recriticality. Id. at ¶¶ 39-42. The overall source term in the case of a severe accident includes the type and amount of radionuclides, the heat energy in the plume associated with the release, the height of

the release, the timing of release, and the maximum plume duration. Id. at ¶ 36. Pilgrim Watch does not even address the type and amount of radionuclides contained in releases, the heat energy in the plume associated with a releases, the height of releases, and the timing of releases considered in the SAMA analysis. Nor does Pilgrim Watch make any showing that consideration of its concerns would increase the benefit (risk averted) by a factor of more than two that is necessary to change the results of the SAMA analysis. As such, Pilgrim Watch’s newly proffered contention fails to raise a material dispute.

In light of the large margin inherent in the SAMA analysis, Pilgrim Watch was required to have pled facts to establish the materiality of its asserted deficiencies. Such a showing – necessary to avoid a meaningless “EIS editing session[],” of the type the Commission has warned against (see Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 N.R.C. 419, 431 (2009) – is absent from the PW Request. Mitigation alternatives need only be evaluated in “sufficient detail to ensure that environmental consequences” of the proposed project “have been fairly evaluated.” Id. (footnote omitted). In fact, Pilgrim Watch provides no basis to suggest that Pilgrim’s SAMAs have been unfairly evaluated due to an asserted failure to consider continuing radiological releases or ongoing recriticalities. Pilgrim Watch provides no information demonstrating that any of its alleged deficiencies are sufficiently significant to alter the SAMA analysis. Pilgrim Watch provides no basis – no analysis or expert opinion – demonstrating that any of its allegations would make a difference in the outcome.

#### **IV. CONCLUSION**

In sum, Pilgrim Watch’s Request should be denied because Pilgrim Watch has not met the standards for reopening the record, has not met the standards for raising a late contention, and

has not met the standards for an admissible contention. The purported lessons learned from the Fukushima Daiichi accident that Pilgrim Watch uses as justification for this late filing appears to be nothing more than a pretext for raising issues that could have been pled at the outset of this proceeding.

For all of the foregoing reasons, Pilgrim Watch's Request should be denied.

/Signed electronically by Paul A. Gaukler/

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Dated: June 6, 2011

Counsel for Entergy

**UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION**

Before the Atomic Safety and Licensing Board

In the Matter of	)	
	)	
Entergy Nuclear Generation Company and	)	Docket No. 50-293-LR
Entergy Nuclear Operations, Inc.	)	ASLBP No. 06-848-02-LR
	)	
(Pilgrim Nuclear Power Station)	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of “Entergy’s Answer Opposing Pilgrim Watch’s Request for Hearing on Post-Fukushima SAMA Contention” and the “Declaration of Dr. Thomas L. Sowdon and Dr. Kevin R. O’Kula in Support of Entergy’s Answer Opposing Pilgrim Watch Request for Hearing on Post-Fukushima SAMA Contention,” both dated June 6, 2011, were provided to the Electronic Information Exchange for service on the individuals below, this 6th day of June, 2011.

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/Signed Electronically by Paul A. Gaukler/

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