

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

NRC STAFF'S ANSWER IN OPPOSITION TO PILGRIM WATCH'S
REQUEST FOR HEARING ON A NEW CONTENTION REGARDING
INADEQUACY OF ENVIRONMENTAL REPORT, POST FUKUSHIMA

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December 13, 2011

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INTRODUCTION

Pursuant to 10 C.F.R. § 2.309(h)(1), the staff of the Nuclear Regulatory Commission ("Staff") hereby files its answer opposing the November 18, 2011 Pilgrim Watch Request for Hearing on a New Contention Regarding Inadequacy of Environmental Report, Post Fukushima ("Proposed New Contention").¹ The contention claims that the Pilgrim severe accident mitigation alternatives ("SAMA") analysis ignores "new and significant issues raised by Fukushima regarding the probability of both containment failure, and subsequent larger off-site consequences due, in part, to the need for flooding the reactor (vessel, containment, pool) with huge amount of water in a severe accident, as at Fukushima." Proposed New Contention at 1.²

¹ Pilgrim Watch Request for Hearing on a New Contention Regarding Inadequacy of Environmental Report, Post Fukushima (Nov. 18, 2011) (Agencywide Documents Access and Management System ("ADAMS") Accession No. ML113322A080) ("Proposed New Contention").

² A recent Board held that NEPA challenges to an Applicant's Environmental Report are invalid because the Applicant has no NEPA responsibility, and therefore no duty to update its compliant Environmental Report upon discovery of new and significant information. *Pacific Gas & Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), LBP-11-32, 74 NRC __ (Nov. 18, 2011) (slip op. at 2) (ADAMS Accession No. ML11322A193). While Pilgrim Watch challenges the Applicant's Environmental Report directly, its references to the NRC's duty to review implies that the challenge is (continued. . .)

As discussed in detail below, the Proposed New Contention should not be admitted because it is not based on new information that was previously unavailable; the Proposed New Contention is not timely; and Pilgrim Watch has not met the requirements for nontimely contentions under 10 C.F.R. § 2.309(c). The Proposed New Contention has also not met the requirements for reopening a closed record in that the Proposed New Contention is not timely, does not demonstrate that a materially different result is likely, does not address a significant safety or environmental issue, and is not accompanied by an affidavit from an expert in the field of study at issue.

PROCEDURAL BACKGROUND

Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc. (“Entergy” or “Applicant”) submitted a license renewal application for the Pilgrim Nuclear Generating Station (“Pilgrim”) on January 25, 2006.³ Pilgrim Watch filed a petition to intervene in this matter on May 25, 2006, submitting five contentions for consideration.⁴

The Board admitted two of Pilgrim Watch’s proposed contentions – Contention 1, challenging Entergy’s aging management program for buried piping, and Contention 3, challenging Entergy’s SAMA analysis.⁵ On October 30, 2007, a Board majority granted the

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actually to NRC’s FSEIS, and the Staff has a duty under NEPA to take a “hard look” at new and significant information.

³ Entergy Nuclear Operations, Inc., License Renewal Application – Pilgrim Nuclear Power Station (January 25, 2006) ADAMS Accession No. ML060300028).

⁴ Request for Hearing and Petition to Intervene by Pilgrim Watch (May 25, 2006) (ADAMS Accession No. ML061630125).

⁵ *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), LBP-06-23, 64 NRC 257, 348-49 (2006).

motion for summary disposition of Contention 3.⁶ On April 10, 2008, an evidentiary hearing was held on Contention 1, and shortly thereafter, on June 4, 2008, the Board formally closed the evidentiary record.⁷

The Board issued an initial decision disposing of Contention 1 in favor of the Applicant on October 30, 2008.⁸ Pilgrim Watch filed a petition for review of the Board's initial decision and other interlocutory decisions,⁹ which the Commission denied on June 17, 2010 in CLI-10-14.¹⁰

The Commission, however, reversed the summary disposition of Contention 3 and remanded it to the Board for further proceedings as limited by the Commission's Order.¹¹ On July 19, 2011, the Board issued a partial initial decision finding in favor of the Applicant on the remanded Contention 3.¹² The Board's decision on remanded Contention 3 is currently pending before the Commission on a petition for review filed by Pilgrim Watch.¹³

⁶ *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), LBP-07-13, 66 NRC 131, 154 (2007).

⁷ Memorandum and Order (Ruling on Pilgrim Watch Motions Regarding Testimony and Proposed Additional Evidence Relating to Pilgrim Watch Contention 1) (June 4, 2008) at 3 (ADAMS Accession No. ML081560375).

⁸ *Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), LBP-08-22, 68 NRC 590, 610 (2008).

⁹ Pilgrim Watch's Petition for Review of LBP-08-22, LBP-07-13, LBP-06-23 and the Interlocutory Decisions in the Pilgrim Nuclear Power Station Proceeding (Nov. 12, 2008) at 11 (ADAMS Accession No. ML083240599).

¹⁰ *Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-10-14, 71 NRC 449, 477 (2010).

¹¹ *Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 317 (2010).

¹² See generally *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), LBP-11-18, 74 NRC ___ (July 19, 2011)(slip op.) (ADAMS Accession No. ML11200A224).

¹³ Pilgrim Watch Request for Review of the Partial Initial Decision (Rejecting Upon Remand (continued. . .)

A few months after it filed its petition on remanded Contention 3, Pilgrim Watch filed a request for a hearing on new contentions related to cleanup costs and inaccessible cables.¹⁴ The Board denied Pilgrim Watch's requests for hearing on the cleanup and inaccessible cables contentions.¹⁵ The Board's decision on these contentions is also currently pending before the Commission on a petition for review by Pilgrim Watch.¹⁶

Subsequent to the accident at Fukushima, Pilgrim Watch filed requests for hearing on two new contentions. On May 12, 2011, Pilgrim Watch filed a proposed Re-Criticality Contention.¹⁷

On June 1, 2011, Pilgrim Watch submitted a proposed direct torus vent (DTV) Contention.¹⁸ The Board denied Pilgrim Watch's request for hearing on the Re-Criticality

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Pilgrim Watch's Challenge To Meteorological Modeling In SAMA Analysis in Entergy's License Renewal Application (July 19, 2011) (ADAMS Accession No. ML11215A133)

¹⁴ See Pilgrim Watch Request for Hearing on a New Contention (November 29, 2010)(ADAMS Accession No. ML103420305); Pilgrim Watch Request for Hearing on a New Contention: Inadequacy of Entergy's Aging Management of Non-Environmentally Qualified Inaccessible Cables (Splices) at Pilgrim Station (December 13, 2010) (ADAMS Accession No. ML103500400); Pilgrim Watch Request for Hearing on a New Contention: Inadequacy of Entergy's Aging Management of Non-Environmentally Qualified Inaccessible Cables (Splices) at Pilgrim Station (January 20, 2010) (ADAMS Accession No. ML110200267).

¹⁵ *Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), LBP-11-20, 74 NRC ____ (Aug. 11, 2011) (slip op at 3.) (ADAMS Accession No. ML11223A183).

¹⁶ See Pilgrim Watch's Petition For Review Of Memorandum And Order (Denying Pilgrim Watch's Requests For Hearing On Certain New Contentions) (Aug. 26, 2011) (ADAMS Accession No. ML11238A118).

¹⁷ Pilgrim Watch Request for Hearing on Post Fukushima SAMA Contention ("Post Fukushima SAMA Contention") (May 12, 2011) (ADAMS Accession No. ML111320651).

¹⁸ Pilgrim Watch Request for Hearing on a New Contention Regarding Inadequacy of Environmental Report, Post Fukushima (June 1, 2011) (ADAMS Accession No. ML111530448).

Contention and DTV Contention.¹⁹ On September 23, 2011, Pilgrim Watch filed a petition for review with the Commission of the Board's decision denying Pilgrim Watch's request for hearing on the two post-Fukushima contentions. Thereafter, on November 18, 2011 Pilgrim Watch filed the Proposed New Contention, raising new challenges to the Pilgrim SAMA analysis based on the Fukushima event.²⁰

Additionally, on May 2, 2011, the Commonwealth of Massachusetts filed a Motion to Hold Licensing Decision in Abeyance.²¹ The Commonwealth of Massachusetts filed an additional motion to admit a new contention, accompanied by a request for waiver, challenging the Entergy SAMA analysis based on new information gleaned from the Fukushima accident.²² On August 11, 2011, the Commonwealth filed a motion to supplement the bases of its proposed contention.²³ On November 28, 2011, the Board ruled on the Commonwealth's Motion, denying

¹⁹ *Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), LBP-11-23, 74 NRC ____, (Sept. 8, 2011) (slip op. at 3) (ADAMS Accession No. ML11251A206).

²⁰ Like the DTV and Re-Criticality contentions already rejected by the majority of this Board in LBP-11-23, the Proposed New Contention is allegedly based on "new and significant information learned from Fukushima regarding the probability of containment failure in the event of an accident and the concomitant probability of a significantly larger volume of off-site consequences." Proposed New Contention at 3. The Proposed New Contention is focused on the need to "analyze flooding the reactor (vessel, containment, pool) with huge amounts of water in a severe accident, as at Fukushima." *Id.*

²¹ Commonwealth of Massachusetts Motion to Hold Licensing Decision in Abeyance Pending Commission Decision Whether to Suspend the Pilgrim Proceeding to Review the Lessons of the Fukushima Accident (May 2, 2011) ("Stay Request") (ADAMS Accession No. ML11220326).

²² Commonwealth of Massachusetts' Motion to Admit Contention and, If Necessary, to Reopen Record Regarding New and Significant Information Revealed by Fukushima Accident (June 2, 2011) ("Motion to Admit") (ADAMS Accession No. ML111530340); Commonwealth of Massachusetts' Petition for Waiver of 10 C.F.R. Part 51 Subpart A, Appendix B or, in the Alternative, Petition for rulemaking to rescind Regulations Excluding Consideration of Spent Fuel Storage Impacts from License Renewal Environmental Review (June 2, 2011) ("Waiver Petition") (ADAMS Accession No. ML111530342).

²³ Commonwealth of Massachusetts Motion to Supplement Bases to Commonwealth to Commonwealth Contention to Address NRC Task Force Report on Lessons Learned from the Radiological Accident at Fukushima (Aug. 11, 2011) (ADAMS Accession No. ML11223A284).

the Stay Request, Waiver Request, and Motion to Admit.²⁴

DISCUSSION

I. The Proposed New Contention Does Not Meet The Requirements for New or Amended Contentions under 10 C.F.R. § 2.309

The Commission has stated that the NRC does not look with favor on new contentions filed after the initial filing.²⁵ Thus, a petitioner may file late contentions “only ‘upon a showing that -- (i) [t]he information upon which the . . . new contention is based was not previously available; (ii) [t]he information upon which the . . . new contention is based is materially different than information previously available; and (iii) [t]he . . . new contention has been submitted in a timely fashion based on the availability of the subsequent information.’”²⁶ When a contention is not based on new or previously unavailable information, the stricter standards of 10 C.F.R. § 2.309(c)(1)(i)-(viii) apply.²⁷ Atomic Safety and Licensing Boards have recently examined new or amended contentions based on previously unavailable information under the 10 C.F.R. § 2.309(f)(2) standards.²⁸ Pilgrim Watch’s Proposed New Contention does not contain new or previously unavailable information or otherwise meet the requirements of 10 C.F.R. § 2.309(c).

In its Proposed New Contention, Pilgrim Watch failed to discuss the requirements of 10

²⁴ *Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), LBP-11-35, 74 NRC ____ (Nov. 28, 2011) (slip op. at 70) (ADAMS Accession No. ML11332A152).

²⁵ *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-04-36, 60 NRC 631, 636 (2004).

²⁶ *Id.* (quoting 10 C.F.R. § 2.309(f)(2)(i)-(iii) (alterations in original)). *See also* 10 C.F.R. § 2.309(c)(1).

²⁷ *See id.*

²⁸ *Shaw Areva Mox Services* (Mixed Oxide Fuel Fabrication Facility), LBP-07-14, 66 NRC 169, 210 n.95 (2007); *Diablo Canyon*, LBP-11-32, 74 NRC __ (slip op. at 6).

C.F.R. § 2.309(f)(2). Regardless, Pilgrim Watch does not satisfy the requirements under 10 C.F.R. § 2.309(f)(2) and 10 C.F.R. 2.309(c) because the contention is not based on new information that was previously unavailable and therefore was not filed in a timely manner. The Board should therefore dismiss the Proposed New Contention.

A. Pilgrim Watch's Proposed New Contention Does Not Contain Previously Unavailable Information and Therefore Does Not Meet the Requirements of 10 C.F.R. § 2.309(f)(2)(i), (ii)

Despite its declarations to the contrary, Pilgrim Watch's Proposed New Contention does not contain or rely on new information that was previously unavailable. This Board has recently stated that the question of whether a contention is timely "turns on whether there is new information."²⁹ Pilgrim Watch attempted to satisfy this requirement by declaring that the information relied upon was not available "until sufficient reports became available after the Fukushima disaster and after it became clear what actions that the NRC would or would not take in response to the lessons learned."³⁰

The specific documents upon which Pilgrim Watch seeks to rely are SECY-11-0089,³¹ and SRM-SECY-11-0089.³² Pilgrim Watch seeks to use these documents to establish that the

²⁹ *Pilgrim*, LBP-11-23, 74 NRC at __ (slip op. at 10).

³⁰ Proposed New Contention at 39.

³¹ SECY-11-0089, Options for Proceeding With Future Level 3 Probabilistic Risk Assessment Activities (July 7, 2011) (ADAMS Accession No. ML11090A041) ("SECY-11-0089") ("This paper (1) provides the Commission with potential future uses for Level 3 probabilistic risk assessments (PRAs) for nuclear power plants (NPPs), (2) provides the Commission with three primary options for proceeding with future Level 3 PRA activities including resource estimates, (3) informs the Commission of the internal coordination efforts and external stakeholder engagement activities in which the staff participated to formulate its plan and scope for future Level 3 PRA activities, and (4) seeks Commission approval for the staff's recommendation to proceed with focused research to address identified gaps in existing PRA technology before performing a full-scope comprehensive site Level 3 PRA for an operating NPP." *Id.* at 1.).

³² SRM-SECY-11-0089, Staff Requirements — SECY-11-0089 — Options for Proceeding with (continued. . .)

MACCS2 code used by Entergy in its SAMA analysis is flawed because it “does not currently model and analyze aqueous transport and dispersion of radioactive materials through the subsurface water, sediment, soils, and groundwater.”³³ Pilgrim Watch claims that, combined with reports describing emergency responder’s use of “feed-and-bleed” during the Fukushima incident to bring the reactor under control, this constitutes new and significant information.³⁴

However, Pilgrim Watch’s reliance on the issuance of SECY-11-0089 and SRM-SECY-11-0089 is misplaced. The appropriate focus of the inquiry is whether Pilgrim Watch could have raised this challenge to the SAMA analysis earlier. As Pilgrim Watch itself points out, the deficiency in the SAMA analysis that it relies on is inherent in the analysis itself and is “fully recognized by the NRC Commission in SECY-11-0089.”³⁵ If the deficiency is inherent in the MACCS2 code, it is a deficiency that has existed since the Applicant filed its Environmental Report (“ER”) in 2006 because that report included that allegedly deficient analysis. While SECY-11-0089 may have brought the alleged deficiency to Pilgrim Watch’s attention, the Commission has repeatedly held that petitioners must file new or amended contentions based on information when it becomes available and not await a document “that collects, summarizes, and places into context the facts supporting that contention.”³⁶ Accordingly, the information is

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Future Level 3 Probabilistic Risk Assessment with Future Level 3 Probabilistic Risk Assessment (PRA) Activities (Sept. 21, 2011) (ADAMS Accession No. ML112640419) (“SRM-SECY-11-0089”) (directs the Staff to “plan for and perform a new full-scope comprehensive site Level 3 PRA for an operating plant, as described in Option 3” of SECY-11-0089. *Id.* at 1.).

³³ SECY-11-0089 at 29.

³⁴ Proposed New Contention at 10-11.

³⁵ Proposed New Contention at 4, 10.

³⁶ *Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), CLI-10-27, (continued. . .)

not new and the contention is therefore not timely in that it relies on information (i.e. the inadequacies of the Applicant's ER) that was in existence at the time of Pilgrim Watch's initial contention.

Pilgrim Watch additionally implies that the use of "feed and bleed" in Fukushima constitutes new information that was previously unavailable, as supported by SECY-11-0089.³⁷ However "feed and bleed" as a method of emergency response long predates the Fukushima incident, and has been an accepted part of emergency planning.³⁸ Additionally, the use of "feed and bleed" at Fukushima was reported months ago, as early as March 14, 2011.³⁹ As stated above, while the Fukushima accident and SECY-11-0089 may have brought the use of "feed

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72 NRC __ (Sep. 30, 2010)(slip op. at 17) (ADAMS Accession No. ML102730779) (finding that the issuance of a safety evaluation report ("SER") was not the "final piece in the puzzle" allowing for timely contentions when the information upon which petitioners relied was available in some other form and available well before the issuance of the SER but was compiled and summarized in the SER).

³⁷ Proposed New Contention at 3, 11.

³⁸ See Procedure No. EP-IP-100, Pilgrim Nuclear Power Station, Emergency Classification and Notification (March 30, 2001) (ADAMS Accession No. ML010930249) (outlines flooding of the reactor pressure vessel and primary containment as appropriate emergency procedures at Pilgrim when the water level cannot be determined); Boiling Water Reactor Owners Group – Emergency Procedures/Severe Accident Guidelines (Jan. 28, 2000) (ADAMS Accession No. ML003678152) (letter from Staff to BWROG referencing flooding and venting of containment as a part of general emergency planning and severe accident guidelines for Boiling Water Reactors. "Under certain circumstances, it may indeed be preferable to accept an early and controlled release of fission products in lieu of a later (and certain) uncontrolled release from a ruptured containment." *Id.* at 5); BWROG Simulator Scenario Development Guidelines (July 14, 1993) (ML082710023) (BWROG simulator scenario where flooding and venting are appropriate emergency procedures when reactor pressure vessel water level is cannot be determined. *Id.* at 34); NUREG/CR-5869, Identification and Assessment of BWR In-Vessel Severe Accident Mitigation Strategies (October 1992), *available at* <http://www.ornl.gov/info/reports/1992/3445603689514.pdf> (outlines methods for flooding and venting containment as severe accident mitigation).

³⁹ See R. Mitchell, *Feed and Bleed: Fukushima Reactor Cooling Still Dicey*, CONSERVATIVE DAILY NEWS, Mar. 14, 2011, <http://conservativedailynews.com/2011/03/feed-and-bleed-fukushima-reactor-cooling-still-dicey/>.

and bleed” to Pilgrim Watch’s attention, it does not classify that information as new. Accordingly, the information relied upon in the contention is not new and the contention is therefore not timely.

B. The Proposed New Contention Was Not Submitted in a Timely Fashion

Even if SECY-11-0089, SRM-SECY-11-0089, or the use of “feed and bleed” at Fukushima constituted new information, Pilgrim Watch’s Proposed New Contention would still not be timely. In promulgating 10 C.F.R. Part 2, the Commission stated,

For [non-NRC-environmental-document-based] new or amended contentions the rule makes clear that the criteria in § 2.309(f)(2)(i) through (iii) must be satisfied for admission. Include[d] in these standards is the requirement that it be shown that the new or amended contention has been submitted in a timely fashion based on the timing of availability of the subsequent information. See § 2.309(f)(2)(iii). This requires that the new or amended contention be filed promptly after the new information purportedly forming the basis for the new or amended contention becomes available.⁴⁰

Although NRC regulations do not precisely define when an “amended or Proposed New Contention has been submitted in a timely fashion,” 10 C.F.R. § 2.309(f)(2)(iii), “[s]everal boards have established a 30-day rule [after receipt of relevant new information] for Proposed New Contentions,”⁴¹

Pilgrim Watch claims that the Proposed New Contention could not have been presented earlier, and that “Pilgrim Watch acted promptly after learning of the new information.”⁴² This is clearly not the case. If the use of “feed and bleed” at Fukushima constituted new information,

⁴⁰ Statement of Considerations, Final Rule, Changes to Adjudicatory Process, 69 Fed. Reg. 2,182, 2,221 (Jan. 14, 2004).

⁴¹ *Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), LBP-06-14, 63 NRC 568, 574 (2006); *Diablo Canyon*, LBP-11-32, 74 NRC at __ (slip op. at 7).

⁴² Proposed New Contention at 40.

the Proposed New Contention would not be timely because it was filed more than 30 days after reports of “feed and bleed” at Fukushima. The use of feed and bleed was reported as early as March 14, 2011,⁴³ and the appropriate time for Pilgrim Watch to have filed would therefore have been mid-April at the latest, 30 days following reports of feed and bleed. Since Pilgrim Watch did not file until November 18, 2011, well outside the window in which to timely file, the Proposed New Contention is not timely.

For the same reasons, if the analysis of the MACCS2 code in SECY-11-0089 is considered new information, then Pilgrim Watch should have filed the Proposed New Contention within 30 days of its publication. SECY-11-0089 is dated July 7, 2011, and Pilgrim Watch should have therefore filed its Proposed New Contention in early August, 2011.⁴⁴

Additionally, even if, as Pilgrim Watch seems to imply, that SRM-SECY-11-0089 constitutes the new information required under 10 C.F.R. § 2.309(f)(2), the Proposed New Contention would still not be timely. SRM-SECY-11-0089 was issued on September 21, 2011.⁴⁵

Not only could Pilgrim Watch have filed this Proposed New Contention earlier and in a timely fashion, on October 26, 2011 Ms. Lampert did file a comment on Seabrook Station’s Draft Environmental Impact Statement in the Seabrook license renewal proceeding regarding “feed and bleed.”⁴⁶

Since Pilgrim Watch did not file its contention until November 18, 2011, nearly two

⁴³ See R. Mitchell, *Feed and Bleed: Fukushima Reactor Cooling Still Dicey*, CONSERVATIVE DAILY NEWS, Mar. 14, 2011, <http://conservativedailynews.com/2011/03/feed-and-bleed-fukushima-reactor-cooling-still-dicey/>.

⁴⁴ SECY-11-0089 at 1.

⁴⁵ SRM-SECY-11-0089 at 1.

⁴⁶ Comment 16 on Seabrook NUREG-1437, Supplement 46, Section 5.0 at 11 (Oct. 26, 2011) (ADAMS Accession No. ML11304A243).

months after SRM-SECY-11-0089's issuance, the Proposed New Contention is clearly not timely and should be dismissed.

C. The Amended Petition Does Not Meet the Requirements of Non-timely Filing Under 10 C.F.R. § 2.309(c)

Even if a proposed new contention is not based on previously unavailable information, the Board might still consider the petition under the stricter standards of 10 C.F.R. § 2.309(c)(1)(i)-(viii).⁴⁷ To consider a late contention under 10 C.F.R. § 2.309(c), the Board must balance the following factors: (i) good cause for failure to file on time; (ii) the right to be made a party to the proceeding; (iii) the nature and extent of petitioner's interest in the proceeding; (iv) the possible effect of any order that may be entered in the proceeding on that interest; (v) the availability of other means to protect the interest; (vi) the extent to which the interests will be represented by existing parties; (vii) the extent to which the petitioner's participation will broaden the issues or delay the proceeding; and (viii) the extent to which the petitioner's participation may reasonably be expected to assist in developing a sound record. 10 C.F.R. § 2.309(c)(1)(i)-(viii). The Commission has held that the most important of these factors is the first, the requirement for the petitioner to demonstrate good cause for the failure to file on time.⁴⁸ "Good cause has long been interpreted to mean that the information on which the proposed new contention is based was not previously available."⁴⁹

As stated above, Pilgrim Watch has not met the requirements of 10 C.F.R. § 2.309(c) because the information upon which the Contention is based was not new or previously

⁴⁷ See *Shaw Areva*, LBP-07-14, 66 NRC at 210 & n. 95 (2007).

⁴⁸ *Dominion Nuclear Connecticut, Inc.* (Millstone Power Station, Unit 3), CLI-09-05, 69 NRC 115, 125-26 (2009).

⁴⁹ *Id.*

unavailable. The Proposed New Contention is therefore not timely and does not meet the most important factor under 10 C.F.R. § 2.309(c).

The addition of a hearing on this Proposed New Contention would also unduly broaden the issues and materially delay the proceeding. Pilgrim Watch cites a past Board decision, claiming that it limits application of this factor only to those “delay[s] that could be attributed to the tardiness of the petition.”⁵⁰ The Board in that case came to the conclusion that the petition for hearing would not delay the proceeding because the contentions would not disrupt the timeframe set for a hearing on additional contentions already admitted.⁵¹ *Id.* In this case, the record has been closed and there is no hearing set for any outstanding contention. The case therefore does not apply to this proceeding.

In considering a SAMA challenge in a recently filed contention, this Board stated that the contention would unduly broaden the issues and “undoubtedly materially delay this proceeding,” given the status of the proceeding, and that all other substantial issues had been resolved at the time the contention was filed.⁵² The official record remains closed and all substantial issues have been resolved. Admission of this contention would, therefore, unduly broaden the issues and materially delay this proceeding.

Since Pilgrim Watch does not meet two of the factors to be considered under 10 C.F.R. § 2.309(c), including the most important in failure to show good cause, the Proposed New Contention does not meet the requirements for non-timely contentions and should be dismissed.

⁵⁰ *South Carolina Electric & Gas Co.* (Virgil C. Summer Nuclear Station, Unit 1), LBP-81-11, 13 NRC 420, 425 (1981)

⁵¹ *Id.*

⁵² *Pilgrim*, LBP-11-35, 74 NRC at __ (slip op. at 64).

II. Pilgrim Watch Fails to Meet the Requirements for Reopening the Record

A. Standards for Reopening the Record

Pursuant to 10 C.F.R. § 2.326(a), a motion or petition to reopen a closed record to consider additional evidence will not be granted unless all of the criteria in 10 C.F.R. § 2.326 are satisfied.⁵³ The motion to reopen must be timely, though an exceptionally grave issue may be considered even if it is untimely presented; it must address a significant safety or environmental issue; and it must demonstrate that a materially different result would be or would have been likely had the newly proffered evidence been considered in the first instance. 10 C.F.R. § 2.326(a)(1)-(3).⁵⁴ Pursuant to 10 C.F.R. § 2.326(b), one or more affidavits that show that these criteria are met must accompany the motion.⁵⁵ Each affidavit must contain statements from "competent individuals with knowledge of the facts alleged" or experts in disciplines appropriate to the issues raised. 10 C.F.R. § 2.326(b).⁵⁶ Moreover, "the moving papers must be strong enough, in the light of any opposing filings, to avoid summary disposition." Vermont Yankee Nuclear Power Corp. (Vermont Yankee Nuclear Power Station), ALAB-138, 6 AEC 520, 523 (1973).⁵⁷ The Commission has previously held, "[t]he burden of

⁵³ See also *Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-11-08, 74 NRC ____ (Sept. 27, 2011) (slip op. at 8) (ADAMS Accession No. ML11270A032); *AmerGen Energy Co., LLC*. (Oyster Creek Nuclear Generating Station), CLI-08-28, 68 NRC 658, 673 (2008); *Pilgrim*, LBP-11-35, 74 NRC at ____ (slip op. at 18).

⁵⁴ See also *Vogtle*, CLI-11-08, 74 NRC at ____ (slip op. at 8); *Pilgrim*, LBP-11-35, 74 NRC at ____ (slip op. at 18).

⁵⁵ See also *Vogtle*, CLI-11-08, 74 NRC at ____ (slip op. at 8); *Pilgrim*, LBP-11-35, 74 NRC at ____ (slip op. at 18).

⁵⁶ See also *AmerGen Energy Co., LLC*. (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 286 - 291 (2009); *Pilgrim*, LBP-11-23, 74 NRC at ____ (slip op. at 17-18 n.75).

⁵⁷ See also *Vogtle*, CLI-11-08, 74 NRC at ____ (slip op. at 10); *Private Fuel Storage, LLC* (Independent Spent Fuel Storage Installation), CLI-05-12, 61 NRC 345, 350 (2005)).

satisfying the reopening requirements is a heavy one, and proponents of a reopening motion bear the burden of meeting all of [these] requirements.” *Oyster Creek*, CLI-09-7, 69 NRC at 287 (citations omitted, alteration in original). Thus, “[b]are assertions and speculation ... do not supply the requisite support[, and a] mere showing of a possible violation is not enough.” *Id.* (internal citations and quotation marks omitted).

The Commission recently had occasion to reiterate its rationale and ruling in *Oyster Creek*, and again acknowledged that while Commission rules “place a heavy burden on proponents of contentions. . . . An even heavier burden applies to motions to reopen.” *Union Electric Co. (Callaway Plant, Unit 2) et al*, CLI-11-05, 74 NRC ____ (Sept. 9, 2011) (slip op. at 33) (ADAMS Accession No. ML11252B059). In rejecting a request that it establish special procedures for judging motions to reopen and timetables for new issues related to the Fukushima accident, the Commission wrote:

To the extent that the Fukushima events provide the basis for contentions appropriate for litigation in individual proceedings, our procedural rules contain ample provisions through which litigants may seek admission of new or amended contentions, seek stays of licensing board decisions, appeal adverse decisions, and file motions to reopen the record, as appropriate.

Id. at 35.

As discussed above, where a contention that requires reopening of the record raises an issue not previously in controversy, the contention must meet the requirements for nontimely contentions at 10 C.F.R. § 2.309(c). 10 C.F.R. § 2.326(d).⁵⁸ Foremost among the requirements for admission of nontimely contentions is good cause for the failure to file on time. 10 C.F.R. § 2.309(c)(1)(i).⁵⁹

⁵⁸ See also *Vogtle*, CLI-11-08, 74 NRC at ____ (slip op. at 15-16).

⁵⁹ *Vogtle*, CLI-11-08, 74 NRC at ____ (slip op. at 17).

Finally, Pilgrim Watch's Proposed New Contention must meet the general admissibility requirements at 10 C.F.R. § 2.309(f) applicable to all contentions; *inter alia*, it must have a legal and factual basis, must be supported by expert analysis and must raise a material issue.⁶⁰

B. Pilgrim Watch's Proposed New Contention Must Meet the Requirements for Reopening the Record

The evidentiary record in this case has been closed since 2008. See Memorandum and Order (Ruling on Pilgrim Watch Motions Regarding Testimony and Proposed Additional Evidence Relating to Pilgrim Watch Contention 1) at 3-4 ("we consider that the record with regard to Contention 1 is effectively closed, and to the extent necessary we here and now formally so close it"); *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-08-09, 67 NRC 353, 356 (2008) ("we direct the Board to close the evidentiary record on Pilgrim Watch Contention 1"); *Pilgrim*, LBP-11-18, 74 NRC at ___ (slip op. at 3).⁶¹ Consequently, Pilgrim Watch's Proposed New Contention must meet the requirements for reopening a closed record under 10 C.F.R. § 2.326.

Consistent with Commission precedent and the plain language of the regulation governing reopening at 10 C.F.R. § 2.326, this Board has applied the reopening standards to

⁶⁰ The Staff discussed reopening and contention admissibility at length in NRC Staff's Answer in Opposition to Pilgrim Watch Request for Hearing on Proposed New Contention (January 7, 2011) (ADAMS Accession No. ML110070837), and NRC Staff's Answer in Opposition to Pilgrim Watch's January 20, 2011 Amended Contention (February 14, 2011) (ADAMS Accession No. ML110450664), and hereby incorporates those discussions and argument by reference.

⁶¹ Because Contention 1 was the only contention pending at the time, closing the records with respect to Contention 1 closed the record completely. With regard to the remanded portion of Contention 3, the Commission held in *Entergy Nuclear Vermont Yankee* (Vermont Yankee Nuclear Power Station), CLI-10-17, 71 NRC ___ (Jul. 8, 2010) (slip op.) (ADAMS Accession No. ML101890775) that while pendency of a remand keeps the record open, any genuinely new issues during the pendency require a motion to reopen the record. *Id.* at 10 n.37. It follows that final disposition of the remand closes the record. Therefore, once the Board ruled in favor of the Applicant regarding the remanded portion of Contention 3, the record was once more closed.

new contentions raised in this proceeding on three prior occasions.⁶² Nonetheless, Pilgrim Watch argues that the requirements of § 2.326 do not apply to the Proposed New Contention because it “does not seek to introduce any new evidence as to any contention that has previously been considered by the ALSB; rather it seeks to add a new, entirely different, in scope, contention to the proceeding.” Proposed New Contention at 47. But, as this Board has recognized, the text of § 2.326 plainly contradicts Pilgrim Watch’s claim. *Pilgrim*, LBP-11-23, 74 NRC at ___ (slip op. at 6-7). Subsections (a) through (c) of that regulation state all of the requirements that a motion to reopen must meet. Subsection (d) adds, “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).” 10 C.F.R. § 2.326(d) (emphasis added). Contrary to Pilgrim Watch’s assertions, the obvious language of 10 C.F.R. § 2.326(d) indicates that a contention “not previously in controversy among the parties,” such as the Proposed New Contention, must meet the requirements to reopen. In addition, a contention raising a new issue must also meet the requirements of 10 C.F.R. § 2.309(c). Likewise, in the Vermont Yankee license renewal proceeding, the Commission observed that while a contention was on remand, intervenors were “free to submit a motion to reopen the record pursuant to 10 C.F.R. § 2.326, should they seek to address any *genuinely new* issues related to the license renewal application.” *Vermont Yankee*, CLI-10-17, 72 NRC at ___ (slip op. at 10 n.37). Importantly, in LBP-11-23, this Board noted that for either the DTV or Re-Criticality contention to be admitted, “Pilgrim Watch [had to] satisfy the Commission’s demanding regulatory requirements for reopening the record.” *Pilgrim*, LBP-11-23, 74 NRC at ___ (slip op. at 5, 7;

⁶² *Pilgrim*, LBP-11-20, 74 NRC at ___ (slip op. at 3, 12-16); *Pilgrim*, LBP-11-23, 74 NRC at ___ (slip op. at 7); *Pilgrim*, LBP-11-35, 74 NRC at ___ (slip op. at 2, 17, 49-55).

concurrence and dissent at 1). Likewise, for this Proposed New Contention to be admitted, Pilgrim Watch must satisfy §2.326. Consequently, the Commission's regulations and case law clearly indicate that once the record closes, a party seeking to litigate a genuinely new issue must meet the requirements for reopening the record in 10 C.F.R. § 2.326.

Indeed, the Third Circuit recently upheld this application of the reopening standard in a case involving facts similar to those presented here and rejected the same argument that Pilgrim Watch makes here. In *New Jersey Environmental Federation v. U.S. Nuclear Regulatory Commission*, 645 F.3d 220 (3d Cir. 2011), an intervenor sought to raise a new contention after the administrative record closed.⁶³ The NRC applied the reopening standard to the contention; the contention failed to meet the standard; and the intervenor appealed.⁶⁴ The Circuit Court approved the NRC's application of the reopening standard, noting that the regulations "explicitly allow for contentions alleging previously non-litigated issues to be raised through a motion to reopen," and that the intervenor's argument (identical to that raised by Pilgrim Watch) -- that the reopening standard could not be applied to previously unlitigated issues -- "would effectively render the regulation meaningless." *Id.* at 233.

In support of its argument that the standard for reopening only applies to issues that have been the subject of litigation earlier in the proceeding, Pilgrim Watch cites *Union of Concerned Scientists v. NRC*, 735 F.2d 1427, 1443-1444 and n.11 (D.C. Cir. 1984). Not only would such a reading of the case run contrary to the language and structure of the reopening regulation in 10 C.F.R. § 2.326, as the Third Circuit recognized, but this D.C. Circuit case does

⁶³ *Id.* at 226.

⁶⁴ *Id.* at 14-16; *AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station)*, LBP-08-12, 68 NRC 5 (2008).

not support such a reading. *Union of Concerned Scientists* did not address the reopening standard or discuss its application and it does not stand for the proposition that reopening only applies to issues that have already been litigated and does not apply to issues that are being raised for the first time. Instead, that case held that the NRC could not remove emergency preparedness (a material issue) from a statutorily mandated proceeding. *Id.* at 1444-45. The court rejected the NRC's assertion that the removal of the issue was compensated for by the opportunity afforded an intervenor to reopen the proceeding to litigate emergency preparedness if, at a later point, the conduct of emergency preparedness exercises revealed fundamental defects in the emergency preparedness plan. *Id.* at 1443-1444. Reopening after the proceeding had run its course, the D.C. Circuit ruled, was not sufficient to make up for the removal of an issue from the proceeding.

The other case Pilgrim Watch cites, *Commonwealth of Massachusetts v. NRC*, 924 F.2d 311 (D.C. Cir. 1991), is inapposite. In that case, the Atomic Safety and Licensing Appeal Board ("Appeal Board") rejected a contention because it did not meet the requirements for late-filed contentions and because it did not involve a fundamental flaw in the emergency plan, and thus did not raise a material issue; "[t]he Appeal Board did not reach the issue of whether the motion satisfied the criteria for reopening a closed record." *Id.* at 321. The Circuit Court remanded the Appeal Board decision on the question of the materiality of the contention, not, as Pilgrim Watch suggests, because the reopening standard was applied to a new contention on an issue that has not been litigated. *Id.* at 336-38.

Neither does *Deukmajian v. NRC*, 751 F.2d 1287 (D.C. Cir. 1984), *vacated on other grounds*, 760 F.2d 1320 (D.C. Cir. 1985), *cert. denied*, 479 U.S. 923 (1986), stand for that proposition. In *Deukmajian*, the Commission had refused to grant petitioners a hearing under § 189(a) of the Atomic Energy Act on the grounds that the lifting of a suspension order on a low power license and an extension of the term of that license did not constitute an amendment of

that license and thus did not trigger a § 189(a) hearing. *Id.* at 1311. In any event, the Commission argued, the petitioners had an opportunity to obtain a hearing by seeking to reopen a related full power license proceeding. *Id.* The Court disagreed; it found that the extension of the term of the low power license was an amendment that triggered a § 189(a) hearing and that the opportunity to seek reopening was “not a sufficient substitute for the hearing rights guaranteed by section 189(a).” *Id.* at 1312. While the Court disapproved of the use of reopening as a substitute for a hearing, it approved the Commission’s application of the reopening standard in that case. *Id.* at 1312, 1317-21.

Pilgrim Watch also claims that the “third criteria [in 10 C.F.R. § 2.326(a)] – that a materially different result would be likely – simply would show why Rule [2.326] does not apply; the new contention does not involve any prior result.” Proposed New Contention at 30. But, Pilgrim Watch’s contention attacks the SAMA analysis. *Id.* at 3, 5, 9, 12-13, 17, 21-23. The Commission has noted that the purpose of the SAMA analysis is to determine whether any proposed SAMAs would be “cost-effective to implement.” *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 291 (2010). Pilgrim Watch asserts that had the SAMA analysis evaluated the issues raised by the Proposed New Contention, the outcome of Pilgrim’s SAMA analysis could change and “result in some previously rejected or ignored SAMAs that may prove to be cost-effective.” Proposed New Contention at 6.⁶⁵ Consequently, the Proposed New Contention challenges a prior result in this proceeding: the Staff’s conclusions on which SAMAs would be cost-beneficial. NUREG-

⁶⁵ See also Proposed New Contention at 8 (claiming that additional mitigation would be justified if Entergy’s SAMA analysis considered the new and significant information claimed in the Proposed New Contention); *id.* at 38 (claiming that SAMA analysis should be revised to consider mitigative measures that previously may have been ignored or rejected).

1437, Supplement 29, Vol. 2, Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Regarding Pilgrim Nuclear Power Station, at G-45 (Jul. 2007) (ADAMS Accession No. ML071990027) (“FSEIS”). Therefore, Pilgrim Watch has not shown any reason why 10 C.F.R. § 2.326 would be inapplicable to the Proposed New Contention. Rather, the plain language of that section indicates that it applies to challenges that raise new issues, such as the Proposed New Contention, after the record has closed.

C. The Proposed New Contention is Not Timely, Does Not Raise an Exceptionally Grave Issue, and Does Not Raise a Significant Safety or Environmental Issue

As explained above, Pilgrim Watch’s Proposed New Contention is untimely.

Therefore, the Proposed New Contention does not meet the first requirement of the reopening standards. 10 C.F.R. § 2.326(a)(1). Nonetheless, a board may still consider an untimely motion to reopen if it raises “an exceptionally grave issue.” *Id.* In addition, under § 2.326(a)(2), a motion to reopen “must address a significant safety or environmental issue.” But, as the Commission has recently explained, “when a motion to reopen is untimely, the § 2.326(a)(1) ‘exceptionally grave’ test supplants the § 2.326(a)(2) ‘significant safety or environmental issue’ test.” *Vogtle*, CLI-11-08, 74 NRC at ___ (slip op. at 14 n.44). Consequently, the “exceptionally grave” standard is the appropriate one to apply for both the first and second prongs of the reopening test.

a. The Proposed New Contention Does Not Raise an Exceptionally Grave Issue

Conclusory language is insufficient to demonstrate an exceptionally grave issue. *Vogtle*, CLI-11-08, 74 NRC at ___ (slip op. at 14). Rather, a proponent of reopening must explain how the motion presents an exceptionally grave safety or environmental issue. *Millstone*, CLI-09-05, 69 NRC at 125 n. 51. The Commission has found that an exceptionally grave issue calls “into question the safety of the licensed activity.” *Hydro Resources, Inc.*, CLI-00-12, 52 NRC 1, 5 (2000). This Board has previously rejected an untimely SAMA contention related to Fukushima

under §2.326(a)(1) because it did not demonstrate “any grave threat to public safety respecting the Pilgrim plant.” *Pilgrim*, LBP-11-35, 74 NRC at ___ (slip op. at 57).

The Proposed New Contention does not address the “exceptionally grave” test let alone demonstrate how it meets that test. Therefore, the Proposed New Contention fails to meet the requirements of § 2.326(a)(1) and (2) on its face. As a result, the Board should reject the Proposed New Contention out of hand.

Moreover, because it addresses the SAMA analysis, the Proposed New Contention cannot raise an “exceptionally grave” issue. In their previously filed affidavit, Dr. Bixler and Dr. Ghosh explained that the SAMA analysis is not a safety analysis; it is an environmental analysis conducted for the purpose of identifying cost-beneficial mitigation alternatives that existing plant examinations may have missed.⁶⁶ Thus, the SAMA analysis has no direct safety significance. The SAMA analysis merely augments existing programs to identify environmental mitigation alternatives that could “*further reduce* the risk at a plant that ha[s] no identified safety vulnerabilities.”⁶⁷ Since exceptionally grave issues are inherently safety related, the Proposed New Contention does not, and indeed it cannot, raise an exceptionally grave issue. A majority of the Board agreed with this reasoning in its earlier order. *Pilgrim*, LBP-11-23, 74 NRC ___ (slip op. at 14-15, 33). Consequently, the Proposed New Contention does not meet the requirements of § 2.326(a)(1) or (2).

b. The Proposed New Contention Does Not Raise a Significant Safety or Environmental Issue

Even if the Proposed New Contention were timely, and therefore did not need to raise an

⁶⁶ Affidavit of Dr. Nathan E. Bixler and Dr. S. Tina Ghosh in Support of the NRC Staff’s Answer in Opposition to Pilgrim Watch’s Request for Hearing on Post Fukushima SAMA Contention, at 4-5 (June 6, 2011) (ADAMS Accession No. ML111570502) (“Bixler and Ghosh Affidavit”).

⁶⁷ *Id.* at 5.

exceptionally grave issue, it would still not meet the normal requirements of § 2.326(a)(2). Under that section, a motion to reopen must address a “significant safety or environmental issue.” As discussed above, the Proposed New Contention does not address a significant safety issue because it focuses solely on the environmental aspects of the SAMA analysis. For environmental issues, the Commission has found that to address a significant issue, a motion to reopen “must paint a *seriously* different picture of the environmental landscape.”⁶⁸ *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-06-03, 63 NRC 19, 29 (2006) (“*PFS*”) (quotations omitted, emphasis in original). Under this standard, an issue is significant “when it raises a previously unknown environmental concern, but not necessarily when it amounts to mere additional evidence supporting one side or the other of a disputed environmental effect.” *Id.* Under 10 C.F.R. § 2.326(b), a motion to reopen must be accompanied by an affidavit that addresses each of the reopening criterion and includes “a specific explanation of why it has been met.”

Pilgrim Watch asserts that the Proposed New Contention “addressed a significant safety or environmental issue.” Proposed New Contention at 48. Pilgrim Watch alleges that “the Fukushima events plainly show that the environmental impacts of [the] NRC relicensing Pilgrim may ‘affect the quality of the human environment in a significant manner or to a significant extent not already considered.’” *Id.* at 5 (quoting *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 362 (1989)). The supporting affidavit supports this assertion by claiming that the Proposed New Contention raises a significant issue because it shows “the effect of copious

⁶⁸ The Commission has also stated that this is the standard for supplementing an EIS under NRC practice. *PFS*, CLI-06-03, 63 NRC at 29. The Staff notes that the Proposed New Contention challenges the ER. Proposed New Contention at 1-2. Because the Staff has published an EIS for Pilgrim, the contention should have challenged the Staff’s document. 10 C.F.R. § 2.309(f)(2). See also *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), LBP-11-28, 74 NRC __, __ (slip op. at 5) (Oct. 19, 2011) (ADAMS Accession No. ML11292A051) (“Once the NRC performs its own analysis, the ER is no longer important.”).

amounts of radioactive releases upon the marine environment.” Affidavit at 6. But neither document makes any attempt, beyond assertion, to demonstrate how aqueous transport issues in the SAMA model paint a seriously different picture of the environmental consequences of license renewal. Consequently, the Proposed New Contention falls well short of meeting the standards of § 2.326(a)(2).

Moreover, the information supporting the Proposed New Contention does not raise a significant issue itself. Had the NRC not discussed the possibility of severe accidents, or examined them but found them to be too remote and speculative to warrant full NEPA consideration, the information in the Proposed New Contention might well “paint a *seriously* different picture of the environmental landscape.”⁶⁹ But, the NRC conducted lengthy analyses of severe accidents in the GEIS and of severe accident mitigation alternatives in the FSEIS for Pilgrim.⁷⁰ These analyses recognized the possibility that severe accidents could occur and that if they did, the consequences might be considerable.⁷¹ The Proposed New Contention simply alleges that the consequences of a severe accident could be greater than modeled in the SAMA

⁶⁹ PFS, CLI-06-03, 63 NRC at 29 (emphasis in original). See also *Limerick Ecology Action, Inc. v. NRC*, 869 F.2d 719, 726 (3d Cir. 1989) (noting that the NRC previously considered severe accidents to be sufficiently improbable to warrant full NEPA consideration). In a previous order in this proceeding, the Board found that the Commission could arguably determine that severe accidents are not reasonably foreseeable and therefore outside the scope of events an agency must analyze under NEPA. *Pilgrim*, LBP-11-35, 74 NRC at ___ (slip op. at 61 n.227). “[I]t appears to us that by requiring any chain of events that has an annual frequency of occurrence greater than one in a million to be included within the design basis, the Commission has *de facto* made the frequency of occurrence of all other events (including those resulting in severe accidents) to be less than one in a million per year – a value so low as to certainly not be ‘reasonably foreseeable’ (which would require such events to be considered under NEPA) but also to be reasonably considered remote and speculative in this context.” *Id.*

⁷⁰ NUREG-1437, “Generic Environmental Impact Statement for License Renewal of Nuclear Plants,” Chapter 5 (May, 1996) (ADAMS Accession No. ML040690705) (“GEIS”); Pilgrim FSEIS at Appendix G.

⁷¹ GEIS at Chapter 5; Pilgrim DSEIS at Appendix G.

analysis and speculates that the magnitude of this increase may suffice to render some additional SAMAs cost-beneficial. Proposed New Contention at 1-2, 44-45. Therefore, the information does not raise “a previously unknown environmental concern.” Rather, the Proposed New Contention claims that if the agency considered new information, it might change some of the inputs to the agency’s existing consideration of ways to mitigate severe accidents. Thus, it “amounts to mere additional evidence supporting one side or the other of a disputed environmental effect.” *PFS*, CLI-06-03, 63 NRC at 29. As a result, the Proposed New Contention does not raise a “significant environmental issue” for purposes of reopening the record under § 2.326(a)(2), (b).

This Board reached a similar conclusion in rejecting another contention filed by the Commonwealth of Massachusetts in this proceeding. That contention also challenged the adequacy of the NRC’s SAMA review for Pilgrim after Fukushima. *Pilgrim*, LBP-11-35, 74 NRC at ___ (slip op. at 57). The Board noted that “the Commonwealth avers that other SAMAs might become cost effective if implemented – but indicates neither any particular positive environmental impact from any such implementation nor any specific negative environmental impact from failure to do so.” *Id.* As a result, the Board concluded that the “Commonwealth’s contention can hardly be said, therefore, to paint the required ‘seriously different picture of the environmental landscape.’ ” *Id.* (quotations omitted). Like the Commonwealth’s contention, Pilgrim Watch’s Proposed New Contention only claims other SAMAs could be cost beneficial without identifying positive environmental effects that would come from implementation or the negative effects that would result if the SAMAs were not implemented. Therefore, under the Board’s prior holdings in this case, the Proposed New Contention does not contain sufficient information to meet the requirements of 10 C.F.R. § 2.326(a)(2).

D. Pilgrim Watch has Not Shown that a Materially Different Result Would Be Likely if the Board Considered the Proposed New Contention

Under 10 C.F.R. § 2.323(a)(3), a motion to reopen a closed record “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. § 2.323(a)(3) (emphasis added). One board has explained that under this standard “[t]he movant must show that it is *likely* that the result would have been materially different, *i.e.*, that it is more probable than not that [the movant] would have prevailed on the merits of the Proposed New Contention.” *Entergy Nuclear Vermont Yankee, L.L.C. and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), LBP-10-19, 72 NRC __ (Oct. 28, 2010) (slip op. at 26) (ADAMS Accession No. ML103010136). The Commission has found a claim that simply states that new information “contradicts some of the Board’s factual findings, and then states ‘that this prong of the reopening test is met’ . . . falls far short of meeting” § 2.323(a)(3)’s requirements. *Oyster Creek*, CLI-09-7, 69 NRC at 290-91 (internal quotations omitted).

The “ultimate concern” for a SAMA analysis “is whether any additional SAMA should have been identified as potentially cost beneficial, not whether further analysis may refine the details in the SAMA NEPA analysis.” *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-09-11, 69 NRC 529, 533 (2009). “Unless it looks 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, no purpose would be served to further refine the SAMA analysis, whose goal is only to determine what safety enhancements are cost-effective to implement.” *Pilgrim*, CLI-10-11, 71 NRC at 317.

Consequently, to prevail on its new SAMA contention, Pilgrim Watch must demonstrate that the information its Proposed New Contention cites will likely result in identifying at least one more cost-beneficial SAMA. *Id.* In previously filed testimony, the NRC Staff has noted that “it

would require at least a doubling of benefits before the next SAMA on the candidate list could become potentially cost-beneficial (hence at a minimum a doubling of benefits is required to change the results of the SAMA analysis).⁷² Therefore, to reopen the record under 10 C.F.R. § 2.326(a), Pilgrim Watch must demonstrate that the issues raised by the Proposed New Contention would likely change the cost-benefit conclusions in the Pilgrim SAMA analysis by at least a factor of 2.

Pilgrim Watch argues that Entergy's SAMA analysis is flawed because the MACCS2, which Entergy used for its SAMA analysis "does not currently model and analyze aqueous transport and dispersion of radioactive materials; and there is no provision within the Severe Accident Mitigation Guidelines (SAMGs) for processing the water post accident." Proposed New Contention at 38.⁷³ Pilgrim Watch argues that "adding the impact of 'bleeding' contaminated water into the bay and runoff is new and significant information" which may explain why "the GEIS mistakenly determined 'societal and economic impacts of severe accidents are of small significance for all plants." *Id.* at 11. Pilgrim Watch claims that the actual or perceived⁷⁴ impact from aqueous transport and dispersion of radioactive material, as in Fukushima, must be considered as it would "significantly affect the marine ecology and economy," *id.* at 17, and will result in "[s]ignificant offsite economic consequences." *Id.* at 19.

⁷² Bixler and Ghosh Affidavit at 4.

⁷³ The Staff notes that this limitation to MACCS2 is not new information, and should have been challenged at the outset of this proceeding. Thus, it is untimely. *See Pilgrim*, LBP-11-23, 74 NRC at ___ (slip op. at 13-14). Moreover, as discussed *infra*, Pilgrim Watch does not raise a significant safety or environmental issue, much less an exceptionally grave issue. 10 C.F.R. § 2.326(a).

⁷⁴ For example, Pilgrim Watch argues that the Applicant's SAMA analysis must calculate the public's perception that fish or seafood is contaminated. Proposed New Contention at 30. *See also id.* at 17 (arguing that actual or perceived impact of contamination spread by currents, winds and tides into and around Cape Cod Bay, Massachusetts Bay and Cape Cod would significantly affect the marine ecology and economy).

By taking these impacts into account, Pilgrim Watch asserts that Entergy's SAMA analysis should be "revised to consider mitigative measures that previously may have been ignored or rejected." *Id.* at 38.⁷⁵ Thus, Pilgrim Watch argues that its "motion shows that a materially different result would be likely had this new and significant information been available to consider initially." *Id.* at 44.

In support of its claims, Pilgrim Watch relies on (1) an affidavit of Arnold Gundersen ("Gundersen Declaration"), (2) SECY-11-0089 (3) NUREG/CR-5634, (4) the FSEIS, (5) several studies, which are cited in Pilgrim Watch's motion, and (6) several newspaper and journal articles. See Proposed New Contention at 7-8, 20-22, 24-29, 33-37.

As an initial matter, Pilgrim Watch's claim that the GEIS' characterization of societal and economic impacts of severe accidents is erroneous⁷⁶ is an attack on the Commission's regulations and cannot be done absent a waiver. 10 C.F.R. § 2.335(a); *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 10, 12 (2001). Moreover, case law makes clear that an agency does not have a duty under NEPA to evaluate psychological harm related to the risk of a nuclear power plant accident. *Metropolitan Edison Co. v. People Against Nuclear Energy*, 460 U.S. 766, 779 (1983). Thus, the Applicant, in complying with NRC's Part 51 regulations implementing NEPA, does not have a duty to include in its SAMA analysis the public's perceived fears of contamination following a severe accident.

⁷⁵ See Gundersen Declaration at 11 (arguing that Entergy model pollutants transport over at least a 5-year time period, and use the 95% percentile, and not simply the mean).

⁷⁶ Proposed New Contention at 11 (arguing that the GEIS mistakenly determined societal and economic impacts of severe accidents are of small significance for all plants).

In any event, Pilgrim Watch has not produced sufficient evidence to demonstrate that the concerns raised by the Proposed New Contention would likely alter the conclusions in the SAMA analysis. Pilgrim Watch generally asserts that the studies and other evidence it relies on show an “increased probability of a severe accident and larger offsite consequences impacting the marine environment, that if analyzed would justify additional mitigation.” Proposed New Contention at 8.⁷⁷ But, Pilgrim Watch has not attempted to show that its claims would change the actual cost-benefit calculation on any given SAMA.⁷⁸ Instead, the motion and the Gundersen Declaration only talk generally about possible unanticipated and/or substantial offsite consequences and costs, including the public’s perception of possible contamination,⁷⁹ and “mitigative measures that previously may have been ignored or rejected.” Proposed New Contention at 38.

⁷⁷ Pilgrim Watch incorporates by reference its DTV and Re-Criticality contentions, arguing that both “support the significant technical gap in Entergy’s SAMA to which this [Proposed New Contention] is addressed...” Proposed New Contention at 8. As noted, a majority of this Board rejected both contentions in LBP-11-23 based on, among other things, their failure to meet the Commission’s reopening standards.

⁷⁸ The Commission recently rejected an appeal in the Diablo Canyon license renewal proceeding that claimed the licensing board erroneously admitted a SAMA contention that did not “show that an additional SAMA should have been identified as potentially cost-beneficial.” *Pacific Gas and Electric Company* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC __ (Oct. 12, 2011) (slip op. at 19) (ADAMS Accession No. ML11285A022) (quotations omitted). The Commission noted that the appellant’s argument was based on a reading of a case involving summary disposition, not initial contention admissibility. *Id.* “Our statement regarding the “materiality” of the contention should be read in the context of the issue involved in that case, which was whether the intervenor raised a genuine material dispute for the purposes of surviving summary disposition – a more rigorous evidentiary showing than that required to establish an admissible contention.” *Id.* at 19-20. Here, the Proposed New Contention must meet the reopening standards, which require a level of proof akin to summary disposition as opposed to the level needed for normal contention admissibility standards. *Private Fuel Storage, LLC* (Independent Spent Fuel Storage Installation), CLI-05-12, 61 NRC 345, 350 (2005). As a result, the Commission’s holding in *Diablo Canyon* supports the Staff’s argument that Pilgrim Watch must show how the information supporting the Proposed New Contention would lead to the identification of an additional cost-beneficial SAMA.

⁷⁹ See Proposed New Contention at 2, 3, 6, 8, 18-19, 22-23, 37, 41-42, 44-45; Gundersen Declaration at 4.

Moreover, Pilgrim Watch has not produced any evidence that demonstrates such a change would be likely. Certainly, Pilgrim Watch has not shown that its claims would likely double the value of any benefit, the necessary increase to change the conclusions in the SAMA analysis. Instead, Pilgrim Watch offers Mr. Gundersen's vague allegation that "Entergy's Pilgrim Station SAMA would be entirely different if Entergy had modeled and analyzed aqueous transport and dispersion of radioactive materials." Gundersen Declaration at 6. Such "bare assertions" do not meet the Commission's high standard for reopening the record. *Oyster Creek*, CLI-09-7, 69 NRC at 287. Rather, they are more akin to the cursory analyses the Commission has previously rejected under 10 C.F.R. § 2.326(a)(3). *Id.* at 290-91; *Entergy Nuclear Vermont Yankee, L.L.C. and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), CLI-11-02, 73 NRC __ (Mar. 10, 2011) (slip op. at 16-18) (ADAMS Accession No. ML110691312).⁸⁰

E. Pilgrim Watch's Attempt to Reopen the Record Is Not Supported by Expert Affidavit

In order to reopen the record, a petitioner must support its request with an affidavit from an expert. 10 C.F.R. § 2.326(b). The individual proffered by the party must be qualified as an expert in the field of study at issue in the contention. *Progress Energy Florida, Inc.* (Combined License Application, Levy County Nuclear Power Plant, Units 1 and 2), CLI-10-02, 71 NRC 27, 40-41 (2010) (affirming appropriateness of board's evaluation of expert's qualifications in determination whether contention was adequately supported by expert opinion); *Southern*

⁸⁰ Pilgrim Watch also claims that pursuant to NUREG-0386, Digest 15, United States Nuclear Regulatory Commission Staff Practice and Procedure Digest: Commission, Appeal Board, and Licensing Board Decisions – July 1972 – August 2009, at Post Hearing Matters 11-12 (Mar. 2010) (ADAMS Accession No. ML101000014), the Board may reopen the record *sua sponte* to reach a significant issue. But, that document clearly states, "Persons using this Digest are placed on notice that it may not be used as an authoritative citation in support of any positions before the Commission or any of its adjudicatory tribunals." *Id.* at ii.

Nuclear Operating Co. (Early Site Permit for Vogtle ESP Site), LBP 09-07, 69 NRC 613, 639-40 (2009) (expert testimony dependent on witnesses' qualifications as experts regarding issues at bar); *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), LBP-89-32, 30 NRC 375, 417 (1989); *Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-05-04, 61 NRC 71, 81 (2005). Pilgrim Watch's attempt to reopen the record and its Proposed New Contention, however, are not supported by an affidavit from an expert in the field of study at issue.

To support the contention and motion to reopen, Pilgrim Watch relies on the affidavit of Arnold Gundersen. Mr. Gundersen states that he holds a Master's Degree in Nuclear Engineering, began his career in the nuclear field in 1971, has served as an expert witness in other proceedings, and authored a report on decommissioning. He avers that he is familiar with a host of topics including:

Nuclear engineering management assessment and prudence assessment, Nuclear power plant licensing and permitting – assessment and review, Nuclear safety assessments, source term reconstructions, dose assessments, criticality analysis, and thermohydraulics, Contract administration, assessment and review, Systems engineering and structural engineering assessments, Cooling tower operation, cooling tower plumes, thermal discharge assessment, and consumptive water use, Nuclear fuel rack design and manufacturing, nuclear equipment design and manufacturing, and technical patents, Radioactive waste processes, storage issue assessment, waste disposal and decommissioning experience, Reliability engineering and aging plant management assessments, in-service inspection, Employee awareness programs, whistleblower protection, and public communications, Quality Assurance (QA) & records

Proposed New Contention, Exhibit Two. Mr. Gundersen states that his declaration is “specific to issues regarding the inadequacy of Pilgrim’s SAMA analysis” and simply states that he is “qualified to testify in support of this request for Hearing.” Proposed New Contention, Exhibit One, ¶¶ 9, 12.

The SAMA analysis is a probabilistic risk assessment designed to identify potentially cost-beneficial severe accident mitigation measures for the NRC’s environmental review. Bixler

and Ghosh Affidavit at 4.⁸¹ The Board has already noted the complexities within the SAMA analysis in this case. “The underlying analyses require modeling of extremely complex time and physical condition dependent phenomena, which all those familiar with the field know are generally not amenable to accurate modeling.” *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), LBP-07-13, 66 NRC 131, 142 & n.12 (2007). In this approach, the SAMA analysis “compute[s] hundreds of scenarios which [a]re then weighted according to their probabilities[,] and then [develops] a distribution of probabilities of the consequences and risks.” *Id.* Moreover, Staff experts have testified that “it would require at least a doubling of benefits before the next SAMA on the candidate list could become potentially cost-beneficial.” Bixler and Ghosh Affidavit at 4.

While Mr. Gundersen asserts expertise in many areas, he does not state that he has relevant experience or training in SAMA analyses in particular or probabilistic risk analyses in general. Instead, Mr. Gundersen states in a conclusory fashion that “[my] unique insights and comprehensive understanding of the accident scenario at Mark 1 BWR nuclear plants enables me to assess similar accident scenarios at Pilgrim Station and the impact and costs of such an accident upon the surrounding marine environment.” Proposed New Contention, Exhibit One ¶ 11. Although Mr. Gundersen claims familiarity with some aspects of Pilgrim Watch’s contention, he does not demonstrate that he is qualified to determine whether those issues will be sufficient to change the cost benefit conclusions in the SAMA analysis. Rather, Mr. Gundersen simply cites his “professional opinion” or “professional judgment” as a basis for his statements. Proposed New Contention, Exhibit One ¶¶ 19, 20, 21, 23. Therefore, contrary to

⁸¹ Bixler and Ghosh Affidavit at 4.

the Commission's requirements, Mr. Gundersen has not demonstrated that he is an expert in the field of probabilistic analyses, on which the SAMA analysis relies.

Moreover, contrary to the plain requirements of § 2.326(b), Mr. Gundersen does not provide expert factual or technical support for the bases of Pilgrim Watch's contention that Entergy's SAMA is inadequate. Rather, Mr. Gundersen relies on conclusory extrapolations from events at Fukushima to allege that the applicant should redo its SAMA analysis. Without reference to technical information for his conclusions, Mr. Gundersen states that if an accident occurred at Pilgrim similar to the accident at Fukushima, it would mean that "it would be likely that enormous quantities of contaminated water would enter Cape Cod Bay and other nearby waters and marshlands." Proposed New Contention, Exhibit One ¶ 16. Mr. Gundersen suggests that because "millions of gallons of contaminated water bled into the ocean at Fukushima, it is reasonable to assume that the same would hold true at Pilgrim" and that based on Fukushima, "[i]t is certainly reasonable to assume that [the entire Cape Cod Bay would be unusable by the public for its intended function after a severe accident at Pilgrim Station." Proposed New Contention, Exhibit One, ¶ 30, 33. Citing his "professional experience," Mr. Gundersen further claims that the economic effect of an accident similar to Fukushima at Pilgrim would result in "cleanup and waste disposal costs [that] could be substantial due to the amount of radioactive waste created and the challenges surrounding waste clean up, mitigation, and remediation." Proposed New Contention, Exhibit One ¶ 18. Mr. Gundersen's estimate of the economic impact only extends to stating that the economic impact of Fukushima was "staggering" and that the conversion of "Japanese Yen to US dollars to assess the economic impact of such an accident at Pilgrim Station shows that Price Anderson insurance limits will be exceeded to pay compensation for damages." Proposed New Contention, Exhibit One ¶ 38.

Mr. Gundersen, however, makes no such showing of how he reached these conclusions other than these pronouncements, which appear to be unfounded inferences. Previously, this

Board rejected such conclusory statements from Mr. Gundersen attempting to link events at Fukushima to inadequacies in Pilgrim's SAMA, finding his affidavit to "fail utterly to provide any technical support for this contention." *Pilgrim*, LBP-11-23, 74 NRC at ____ (slip op. at 34). "Mr. Gundersen provides no technical information, provides nothing explicit regarding operator actions or operation of, and provides no information as to operability or non-operability of the DTVs either at Pilgrim or at the Fukushima plants." *Id.* at 27. Likewise in this case, Mr. Gundersen does not provide and does not demonstrate that he is qualified to provide the required "meaningful factual or technical support" for these conclusory assertions. *AmerGen Energy Company, LLC* (Oyster Creek Nuclear Generating Station), LBP-08-12, 68 NRC 5, 27 (2008). Nor are these assertions any more than speculation inadequate to fulfill the requirements of § 2.326(b). *New Jersey Environmental Federation v. U.S. Nuclear Regulatory Com'n*, 645 F.3d 220, 236 (3d Cir. 2011) (where an expert affidavit offers only "speculation" and "fail[s] to offer supporting evidence," it falls short of the requirements of § 2.326(b)). Moreover, as this Board recently observed, "speculation by an expert cannot form the basis for admission of a contention on the basis of the matter being exceptionally grave" in a motion to reopen. *Pilgrim*, LBP-11-20, 74 NRC at ____ (slip op. at 30, n. 125) *citing Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 3), CLI-09-5, 69 NRC 115, 125 (2009) (affirming finding of untimeliness where expert did not explain how the issue presented an exceptionally grave safety or environmental issue).

Mr. Gundersen attempts to address the criteria for motions to reopen as required by § 2.326(b) (Proposed New Contention, Exhibit One, ¶¶ 21-24), but as discussed above, neither Pilgrim Watch's contention nor Mr. Gundersen's affidavit satisfies the admissibility criteria for motions to reopen. Mr. Gundersen is not an expert in the field of probabilistic analysis or SAMA evaluations, as required by § 2.326(b), nor does Mr. Gundersen's affidavit provide substantive technical or factual support for the bases of Pilgrim Watch's Proposed New Contention.

Consequently, the Board should not admit the Proposed New Contention, because Pilgrim Watch has not produced an affidavit from an expert that meets the requirements of § 2.326(b).

CONCLUSION

As demonstrated above, Pilgrim Watch's Proposed New Contention does not contain new information that was previously unavailable, was not filed in a timely manner, and does not meet the requirements for nontimely contentions under 10 C.F.R. § 2.309(c). Pilgrim Watch has also failed to meet the requirements for reopening the record. Accordingly, the record should not be reopened to admit Pilgrim Watch's Proposed New Contention and, because the contention itself is inadmissible, it should be denied.

Respectfully submitted,

/Signed (electronically) by/

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Dated at Rockville, Maryland
this 13^h day of December 2011

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing "NRC Staff's Answer in Opposition to Pilgrim Watch's Request for Hearing on A New Contention Regarding Inadequacy of Environmental Report, Post Fukushima " has been served upon the following by the Electronic Information Exchange, this 13th day of December, 2011:

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