

February 25, 2011

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

Before the Commission

In the Matter of)	
)	
NextEra Energy Seabrook, LLC)	Docket No. 50-443-LR
)	
(Seabrook Station))	
)	ASLBP No. 10-906-02-LR
(Operating License Renewal))	

**NEXTERA ENERGY SEABROOK, LLC’S NOTICE OF APPEAL OF LBP-11-02
AS TO THE NEW ENGLAND COALITION AND FRIENDS OF THE COAST**

Pursuant to 10 C.F.R. §§ 2.311(a) and (d), NextEra Energy Seabrook, LLC files this Notice of Appeal of the Atomic Safety and Licensing Board’s Memorandum and Order, dated February 15, 2011, which, among other things, admitted for litigation in the above-captioned proceeding three contentions jointly proffered by the New England Coalition and Friends of the Coast. Attached hereto is a brief in support of this appeal.

Respectfully Submitted,

/Signed electronically by Steven Hamrick/

Mitchell S. Ross
Antonio Fernández
NextEra Energy Seabrook, LLC
700 Universe Blvd.
Juno Beach, Florida 33408

Steven Hamrick
NextEra Energy Seabrook, LLC
801 Pennsylvania Avenue, N.W. Suite 220
Washington, DC 20004

COUNSEL FOR NEXTERA ENERGY
SEABROOK, LLC

February 25, 2011

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

Before the Commission

In the Matter of)	
)	
NextEra Energy Seabrook, LLC)	Docket No. 50-443-LR
)	
(Seabrook Station))	
)	ASLBP No. 10-906-02-LR
(Operating License Renewal))	

**BRIEF IN SUPPORT OF NEXTERA ENERGY SEABROOK, LLC'S
APPEAL OF LBP-11-02 AS TO
THE NEW ENGLAND COALITION AND FRIENDS OF THE COAST**

Mitchell S. Ross
Antonio Fernández
Steven Hamrick

COUNSEL FOR NEXTERA ENERGY
SEABROOK, LLC

February 25, 2011

TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION	1
II. BACKGROUND	1
III. STANDARD OF REVIEW	2
IV. SUMMARY OF ARGUMENT	2
V. ARGUMENT	4
A. NEC Contention 1 – “Inaccessible Cables” Is Inadmissible	5
1. NEC 1 is Not Adequately Supported	6
2. The Board Failed to Identify the Specific Bases Supporting NEC 1.....	10
B. NEC Contention 2 – “Transformers” is Inadmissible.....	11
C. NEC Contention 4 - “Severe Accident Mitigation Alternatives Analysis” is Inadmissible	16
1. NEC 4B is Inadmissible	19
2. NEC 4D is Inadmissible	21
3. NEC 4E is Inadmissible	25
VIII. CONCLUSION.....	28

TABLE OF AUTHORITIES

<u>Cases</u>	<u>Page</u>
<i>Conn. Bankers Ass’n v. Board of Governors</i> , 627 F.2d 245 (D.C. Cir. 1980)	3
<i>Crow Butte Resources, Inc.</i> (North Trend Expansion Area), CLI-09-12, 69 NRC __ (Jun. 25, 2009)	2, 11
<i>Duke Energy Corp.</i> (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-17, 56 NRC 1 (2002)	16
<i>Duke Energy Corp.</i> (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328 (1999)	19
<i>Entergy Nuclear Generation Co. & Entergy Nuclear Operations, Inc.</i> , (Pilgrim Nuclear Power Station) CLI-10-11, 71 NRC __ (2010) (Pilgrim I)	<i>passim</i>
<i>Entergy Nuclear Generation Co. & Entergy Nuclear Operations, Inc.</i> , (Pilgrim Nuclear Power Station) CLI-10-14, 71 NRC __ (2010) (Pilgrim II).....	12
<i>Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.</i> (Pilgrim Nuclear Power Station), CLI-10-22, 72 NRC __ (2010) (Pilgrim III)	23-4
<i>Entergy Nuclear Operations, Inc.</i> (Indian Point, Units 2 and 3), LBP-08-13, 68 NRC 43 (2008)	20
<i>Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc.</i> (Vermont Yankee Nuclear Power Station), LBP-10-19, 72 NRC __ (2010)	10
<i>Florida Power & Light Company, (Turkey Point Nuclear Generating Plant,</i> Units 3 and 4), CLI-01-17, 54 NRC 3 (2001).....	19
<i>Nuclear Management Co., LLC</i> (Monticello Nuclear Generating Plant) LBP-06-10, 62 NRC 314 (2006).....	21
<i>Nuclear Management Co., LLC</i> (Monticello Nuclear Generating Plant) CLI-06-17, 63 NRC 727 (2006).....	21
<i>Private Fuel Storage, LLC</i> (Indep. Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125 (2004).....	21-22
<i>Progress Energy Florida, Inc.</i> (Levy County Nuclear Power Plant, Units 1 and 2), CLI-10-02, 71 NRC __ (Jan. 7, 2010)	2, 15
<i>U.S. Department of Energy</i> (High Level Waste Repository), CLI-09-14, 69 NRC __ (Jun 30, 2009)	2
<i>USEC</i> (American Centrifuge Plant), CLI-06-10, 63 NRC 451 (2006)	14

Statutes and Regulations

10 C.F.R. § 2.309(f)(1)(iv)19
10 C.F.R. § 2.309(f)(1)(v)6
10 C.F.R. § 2.309(f)(1)(vi)6, 10
10 C.F.R. § 2.311(a).....1
10 C.F.R. § 2.311(d)1
10 C.F.R. § 54.21(a)(1)12

NRC Guidance and Rulemaking Documents

Final Rule, Nuclear Power Plant License Renewal; Revisions, 60 Fed. Reg. 22,461
(May 8, 1995)12
Final Rule, Rules of Practice for Domestic Licensing Proceedings – Procedural
Changes in the Hearing Process, 54 Fed. Reg. 33,168 (Aug. 11, 1989).....3
NUREG 1437, Generic Environmental Impact Statement for License Renewal of
Nuclear Plants (GEIS)..... 23-4
NUREG 1800, Rev. 1, Standard Review Plan for Review of License Renewal
Applications for Nuclear Power Plants.....9,13
NUREG-1801, Generic Aging Lessons Learned (GALL) Report –
Tabulation of Results, Rev. 1 (Sept. 2005) (GALL Rev. 1)5
NUREG-1801, Generic Aging Lessons Learned (GALL) Report –
Final Report, Rev. 2 (Dec. 2010) (GALL Rev. 2) 5-9
Proposed Rule, Rules of Practice for Domestic Licensing Proceedings—
Procedural Changes in the Hearing Process, 51 Fed. Reg. 24,365 (July 3, 1986)..... 4

I. INTRODUCTION

On February 15, 2011, the Atomic Safety and Licensing Board (“ASLB” or “Board”) in the above-captioned proceeding admitted three contentions (one of which contains three admitted subparts) raised by Friends of the Coast and the New England Coalition (“NEC” or “Petitioners”) in its Petition for Leave to Intervene, Request for Hearing, and Admission of Contentions, (Oct. 21, 2010) (“Petition”).¹ Pursuant to 10 C.F.R. § 2.311 (a) and (d), NextEra Energy Seabrook, LLC (“NextEra”) respectfully requests that the Commission reverse the Board’s decision to admit these contentions for hearing and find that the Petition should have been wholly denied.

II. BACKGROUND

This proceeding involves NextEra’s application for a renewed operating license for Seabrook Station, Unit 1 (“Application” or “LRA”) submitted by letter dated May 25, 2010. The NRC published notice of an opportunity for hearing in the Federal Register.² By order dated September 17, 2010, the Secretary of the Commission granted NEC a 30-day extension of time to file intervention petitions, until October 20, 2010. NEC filed its Petition one day late, on October 21, 2010. On November 15, 2010, NextEra and the NRC Staff filed answers opposing the Petition.³ On November 23, 2010, NEC replied to

¹ Although dated October 20, 2010, the Petition was actually served through the NRC’s Electronic Information Exchange on October 21, 2010.

² “Notice of Acceptance for Docketing of the Application and Notice of Opportunity for Hearing Regarding Renewal of Facility Operating License No. NPF-86 for an Additional 20-Year Period; Nextera Energy Seabrook, LLC; Seabrook Station, Unit 1,” 75 Fed. Reg. 42,462 (July 21, 2010) (“Hearing Notice”).

³ See “NextEra Energy Seabrook, LLC’s Answer Opposing the Petition to Intervene and Request for Hearing of Friends of the Coast and the New England Coalition” (Nov. 15, 2010) (“NextEra Answer”); and “NRC Staff’s Answer to Petitions to Intervene and Requests for Hearing Filed By (1) Friends of the Coast and New England Coalition and (2) Beyond Nuclear, Seacoast Anti-Pollution League and New Hampshire Sierra Club” (Nov. 15, 2010) (“Staff Answer”).

the NextEra and Staff answers, again one day after the filing deadline.⁴ On February 15, 2011, the Board issued its ruling on the Petition,⁵ admitting NEC Contentions 1, 2, 4B, 4D, and 4E for hearing.

III. STANDARD OF REVIEW

The Commission defers to Board rulings on contention admissibility unless it finds clear error or abuse of discretion. *Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), CLI-10-02, CLI-10-2, 71 NRC __ (Jan. 7, 2010) (slip op. at 1); *U.S. Department of Energy* (High Level Waste Repository), CLI-09-14, 69 NRC __ (Jun 30, 2009) (slip op. at 4); *Crow Butte Resources, Inc.* (North Trend Expansion Area), CLI-09-12, 69 NRC __ (Jun. 25, 2009) (slip op. at 8-9).

IV. SUMMARY OF ARGUMENT

In LBP-11-02, the Board erred in admitting NEC Contentions 1, 2, and portions of NEC Contention 4 because it failed to identify the information provided by NEC that was sufficient to show the existence of a genuine dispute as to a material issue. 10 C.F.R. § 2.309(f)(1)(vi). Specifically, NEC 1 and NEC 2 fail to present factual allegations or expert opinion necessary to show the existence of a *genuine* dispute with the LRA. 10 C.F.R. §§ 2.309(f)(1)(v) and (vi). NEC 4 also suffers from this flaw, and is also inadmissible because it provides no information to show that the various disputes raised therein are material to the decisions the NRC must make to support issuance of the renewed license. 10 C.F.R. §§ 2.309(f)(1)(iv). In LBP-11-02, the Board repeatedly cited the Commission's Statements of Consideration from its 1989 amendment of 10 C.F.R.

⁴ See "Friends of the Coast and New England Coalition Reply to NextEra NRC Staff Answers" (Nov. 22, [sic] 2010) ("Petitioners' Reply").

⁵ Memorandum and Order (Ruling on Petitions for Intervention and Requests for Hearing) LBP-11-02 (February 15, 2011).

Part 2 that the required factual support is “a minimal showing that material facts are in dispute.” *See, e.g.*, LBP-11-02 (slip op. at 16, 31, 48) (citing Final Rule, Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process, 54 Fed. Reg. 33,168, 33,171 (Aug. 11, 1989) (“1989 Final Rule”). However, at the contention admissibility stage, Boards still must consider the information presented in support of the contentions, in accordance with Commission caselaw.

Under NRC rules, “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.” 1989 Final Rule, 54 Fed. Reg. at 33,171 (citing *Conn. Bankers Ass’n v. Board of Governors*, 627 F.2d 245, 251 (D.C. Cir. 1980)). Where a careful review of a petitioner’s contentions show that its assertions are not supported (or even addressed) by purported expert opinion (NEC 1), are based upon clear mischaracterizations of the LRA (NEC 1), are supported only by bald and conclusory assertions of a purported expert who simply parrots the relevant legal standard (NEC 2), or where a petitioner expressly disclaims any attempt to show that its claims are material (NEC 4), the contention does not meet even this “minimal showing.” In ruling that these flawed contentions meet the Commission’s contention admissibility standards, the Board erred. For all of these reasons, the three contentions proffered by NEC should be rejected and its Petition should be wholly denied.

V. ARGUMENT

At the outset, it should be noted that most of the three admitted contentions were copied from other license renewal proceedings.⁶ The Board in LBP-11-02 did not see a problem with this approach (*see slip op.* at 47, n. 248), but the cutting and pasting of contentions was one of the problems that the Commission sought to address when it toughened its contention admissibility rules in the 1980s: “In practice, this requirement [the prior contention admissibility standard] may be met by copying contentions from another proceeding involving another reactor. Thus, an intervenor may not fully understand a contention and frivolous contentions may be admitted.” Proposed Rule, Rules of Practice for Domestic Licensing Proceedings—Procedural Changes in the Hearing Process, 51 Fed. Reg. 24,365 at 24,366 (July 3, 1986). Cut-and-pasted contentions must be carefully reviewed to ensure that the petitioner has provided a sufficient nexus to the application at issue to ensure the existence of a genuine dispute with *that particular* application. Consistently throughout its Petition, NEC’s copied contentions retain references to other reactors and NRC Staff review documents that have not yet been prepared for Seabrook, calling into question whether it or its expert have even examined the Seabrook application, as is required by 10 C.F.R. § 2.309(f)(1)(vi).

⁶ Compare NEC 1 with New York State Contention 6, which challenged the *Indian Point* LRA. See New York State Notice of Intention to Participate and Petition to Intervene (Nov. 30, 2007) (“New York State Petition”) at 92-100 (ADAMS Accession No. ML073400187). See also “[NEC’s] Motion to Reopen the Hearing and for the Admission of New Contentions” in the *Vermont Yankee* proceeding. (Aug. 20, 2010) (ADAMS Accession No. ML102420042). Compare NEC 2 with New York State Contention 8, New York State Petition at 103-05. Compare NEC 4B with Edwin Lyman, *A Critique of the Radiological Consequence Assessment Conducted in Support of the Indian Point Severe Accident Mitigation Alternatives Analysis* (Nov. 2007) (the “Lyman Report”), attached to Riverkeeper, Inc.’s Request for Hearing and Petition to Intervene in Indian Point License Renewal Proceeding (November 30, 2007) (ADAMS Accession No. ML073410093”). NEC 4D and 4E are based on claims asserted in the *Pilgrim* license renewal proceeding. See, e.g., *Entergy Nuclear Generation Co. & Entergy Nuclear Operations, Inc.*, (Pilgrim Nuclear Power Station) CLI-10-11, 71 NRC __, __ (*slip op.* at 5, 30) (2010).

A. NEC Contention 1 – “Inaccessible Cables” Is Inadmissible

NEC 1 challenges NextEra’s aging management program (“AMP”) for non-environmentally qualified inaccessible cables. NextEra described this program in section B.2.1.34 of the Seabrook LRA, “Inaccessible Medium-Voltage Cables Not Subject to 10 C.F.R. 50.49 EQ Requirements” (“Non-EQ Medium Voltage Inaccessible Cables Program”). Pet. at 10-11. This program was based upon a program of the same name in Revision 1 of the GALL Report (NUREG-1801) and included a certification of its consistency with the GALL Rev. 1 XI.E3 program with no exceptions. LRA at B-182.

On October 29, 2010, NextEra submitted a supplement to its LRA, in order to bring it in line with Revision 2 of the GALL Report. This supplement amended the Non-EQ Inaccessible Medium-Voltage Cables Program. Letter from P. Freeman, NextEra to NRC Document Control Desk, Supplement to the NextEra Energy Seabrook, LLC Seabrook Station License Renewal Application (October 29, 2010) (“LRA Supplement”). The scope of the amended AMP was expanded to include low voltage cables, resulting in a change of the AMP’s name to “Inaccessible *Power* Cables Not Subject to 10 CFR 50.49 EQ Requirements.” See LRA Supplement, Encl. 2 at 2, 6.

As described by the Board in LBP-11-02, NEC 1 alleges that the Non-EQ Inaccessible Medium-Voltage Cables Program⁷ is inadequate because it fails to:

- (1) address specific recommendations in two reports from the national laboratories at Sandia and Brookhaven;
- (2) identify testing methods that would adequately assure that submerged or previously submerged cables will perform their functions for the duration of a postulated accident;
- (3) provide measures to detect cable degradation prior to failure by using techniques for measuring and trending the condition of cable

⁷ Because the Petition was filed in response to the original Non-EQ Inaccessible Medium-Voltage Cables Program, NextEra’s Answer first addressed the admissibility of the contention with respect to the original program and then addressed whether the revised program mooted NEC’s claims.

- insulation, such as partial discharge testing, time domain reflectometry, dissipation factor testing, and low frequency alternating current testing; and
- (4) identify the location and extent of Non-EQ Inaccessible Cables in use at Seabrook.

LBP-11-02 (slip op. at 28) (footnotes omitted). The Board then identified the fifth and central claim of NEC 1, that NextEra:

must either replace all cables (and splices) that have been exposed to submergence or develop a comprehensive aging management program to preclude moisture and adequately test all cables that have been exposed to an environment for which it was not designed.

Id. (citing NEC Petition at 20 (emphasis in original)).

As demonstrated below, the Board in LBP-11-02 erred in determining that “Petitioners’ references to various technical documents as well as the declaration from Mr. Blanch adequately support admission of this contention.” LBP-11-02 (slip op. at 29).

1. NEC 1 is Not Adequately Supported

Neither the Blanch declaration nor any other proffered document provides support for NEC’s claims as is required by 10 C.F.R. § 2.309(f)(1)(v). In fact, none of the five claims identified by the Board support its finding that NEC 1 provided sufficient information to demonstrate the existence of a genuine dispute as to a material issue of fact or law. 10 C.F.R. § 2.309(f)(1)(vi). The Board erred in LBP-11-02 by not examining the support proffered for each of these specific bases for NEC 1. We address NEC’s five claims below, *seriatim*.

First, the Board referenced NEC’s claim that the LRA failed to address “specific recommendations” in two reports from the national laboratories at Sandia and Brookhaven. LBP-11-02 (slip op. at 27-28) (citing Pet. at 12, 15-16). Petitioners must present contentions with specificity and particularity. 10 C.F.R. § 2.309(f)(1). But NEC

did not identify what “specific recommendations” from these documents the LRA failed to include. *See* NEC Petition at 12, ¶¶ 7-8, 15-16 ¶ 18. In fact, the referenced Sandia Cable Aging Management Guideline (SAND96-0344) provides the technical basis for the underlying GALL XI.E3 AMP. *See* GALL Rev. 1 at XI.E-7. LRA Appendix B.2.1.34 clearly states that Seabrook’s Non-EQ Inaccessible Medium-Voltage Cables Program is consistent with NUREG-1801 XI.E3, with no exceptions, and it also explains that the development of the B.2.1.34 program “considers the technical information and guidance in [SAND96-0344].” LRA at B-181. NEC also cites NUREG/CR-7000, a Brookhaven study from which NEC cites the Abstract, the Forward, and the “Recommendations” section, which indicates that the study recommends the incorporation of nine essential elements in a comprehensive cable monitoring program. Pet. at 19-20, ¶¶ 20-22. NEC does not identify these nine elements nor does it identify which, if any, of the nine elements it believes to be missing from the Seabrook AMP.

Second, the Board referenced NEC’s claim that NextEra’s AMP does not “identify testing methods that would adequately assure that submerged or previously submerged cables will perform their functions for the duration of a postulated accident.” LBP-11-02 (slip op. at 28) (citing NEC Petition at 14). Here, the Board misstates the claim in NEC 1, which actually alleges: “[t]here *are no testing methods available* to adequately assure the submerged or previously submerged cables will perform their functions for the duration of the postulated accident.”⁸ NEC Petition at 14 ¶ 15

⁸ The Blanch declaration makes an unrelated claim, asserting that in-service testing of safety-related systems “can demonstrate the function of the cables under test conditions” but “does not provide specific information on the status of cable aging degradation processes nor the physical integrity and dielectric strength of its insulation and jacket materials.” Blanch Decl. at 9, ¶ 26 (quoting NUREG/CR-7000 at xi). But this claim is irrelevant. The Non-EQ Inaccessible Medium-Voltage Cables Program does not rely on the in-service systems testing to which Blanch refers but instead requires a “proven test” that will “provide

(emphasis added). Once again, NEC provided no support for its bald assertion; even the Blanch Declaration did not make any such claim.

Third, the Board referenced NEC's claim that the AMP does not "provide measures to detect cable degradation prior to failure by using techniques for measuring and trending the condition of cable insulation, such as partial discharge testing, time domain reflectometry, dissipation factor testing, and low frequency alternating current testing." LBP-11-02 (slip op. at 28) (citing NEC Petition at 14). This claim simply failed to address, and hence failed to dispute, information in the LRA. The Non-EQ Inaccessible Medium Voltage Cable Program called for "a proven test for detecting deterioration of the insulation system due to wetting, such as power factor, partial discharge, or polarization index, as described in EPRI TR-103834-P1-2, 'Effects of Moisture on the Life of Power Plant Cables' or other testing that is state-of-the-art at the time the test is performed." LRA at B-181. This language is consistent with the referenced GALL AMP, XI.E3. *See* GALL Rev. 1 at XI.E-7. NextEra's amendment to bring its program in line with GALL Rev. 2 did not modify this description of the tests (although it did increase their frequency). *See* LRA Supp. Encl. 2 at 2, 5. NextEra's program provides *exactly* what NEC baselessly argues that it does not; and NEC's failure to address and genuinely dispute the information in the LRA render its claim inadmissible under 10 C.F.R. § 2.309(f)(1)(vi).

Fourth, the Board referenced NEC's claim that NextEra did not "identify the location and extent of Non-EQ Inaccessible Cables in use at Seabrook." LBP-11-02 (slip op. at 28) (citing NEC Petition at 12). Blanch did address this issue, though his

an indication of the condition of the conductor insulation." LRA at B-181; *see also* GALL Rev. 1 at XI.E-7.

discussion of it was misplaced in the section of his declaration that addressed transformers under NEC 2. *See* Blanch Decl. at 13, ¶ 38 (“Characterization of cables by commodity grouping is an acceptable practice only if the location where each cable type is used is also identified”). The GALL Report explains that “[e]lectrical cables and their required terminations (i.e., connections) are typically reviewed as a single commodity.” GALL Rev. 1 at VI A-1; *see also* NUREG 1800, Rev. 1, Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants, at 2.1-5, 2.1-13. Neither NEC nor Mr. Blanch ever explained what benefit, if any, would be gained by including the precise locations of these cables in the LRA or why commodity grouping, a longstanding license renewal practice, is inappropriate.

Finally, the Board identified NEC’s central claim – that NextEra must be required to preclude moisture from affecting non-EQ inaccessible cables. LBP-11-02 (slip op. at 28) (citing NEC Petition at 20). Once again, this claim finds no support in the Blanch declaration or other supporting documentation – Blanch never asserted a need to preclude wetting of cables. Moreover, NEC did not provide any indication of whether precluding all wetting of these below-grade cables would be practicable or any factual or expert support showing that precluding wetting would be superior to the aging management afforded by NextEra’s AMP. 10 C.F.R. § 54.21(a)(3) requires license renewal applicants to include programs to *manage* aging effects. There is no regulatory basis upon which to require a program to *preclude* aging effects. Thus, NEC provided no expert support or legal basis for its claim.

In any event, as the *Vermont Yankee* Board recently explained when faced with a nearly identical contention, “while the total preclusion of wetting or submergence below

grade cables might be ideal, it does not appear that the mere existence of such wetting or submergence is automatically significant.” *Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), LBP-10-19, 72 NRC __, __ (2010) (slip op. at 25-26). In fact, that Board reasoned, “the potential for such wetting or submergence seems to be assumed, otherwise there would be no need for an AMP to manage it.” *Id.* at 26.

Of the five NEC 1 claims identified by the Board in its ruling, only one is addressed in the Blanch declaration (Blanch’s misplaced and conclusory assertion that the locations of all cables must be identified). Not one of the five claims is adequately supported by allegations of fact or expert opinion (10 C.F.R. § 2.309(f)(1)(v)) in a manner sufficient to demonstrate the existence of a genuine material dispute with the application (§ 2.309(f)(1)(vi)). The Board’s determination in LBP-11-02 to the contrary is without justification in the record.

2. The Board Failed to Identify the Specific Bases Supporting NEC 1

Moreover, the Board erred by not clearly identifying which bases of NEC 1 it admitted for hearing. Several of the claims presented have been mooted by NextEra’s submittal of its revised AMP. For instance, NEC claims that it “defies engineering logic” to limit this AMP to cable subjected to “system voltage more than 25 percent of the time.” Pet. at 14 ¶13. This claim is inadmissible because the Blanch Declaration does not address this energization threshold issue and NEC offers no other support for the claim. Regardless, the claim was clearly mooted by NextEra’s amendment of the AMP to remove the 25 percent energization threshold so that the program applies to cables regardless of the frequency of energization. LRA Suppl. Encl. 2 at 6. The revised

program also reduces the maximum time between manhole inspections from two years to one year (*See* Pet. at 15, ¶ 17). *Id.*

But the Board did not explicitly hold that NEC’s challenges to these issues have been mooted. Instead, the Board explained that while many of NEC’s claims may be moot, Boards “admit contentions . . . and not their supporting bases” and the unidentified “remaining allegations” provided sufficient support. LBP-11-02 (slip op. at 31). However, Boards must identify which of the various claims made in a contention are admitted for hearing. *Crow Butte*, CLI-09-12, 69 NRC at __ (slip op. at 23). Here, the Board did not clearly state whether the mooted bases were admitted as part of the hearing, nor did it identify which of the remaining (deficient) bases were admitted. A Board should not leave doubt as to which matters are and are not admitted for hearing. *Id.* at 24.

For all of these reasons, NEC Contention 1 is inadmissible.

B. NEC Contention 2 – “Transformers” is Inadmissible

NEC 2 claims that NextEra’s LRA is inadequate because it fails to include an AMP for electrical transformers that are important to safety. NEC Pet. at 20. In fact, NextEra “screened out” transformers from aging management review (“AMR”) because they are active components that do not require aging management. NEC disagrees with this determination and the Board found that it “adequately raised an issue as to whether transformers constitute active or passive components.” LBP-11-02 (slip op. at 32-33). The Board’s decision is based solely upon its finding that the Blanch declaration was adequate to raise this issue. *Id.* at 33. But the Blanch declaration provides only conclusory (and contradictory) assertions – first that transformers are active components,

and then that they are passive components. Blanch's conclusory statements are insufficient to support admission of NEC 2. The Board's admission of NEC 2 on this basis constitutes an abuse of discretion.

10 C.F.R. § 54.21(a)(1) limits the structures and components subject to license renewal AMR to those structures and components "that perform an intended function . . . without moving parts or without a change in configuration or properties." These are considered "passive" components. *Entergy Nuclear Generation Co. & Entergy Nuclear Operations, Inc.*, (Pilgrim Nuclear Power Station) CLI-10-14, 71 NRC __, __ (slip op. at 5) (2010) (Pilgrim II). "Active" components, by contrast, are not subject to an AMR because "[e]xisting regulatory programs, including required maintenance programs, can be expected to 'directly detect the effects of aging' on active functions." *Id.* (citing Final Rule, Nuclear Power Plant License Renewal; Revisions, 60 Fed. Reg. 22,461, 22,472 (May 8, 1995) ("1995 Final Rule")).

In its Statements of Consideration accompanying the revised license renewal rule, the Commission explained:

a pump or valve has moving parts, an electrical relay can change its configuration, and a battery changes its electrolyte properties when discharging. Therefore, the performance or condition of these components is readily monitored and would not be captured by this description [of passive components].

1995 Final Rule, 60 Fed. Reg. at 22,477. It also concluded that "a change in configuration or properties" includes "a change in state" and explained by way of example that a transistor can change its state, and so would be considered an active component. *Id.* In 10 C.F.R. § 54.21(a)(1)(i), the Commission provided additional examples of electrical components that are screened out of license renewal review as

active components (including “transistors, batteries, breakers, relays, switches, power inverters, circuit boards, battery chargers, and power supplies”).

Subsequent NRC Guidance implementing 10 C.F.R. § 54.21(a)(1) specifically determined that transformers are active components and are excluded from AMR:

Transformers perform their intended function through a change in state by stepping down voltage from higher to lower value, stepping up voltage to a higher value, or providing isolation to a load. Transformers perform their intended function through a change of state similar to switchgear, power supplies, battery chargers, and power inverters, which have been excluded in §54.21(a)(1)(i) from an aging management review. Any degradation of the transformer’s ability to perform its intended function is readily monitorable by a change in the electrical performance of the transformer and associated circuits. Trending electrical parameters measured during transformer surveillance and maintenance such as Doble test results, and advanced monitoring methods such as infrared thermography, and electrical circuit characterization and diagnosis provide a direct indication of the performance of the transformer. Therefore, transformers are not subject to an aging management review.

Letter from C. Grimes, NRC License Renewal Project Directorate, to D. Walters, NEI, “Determination of Aging Management Review for Electrical Components” (Sept. 19, 1997) at 2 (“Grimes Letter”).⁹ In the face of this longstanding, well-supported NRC position, NEC baldly asserts, without any explanation, that transformers “contain no moving parts and do not undergo a change of properties or state.” Pet. at 22 ¶8; Blanch Decl. at 11 ¶28.

Both NEC and Blanch go on to contradict their own positions by stating that “transformers are active devices . . .” Pet. at 22 ¶9; Blanch Decl. at 12 ¶36. The Board states that NextEra and the NRC Staff “seize upon” these “obvious typographical errors”

⁹ This NRC position is included in Appendix C to NEI-95-10, “Industry Guidelines for Implementing the Requirements of 10 CFR Part 54 – The License Renewal Rule” (Rev. 6, June 2005) (ADAMS Accession No. ML051860406). NEI-95-10 is endorsed by NRC Regulatory Guide 1.188 Rev. 1. Similarly, the NRC Standard Review Plan indicates that transformers are not passive components subject to aging management review under Section 54.21(a)(1)(i). See NUREG-1800 at 2.1-23, line 104.

to argue against the admission of the contention. LBP-11-02 (slip op. at 34). The Board declined to reject the contention on this basis, stating that it would rely upon the representation of NEC's representative, who attempted to correct these errors at the prehearing conference,¹⁰ or it could otherwise "infer on [its] own initiative" that NEC meant to consistently allege that transformers are passive components. *Id.*

Regardless of the propriety of this inference, by focusing on these "typographical" errors, the Board ignored NextEra's more basic argument against the admission of NEC 2 – that Blanch's assertions are conclusory and thus insufficient to support admission of the contention. Blanch never explained why he believes transformers do not have a change in properties or state. He simply identified the threshold legal question – whether transformers have a change in properties or state – and restated that standard in a conclusory manner. Conclusory assertions, even when provided by a purported expert, are insufficient to demonstrate that further inquiry is appropriate. *USEC* (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 472 (2006) ("[A]n expert opinion that merely states a conclusion (e.g., the application is 'deficient,' 'inadequate,' or 'wrong') without providing a reasoned basis or explanation for that conclusion is inadequate because it deprives the Board of the ability to make the necessary, reflective assessment of the opinion" (footnote omitted)).

The Commission recently distinguished its *USEC* decision, helping to identify the line between an expert who provides an impermissibly conclusory assertion and one whose declaration provides minimal, yet sufficient detail to support a contention.

¹⁰ See Transcript at 107-08.
JUDGE WARDWELL: I don't understand unless you're saying active is a typo for passive.
MR. SHADIS: That should have read inactive, I believe.

Progress Energy Florida, Inc. (Levy County Nuclear Plant, Units 1 and 2), CLI-10-02, 71 NRC __ (slip op. at 16-17) (2010). The purported expert in *Levy County* “offered more than [her] conclusion that the environmental impacts . . . would be ‘large.’” *Id.* at 17. Her “declaration explained her reasons for concluding that the proposed project would have harmful effects on aquatic resources, and cited or attached supporting documents.” *Id.* By contrast, in *USEC*, the Commission “held that the Board need not accept an expert’s bare conclusions that an application is ‘deficient,’ ‘inadequate’ or ‘wrong’ as support for a contention.” *Id.* at 16 (citing *USEC*, CLI-06-10, 63 NRC at 472).

The Blanch declaration is much closer to the *USEC* example. Unlike the expert in *Levy County*, Blanch did not “state his reasons for concluding that” transformers perform their functions without a change of properties or state. Instead, as in *USEC*, he simply asserted a legal conclusion with no explanation for that conclusion. NEC must do more than state that transformers function without a change in configuration or properties, it must explain why it believes that to be the case. While the NRC Staff position is not insulated from challenge, a petitioner presenting such a challenge still must address the reasons the Staff provides for its conclusion that transformers are active devices that do not require aging management. But here, neither NEC nor Blanch offered any explanation of how a transformer’s intended function could be compromised by the lack of an AMP. *See* Pet. at 22 ¶9; Blanch Decl. at 12 ¶36 (“the licensee has not provided for any AMP to assure ??????”). Judging by the NRC Staff position set forth in the Grimes letter, NEC’s inability to do so is likely due to the fact that transformer performance can be readily monitored and trended such that transformers do not, in fact, require aging

management. In LBP-11-02, the Board erred by ignoring this argument and admitting NEC 2 on the basis of Blanch's conclusory assertion.

C. NEC Contention 4 - "Severe Accident Mitigation Alternatives Analysis" is Inadmissible

NEC 4 challenges NextEra's Severe Accident Mitigation Alternatives ("SAMA") analysis. SAMA reviews, site-specific severe accident mitigation analyses, "ensure that any plant changes - in hardware, procedures, or training - that have a potential for significantly improving severe accident safety performance are identified and assessed." *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-17, 56 NRC 1, 5 (2002). SAMA analysis is "rooted in a cost-benefit assessment." *Id.* at 5. Thus, it is "unreasonable to trigger full adjudicatory proceedings based merely upon a suggested SAMA under circumstances in which the Petitioners have done nothing to indicate the approximate relative cost and benefit of the SAMA." *Id.* at 12.

Contention 4 boils down to NEC's assertion that there are better methods available for determining the offsite dose consequence and economic cost valuations in the SAMA analysis than those NextEra employed. But because it is subject to NEPA's rule of reason, the pertinent question for a SAMA analysis is not whether there are "plainly better" models or whether the analysis can be further refined, but rather whether the selected methodology is reasonable. *Entergy Nuclear Generation Co. & Entergy Nuclear Operations, Inc.*, (Pilgrim Nuclear Power Station) CLI-10-11, 71 NRC __, __ (slip op. at 37) (2010) (Pilgrim I). "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.” *Id.* (slip op. at 39) (emphasis added). Thus, in order to demonstrate that its concerns raise a genuine *material* dispute with the applicant, NEC must provide sufficient information to show that, if its proposed refinements were incorporated, it is “genuinely plausible” that the Seabrook SAMA analysis cost-benefit conclusions may change.

In LBP-11-02, the Board acknowledged the Commission’s *Pilgrim I* decision, but reasoned that the Commission had not intended to rewrite its contention admissibility standards. LBP-11-02 (slip op. at 40). That is certainly true, but the Commission in *Pilgrim I* did explain how to meet its existing materiality requirement set forth in 10 C.F.R. § 2.309(f)(1)(iv). And NEC freely admits that it has not even attempted to meet this burden. *See* Pet. at 76 (“Petitioners do not offer examples of how the cost benefit equation might have been skewed in favor of no mitigation.”). Instead, NEC simply asserts that “[t]he dramatic minimization of costs by NextEra are such that it should be obvious that *many* SAMAS would be cost effective if the described defects in the analysis were addressed.” *Id.* at 76-77 (emphasis in original); *see also* Pet. at 72 (“[i]t seems clear that a number of additional SAMAs that were previously rejected by the applicant’s methodology will now become cost effective.”).

The Board correctly concluded that a petitioner need not re-perform an entire SAMA analysis with its preferred inputs or models in order to demonstrate that it raises a material issue. *See* LBP-11-02 (slip op. at 40). But instead of applying the Commission’s “genuinely plausible” standard, the Board rendered that standard toothless. In each of the admitted portions of Contention 4, the Board simply presumed that

challenges to aspects of the modeling might affect the cost-benefit analysis, without requiring NEC to put any sort of measure on that impact.

Such a lenient test cannot show *genuine* plausibility because it fails to take into account the entirety of the SAMA analysis. For instance, NextEra's ER describes a number of sensitivity analyses it performed to account for uncertainty both in core damage frequency ("CDF") determination (the PRA results) and in atmospheric and evacuation inputs modeling (the Level 3 analysis). *See* ER at F-158-59. Nowhere in the contention does NEC acknowledge the uncertainty factor that NextEra applied and sensitivity analyses that it performed to account for many of the very concerns that NEC identifies. But in order to show that it is genuinely plausible that its changes would make a difference in the ultimate cost-benefit conclusion it must attempt to demonstrate that the effects of its suggested changes would be so significant as to overcome the inherent conservatism of the analysis as represented by the uncertainty factor and the various atmospheric sensitivity analyses. The Board acknowledged that this was a "reasonable counter argument[]", but it nevertheless concluded that this is an issue appropriate for further merits litigation. LBP-11-02 (slip op. at 55).

Instead of a counter argument on the merits, this argument properly explains that NEC failed to meet the threshold requirement at the contention admissibility stage of demonstrating that its claims are material. While, as the Board concluded, NEC need not necessarily have an expert re-run the SAMA analysis at this stage, NEC must be able to tie the suggested modifications to an ultimate SAMA cost-benefit conclusion, beyond simply speculating that the impact on the SAMA appears to be significant. *See Florida Power & Light Company*, (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-

01-17, 54 NRC 3, 19 (2001) (Petitioners “need not be technical experts, [but] must knowledgeably provide some threshold-level factual basis for their contention.”).¹¹ That crucial step is missing in NEC 4, which fails, therefore, to demonstrate that it raises a material issue. 10 C.F.R. § 2.309(f)(1)(iv).

For these reasons, the Board erred in admitting NEC 4. The Board also erred in admitting specific subparts of NEC 4, as described below.

1. NEC 4B is Inadmissible

In NEC 4B, the Board admitted NEC’s claim that NextEra’s source term used in its SAMA analysis, generated by the Modular Accident Analysis Progression (MAAP) code, leads to anomalously low consequences compared to source terms generated by the NRC Staff using NUREG-1465. LBP-11-02 (slip op. at 46) (citing Pet. at 44). But in support of this contention, NEC offers only its own unsupported speculation. This portion of NEC 2 is copied almost verbatim from a proffered expert report of Dr. Edwin Lyman presented in support of Riverkeeper EC-2, a contention in the *Indian Point* license renewal proceeding.¹² Dr. Lyman performed his own SAMA analysis for Indian Point, using the MACCS2 code to conduct an independent evaluation of severe accident consequences. Lyman Decl. at 2. According to Dr. Lyman, his results indicated that the

¹¹ An expert is not always required, but for complex contentions such as this, an expert can be immensely helpful in showing a *genuine* dispute. As the Commission explained in one of its first license renewal decisions, “[i]t is surely legitimate for the Commission to screen out contentions of doubtful worth and to avoid starting down the path toward a hearing at the behest of petitioners who themselves have no particular expertise -- or expert assistance -- and no particularized grievance.” *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 342 (1999).

¹² See Edwin Lyman, *A Critique of the Radiological Consequence Assessment Conducted in Support of the Indian Point Severe Accident Mitigation Alternatives Analysis* (Nov. 2007) (the “Lyman Report”), attached to Riverkeeper, Inc.’s Request for Hearing and Petition to Intervene in Indian Point License Renewal Proceeding (Nov. 30, 2007) (“Riverkeeper Petition”) (ADAMS Accession No. ML073410093”).

licensee's SAMA analysis underestimated consequences due to the particular source term used. *Id.*

Here, NEC simply cut-and-pasted the Lyman Report and replaced references to Indian Point with references to Seabrook. *Compare* Pet. at 44 with Lyman Report at 2-3. But a plant-specific SAMA analysis cannot simply be copied and applied to a different plant by a layperson (further demonstrating the plain lack of analysis underlying NEC 4B). The Board acknowledged this yet concluded that NEC's cut-and-paste approach to contention preparation "does not negate the support provided by" the cited documents. *See* LBP-11-02 (slip op. at 47) n.248. However, without expert opinion to suggest that the use of MAAP is inappropriate and that the other source terms would be more reasonable, NEC cannot show that its claims, as applied to Seabrook, are based on anything other than its own uninformed speculation.¹³ In fact, as admitted by the Board in LBP-11-02, the contention only alleges that other models may produce a larger source term. NEC does not even attempt to allege that one is more accurate than the other. This portion of NEC 2B is inadmissible because it does not provide sufficient information to demonstrate the existence of a genuine dispute with the applicant. 10 C.F.R. § 2.309(f)(1)(vi).

¹³ Regardless, even with Dr. Lyman's ostensibly expert, plant-specific analysis, Riverkeeper Contention EC-2 was not admitted in Indian Point. *Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), LBP-08-13, 68 NRC 43, 185 (2008). In that case, the NRC Staff explained that NUREG-1465 addresses only releases into containment and assumes that containment remains intact but leaks. *Id.* Therefore, the NRC Staff explained and the Board concluded that the NUREG-1465 methodology does not apply in the scenario in which the Petitioners would like to apply it, that of "early energetic containment breach" and so the Board found the Riverkeeper contention to be inadmissible. *Id.*

2. NEC 4D is Inadmissible

NEC 4D alleges that ATMOS, the steady-state, straight line Gaussian plume model embedded in the accident consequence code (MAACS2) used in NextEra's SAMA analysis is not adequate to represent Seabrook's coastal site and thus underestimates both the size of the area that would be affected by a severe accident and the dose likely to be received in that area. *See* LBP-11-02 (slip op. at 49) (citing Pet. at 47-8). NEC contends that the modeling limitations of the ATMOS code will not account for dose that may become more concentrated due to "variable winds, sea breezes, plume behavior over water, and terrain." *Id.* at 50 (citing Pet. at 48-53). It seeks to require NextEra to re-perform the modeled transport and deposition using a site-appropriate variable plume model such as AERMOD or CALPUFF. Pet. at 47. The Board erred in admitting NEC 4D because it: (1) is not adequately supported; and (2) fails to address and hence fails to dispute information in the application addressing modeling uncertainties. Because of these failures, NEC also fails to show that its claims are material in that it is genuinely plausible that accounting for these claims could result in changed cost-benefit conclusions.

First, while 10 C.F.R. § 2.309(f)(1)(v) specifies that contentions may be supported by either factual allegations or expert opinion, the type of support necessary can depend upon the nature of the claim raised in the contention. Some contentions, for instance those that seek to connect a factual scenario to a specific result that is not self-evident, may require expert or technical support to help demonstrate that further inquiry is required. *See, e.g., Nuclear Mgmt. Co., LLC* (Palisades Nuclear Plant), LBP-06-10, 63 NRC 314, 352 (2006), *aff'd* CLI-06-17, 63 NRC 727 (2006). *See also Private Fuel*

Storage, LLC (Indep. Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 139-140 (2004). Here, NEC has provided no expert opinion (and identified no document) to indicate that the use of an alternate air dispersion model would predict greater offsite consequences. Certainly the use of a different model *might* result in a prediction of greater offsite consequences, but in order to justify further inquiry, NEC must provide at least *some* support (most likely in the form of an expert) to show that would be the case.

Instead, NEC (and by extension, the Board) simply assume that certain modeling features in the ATMOS model (such as the straight-line Gaussian plume, lack of modeling of terrain effects, and the use of a single year of meteorological data) might ultimately be significant. But NEC provides no support to suggest that this is actually the case. For example, NEC challenges the code because it uses only a single year's worth of meteorological data. Pet. at 53. But this claim ignores the fact that NextEra's ER explains that it examined five years of data, and chose 2005 data because that year resulted in the maximum dose and cost risk, thus adding to the conservatism of the analysis. ER at F-64, F-158. In this case, the use of additional data would actually reduce the dose and cost risk. Thus merely identifying an alleged shortcoming in the analysis is insufficient to show that the perceived shortcoming led to a lower dose or cost risk. NEC's inadequately supported claims do not show the existence of a genuine, material dispute.

Moreover, these claims fail to account for the extensive sensitivity analyses NextEra included as part of its SAMA analysis. Under 10 C.F.R. § 2.309(f)(1)(vi), petitioners must identify and challenge specific portions of the application in order to demonstrate the existence of a genuine dispute. Because the LRA contains sensitivity

analyses addressing atmospheric modeling uncertainty, it was incumbent upon NEC to address this information and explain why NextEra's analysis is not adequate.

In fact, the argument that Seabrook should have used a different atmospheric dispersion model is inconsistent with the Commission's statement in *Pilgrim I* that questions such as "whether there are 'plainly better' atmospheric dispersion models or whether the SAMA analysis can be refined further" are not proper lines of inquiry for a contention challenging an applicant's SAMA analysis. *Pilgrim I*, CLI-10-11, 71 NRC at __ (slip op. at 37). NextEra's SAMA analysis, like all SAMAs, necessarily relies upon modeling and only attempts to "simulate the probability of impact risks." ER at F-52. Accordingly, the Commission explained in *Pilgrim III* that "[u]ltimately, NEPA requires the NRC to provide a 'reasonable' mitigation alternatives analysis, containing 'reasonable' estimates, including, where appropriate, full disclosures of any known shortcomings in available methodology, disclosure of incomplete or unavailable information and significant uncertainties, and a reasoned evaluation of whether and to what extent these or other considerations credibly could or would alter the . . . SAMA analysis conclusions on which SAMAs are cost-beneficial to implement." *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-10-22, 72 NRC __, __ (Aug. 27, 2010) (slip op. at 9-10) (Pilgrim III).

The GEIS, which the ER is intended to supplement, explains that uncertainties are manifest in "modeling the atmospheric transport of radioactivity in gaseous and particulate states and the actual transport, diffusion, and deposition or fallout that would occur during an accident" and this uncertainty "can result in overestimates or underestimates of both early and later effects (health and economic)." NUREG 1437,

Generic Environmental Impact Statement for License Renewal of Nuclear Plants (GEIS) at 5-101. As a result, NextEra performed a number of sensitivity analyses to account for uncertainty in atmospheric modeling, which NEC never challenged. *See* ER at F-158-59. The sensitivity analyses for the MACCS2 inputs included varying the annual meteorological data set, release height, release heat, wake effects, and meteorology in a 40-50 mile ring segment, together with several evacuation cases *Id.* As a result of these sensitivity analyses, NextEra chose to use in its baseline analysis the meteorological data set that resulted in the maximum dose and cost risk (*id.* at F-158), and also assumed rainfall within the 40-50 mile ring segment to force a conservatively large deposition and exposure. *Id.* at 160. NextEra determined that none of the evaluated changes to the other input parameters would increase the accident risk by more than 4%. *Id.*

Consistent with *Pilgrim III*, NextEra's ER addresses the impacts of uncertainty on the model results and provides a reasoned evaluation of whether and to what extent these considerations credibly could or would alter the SAMA cost-benefit conclusions. *Id.* NEC did not challenge these sensitivity analyses or NextEra's evaluation of their impact, and, as a result, could not show that its claims are material- *i.e.* that it is genuinely plausible that using a different atmospheric dispersion model might result in a changed cost-benefit conclusion.¹⁴

¹⁴ The Board also erred in holding that if the ATMOS model is shown to be inappropriate "it is incumbent on the Applicant to seek other options besides MACCS2 to perform the remaining cost-benefit analyses rather than relying on a deficient ATMOS code just because it is embedded with the familiar MACCS2 model." LBP-11-02 (slip op. at 53). In that situation, NextEra would not be required to seek out another model because, as the Commission ruled in *Pilgrim I*, there is no NEPA requirement to use the best scientific methodology or to create a research document reflecting the frontiers of science. CLI-10-11, 71 NRC at __ (slip op. at 37). Instead, as the Commission explained in *Pilgrim III*, NextEra simply must identify any potential shortcomings in its reasonable estimates and provide a reasoned evaluation of the extent to which those shortcomings would affect the ultimate cost-benefit conclusions. CLI-10-22, 72 NRC at __ (slip op. at 9-10).

3. NEC 4E is Inadmissible

Contention 4E challenges the methods by which NextEra converted the dose calculations into an economic cost that can then be compared to the cost of the particular mitigation alternatives. As admitted, it alleged that NextEra employed an inapplicable particle size and ignored the difficulty of cleanup in an urban area and the costs of meeting a different cleanup standard. LBP-11-02 (slip op. at 56).

To support its claims regarding the particle size, NEC cites the Sandia Site Restoration Study¹⁵ to argue that “earlier estimates (such as incorporated in WASH-1400 and up through and including MACCS2) of decontamination costs are incorrect because they examined fallout from the explosion of nuclear weapons that produce large particle sizes and high mass loadings.” Pet. at 66. But, as the Commission noted in *Pilgrim I*, when faced with a similar claim, this argument does not “demonstrate a *supported* genuine material issue – bearing on the overall SAMA cost-benefit results.” CLI-10-11 (slip op. at 30-31)(emphasis in original). Instead, the Commission explained:

Repeatedly, as we examined Pilgrim Watch’s evidence (when it had any) on economic costs, we could not discern any direct connection to the Pilgrim SAMA cost-benefit results. For example, as support for a claim that clean-up costs are underestimated, Pilgrim Watch cites to a page in a Sandia National Laboratories report. *See, e.g.*, Petition for Review at 18; Pilgrim Watch Initial Brief at 12 (citing to SAND96-0957, “Site Restoration: Estimation of Attributable Costs from Plutonium-Dispersal Accidents” (May 1996)); *see also* Pilgrim Watch Initial Brief at 21. But the cited page merely states that after the Chernobyl accident it became recognized that decontamination of urban areas and particularly porous surfaces can be very difficult, although the acknowledged difficulties of the Chernobyl clean-up may largely have been due to poor training, lack of equipment, and a nearly complete break-down in leadership. Pilgrim Watch provided no specific argument of error in the SAMA cost-benefit analysis calculations or conclusions. Merely citing to pages in diverse reports without any additional explanation or other obvious link to the

¹⁵ David Chanin, Walt Murfin, *Site Restoration: Estimation of Attributable Costs from Plutonium-Dispersal Accidents*, SAND96-0957 (May 1996).

SAMA analysis is insufficient to raise a genuine material dispute for hearing.

CLI-10-11, 71 NRC at __ (slip op. at 31) n.121.

NEC also claims that the Site Restoration Study implicitly criticized MAACS2 by criticizing WASH-1400 with respect to the size of particles that result from severe reactor accidents – an argument that is equally flawed. *See* Pet. at 62 (citing MAACS2 User’s Guide, NUREG/CR-6613 at 7-10), 66. With respect to particle size, the Site Restoration Study criticized only a specific portion of WASH-1400, its use of a large decontamination factor (“DF”).¹⁶ The Site Restoration Study explains:

Prior to the 1986 Chernobyl accident, reactor accident risk assessments in the U.S. and Europe relied heavily on the economic cost model of WASH-1400 . . . The use of a DF of 20 in WASH-1400 was apparently based on contemporary guidance documents for anticipated recovery actions following nuclear explosions of warfare. Nuclear explosions produce fallout with large particles and high mass loadings on surfaces. The DF of 20 was widely used in planning documents addressing such events.

Site Restoration Study at 2-9 (emphasis added).

Notably, the Site Restoration Study referred to 25-year-old “pre-Chernobyl” risk assessments. Still, contrary to NEC 4E’s interpretation of the Site Restoration Study, use of the MACCS2 code does not require or imply the use of a DF of 20. The MAACS2 User’s Guide (cited by NEC) explains that the code can accommodate several different decontamination strategies (“decontamination levels”), each of which would reduce the resulting dose by what the User’s Guide calls a “dose reduction factor,” for which it suggests the use of two decontamination levels, with suggested values of 3 and 15 (i.e.,

¹⁶ The MACCS2 User’s Guide explains that “the decontamination factor (DF) (input variable DSRFCT, described in Section 7.5) is a linear scaling factor by which the doses are reduced.” NUREG/CR-6613 at 7-3. This computation is performed to account for decontamination activities that would be taken during the long-term period to reduce doses to acceptable levels. *Id.* at 7-9. A DF of 20 means that contamination is reduced by a factor of 20 (i.e., 95% of the radioactive material is removed). Site Restoration Study at 2-9 n.8; *see also* NUREG/CR-6613 at 7-10, 7-11.

not 20). NUREG/CR-6613 at 7-9 – 7-11. This Site Restoration Study criticism of WASH-1400 then, cannot provide support for this particular challenge to the current-day use of MAACS2.¹⁷

NEC’s reliance on the Reichmuth study to indicate “a significant difference in costs depending on the population density and cleanup standard” is similarly flawed. *See* LBP-11-02 (slip op. at 58) (citing NEC Pet., Attach. C, Barbara Reichmuth, *et al.*, Economic Consequences of a Rad/Nuc Attack: Cleanup Standards Significantly Affect Costs, at 6 tbl.1, 12 (April 2005)). This cited pages merely reflect the intuitive notions that cleanup of urban areas and cleanup to a higher standard can be more expensive than cleanup of rural areas or to a lower standard.¹⁸ But NEC did not provide any information as to what cleanup standard is reflected in the MACCS2 code (and thus in NextEra’s SAMA analysis), nor did it provide information to indicate that NextEra’s analysis improperly accounts for urban areas. The Commission’s statement in *Pilgrim I* is fitting: “Merely citing to pages in diverse reports without any additional explanation or other obvious link to the SAMA analysis is insufficient to raise a genuine material dispute for hearing.” CLI-10-11, 71 NRC at __ (slip op. at 31) n.121.

¹⁷ Despite the Board’s ruling (LBP-11-02 (slip op. at 57) n.297), NextEra’s noting of these deficiencies is not “a merits issue appropriately addressed at hearing,” it is part of the threshold determination whether NEC has met its burden to plead sufficient information indicating a genuine dispute.

¹⁸ This appears to be based upon NEC’s unsupported claim that “a cleanup standard is not agreed upon by NRC and EPA and appears to range from 15 mrem/year to 5 mrem/year.” Pet. at 65. The cited pages of the Reichmuth study only address cleanup standards from 500 mrem/year to 15 mrem/year. There is no evidence in the record to support a claim that a 5 mrem/year would be required, or, if it were required, would have material effect on the SAMA’s cost-benefit conclusions.

VI. CONCLUSION

For all of the foregoing reasons, NEC 1, 2, 4B, 4D, and 4E should be rejected and NEC's Petition should be wholly denied.

Respectfully Submitted,

/Signed electronically by Steven Hamrick/

Mitchell S. Ross
Antonio Fernández
NextEra Energy Seabrook, LLC
700 Universe Blvd.
Juno Beach, Florida 33408
Telephone: 561-691-7126
Facsimile: 561-691-7135
E-mail: mitch.ross@fpl.com
antonio.fernandez@fpl.com

Steven Hamrick
NextEra Energy Seabrook, LLC
801 Pennsylvania Avenue, N.W. Suite 220
Washington, DC 20004
Telephone: 202-349-3496
Facsimile: 202-347-7076
E-mail: steven.hamrick@fpl.com

Counsel for NextEra Energy Seabrook, LLC

February 25, 2011

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

Before the Commission

In the Matter of)	
)	
NextEra Energy Seabrook, LLC)	Docket No. 50-443-LR
)	
(Seabrook Station))	
)	ASLBP No. 10-906-02-LR
(Operating License Renewal))	

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing “NextEra Energy Seabrook, LLC’s Notice of Appeal of LBP-11-02 as to the New England Coalition and Friends of the Coast,” and “Brief in Support of NextEra Energy Seabrook, LLC’s Appeal of LBP-11-02 as to the New England Coalition and Friends of the Coast,” were provided to the Electronic Information Exchange for service to those individuals listed below and others on the service list in this proceeding, this 25th day of February, 2011.

Administrative Judge
Paul S. Ryerson, Esq., Chair
Atomic Safety and Licensing Board
Mail Stop T-3 F23
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
Email: psr1@nrc.gov

Administrative Judge
Dr. Michael Kennedy
Atomic Safety and Licensing Board
Mail Stop T-3 F23
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
Email: michael.kennedy@nrc.gov

Administrative Judge
Dr. Richard E. Wardwell
Atomic Safety and Licensing Board
Mail Stop T-3 F23
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
Email: richard.wardwell@nrc.gov

Secretary
Att’n: Rulemakings and Adjudications Staff
Mail Stop O-16 C1
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
hearingdocket@nrc.gov

Office of Commission Appellate Adjudication
Mail Stop O-16 C1
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
E-mail: OCAAMAIL@nrc.gov

Mary Spencer, Esq.
Maxwell C. Smith, Esq.
Emily L. Monteith, Esq.
Megan Wright, Esq.
Office of the General Counsel
Mail Stop O-15 D21
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
E-mail: mary.baty@nrc.gov

Raymond Shadis
New England Coalition
Post Office Box 98
Edgecomb, Maine 04556
E-mail: shadis@prexar.com

Kurt Ehrenberg
New Hampshire Sierra Club
40 N. Main Street
Concord, NH 03301
E-mail: Kurt.Ehrenberg@sierraclub.org

Paul Gunter, Reactor Oversight Project
Beyond Nuclear
6930 Carroll Avenue, Suite 400
Takoma Park, MD 20912
E-mail: paul@beyondnuclear.org

Doug Bogen
Executive Director
Seacoast Anti-Pollution League
PO Box 1136
Portsmouth, NH 03802
E-mail: bogen@metrocast.net

/Signed electronically by Steven Hamrick/

Steven Hamrick