

December 13, 2010

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
)	
NextEra Energy Seabrook, LLC)	Docket No. 50-443-LR
)	
(Seabrook Nuclear Station, Unit 1))	ASLBP No. 10-906-02-LR-BD01

NRC STAFF'S OBJECTIONS TO THE FRIENDS OF THE COAST AND NEW
ENGLAND COALITION'S SUPPLEMENT

INTRODUCTION

In accordance with the Board's instructions during the November 30, 2010, prehearing conference in Portsmouth, New Hampshire,¹ the Staff of the Nuclear Regulatory Commission ("NRC Staff" or "Staff"), hereby submits its objections to the Supplement to Friends of the Coast and New England Coalition Petition for Leave to Intervene, Request for Hearing, and Admission of Contentions: Errors and Corrections and New Information ("Supplement") filed by the Friends of the Coast and New England Coalition ("FOTC/NEC") on December 6, 2010.² Under the auspices of making typographical corrections, the Supplement impermissibly seeks to amend FOTC/NEC's Petition for Leave to Intervene, Request for Hearing, and Admission of Contentions ((Oct. 20, 2010) ADAMS Accession No. ML1029405580) ("Petition"). The

¹ Oral Argument Transcript, NextEra Seabrook Station, LLC (Seabrook Station, Unit 1), at 69-70, 170 (Nov. 30, 2010) ("Tr.") (Agencywide Documents Access and Management System ("ADAMS") Accession No. ML103420615).

² Attached to the Supplement was Friend/NEC Petition Supplement – Attachment One: Declaration of Paul Blanch ("Revised Declaration") and Friends/NEC Petition Supplement Attachment Two: NRC Information Notice 2010-26: Submerged Electric Cables (Dec. 2, 2010) ("IN").

Supplement does not provide a basis for accepting such late-filed amendments to its contentions, as required by 10 C.F.R. § 2.309(c), (f)(2). Accordingly, the Board should not consider the new claims in the Supplement. In addition, the Staff objects to FOTC/NEC's submission of NRC Information Notice 2010-26: Submerged Electric Cables (Dec. 2, 2010) as new information in support of Contention 1.

BACKGROUND

By application dated May 25, 2010, NextEra Energy Seabrook, LLC ("NextEra" or "Applicant") requested renewal of its operating license for Seabrook Station, Unit 1 ("Seabrook") for an additional 20 years from the current expiration date of March 15, 2030.³ On June 16, 2010, the Nuclear Regulatory Commission ("NRC" or "Commission") published a notice of receipt of the License Renewal Application ("LRA" or "Application").⁴ The NRC accepted the LRA for review, and on July 21, 2010, published in the *Federal Register* a Notice of Opportunity for Hearing ("Notice").⁵ The Notice permitted any person whose interest may be affected to file a request for hearing or a petition for leave to intervene within 60 days and provided that all such filings must be filed in accordance with 10 C.F.R. Part 2. 75 Fed. Reg. at 42,463. The Notice also provided specific instructions regarding the requirements that each proposed contention must meet in order to be admitted. *Id.* The deadline for filing a petition for intervention or request for hearing fell on September 20, 2010. *See id.* at 42,462.

³ Letter from Paul O. Freeman, Site Vice President dated May 25, 2010, transmitting application for license renewal for Seabrook Station, Unit No. 1 (ADAMS Accession No. ML101590099).

⁴ See NextEra Energy Seabrook, LLC; Notice of Receipt and Availability of Application for Renewal of Seabrook Station, Unit 1 Facility Operating License No. NPF-86 for an Additional 20-Year Period, 75 Fed. Reg. 34,180 (June 16, 2010).

⁵ See 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).

On September 15, 2010, FOTC/NEC sought a 90-day extension to file a petition to intervene.⁶ On September 17, 2010, the Secretary to the Commission granted FOTC/NEC a 30-day extension, to October 20, to file petitions to intervene.⁷ Subsequently, FOTC/NEC filed its Petition, which raised three proposed safety contentions and one proposed environmental contention.⁸

On November 1, 2010, FOTC/NEC filed an errata sheet to correct errors in its Petition. The filing contained an accessible version of a previously submitted attachment and one correction to the Petition itself, striking a reference to “Entergy” and replacing it with “NextEra.”⁹

On November 15, 2010, NRC Staff and NextEra both filed timely answers.¹⁰ Both answers pointed out several obvious errors and omissions in FOTC/NEC’s Petition and the

⁶ FOTC/NEC supported a request by the New Hampshire Attorney General for a 90-day extension in which to file a petition, provided that an identical extension of time would be granted to FOTC/NEC and all other potential parties. See Friends of the Coast and New England Coalition’s Answer to New Hampshire Attorney General’s Request for Extension (Sept. 15, 2010) (ADAMS Accession No. ML1025905280). New Hampshire has not filed a petition to intervene or request for hearing in this proceeding.

⁷ See Order (Sept. 17, 2010) (unpublished) (ADAMS Accession No. ML102600347). This extension was also granted to the New Hampshire Attorney General and Beyond Nuclear. See *id.*

⁸ See Friends of the Coast and New England Coalition Petition for Leave to Intervene, Request for Hearing, and Admission of Contentions (dated Oct. 20, 2010) (ADAMS Accession No. ML1029405580).

⁹ See Friends of the Coast and New England Coalition Petition for Leave to Intervene, Request for Hearing, and Admission of Contentions Errata (Nov. 1, 2010) (ADAMS Accession No. ML1030504880).

¹⁰ See 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) (ADAMS Accession No. ML103190764) (“NRC Staff Answer”); 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) (ADAMS Accession No. ML1031904940) (“NextEra Answer”).

supporting Declaration of Paul Blanch (“Original Declaration”).¹¹ On November 23, 2010, FOTC/NEC filed a Reply to NextEra and NRC Staff’s answers.¹² In the Reply, FOTC/NEC acknowledged three errors in its Petition and Original Declaration and dismissed the errors as irrelevant.¹³

On November 30, 2010, the Board held a prehearing conference on the issues of standing and the admissibility of the proposed contentions filed in the Seabrook LRA proceeding.¹⁴ At the hearing, the Board gave FOTC/NEC permission to submit a revised declaration of its expert, Paul Blanch, within seven days. Tr. at 69-70; 170. The Board stated, “Clearly, it is not the Board’s intent to encourage the filing of a declaration that presents new arguments [or] new issues.” *Id.* at 70. Rather, the revised declaration was intended to permit the “correction of typos” or the clarification of typographical errors so as to enable the Board to read the declaration in “a better form.” *Id.* at 70; 109. The Board also permitted the parties to the proceeding to file objections to any corrections made, including changes “going beyond the original filing,” within seven days thereafter. *Id.* at 70; 170.

¹¹ See, e.g., NRC Staff Answer at 20 n.25 (noting a reference in the Original Declaration to a non-existent SER); *id.* at 23 n.29 (noting citations in FOTC/NEC Petition to the Indian point LRA); *id.* at 35 (same); NextEra Answer at 27 (noting references in FOTC/NEC Petition to a non-existent SER); *id.* at 32 n.17 (stating that FOTC/NEC Petition incorrectly states that the Seabrook LRA references a “Non-EQ Insulated Cables and Connections Program”).

¹² See Friends of the Coast and New England Coalition Reply to NextEra and NRC Staff Answers to Friends of the Coast and New England Coalition Petition for Leave to Intervene, Request for Hearing, and Admission of Contentions (Nov. 22, 2010) (ADAMS Accession No. ML1032700010) (“Reply”).

¹³ See *id.* at 10 (explaining that Blanch’s reference to an as-yet undeveloped SER in the Original Declaration was the result of his having served as a witness in Vermont Yankee and Indian Point proceedings); *id.* at 15 (indistinct footnote) (stating, “This discussion is included with Mr. Blanch’s discussion of transformers, but refers [to] cables and appears to be misplaced.”); *id.* at 19 (stating, in response to NextEra’s assertion that the transformers contention was copied verbatim from the Indian Point proceeding, that “Friends/NEC editing errors aside, nothing plus nothing equals nothing”).

¹⁴ See NextEra Energy Seabrook, LLC (Seabrook Station, Unit 1), No. 50-443-LR (Nov. 5, 2010) (unpublished order) (ADAMS Accession No. ML1030901540).

DISCUSSION

I. Legal Standard for a Pleading Specified by the Board

Under 10 C.F.R. § 2.309(h), unless otherwise specified by the Commission, the presiding officer, or the Board designated to rule on requests for hearing or petitions for leave to intervene, the pleadings in an NRC proceeding are limited to the petition for leave to intervene, an answer to the petition to intervene, and a reply to any answer. “No other written answers or replies will be entertained.” 10 C.F.R. § 2.309(h)(3).

As discussed above, the Board specified that FOTC/NEC could submit a Revised Declaration of Paul Blanch (“Revised Declaration”) within seven days of November 30, 2010. Tr. at 69-70.¹⁵ However, the Board indicated that the scope of the Revised Declaration would be limited to correcting typographical mistakes or “some clarification [if] something similar to a typo has occurred.” *Id.* at 70.¹⁶ Importantly, the Board stated that it did not intend to encourage the presentation of new arguments or issues. *Id.*¹⁷ In fact, the Board stated that in providing a Revised Declaration correcting word processing errors in Mr. Blanch’s discussion of electrical cables and transformers, caution should be taken to avoid “significantly substantial [changes] that [the Board] really can’t consider . . . because it’s not fair to change things too much after everyone has already gone through the process of briefing and arguing based on what

¹⁵ See Tr. at 112 (providing Board’s rationale that “it doesn’t benefit anyone to have a record that consists of a declaration that is difficult to follow”).

¹⁶ See, e.g., *id.* at 105-108 (discussing potential corrections to the Original Declaration regarding whether transformers are active or passive). See also *id.* at 108 (discussing potential word processing errors in the discussion of electrical cables and transformers).

¹⁷ See also *id.* at 111 (“Clearly, if there were new arguments that were never previously raised I doubt very much that they would be accepted.”).

[FOTC/NEC] filed.” *Id.* at 108-109.¹⁸ The Board also made clear that what FOTC/NEC could include in the Revised Declaration was “subject to the Commission’s rules and case law.” *Id.* at 70-71. Finally, the Board noted that the parties could file objections to any corrections made, including changes “going beyond the original filing.” *Id.* at 70; 170.¹⁹

While there does not appear to be Commission precedent discussing the proper scope of the type of supplement specified by the Board, there is substantial case law on the proper scope of replies. From a procedural standpoint, a reply provides a useful analogy to this Supplement because both documents precede the Board’s initial decision on contention admissibility and follow the answers to a hearing request. Moreover, like a reply, FOTC/NEC’s Supplement is limited in scope. *Compare* Tr. at 69-71 *with Louisiana Energy Servs., L.P.* (National Enrichment Facility), CLI-04-25, 60 NRC 223, 224-25 (2004), *reconsid. denied*, CLI-04-35, 60 NRC 619 (2004) (“LES”). Thus, the Board should rely on the following Commission precedents, discussing the appropriate scope of a reply, in evaluating FOTC/NEC’s Supplement.

The Commission has clearly stated that a reply to an intervention petition answer may not raise new arguments, new contention bases, or new issues in an attempt to cure a defective petition. *See LES*, CLI-04-25, 60 NRC at 224-25; *Nuclear Mgmt. Co.* (Palisades Nuclear Plant), CLI-06-17, 63 NRC 727, 732 (2006). The Commission requires strict adherence to contention admissibility standards and demands discipline and preparedness on the part of petitioners. *LES*, CLI-04-25, 60 NRC at 224-225.

¹⁸ *See also id.* at 113 (Board noting that it will need to decide whether the changes to the Original Declaration are significantly substantial).

¹⁹ NextEra objected to the Board allowing for a Revised Declaration given the stage of the proceedings. *Id.* at 111.

Importantly, contentions must be based on documents or other information available at the time the petition is filed. 10 C.F.R. § 2.309(f)(2). Therefore, untimely attempts to amend a defective, original petition are to be rejected as failing to satisfy the late-filing factors in 10 C.F.R. §§ 2.309(c), (f)(2). See *Palisades*, CLI-06-17, 63 NRC at 732. A practice that would allow petitioners to use “reply briefs to provide, for the first time, the necessary threshold support for contentions . . . would effectively bypass and eviscerate [the Commission’s] rules governing timely filing, contention amendment, and submission of late-filed contentions.” *LES*, CLI-04-35, 60 NRC at 623. Further, raising new claims in a reply unfairly deprives other participants of an opportunity to rebut the claims. *Palisades*, CLI-06-17, 63 NRC at 732. Permitting FOTC/NEC to raise new arguments and provide new bases for its contentions in its Supplement would likewise frustrate the Commission’s rules on timely filing and deprive the other parties to this case of an opportunity to fairly address FOTC/NEC’s new claims.

Petitioners may not use a reply to reinvigorate thinly supported contentions. *LES*, CLI-04-25, 60 NRC at 224. Nor may petitioners “initially file vague, unsupported, and generalized allegations and simply recast, support or cure them later.” *LES*, CLI-04-35, 60 NRC at 622. Although petitioners are not required “to prove their case, or to provide an exhaustive list of possible bases,” they are required to provide “sufficient alleged factual or legal bases to support the contention, and to do so at the outset.” *Id.*; see also *Dominion Nuclear Connecticut, Inc.* (Millstone Power Station, Unit 3), CLI-08-17, 68 NRC 231, 237 n.27 (2008).

In applying these standards, Boards have struck, or declined to consider, new information and argument offered in a reply. *E.g. Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), LBP-06-20, 64 NRC 131, 198-199 (2006); *PPL Susquehanna, LLC* (Susquehanna Steam Electric Station, Units 1 & 2), LPB-07-04, 65 NRC 281, 301-302 (2007). Likewise, the Board should decline to consider the new claims made in FOTC/NEC’s Supplement that seek to amend the FOTC/NEC

Petition. As discussed below, these new claims are outside the scope of the Revised Declaration specified by the Board and do not address the late filing requirements of 10 C.F.R. §§ 2.309(c), (f)(2).

II. NRC Staff's Objections to FOTC/NEC's Supplement

Although the Board authorized the filing of a revised declaration pursuant to its authority in 10 C.F.R. § 2.309(h), FOTC/NEC's submittal of this Supplement and Revised Declaration bolsters the hearing request in a way not contemplated by the Commission's rules or the case law discussed above. The Board's consideration of this supplement, after the other parties have responded and appeared for oral arguments on FOTC/NEC's Petition, would undermine the Commission's regulations governing timely filing by permitting FOTC/NEC to substantially alter its Petition without giving the other parties a complete chance to respond to FOTC/NEC's amended contentions in their entirety. Thus, the Staff generally objects to the Board's consideration of the Supplement and Revised Declaration. In addition, the Staff offers the following specific objections.

The Staff asks the Board to ignore those portions of the Supplement that impermissibly seek to amend FOTC/NEC's Petition by raising new arguments or supplying additional bases not contained in FOTC/NEC's original hearing request. Although FOTC/NEC did use the opportunity provided by the Board to correct typographical and word processing errors in the Original Declaration, FOTC/NEC also improperly used the Supplement to raise additional claims not found in FOTC/NEC's Petition. To facilitate identification of the additions, changes, and deletions in the Revised Declaration, which is not in the same format as the original and does not have numbered paragraphs, the Staff has created and attached a red-line comparison of the

two declarations.²⁰ In addition, the Staff has attached a version of the Revised Declaration with numbered paragraphs and will reference those paragraph numbers in its discussion.

A. FOTC/NEC Contention 1 (Inaccessible Non-Environmentally Qualified Cables)

There are numerous changes to Blanch's Original Declaration with respect to Contention 1 that go beyond correcting or clarifying typographical errors and erroneous references. The most significant of these changes is Mr. Blanch's new assertion that "Seabrook has experienced submerged cables within the scope of 10 CFR 54." Revised Declaration at 8 ¶29. Although FOTC/NEC describes this addition as an explanation offered "for purposes of clarification,"²¹ it is neither an explanation nor a clarification. Instead, it is an impermissible new factual assertion in support of Contention 1 and should not be considered. See *Palisades*, CLI-06-17, 63 NRC at 732 (stating that new factual support for a contention may not be submitted after initial filing unless the late-filing criteria of 10 C.F.R. § 2.309(c), (f)(2), are met). Moreover, FOTC/NEC has provided no support for this statement, and Mr. Blanch has not offered any explanation for how he arrived at this conclusion. Conclusory assertions, even by experts, are insufficient to support an admissible contention. See *USEC Inc. (American Centrifuge Plant)*, CLI-06-10, 63 NRC 451, 472 (2006) (stating that expert opinions must provide a reasoned basis and opinions that merely state a conclusion do not support an admissible contention).

It is also worthy to note that although the Revised Declaration quotes at length from the Executive Summary of NUREG/CR-7000 "Essential Elements of an Electric Cable Condition

²⁰ To create this document, the Staff converted the PDF of the Revised Declaration in Microsoft Word format and then used the compare document function in Microsoft Word to compare the Revised Declaration to the Original Declaration, which was initially e-mailed to the parties in Microsoft Word Format.

²¹ Supplement at 4.

Monitoring Program,” footnotes attributing the text to the NUREG/CR that appeared in the Original Declaration have been removed. *Compare* Revised Declaration at 8-11 ¶¶30-33 with Original Declaration at 9-11 nn.2-4. This omission suggests that FOTC/NEC no longer believes that the document in question supports these portions of its contention. If this is the case, this is a substantive change and should not be considered by the Board.

B. FOTC/NEC Contention 2 (Transformers)

The Revised Declaration also makes many changes to Contention 2 that are substantive in nature. Most significantly, the Revised Declaration removes two paragraphs referring to the Indian Point license renewal application (LRA) and adds a paragraph containing an argument based on the Seabrook LRA. The paragraphs removed state, in pertinent part, that “Appendix A, Page A-35 of the UFSAR supplement describes a Structures Monitoring Program that includes a program for monitoring ‘transformer/switchyard support structures,’ yet there is no APM [sic] described for transformers,” and that “[t]he LRA also discusses the need for an AMP for ‘transformer support structures’ . . .” Original Declaration at 12. The new paragraph added to the Revised Declaration states, “Figure 2.5-1 clearly illustrates that transformers are part of the [Station Blackout (“SBO”)] recovery path and there are numerous additional transformers within the scope of 10 CFR 54.4 that are not discussed in the LRA. There is no proposed AMP for these transformers.” Revised Declaration at 14.

Together, these changes are an attempt to bolster FOTC/NEC’s Contention 2 because they attempt to cure the defects in the Original Declaration with respect to providing a basis for the contention, as required by 10 C.F.R. § 2.309(f)(1)(ii), and making references to specific portions of the Seabrook LRA along with supporting reasons for the LRA’s claimed inadequacy,

as required by § 2.309(f)(1)(vi).²² FOTC/NEC claims that the Revised Declaration’s argument that the Seabrook LRA “clearly” identifies particular transformers as part of the SBO recovery path and fails to discuss these transformers, much less provide an AMP for them, is offered for purposes of clarification. Supplement at 5. Despite this claim, this is the first time that FOTC/NEC has argued that a specific portion of the *Seabrook* LRA provides a basis for its contention that the LRA’s treatment of transformers is deficient. *Compare* Revised Declaration at 14 ¶¶45 *with* Original Declaration at 13 ¶¶38. As a result, the Revised Declaration now controverts specific portions of the Seabrook LRA where it previously only demonstrated, at most, a genuine factual dispute with the Indian Point LRA. *Compare* Revised Declaration at 12 *with* Original Declaration at 11-12. Therefore, these changes should not be considered, because they selectively alter the factual support for Contention 2 in order to bolster a previously unsupported contention to meet the requirements of §§ 2.309(f)(1)(ii) and (vi). See *Palisades*, CLI-06-17, 63 NRC at 732; *LES*, CLI-04-25, 60 NRC at 224-25.

C. FOTC/NEC Contention 3 (Buried, Below-Grade, and Hard to Access Cables)

The Revised Declaration contains a number of changes with respect to Contention 3 that go beyond correction or clarification of typographical errors. First is the inclusion of footnote 2 in the Revised Declaration. FOTC/NEC states that the Revised Declaration “adds in a footnote a few examples of safety-related pipe failure by way of clarification.” Supplement at 5. Specifically, the footnote states, “Indian Point failure of Condensate Storage Tank buried piping and severe degradation of Salem Unit 1 AFW buried discharge piping.” Revised Declaration at

²² These changes do not, however, provide support for FOTC/NEC’s assertion that transformers are passive components.

17 n.2. This footnote was added to support the assertion, “Recent events at nuclear power plants as well as at Seabrook Nuclear Power Station have demonstrated that various in scope piping systems have experienced leaks and/or corrosion.” *Id.* at 17 ¶37. FOTC/NEC’s Petition and the Original Declaration both state, “Recent events around the United States and the world— as well as at the Seabrook Nuclear Power Station—have demonstrated that various aging piping systems have experienced leaks and/or corrosion.” FOTC/NEC Petition at 24; Original Declaration at ¶46. Neither the FOTC/NEC Petition nor the Original Declaration identified recent events either at other U.S. plants, at foreign plants, or at Seabrook. FOTC/NEC was, however, questioned about the “recent events” referenced in its Petition. See Tr. at 127 (referring to page 24 ¶6 of FOTC/NEC’s Petition). Thus, this factual addition is not a clarification but an attempt to belatedly provide support for previously unsupported assertions, and the Board should not consider it.

Moreover, in light of Board questioning of FOTC/NEC regarding the intended function of buried and inaccessible piping and FOTC/NEC’s acknowledged unfamiliarity with the Commission’s decision in CLI-10-14²³ at the time of the prehearing conference, see Tr. at 126-29, this additional factual assertion appears to be a belated attempt to shift the focus of the contention away from radioactive leaks to leaks of any type large enough to impact the ability of piping to perform its 10 C.F.R. § 54.4(a)(1)-(3) functions. Thus, the addition of footnote 2 is not a clarification. Its addition is impermissible because after initial submission, contentions may only be amended in accordance with 10 C.F.R. § 2.309(c), (f)(2). See *Palisades*, CLI-06-17, 63 NRC at 732.

²³ *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-10-14, 71 NRC__ (June 17, 2010).

Second, without explanation, the Revised Declaration omits its previous assertion that Seabrook's LRA is deficient because "it does not provide for adequate inspection of all systems, structures, and components that may contain or convey water, radioactively-contaminated water, and/or other fluids." *Compare* Original Declaration at ¶41 *with* Revised Declaration at 15 ¶52. This change is not a clarification or an explanation but a belated response to Staff and NextEra arguments that Contention 3 is impermissibly broad, purporting to encompass "all buried systems, structures, and components that may convey or contain radioactively-contaminated water or other fluids and/or may be important to safety." See NRC Staff Answer at 37-38 (quoting FOTC/NEC Petition at 22-23); NextEra Answer to FOTC/NEC at 48. It is also a belated response to NextEra's assertion that "there are no buried components within the scope of the license renewal rule at Seabrook that contain radioactive liquids." NextEra Answer at 55. Further, this change could also be viewed as an attempt to shift the focus of the contention away from radioactive leaks per se to leaks of any type large enough to impact the ability of piping to perform its 10 C.F.R. § 54.4(a)(1)-(3) functions.²⁴ Because contentions may only be amended in accordance with the requirements of 10 C.F.R. § 2.309(c), (f)(2), the Board should not consider this change.

III. NRC Staff's Objection to FOTC/NEC's New Information In Support of Contention 1

FOTC/NEC attached a document entitled "Information Notice 2010-26: Submerged Electrical Cables" ("IN") to their Supplement as a means of apprising the Board of "material new

²⁴ A further example of an attempt to shift the focus of Contention 3 is the deletion of the phrase "to protect the public from the release of hazardous material to the environment" from the end of ¶ 51 of the Original Declaration. The paragraph now reads: "The LRA contains no plan or discussion of cathodic protection or other methods to prevent leaks from occurring. Prevention is the best protection against leakage from pipes. 49 CFR 195 provides reasonable requirements for the protection of buried pipes for the transportation industry, yet Seabrook and NRC have failed to consider the 'lessons learned' from these important requirements." Revised Declaration at 18 ¶62.

information” relevant to proffered Contention 1. Supplement at 7. The IN was released by the NRC Staff on December 2, 2010 and contains Staff findings related to the submergence of electrical cables in water at operating nuclear power plants. The IN does not impose any requirements on licensees; it is for informational purposes only.²⁵

The Staff objects to FOTC/NEC’s use of the IN as new information because FOTC/NEC submits the IN as an additional basis to support proffered Contention 1. If FOTC/NEC wishes to submit the IN as a new basis to support proffered Contention 1, it must address and meet the requirements for new or amended contentions found in 10 C.F.R. §§ 2.309(c), (f)(2).

The Commission has held that “[n]ew bases for a contention cannot be introduced in a reply brief, or any other time after the date the original contentions are due, unless the petitioner meets the late-filing criteria set forth in 10 C.F.R. §§ 2.309(c), (f)(2).” *Palisades*, CLI-06-17, 63 NRC at 732 (emphasis added). Furthermore, NRC staff activities that occur after issuance of a notice of opportunity for hearing are not grounds for the Board to extend the deadline that the notice provides for filing contentions. A party seeking to file contentions after the notice’s deadline in such circumstances must file a timely motion for leave to file a new contention and satisfy the heightened pleading requirements of 10 C.F.R. § 2.309(c), (f)(2). *Entergy Nuclear Vermont Yankee, L.L.C. and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), LBP-04-28, 60 NRC 548, 577-78 (2004).

FOTC/NEC presents this new information in its Supplement with the intention that it be used to support proffered Contention 1, which deals with submerged cables. FOTC/NEC states that the IN “is material because it affirms throughout Friend/NEC’s concerns with the challenges

²⁵ An Information Notice (IN) is a type of generic communication issued by the NRC. For a description of the types of generic communications the NRC issues, see SECY-99-143, Revisions to Generic Communication Program (May 26, 1999) (ADAMS Accession No. ML992850037).

to maintaining safety of submerged electrical cables.” Supplement at 7. FOTC/NEC then goes on to cite specific portions of the IN that it views as supporting proffered Contention 1 and concludes by saying that the IN speaks “to the question of the validity of the Friends/NEC [contention] on aging management of electrical cables and [FOTC/NEC] now hopes that the Board will review the IN in that light.” *Id.* at 8-9. Clearly, FOTC/NEC intends that the Board will consider the information in the IN when determining whether Contention 1 is admissible under 10 C.F.R. § 2.309(f)(1) in this proceeding.

If FOTC/NEC wishes to use the IN as a basis for Contention 1, it must first address and meet the requirements of 10 C.F.R. § 2.309(c), (f)(2). Under 10 C.F.R. § 2.309(c), determination on any “nontimely” filing of a petition must be based on a balancing of certain factors, the most important of which is “good cause, if any, of the failure to file on time.” *Crow Butte Resources, Inc.* (North Trend Expansion Project), LBP-08-6, 67 NRC 241 (2008); *Pacific Gas & Elec. Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-08-8, 67 NRC 193 (2008). Section § 2.309(f)(2) provides for the filing of new or amended contentions only with the leave of the presiding officer, and upon a showing of three factors: (1) the information upon which the amended or new contention is based was not previously available; (2) the information upon which the amended or new contention is based is materially different than information previously available; and (3) the amended or new contention has been submitted in a timely fashion based on the availability of the subsequent information. If new and materially different information becomes available during the processing of the application, and a petitioner promptly files a new contention based on this new information, the contention is admissible, assuming that it also satisfies the general contention admissibility standards contained in 10 C.F.R. § 2.309(f)(1). *Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), LBP-06-14, 63 NRC 568, 572 (2006).

The IN attached to FOTC/NEC's Supplement is being submitted with the intention of using the IN as a new basis for FOTC/NEC's proffered Contention 1. According to the regulations and case law, FOTC/NEC must address and meet the late-filing requirements of 10 C.F.R. § 2.309(c), (f)(2) in order for the Board to consider the information in formulating its decision on the admissibility of Contention 1. Because FOTC/NEC has not even addressed those standards, the Board should not further consider the IN in ruling on FOTC/NEC's hearing request.

Moreover, even if the Board were to consider the IN, it raises issues that are plainly outside the scope of license renewal and therefore fails to meet the contention admissibility requirements of 10 C.F.R. § 2.309(f)(1)(iii). The Commission has limited the scope of license renewal to age-related issues, not issues already monitored and reviewed in the ongoing regulatory oversight processes. *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-10-14, 71 NRC ___, ___ (June 17, 2010) (slip op. at 8-10). The IN focuses on precisely those current operating issues that the Commission indicated are not within the scope of license renewal. IN at 5-7. Indeed, FOTC/NEC concedes that "the [IN] does not directly address license renewal applications." Supplement at 8. FOTC/NEC continues, "[i]t should be self-evident that aging management programs that cannot assure reliability and function during the present operation are not made whole by inclusion in a LRA AMP." *Id.* But, 10 C.F.R. § 54.30(a) explicitly states that if the license renewal reviews "show that there is not reasonable assurance during the current licensing term that the licensed activities will be conducted in accordance with the [current licensing basis ("CLB")], the licensee must correct those deficiencies now. 10 C.F.R. § 54.30(a). Compliance with 10 C.F.R. § 54.30(a) is not within the scope of license renewal. 10 C.F.R. § 54.30(b). Thus, to the extent that the IN suggests that the licensee is currently not in compliance with its CLB, the licensee must address this issue now as a current operating issue.

Because this IN raises a current operating issue, it is plainly not within the scope of license renewal.

In sum, the Staff objects to the submission of new information in FOTC/NEC's Supplement. FOTC/NEC has not addressed the new or amended contention requirements found in 10 C.F.R. § 2.309(c), (f)(2), and therefore attempting to use the IN as a new basis for Contention 1 is impermissible. Furthermore, the issues raised in the IN are outside the scope of this license renewal proceeding, in contravention of 10 C.F.R. § 2.309(f)(1)(iii). Thus, the Board should not consider the IN in formulating its decision regarding FOTC/NEC's hearing request.

CONCLUSION

The NRC Staff objects to FOTC/NEC's Supplement and the Revised Declaration because they impermissibly seek to belatedly amend FOTC/NEC's Petition. The Supplement does not provide a basis for accepting such late-filed amendments to its contentions, as required by 10 C.F.R. §§ 2.309(c), (f)(2). Accordingly, the Board should not consider the new claims in the Supplement. In addition, the Staff objects to FOTC/NEC's submission of new information in support of Contention 1. FOTC/NEC has not provided the basis required by the Commission's regulations for the Board to accept a late-filed amendment to Contention 1. Consequently the Board should not consider the amendments to FOTC/NEC's contentions provided in FOTC/NEC's Supplement and the Revised Declaration.

Respectfully submitted,

Signed (electronically) by

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FRIENDS/NEC PETITION SUPPLEMENT – ATTACHMENT 7ONE

UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION BEFORE
THE ~~SECRETARY~~ATOMIC SAFETY AND LICENSING BOARD

In the Matter of FPL Energy Seabrook, LLC (NextEra, Inc)

Station, Unit 1 – License Renewal Application) December 6, 2010 (Seabrook

Docket No. 50-443

DECLARATION OF PAUL BLANCH

I, Paul Blanch hereby declare under penalty of perjury that the following is true and correct: —

I have been retained by Friends of the Coast and New England Coalition to provide expert services in connection with the above captioned matter, an application to add 20 years to the operating license of Seabrook Station, from 2030, its current year of expiration, to 2050.

Experience

Beginning in 1964, I served in the U.S. Navy as both a nuclear reactor operator and electric plant operator on Polaris class submarines for seven years. These submarines typically were at sea for extended tours of duty. During my Navy service, I and my fellow crew members were routinely in close proximity to the submarines' nuclear reactors that powered the vessels whether they were under the sea or on the surface.

As a qualified Reactor and Electric Plant Operator, I was responsible for the operation of the reactor and supporting safety systems including, piping, valves, radiation monitoring systems, chemical monitoring systems, reactor protection and control systems, cable and cable termination systems, turbines, generators, power supplies, inverters, breakers, switchgear, battery chargers, motor and steam-powered electric generators (AC and DC), and transformers and other components and systems required to support the safe operation of the submarine's nuclear power plant.

I graduated from the U.S. Navy Electronics Technician School in 1964; the U.S. Navy Nuclear Power School, in 1966; and the U.S. Navy Submarine School, in 1968.

As part of my Navy duties, I was certified as an operator/instructor at the Navy prototype reactor (S1C) in Windsor Locks, Connecticut. I instructed Navy officers and enlisted personnel on reactor operations and maintenance including the subjects of reactor systems and electrical theory related to nuclear systems, power generation, emergency core cooling systems, emergency power systems, diesel generators, water supplies and all other systems required for the operation of the nuclear reactor.

I received an honorable discharge from the Navy in 1971. In 1972, I received a

Bachelor of Science in Electrical Engineering from the University of Hartford. This curriculum included numerous courses in thermal and mechanical engineering.

I have more than 40 years of engineering, design, operations, maintenance, engineering management, and project coordination experience for the construction maintenance and operation of nuclear power plants. This includes positions at Northeast Utilities that involved in the design, construction, operation, and maintenance of Millstone Units 1, 2, and 3 and Connecticut Yankee (Haddam Neck). During this period, I was under the direction of the Nuclear Engineering division ~~Department~~ within Northeast Utilities.

I have also been employed by Consolidated Edison and Entergy at Indian Point Unit 2 as an advisor to the Chief Nuclear Officer (CNO) at that facility. I served in a similar position at Maine Yankee reporting to the CNO of Maine Yankee Atomic Power Company.

My duties at Northeast Utilities included piping system designs and also all Instrument and control systems. I also served as Nuclear Operations Engineer providing liaison services between the NU headquarter and Millstone Unit 2 responsible for coordination of all system design, operation and backfits of operating systems.

I am a registered professional engineer in the State of California. Certificate Number 2235 (currently inactive)

I have actively participated in industry standards writing activities with the American Nuclear Society (ANS), Instrumentation Society of America (ISA), and the Institute of Electrical and Electronics Engineers, Inc. (IEEE) for use by the nuclear industry.

I have been employed as a contractor for the Electric Power Research Institute (EPRI) for the development of computerized monitoring systems for nuclear power plants including monitoring the conditionsperformance of activesafety systems and devices including pressure and level monitoring systems.

I have been engaged as a contractor to Nuclear Energy Institute (NEI, previously NUMARC) to educate Chief Nuclear Officers on the attributes of a Safety Conscious Work Environment (SCWE).

In 1993, I was named "Engineer of the Year" by Westinghouse Electric and Control magazine for my efforts in identifying the subtle failures of active electrical devices such as pressure, level, and flow transmitters and indicators. These failures included generic design deficiencies of piping and mechanical systems in reactor level monitoring systems.

~~I have reviewed Vermont Yankee's License applicable portions of "Renewal Application and the subsequent submittals by Entergy to renew the operating licenses for Indian Point Nextera Energy Seabrook, LLC, et al. Docket no. 50-443 Seabrook Station, Unit 2 and Unit 3. I have also reviewed pertinent sections of the NRC's Safety Evaluation Report dated May 2008 (NUREG 1907). No. 1 Facility Operating License No. NPF-86~~

Non-environmentally-qualified inaccessible medium and low voltage cables and wiring.

Cables play vital roles in the operation of a nuclear power plant. This is clearly recognized by 10 CFR 54.4 and 54.21.

Low voltage and medium voltage cables are clearly defined in NUREG 1801 (GALL) as follows: "The power cables and connections addressed are low-voltage (<1000V) and medium-voltage (2 kV to 35 kV). High voltage (>35 kV) power cables[†] and connections have unique, specialized constructions and must be evaluated on an application specific basis"

10 CFR 54.21 addresses electrical cables and connections and does not differentiate between low, medium and high voltage cables and connections. It is only the GALL document that makes the differentiation. All cables meeting the requirements of 10 CFR 54.21 must be addressed and provided with an aging management program (AMP).

[†]Cables designed for service between 1000 and 2000 volts are not defined.

Based upon more than 40 years of engineering, operation and design

experience, I ~~believe these cables am aware there~~ are ~~designed to~~ cables within the scope of 10 CFR 54.4 and 10

CFR 54.21 that operate ~~between~~ <from less than 1000 volts to 35,000 volts.

Safety-related systems, structures, and components are those relied upon to

remain functional during and following design-basis events (as defined in NUREG 1801-10 CFR

NRC Regulations

~~1. In preparing this declaration, I reviewed 10 C.F.R. § 54.4. Specifically, § 54.4 states:~~

~~§ 54.4 Scope.~~

54.4) to ensure the following functions:

(a) Plant systems, structures, and components within the scope of this part are—

(1) Safety-related systems, structures, and components which are those relied upon to remain functional during and following design-basis events (as defined in 10 CFR 50.49 (b)(1)) to ensure the following functions—

(i) The integrity of the reactor coolant pressure boundary;

(ii) The capability to shut down the reactor and maintain it in a safe shutdown condition; or

(iii) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to those referred to in § 50.34(a)(1), § 50.67(b)(2), or § 100.11 of this chapter, as applicable.

(2) All nonsafety-related systems, structures, and components whose failure could prevent satisfactory accomplishment of any of the functions identified in paragraphs (a)(1)(i), (ii), or (iii) of this section.

(3) All systems, structures, and components relied on in safety analyses or plant evaluations to perform a function that demonstrates compliance with the Commission's regulations for fire protection (10 CFR 50.48), environmental qualification (10 CFR 50.49), pressurized thermal shock (10 CFR 50.61), anticipated transients without scram (10 CFR 50.62), and station blackout (10 CFR 50.63).

(b) The intended functions that these systems, structures, and components must be shown to fulfill in § 54.21 are those functions that are the bases for including them ~~within the scope of license renewal as specified in paragraphs (a)(1)–(3) of this section.~~

within the scope of license renewal as specified in paragraphs (a)(1) -(3) of this section.

I also reviewed 10 C.F.R. § 54.21. Specifically, § 54.21(a)(1) provides:

~~§ 54.21 Contents of application—technical information.~~

~~Each application must contain the following information:~~

~~(a) An integrated plant assessment (IPA). The IPA must—~~

(1) For those systems, structures, and components within the scope of this part, as delineated in § 54.4, identify and list those structures and components subject to an aging management review. Structures and components subject to an aging management review shall encompass those structures and components—

(i) That perform an intended function, as described in § 54.4, without moving parts or without a change in configuration or properties. These structures and components include, but are not limited to, the reactor vessel, the reactor coolant system pressure boundary, steam generators, the pressurizer, piping, pump casings, valve bodies, the core shroud, component supports, pressure retaining boundaries, heat exchangers, ventilation ducts, the containment, the containment liner, electrical and mechanical penetrations, equipment hatches, seismic Category I structures, electrical cables [*emphasis added*] and connections, cable trays, and electrical cabinets, excluding, but not limited to, pumps (except casing), valves (except body), motors, diesel generators, air compressors, snubbers, the control rod drive, ventilation dampers, pressure transmitters, pressure indicators, water level indicators, switchgears, cooling fans, transistors, batteries, breakers, relays, switches, power inverters, circuit boards, battery chargers, and power supplies; and

(ii) That are not subject to replacement based on a qualified life or specified time period. ~~10 C.F.R. § 54.21(a)(1)(i), (ii).~~

Based on my review of 10 C.F.R. § 54.21(a)(1), and 10 CFR § 54.4, electrical cables

are clearly included within the scope of § 10 CFR 54, irrespective of the ~~design of or the~~ applied voltage.

A ~~diligent~~ review of the Seabrook LRA and the NRC Staff's SER Appendix B finds no ~~such Time Limited Aging Analysis (TLAA) or~~ Aging Management

Program (AMP);) for inaccessible cables designed to operate in the voltage range of

less than 1000 to 2000 volts; thus I am led to conclude that the LRA is ~~inaccurate and incomplete~~

deficient

with respect to TLAA or AMP of below-grade, buried, underground, or otherwise inaccessible safety-related electrical ~~cable-cables~~. There is no assurance that cables not designed to operate while submerged or subsequent to moisture or submergence are capable of performing the functions within the scope of 10 CFR 54.4.

~~—Complete and accurate Time Limited Aging Analysis (TLAA) or~~ An effective Aging Management Program (AMP) would take into account the potential physical degradation effects of submergence in water on those electrical cables and components which are susceptible to flooding but which have not been environmentally qualified for submergence.

Consequences of Inadequate Management of Low and Medium Voltage Cables

The failure to properly manage aging of Electrical ~~Transformers~~Cables at ~~Indian Point~~Seabrook may compromise plant safety discussed within 10 CFR 54.4 ~~that states:~~.

~~§ 54.4 Scope.~~

~~(a) Plant systems, structures, and components within the scope of this part are—~~

~~(1) Safety-related systems, structures, and components which are those relied upon to remain functional during and following design-basis events (as defined in 10 CFR 50.49~~

~~(b)(1)) to ensure the following functions—~~

~~(i) The integrity of the reactor coolant pressure boundary;~~

~~(ii) The capability to shut down the reactor and maintain it in a safe shutdown condition; or~~

~~(iii) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to those referred to in § 50.34(a)(1), § 50.67(b)(2), or § 100.11 of this chapter, as applicable.~~

~~2. The consequence of failures of safety related cables may result in accidents beyond the Design Basis Accidents resulting in exposures to the public exceeding 10 C.F.R. § 100 limits.~~

—Failure to properly manage aging of electrical cables could result in loss of emergency power to safety equipment including station blackout loads as discussed in § 10 CFR 50.63.

~~Most of the~~The inaccessible cables within the scope of 10 CFR 54 (~~<2 kv~~) are not identified and not inspected or maintained by any aging management program. Many of these cables ~~are also~~may be periodically submerged and not qualified for ~~the~~this environment.

Seabrook has experienced submerged cables within the scope of 10 CFR 54.

The polymers used for the insulation and jacket materials for electric cables, cable splices, and terminations are susceptible to aging and degradation mechanisms caused by exposure to many of the stressors encountered in nuclear power plant service environments. Longer cable circuits may pass through several different operating environments over the length of their routing throughout the plant. Portions of a cable circuit may pass through areas experiencing more harsh environmental conditions, such as high temperature, high radiation, high humidity, or flooding of underground cables. There has been concern that such local adverse environmental stressors can cause excessive aging and degradation in the exposed sections of a cable that could significantly shorten its effective service life and cause unexpected early failures².

²~~NUREG/CR-7000~~

~~The integrity and function of power and instrumentation and control (I&C)~~ Cables are monitored indirectly through the performance of in-service testing of safety-related systems and components. These tests ~~can~~may demonstrate the function of the cables only under test conditions. ~~However, they~~

These tests do not provide assurance that they will continue to perform successfully when they are called upon to operate fully loaded for extended periods as they would under ~~normal service operating conditions or under~~ design basis conditions. In-service testing of a cable 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. Consequently, a cable circuit with undetected ~~damaged~~damage or degraded insulation could pass an in-service functional test, but still fail unexpectedly when called upon to operate under anticipated environmental conditions or the severe stresses encountered during a design basis event (i.e., fully loaded equipment, more extreme environmental conditions, extended operation in a heavily loaded state)³).

³NUREG/CR-7000

Characterization of cables by commodity grouping is an acceptable practice only if the location where each cable type is used is also identified. The LRA should include the drawings identified in this section so that reviewers can identify locations of cables that may be subjected to moisture and submergence. Again, these materials are not in the public domain and the LRA is therefore opaque and incomplete.

Electrical Transformers

~~28.~~ There are numerous electrical transformers that perform ~~a function~~functions described in ~~§§10~~CFR 54.4(a)(1)/(2) and (3). Transformers function without moving parts or without a change in configuration or properties as defined in that regulation and are passive devices.

~~29.~~ Failure to properly manage aging of Electrical Transformers may compromise:

- ~~a.~~ The integrity of the reactor coolant pressure boundary;

~~b.~~ The capability to shut down the reactor and maintain it in a safe shutdown condition; or

~~e.~~ The capability to prevent or mitigate the consequences of accidents, which could result in potential offsite exposures comparable to those referred to in §§ 50.34(a)(1), 50.67(b)(2), or § 100.11 of this chapter, as applicable. 10 C.F.R. §§ 54.4(a)(1)(2) and (3).

~~30.~~ The consequence of failures of Electrical Transformers may result in accidents beyond the Design Basis Accidents resulting in exposures to the public exceeding 10 C.F.R. § 100 limits.

~~31. Failure to properly manage aging of electrical transformers could result in loss of emergency power to safety equipment and vital busses, including all station blackout loads. Appendix A, Page A-35 of the UFSAR supplement describes a Structures Monitoring Program that includes a program for monitoring “transformer/switchyard support structures” yet there is no APM described for transformers within the scope of 10 C.F.R. § 54.21(a)(1)(i).~~

~~32. The LRA also discusses the need for an AMP for “transformer support structures” based on the criterion of 10 CFR § 54.4(a)(3).~~

~~33.~~ The role of most of the transformers in providing power for safety functions is normally described in Chapter 8 of the UFSAR. The Seabrook LRA provides an FSAR supplement as required by 10 CFR 54.21.

~~34.~~ While other License renewal applications contained a copy of relevant sections of the UFSAR, Seabrook did not provide such copy and only referenced applicable sections of the UFSAR. This

UFSAR is not readily available for review.

~~35.~~ Without a copy of the UFSAR it is not possible to identify all of the transformers within the scope of 10 CFR 54.4, however it is ~~well~~ known that many transformers perform functions described in 10 CFR 54 ~~and are passive devices in that they contain no moving parts and do not undergo a change of properties or state.~~

~~36.~~ Transformers are ~~active~~passive devices within the scope of 10 CFR 54.4 yet the licensee has not provided any AMP to assure ~~???????~~compliance with the requirements of 10 CFR 37.54.21.

For purposes of the license renewal rule, the staff has determined that the plant system portion of the offsite power system that is used to connect the plant to the offsite power source should be included within the scope of the rule.

This path typically includes switchyard circuit breakers that connect to the offsite system *power transformers (startup transformers), the transformers ~~themselves~~themselves*¹, the intervening overhead or underground circuits between circuit breaker and transformer and transformer and onsite electrical system, and the associated control circuits and structures. Ensuring that the appropriate offsite power system long-lived passive structures and components that are part of this circuit path are subject to an AMR will assure that the bases underlying the SBO requirements are maintained over the period of extended license.

~~38.~~ For the electrical scoping effort, the LRA states,

“For the electrical scoping effort, boundary drawings were not necessary since commodity grouping was used in the scoping process. The SBO Offsite Recovery

¹ Gall Report NUREG 1801

Path License Renewal Drawing, Figure 2.5-1, was created to depict the in-scope portion of the off-site power system for Station Blackout (SBO). Seabrook Station has chosen two paths for the recovery of off-site power in the event of a Station Blackout (SBO). Path 1 is colored green. Path 2 is colored red.”

~~Characterization of cables by commodity grouping is an acceptable practice only if the location where each cable type is used is also identified. The LRA should include the the drawings identified in this section so that reviewers can identify location of cables that may be subjected to moisture and submergence. Again, these materials are not in the public domain and the LRA is therefore opaque and incomplete.~~

Figure 2.5-1 clearly illustrates that transformers are part of the SBO recovery path and there are numerous additional transformers within the scope of 10 CFR 54.4 that are not discussed in the LRA. There is no proposed AMP for these transformers.

Buried, Below Grade, Inaccessible Pipes and Tanks

~~39. In Appendix A of the LRA, under scoping, the licensee references, but does not provide color-coded schematic drawings.~~

Page 2.1-6 of the Seabrook LRA states the following:

“Scoping Boundaries

For the mechanical scoping effort, summary level boundary descriptions were developed and included in Section 2.3. License renewal drawings/diagrams were also created from plant controlled PID’s (e.g. PID-1-~~FW~~ FW-20686) to illustrate in-scope mechanical systems, structures and components subject to an aging management review (AMR). These AMR boundaries are depicted on color coded license renewal drawings (e.g. PID-1-~~FW-LR206861-~~ FWLR20686) and contain system boundary flags. The “RED” colored portions of the drawings indicate system components in scope for criteria (a)(1) and

(a)(3) that are subject to an AMR. The “GREEN” colored portions indicate system components in scope for criterion (a)(2) that are subject to an AMR.”

While numerous drawings were discussed and referenced in the LRA, few of these

actual piping drawings and diagrams are available for review. Without these

drawings the LRA is incomplete and does not permit the reviewer to ~~easily~~ determine if ~~mechanical~~ ~~scoping was~~

buried pipes and tanks are properly ~~done~~-addressed.

~~40.~~In addressing Buried Piping and Tanks Surveillance or Buried Piping and Tanks Inspection in LRA Table 3.2.1-17, the Licensee concludes that the AMP is “not applicable” because “The Engineering Safety Features systems do not contain steel piping (with or without coating or wrapping), piping components, and piping elements buried in soil. See Subsection 3.2.2.2.9.”

~~However,~~ 10 CFR 54 does not differentiate between steel and non-steel piping and tanks. Stainless steel, fiberglass, PVC, concrete and other materials are employed and are subject to degradation and must be addressed. Again, the LRA is ~~incomplete~~ deficient.

~~41.~~The Aging Management program proposed in the license renewal application for Seabrook buried pipes is inadequate because: (1) ~~it does not provide for adequate inspection of all systems, structures, and components that may contain or convey water, radioactively contaminated water, and/or other fluids;~~ (2) ~~there is no adequate~~ there is no adequate leak prevention or detection programs designed to ~~replace~~ inspect/repair such systems, structures, and components before leaks occur; and (3) ~~there is no adequate monitoring to determine if and when leakage from these systems, structures, and components occurs.~~ (4) There is no identification within the LRA of the specific piping systems and tanks covered by this AMP.

~~42.~~In order to renew its licenses for another 20 years, 10 C.F.R. § 54.21 requires Seabrook to demonstrate that for each system, structure, and component included within the scope of Part 54.4 the effects of aging will be adequately managed for the period of extended operation. 10 C.F.R. § 54.21 specifically includes "piping" as one of the systems, structures and components included within Part 54. The transfer ~~canal between a reactor and an associated spent fuel pool is another system, structure, or component that falls within Part 54.~~

~~43. canal between a reactor and an associated spent fuel pool is another system, structure, or component that falls within Part 54.~~

Pipes perform a critical role in the following systems: (1) safety injection; (2) service water (SW); (3) fire protection; (4) diesel fuel oil; (5) security generator; (6) ECCS and (7) auxiliary feedwater and other systems within the scope of 10 CFR

54.4. These pipes and tanks— whether by design or a structural or system failure within the nuclear power station — may contain radioactive water ~~in excess of EPA drinking water limits.~~

~~44.~~In addition, the refueling water cavities, and spent fuel pool; transfer canals that connect each unit's reactor core with the unit's associated spent fuel pool are included within in the scope of Part 54's systems, structures, and components. *See* 10 C.F.R. § 54.~~212~~ 1(a)(1)(I). These transfer canals and water cavities contain radioactive water during refuelings. The adequacy of the AMPs for these components cannot be determined from the information provided in the LRA.

~~45.~~Deficiencies in the Aging Management Plan that encompass the detection of corrosion or leaks in underground buried pipes and tanks, the transfer canals, and essential service water systems could endanger the safety and welfare of the public and are therefore within the scope of a ~~re-~~ licensing ~~relicensing~~ hearing. In addition, deficiencies in the Aging Management Plan concerning the detection of leaks or corrosion in other systems, structures, and components containing radioactive water ~~could endanger the safety and welfare of the public and therefore also are within the scope of a re-licensing hearing.~~

~~46. Recent events around could endanger the United States safety and welfare of the world—public and therefore also are within~~

~~the scope of a re-licensing hearing.~~

Recent events² at nuclear power plants as well as at the Seabrook Nuclear Power Station —have demonstrated that various aging in scope piping systems have experienced leaks and/or corrosion. These leaks and corrosion threaten the integrity of such systems and compromise their ability to achieve their intended function. The existence of these leaks demonstrates that aging management of the piping systems is absolutely essential for extended operation of Seabrook.

~~47.~~ In addition, reports have also confirmed that leaks of underground pipes and tanks can result in the release of significant amounts of radioactive materials into the groundwater or the atmosphere. Exposure to this radiation can threaten human health.

~~48.~~ Despite the substantial evidence of the dangers of underground leaks from pipes, the LRA fails to include a comprehensive program of leak detection and prevention. Rather, the Applicant's Aging Management Program for pipes consists of no preventative measures and no leak tests any more frequently than every 10 years unless, by happenstance (opportunistic), the opportunity to look at a pipe arises for

2 Indian Point failure of Condensate Storage Tank buried piping and severe degradation of Salem Unit 1 AFW buried discharge piping

some other reason. There is substantial evidence that such a laissez-faire inspection program will be ineffective at prevention or early detection of leaks from pipes that carry radioactive water or are otherwise important for plant safety.

~~49.~~ Inspections that might only occur every ten years are insufficient if there is a potential leak of radioactive water from corroded components that could be migrating off-site. "Opportunistic inspections" that might occur no more often than ten years give the appearance that the matter of discovering leaks is being left to chance. There should be regular and frequent inspections of all components that contain radioactive water in this aging plant, including all weld junctures.

~~50.~~ Seabrook's License Renewal Application and proposed Aging Management Plan are deficient because they do not provide any evaluation of the baseline conditions of buried systems or their many weld junctures, nor do they provide any support for postulated or "typical" corrosion rates within the facility.

~~51.~~ The LRA contains no plan or discussion of cathodic protection or other methods to prevent leaks from occurring. Prevention is the best protection against leakage from pipes. 49 CFR 195 provides reasonable requirements for the protection of ~~buried~~ buried pipes for the transportation industry, yet Seabrook and the NRC have failed to consider the "lessons learned" from these important requirements ~~to the protect the public from the release of hazardous materials to the environment.~~

~~52.~~—Seabrook makes no commitment to comply with the National Association of Corrosion Engineers (NACE) corrosion control standards.

~~53.~~—There is no assurance that the backfill of buried pipes and tanks is consistent with SP0169-~~2007-section~~³2007 section 5.2.3.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed in Accord with 10CFR 2.304(d).

Paul M. Blanch

~~Paul M. Blanch~~

~~September 18~~ December 6, 2010 Technical Consultant 135 Hyde Rd. West Hartford, Connecticut
06617 860-236-0326 pmb Blanch@comcast.net

³ NACE “Control of External Corrosion on Underground or Submerged Metallic Piping Systems”

FRIENDS/NEC PETITION SUPPLEMENT – ATTACHMENT ONE

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of
FPL Energy Seabrook, LLC (NextEra, Inc)
(Seabrook Station, Unit 1 – License Renewal Application

December 6, 2010
Docket No. 50-443

DECLARATION OF PAUL BLANCH

1. I, Paul Blanch hereby declare under penalty of perjury that the following is true and correct.

2. I have been retained by Friends of the Coast and New England Coalition to provide expert services in connection with the above captioned matter, an application to add 20 years to the operating license of Seabrook Station, from 2030, its current year of expiration, to 2050.

Experience

3. Beginning in 1964, I served in the U.S. Navy as both a nuclear reactor operator and electric plant operator on Polaris class submarines for seven years. These submarines typically were at sea for extended tours of duty. During my Navy service, I and my fellow crew members were routinely in close proximity

to the submarines' nuclear reactors that powered the vessels whether they were under the sea or on the surface.

- 4 . As a qualified Reactor and Electric Plant Operator, I was responsible for the operation of the reactor and supporting safety systems including, piping, valves, radiation monitoring systems, chemical monitoring systems, reactor protection and control systems, cable and cable termination systems, turbines, generators, power supplies, inverters, breakers, switchgear, battery chargers, motor and steam-powered electric generators (AC and DC), and transformers and other components and systems required to support the safe operation of the submarine's nuclear power plant.

- 5 . I graduated from the U.S. Navy Electronics Technician School in 1964; the U.S. Navy Nuclear Power School, in 1966; and the U.S. Navy Submarine School, in 1968.

- 6 . As part of my Navy duties, I was certified as an operator/instructor at the Navy prototype reactor (S1C) in Windsor Locks, Connecticut. I instructed Navy officers and enlisted personnel on reactor operations and maintenance including the subjects of reactor systems and electrical theory related to nuclear systems, power generation, emergency core cooling systems, emergency power systems, diesel generators, water supplies and all other systems required for the operation of the nuclear reactor.

7. I received an honorable discharge from the Navy in 1971. In 1972, I received a Bachelor of Science in Electrical Engineering from the University of Hartford. This curriculum included numerous courses in thermal and mechanical engineering.
8. I have more than 40 years of engineering, design, operations, maintenance, engineering management, and project coordination experience for the construction maintenance and operation of nuclear power plants. This includes positions at Northeast Utilities that involved in the design, construction, operation, and maintenance of Millstone Units 1, 2, and 3 and Connecticut Yankee (Haddam Neck). During this period, I was under the direction of the Nuclear Engineering Department within Northeast Utilities.
9. I have also been employed by Consolidated Edison and Entergy at Indian Point Unit 2 as an advisor to the Chief Nuclear Officer (CNO) at that facility. I served in a similar position at Maine Yankee reporting to the CNO of Maine Yankee Atomic Power Company.
10. My duties at Northeast Utilities included piping system designs and also all Instrument and control systems. I also served as Nuclear Operations Engineer providing liaison services between the NU headquarter and Millstone Unit 2 responsible for coordination of all system design, operation and backfits of operating systems.

11. I am a registered professional engineer in the State of California. Certificate Number 2235 (currently inactive)

12. I have actively participated in industry standards writing activities with the American Nuclear Society (ANS), Instrumentation Society of America (ISA), and the Institute of Electrical and Electronics Engineers, Inc. (IEEE) for use by the nuclear industry.

13. I have been employed as a contractor for the Electric Power Research Institute (EPRI) for the development of computerized monitoring systems for nuclear power plants including monitoring the performance of safety systems and devices including pressure and level monitoring systems.

14. I have been engaged as a contractor to Nuclear Energy Institute (NEI, previously NUMARC) to educate Chief Nuclear Officers on the attributes of a Safety Conscious Work Environment (SCWE).

15. In 1993, I was named “Engineer of the Year” by Westinghouse Electric and Control magazine for my efforts in identifying the subtle failures of active electrical devices such as pressure, level, and flow transmitters and indicators. These failures included generic design deficiencies of piping and mechanical systems in reactor level monitoring systems.

16. I have reviewed applicable portions of “Renewal Application Nextera Energy Seabrook, LLC, et al. Docket no. 50-443 Seabrook Station, Unit No. 1 Facility Operating License No. NPF-86

Non-environmentally-qualified inaccessible medium and low voltage cables and wiring.

17. Cables play vital roles in the operation of a nuclear power plant. This is clearly recognized by 10 CFR 54.4 and 54.21.

18. Low voltage and medium voltage cables are clearly defined in NUREG 1801 (GALL) as follows: “The power cables and connections addressed are low-voltage (<1000V) and medium-voltage (2 kV to 35 kV). High voltage (>35 kV) power cables and connections have unique, specialized constructions and must be evaluated on an application specific basis”

19. 10 CFR 54.21 addresses electrical cables and connections and does not differentiate between low, medium and high voltage cables and connections. It is only the GALL document that makes the differentiation. All cables meeting the requirements of 10 CFR 54.21 must be addressed and provided with an aging management program (AMP).

20. Based upon more than 40 years of engineering, operation and design experience, I am aware there are cables within the scope of 10 CFR 54.4 and 10 CFR 54.21 that operate from less than 1000 volts to 35,000 volts.

21. Safety-related systems, structures, and components are those relied upon to remain functional during and following design-basis events (as defined in 10 CFR 54.4) to ensure the following functions:

(a) Plant systems, structures, and components within the scope of this part are--

(1) Safety-related systems, structures, and components which are those relied upon to remain functional during and following design-basis events (as defined in 10 CFR 50.49 (b)(1)) to ensure the following functions--

(i) The integrity of the reactor coolant pressure boundary;

(ii) The capability to shut down the reactor and maintain it in a safe shutdown condition; or

(iii) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to those referred to in § 50.34(a)(1), § 50.67(b)(2), or § 100.11 of this chapter, as applicable.

(2) All nonsafety-related systems, structures, and components whose failure could prevent satisfactory accomplishment of any of the functions identified in paragraphs (a)(1)(i), (ii), or (iii) of this section.

(3) All systems, structures, and components relied on in safety analyses or plant evaluations to perform a function that demonstrates compliance with the Commission's regulations for fire protection (10 CFR 50.48), environmental qualification (10 CFR 50.49), pressurized thermal shock (10 CFR 50.61), anticipated transients without scram (10 CFR 50.62), and station blackout (10 CFR 50.63).

(b) The intended functions that these systems, structures, and components must be shown to fulfill in § 54.21 are those functions that are the bases for including them

within the scope of license renewal as specified in paragraphs (a)(1) - (3) of this section.

22 . I also reviewed 10 C.F.R. § 54.21. Specifically, § 54.21(a)(1) provides:

(1) For those systems, structures, and components within the scope of this part, as delineated in § 54.4, identify and list those structures and components subject to an aging management review. Structures and components subject to an aging management review shall encompass those structures and components--

(i) That perform an intended function, as described in § 54.4, without moving parts or without a change in configuration or properties. These structures and components include, but are not limited to, the reactor vessel, the reactor coolant system pressure boundary, steam generators, the pressurizer, piping, pump casings, valve bodies, the core shroud, component supports, pressure retaining boundaries, heat exchangers, ventilation ducts, the containment, the containment liner, electrical and mechanical penetrations, equipment hatches, seismic Category I structures, electrical cables and connections, cable trays, and electrical cabinets, excluding, but not limited to, pumps (except casing), valves (except body), motors, diesel generators, air compressors, snubbers, the control rod drive, ventilation dampers, pressure transmitters, pressure indicators, water level indicators, switchgears, cooling fans, transistors, batteries, breakers, relays, switches, power inverters, circuit boards, battery chargers, and power supplies; and

(ii) That are not subject to replacement based on a qualified life or specified time period.

23 . Based on my review of 10 C.F.R. § 54.21(a)(1), and 10 CFR § 54.4, electrical cables are clearly included within the scope of § 10 CFR 54, irrespective of the applied voltage.

24 . A review of the Seabrook LRA Appendix B finds no Aging Management Program (AMP) for inaccessible cables designed to operate in the voltage range of less than 1000 to 2000 volts; thus I am led to conclude that the LRA is deficient with respect to TLAA or AMP of below-grade, buried, underground, or otherwise

inaccessible safety-related electrical cables. There is no assurance that cables not designed to operate while submerged or subsequent to moisture or submergence are capable of performing the functions within the scope of 10 CFR 54.4.

25. An effective Aging Management Program (AMP) would take into account the potential physical degradation effects of submergence in water on those electrical cables and components which are susceptible to flooding but which have not been environmentally qualified for submergence.
26. The failure to properly manage aging of Electrical Cables at Seabrook may compromise plant safety discussed within 10 CFR 54.4.
27. Failure to properly manage aging of electrical cables could result in loss of emergency power to safety equipment including station blackout loads as discussed in § 10 CFR 50.63.
28. The inaccessible cables within the scope of 10 CFR 54 are not identified and not inspected or maintained by any aging management program. Many of these cables may be periodically submerged and not qualified for this environment.
29. Seabrook has experienced submerged cables within the scope of 10 CFR 54.
30. The polymers used for the insulation and jacket materials for electric cables, cable splices, and terminations are susceptible to aging and degradation

mechanisms caused by exposure to many of the stressors encountered in nuclear power plant service environments. Longer cable circuits may pass through several different operating environments over the length of their routing throughout the plant. Portions of a cable circuit may pass through areas experiencing more harsh environmental conditions, such as high temperature, high radiation, high humidity, or flooding of underground cables. There has been concern that such local adverse environmental stressors can cause excessive aging and degradation in the exposed sections of a cable that could significantly shorten its effective service life and cause unexpected early failures.

31. Cables are monitored indirectly through the performance of in-service testing of safety-related systems and components. These tests may demonstrate the function of the cables only under test conditions.

32. These tests do not provide assurance that they will continue to perform successfully when they are called upon to operate fully loaded for extended periods as they would under design basis conditions. In-service testing of a cable 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. Consequently, a cable circuit with undetected damage or degraded insulation could pass an in-service functional test, but still fail unexpectedly when called upon to operate under anticipated environmental conditions or the

severe stresses encountered during a design basis event (i.e., fully loaded equipment, more extreme environmental conditions, extended operation in a heavily loaded state).

33. 10 CFR Part 50 including Appendix A and B regulations require licensees to assess the condition of their components, to monitor the performance or condition of structures, systems, and components in a manner sufficient to provide reasonable assurance that they are capable of fulfilling their intended functions, and to establish a test program to ensure that all testing required to demonstrate that components will perform satisfactorily in service is identified and performed. Recent incidents involving early failures of electric cables and cable failures leading to multiple equipment failures, as cited in Information Notice 2002-12, "Submerged Safety-Related Cables," and Generic Letter 2007-01, "Inaccessible or Underground Power Cable Failures That Disable Accident Mitigation Systems or Cause Plant Transients," suggest that licensee approaches to cable testing, such as in-service testing, surveillance testing, preventive maintenance, maintenance rule, etc., do not fully characterize the condition of cable insulation nor provide information on the extent of aging and degradation mechanisms that can lead to cable failure. Analysis of the summary of licensee responses to GL 2007-01 inquiries on licensees' experiences regarding cable failures and cable condition monitoring activities revealed wide variations to the approaches and comprehensiveness of cable testing activities. Analysis of the reported cable failures also indicated a trend

toward early cable failures occurring prior to the end of the original 40-year license period. These data prompted the NRC to consider whether "...licensees should have a program for using available diagnostic cable testing methods to assess cable condition."

34. Characterization of cables by commodity grouping is an acceptable practice only if the location where each cable type is used is also identified. The LRA should include the drawings identified in this section so that reviewers can identify locations of cables that may be subjected to moisture and submergence. Again, these materials are not in the public domain and the LRA is therefore opaque and incomplete.

Electrical Transformers

35. There are numerous electrical transformers that perform functions described in 10 CFR 54.4(a)(1)/(2) and (3). Transformers function without moving parts or without a change in configuration or properties as defined in that regulation and are passive devices.
36. Failure to properly manage aging of Electrical Transformers may compromise:

The integrity of the reactor coolant pressure boundary;

The capability to shut down the reactor and maintain it in a safe shutdown condition; or

The capability to prevent or mitigate the consequences of accidents, which could result in potential offsite exposures comparable to those referred to in §§ 50.34(a)(1), 50.67(b) (2), or § 100.11 of this chapter, as applicable. 10 C.F.R. §§ 54.4(a)(1)(2) and (3).

37. The consequence of failures of Electrical Transformers may result in accidents beyond the Design Basis Accidents resulting in exposures to the public exceeding 10 C.F.R. § 100 limits.

38. The role of most of the transformers in providing power for safety functions is normally described in Chapter 8 of the UFSAR. The Seabrook LRA provides an FSAR supplement as required by 10 CFR 54.21.

39. While other License renewal applications contained a copy of relevant sections of the UFSAR, Seabrook did not provide such copy and only referenced applicable sections of the UFSAR. This UFSAR is not readily available for review.

40. Without a copy of the UFSAR it is not possible to identify all of the transformers within the scope of 10 CFR 54.4, however it is known that many transformers perform functions described in 10 CFR 54.

41. Transformers are passive devices within the scope of 10 CFR 54.4 yet the licensee has not provided any AMP to assure compliance with the requirements of 10 CFR 54.21.

42. For purposes of the license renewal rule, the staff has determined that the plant system portion of the offsite power system that is used to connect the plant to the offsite power source should be included within the scope of the rule.

43. This path typically includes switchyard circuit breakers that connect to the offsite system *power transformers (startup transformers), the transformers themselves*¹, the intervening overhead or underground circuits between circuit breaker and transformer and transformer and onsite electrical system, and the associated control circuits and structures. Ensuring that the appropriate offsite power system long-lived passive structures and components that are part of this circuit path are subject to an AMR will assure that the bases underlying the SBO requirements are maintained over the period of extended license.

44. For the electrical scoping effort, the LRA states,

“For the electrical scoping effort, boundary drawings were not necessary since commodity grouping was used in the scoping process. The SBO Offsite Recovery

¹ Gall Report NUREG 1801

Path License Renewal Drawing, Figure 2.5-1, was created to depict the in-scope portion of the off-site power system for Station Blackout (SBO). Seabrook Station has chosen two paths for the recovery of off-site power in the event of a Station Blackout (SBO). Path 1 is colored green. Path 2 is colored red.”

45. Figure 2.5-1 clearly illustrates that transformers are part of the SBO recovery path and there are numerous additional transformers within the scope of 10 CFR 54.4 that are not discussed in the LRA. There is no proposed AMP for these transformers.

46. **Buried, Below Grade, Inaccessible Pipes and Tanks**

47. Page 2.1-6 of the Seabrook LRA states the following:

48. “Scoping Boundaries

For the mechanical scoping effort, summary level boundary descriptions were developed and included in Section 2.3. License renewal drawings/diagrams were also created from plant controlled PID’s (e.g. PID- 1 - FW-20686) to illustrate in-scope mechanical systems, structures and components subject to an aging management review (AMR). These AMR boundaries are depicted on color coded license renewal drawings (e.g. PID-1-FWLR20686) and contain system boundary flags. The “RED” colored portions of the drawings indicate system components in scope for criteria (a) (1) and (a) (3) that are subject to an AMR. The “GREEN” colored portions indicate system components in scope for criterion (a)(2) that are subject to an AMR.”

49. While numerous drawings were discussed and referenced in the LRA, few of these actual piping drawings and diagrams are available for review. Without these drawings the LRA is incomplete and does not permit the reviewer to determine if buried pipes and tanks are properly addressed.

50. In addressing Buried Piping and Tanks Surveillance or Buried Piping and Tanks Inspection in LRA Table_3.2.1-17, the Licensee concludes that the AMP is “not applicable” because “The Engineering Safety Features systems do not contain steel piping (with or without coating or wrapping), piping components, and piping elements buried in soil. See Subsection 3.2.2.2.9.”
51. 10 CFR 54 does not differentiate between steel and non-steel piping and tanks. Stainless steel, fiberglass, PVC, concrete and other materials are employed and are subject to degradation and must be addressed. Again, the LRA is deficient.
52. The Aging Management program proposed in the license renewal application for Seabrook buried pipes is inadequate because: (1) there is no adequate leak prevention or detection programs designed to inspect/repair such systems, structures, and components before leaks occur; and (2) there is no adequate monitoring to determine if and when leakage from these systems, structures, and components occurs. (3) There is no identification within the LRA of the specific piping systems and tanks covered by this AMP.
53. In order to renew its licenses for another 20 years, 10 C.F.R. § 54.21 requires Seabrook to demonstrate that for each system, structure, and component included within the scope of Part 54.4 the effects of aging will be adequately managed for the period of extended operation. 10 C.F.R. § 54.21 specifically includes "piping" as one of the systems, structures and components included within Part 54. The transfer

canal between a reactor and an associated spent fuel pool is another system, structure, or component that falls within Part 54.

54. Pipes perform a critical role in the following systems: (1) safety injection; (2) service water (SW); (3) fire protection; (4) diesel fuel oil; (5) security generator; (6) ECCS and (7) auxiliary feedwater and other systems within the scope of 10 CFR 54.4. These pipes and tanks— whether by design or a structural or system failure within the nuclear power station – may contain radioactive water

55. In addition, the refueling water cavities, and spent fuel pool transfer canals that connect each unit's reactor core with the unit's associated spent fuel pool are included within in the scope of Part 54 's systems, structures, and components. *See* 10 C.F.R. § 54.2 1(a)(1)(I). These transfer canals and water cavities contain radioactive water during refuelings. The adequacy of the AMPs for these components cannot be determined from the information provided in the LRA.

56. Deficiencies in the Aging Management Plan that encompass the detection of corrosion or leaks in underground buried pipes and tanks, the transfer canals, and essential service water systems could endanger the safety and welfare of the public and are therefore within the scope of a relicensing hearing. In addition, deficiencies in the Aging Management Plan concerning the detection of leaks or corrosion in other systems, structures, and components containing radioactive water

could endanger the safety and welfare of the public and therefore also are within the scope of a re-licensing hearing.

57. Recent events² at nuclear power plants as well as at the Seabrook Nuclear Power Station have demonstrated that various in scope piping systems have experienced leaks and/or corrosion. These leaks and corrosion threaten the integrity of such systems and compromise their ability to achieve their intended function. The existence of these leaks demonstrates that aging management of the piping systems is absolutely essential for extended operation of Seabrook.

58. In addition, reports have also confirmed that leaks of underground pipes and tanks can result in the release of significant amounts of radioactive materials into the groundwater or the atmosphere. Exposure to this radiation can threaten human health.

59. Despite the substantial evidence of the dangers of underground leaks from pipes, the LRA fails to include a comprehensive program of leak detection and prevention. Rather, the Applicant's Aging Management Program for pipes consists of no preventative measures and no leak tests any more frequently than every 10 years unless, by happenstance (opportunistic), the opportunity to look at a pipe arises for

² Indian Point failure of Condensate Storage Tank buried piping and severe degradation of Salem Unit 1 AFW buried discharge piping

some other reason. There is substantial evidence that such a laissez-faire inspection program will be ineffective at prevention or early detection of leaks from pipes that carry radioactive water or are otherwise important for plant safety.

60. Inspections that might only occur every ten years are insufficient if there is a potential leak of radioactive water from corroded components that could be migrating off-site. "Opportunistic inspections" that might occur no more often than ten years give the appearance that the matter of discovering leaks is being left to chance. There should be regular and frequent inspections of all components that contain radioactive water in this aging plant, including all weld junctures.

61. Seabrook's License Renewal Application and proposed Aging Management Plan are deficient because they do not provide any evaluation of the baseline conditions of buried systems or their many weld junctures, nor do they provide any support for postulated or "typical" corrosion rates within the facility.

62. The LRA contains no plan or discussion of cathodic protection or other methods to prevent leaks from occurring. Prevention is the best protection against leakage from pipes. 49 CFR 195 provides reasonable requirements for the protection of buried pipes for the transportation industry, yet Seabrook and the NRC have failed to consider the "lessons learned" from these important requirements.

63. Seabrook makes no commitment to comply with the National Association of Corrosion Engineers (NACE) corrosion control standards.

64. There is no assurance that the backfill of buried pipes and tanks is consistent with SP0169-2007³ section 5.2.3.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed in Accord with 10CFR 2.304(d),

Paul M. Blanch

December 6, 2010

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³ NACE “Control of External Corrosion on Underground or Submerged Metallic Piping Systems”

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
)
NextEra Energy, LLC) Docket Nos. 50-443
)
(Seabrook Station, Unit 1)) ASLBP No. 10-906-02-LR-BD01

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing "NRC STAFF'S OBJECTIONS TO THE FRIENDS OF THE COAST AND NEW ENGLAND COALITION'S SUPPLEMENT" dated December 13, 2010, have been served upon the following by the Electronic Information Exchange, this 13th day of December, 2010:

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