

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 |

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NRC STAFF'S ANSWER TO INTERVENORS' MOTION  
FOR LEAVE TO FILE NEW CONTENTION CONCERNING  
SAFETY-RELATED CONCRETE STRUCTURES

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September 21, 2012

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INTRODUCTION

Pursuant to 10 C.F.R. § 2.309(h)(1), and the Atomic Safety and Licensing Board's ("Board") April 4, 2011 Initial Scheduling Order,<sup>1</sup> the Staff of the U.S. Nuclear Regulatory Commission ("NRC Staff" or "Staff") hereby files its answer to Friends of the Coast and New England Coalition's ("FOTC/NEC" or "Intervenors") motion for leave to file a new contention regarding Alkali-Silica Reaction ("ASR").<sup>2</sup> The new contention ("ASR Contention") challenges the applicant's, NextEra Energy Seabrook, LLC ("NextEra"), plans to manage ASR in concrete at the Seabrook Nuclear Station ("Seabrook") during the license renewal period.

While some of the ASR Contention's claims meet the NRC's contention admissibility standards, as explained in detail below, the entirety of the contention is late.<sup>3</sup> As a result, the

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<sup>1</sup> Initial Scheduling Order (Apr. 4, 2011) (Agencywide Documents Access and Management System ("ADAMS") Accession No. ML110940336) ("ISO")

<sup>2</sup> Friends of the Coast and New England Coalition's Motion for Leave to File a New Contention Concerning NextEra Energy Seabrook's Amendment of its Aging Management Program for Safety-Related Concrete Structures (Aug. 27, 2012) ADAMS Accession No. ML12241A061) ("ASR Contention").

<sup>3</sup> Although the Commission recently amended its rules of practice, because FOTC/NEC filed the (continued. . .)

Board should not admit the ASR Contention under the Commission's regulations. Nevertheless, the NRC Staff views ASR as an important issue which, as discussed below, the Staff is thoroughly reviewing outside of this hearing.

## BACKGROUND

### I. Procedural History

As relevant to the instant motion, this proceeding concerns the May 25, 2010 application of NextEra to renew its operating license for Seabrook for an additional 20 years from the current expiration date of March 15, 2030.<sup>4</sup> The Board determined that FOTC/NEC has standing, found that FOTC/NEC raised at least one admissible contention, and admitted FOTC/NEC as a party to this proceeding.<sup>5</sup> FOTC/NEC currently has two admitted contentions in this proceeding that challenge the adequacy of NextEra's severe accident mitigation analysis.<sup>6</sup>

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(. . .continued)

ASR Contention before the effective date of those amendments, the Staff will analyze the ASR contention under the pre-amendment regulations. Amendments to Adjudicatory Process Rules and Related Requirements, 77 Fed. Reg. 46562, 46562 (Aug. 3, 2012).

<sup>4</sup> Letter from Paul O. Freeman, Site Vice President, dated May 25, 2010, transmitting application for license renewal for Seabrook Station, Unit 1 (ADAMS Accession No. ML101590099) ("LRA").

<sup>5</sup> *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), LBP-11-02, 73 NRC 28 (2011).

<sup>6</sup> *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-05, 75 NRC \_\_, \_\_ (Mar. 8, 2012) (slip op.). On July 9, 2012, FOTC/NEC filed a motion for leave to admit a new contention regarding the NRC's consideration of spent fuel storage after the license renewal term. Intervenor's Motion for Leave to File a New Contention Concerning Temporary Storage and Ultimate Disposal of Nuclear Waste at Seabrook Station, Unit 1" (July 9, 2012) (ADAMS Accession No. ML12191A420). The same or similar contentions were filed in other proceedings. On August 7, 2012, the Commission directed that these contentions "be held in abeyance pending" the Commission's further order. *Calvert Cliffs Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-12-16, 76 NRC \_\_ (Aug. 7 2012) (slip op. at 6). Resultantly, FOTC/NEC's spent fuel contention is currently in abeyance before this tribunal.

II. The NRC's Review of ASR at Seabrook

On November 18, 2010, the Staff sent NextEra a request for additional information ("RAI") which noted that "cracks due to Alkali-Silica Reaction (ASR) have been observed in different Seabrook plant concrete structures, including the concrete enclosure building."<sup>7</sup> Specifically, the Staff asked NextEra to provide information on tests the applicant had employed to determine whether the "exterior containment concrete surface between elevation -30 feet and +20 feet" had been affected by cracking due to expansion and reaction with aggregates.<sup>8</sup> The Staff also asked NextEra to provide the results of 2010 concrete tests conducted at Seabrook.<sup>9</sup>

In a December 17, 2010 response, NextEra stated that it performed a five-year interval inspection of the Containment Structure using ACI 349, "Evaluation of Existing Nuclear Safety-Related Concrete Structures."<sup>10</sup> Based on that inspection, NextEra found that there "has been no sign of detrimental cracking in the Containment Structure."<sup>11</sup> Nonetheless, NextEra

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<sup>7</sup> Request for Additional Information Related to the Review of the Seabrook Station License Renewal Application (TAC No ME4028) – Aging Management Programs, Enclosure at 10 (Nov. 18, 2010) (ADAMS Accession No. ML103090558).

ASR can occur in a moistened environment when aggregate in concrete contains reactive silica which reacts with alkali hydroxides in the cement paste. The reaction forms an alkali-silica gel, which can absorb water and swell, which causes internal stress in the concrete structure. In turn, that stress leads to cracking which may degrade the mechanical properties of concrete. NRC Information Notice 2011-20: Concrete Degradation by Alkali-Silica Reaction, 2 (Nov. 18, 2011) (ADAMS Accession No. ML112241029); Transcript of Advisory Committee on Reactor Safety, Plant License Renewal Subcommittee, NRC Slides at 25 (July 10, 2012) (ADAMS Accession No. ML12207A401) ("ACRS Transcript").

<sup>8</sup> *Id.*, Enclosure at 14.

<sup>9</sup> *Id.*, Enclosure at 16.

<sup>10</sup> Seabrook Station, Response to Request for Additional Information, NextEra Energy Seabrook License Renewal Application, Aging Management Programs, Enclosure 1 at 33 (Dec. 17, 2010) (ADAMS Accession No. ML103540534).

<sup>11</sup> *Id.*

committed to perform a condition assessment that would include “confirmatory testing and evaluation of the Containment Structure concrete.”<sup>12</sup> NextEra also stated that the 2010 concrete tests confirmed the presence of ASR in the “B” Electrical Tunnel.<sup>13</sup>

The NRC responded with a follow-up RAI on March 17, 2011, which noted that NextEra’s response had not provided specific information on the planned condition assessment.<sup>14</sup> As a result, the NRC asked NextEra to supply information on when NextEra planned to conduct future investigations, where NextEra would conduct those investigations, the results of any investigations already conducted since NextEra’s reply to the first RAI, and how these investigations would “ensure the adequacy of the concrete during the period of extended operation.”<sup>15</sup>

On April 14, 2011, NextEra responded by describing its plans to conduct further tests on core samples.<sup>16</sup> In addition, NextEra claimed that it would rely on existing testing data to develop an action plan that would identify and test other structures at Seabrook that could be susceptible to ASR.<sup>17</sup> The action plan would include an engineering evaluation tentatively scheduled to be complete in March 2012. NextEra also indicated that it would perform lab tests

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<sup>12</sup> *Id.*

<sup>13</sup> *Id.*, Enclosure 1 at 37.

<sup>14</sup> Request for Additional Information Related to the Review of the Seabrook Station License Renewal Application (TAC No ME4028), Enclosure at 2 (Mar. 17, 2011) (ADAMS Accession No. ML110350630).

<sup>15</sup> *Id.*

<sup>16</sup> Seabrook Station, Response to Request for Additional Information, NextEra Energy Seabrook License Renewal Application – Set 13, Enclosure 1 at 5 (Apr. 14, 2011) (ADAMS Accession No. ML11108A131).

<sup>17</sup> *Id.*

to determine how ASR propagates, issue an engineering evaluation of ASR at Seabrook, and update its Structures Monitoring Program in its LRA accordingly.<sup>18</sup> Last, NextEra stated that it would develop a long range plan for “mitigation measures to arrest degradation attributed to ASR.”<sup>19</sup>

In response, the Staff issued a further RAI on June 29, 2011.<sup>20</sup> The Staff noted that the previous response “lacked specific information about what tests (laboratory and in-situ) would be conducted and when,” did not discuss how NextEra estimated or addressed “possible reductions in concrete shear strength,” and “did not address the statistical validity and size of core samples taken.”<sup>21</sup> Thus, the Staff asked NextEra to provide “detailed and comprehensive information regarding the planned approach to addressing ASR degradation throughout the site.”<sup>22</sup> The Staff also asked NextEra to explain how it addressed loss of shear strength capacity due to ASR degradation “since core samples are not being used to establish the tensile strength of concrete.”<sup>23</sup> The Staff also noted that NextEra did not plan to take core samples from the containment structure to monitor containment concrete, and the Staff asked NextEra to justify this approach.<sup>24</sup> Moreover, based on NextEra’s response, the Staff informed NextEra that because it had “delayed providing aging management programs that include the evaluation of

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<sup>18</sup> *Id.*, Enclosure 1 at 6.

<sup>19</sup> *Id.*

<sup>20</sup> Request for Additional Information Related to the Review of the Seabrook Station License Renewal Application (June 29, 2011) (ADAMS Accession No. ML11178A338).

<sup>21</sup> *Id.*, Enclosure at 2.

<sup>22</sup> *Id.*, Enclosure at 3.

<sup>23</sup> *Id.*

<sup>24</sup> *Id.*, Enclosure 2 at 5.



ASR,” the NRC would extend its review of the LRA.<sup>25</sup>

In its response, dated August 11, 2011, NextEra stated that the engineering evaluation, which it planned to complete in March 2012, would answer these questions.<sup>26</sup> This evaluation would discuss concrete degradation mechanisms, areas susceptible to ASR, the in-situ and lab concrete tests, and mitigation techniques.<sup>27</sup> NextEra supplemented its responses on March 30, 2012.<sup>28</sup> This supplement indicated that NextEra planned to conduct testing “on full-scale replicas of station structural configurations that will provide the data necessary to establish the current and future implications of the effects of ASR on plant buildings.”<sup>29</sup> In addition, the supplement provided more information on NextEra’s completed core sampling testing and plans to monitor ASR until it completed replica testing.<sup>30</sup>

On May 16, 2012, NextEra supplemented its LRA to include a new Aging Management Program, the Alkali-Silica Reaction (ASR) Monitoring Program (“ASR AMP”).<sup>31</sup> The ASR AMP augments the Structures Monitoring Program “to identify plant structures affected by ASR,

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<sup>25</sup> Schedule Revision for the Safety Review of the Seabrook Station License Renewal Application (TAC No. ME4028) (Jul. 12, 2011) (ADAMS Accession No. ML11178A365).

<sup>26</sup> Seabrook Station, Response to Request for Additional Information, NextEra Energy Seabrook License Renewal Application – Set 15, Enclosure 1 at 7, 12-13 (Aug. 11, 2011) (ADAMS Accession No. ML11227A023).

<sup>27</sup> *Id.*

<sup>28</sup> Seabrook Station, Response to Request for Additional Information, NextEra Energy Seabrook License Renewal Application – Alkali Silica Reaction (ASR), (Mar. 30, 2012) (ADAMS Accession No. ML12094A725).

<sup>29</sup> *Id.*, Enclosure 1 at 3.

<sup>30</sup> *Id.*, Enclosure 1 at 7-8, 11, 17-19.

<sup>31</sup> Seabrook Station, NextEra Energy Seabrook License Renewal Application – Structures Monitoring Program Supplement - Alkali Silica Reaction (ASR) Monitoring, (May 16, 2012) (ADAMS Accession No. ML12142A323).

monitor its progression and take corrective action such that intended functions are maintained.”<sup>32</sup> Shortly afterwards, the NRC Staff issued its Safety Evaluation Report with Open Items for Seabrook (“SER”).<sup>33</sup> The SER concluded that the Applicant’s plans to manage ASR did not meet all applicable regulatory requirements for license renewal, although it did not consider the ASR AMP.<sup>34</sup> Thereafter, on September 14, 2012, the Staff sent NextEra another set of RAIs, largely focused on the ASR AMP.<sup>35</sup> Currently, the Staff awaits a response.

In summary, the Staff has expressed concerns regarding NextEra’s plans to manage ASR at Seabrook since almost the beginning of this LRA review and has explicitly delayed its review because of these concerns.<sup>36</sup> In response to those concerns, NextEra has altered its approach on several occasions. Currently, the Staff does not believe that NextEra’s plans to manage ASR are adequate. The Staff will continue its review of the most recent update to the LRA, the ASR AMP, and only renew the license when it concludes that NextEra has provided a reasonable assurance that it will adequately manage effects of aging from ASR during the period of extended operation.<sup>37</sup>

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<sup>32</sup> *Id.*, Enclosure 2 at 2.

<sup>33</sup> Safety Evaluation Report, With Open Items Related to the License Renewal of Seabrook Station (June 2012) (ADAMS Accession No. ML12160A374).

<sup>34</sup> *Id.* at 6; ACRS Transcript at 1

<sup>35</sup> Requests for Additional Information for the Review of the Seabrook Station, License Renewal Application – Set 19 (Sep. 14, 2012) (ADAMS Accession No. ML12250A707).

<sup>36</sup> See Letter from Maxwell C. Smith, Counsel for the NRC Staff, to the Atomic Safety and Licensing Board Providing Changes to Schedule for Site-Specific Environmental Impact Statement and Safety Evaluation Report (June 4, 2012) (ADAMS Accession No. ML12156A118); Letter from Mary B. Spencer, Counsel for the NRC Staff, to the Atomic Safety and Licensing Board Providing Changes to Projected Schedule for Completion of Safety Evaluations (July 14, 2011) (ADAMS Accession No. ML11195A034).

<sup>37</sup> 10 C.F.R. § 54.29(a)(1).

DISCUSSION

I. Statement of Contention

On August 29, 2012, FOTC/NEC filed the ASR Contention in this proceeding. The ASR Contention asserts:

The NextEra Energy Seabrook License Renewal Application, as amended by the Structures Monitoring Program Supplement-Alkali-Silica Reaction Monitoring [Program]. . . fails to demonstrate . . . that the effects of aging on structures and components subject to an aging management review (AMR) are adequately managed so that the intended function(s) will be maintained consistent with the current licensing basis (CLB) for the period of extended operation.<sup>38</sup>

FOTC/NEC assert eight bases for the ASR contention, which involve: (1) the lack of baseline inspections, (2) the inadequacy of visual inspections, (3) the lack of inspection of inaccessible or buried concrete, (4) the lack of a provision for monitoring ASR aggravating factors, (5) the inadequacy of inspector qualifications, (6) the lack of an active component to arrest, mitigate, or manage growth of ASR, (7) the inspection interval not being tied to a calculation of the growth rate of ASR , and (8) the inadequacy of concrete sampling.<sup>39</sup> To “flesh out the basis of its contention that the ASR monitoring plan” is inadequate, FOTC/NEC primarily relies on NRC Staff statements from a July 10, 2012 Advisory Committee on Reactor Safeguards meeting.<sup>40</sup>

As discussed below, the ASR Contention is inadmissible. First, all eight parts of the ASR Contention are untimely under 10 C.F.R. § 2.309(f)(2). Moreover, FOTC/NEC has not shown, or attempted to show, that the ASR Contention meets the requirements in the Commission’s regulation for admitting an untimely contention under 10 C.F.R. §

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<sup>38</sup> ASR Contention at 8.

<sup>39</sup> ASR Contention at 9-10.

<sup>40</sup> ASR Contention at 11. *See also* ACRS Transcript.

2.309(c).<sup>41</sup> Finally, the majority of the contention is also inadmissible under the normal contention admissibility requirements in 10 C.F.R. § 2.309(f)(1). While the baseline inspections, visual inspections, and core sample testing portions of the claim meet the requirements of that regulation, the remaining portions of the contention are not supported by an adequate factual basis.

II. The ASR Contention Does Not Meet the Timeliness Requirements of 10 C.F.R. § 2.309(f)(2)

A. Timeliness Standards Under 10 C.F.R. § 2.309(f)(2)

Under 10 C.F.R. § 2.309(f)(2), an amended contention filed after the initial filing period may be admitted as a timely new contention only with leave of the Board upon a showing that:

- (i) The information upon which the amended or new contention is based was not previously available;
- (ii) The information upon which the amended or new contention is based is materially different than information previously available; and
- (iii) The amended or new contention has been submitted in a timely fashion based on the availability of the subsequent information.<sup>42</sup>

Pursuant to the Board's Initial Scheduling Order, "[a] motion and proposed new contention shall be deemed timely under 10 C.F.R. § 2.309(f)(2)(iii) if it is filed within thirty (30) days of the date

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<sup>41</sup> As previously noted, the NRC recently changed its Part 2 regulations regarding the filing of new and amended contentions. Although the new rule eliminates the 10 C.F.R. § 2.309(c)(1) factors, the pre-amendment regulations control the ASR Contention. As the new rules took effect on September 4, 2012, they do not apply to the ASR Contention, which was filed on August 27, 2012. See Amendments to Adjudicatory Process Rules and Related Requirements, 77 Fed. Reg. 46562, 46562 (Aug. 3, 2012) ("[I]n ongoing adjudicatory proceedings, if there is a dispute over an adjudicatory obligation or situation arising prior to the effective date of the rule, the former rule provisions would be used. . . . the new or amended requirements will be effective and govern all obligations and disputes that arise *after* the effective date of the final rule.") (emphasis added). Thus, FOTC/NEC is bound by the requirements of § 2.309(c) as it existed on August 27, 2012.

<sup>42</sup> 10 C.F.R. § 2.309(f)(2).

when the new and material information on which it is based first becomes available to the moving party through service, publication, or any other means.<sup>43</sup> If filed thereafter, the motion and proposed contention shall be deemed nontimely under 10 C.F.R. § 2.309(c). If the movant is uncertain, it may file pursuant to both sections.”<sup>44</sup>

The Commission has made several points clear when discussing what constitutes new and materially different information for purposes of 10 C.F.R. § 2.309(f)(2). First, when a petitioner’s motion makes little effort to meet the pleading requirements governing late-filed contentions, that in and of itself constitutes sufficient grounds for rejecting the petitioner’s motion.<sup>45</sup> For example, the Commission has stated that a petitioner’s failure to address the factors in 10 C.F.R. § 2.309(f)(2) or 10 C.F.R. § 2.309(c) is reason enough to reject the motion.<sup>46</sup> Second, petitioners cannot simply point to “documents merely summarizing earlier documents or compiling pre-existing, publicly available information into a single source...[as doing so]... do[es] not render ‘new’ the summarized or compiled information.”<sup>47</sup> The Commission has explained, a “petitioner or intervenor [cannot] delay filing a contention until a document becomes available that collects, summarizes and places into context the facts supporting that contention. To conclude otherwise would turn on its head the regulatory

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<sup>43</sup> The Staff notes that although Intervenors’ Motion for Leave to File a New Contention purports to be filed on August 27, 2012, the Staff was served with Intervenors’ motion on August 28, 2012.

<sup>44</sup> ISO at 4.

<sup>45</sup> *Florida Power & Light Co.*, (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-06-21, 64 NRC 30, 33 (2006).

<sup>46</sup> *Id.* (noting that petitioner did not address any of the factors in 10 C.F.R. § 2.309(f)(2) and did not address two of the factors in 10 C.F.R. § 2.309(c)).

<sup>47</sup> *Entergy Nuclear Vermont Yankee, L.L.C. and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), CLI-11-02, 73 NRC 333, 344 (2011).

requirement that new contentions be based on ‘information ... *not previously available*.’<sup>48</sup>

Third, the Commission has emphasized that allegedly new and materially different information must support the proposed contention.<sup>49</sup> Thus, the Commission has noted that allegedly new and materially different information must articulate a “reasonably apparent” foundation for the contention.<sup>50</sup>

B. Intervenors Do Not Demonstrate how the ACRS Transcript Contains New and Materially Different Information Not Previously Available

In the ASR Contention, FOTC/NEC asserts that the NRC technical opinions expressed in the transcript of the July 10, 2012 ACRS Meeting on Seabrook, “flesh out the basis of its contention that the ASR monitoring plan/AMP is inadequate.”<sup>51</sup> Intervenors further allege that, “the testimony and accompanying presentation materials are new material information reflecting the NRC Technical Staff’s opinions expressed for the first time in an official NRC forum.”<sup>52</sup> The ASR Contention asserts that the ASR AMP is deficient with respect to (1) baseline inspections, (2) visual inspections, (3) inaccessible or buried concrete, (4) ASR aggravating factors, (5) inspector qualification, (6) ASR mitigating strategies, (7) inspection intervals, and (8) core sample testing.<sup>53</sup>

However, the Staff has been raising and reviewing ASR issues at the Seabrook plant

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<sup>48</sup> *Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), CLI-10-27, 72 NRC 481, 496 (2010) (internal citations omitted); see also Amendments to Adjudicatory Process Rules and Related Requirements, 77 Fed. Reg. 46562, 46566 (Aug. 3, 2012).

<sup>49</sup> See *Prairie Island*, CLI-10-27, 72 NRC at 493-94 (noting that the SER petitioners cited to as having new and materially different information did not provide support for the contention and so did not contain new or materially different information).

<sup>50</sup> *Id.* at 495.

<sup>51</sup> ASR Contention at 10-11.

<sup>52</sup> *Id.* at 11.

<sup>53</sup> *Id.* at 9-10.

since 2010,<sup>54</sup> and much of the Staff's testimony contained in the ACRS transcript merely summarizes the Staff's opinions from documents such as RAIs, correspondence with the applicant, and information in the ASR AMP, which were available prior to the July 10, 2012 ACRS meeting. The Commission has stated that intervenors have an "iron-clad obligation to examine the publicly available documentary material . . . with sufficient care to enable [them] to uncover any information that could serve as the foundation for a specific contention."<sup>55</sup> Moreover, the Commission has indicated that where previously available information is summarized in an ACRS transcript, a petitioner may not "use the ACRS meeting, or its transcript, as an artificial bridge to extend the time in which a contention could be filed."<sup>56</sup> Intervenors have not demonstrated that information in the ACRS Transcript is new or materially different from information previously available. As shown below, each of the Intervenors' claims is based on information available prior to the July 10, 2012 ACRS meeting. Accordingly, for the reasons stated below, the ASR Contention is untimely and should not be admitted under 10 C.F.R. § 2.309(f)(2).

1. Baseline Inspections

In the ASR Contention, FOTC/NEC assert that the "Structures Monitoring Program does

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<sup>54</sup> See *supra*, at p. 3.

<sup>55</sup> *Prairie Island*, CLI-10-27, 72 NRC at 496; Amendments to Adjudicatory Process Rules and Related Requirements, 77 Fed. Reg. 46562, 46566 (Aug. 3, 2012) (reaffirming the Commission's longstanding policy that "a petitioner has an 'iron-clad obligation to examine the publicly available documentary material . . . with sufficient care to enable it to uncover any information that could serve as the foundation for a specific contention.'").

<sup>56</sup> *Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-11-08, 74 NRC \_\_\_\_, \_\_\_\_ (Sept. 27, 2011)(slip op. at 18) (finding no good cause for failure to file on time where the ACRS transcript did not alter the technical information previously available to petitioners).

not provide a baseline for all affected structures from which to register and monitor trending.”<sup>57</sup> In the Staff’s presentation to the ACRS, the Staff indicated that an adequate AMP for ASR should include a baseline inspection.<sup>58</sup> However, the Staff’s ACRS presentation is not the first time the Staff has indicated its concern regarding the necessity of baseline inspections for all structures to monitor trending. In an RAI dated November 18, 2010, the Staff stated that, “A baseline quantitative concrete inspection of in-scope structures is necessary for monitoring and trending degradation during the period of extended operation.”<sup>59</sup> Further, the Staff requested the applicant to, “provide plans for conducting a quantitative baseline inspection, in accordance with the ACI 349.3R, prior to the period of extended operation.”<sup>60</sup> Intervenor’s may not point to documents merely summarizing earlier documents, and doing so does not render ‘new’ the summarized information.<sup>61</sup> Thus, Intervenor’s claims regarding baseline inspections are untimely under 10 C.F.R. § 2.309(f)(2) because this information is neither new nor materially different from the information previously available in the November 2010 RAI.

## 2. Visual Inspections

Next, FOTC/NEC contends that, “Visual inspection of surface indications alone is not [an] adequate gauge [of] the status [of] internal chemical processes such as ASR.”<sup>62</sup>

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<sup>57</sup> ASR Contention at 9.

<sup>58</sup> ACRS Transcript, NRC Slides at 31.

<sup>59</sup> Request for Additional Information related to the Review of the Seabrook Station License Renewal Application (TAC No ME4028) – Aging Management Programs, Enclosure at 17 (Nov. 18, 2010) (ADAMS Accession No. ML103090558).

<sup>60</sup> *Id.*

<sup>61</sup> *Vermont Yankee*, CLI-11-02, 73 NRC at 344.

<sup>62</sup> ASR Contention at 9.



Intervenors cite testimony from the ACRS transcript critiquing the Applicant's reliance on visual inspections.<sup>63</sup> The Staff also noted in the ACRS Transcript that it is a "well-known fact that the visual examination cannot rule out the presence of ASR."<sup>64</sup> However, a number of documents publicly available prior to the Staff's ACRS presentation indicate that while visual inspections can signal that ASR is occurring, additional examination is needed to confirm it and understand its impact on structures.<sup>65</sup> For example, on November 18, 2011, the NRC issued Information Notice ("IN") 2011-20 which states, "ASR can be identified as a likely cause of degradation during visual inspection by the unique 'craze,' 'map' or 'patterned' cracking and the presence of alkali-silica gel. . . . However, ASR-induced degradation can only be confirmed by optical microscopy performed as part of petrographic examination of concrete core samples."<sup>66</sup> IN 2011-20 further states, "Once visual indications of ASR-induced concrete degradation have been identified, additional actions to evaluate and monitor the condition . . . may include confirming the presence of ASR through microscopic examination of concrete cores."<sup>67</sup>

Additionally, in January 2010, the Federal Highway Administration ("FHWA") issued a

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<sup>63</sup> ASR Contention at 13 (*citing* ACRS Transcript at 160).

<sup>64</sup> ACRS Transcript at 170.

<sup>65</sup> See NRC Information Notice 2011-20 at 2-3 (Nov. 18, 2011) (ADAMS Accession No. ML112241029); ASR AMP, Enclosure 2, at 6, 11-12; Request for Additional Information for the Review of the Seabrook Station License Renewal Application, Enclosure at 5 (June 29, 2011) (ADAMS Accession No. ML11178A338); U.S. Department of Transportation Federal Highway Administration, *Report on the Diagnosis, Prognosis, and Mitigation of Alkali-Silica Reaction in Transportation Structures*, at 3-4 (January 2010), available at <http://www.fhwa.dot.gov/pavement/concrete/pubs/hif09004/hif09004.pdf> ("FHWA ASR Report").

<sup>66</sup> NRC Information Notice 2011-20 at 2 (Nov. 18, 2011) (ADAMS Accession No. ML112241029).

<sup>67</sup> *Id.* at 4.

report indicating that visual inspection may not be sufficient to gauge the status of ASR.<sup>68</sup> The FHWA report has been extensively used by Applicant and was cited in the Applicant's May 16, 2012 ASR AMP and the NRC's IN 2011-20.<sup>69</sup> Also, in a June 2011 RAI, the Staff requested that the applicant, "explain how these properties (compressive strength, presence [or absence] of ASR, modulus of elasticity, presence of rebar degradation) can be verified without taking core samples."<sup>70</sup> The Staff explained that it was "unaware of any method other than core bores that can be used to determine" these properties.<sup>71</sup> The Staff's June 2011 RAI plainly discloses the inadequacy of visual inspections proposed by NextEra, both to fully evaluate ASR and rule out its presence, more than a year before the Intervenors proposed their ASR Contention.

Therefore, information regarding visual inspections not being sufficient to gauge the status of ASR has been publicly available since at least 2010 when FHWA published its report. Intervenors have an "iron-clad obligation to examine the publicly available documentary material ... with sufficient care to enable [them] to uncover any information that could serve as the foundation for a specific contention."<sup>72</sup> Accordingly, Intervenors' claims regarding visual inspections are untimely under 10 C.F.R. § 2.309(f)(2) because the ACRS Transcript does not

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<sup>68</sup> "Cores are generally collected in concrete members showing visual signs of deterioration subjective of ASR and are then subjected to *petrographic examination* in the laboratory. If petrography does not confirm the presence of ASR in the concrete member examined, further investigations for other mechanisms of deterioration could be initiated, if necessary. On the other hand, when petrographic evidence of ASR is confirmed, a decision on the further steps to follow is then taken on the basis of the severity/extent of the cracking observed . . . ." FHWA ASR Report at 3-4.

<sup>69</sup> ASR AMP, Enclosure 2, at 6, 11-12; NRC Information Notice 2011-20 at 3 (Nov. 18, 2011) (ADAMS Accession No. ML112241029).

<sup>70</sup> Request for Additional Information for the Review of the Seabrook Station License Renewal Application, Enclosure at 5 (June 29, 2011) (ADAMS Accession No. ML11178A338).

<sup>71</sup> *Id.*

<sup>72</sup> *Prairie Island*, CLI-10-27, 72 NRC at 496; 77 Fed. Reg. at 46566.

provide new or materially different information from that previously available.

3. Inaccessible or Buried Concrete

Third, FOTC/NEC asserts that “the proposed monitoring program makes no allowance for inspection of inaccessible or buried concrete save for opportunistic inspections which may never happen, or which are not necessarily biased toward areas and structures most likely to be severely affected. In the event that excavations and hence opportunistic inspections happen in lightly affected or non-affected areas, findings will be of little use in locating potential structural failures.”<sup>73</sup> However, Intervenor’s claims are untimely because the Staff’s concerns regarding inspections for inaccessible or buried concrete were outlined in an RAI dated November 18, 2010. In this RAI, the Staff observed that below-grade concrete structures have experienced groundwater infiltration and requested that the applicant, “Explain if/why the [core] samples are representative of affected concrete throughout the plant, including foundations and the containment enclosure building.”<sup>74</sup> Thus, information was publicly available as early as 2010 regarding inaccessible or buried concrete.

Moreover, Intervenor’s reliance on the ACRS Transcript is unfounded.<sup>75</sup> New and materially different information must support the proposed contention and articulate a “reasonably apparent” foundation for the contention.<sup>76</sup> However, nowhere in the ACRS Transcript does the Staff specifically discuss inaccessible concrete structures or whether

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<sup>73</sup> ASR Contention at 9.

<sup>74</sup> Request for Additional Information Related to the Review of the Seabrook Station License Renewal Application (TAC No ME4028) –Aging Management Programs, Enclosure at 16 (Nov. 18, 2010) (ADAMS Accession No. ML103090558).

<sup>75</sup> See *infra*, Section IV.B.1.

<sup>76</sup> See *Prairie Island*, CLI-10-27, 72 NRC at 493-95.

opportunistic inspections would be enough to manage the effects of ASR. Accordingly, Intervenor's claims regarding inaccessible or buried concrete are untimely under 10 C.F.R. § 2.309(f)(2).

4. ASR-Aggravating Factors

Next, the ASR Contention asserts that "the proposed monitoring program makes no provision for monitoring ASR – aggravating factors, such as the moisture content, the presence of liquid water, the potential of chemically aggressive water, or the temperature of affected [or] susceptible concrete."<sup>77</sup> This information, however, is neither new nor materially different from information previously available in a Staff RAI dated June 29, 2011. In this RAI, the Staff asked the applicant to provide, "Plans, if any, for relative humidity and temperature measurements of affected concrete areas over the long term."<sup>78</sup> Thus, over a year ago, the Staff highlighted the issue in a RAI. The Staff also requested that the Applicant explain, "How the extent of degradation/corrosion of rebars will be established in the ASR affected areas during the period of extended operation."<sup>79</sup>

Furthermore, Intervenor's reliance on the ACRS Transcript is misplaced. New and materially different information must support the proposed contention and articulate a "reasonably apparent" foundation for the contention.<sup>80</sup> The Staff, however, did not reference any of these potential ASR-aggravating factors in their statements to the ACRS at the July 10, 2012 meeting. Accordingly, Intervenor's claims regarding aggravating factors are untimely

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<sup>77</sup> ASR Contention at 9.

<sup>78</sup> Request for Additional Information for the Review of the Seabrook Station License Renewal Application (June 29, 2011), Enclosure at 3 (ML11178A338).

<sup>79</sup> *Id.*

<sup>80</sup> See *Prairie Island*, CLI-10-27, 72 NRC at 493-95.

under 10 C.F.R. § 2.309(f)(2).

5. Inspector Qualifications

Additionally, FOTC/NEC asserts that “first field observations are to be done by untrained or minimally-trained personnel, who must make the first cut on what is reportable for further reexamination by a qualified professional engineer.”<sup>81</sup> However, this information is not new or materially different from information previously available. The ASR AMP states, “ASR is detected by visual inspections performed by qualified individuals. These individuals must either be a licensed Professional Engineer experienced in this area, or will work under the direction of a licensed Professional Engineer.”<sup>82</sup> The statement in the ASR AMP that individuals may work under the direction of a licensed Professional Engineer appears to provide the basis for Intervenors’ assertion regarding inspector qualification.

Moreover, Intervenors’ assertion is not related to any of the Staff’s statements in the ACRS Transcript. New and materially different information must support the proposed contention and articulate a “reasonably apparent” foundation for the contention.<sup>83</sup> Accordingly, Intervenors’ assertions with respect to inspector qualifications fail to meet the new and materially different information standards of 10 C.F.R. § 2.309(f)(2).

6. No Active Component to Arrest, Mitigate, or Manage Growth of ASR

In the ASR Contention, FOTC/NEC also states that “if this monitoring program is the AMP in its entirety it fails because there is no active component proposed to arrest, mitigate or manage the growth of ASR, such as a stringent de-watering program, waterproofing or

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<sup>81</sup> ASR Contention at 9.

<sup>82</sup> ASR AMP, Enclosure 2 at 12.

<sup>83</sup> See *Prairie Island*, CLI-10-27, 72 NRC at 493-95.

waterproof membranes restoration, concrete cladding to restore surfaces, or chemical treatment, such as that using lithium compounds.”<sup>84</sup> Intervenors’ claims, however, are untimely. The ASR AMP dated May 16, 2012 states, “There are no preventive actions specified in the Seabrook Station Structures Monitoring Program, which includes implementation of NUREG-1801 XI.S5, XI.S6, and XI.S7. These are monitoring programs only. Similarly, the ASR Monitoring Program does not rely on preventive actions.”<sup>85</sup> Therefore, the information in the ASR AMP was available more than three months before the Intervenors submitted the ASR Contention and the Intervenors could have based their claim on that information. Moreover, the ACRS Transcript does not contain any statements by the NRC Staff supporting Intervenors’ claim that the ASR AMP must contain an active component. Accordingly, Intervenors’ claims are untimely under 10 C.F.R. § 2.309(f)(2).

#### 7. Inspection Intervals

FOTC/NEC also asserts that “NextEra has proposed intervals of inspection of [six] months but the interval appears nominal; not tied to any calculation of the rate of growth of ASR in any given set of locations.” However, Intervenors’ assertion regarding the six-month interval is based on information that was available prior to the ACRS meeting on July 10, 2012. In the May 16<sup>th</sup> ASR AMP, the applicant stated, “The Alkali-Silica Reaction (ASR) Monitoring Program will monitor at least 20 locations that represent the highest CCI values recorded during the baseline inspections. Follow-up inspection of these locations will be performed at six month intervals.”<sup>86</sup> Additionally, on March 30, 2012, the Applicant stated, “Until a trend is established,

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<sup>84</sup> ASR Contention at 9-10.

<sup>85</sup> ASR AMP, Enclosure 2 at 10.

<sup>86</sup> ASR AMP, Enclosure 2, at 3.

NextEra will inspect 20 previously inspected cracked locations at six months intervals. These 20 areas show cracking characteristics with the greatest similarity to the "B" Electrical Tunnel. Once trending data has been established, inspection intervals may be adjusted accordingly.<sup>87</sup> Moreover, the ACRS Transcript does not contain any statements by the Staff referencing the proposed six-month inspection interval. Accordingly, Intervenor's claims are untimely under 10 C.F.R. § 2.309(f)(2).

#### 8. Concrete Sampling

Finally, FOTC/NEC contends that "NextEra has determined the extent to which concrete has degraded or lost its structural function by relying on testing measurements of a very limited number of samples for a very limited number of structural dynamics."<sup>88</sup> In the ACRS Transcript, the Staff states that "the applicant has finally concluded that compressive strength results alone are not sufficient to manage the aging of the ASR."<sup>89</sup> However, the Staff statements in the ACRS Transcript are not new or materially different from information previously available. In fact, the Staff has previously expressed concern regarding NextEra's testing for degradation of mechanical properties of the ASR affected concrete at Seabrook through RAIs for the last 18 months.<sup>90</sup> In particular, on November 18, 2010, the Staff issued an RAI requesting "a summary of the results of the concrete testing performed to date including information on mechanical properties (e.g. compressive strength, modulus of elasticity, tensile strength, etc.)" and an

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<sup>87</sup> Seabrook Station, Response to Request for Additional Information, NextEra Energy Seabrook License Renewal Application Supplemental Response – Alkali Silica Reaction (ASR), Enclosure 1 at 17 (Mar. 30, 2012) (ADAMS Accession No. ML12094A364).

<sup>88</sup> ASR Contention at 10.

<sup>89</sup> ACRS Transcript at 156.

<sup>90</sup> *Id.*

explanation of “if/why the samples are representative of affected concrete throughout the plant, including foundations and the containment enclosure building.”<sup>91</sup> Moreover, in March of 2012, NextEra stated in its RAI response that, “NextEra has initiated actions to perform testing on full-scale replicas of station structural configurations that will provide the data necessary to establish the current and future implications of the effects of ASR on plant buildings. Specifically, these tests will elucidate the effects of ASR with regards to reinforcing steel anchorage, flexural stiffness and shear strength.”<sup>92</sup> Therefore, FOTC/NEC could have relied on either or both of these previously available documents in support of its claim regarding concrete sampling. The Commission has stated that petitioners cannot simply point to “documents merely summarizing earlier documents or compiling pre-existing, publicly available information into a single source...[as doing so]... do[es] not render ‘new’ the summarized or compiled information.”<sup>93</sup> Accordingly, this portion of the ASR contention is untimely for failure to provide new materially different information in accordance with 10 C.F.R. § 2.309(f)(2).

## 9. Conclusion

The Staff has been reviewing ASR issues at the Seabrook plant since 2010.<sup>94</sup> Thus, the Staff’s statements and opinions in the ACRS Transcript either summarize or compile information from documents such as RAIs, correspondence, and the ASR AMP regarding ASR issues at

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<sup>91</sup> Request for Additional Information related to the Review of the Seabrook Station License Renewal Application (TAC No ME4028) – Aging Management Programs, Enclosure at 16 (Nov. 18, 2010) (ADAMS Accession No. ML103090558).

<sup>92</sup> Seabrook Station, Response to Request for Additional Information, NextEra Energy Seabrook License Renewal Application Supplemental Response – Alkali Silica Reaction (ASR), Enclosure 1 at 3 (Mar. 30, 2012) (ADAMS Accession No. ML12094A364).

<sup>93</sup> *Vermont Yankee*, CLI-11-02, 73 NRC at 344.

<sup>94</sup> See *supra*, at 3.



Seabrook. As shown above, each of the Intervenor's claims is based on information available prior to the July 10, 2012 ACRS meeting. The Commission has stated that where previously available information is summarized in an ACRS transcript, a petitioner may not "use the ACRS meeting, or its transcript, as an artificial bridge to extend the time in which a contention could be filed."<sup>95</sup> Intervenor's have not demonstrated that information in the ACRS transcript is new or materially different from information previously available. Accordingly, the ASR Contention is untimely under 10 C.F.R. § 2.309(f)(2) and should not be admitted.

III. Intervenor's Do Not Meet the Late-Filing Standards of 10 C.F.R. § 2.309(c)

Nontimely contentions may only be entertained under 10 C.F.R. § 2.309(c) following a determination by the Presiding Officer that a balancing of eight factors weighs in favor of admission.<sup>96</sup> The requirements for nontimely filings are "stringent,"<sup>97</sup> and the Commission has

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<sup>95</sup> *Vogtle*, CLI-11-08, 74 NRC at \_\_\_\_ (slip op. at 18) (finding no good cause for failure to file on time where the ACRS transcript did not alter the technical information available to petitioners).

<sup>96</sup> The eight factors listed at § 2.309(c)(1) are as follows:

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

(continued. . .)

made clear that holding intervenors to the standards for nontimely filings is required by fundamental fairness.<sup>98</sup> The intervenor must address all eight factors,<sup>99</sup> failure to do so is in and of itself grounds for dismissal.<sup>100</sup> While intervenors must show a “favorable balance” among the eight factors, good cause for the failure to file on time is given the most weight.<sup>101</sup> If an intervenor cannot show good cause, the balance of the other factors must be “compelling.”<sup>102</sup>

The ASR Contention does not specifically address the § 2.309(c)(1) factors, which is sufficient cause in itself to find that § 2.309(c) is not met.<sup>103</sup> Notwithstanding this omission, the ASR contention does not demonstrate good cause for the failure to file on time and does not

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(. . .continued)

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

<sup>97</sup> *Amergen Energy Co., LLC* (License Renewal for Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 260, (2009); *see also id.* at 272 (“Our expanding adjudicatory docket makes it critically important that parties comply with our pleading requirements and that the Board enforce those requirements.”).

<sup>98</sup> *Tennessee Valley Authority* (Watts Bar Nuclear Plant, Unit 2), CLI-10-12, 71 NRC 319, 327 (2010) (“Fundamentally, fairness requires that all participants in NRC adjudicatory proceedings abide by our procedural rules . . .”); *Statement of Policy on Conduct of Licensing Proceedings*, CLI-81-8, 13 NRC 452, 454 (1981) (“Fairness to all involved in NRC’s adjudicatory procedures requires that every participant fulfill the obligations imposed by and in accordance with applicable law and Commission regulations.”).

<sup>99</sup> 10 C.F.R. § 2.309(c)(2).

<sup>100</sup> *See Oyster Creek*, CLI-09-7, 69 NRC at 260-61 (“Section 2.309(c)(2) clearly provides that a petitioner ‘shall address’ all eight factors set forth in section 2.309(c)(1). . . . [F]ailure to comply with our pleading requirements for late filings constitutes sufficient grounds for rejecting . . . intervention and hearing requests.”); *see also Vogtle*, CLI-11-08, 74 NRC at \_\_\_ (slip op. at 17 n.59) (“failure to specifically address the § 2.309(c)(1) factors is a potentially fatal omission”).

<sup>101</sup> *Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), LBP-06-14, 63 NRC 568, 575 (2006).

<sup>102</sup> *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 & 3), CLI-05-24, 62 NRC 551, 565 (2005); *Watts Bar*, CLI-10-12, 71 NRC at 323.

<sup>103</sup> *See supra*, note 99.

demonstrate a favorable balance among the remaining factors.<sup>104</sup> Therefore, the ASR Contention should be denied as untimely.

A. Intervenors Do Not Show Good Cause

The Commission has stated that “[g]ood cause has long been interpreted to mean that the information on which the proposed new contention is based was not previously available.”<sup>105</sup> Once that information is available, the contention must be filed in a timely fashion.<sup>106</sup> Intervenors “have an ‘ironclad obligation to examine the publicly available documentary material pertaining to the facility in question with sufficient care to enable the intervenor to uncover any information that could serve as the foundation for a specific contention.’”<sup>107</sup> Where previously-available information is summarized in an ACRS transcript, an intervenor may not “use the ACRS meeting, or its transcript, as an artificial bridge to extend the time in which a contention could be filed.”<sup>108</sup>

As discussed in Section II above, none of the information relied upon in the ASR

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<sup>104</sup> The Staff does not address the factors listed in 10 C.F.R. § 2.309(c)(1)(ii)–(iv), as Boards have previously found these criteria to be “not particularly ‘applicable’ given that they focus on the status of the requestor/petitioner seeking admission to a proceeding (e.g., standing, nature of the requestor/petitioner’s affected interest).” *Vermont Yankee*, LBP-06-14, 63 NRC at 581. As discussed above, FOTC/NEC has already demonstrated standing. See *supra* p. 2; *Seabrook*, LBP-11-02, 73 NRC at 42-44.

<sup>105</sup> *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 & 3), CLI-09-05, 69 NRC 115, 125-26 (2009); *Texas Utilities Elec. Co.* (Comanche Peak Steam Electric Station, Unit 2), CLI-93-4, 37 NRC 156, 164-65 (1993).

<sup>106</sup> *Detroit Edison Co.* (Enrico Fermi Atomic Power Plant, Unit 2), ALAB-707, 16 NRC 1760, 1764-65 (1982) (finding that petitioners did not establish “good cause” for late filing when information had been “in the public domain” for six months).

<sup>107</sup> *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 386 (2002) (quoting Final Rule, “Rules for Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process,” 54 Fed. Reg. 33,168, 33,170 (Aug. 11, 1989)).

<sup>108</sup> *Vogtle*, CLI-11-08, 74 NRC at \_\_\_\_ (slip op. at 18) (finding no good cause for failure to file on time where the ACRS transcript did not alter the technical information available to petitioners).

Contention is new, materially different than previously available information, or raised in a timely fashion. Although the contention purports to rely on the ACRS Transcript, all of the information in the transcript appeared in documents predating the ACRS meeting, with some available as early as 2010.<sup>109</sup> Therefore, FOTC/NEC has not demonstrated good cause.

B. The Balance of the Remaining Factors is Not Compelling

The Commission has recently reaffirmed that “[a]bsent ‘good cause,’ there must be a ‘compelling showing on the remaining factors’; it is a ‘rare case where we would excuse a nontimely petition absent good cause.’”<sup>110</sup> Because the balance of the remaining factors weighs against FOTC/NEC, they cannot make the compelling showing needed to overcome the absence of good cause.

For instance, the seventh factor,<sup>111</sup> which assesses the extent to which admitting the contention would broaden the issues or delay the proceeding, does not weigh in favor of admitting the ASR Contention. The only issues currently pending in this proceeding involve the adequacy of NextEra’s severe accident mitigation analysis.<sup>112</sup> Accordingly, admitting a contention involving NextEra’s ASR AMP would broaden the issues under consideration. Therefore, the seventh factor as a whole neither weighs in favor of admitting the contention nor contributes to the required compelling balance in FOTC/NEC’s favor.

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<sup>109</sup> See *supra*, Section II.

<sup>110</sup> *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-12-10, 75 NRC \_\_\_\_ (Mar. 30, 2012) (slip op. at 17 n.69) (*citing Watts Barr*, CLI-10-12, 71 NRC at 323).

<sup>111</sup> See 10 C.F.R. § 2.309(c)(1)(vii).

<sup>112</sup> See *supra*, notes 5-6 and accompanying text.

Regarding the eighth factor,<sup>113</sup> FOTC/NEC fails to demonstrate that it will be likely to contribute to the development of a sound record should the ASR Contention be admitted. The Commission has long held that a petition requires “more than vague assertions that it will be able to assist in developing the record.”<sup>114</sup> Instead, the intervenor should describe “with as much particularity as possible the precise issues it plans to cover, identify its prospective witnesses, and summarize their proposed testimony.”<sup>115</sup> The ASR Contention relies solely on the opinions of the NRC staff to support its claims. At no point does the ASR Contention describe any facts or evidence not previously known to and under review by the Staff.<sup>116</sup> Additionally, FOTC/NEC has not proffered any prospective witnesses or testimony of its own beyond the general assertion that it “intends to identify and retain an expert witness should its contention be accepted.”<sup>117</sup> Nor does the ASR Contention suggest that FOTC/NEC has any particular expertise in ASR testing or management that would equip it to contribute to the record. Because the ASR aging management issue has been known for a significant period of time, because the Staff has been pursuing the issue, and because FOTC/NEC has not proffered specific witnesses and testimony as required, this factor weighs heavily against admitting the ASR Contention.

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<sup>113</sup> See 10 C.F.R. § 2.309(c)(1)(viii).

<sup>114</sup> *Watts Bar*, CLI-10-12, 71 NRC at 326.

<sup>115</sup> *Id.*

<sup>116</sup> See generally ASR Contention; see also *id.* at 15 (noting FOTC/NEC’s “heavy reliance” on the ACRS transcript, the Staff’s disclosures, and unspecified “technical papers and manuals . . . many of which have been posted on ADAMS”). Furthermore, virtually all of this information has been available for at least several months. The only document published recently is the ACRS transcript, which merely summarizes information already part of the record or already publicly available. See *supra* Section II.

<sup>117</sup> ASR Contention at 15.

As FOTC/NEC fails to specifically address the factors for nontimely filings under 10 C.F.R. § 2.309(c), and regardless of this omission, Intervenors demonstrate neither good cause for the failure to file on time nor a compelling showing on the remaining factors, the ASR Contention does not meet the requirements for nontimely filings and should be dismissed.

IV. Portions of the ASR Contention Meet the Contention Admissibility Requirements in 10 C.F.R. § 2.309(f)(1)

A. Contention Admissibility Standards in NRC License Renewal Proceedings

In addition to meeting the timeliness requirements in 10 C.F.R. § 2.309(f)(2) or § 2.309(c), a new contention must also meet the normal contention admissibility requirements in § 2.309(f)(1).<sup>118</sup> As discussed below, the portions of the ASR Contention related to baseline inspections, visual inspections, and core sampling meet these requirements. In contrast, the portions of the ASR contention regarding inaccessible concrete, ASR aggravating factors, inspector qualification, ASR mitigating factors, and inspection intervals do not.

1. Contention Admissibility Factors in 10 C.F.R. § 2.309(f)(1)

An admissible contention must:

- (i) Provide a specific statement of the issue of law or fact to be raised or controverted;
- (ii) Provide a brief explanation of the basis for the contention;
- (iii) Demonstrate that the issue raised in the contention is within the scope of the proceeding;
- (iv) Demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding;
- (v) Provide a concise statement of the alleged facts or

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<sup>118</sup> *Amergen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 261 (2009).*

expert opinions which support the requestor's/petitioner's position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the requestor/petitioner intends to rely to support its position on the issue; and

(vi) Provide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact. This information must include references to specific portions of the application (including the applicant's environmental report and safety report) that the petition disputes and the supporting reasons for each dispute, or, if the petitioner believes that the application fails to contain information on a relevant matter as required by law, the identification of each failure and the supporting reasons for the petitioner's belief.<sup>119</sup>

The requirements governing the admissibility of contentions are "strict by design."<sup>120</sup> Thus, they have been strictly applied in NRC adjudications, including license renewal proceedings.<sup>121</sup>

## 2. Scope of NRC License Renewal Proceedings

Regarding scope, the Commission has held, "[a]djudicatory hearings in individual license renewal proceedings will share the same scope of issues as our NRC Staff review."<sup>122</sup> Part 54 governs the Staff's safety review of license renewal applications.<sup>123</sup> "Part 54 centers the license renewal reviews on the most significant overall safety concern posed by extended reactor operation – the detrimental effects of aging."<sup>124</sup> "Accordingly, Part 54 requires renewal

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<sup>119</sup> 10 C.F.R. § 2.309(f)(1).

<sup>120</sup> *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 & 3), CLI-01-24, 54 NRC 349, 358 (2001).

<sup>121</sup> *AmerGen Energy Company, LLC* (Oyster Creek Nuclear Generating Station), CLI-06-24, 64 NRC 111, 118-19 (2006).

<sup>122</sup> *Florida Power and Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 & 4), CLI-01-17, 54 NRC 3, 10 (2001).

<sup>123</sup> 10 C.F.R. § 54.1.

<sup>124</sup> *Turkey Point*, CLI-01-17, 54 NRC at 7.

applicants to demonstrate how their programs will be effective in managing the effects of aging during the proposed period of extended operation.”<sup>125</sup> An applicant demonstrates that it will manage the effects of aging by updating existing plant time-limited aging analyses (“TLAA”) and proposing adequate aging management programs (“AMP”) to manage the effects of aging.<sup>126</sup>

### 3. An Admissible Contention Must Contain an Adequate Factual Basis

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.”<sup>127</sup> In addition, “[T]he Commission will not accept the filing of a vague, unparticularized [contention], unsupported by alleged fact or expert opinion and documentary support.”<sup>128</sup> Put another way, “[g]eneral assertions or conclusions will not suffice.”<sup>129</sup> Thus, “[a] petitioner’s issue will be ruled inadmissible if the petitioner has offered no tangible information, no experts, [or] no substantive affidavits but instead only bare assertions and speculation.”<sup>130</sup> Although the Staff’s safety review is not the subject of NRC hearings, a document produced by the Staff may provide the requisite factual support for an

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<sup>125</sup> *Id.* at 8.

<sup>126</sup> *Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), CLI-10-17, 70 NRC 1, 18 (2010) (citing 10 C.F.R. § 54.21).

<sup>127</sup> *Louisiana Energy Services, LP* (National Enrichment Facility), CLI-04-35, 60 NRC 619, 623 (2004).

<sup>128</sup> *Consumers Energy Co.* (Palisades Nuclear Power Plant), CLI-07-18, 65 NRC 399, 414 (2007) (quotations omitted).

<sup>129</sup> *Id.*

<sup>130</sup> *Fansteel, Inc.* (Muskogee, Oklahoma, Site), CLI-03-13, 58 NRC 195, 203 (2003) (internal quotations omitted).



admissible contention challenging the license application.<sup>131</sup> However, a petitioner seeking to rely on a Staff document must adequately explain how it supports the contention.<sup>132</sup>

B. The ASR Contention Raises Three Admissible Issues

1. Baseline Inspections

Three of the claims raised by the ASR Contention meet the contention admissibility requirements of 10 C.F.R. § 2.309(f)(1).<sup>133</sup> First, the ASR Contention asserts,

The Structures Monitoring Program does not provide a baseline for all affected structures from which to register and monitor trending.<sup>134</sup>

The ASR AMP states that “NextEra has performed a baseline inspection and ASR associated cracks have been evaluated and categorized. NextEra has accessed 131 accessible areas to

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<sup>131</sup> *Baltimore Gas & Electric Company* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-25, 48 NRC 325, 350 (1998) (noting that “[i]f a petitioner concludes that a staff RAI or an applicant RAI response raises a legitimate question about the adequacy of the application, the petitioner is free to posit that issue as a new or amended contention, subject to complying with the late-filing standards”).

<sup>132</sup> *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), LBP-91-41, 32 NRC 332, 338 (1991); e.g. *USEC, Inc.* (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 471 (2006) (noting that “an 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” to establish a material dispute).

<sup>133</sup> As mentioned above, § 2.309(f)(1)(i) also requires petitioners to “[p]rovide a specific statement of the issue of law or fact to be raised or controverted.” FOTC/NEC’s statement is hardly specific: it claims that the Seabrook LRA as amended by the ASR AMP “fails to demonstrate . . . that the effects of aging on structures and components subject to an aging management review (AMR) are adequately managed so that the intended function(s) will be maintained consistent with the current licensing basis (CLB) for the period of extended operation.” ASR Contention at 8. Read literally, the contention challenges every AMP proposed by NextEra. But, the rest of the pleading focuses on ASR sufficiently to demonstrate that the contention only challenges AMPs related to ASR. “It is neither Congressional nor Commission policy to exclude parties because the niceties of pleading were imperfectly observed. Sounder practice is to decide issues on the merits, not to avoid them on technicalities.” *Houston Lighting & Power Co.* (South Texas Project, Units 1 and 2), ALAB-549, 9 NRC 644, 649 (1979). Because the pleading clearly challenges ASR, the failure to articulate this challenge specifically in the short statement of the contention should not prove fatal to the ASR Contention.

<sup>134</sup> ASR Contention at 9.

date in this manner.”<sup>135</sup> But, the ASR AMP does not indicate that NextEra has performed a baseline inspection for all affected structures, only those with accessible areas. The NRC Staff presented a slide to the ACRS that stated “an acceptable AMP for ASR should be based on the following: Baseline inspection of concrete structures to document current condition of structures.”<sup>136</sup>

As a result, the baseline inspection portion of the ASR Contention meets the requirements in 10 C.F.R. § 2.309(f)(1). First, it is in the scope of this license renewal proceeding because it relates to managing the effects of aging during the period of extended operations on in-scope structures. Second, the baseline inspection claim is material because the NRC must determine if the ASR AMP’s reliance on these baseline inspections is adequate to support the monitoring program. Third, it is supported by an adequate factual basis. FOTC/NEC presented information that emphasizes that an adequate AMP for ASR should include a baseline inspection. But, the ASR AMP only indicates that NextEra performed a baseline inspection for accessible structures, not all potentially affected structures. Consequently, FOTC/NEC has provided sufficient facts to meet the basis requirement in §

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<sup>135</sup> ASR AMP, Enclosure 2, at 7.

<sup>136</sup> ACRS Transcript, NRC Slides at 31. While FOTC/NEC did not precisely cite the portions of the transcript that discuss baseline inspections, they indicated that they relied “on the NRC technical opinions expressed in the transcript of the meeting to flesh out the basis of [the] contention that the ASR monitoring plan/ AMP is inadequate.” ASR Contention at 11. One purpose of the Commission’s heightened pleading requirements is to “put other parties sufficiently on notice of the issues so that they will know generally what they will have to defend against or oppose.” *Philadelphia Elec. Co.* (Peach Bottom Atomic Power Station, Units 2 & 3), ALAB-216, 8 AEC 13, 20 (1974). The Staff’s discussion of ASR in the ACRS Transcript spans less than 25 pages, and the Staff presented only a few slides on this topic. ACRS Transcript at 154-178, NRC Slides at 23-32. Given the relatively focused nature of FOTC/NEC’s citation to the ACRS Transcript, the Staff had no difficulty locating the portions of the discussion that were pertinent to FOTC/NEC’s claims. Because this citation “put other parties sufficiently on notice of the issues so that they will know generally what they will have to defend against or oppose,” the Staff believes it provides an adequate factual basis for contention admissibility purposes. *Peach Bottom*, ALAB-216, 8 AEC at 20.

2.309(f)(1).<sup>137</sup> Moreover, because the ASR AMP relies on these inspections to support its ASR monitoring program, FOTC/NEC has raised a genuine dispute with the application.<sup>138</sup>

Therefore, the Staff concludes that this portion of the contention meets the admissibility requirements in 10 C.F.R. § 2.309(f)(1).

## 2. Visual Inspections

Next, the ASR Contention asserts, “Visual inspection of surface indications alone is not [an] adequate gauge [of] the status of internal chemical processes, such as ASR.”<sup>139</sup> NextEra’s current ASR AMP explicitly states that it only relies on visual inspections to monitor the ASR reaction in concrete structures within the scope of the license renewal review.<sup>140</sup> The Staff explained to the ACRS subcommittee that while a visual examination may detect ASR in concrete structures, a visual examination alone, without a petrographic examination, cannot rule out the presence of ASR.<sup>141</sup> FOTC/NEC has cited statements by the NRC Staff before the ACRS which critique the Applicant’s reliance on visual inspections: “the applicant has not performed any further reevaluation or petrographic examination to confirm whether ASR is present in the containment or not.”<sup>142</sup> Moreover, the Staff stated elsewhere in the ACRS Transcript that “it is a well-known fact that the visual examination cannot rule out the presence

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<sup>137</sup> ASR AMP, Enclosure 2, at 7; ACRS Transcript, NRC Slides at 31. As discussed above, documents from the NRC Staff may provide an adequate basis for an admissible contention. *Calvert Cliffs*, CLI-98-25, 48 NRC at 350.

<sup>138</sup> ASR AMP, Enclosure 2, at 6-7.

<sup>139</sup> ASR Contention at 9.

<sup>140</sup> ASR AMP, Enclosure 2, at 3 (“ASR is detected by visual observation of cracking on the surface of the concrete.”).

<sup>141</sup> ACRS Transcript at 170.

<sup>142</sup> ASR Contention at 13 (*citing* ACRS Transcript at 160).

of ASR.”<sup>143</sup>

Thus, the visual inspection component of the ASR claim meets the § 2.309(f)(1) criteria. First, it is in scope because it challenges NextEra’s plan to manage the effects of aging during the period of extended operations on in-scope structures. Second, the visual inspection claim is material because the NRC must determine if the ASR AMP’s reliance on visual inspections is adequate. Third, FOTC/NEC has directly supported this claim with relevant information. Last, the visual inspection claim challenges a specific portion of NextEra’s amended application. As a result, the Staff agrees with FOTC/NEC that this portion of the claim meets the § 2.309(f)(1) criteria.

### 3. Concrete Sampling

In addition, FOTC/NEC contends, “NextEra has determined the extent to which concrete has degraded or lost its structural function by relying on testing measurements of a very limited number of samples for a very limited number of structural dynamics.”<sup>144</sup> The ASR AMP indicates that NextEra tested the concrete cores for compressive strength to support its monitoring program.<sup>145</sup> Such tests pressurize a sample until it breaks to determine the concrete’s compressive strength, or resistance to forces pushing inward. But, the Staff’s statements before the ACRS, cited by FOTC/NEC, indicate that NextEra’s tests for compressive strength alone do not account for tensile and bond strength, which measure the concrete’s

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<sup>143</sup> ACRS Transcript at 170; *see also id.* at 177-78, 181 (noting that while visual inspection alone cannot rule out the presence of ASR, such inspections can uncover the presence of ASR). ACRS Transcript at 161-62, 170 (responding affirmatively to a question of whether the Staff would require core samples and petrographic examination; “they haven’t extracted any cores from the containment”).

<sup>144</sup> ASR Contention at 10.

<sup>145</sup> ASR AMP, Enclosure 2, at 17.

resistance to forces pulling it apart.<sup>146</sup> The Staff acknowledged that industry codes establish that in concrete unaffected by ASR, without cracking, compressive strength may provide an indication of tensile and bond strength.<sup>147</sup> But, the Staff questioned NextEra's reliance on compressive strength tests to establish tensile and bond strength in Seabrook's concrete, which is subject to cracking.<sup>148</sup> Moreover, the Staff indicated that after months of disagreement NextEra had changed its initial position and agreed with the Staff that "compressive strength [testing] results alone are not sufficient to manage the aging of the ASR."<sup>149</sup>

Consequently, the sampling portion of the ASR Contention also meets the § 2.309(f)(1) requirement. As discussed above, the ASR AMP is in the scope of this proceeding, and the adequacy of the program is material to the Staff's licensing decision. Likewise, FOTC/NEC has pointed to information that questions whether NextEra has conducted sufficient tests to support the monitoring program. Finally, the ASR AMP update to the Seabrook LRA discusses and relies on this sampling program. Thus, the core sampling portion of the ASR contention also meets the requirements of § 2.309(f)(1).

C. The Remainder of the ASR Contention Lacks an Adequate Factual Basis

The remaining claims in the ASR Contention lack an adequate factual basis. Generally, they raise issues that the Staff did not discuss before the ACRS. Accordingly, that document does not provide sufficient factual support for those claims. Without such factual support, these remaining claims constitute the type of speculation and bare assertion that the Commission has

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<sup>146</sup> ASCR Contention at 12.

<sup>147</sup> ACRS Transcript at 156.

<sup>148</sup> *Id.*

<sup>149</sup> *Id.*

previously found inadmissible.<sup>150</sup>

In addition to the transcript, FOTC/NEC insists that “documents and sources already identified in this petition,” “the full panoply of relevant documents cited in the NRC Staff’s periodic Disclosures,” and “a broad range of technical papers and manuals on concrete aging” support its contention.<sup>151</sup> But, the Commission has stated that it “expects parties to bear their burden and to clearly identify the matters on which they intend to rely with reference to a specific point. The Commission cannot be faulted for not having searched for a needle that may be in a haystack.”<sup>152</sup> Therefore, FOTC/NEC’s non-particularized citations to several large classes of documents do not meet the requirement in § 2.309(f)(1)(v) that petitioners reference “the specific sources and documents on which” they intend to rely. Moreover, because the ASR Contention does not allege that any of these documents are new, any claims based entirely on them would be late under the Commission’s timeliness regulations.<sup>153</sup>

1. Inaccessible or Buried Concrete

First, FOTC/NEC asserts that the ASR AMP “makes no allowance for inspection of inaccessible or buried concrete save for opportunistic inspections.”<sup>154</sup> FOTC/NEC explains, “In the event that excavations and hence opportunistic inspections occur in lightly affected or non-affected areas, [these] findings will be of little use in locating potential structural failures.”<sup>155</sup> The

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<sup>150</sup> *Fansteel*, CLI-03-13, 58 NRC at 203.

<sup>151</sup> ASR Contention at 15.

<sup>152</sup> *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-89-3, 29 NRC 234, 241 (1989).

<sup>153</sup> 10 C.F.R. § 2.309(c), (f)(2).

<sup>154</sup> ASR Contention at 9.

<sup>155</sup> *Id.*

Staff did not specifically discuss inaccessible concrete structures before the ACRS, let alone whether opportunistic inspections would suffice to manage the effects of ASR in those structures. The Staff only confirmed that many structures affected by ASR at Seabrook are below grade and exposed to groundwater.<sup>156</sup> As a result, the buried concrete claim rests only on FOTC/NEC's assertion that opportunistic inspections are insufficient to manage the effects of ASR in buried or inaccessible concrete.<sup>157</sup> However, such assertions alone cannot provide sufficient factual support for an admissible contention.<sup>158</sup>

## 2. ASR-Aggravating Factors

The ASR Contention also contends that the ASR AMP is inadequate because it “makes no provision for monitoring ASR-aggravating factors, such as moisture content, the presence of liquid water, the potential of chemically aggressive water, or the temperature of affected [or] susceptible concrete.”<sup>159</sup> Again the Staff presentation before the ACRS did not reference these potential ASR-aggravating factors, let alone establish that an adequate AMP must monitor ASR aggravators.<sup>160</sup> Consequently, because the Staff's presentation to the ACRS did not support this point, and FOTC/NEC has not identified any other support for this claim, the aggravating factors portion of the ASR contention also lacks a factual basis and instead rests only on speculation.<sup>161</sup> As a result, it is inadmissible.<sup>162</sup>

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<sup>156</sup> ACRS Transcript at 158-59.

<sup>157</sup> ASR Contention at 9.

<sup>158</sup> *Fansteel*, CLI-03-13, 58 NRC at 203.

<sup>159</sup> ASR Contention at 9.

<sup>160</sup> ACRS Transcript at 125-178.

<sup>161</sup> *Fansteel*, CLI-03-13, 58 NRC at 203.

3. Inspector Qualifications

Additionally, the ASR Contention challenges the ASR AMP's reliance on "untrained or minimally-trained personnel, who must make the first cut on what is reportable for further examination by a qualified professional engineer."<sup>163</sup> But, this claim is unrelated to any Staff statement in the ACRS transcript, and FOTC/NEC has not provided a specific reference to any other document that could support this claim.<sup>164</sup> Consequently, the inspector qualification claim lacks a factual basis altogether.<sup>165</sup>

4. No Active Component to Arrest, Mitigate, or Manage Growth of ASR

Moreover, FOTC/NEC contends that the ASR AMP "fails because there is no active component to arrest, mitigate or manage the growth of ASR, such as a stringent de-watering program, waterproofing or waterproof membranes restoration, concrete cladding to restore surfaces, or chemical treatment such as using lithium compounds."<sup>166</sup> Again, the ACRS transcript is devoid of any statement by the NRC Staff supporting the claim that the ASR AMP must contain an active component.<sup>167</sup> While the Staff noted that Seabrook lacks a functioning

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(. . .continued)

<sup>162</sup> 10 C.F.R. § 2.309(f)(1)(v), (vi).

<sup>163</sup> ASR Contention at 9.

<sup>164</sup> *Id.*

<sup>165</sup> 10 C.F.R. § 2.309(f)(1)(v), (vi). Moreover, NextEra structured the ASR AMP, including the inspector qualification components, along the guidelines in ACI 349.3R, "Structural Condition Assessment of Buildings." ASR AMP, Enclosure 2 at 8, 12. The NRC staff recommends using ACI 349.3R for personnel qualification in the GALL Report. NUREG-1801, Generic Aging Lessons Learned (GALL) Report, Rev. 2, at XI S6-1 (Dec. 2010) (ADAMS Accession No. ML103490041). As a result, this part of the claim not only lacks a factual basis but also contravenes well-established NRC guidance.

<sup>166</sup> ASR Contention at 9-10.

<sup>167</sup> ACRS Transcript at 125-178.



waterproofing membrane or groundwater dewatering system, the Staff in no way suggested that these were required elements to an effective AMP for managing the effects of ASR.<sup>168</sup> Because FOTC/NEC has not provided any further support for its assertion that such active elements are necessary for an adequate AMP, this portion of the ASR Contention is also inadmissible for want of an adequate factual basis.<sup>169</sup>

5. Inspection Intervals

Finally, FOTC/NEC claims that the ASR AMP reliance on six month inspection intervals “appears nominal; not tied to any calculation of the rate of growth of ASR in any given set of locations.”<sup>170</sup> However, the Staff statements in the ACRS Transcript do not contain any references to the proposed six month inspection interval. FOTC/NEC has not identified any other source to support this assertion. As a result, this portion of the claim also lacks an adequate factual basis.<sup>171</sup>

6. Conclusion

Thus, the inaccessible concrete, aggravating factors, inspector qualification, active component, and inspection interval portions of the ASR Contention are not supported by an

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<sup>168</sup> *Id.* at 159.

<sup>169</sup> *Fansteel*, CLI-03-13, 58 NRC at 203; 10 C.F.R. § 2.309(f)(1)(v), (vi).

<sup>170</sup> ASR Contention at 10.

<sup>171</sup> *Fansteel*, CLI-03-13, 58 NRC at 203; 10 C.F.R. § 2.309(f)(1)(v), (vi). Moreover, Federal Highway Administration guidance states that inspection intervals to monitor ASR should be “adapted to the particular needs of each case. The period can go from a few months in the case of recent and heavily damaged structures to a few years for older and well preserved ones.” Federal Highway Administration, Report on the Diagnosis, Prognosis, and Mitigation of Alkali-Silica Reaction (ASR) in Transportation Structures, 79-80 (Jan. 2010). Thus, “As a general guideline, bi-yearly (i.e., twice a year) measurements should be taken for the first 3 to 5 years and then every five years if the evolution of the damage is slow or nil.” *Id.* Accordingly, FOTC/NEC’s speculations on inspection frequency also diverge from recent guidance from the Federal Highway Administration.

adequate factual basis. Although FOTC/NEC asserts that the Staff's statements before the ACRS support these allegations, those statements either do not address these issues or only tangentially address them. Moreover, FOTC/NEC has not pointed to another document with any degree of specificity to support these assertions. Consequently, these portions of the contention lack an adequate factual basis and are inadmissible under 10 C.F.R. § 2.309(f)(1)(v), (vi).

D. Portions of the ASR Contention Are Also Outside the Scope of License Renewal

Finally, in addition to lacking adequate factual support, the aggravating factors and active component portions of the ASR Contention raise claims that are outside the scope of NRC license renewal proceedings. As discussed below, the NRC's license renewal regulations only require applicants to manage the effects of aging, as opposed to aging mechanisms. Because the aggravating factors and active component parts of the ASR Contention focus on the mechanism behind aging, they raise out-of-scope claims.<sup>172</sup>

1. NRC Regulations Require AMPs to Manage Aging Effects, Not Aging Mechanisms

Before issuing a renewed license under 10 C.F.R. § 54.29, the Staff must find that the applicant's proposed AMPs adequately "manag[e] the *effects* of aging during the period of extended operation."<sup>173</sup> Prior to 1995, the NRC's license renewal rule did not focus on managing aging "effects."<sup>174</sup> Rather, it emphasized the "identification and evaluation of aging

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<sup>172</sup> 10 C.F.R. § 2.309(f)(1)(iii).

<sup>173</sup> 10 C.F.R. § 54.29(a)(1) (emphasis added).

<sup>174</sup> Nuclear Power Plant License Renewal; Revisions, 60 Fed. Reg. 22,461, 22,469 (May 8, 1995). Earlier versions of the regulation did not mention effects. Nuclear Power Plant License Renewal, 56 Fed. Reg. 64,943, 64,979 (Dec. 13, 1991). For example, the predecessor to § 54.29 required the Staff to find that appropriate "Actions have been identified and have been or will be taken with respect to age related degradation unique to license renewal." *Id.*

*mechanisms* for systems, structures, and components within the scope of the rule.”<sup>175</sup> The Commission abandoned this approach because focusing on aging mechanisms could result in “an open ended research project” and may not lead to a reasonable assurance that the applicant would adequately manage aging during the period of extended operation.<sup>176</sup> Instead, the Commission concluded “that regardless of the specific aging mechanism, only aging degradation that leads to degraded performance or condition (i.e., detrimental effects) during the period of extended operation is of principal concern for license renewal.”<sup>177</sup> Because a degraded performance or condition will reveal detrimental aging effects, the Commission found that appropriate AMPs should monitor performance and condition in a “manner that allows for the timely identification and correction of degraded conditions.”<sup>178</sup> Thus, as explained by the Commission, the NRC’s regulations only require consideration of the effects of aging, as opposed to aging mechanisms, during the license renewal review.<sup>179</sup> While an applicant may choose to manage an aging mechanism as a method of managing aging effects, the regulations do not require applicants to adopt that approach.<sup>180</sup> The Commission has recently reaffirmed this distinction between aging mechanisms and effects.<sup>181</sup>

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<sup>175</sup> 60 Fed. Reg. at 22,468-69 (emphasis added).

<sup>176</sup> *Id.* at 22,469.

<sup>177</sup> *Id.*

<sup>178</sup> *Id.*

<sup>179</sup> *Id.*

<sup>180</sup> 10 C.F.R. § 54.29(a)(1).

<sup>181</sup> *Seabrook*, CLI-12-05, 75 NRC \_\_\_ (slip op. at 18) (rejecting a contention that would require the applicant to “ ‘preclude,’ not just ‘manage’ ” aging effects).

2. The Aggravating Factors and Active Component Claims Focus on Aging Mechanisms

FOTC/NEC claims that the ASR AMP is inadequate because it “makes no provision for monitoring ASR aggravating factors, such as the moisture content, the presence of liquid water, the potential of chemically aggressive water, or the temperature of affected or susceptible concrete.”<sup>182</sup> Likewise, FOTC/NEC’s asserts that the ASR AMP “fails because there is no active component to arrest, mitigate or manage the growth of ASR.”<sup>183</sup> Both of these arguments relate to monitoring and mitigating the mechanisms behind ASR instead of managing the effects of aging caused by ASR. Because the NRC’s license renewal regulations only require licensees to manage the effects of aging, not the mechanisms behind aging, these claims are outside the scope of this proceeding.<sup>184</sup> Thus, the ASR Contention asks NextEra to take steps beyond those required by the regulation.

While challenges to NRC regulations are normally outside the scope of NRC hearing, intervenors may always challenge NRC regulations by submitting a waiver petition under 10 C.F.R. § 2.335.<sup>185</sup> But, FOTC/NEC did not file a waiver petition in this case. As a result, these portions of the claim are inadmissible because they are outside the scope of this proceeding and, as discussed in the preceding section, are inadequately supported.<sup>186</sup>

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<sup>182</sup> ASR Contention at 9.

<sup>183</sup> *Id.*

<sup>184</sup> 10 C.F.R. § 2.309(f)(1)(iii).

<sup>185</sup> *Peach Bottom*, ALAB-216, 8 AEC at 20-21.

<sup>186</sup> 10 C.F.R. §§ 2.309(f)(1)(iii), 2.335.

CONCLUSION

For the foregoing reasons, the NRC Staff opposes admission of the ASR Contention. Although limited portions of the contention meet the admissibility standards under § 2.309(f)(1), the contention is late under the Commission's timeliness regulations and must be rejected. Nonetheless, the Staff will continue to work to resolve those concerns outside of this hearing.

Respectfully submitted,

***/Signed (electronically) by/***

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**Executed in Accord with 10 CFR 2.304(d)**

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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 ANSWER TO INTERVENORS' MOTION FOR LEAVE TO FILE NEW CONTENTION CONCERNING SAFETY-RELATED CONCRETE STRUCTURES dated September 21, 2012, have been served upon the following by the Electronic Information Exchange, this 21st day of September, 2012:

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