Via electronic submission

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE COMMISSION

In the Matter of:
NEXTERA ENERGY SEABROOK, LLC
(Seabrook Station Unit 1)

Docket No. 50-443-LA-2
Nov 22, 2017

C-10 Research and Education Foundation, Inc. Response to NextEra's Appeal of LBP-17-7: Whereby the Atomic Safety and Licensing Board Granted Standing to C-10 Research and Education Foundation to Intervene in Docket No. 50-443-LA-2 and Admitted Five of Its Contentions.

Pursuant to 10 C.F.R. § 2.311, the C-10 Research and Education Foundation, Inc. ("C-10") hereby files its response to NextEra Energy Seabrook LLC's ("NextEra") October 31, 2017 Appeal of the Atomic Safety and Licensing Board's ("Board") October 6, 2017 Memorandum and Order LPB-17-7. In its order, the Board granted C-10's April 10, 2017 petition for leave to intervene [1] in the license amendment request ("LAR") 16-03 from NextEra Energy Seabrook, LLC ("NextEra")[2] to adopt a methodology to monitor the impacts of alkali-silica reaction ("ASR") on concrete structures at Seabrook Station, Unit No. 1 ("Seabrook"). In its 100-page Memorandum and Order, the Board carefully reviewed and considered each of C-10's ten contentions, finding that five of the ten were independently admissible. The Board then reformulated these five admissible contentions into the following contention:

> The large-scale test program, undertaken for NextEra at the FSEL, has yielded data that are not "representative" of the progression of ASR at Seabrook. As a result, the proposed monitoring, acceptance criteria, and inspection intervals are not adequate.[3]

In its Appeal, NextEra seeks to challenge the Board's careful analysis and consideration of C-10's contentions by misrepresenting C-10's arguments and the Board's findings. Indeed, NextEra relies heavily on an argument — first raised during the June 29, 2017 pre-hearing conference — that because its contractor recommended "confirmatory testing" of representativeness, there is no material dispute. This argument is untimely, and simply confirms the importance of considering representativeness prior to granting the LAR. NextEra further attacks the fact that the Board carefully reviewed the materials that C-10 had submitted, and argues that the Board should not have considered any of C-10's support that predates NextEra's LAR submission. The Board was simply doing what it is required to do in reviewing C-10's materials to make sure that they supported C-10's contentions, and there is no reason or justification requiring the Board to only consider materials post-dating a LAR when evaluating

[1] C-10 Research and Education Foundation, Inc. Petition for leave to intervene: Nuclear Regulatory Commission Docket No. 50-443 (Apr. 10, 2017) [hereinafter Petition]
[2] License Amendment Request 16-03, Revise Current Licensing Basis to Adopt a Methodology for the Analysis of Seismic Category I Structures with Concrete Affected by Alkali-Silica Reaction, (Aug. 1, 2016) (ADAMS Accession No. ML16216A240)
[3] Memorandum and Order at 86.

scientific evidence supporting a contention. NextEra also spends significant time in its appeal attacking the Board's ability to revise contentions, largely ignoring the fact that the Board found five of C-10's contentions independently admissible, and that, as the Board itself noted, "the Commission has approved substantially more significant reformulations than the reformulation in this case."[4]

Overall, the Board's authoritative and diligent consideration of C-10's Petition should be affirmed by the Commission, and this case should proceed to an evidentiary hearing to determine whether NextEra's testing at the FSEL— which formed the basis for the LAR — was representative of the progression of ASR at Seabrook Station. Failing to do so, and instead allowing unrepresentative tests to be used to determine safety at an operating nuclear facility, would be negligent in the extreme and place the health and safety of hundreds of thousands of people at risk.

STANDARD OF REVIEW

C-10 agrees that the Commission will review Board decisions to grant a petition to intervene for errors of law or abuse of discretion. While NextEra correctly states this standard, throughout its brief, NextEra argues that "factual error" by the Board in how the board read documents and construed the evidence presented to it "constitutes legal error."[5] C-10 maintains that the Commission should only reverse the Board's decision if it finds an actual error of law, or finds that the Board abused its discretion in evaluating the documents and evidence presented to it.

NEXTERA'S ARGUMENTS REGARDING "CONFIRMATORY TESTING" SHOULD BE REJECTED AS UNTIMELY, SINCE THEY WERE RAISED FOR THE FIRST TIME AT ORAL ARGUMENT

One of NextEra's central contentions upon appeal is that all of C-10's Contentions should be rejected because "the LAR proposes to conduct confirmatory testing to empirically verify the similarity between Seabrook's concrete and the data collected as part of the LSTP."[6] But this argument was not raised anywhere in NextEra's 71-page Answer, and as such, the Board did not address the argument anywhere in its comprehensive 100-page Memorandum and Order. NextEra specifically acknowledges in its briefing that it raised this issue for the first time "at oral argument."[7]

Arguments "raised . . . for the first time at oral argument" are "not timely."[8] "To permit [the defendant] to blindside . . . Intervenors with this new argument would violate case law and implicate due process concerns."[9] NextEra raised this argument in passing for the first time at oral argument, and C-10 did not have any opportunity to review the materials or respond. While C-10 responds to the argument here for the first time on appeal, the Commission should consider NextEra's arguments as

[4] Memorandum and Order at 89.
[5] NextEra Brief at 22; *see also id.* at 19 (arguing that "because [the Board] relied upon" a "factual error," "its decision . . . is reversible legal error.").
[6] NextEra Brief at 5.
[7] NextEra Brief at 19 & n.98.
[8] *In re Fla. Power & Light Co.*, 2016 NRC LEXIS 9, *22 (N.R.C. Apr. 21, 2016); *In re Fla. Power & Light Co.*, 2015 NRC LEXIS 68, *16 (N.R.C. Aug. 21, 2015).
[9] *In re Fla. Power & Light Co.*, 2016 NRC LEXIS 9, *22 (N.R.C. Apr. 21, 2016) (citing *United States v. Almaraz*, 306 F.3d 1031, 1041 (10th Cir. 2002) ("Raising the issue for the first time at oral argument affords the [opposing party] an inadequate opportunity to address it. It is unfair to lie in wait until oral argument to present issues material to the [case].").

untimely and waived. The Board did not abuse its discretion in any way by refusing to consider arguments that were not timely made by NextEra and that implicate serious due process concerns.

EVEN IF CONSIDERED, A RECOMMENDATION FOR "CONFIRMATORY TESTING" IN NEXTERA'S SUPPORTING MATERIALS CONFIRMS THE IMPORTANCE OF EVALUATING REPRESENTATIVENESS PRIOR TO APPROVAL, AND DOES NOT REMOVE ANY MATERIAL DISPUTE

Moreover, even were NextEra's argument regarding "confirmatory testing" to be considered, it does not form any basis to reject the Board's admission of the Reformulated Contention. As C-10 made abundantly clear in its Petition, the entire basis for the LAR is that the concrete tested at FSEL was "representative" with the existing concrete at Seabrook, and that the conclusions reached by MPR are thus valid to develop a testing protocol and program for use at Seabrook.[10] As the very provisions cited to by NextEra state, "Application of the results of the FSEL test programs *requires that the test specimens be representative of reinforced concrete at Seabrook Station*, and that expansion behavior of concrete at the plant be similar to that observed in the test specimens."[11] It is axiomatic that if the test specimens are not representative of the concrete at Seabrook, then the FSEL test results should not be applied to Seabrook Station. That is the basis for the Reformulated Contention, and should be determined at an evidentiary hearing.

NextEra, however, wishes to circumvent any evidentiary hearing to determine whether the FSEL test results are "representative" by arguing that its contractor, MPR, issued recommendations for future testing in an attempt to confirm representativeness.[12] MPR's recommendations, however, are just that: *recommendations*. NextEra's LAR does not propose modifying the UFSAR to include future confirmatory testing as a required component of assessing the safety of concrete at Seabrook Station. As such, the possibility of future voluntary testing by NextEra is insufficient to show that there is no dispute regarding the LAR. Instead, MPR's recommendations simply confirm the importance of there being an evidentiary hearing on the Reformulated Contention to determine whether the FSEL testing samples were truly representative with those present at Seabrook Station.

Moreover, even if the testing recommended by MPR did form a required component of the LAR, they would not be sufficient to reject the Reformulated Contention or establish the necessary representativeness required to approve the LAR. First, if the FSEL test samples are not representative, then the LAR should not be approved and the results from those test samples should not be used at Seabrook Station to determine the safety of a working nuclear reactor. Such a "try it and see" approach is not appropriate where significant issues of public health and safety are concerned.

The testing program proposed by MPR recommends to "Corroborate modulus-expansion correlation" with data from the plant based on a single set of tests performed in 2028. It recommends confirming "Expansion Behavior" with a review of records performed in 2025 and every 10 years thereafter. Where there are significant questions as to whether the testing samples are representative of those present at Seabrook Station, a protocol that initially evaluates representativeness eight or

[10] *See* Petition at 8-9.
[11] MPR-4273 at § 6.1.5.
[12] MPR-4273 at vii & § 6.1.5.

eleven years from now is insufficient to protect the public from a possible nuclear accident caused or exacerbated by weakened concrete at Seabrook Station.

NEXTERA REPEATEDLY MISREPRESENTS C-10'S ARGUMENTS

NextEra attempts to prevail on appeal by misrepresenting C-10's arguments. For example, in its brief, NextEra states that "C-10 appears to argue the LAR does not show that the LSTP [Large Scale Test Program] specimens were *identical* to Seabrook's concrete."[13] But nowhere in its Petition or in oral arguments has C-10 stipulated "identical" as a criterion for evaluating the LAR. Instead, the bar, as itself set by NextEra and their contractor, MPR Associates, is for "representativeness" as the central criterion to be met. MPR Associates itself acknowledged that the core issue — and possible challenge — to its research was a lack of representativeness:

> While most research on ASR has focused on the science and kinetics of ASR, there is a substantial body of knowledge that exists in the literature on structural testing of ASR-affected concrete specimens. However, the application of the conclusions from the literature to structures at Seabrook Station can be challenged by *lack of representativeness*. As a result, for selected structural limit states, NextEra commissioned MPR/FSEL to perform large-scale structural testing using specimens that were *designed and fabricated to be representative of structures* at Seabrook Station.[14]

NextEra employs almost identical wording in the LAR:

> Although structural testing of ASR-affected test specimens has been performed, the application of the conclusions to a specific structure can be challenged by *lack of representativeness....*The large-scale test programs included *testing of specimens that reflected the characteristics of ASR-affected structures at Seabrook Station*.[15]

Therefore, far from being an "irrelevant" challenge, as NextEra puts it, the bar of "representativeness" is the *raison d'etre* for the entire testing program—a bar C-10 maintains they did not meet. In spite of the efforts made by NextEra and MPR to try to meet this standard, C-10 will show at an evidentiary hearing that the concrete tested at FSEL is not actually "representative" of the concrete at Seabrook Station, and that the LAR therefore should not be approved to monitor Seabrook Station's deteriorating concrete structures. Using unrepresentative testing samples to determine safety at an operating nuclear plant would endanger C-10 and the many communities and residents that it serves.

As another example, NextEra argues that "C-10 has one chief complaint: that NextEra must rely solely on mechanical property testing of Seabrook concrete samples to evaluate ASR."[16] C-10 refutes this assertion. Nowhere in C-10's Petition, or any other documents or oral statements presented in support of the Petition, does C-10 assert, or even imply, that NextEra must rely *solely* on mechanical property testing of Seabrook concrete. This is a misapprehension, and a misrepresentation, of the case

[13] NextEra Brief at 15 (emphasis added).
[14] MPR-4288, 4.1 (emphasis added); *see also* MPR-4273, 1.2.2 ("MPR Associates conducted large scale test programs at [FSEL] using specimens that were designed and fabricated to *represent reinforced concrete at Seabrook Station to the maximum extent practical*." (emphasis added)).
[15] NextEra LAR 16-03, 3.2.1 (emphasis added).
[16] NextEra Brief at 7

C-10 has presented which raise serious issues with the representativeness of the testing performed by NextEra at FSEL.

It is also incorrect for NextEra to argue that C-10 "reject[s] the notion that any change to the license is permissible."[17] C-10 is happy to support changes that will actually increase the safety of the nuclear reactor operating in its backyard. But with this LAR, NextEra has proposed an unprecedented approach: using testing results that have not been peer-reviewed and that are not representative of the existing deteriorating concrete at Seabrook Station in order to evaluate the safety of an operating nuclear power plant. In short, C-10 does not oppose *any* change to the license, it opposes *this* License Amendment Request.

THE BOARD IS ALLOWED TO REVIEW THE MATERIALS SUBMITTED BY C-10 TO DETERMINE IF ITS CONTENTIONS ARE SUPPORTED

NextEra repeatedly cites to *USEC Inc.* (Am. Centrifuge Plant), CLI-06-10, 63 NRC 451 (2006) to argue that "it is not up to the boards to search through pleadings or other materials to uncover arguments and support never advanced by the petitioners themselves."[18] But *USEC* was in the exact opposite posture as this appeal. In that case, a petition had been rejected, and when the petitioner appealed, the Commission explained that the Board had no responsibility to search for arguments that had never been advanced. In the sentence prior to the one quoted by NextEra, however, the Commission explained that "We expect our licensing boards to examine cited materials to verify that they do, in fact, support a contention."[19] That is exactly what was done in this case, as explained below. Moreover, NextEra cannot point to a single decision where the Commission has overturned a Board decision because the Board relied on evidence presented by the Petitioner.

NEXTERA'S GENERALIZED ARGUMENT AGAINST THE BOARD'S AUTHORITY TO REFORMULATE CONTENTIONS DOES NOT APPLY TO C-10'S CONTENTIONS WHICH ARE THEMSELVES ADMISSIBLE

NextEra asserts that the Board lacks discretion to reformulate contentions.[20] Both the Board and the NRC Staff addressed this issue at length.[21] Moreover, the Board's ruling on admissibility (comprising 60 pages of their 100-page Memorandum and Order) concludes that five of C-10's contentions are admissible largely as they are written, as stand-alone contentions. The admissibility of these five contentions was not based on "Board-supplied information," but rather by information provided solely by C-10. From these five admissible contentions, the Board crafted a single combined contention to capture the essence of the admissible contentions (largely in line with the recommendation from the NRC Staff)[22]. As the Board explained, "First, we conclude that five of C-10's individually proposed contentions are admissible, but, for purposes of efficiency and clarity, we consolidate the contentions into a reformulated contention similar to that proposed by Staff."[23] NextEra

[17] Ibid
[18] NextEra Brief at 17 n. 88 & 21.
[19] *USEC Inc.* (Am. Centrifuge Plant), CLI-06-10, 63 NRC 451, 457 (2006).
[20] NextEra Brief at 3.
[21] DTE Electric Co. (Fermi Nuclear Power Plant, Unit 2), CLI-15-18, 82 NRC 135 (2015)
[22] ASLBP No. 17-953-02-LA-BD01, at 23.
[23] ASLBP No. 17-953-02-LA-BD01, at 33.

is therefore utterly incorrect to contend that the Board reconfigured the Reformulated Contention "from multiple inadmissible contentions" in order to determine admissibility.

NEXTERA'S ARGUMENT THAT ONLY EVIDENCE POST-DATING ITS LAR SHOULD BE CONSIDERED MUST BE REJECTED

NextEra has sought to challenge the timeliness of the supporting evidence presented by C-10, asserting that "nearly all of C-10's alleged support predates the LAR submission."[24] But much of C-10's support is to the underlying science regarding ASR in concrete, including the analysis of the fundamentals of ASR and a discussion of ASR testing techniques provided by Dr. Paul Brown. Ultimately, while the methodology NextEra seeks approval for in the LAR is unproven and unrepresentative, the scientific backdrop and various possible methods for analyzing the properties of ASR in concrete are well understood. While NextEra seeks to impugn Dr. Brown, the appropriate time to do that is at an evidentiary hearing, when Dr. Brown may be questioned, and after Dr. Brown has had the opportunity to review the full testing data from NextEra (which has not been previously disclosed). For the record, Dr. Brown has confirmed that he will serve as an expert witness to support C-10's work in preparation for the evidentiary hearing on this License Amendment Request.

C-10'S CONTENTION D IS ADMISSIBLE[25]

C-10's Contention D asserts that the data from NextEra's testing at FSEL is not "representative" of the progression of ASR at Seabrook Station.[26] NextEra asserts in its appeal that it is "immaterial" whether the testing is representative of Seabrook Station.[27] But the Board found that the link between "representativeness" and the NRC's necessary finding was "readily apparent" from what C-10 did say. C-10 quoted the LAR's acknowledgement that '[a]pplication of the results of the [large-scale] test program requires that the test specimens be representative of reinforced concrete at Seabrook Station and that expansion behavior of concrete at the plant be similar to that observed in the test specimens.'"[28] As the Board explained: "if the test program was not sufficiently representative of Seabrook concrete, as Contention D alleges, the LAR's reliance on the test program to support the monitoring program, acceptance criteria, and inspection intervals would be undermined."[29] Since the LAR itself acknowledges that representativeness is *required*, it is amazing that NextEra continues to argue that representativeness is somehow immaterial to the NRC's determination.[30] The Board was therefore absolutely correct to reject NextEra's arguments based on C-10's Petition.

[24] NextEra Brief at 7.
[25] NextEra first addresses Contention D, and so C-10 follows its lead in so doing. While the Reformulated Contention somewhat follows the "representativeness" argument of Contention D, it also incorporates all of the other admissible contentions and arguments into its analysis.
[26] Petition at 8.
[27] NextEra Brief at 15 ("[I]t does not tie C-10's stand-alone (and otherwise irrelevant) "representativeness" challenge to any finding the NRC must make (i.e., it is immaterial)").
[28] Memorandum and Opinion at 67 (emphasis in original).
[29] *Id.* at 68.
[30] To the extent that the Board noted the Staff's agreement and additional portions of the LAR where representativeness was explained as a necessary finding, those arguments simply buttress C-10's arguments, but in no way take away from the fact that C-10 properly explained the importance of representativeness based on the LAR's own wording.

NextEra next contends that an NRC research report that identifies heat and radiation as accelerants of ASR progression in concrete should be ignored because C-10 somehow failed to properly explain how these conditions — both of which are present at Seabrook Station but were not represented in NextEra's testing program, undermined the representativeness of NextEra's testing. The Board rejected this, stating that:

> We have no difficulty discerning the connection between these provisions of NUREG/CR-7171 and C-10's claim that the test program specimens were not representative of Seabrook concrete. Contention D maintains that, for the test program results to apply to Seabrook, the test specimens must be representative of the reinforced concrete at Seabrook. Contention D identifies heat and radiation, together with other factors, as contributing to the "non-linear advancement of ASR over the course of 35-40 years" in the concrete structures at Seabrook. NUREG/CR-7171 supports C-10's argument by noting the "coupling effect between radiation and ASR that can potentially accelerate ASR activity." Contention D further alleges that the test program specimens fail to accurately represent the characteristics of Seabrook concrete because they do not reflect the effects of heat and radiation, among other variables.[31]

This is clear from C-10's Petition and from the merest use of common sense and logic in reading the Petition. There is absolutely no abuse of discretion in using such common sense and logic to read a Petition, let alone a *pro se* Petition, whereas even NextEra admits, the petitioner is given "some leeway" in pleading.[32] NextEra's argument that the Board should ignore such common sense must be rejected. NextEra's only other argument is that Contention D should be rejected as the Board did not consider its argument raised for the first time at oral argument that later "confirmatory testing" of representativeness obviates the need for any consideration of representativeness prior to approval of the LAR. As discussed at length above, this argument is both untimely and unavailing on the merits. Accordingly, the Board was correct to find Contention D admissible, and did not commit any legal error or any abuse of discretion in doing so.

C-10'S CONTENTION A IS ADMISSIBLE

Rather than addressing C-10's actual Contention A, NextEra attempts to improperly recharacterize C-10's arguments as advocating for a "preferred approach."[33] The Board properly rejected this, stating that it did not "understand Contention A to make such an argument," because Contention A actually reads "Visual inspection, crack width indexing, and extensometer deployment are not sufficient tools for determining the presence and extent of Alkali-Silica Reaction (ASR) in safety-related structures at Seabrook Station."[34] The Board properly found that C-10's contention was "based on the alleged insufficiency of the monitoring methods proposed in the LAR" and that the insufficiencies in those methods were explained in detail by Dr. Brown's analysis.[35]

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[31] Memorandum and Opinion at 70. NextEra's complaint that the Board somehow considered "supplemental material" from NUREG/CR-7171 must also be rejected. The Board merely "examine cited materials to verify that they do, in fact, support a contention" and quoted from the next paragraph of NUREG/CR-7171. *See USEC Inc.* (Am. Centrifuge Plant), CLI-06-10, 63 NRC 451, 457 (2006).
[32] NextEra Brief at 11.
[33] NextEra Brief at 20.
[34] Memorandum and Opinion at 37, 40.
[35] *Id.* at 40-43.

NextEra does not dispute that the LAR uses combined crack width indexing and extensometer deployment as part of its monitoring program. NextEra also does not dispute that Dr. Brown raises significant issues with both of these methods of monitoring ASR. Indeed, Dr. Brown raises serious concerns, as acknowledged by the Board, that the use of these monitoring techniques, as proposed by the LAR, will fail to properly detect significant weakening of the concrete at Seabrook Station.[36] The Board then correctly concluded that the contention was material to the NRC's determination, as "Contention A alleges that the monitoring methods proposed in the LAR, without appropriate in-situ testing of the concrete, are inadequate to measure ASR advancement in safety-related structures at Seabrook."[37] The Board had no problem concluding that it was material to the NRC's determination of the LAR whether safety-related structures at Seabrook were adequately monitored by appropriate testing for the degradation caused by ASR. NextEra's arguments to the contrary is unavailing. Finally, NextEra again relies upon the "confirmatory testing" argument that it raised for the first time at oral argument,[38] which as noted in detail above, is untimely and, if considered at all, should be rejected on its merits.

C-10'S CONTENTION B IS ADMISSIBLE

NextEra attacks the Board's admission of C-10's Contention B largely on the basis that the Board exercised its discretion to revise the contention. The Board's exercise of its discretion was proper here. As the Board stated: "reading the full contention together with the statement of its basis, we understand the contention to allege that the LAR misconstrues the effects of ASR acting within the restraint imposed by reinforcing steel, and that, as a result, significant micro-cracking and resulting concrete degradation may go unnoticed unless there is additional analysis not contemplated under the LAR."[39] This is a serious issue that was properly raised by C-10 in its contention and in the evidence presented by C-10, and the Board was well within its discretion to revise C-10's contention to capture the essence of its argument.

NextEra's only other argument that this contention is inadmissible is that the Board failed to consider their arguments regarding the "confirmatory testing" that were raised for the first time at oral argument. As addressed in detail above, those arguments were untimely and are ultimately unavailing on their merits. The Board did not abuse its discretion in revising C-10's Contention B to capture the thrust of its argument, and certainly did not abuse its discretion in failing to consider an untimely argument raised by NextEra.

C-10'S CONTENTION C IS ADMISSIBLE

NextEra's Appeal on this issue is somewhat confusing, as it conflates petrographic analysis and core testing. For example, NextEra asserts that "The 'core sample testing' C-10 demands, likewise, is not defined in the Petition. However, the Board interpreted it as a demand for implementation of the

[36] *Id.*
[37] *Id.* at 45.
[38] NextEra Brief at 33-34.
[39] Memorandum and Opinion at 55.

'testing and analysis protocols' in ACI 349.3R and ASTM C856-11.127."[40] But at the Board explained in its Memorandum and Opinion, ACI 349.3R and ASTM C856-11.127 are "the code provisions C-10 cites regarding petrographic analysis."[41] Both of these techniques are explained in detail by Dr. Brown in his analyses.[42]

NextEra's main attack upon the testing and analysis protocols (which do not relate to the core testing) is that C-10 has submitted a Petition for Rulemaking regarding these protocols, and that they therefore cannot be considered in this proceeding. The Board rejected this argument, stating that because the NRC had not initiated and was not in the process of initiating a rulemaking regarding this issue, it could be considered in the context of this case.[43] Even the case that NextEra cites to states that it is only "counter-productive" to consider an issue in litigation if the issue is one that "by all accounts *very soon* will be resolved generically."[44] NextEra does not and cannot contend that this issue will "very soon" be resolved by a rulemaking. Therefore, the Board is well within its discretion to consider it in the context of this case.

NextEra also again misconstrues both C-10's arguments and the Board's findings in its final attack, when it asserts: "The Board also appears to find a genuine dispute in Dr. Brown's demand that the LAR cite a predictive model for ASR advancement."[45] But while the Board acknowledged that Dr. Brown faulted NextEra for failing to cite any of the predictive models for ASR advancement in its LAR, the point of this was that "those proposing such models have uniformly also cited the critical need to carry out core testing in reinforced concrete in order to test such models."[46] The genuine dispute was not with citation to a model, but with the failure by NextEra to perform the regular core testing that would be necessary in order to ascertain the progression of ASR at Seabrook Station. In reviewing the materials, the Board thus correctly found that C-10's Contention C was admissible.

C-10'S CONTENTION H IS ADMISSIBLE

C-10's Contention H is that the monitoring intervals proposed in the LAR are too long given that there has not been adequate testing and evaluation done by NextEra into the progression of ASR in the concrete at Seabrook Station. The proposed monitoring intervals therefore fail to provide sufficient protections for public health and safety.

Before the Board, NextEra argued that it understood the progression of ASR and argued that there was a "slow progression," justifying extended monitoring intervals with certain structures only checked every few years. On appeal, NextEra now argues that because it is obligated by NRC regulations to change these intervals if it determines that the rate of ASR degradation is changing, there is no genuine dispute.[47] But this is again a "try it and see" approach to nuclear safety that is highly inappropriate to use with an operating nuclear plant close to major population centers. As the Board found, C-10 argued, and Dr. Browns' analysis have supported, the testing done by NextEra at FSEL was

[40] NextEra Brief at 25.
[41] Memorandum and Opinion at 62.
[42] Commentary on Seabrook Station: Impact of Alkali-Silica Reaction on Concrete Structures and Attachments. Dr. Paul Brown, March 2013.
[43] *Id.* at 62.
[44] NextEra Brief at 25 (citing *Oconee*, CLI-99-11, 49 NRC at 346) (emphasis added).
[45] *Id.*
[46] Memorandum and Opinion at 59-60.
[47] *See* NextEra Brief at 26; Memorandum and Opinion at 83.

not representative, and using testing intervals based on an assumption that ASR at Seabrook Station will progress similarly to ASR in unrepresentative tests at FSEL is unsafe. Since the progression of ASR is not fully understood, and as should be examined in an evidentiary hearing, significantly more conservative monitoring intervals should be utilized in order to protect public health and safety. The Board was well within its discretion to find Contention H admissible.

CLOSING

With C-10's petition to intervene and call for a public evidentiary hearing on NextEra Seabrook's License Amendment Request, C-10 has simply asked the Board to consider whether the testing and monitoring of the very serious issue of ASR is adequate to ensure that Seabrook's concrete will continue to protect the public from radiological releases. The Board undertook a diligent and thorough examination of C-10's claims and evidence, as well as of regulatory precedent, and determined that as a *pro se* citizens group, C-10 has standing and that five of its contentions (combined into a single Reformulated Contention) should be explored via a full evidentiary hearing.

On behalf of the board of directors and the members of the C-10 Research and Education Foundation, we thank you for the opportunity to file our reply comments to NextEra's Appeal of LBP-17-7. **We urge the Commission to consider the underlying reasons that C-10 has sought intervenor status: that if the deteriorating concrete at Seabrook Station nuclear plant ultimately contributes to the release of radiological materials, our members, and the broader public, would be at risk of grave danger**. Thank you for fulfilling your pledge to protect people and the environment.

Sincerely,

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