

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

Before Administrative Judges:

William J. Froehlich, Chairman
Nicholas G. Trikouros
Dr. William E. Kastenberg

In the Matter of:

FirstEnergy NUCLEAR OPERATING
COMPANY

(Davis-Besse Nuclear Power Station, Unit 1)

Docket No. 50-346-LR

ASLBP No. 11-907-01-LR-BD01

January 15, 2015

MEMORANDUM AND ORDER

(Denying Intervenors' Motion to Admit Contention No. 7)

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Before this Licensing Board is a September 2, 2014 motion from Beyond Nuclear, Citizens Environment Alliance of Southwestern Ontario, Don't Waste Michigan, and the Green Party of Ohio (collectively, Intervenors). Intervenors seek admission of Contention 7, concerning cracks in the shield building at the Davis-Besse Nuclear Power Station, Unit 1 (Davis-Besse).¹ Also before the Board are two motions to amend and supplement Contention 7.²

¹ See Intervenors' Motion for Admission of Contention No. 7 on Worsening Shield Building Cracking and Inadequate AMPs [Aging Management Programs] in Shield Building Monitoring Program (Sept. 2, 2014) [hereinafter Motion to Admit Contention 7].

² See Intervenors' Motion to Amend and Supplement Contention No. 7 on Worsening Shield Building Cracking and Inadequate AMPs in Shield Building Monitoring Program (Sept. 8, 2014) [hereinafter Motion to Amend Contention 7]. Shortly after filing their Motion to Amend Contention 7, Intervenors filed an erratum to the motion, correcting a citation to a document referenced in the motion to amend. See Erratum to Intervenors' Motion to Amend and Supplement Contention No. 7 on Worsening Shield Building Cracking and Inadequate AMPs in

FirstEnergy Nuclear Operating Company (FENOC) opposes Intervenors' Motion to Admit Contention 7 on the grounds that it does not meet the NRC's contention admissibility requirements and is untimely.³ The NRC Staff also opposes Intervenors' Motion to Admit Contention 7 for similar reasons.⁴ Intervenors filed a reply to FENOC's and the NRC Staff's Answers,⁵ and oral argument was held on November 12, 2014.⁶ For the reasons discussed below, Intervenors' Motion to Admit Contention 7 is denied.⁷

Shield Building Monitoring Program (Sept. 12, 2014).

On December 30, 2014, Intervenors filed a second motion to supplement Contention 7. See Intervenors' Motion to Supplement Contention No. 7 on Worsening Shield Building Cracking and Inadequate AMPs in Shield Building Monitoring Program (Dec. 30, 2014) [hereinafter Motion to Supplement Contention 7]. This motion, however, did not seek to amend the text of the contention. Id. at 2.

³ See FENOC's Answer Opposing Admission of Intervenors' Original and Amended Contention No. 7 at 2–3 (Oct. 3, 2014) [hereinafter FENOC Answer].

⁴ See NRC Staff's Answer to Intervenors' Motion for Admission of Contention No. 7 on Worsening Shield Building Cracking and Inadequate AMPs in Shield Building Monitoring Program at 2–3 (Oct. 3, 2014) [hereinafter NRC Staff Answer].

⁵ See Intervenors' Reply in Support of Motion to Amend and Supplement Contention No. 7 on Worsening Shield Building Cracking and Inadequate AMPs in Shield Building Monitoring Program (Oct. 10, 2014) [hereinafter Intervenors' Reply].

⁶ See Licensing Board Notice and Order (Scheduling Oral Argument) (Oct. 27, 2014) (unpublished); see also Transcript of Oral Argument on Contention 7 (Nov. 12, 2014) [hereinafter Tr.]; Joint Proposed Changes to the Transcript of the Oral Argument Held on November 12, 2014 (Dec. 1, 2014).

⁷ Intervenors' September 8, 2014 Motion to Amend Contention 7 was not opposed by FENOC or the NRC Staff. The Board considers Contention 7, as amended by the September 8 motion, in reaching its admissibility determination. However, Intervenors' December 30, 2014 Motion to Supplement Contention 7 does not alter the amended contention and is untimely. Therefore, the Board does not consider the December 30 motion in determining the admissibility of Contention 7.

I. Procedural Background

a. Initial Contentions 1 through 4

On August 27, 2010, FENOC filed to renew its operating license for Davis-Besse for twenty years.⁸ Intervenors petitioned to intervene on December 27, 2010, proposing four contentions.⁹ The Board found that Intervenors had standing and admitted Contention 1 (dealing with renewable energy alternatives)¹⁰ and Contention 4, in part (dealing with severe accident mitigation alternatives (SAMA)).¹¹ FENOC appealed the Board's ruling and the Commission reversed the Board's admission of Contention 1 in whole and Contention 4 in part.¹² FENOC subsequently moved for,¹³ and the Board granted, summary disposition of

⁸ [FENOC's] License Renewal Application, Davis-Besse Nuclear Power Station at 1.0-1, 1.1-1, 2.1-25 (Aug. 31, 2010) (ADAMS Accession Nos. ML102450567, ML102450563) [hereinafter LRA]. The application "also seeks renewal of the source material, special nuclear material, and by-product material licenses under 10 CFR Parts 30, 40, and 70 that are subsumed in or combined with the facility operating license." Id. at 1.0-1. FENOC's LRA is available on the NRC's public website at <http://www.nrc.gov/reactors/operating/licensing/renewal/applications/davis-besse/davis-besse-lra.pdf>.

⁹ See generally Beyond Nuclear, Citizens Environment Alliance of Southwestern Ontario, Don't Waste Michigan, and the Green Party of Ohio Request for Public Hearing and Petition for Leave to Intervene (Dec. 27, 2010) [hereinafter Petition to Intervene].

¹⁰ See LBP-11-13, 73 NRC 534, 588–89 (2011). Intervenors' Contention 1 stated that FENOC's Environmental Report "fails to adequately evaluate the full potential for renewable energy sources, such as wind power." Id. at 554–55 (quoting Petition to Intervene at 10). The Board concluded that Contentions 2 and 3, which also discussed Applicant's consideration of renewable energy alternatives, raised the same issues as Contention 1. See id. at 554–56. The Board thus decided to "analyze Contentions One, Two, and Three as if they were a single contention that challenges the sufficiency of the [Environmental Report's] analysis of renewable energy sources" Id. at 556.

¹¹ See id. at 558–89.

¹² See CLI-12-8, 75 NRC 393 (2012). The Commission concluded that Intervenors "fall short of providing the requisite support for the proposition that wind, alone or in combination with solar and storage, could produce sufficient baseload power by 2017 as to be considered a reasonable alternative to extending the Davis-Besse license." Id. at 402. The Commission also reasoned that parts of Contention 4 were "far too generalized to show a genuine material dispute with the Davis-Besse SAMA analysis." Id. at 417.

¹³ See [FENOC's] Motion for Summary Disposition of Contention 4 (SAMA Analysis Source Terms) (July 26, 2012).

Contention 4, concluding that that the “Davis-Besse SAMA analysis is reasonable under” the National Environmental Policy Act (NEPA).¹⁴

b. Contentions Pertaining to Storage and Disposal of Spent Nuclear Fuel

On July 9, 2012, Intervenors proposed a contention regarding the temporary storage and ultimate disposal of spent nuclear fuel from Davis-Besse.¹⁵ The contention was the result of the June 8, 2012 decision of the United States Court of Appeals for the District of Columbia Circuit in New York v. NRC, 681 F.3d 471 (D.C. Cir. 2012), vacating the “Consideration of Environmental Impacts of Temporary Storage of Spent Fuel After Cessation of Reactor Operation” rule, 10 C.F.R. § 51.23 (Temporary Storage Rule).¹⁶ On August 7, 2012, the Commission directed that all such contentions be held in abeyance.¹⁷

On August 26, 2014 the Commission adopted (1) a generic environmental impact statement identifying and analyzing the environmental impacts of continued storage of spent nuclear fuel; and (2) associated revisions to the Temporary Storage Rule in 10 C.F.R. § 51.23 (now called the “Continued Storage of Spent Nuclear Fuel” Rule).¹⁸ The Commission directed all Licensing Boards, including this one, to reject the pending waste confidence contentions that had been held in abeyance, noting that “[b]ecause these generic impact determinations have

¹⁴ LBP-12-26, 76 NRC 559, 581 (2012).

¹⁵ Intervenors’ Motion for Leave to File a New Contention Concerning Temporary Storage and Ultimate Disposal of Nuclear Waste at Davis-Besse Nuclear Power Station (July 9, 2012).

¹⁶ New York v. NRC, 681 F.3d 471, 483 (D.C. Cir. 2012). The court also vacated the NRC’s Waste Confidence Decision Update, 75 Fed. Reg. 81,037 (Dec. 23, 2010). See id.

¹⁷ Calvert Cliffs 3 Nuclear Project, LLC & Unistar Nuclear Operating Servs., LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), et al., CLI-12-16, 76 NRC 63, 68–69 (2012). The Board held this contention in abeyance on August 8, 2012. Licensing Board Order (Suspending Procedural Date Related to Proposed Waste Confidence Contention) at 2 (Aug. 8, 2012) (unpublished).

¹⁸ See generally Calvert Cliffs 3 Nuclear Project, LLC & Unistar Nuclear Operating Servs., LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), et al., CLI-14-08, 80 NRC __, __ (2014); see also Continued Storage of Spent Nuclear Fuel, 79 Fed. Reg. 56,238 (Sept. 19, 2014); Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel, 79 Fed. Reg. 56,263 (Sept. 19, 2014).

been the subject of extensive public participation in the rulemaking process, they are excluded from litigation in individual proceedings.”¹⁹ This Board denied Intervenors’ July 9, 2012 motion on October 8, 2014.²⁰

On September 29, 2014, shortly after the issuance of CLI-14-08, Intervenors moved to admit a new contention regarding waste confidence safety findings for Davis-Besse, arguing that the new Continued Storage of Spent Nuclear Fuel Rule “no longer makes generic safety findings concerning the feasibility and capacity of spent fuel disposal in the Continued Storage Rule.”²¹ The Commission indicated that it will exercise its “inherent supervisory authority over agency adjudications to review” Intervenors’ September 29, 2014 motion, together with a separate petition currently before the Commission addressing the same issue.²²

c. Previous Cracking-Related Contentions 5 and 6

On January 10, 2012, Intervenors filed Contention 5, concerning concrete cracking at the Davis-Besse shield building.²³ Intervenors argued that cracks in the shield building identified during an October 2011 scheduled reactor head replacement raised safety and environmental concerns, and that FENOC’s License Renewal Application (LRA) was inadequate in discussing how the aging effect of these cracks would be managed.²⁴ Intervenors argued in Contention 5 that:

¹⁹ Calvert Cliffs, CLI-14-08, 80 NRC at ___ (slip op. at 9).

²⁰ Licensing Board Order (Denying Motion to File a New Contention Concerning Temporary Storage of Nuclear Waste) at 3 (Oct. 8, 2014) (unpublished).

²¹ See Intervenors’ Motion for Leave to File a New Contention Concerning the Absence of Required Waste Confidence Safety Findings in the Relicensing Proceeding for Davis-Besse Nuclear Power Station at 1–2 (Sept. 29, 2014).

²² See DTE Electric Co. (Fermi Nuclear Power Plant, Unit 3), et al., CLI-14-9, 80 NRC ___, ___ (slip op. at 2–3) (Oct. 7, 2014).

²³ See Motion for Admission of Contention No. 5 on Shield Building Cracking (Jan. 10, 2012) [hereinafter Motion to Admit Contention 5].

²⁴ See id. at 1–2.

The cracking and cracking-related phenomena raise valid aging-management and NEPA issues within the scope of this proceeding which must be addressed as part of the assurances the NRC is obliged to give concerning operational, safety and environmental obligations surrounding the re-licensing determination.^[25]

After oral argument,²⁶ the Board denied Intervenors' Motion to Admit Contention 5.²⁷

The Board found that the record "contains extensive studies about the extent and origins of the cracking," indicating that the cracks were caused by a single extreme weather event, a blizzard in 1978, and Intervenors "neither proffered supporting facts or expert opinion to demonstrate that FENOC's conclusion is incorrect."²⁸ At that time, Intervenors claimed without supporting evidence that the cracking in the shield building was propagating.²⁹ The Board noted that FENOC's LRA had been amended to include an Aging Management Program (AMP)³⁰ which consisted of periodic inspections and tests on the shield building, thus rendering Contention 5 moot.³¹ The Board further concluded that the other parts of Contention 5, including criticisms of FENOC's "safety culture," were beyond the scope of this proceeding.³²

²⁵ Id. at 10.

²⁶ Transcript of Oral Argument on Contention 5 (Nov. 5–6, 2012).

²⁷ See generally LBP-12-27, 76 NRC 583 (2012). Intervenors also submitted five motions to amend and/or supplement Contention 5, which were also denied. See id. at 586–87.

²⁸ Id. at 607.

²⁹ See id. at 611.

³⁰ Intervenors define the acronym AMP as meaning "Aging Management Plan." Motion to Admit Contention 7 at 1. FENOC and the NRC Staff both define AMP as meaning "Aging Management Program." FENOC Answer at 1; NRC Staff Answer at 1. The technical documents shared between FENOC and the NRC Staff also indicate that AMP stands for "Aging Management Program." See, e.g., Request for Additional Information for the Review of the Davis-Besse Nuclear Power Station License Renewal Application, Enclosure, Recent Plant-Specific Operating Experience-Shield Building Monitoring Program at 1 (April 15, 2014) (ADAMS Accession No. ML14097A454) [hereinafter NRC April 15 RAI]. The Board adopts the definition of AMP provided by FENOC and the NRC Staff.

³¹ See LBP-12-27, 76 NRC at 607–09.

³² See id.

On April 21, 2014, Intervenors filed Contention 6, claiming that “in September 2013, additional concrete cracking which had not hitherto been identified was discovered in the shield building.”³³ Intervenors added that “[o]n or about February 13, 2014, FENOC discovered an extensive air pocket or void of concrete in the Davis-Besse shield building’s inner wall,” which was “caused by FENOC workers or contractors having left forming devices in the concrete” when replacing a reactor head at Davis-Besse in 2011.³⁴ According to Intervenors’ contention:

These problems represent ongoing aging problems compounded and intertwined with management failures; they are unmentioned and undocumented within the DSEIS [Draft Supplemental Environmental Impact Statement] for Davis-Besse; they may be interrelated or synergistic; they each are preceded at Davis-Besse; and they must be more intensely subjected to Aging Management Plans (AMPs) than has heretofore happened. The Draft and Final SEIS documents must be reconfigured in recognition of the lax management and QA failings, and the failings of the physical components of the shield building so that the true nature of these historic problems can be revealed and analyzed in the NEPA documents and in the severe accident mitigation alternatives analysis (SAMA). Relevant AMPs must be redrawn to anticipate and account for the implications or insufficient and irregular aging management of the shield building. Also, the Safety Evaluation review and overall SE Report must be rewritten to articulate modified AMPs and QA procedures which will reasonably assure that the plant can operate safely between now and April 22, 2017, and during the extended operating license period from 2017 until 2037.³⁵

³³ Motion for Admission of Contention No. 6 on Shield Building Concrete Void, Cracking and Broken Rebar Problems at 6 (Apr. 21, 2014) [hereinafter Motion to Admit Contention 6]. Intervenors quote from Applicant’s September 20, 2013 Preliminary Notification of Event or Occurrence: “This year, using new instrumentation with enhanced capabilities, [FENOC] plant workers identified *a crack that had not been seen before. To date, the core bore examinations revealed seven previously unidentified cracks. FENOC has taken steps to reevaluate 43 core bores and will be looking at the remaining 39 going forward.*” *Id.* (quoting Preliminary Notification of Event or Unusual Occurrence (Sept. 20, 2013) (ADAMS Accession No. ML13263A410) [hereinafter 2013 Preliminary Notification of Occurrence]).

³⁴ *Id.* at 3 (citing Preliminary Notification of Event or Unusual Occurrence (Feb. 19, 2014) (ADAMS Accession No. ML14112A009) [hereinafter 2014 Preliminary Notification of Occurrence]). Intervenors, citing from a February 15, 2014 newspaper article, further claimed that “[t]he flaw runs the 25-foot length of a cut made through the building’s wall in fall 2011,” and “varies in width from six to 12 inches.” *Id.* (citing Tom Henry, [Davis-Besse had Air Gap in Shield Building: FirstEnergy Found Flaw while Replacing 2 Steam Generators](http://www.toledoblade.com/Energy/2014/02/15/Davis-Besse-had-air-gap-in-shield-building.html), The Blade (Toledo, Ohio) (Feb. 15, 2014), <http://www.toledoblade.com/Energy/2014/02/15/Davis-Besse-had-air-gap-in-shield-building.html>).

³⁵ *Id.* at 26.

On July 25, 2014, the Board denied Intervenors' Motion to Admit Contention 6, finding it was outside the scope of a license renewal proceeding, lacked adequate support, failed to raise a genuine dispute with the applicant's LRA, and failed to raise a material issue.³⁶ The Board also found that Intervenors' assertions that there are recurring concrete void, cracking, and rebar problems were not supported by facts or expert opinion.³⁷ The Board found that, "Intervenors do not explain why, using facts or expert opinion, the shield building cracks, concrete void, or broken rebar impacts the shield building's ability to perform its intended safety functions or how these issues reflect 'age-related degradation' of the shield building."³⁸ Although Intervenors submitted a report and affidavit with their Motion to Admit Contention 6, the Board found that the two documents did not connect the Davis-Besse shield building cracking to an aging-related environmental or safety impact.³⁹

The Board also found that Contention 6 did not raise a genuine dispute between Intervenors and the Davis-Besse LRA, because Intervenors' generalized allegations did not specify how the applicant's shield building AMPs were deficient.⁴⁰ Lastly, the Board found Contention 6 did not raise a material issue as Intervenors merely asserted that the applicant's shield building AMPs were deficient, and did "not indicate what portion of the License Renewal Application is inadequate or what specifically is wrong with the analysis."⁴¹

³⁶ Licensing Board Memorandum and Order (Denying Intervenors' Motion for Admission of Contention No. 6 on Shield Building Concrete Void, Cracking and Broken Rebar Problems) at 9 (July 25, 2014) (unpublished).

³⁷ Id. at 11–12.

³⁸ Id. at 12.

³⁹ See id. at 11–12.

⁴⁰ See id. at 13. The Board also noted that Intervenors' failure to "specifically challenge the adequacy of the Shield Building Monitoring AMP in Contention 5" also led to the denial of Intervenors' Motion to Admit Contention 5. Id. at 13–14.

⁴¹ See id. at 15.

The Board also emphasized that Intervenors were seeking admission of Contention 6 in advance of FENOC's future filings and actions, noting: "Intervenors claim that they 'seek to litigate the adequacy of FENOC's anticipated modifications to Davis-Besse's Shield Building Monitoring Program and the Structures Monitoring AMPs."⁴² The Board thus rejected Contention 6 in part because it was premature.⁴³

II. Summary of Contention 7

Intervenors filed Contention 7 on September 2, 2014 and amended it on September 8, 2014. Contention 7, as amended, states:

FENOC's revisions to the AMPs in its Shield Building Monitoring Program, dated July 3, 2014, acknowledge not only the risk, but the reality, of aging-related cracking propagation – that is, worsening – in the already severely cracked Shield Building, an admission which brings the issue within the scope of this License Renewal Application proceeding. FENOC's proposed modifications to its Shield Building Monitoring Program AMPs, regarding the scope (areas of the Shield Building to be examined), sample size (number of tests to be performed), and the frequency of its surveillance activities, are woefully inadequate. Significantly more core bores, as well as a broader diversity of complementary testing methods should be required, and at a much greater frequency than FENOC has proposed. The cracking phenomena must be identified, analyzed and addressed within the Final Supplemental Environmental Impact Statement for the license renewal both in the consideration of alternatives to granting the 20-year license extension for Davis-Besse as well as in the Severe Accident Mitigation Alternatives analysis (SAMA). The cracking problems do not support a conclusion that there is "reasonable assurance" that Davis-Besse can be operated in a manner protective of the public health and safety under the Atomic Energy Act during the 20-year proposed license extension period.^[44]

Intervenors allege that Contention 7, the third cracking-based contention filed in this proceeding, is founded upon the "belated emergence and admission" by FENOC that there is undetected cracking in the Davis-Besse shield building and that the cracks detected in September 2013 are propagating throughout the structure.⁴⁵ Intervenors contend that new information provided by FENOC renders insufficient "FENOC's anticipated modifications to

⁴² Id. at 16 (quoting Motion to Admit Contention 6 at 2).

⁴³ Id.

⁴⁴ Motion to Amend Contention 7 at 2 (emphasis removed; footnote omitted).

Davis-Besse's Shield Building Monitoring Program and the Structures Monitoring Program Aging Management Plans ('AMPs')."⁴⁶

Intervenors cite to a "Full Apparent Cause Evaluation" report (FACE Report),⁴⁷ published by Performance Improvement International, LLC, which evaluates the cracking discovered in September 2013⁴⁸ and identifies its root cause.⁴⁹ The FACE Report concludes that a phenomenon called "Ice-Wedging," is responsible.⁵⁰ According to the FACE Report, ice-wedging does not create new cracks in the shield building, but instead causes the existing laminar cracks to propagate.⁵¹ "Ice-Wedging occurs when water accumulates in a cracked section of concrete and expands by a volume of 9% upon freezing. The force exerted by the Ice-Wedge on the adjacent concrete faces causes existing cracks to propagate."⁵² The FACE Report notes that a coating applied to the shield building in 2012 has trapped water inside the

⁴⁵ Motion to Admit Contention 7 at 2, 9.

⁴⁶ Id. at 2.

⁴⁷ Motion to Amend Contention 7 at 4 (citing Full Apparent Cause Evaluation, Shield Building Laminar Crack Propagation Condition Report 2013-14097 (Sept. 11, 2013) (ADAMS Accession No. ML14189A452)).

⁴⁸ The FENOC 2013 Preliminary Notification of Occurrence indicates that the cracking that is the subject of the instant contention was first identified on August 26, 2013, but analyzed and reported to the NRC in September. The parties however refer to the cracks as discovered in September or "August/September." See Motion to Admit Contention 7 at 3; FENOC Answer at 7; NRC Staff Answer at 7. For simplicity, the Board refers to the cracks as having being discovered in September 2013.

⁴⁹ FACE Report at 4.

⁵⁰ Id.

⁵¹ Id. at 4–5.

⁵² Id. at 71.

building, contributing to ice-wedging.⁵³ The FACE Report became publicly available on the NRC's Agencywide Documents Access and Management System (ADAMS) on July 8, 2014.⁵⁴

Intervenors also cite to a July 3, 2014 letter from FENOC.⁵⁵ On April 15, 2014 the NRC Staff sent a request for additional information (RAI) asking FENOC to “[e]xplain, with sufficient technical detail, any modifications or enhancements that will be made to the Shield Building Monitoring Program; the Structures Monitoring Program; or other applicable AMP” to account for the cracking identified in September 2013.⁵⁶ FENOC's July 3, 2014 letter replied to this RAI stating that FENOC issued Amendment No. 51 to the Davis-Besse LRA in response to the NRC Staff's concerns, and to preemptively address the ice-wedging issue.⁵⁷

LRA Amendment No. 51 modified the shield building AMP. It increased the number of core bores inspected per cycle, increased the frequency of inspections, and updated the method by which core bores were located around the shield building. Specifically, the amendment increased the number of core bores to be inspected each cycle from twenty to twenty-three.⁵⁸ It changed the inspection interval from a biennial cycle to an annual cycle for the first four years, and from a five-year cycle to a biennial cycle through 2026.⁵⁹ After 2026, inspections could be reduced to once every four years provided no aging effects were identified.⁶⁰ The amended LRA now sets aside ten of the twenty-three bore holes to monitor

⁵³ Id. at 4.

⁵⁴ See Letter from Timothy P. Matthews, Counsel for FENOC, to the Davis-Besse Atomic Safety and Licensing Board, Regarding Notification of Documents Related to the Davis-Besse Shield Building, Enclosure 2 (July 8, 2014).

⁵⁵ Reply to Request for Additional Information for the Review of the Davis-Besse Nuclear Power Station, Unit No. 1, License Renewal Application and License Renewal Application Amendment No. 51 (July 3, 2014) (ADAMS Accession No. ML14184B184) [hereinafter FENOC July 3 RAI Reply Letter].

⁵⁶ NRC April 15 RAI at 2. The RAI also asked about the broken rebar detected in February 2014. Id.

⁵⁷ See FENOC July 3 RAI Reply Letter at 2–4; see also Amendment No. 51 to the Davis-Besse License Renewal Application [hereinafter LRA Amendment No. 51].

specifically for ice-wedging-induced crack propagation.⁶¹ The amended LRA also states that “past evidence of crack propagation will be considered in choosing future inspection locations.”⁶²

Although this Board has addressed the cracking concerns at Davis-Besse in prior orders, Intervenors contend that Contention 7 is based on the new information made public on July 3 and July 8, 2014.⁶³ Intervenors allege that these FENOC submissions have “exposed the distinct change of position of FENOC.”⁶⁴ According to Intervenors, as a result of these documents:

Applicant now concedes that significant mistakes were made in remediation and in understanding the implications of the cracking phenomena which were first noticed in 2011. FENOC’s latest, “ice-wedging” cracking propagation root cause is an admission that the Shield Building cracking is aging-related, which brings it within the scope of this LRA proceeding. FENOC acknowledged worsening cracking in August-September 2013; on July 8, 2014, FENOC provided, at long last, the supposed root cause of this worsening, or “propagating,” cracking – ice-wedging, per PII’s 9/11/13 RCA-2 [FACE Report].⁶⁵

Intervenors also maintain that propagation of already-existing cracks threatens to expose the shield building rebar to corrosive water conditions, which will lead to failure of the rebar.⁶⁶

⁵⁸ LRA Amendment No. 51 at 1.

⁵⁹ Id. at 4.

⁶⁰ Id.

⁶¹ Id. at 3 (stating that a “minimum of 10 of the core bores at inspection locations are currently uncracked [but] adjacent to areas of known cracking” (emphasis removed)).

⁶² Id. at 4 (emphasis removed).

⁶³ Motion to Amend Contention 7 at 3, 15.

⁶⁴ Id. at 3.

⁶⁵ Id.

⁶⁶ Motion to Supplement Contention 7 at 7–8, 12–13.

Intervenors' Contention 7 claims that three parts of FENOC's amended LRA are inadequate: (1) the shield building-specific AMP; (2) the discussion of alternatives to license renewal in the draft supplemental environmental impact statement (DSEIS); and (3) the SAMA analysis in the DSEIS.⁶⁷ Intervenors maintain that to protect public health and safety, FENOC must amend the shield building AMP to increase the number of core bores sampled per inspection, the diversity of placement of those core bores, the frequency of inspections, and the types of testing methods to be employed per inspection.⁶⁸

III. Legal Standards

a. General Admissibility Requirements

Contentions must meet the admissibility criteria in 10 C.F.R. § 2.309(f)(1). Each contention must: (1) provide a specific statement of the issue of law or fact to be raised; (2) provide a brief explanation of the basis for the contention; (3) demonstrate that the issue raised in the contention is within the scope of the proceeding; (4) demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the licensing action; (5) provide a concise statement of the alleged facts or expert opinions in support of the petitioner's position on the issue and on which the petitioner intends to rely at hearing; and (6) provide sufficient information to show that a genuine dispute exists with the

⁶⁷ See Motion to Amend Contention 7 at 2. A SAMA Analysis is conducted pursuant to NEPA, and thus is an environmental issue, not a safety issue. Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-12-15, 75 NRC 704, 706 (2012) ("The SAMA analysis is not part of the agency's safety review for license renewal under the Atomic Energy Act (AEA), but is instead a mitigation alternatives analysis conducted pursuant to the National Environmental Policy Act (NEPA).").

⁶⁸ Motion to Admit Contention 7 at 21–23. During oral argument, Intervenors further clarified that they are trying to obtain a thorough investigation from FENOC of cracking issues for the Davis-Besse shield building. Tr. at 892, 909. According to Intervenors, "[FENOC] has a wait-and-see approach without understanding clearly, after three years, the scope of the [cracking] problem." Tr. at 839.

applicant/licensee on a material issue of law or fact, with reference to specific disputed portions of the application.⁶⁹ A failure to meet any of these criteria renders the contention inadmissible.

b. Timeliness of New or Amended Contentions

Once the deadline for filing petitions to intervene has passed, which in this proceeding was December 27, 2010,⁷⁰ a party may file new or amended contentions if it is able to demonstrate “good cause.”⁷¹ Good cause for a newly proposed contention exists when:

- (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.^[72]

⁶⁹ 10 C.F.R. § 2.309(f)(1)(i)–(vi).

⁷⁰ See Notice of Acceptance for Docketing of the Application, Notice of Opportunity for Hearing for Facility Operating License No. NPF-003 for an Additional 20-Year Period; FirstEnergy Nuclear Operating Company, Davis-Besse Nuclear Power Station, Unit 1, 75 Fed. Reg. 65,528 (Oct. 25, 2010); see also 10 C.F.R. § 2.309(b) (establishing deadlines for the filing of petitions to intervene).

⁷¹ See 10 C.F.R. § 2.309(c)(1) (2014). Prior to September 4, 2012, intervenors could submit new or amended contentions after the filing deadline by meeting the requirements of 10 C.F.R. § 2.309(f)(2)(i)–(iii) (2012), as discussed in the Board’s prior orders and Initial Scheduling Order. See Licensing Board Initial Scheduling Order at 12 (July 15, 2011) (unpublished) [hereinafter Initial Scheduling Order]; see also LBP-12-27, 76 NRC at 592–93. On September 4, 2012, this option under 10 C.F.R. § 2.309(f)(2) was rescinded. See 77 Fed. Reg. 46,562, 46,571, 46,582 (Aug. 3, 2012). Under the currently effective regulations, new or amended contentions proposed after the initial filing deadline can only be admitted if they meet the three requirements specified in 10 C.F.R. § 2.309(c)(1) which determine if an intervenor has “good cause” for a motion made after the intervention petition filing deadline. 10 C.F.R. § 2.309(c)(1) (“Hearing requests, intervention petitions, and motions for leave to file new or amended contentions filed after the [petition filing] deadline in paragraph (b) of this section will not be entertained absent a determination by the presiding officer that a participant has demonstrated good cause . . .”).

⁷² 10 C.F.R. § 2.309(c)(1)(i)–(iii). The requirements for demonstrating “good cause” under 10 C.F.R. § 2.309(c)(1)(i)–(iii) are the same as the requirements for filing late contentions previously available under 10 C.F.R. § 2.309(f)(2)(i)–(iii). Therefore, despite the change in the rules, it appears in general that contentions proposed after the filing deadline, which would have been

Pursuant to the Board's Initial Scheduling Order, a new or amended contention is considered timely under 10 C.F.R. § 2.309(c)(1)(iii) "if it is filed within sixty (60) days of the date when the material information first becomes available to the moving party through service, publication, or any other means."⁷³

The Board's Initial Scheduling Order sets the requirements for admission of new or amended contentions. The Initial Scheduling Order was issued before the September 4, 2012 amendment of 10 C.F.R. § 2.309.⁷⁴ The Commission has stated, however, that "the new or amended requirements will be effective and govern all obligations and disputes that arise after the effective date of the final rule [September 4, 2012]," even for adjudicatory proceedings

allowable under the previous 10 C.F.R. § 2.309(f)(2) requirements, will also be allowable under the current 10 C.F.R. § 2.309(c)(1) requirements. See also 77 Fed. Reg. at 46,566 ("The NRC is adopting this change because it will allow participants in NRC proceedings to focus on the most relevant question with regard to whether a filing after the deadline will be granted— whether the filing has demonstrated good cause by meeting the three factors from current § 2.309(f)(2).").

⁷³ Initial Scheduling Order at 12 (citing 10 C.F.R. § 2.309(f)(2)(iii) (2011)). Before September 4, 2012, 10 C.F.R. § 2.309(c)(1) contained an eight-factor test, which, if met, allowed a Board to consider new or amended contentions that did not meet the three requirements for admissibility of late-filed contentions available under 10 C.F.R. § 2.309(f)(2). See 10 C.F.R. § 2.309(c)(1)(i)–(viii) (2012); see also LBP-12-27, 76 NRC at 593 (noting that most important among these eight factors was that the intervenors demonstrate "good cause" (citing as example Dominion Nuclear Conn., Inc. (Millstone Power Station, Unit 3), CLI-09-5, 69 NRC 115, 125–26 (2009))). It appears that after September 3, 2012, this alternative option no longer exists, and new or amended contentions proposed after the filing deadline must meet the three requirements specified under the currently effective 10 C.F.R. § 2.309(c)(1), unless an extension is granted. See 77 Fed. Reg. at 46,572 ("Final § 2.309(c) requires all filings after the deadline in § 2.309(b) to satisfy the current § 2.309(f)(2)(i)–(iii) factors.").

The Commission has suggested that if an intervenor cannot meet the requirements for filing a contention under the new 10 C.F.R. § 2.309(c)(1), he or she can still take advantage of an extension request under 10 C.F.R. § 2.307 "if unanticipated events, such as a weather event or unexpected health issues, prevented the participant from filing for a reasonable period of time after the deadline." See 77 Fed. Reg. at 46,571–72 ("The revisions to § 2.309 do not affect participants' ability to request modifications to deadlines under § 2.307."). The Commission has added "that 'good cause' in § 2.307 does not share the same definition that is used for 'good cause' in final § 2.309(c)." Id.

⁷⁴ Motion to Admit Contention 7 at 8–9; FENOC Answer at 19, 51–52; NRC Staff Answer at 12–13, 27.

opened prior to that date.⁷⁵ As Intervenors' Motion to Admit Contention 7 was brought on September 2, 2014, significantly after the date of amendment of 10 C.F.R. § 2.309, the Board applies the rules currently in effect.⁷⁶ Nonetheless, as noted by FENOC, the timeliness "requirements under the former and amended rules are generally the same" as applied to Intervenors' instant motion.⁷⁷

IV. Analysis and Ruling

This Memorandum and Order first addresses the timeliness of Contention 7, and then whether it meets the NRC's contention admissibility requirements. The Board's analysis regarding admissibility focuses on whether Contention 7 presents a genuine dispute with the Davis-Besse LRA, as well as the sufficiency of the facts alleged by Intervenors in their pleadings.

a. Contention 7, as Amended, Is Timely

FENOC asserts that Contention 7, as amended,⁷⁸ is not timely because the shield building AMP had already been modified to address "cracking, change of material properties and loss of material of concrete," before the July 3, 2014 revision to the LRA.⁷⁹ According to

⁷⁵ 77 Fed. Reg. at 46,562. The Commission explained, for example, that "if a Board issues a scheduling order before the effective date of the final rule that incorporates § 2.336(d), which currently requires parties to update their disclosures every 14 days, that obligation would change to every month on a day specified by the Board (unless the parties agree otherwise) once the effective date of the rule is reached." Id.

⁷⁶ The Board issued a Notice on August 22, 2012, shortly after the promulgation of the amendments to 10 C.F.R. § 2.309, stating that the amended regulations "take effect on September 4, 2012, and apply to 'obligations and disputes that arise after' that date." Licensing Board Notice (Advising Parties of Amendments to 10 C.F.R. Part 2) at 1 (Aug. 22, 2012) (unpublished). The Board's statement that "[t]he Initial Scheduling Order (ISO) will continue to govern the conduct of this proceeding" was meant to clarify the high-level schedule of this adjudicatory proceeding, and not speak to this specific issue. See id. at 2.

⁷⁷ FENOC Answer at 18.

⁷⁸ FENOC and the NRC Staff both refer to Contention 7 as it is presented in the September 8, 2014 Motion to Amend Contention 7.

⁷⁹ Id. at 52 (quoting Amendment No. 36 to the Davis-Besse LRA at 4-11 (Nov. 20, 2012)).

FENOC, Intervenor's Contention 7 thus mirrors a contention rejected by the Commission in Oyster Creek, in which "the Commission affirmed the licensing board's rejection of attempts by the petitioners to challenge aspects of an AMP that they could have challenged earlier."⁸⁰

The NRC Staff expands upon FENOC's Oyster Creek argument and quotes from the decision: "if – as [Intervenors] allege – [Applicant's] *enhanced* monitoring program is inadequate, then [Applicant's] *unenanced* monitoring program embodied in its [license renewal application] was *a fortiori* inadequate, and [Intervenors] had a regulatory obligation to challenge it in their original Petition [t]o Intervene."⁸¹ Relying on Oyster Creek, the NRC Staff argues that because Intervenor did not challenge the Shield Building Monitoring AMP before the recent amendment, increasing the scope and number of bore holes and frequency of testing, they cannot bring a timely contention on the same issues now.⁸²

Intervenors reply that the coating of the shield building, and its impact on the cracking of the structure due to ice-wedging, is new, material information.⁸³ They emphasize that the FACE Report discloses previously unknown causes and "clearly identifies the Shield Building cracking as aging-related," a new and different finding by FENOC.⁸⁴ Intervenor also note that the FACE Report was published in September 2013, but only made public in July 2014: "This four-year-old LRA adjudication is near its close, and it is oddly coincidental that two significant Shield Building

⁸⁰ Id. at 53 (citing Amergen Energy Co. (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235 (2009), petition for review denied sub nom., N.J. Env'tl. Fed'n v. NRC, 645 F.3d 220 (3rd. Cir. 2011)).

⁸¹ NRC Staff Answer at 24 (emphases and modifications in original) (quoting Oyster Creek, CLI-09-7, 69 NRC at 274).

⁸² Id. at 24–25.

⁸³ Intervenor's Reply at 2.

⁸⁴ Id.

discoveries were not divulged to the public, particularly in light of Beyond Nuclear's standing [Freedom of Information Act] request for information to the NRC Staff which dates to 2012."⁸⁵

FENOC's and the NRC Staff's reliance on Oyster Creek is misplaced. In Oyster Creek, the intervenors opposed the renewal of the Oyster Creek nuclear power plant license, and proposed new contentions for increased ultrasonic testing of sand bed epoxy coating integrity.⁸⁶ The intervenors brought their contentions after an enhancement was made to the LRA by the applicant adding limited ultrasonic testing in lieu of visual testing; Intervenor maintained that the ultrasonic testing plan proposed was too limited in scale.⁸⁷ It appears that the decision to add the ultrasonic testing was not in response to the discovery of a new safety or environmental concern: "The ultrasonic testing commitments AmerGen made in April and June of 2006 did not alter the acceptance criteria themselves."⁸⁸

The Oyster Creek Licensing Board noted that "as a matter of policy, an applicant's decision to improve an existing program to promote health and safety or to boost public support and confidence ought not ordinarily be viewed as conferring petitioners with an automatic opportunity to advance a new contention."⁸⁹ As a result, the Board stated, and the Commission affirmed, the rule that:

[A]s a matter of law and logic, if -- as Citizens [intervenors] allege -- AmerGen's *enhanced* monitoring program is inadequate, then AmerGen's *unenanced* monitoring program embodied in its [license renewal application] was *a fortiori* inadequate, and Citizens had a regulatory obligation to challenge it in their original Petition [t]o Intervene.⁹⁰

⁸⁵ Id. at 2–3.

⁸⁶ Amergen Energy Co. (Oyster Creek Nuclear Generating Station), LBP-07-17, 64 NRC 229, 231–32, 245–46 (2007), aff'd, CLI-09-7, 69 NRC 235 (2009).

⁸⁷ See id. at 233.

⁸⁸ Oyster Creek, CLI-09-7, 69 NRC at 272; see also Oyster Creek, LBP-07-17, 64 NRC at 231–33 (discussing the background of the case).

⁸⁹ Oyster Creek, LBP-07-17, 64 NRC at 246.

⁹⁰ Oyster Creek, CLI-09-7, 69 NRC at 274 (emphases and modifications in original).

The critical difference in this case, however, is the reason FENOC enhanced its LRA. FENOC amended the LRA in response to the 2013 discovery of a new cracking issue, ice-wedging, which causes age-related crack propagation in a manner previously unplanned for by FENOC. It appears that concerns about “freeze-thaw” damage as a potential driver of microcrack *creation*,⁹¹ were known and considered in the FENOC LRA before 2013. However, the FACE Report makes clear that “Ice-Wedging” is a different cracking phenomenon, which *propagates* already-existing laminar cracks, and which could not have been considered by FENOC beforehand.⁹² The FACE Report states multiple times that “[t]he failure mechanism of Ice-Wedging was unknown in the concrete community at the time” of the coating of the shield

⁹¹ See, e.g., Davis-Besse Nuclear Power Station – Inspection to Evaluate the Root Cause Evaluation and Corrective Actions for Cracking in the Reinforced Concrete Shield Building of the Containment System, Report No. 0500346/2012009(DRS) at 9 (June 21, 2012) (ADAMS Accession No. ML12173A023) [hereinafter NRC 2012 Inspection Report]; Tr. at 776–79 (discussing microcracking due to freeze-thaw conditions).

⁹² As noted above, the FACE Report defines ice-wedging as “when water accumulates in a cracked section of concrete and expands by a volume of 9% upon freezing. The force exerted by the Ice-Wedge on the adjacent concrete faces causes existing cracks to propagate.” FACE Report at 71. However, “Freeze-Thaw Damage” is a separate phenomenon, which can create “internal microcracking” in conditions of freezing temperatures and high humidity. See FACE Report at 69 (“The presence of high relative humidity, 90-100% as measured in the first 8 inches of the outer most layer, in combination with Freeze-Thaw temperature exposure will result in internal microcracking.”) (emphasis removed). The FACE Report notes that “freeze-thaw damage does not necessarily indicate Ice-Wedging (as no pre-existing cracks are needed for this phenomenon [freeze-thaw damage]).” FACE Report at 41. FENOC at oral argument also explained:

We did treat ice wedging as its own mechanism separate [sic]. . . . ice wedging is a very specific mechanism where you do have this pre-existing laminar crack And freeze/thaw refers to other things as well or refers to mechanisms such as the micro-cracking we talked about earlier. It’s a different mechanism, but they’re related as they’re both dealing with water that’s freezing in the concrete.

Tr. at 875.

building in 2012, and until its discovery in 2013.⁹³ Intervenors were not aware of this until LRA Amendment No. 51 and the FACE Report were made publicly available July 2014.

Intervenors' Contention 7 concerns primarily this new ice-wedging phenomenon, as well as the related concern that water trapped in the shield building could aggravate this concern.⁹⁴ Intervenors state, for example, that "FENOC's latest, 'ice-wedging' cracking propagation root cause is an admission that the Shield Building cracking is aging-related"⁹⁵ The Board reads Intervenors' pleadings as alleging that FENOC's LRA inadequately addresses this new aging-related concern. Oyster Creek cannot be read so broadly as to exclude contentions that are founded upon genuinely new safety concerns. Oyster Creek instead stands for the more limited proposition that enhancements to a LRA or EIS, not made in the presence of a newly discovered safety or environmental concern, generally cannot be grounds for a new contention. However, if a newly discovered safety or environmental concern presents itself, an intervenor can file a new contention alleging that the LRA or EIS does not adequately address the new concern. Furthermore, preemptive amendment of an LRA or EIS in response to a new discovery, such as FENOC's preemptive amendment of the Davis-Besse LRA after the discovery of ice-wedging, does not insulate the LRA or EIS from public oversight.

b. Intervenors' Motion to Supplement Contention 7 Is Not Based on New and Material Information and is Therefore Untimely

Although FENOC and the NRC Staff have not been afforded an opportunity to reply to Intervenors' December 30, 2014 Motion to Supplement Contention 7 concerning rebar corrosion, the Board addresses the motion at this time. Intervenors claim their motion is timely because it relies on new and material information from FENOC's October 28 reply to a NRC

⁹³ FACE Report at 66; see also id. at 44, 59, 61, 62, 64 (also explaining that ice-wedging was unknown at the time of the 2012 coating of the shield building).

⁹⁴ Motion to Amend Contention 7 at 4.

⁹⁵ Id. at 3.

Staff RAI, in which FENOC discusses its strategy to “conduct opportunistic inspections of the rebar” for corrosion.⁹⁶ However, FENOC’s brief, one-page discussion in the October 28 letter does not add any new information. The letter instead merely repeats what was already explained in past public filings: that FENOC plans to pursue opportunistic testing of the rebar to detect corrosion,⁹⁷ and that although the groundwater may be corrosive to rebar,⁹⁸ the water detected in the shield building itself is high-pH and not conducive to corrosion.⁹⁹ Because there is no new or materially different information in FENOC’s October 28 reply to the NRC Staff RAI, Intervenor’s motion to supplement and amend Contention 7 is denied.

c. Contention 7 Does Not Raise a Genuine Dispute with the Davis-Besse LRA

Intervenor’s Contention 7 contains both safety and environmental components. Regarding the safety-related portion of Contention 7, Intervenor maintains that “[t]here is a dispute over whether Davis-Besse conforms to its current licensing basis (CLB) merely by providing a slightly more engaged monitoring program.”¹⁰⁰ They add that “[p]art of that dispute is how and why FENOC intends principally to take samples from areas where there already are known cracks, as opposed to sampling from a more dispersed set of locations on the Shield Building exterior.”¹⁰¹ Intervenor also contends that the parties disagree regarding “[t]he scope of

⁹⁶ Motion to Supplement Contention 7 at 6, 22; FENOC Reply to Request for Additional Information for the Review of the Davis-Besse Nuclear Power Station, Unit No. 1, License Renewal Application at 2–4 (Oct. 28, 2014) [hereinafter FENOC October 28 RAI Reply Letter]. Oddly, Intervenor purport to supplement Contention 7 to include rebar corrosion concerns, yet the motion never proposed to alter the text of the contention itself to mention either rebar or corrosion.

⁹⁷ See FENOC July 3 RAI Reply Letter at 3; LRA Amendment No. 51 at 5–6.

⁹⁸ LRA § 3.5.2.2.1.1.

⁹⁹ FACE Report at 18, 22.

¹⁰⁰ Motion to Amend Contention 7 at 24.

¹⁰¹ Id.

causation of the water saturation within the Shield Building.”¹⁰² Intervenor believe their safety concerns are material because “[t]he severe, and finally-admitted increased cracking of the Shield Building threatens to fail the Shield Building from performing its vital design safety and environmental functions,”¹⁰³ including as a biological, radiological, and environmental shield.¹⁰⁴

Regarding the environmental portion of Contention 7, Intervenor maintain that FENOC and the NRC Staff have not taken the “hard look” required by NEPA, and also have failed to modify the SAMA analysis in light of new information.¹⁰⁵ Intervenor claim their environmental concerns are material because the current SAMA and alternatives analyses in the DSEIS are unreasonable and unrealistic.¹⁰⁶

Intervenor primarily rely on the FACE Report for factual support. They also allege that FENOC’s increase in the number of bore holes from twenty to twenty-three is statistically insignificant.¹⁰⁷ Intervenor add that “there are multiple kinds of cracking, located at diverse places across the huge Shield Building . . . including sub-surface laminar cracking, surface cracking, dome cracking, micro-cracking, and radial cracking.”¹⁰⁸ Furthermore, Intervenor assert that FENOC’s current inspection tools are inadequate and that its reliance on past cracking to determine future inspection locations will miss future cracks.¹⁰⁹

FENOC responds that “Intervenor do not proffer any independent technical basis, nor even a mere fact-based argument in support of Contention 7’s admissibility. Rather, they simply

¹⁰² Id.

¹⁰³ Id. at 23.

¹⁰⁴ Id.; Motion to Admit Contention 7 at 15.

¹⁰⁵ Motion to Amend Contention 7 at 24.

¹⁰⁶ See id. at 23.

¹⁰⁷ Motion to Admit Contention 7 at 21–22; Tr. at 839.

¹⁰⁸ Motion to Admit Contention 7 at 24.

¹⁰⁹ Id. at 21–22.

state that they want more of what FENOC already has incorporated into its Shield Building AMP (e.g., more core bores, more frequently, and in more areas).¹¹⁰ FENOC also argues that Intervenors fail to provide an explanation for why FENOC's analysis and approach in the AMP is materially incorrect, even if Intervenors would prefer something different.¹¹¹

The NRC Staff similarly argues that Intervenors' Contention 7 is comprised of unsupported assertions that lack any factual basis or supporting expert opinion.¹¹² According to the NRC Staff, Intervenors merely claim that the AMP is deficient and that other tests "can and should" be done, but provide no explanation for why other testing methods would be more appropriate.¹¹³ The NRC Staff also asserts that Intervenors' suggested additions to the DSEIS and SAMA analysis are immaterial and do not impact the reasonableness of the current analyses.¹¹⁴

Intervenors reply that "[a] commitment to develop a program - and FENOC has only a plan to have a plan by the time the 20-year extension begins - does not demonstrate that the effects of aging will be adequately managed."¹¹⁵ Quoting from a decision of the Pilgrim Licensing Board, Intervenors also argue that the factual support required to support their contention is less than FENOC and the NRC Staff suggest: "The admissibility requirement 'generally is fulfilled when the sponsor of an otherwise acceptable contention provides a brief

¹¹⁰ FENOC Answer at 24.

¹¹¹ Id. at 50.

¹¹² See NRC Staff Answer at 33–34, 42–46.

¹¹³ Id. at 46–47.

¹¹⁴ Id. at 53–55. The NRC Staff further argues that "Intervenors do not indicate why this SAMA analysis deficient." Id. at 51.

¹¹⁵ Intervenors' Reply at 15 (citing Entergy Nuclear Operations, Inc. (Indian Point Nuclear Generating Units 2 & 3), LBP-08-13, 68 NRC 43, 86, aff'd, CLI-08-23, 68 NRC 655 (2008)).

recitation of the factors underlying the contention or references to documents and texts that provide such reasons.”¹¹⁶

To raise a genuine dispute on a material issue of law or fact, a properly formulated contention must challenge specific portions of, or alleged omissions from, the applicant’s application or the agency’s EIS, and provide reasons in support.¹¹⁷ Any contention that fails to directly controvert the application or EIS, or mistakenly asserts the application does not address a relevant issue, will be dismissed.¹¹⁸

The crux of the “genuine dispute” prong under 10 C.F.R. § 2.309(f)(1)(vi) is the requirement for specificity: a contention must have more than general allegations. Rather, it must explain “what” specific deficiencies exist and “why” they materially impact the LRA or EIS.¹¹⁹ The Commission has stated that “[p]etitioners seeking to litigate contentions must do more than attach a list of RAIs and declare an application ‘incomplete.’ It is their job to review the application and to identify what deficiencies exist and to explain why the deficiencies raise material safety concerns.”¹²⁰ A Licensing Board has similarly stated: “When an application is alleged to be deficient, the petitioner must identify the deficiencies [the what] and provide supporting reasons for its position that such information is required [the why].”¹²¹

¹¹⁶ Id. at 19 (quoting Entergy Nuclear Generation Co., et al. (Pilgrim Nuclear Power Station), LBP-06-23, 64 NRC 257, 356 (2006)).

¹¹⁷ See 10 C.F.R. § 2.309(f)(1)(vi); see also Duke Energy Corp. (Catawba Nuclear Station, Units 1 and 2), LBP-04-10, 59 NRC 296, 309 (2004) (A contention presenting a genuine dispute on a material issue should either reference “the specific portions of the application” in dispute or identify the omissions in the application, as well as provide supporting reasons.).

¹¹⁸ See Crow Butte Res., Inc. (N. Trend Expansion Project), CLI-09-12, 69 NRC 535, 557 (2009); USEC, Inc. (Am. Centrifuge Plant), CLI-06-10, 63 NRC 451, 462–63 (2006).

¹¹⁹ See Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 337 (1999).

¹²⁰ Id.

¹²¹ Detroit Edison Co. (Fermi Nuclear Power Plant, Unit 3), LBP-09-16, 70 NRC 227, 267, aff’d, CLI-09-22, 70 NRC 932 (2009). The Commission has also held that the genuine dispute prong

Moreover, in explaining why there is a genuine material dispute, the contention must give the Board a “reason to believe” that the alleged deficiency will lead to a material safety or environmental outcome, based on “factual or expert support.”¹²² The genuine dispute prong has its origin with amendments to the NRC rules in 1989 designed “to prevent the admission of contentions ‘based on little more than speculation.’ The agency deliberately ‘rais[ed] the admission standards for contentions . . . to obviate serious hearing delays caused in the past by poorly defined or [poorly] supported contentions.”¹²³

Because of the need to provide specific support for a contention in order to raise a genuine dispute, the genuine dispute admissibility requirement is sometimes discussed together with the requirement for petitioners and intervenors to provide alleged factual or expert support for their allegations under 10 C.F.R. § 2.309(f)(1)(v). A Licensing Board has stated that “a petitioner that fails to provide sufficient factual or expert support for the claims in its contention in contravention of section 2.309(f)(1)(v), also may have failed to show a genuine dispute with the application as required under section 2.309(f)(1)(vi).”¹²⁴ As the Commission explained

requires a “nexus” between alleged deficiencies and a material consequence. See Pac. Gas & Elec. Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 436 (2011) (“In short, PG&E asserts that SLOMFP did not offer any support ‘to establish a nexus between management of the design and licensing bases and the issues relevant to Part 54.’ We agree.” (footnote omitted)).

¹²² See Private Fuel Storage, LLC (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 138–39 (2004) (Although the intervenor, Utah contended that contamination from a defective canister and cask could lead to material environmental consequences, the Commission found that “Utah offers no factual or expert support for its attack on [Private Fuel Storage’s] plan. . . . To show a genuine material dispute, Utah’s contention would have to give the Board reason to believe that contamination from a defective canister could find its way outside of the cask.”).

¹²³ NextEra Energy Seabrook, LLC (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 307 (2012) (modifications in original) (quoting Oconee, CLI-99-11, 49 NRC at 334–35; Dominion Nuclear Conn., Inc. (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 219 (2003)), petition for review denied sub nom., Beyond Nuclear v. NRC, 704 F.3d 12 (1st Cir. 2013).

¹²⁴ See In re Union Electric Co. (Callaway Plant, Unit 1), LBP-12-15, 76 NRC 14, 27 (2012) (internal citation omitted) (citing CLI-12-8, 75 NRC at 404–05 (noting that because petitioners

earlier in this proceeding, “contentions shall not be admitted if at the outset they are not described with reasonable specificity or are not supported by “some alleged fact or facts” demonstrating a genuine material dispute.”¹²⁵

To meet the section 2.309(f)(1)(v) requirement for providing factual and expert support, petitioners or intervenors must “proffer at least some minimal factual and legal foundation in support of their contentions.”¹²⁶ It is the petitioner’s obligation to present factual allegations and/or expert opinion necessary to support its contention.¹²⁷ While a Licensing Board may appropriately view a petitioner’s supporting information in a light favorable to the petitioner, the failure to provide such information requires that the contention be rejected.¹²⁸ Neither mere speculation nor bare or conclusory assertions, even by an expert, alleging that a matter should be considered will suffice to allow the admission of a proffered contention.¹²⁹

Moreover, where a petitioner neglects to provide the requisite support for its contentions, it is not within the board’s power to make assumptions or draw inferences that favor the petitioner, nor may the board supply information that is lacking.¹³⁰ Likewise, simply attaching material or documents as a basis for a contention, without setting forth an explanation of that

failed to provide support for their claim, “they also have failed to show a genuine dispute with the application as required under 10 C.F.R. § 2.309(f)(1)(vi)”); see also Seabrook, CLI-12-5, 75 NRC at 335.

¹²⁵ CLI-12-8, 75 NRC at 396 (quoting Oconee, CLI-99-11, 49 NRC at 335 (quoting Final Rule, Rules of Practice for Domestic Licensing Proceedings - Procedural Changes in the Hearing Process, 54 Fed. Reg. 33,168, 33,170 (Aug. 11, 1989))).

¹²⁶ Oconee, CLI-99-11, 49 NRC at 334.

¹²⁷ See 10 C.F.R. § 2.309(f)(1)(v); Am. Centrifuge Plant, CLI-06-10, 63 NRC at 457.

¹²⁸ See Arizona Pub. Serv. Co. (Palo Verde Nuclear Stations, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155 (1991).

¹²⁹ See Am. Centrifuge Plant, CLI-06-10, 63 NRC at 472; Fansteel, Inc. (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003).

¹³⁰ See N. Trend Expansion Project, CLI-09-12, 69 NRC at 553; Palo Verde, CLI-91-12, 34 NRC at 155.

information's significance, is inadequate to support the admission of the contention.¹³¹ On the other hand, "[a]t the contention filing stage the factual support necessary to show that a genuine dispute exists need not be in affidavit or formal evidentiary form and need not be of the quality necessary to withstand a summary disposition motion."¹³²

After a thorough review of the pleadings and the transcript of the oral argument, Intervenor's have not provided sufficient support to demonstrate a genuine dispute with the FENOC application or the DSEIS. To present a genuine dispute, Intervenor's must show a disagreement on a material issue.¹³³ In addition to stating what they disagree with, Intervenor's must also explain, with specific support, why the disagreed upon issue will have a material impact.

Regarding the safety aspect of Intervenor's Contention 7, Intervenor's believe that FENOC's current LRA, even amended to increase the number of core bores and the rate of inspections,¹³⁴ is insufficient to deal with ice-wedging, and could lead to the failure or collapse of the shield building.¹³⁵ Intervenor's concerns represent a potential material issue. As the shield building functions as a radiation and biological shield,¹³⁶ failure or collapse of the shield building due to cracking propagation could lead to health and safety impacts. Intervenor's contention thus concerns a subject matter that could impact the grant or denial of a pending license application.¹³⁷

¹³¹ See Fansteel, CLI-03-13, 58 NRC at 204–05.

¹³² Diablo Canyon, CLI-11-11, 74 NRC at 442 (quoting 54 Fed. Reg. at 33,171).

¹³³ Motion to Amend Contention 7 at 24.

¹³⁴ LRA Amendment No. 51 at 3–4.

¹³⁵ Motion to Admit Contention 7 at 20–21; Motion to Amend Contention 7 at 19–20; Tr. at 804–05.

¹³⁶ LRA § 2.4.1.

¹³⁷ See 10 C.F.R. § 2.309(f)(1)(iv); See Yankee Atomic Electric Co. (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 75-76 (1996), rev'd in part on other grounds, CLI-96-7, 43 NRC

However, in order to raise a genuine dispute with the Davis-Besse LRA, Intervenor must do more than point to issues with the shield building. Their contention must also indicate what is wrong with FENOC's response, its amended inspection program, and "why the petitioner [or intervenor] believes the particular inspection [program] makes the license renewal application unacceptable."¹³⁸ Intervenor do not point to any "recitation of the factors underlying the contention or references to documents and texts"¹³⁹ that give the Board a "reason to believe" the current FENOC inspection program may lead to a material negative impact on public safety, or that an improved program will lead to any positive impact.¹⁴⁰

Reviewing the pleadings in the light most favorable to Intervenor, the Board notes that Intervenor recite few alleged facts in support of their position. Specifically, Intervenor allege that the change in the number of bore holes in the amended LRA is statistically insignificant.¹⁴¹ Intervenor also allege that "there are multiple kinds of cracking, located at diverse places across the huge Shield Building . . . including sub-surface laminar cracking, surface cracking, dome cracking, micro-cracking, and radial cracking."¹⁴² Intervenor add that the presence of water in the shield building will increase the rate of cracking to "0.4 to 0.7 inches" per freeze cycle.¹⁴³ At oral argument, Intervenor noted that the surface area covered by the twenty-three

235 (1996) (noting that a contention alleging a material deficiency must link the claimed deficiency to a public health and safety or an environmental impact). We disagree with the NRC Staff's argument that ice-wedging crack propagation by itself is immaterial because it could not prevent the agency from granting a license renewal. NRC Staff Answer at 35–36. As the NRC Staff noted, "the Staff's aging management review focuses on managing the functionality of" systems, structures, and components, such as the shield building. Intervenor allege the functionality of the shield building is at risk from ice-wedging. Id. at 17.

¹³⁸ Oconee, CLI-99-11, 49 NRC at 341.

¹³⁹ Pilgrim, LBP-06-23, 64 NRC at 356.

¹⁴⁰ Private Fuel Storage, CLI-04-22, 60 NRC at 138–39.

¹⁴¹ Motion to Admit Contention 7 at 20.

¹⁴² Id. at 24.

¹⁴³ Intervenor's Reply at 2.

bore holes is much less than the 280,000 square foot surface area of the shield building.¹⁴⁴

Finally, Intervenors alleged that if more is not done to protect the shield building, continued cracking could eventually lead to the “collapse of a lot of the shield building material down to a thickness of perhaps three or four inches in the inner rebar layer.”¹⁴⁵

These allegations, while serious, do not refer to any deficiencies in the shield building AMP FENOC has proposed to address ice-wedging. As a result, Intervenors’ allegations do not “plausibly” indicate that the shield building would lose its functionality under the proposed AMP.¹⁴⁶ This Board has previously faulted Intervenors for focusing too much on those matters on which they disagree with the FENOC LRA, while neglecting to explain why the FENOC LRA is itself deficient, or what they would suggest in response.¹⁴⁷

At oral argument, FENOC explained that the company chose its inspection cycle based on the American Concrete Institute Report 349.3R.¹⁴⁸ The number and locations of core bores to be inspected are based on structural and weather-related analyses previously made public.¹⁴⁹

¹⁴⁴ Tr. at 834–35.

¹⁴⁵ Id. at 804–05.

¹⁴⁶ Private Fuel Storage, CLI-04-22, 60 NRC at 138 (The Commission noted that “it is still up to Utah to frame a contention plausibly showing that mistakes at a shipper’s site will cause environmental consequences at [Private Fuel Storage’s] site.”).

¹⁴⁷ See LBP-11-13, 73 NRC at 576–77 (Although Intervenors disagreed with FENOC’s SAMA analysis related to “fire hosing and plowing decontamination methods,” derived from the MACCS2 Users Guide, this Board noted that “for their part the Joint Petitioners do not explain how the MACCS2 codes assumption about fire hosing and plowing could have caused FirstEnergy to underestimate the cost of a severe accident. Accordingly, Joint Petitioners’ fire hosing and plowing claims do not dispute the Application.”).

¹⁴⁸ Tr. at 847–48. FENOC explained in its July 3, 2014 letter that its inspection plan “is more stringent than the guidance in American Concrete Institute (ACI) Report ACI 349.3R, ‘Evaluation of Existing Nuclear Safety-Related Concrete Structures’ Chapter 5, Section 5.3.” FENOC July 3 RAI Reply Letter at 3.

¹⁴⁹ Tr. at 849 (citing Reply to Request for Additional Information for the Review of the Davis-Besse Nuclear Power Station, Unit No. 1, License Renewal Application and License Renewal Application Amendment No. 36 at 3–4 (Nov. 20, 2012) (ADAMS Accession No. ML12331A125) (explaining the selection of the initial twenty core bore locations for the shield building inspection

Significantly, Intervenor do not challenge FENOC's analyses. In effect, Intervenor's claims boil down to requests for more testing, more methods of testing, and more information, all of which are sought without explaining why the current program is inadequate. This is not sufficient to create a genuine dispute with the Davis-Besse LRA.¹⁵⁰

Moreover, Intervenor confuse assertions for factual allegations. Intervenor assert that the use of past evidence to determine future inspection locations is an inadequate method to find future cracks.¹⁵¹ Intervenor also assert that the current inspection tools contemplated by the FENOC LRA cannot find the ice-wedging induced cracks, and instead "electronic testing; impact response mapping or impulse response testing" should be used.¹⁵² Yet Intervenor do not refer to any technical document or expert opinion that either supports their position or indicates that FENOC's approach is faulty. As FENOC noted at oral argument, Intervenor "provide one sentence that identifies eight different possible testing mechanisms Why are those better than the impulse response testing that we have done?"¹⁵³ As noted above, bare assertions and mere speculation cannot support an admissible contention.¹⁵⁴ While an admissible contention requires no more than "some minimal factual and legal foundation in

program)); see also FENOC October 28 RAI Reply Letter (discussing how FENOC concluded it was necessary to increase the number of bore holes in the shield building AMP to twenty-three).

¹⁵⁰ See Seabrook, CLI-12-5, 75 NRC at 310–11 (Although the Seabrook intervenors sought improvements to a Seabrook AMP, their contention was deemed inadmissible as it failed to "address the testing plan specified in the AMP, much less explain why it is inadequate."); Oconee, CLI-99-11, 49 NRC at 341.

¹⁵¹ Motion to Amend Contention 7 at 21.

¹⁵² See id. at 19, 27.

¹⁵³ Tr. at 846.

¹⁵⁴ See Am. Centrifuge Plant, CLI-06-10, 63 NRC at 472; Fansteel, CLI-03-13, 58 NRC at 203; Exelon Nuclear Tex. Holdings, LLC (Victoria Cnty. Station Site), LBP-11-16, 73 NRC 645, 667 (2011) ("However, to be admissible, a contention must provide more than a 'bare assertion,' and must explain the supporting reasons for the dispute raised in that contention" (quoting Fansteel, CLI-03-13, 58 NRC at 203)); Fla. Power & Light Co. (Turkey Point Units 6 and 7), LBP-11-6, 73 NRC 149, 253 (2011).

support,”¹⁵⁵ at the same time “the Commission expects that in almost all instances a petitioner must go beyond merely quoting an RAI to justify admission of a contention into the proceeding. . . . This means they must develop a fact-based argument that actually and specifically challenges the application.”¹⁵⁶

Intervenors’ environmental claims also do not raise a genuine dispute with the NRC DSEIS. Looking first to the DSEIS discussion of alternatives, Intervenors emphasize that “[t]here is a dispute over whether the NEPA-required ‘hard look’ at alternatives to a 20-year license extension has been achieved.”¹⁵⁷ However, the pleadings themselves add no detail to these statements, and do not discuss or reference any portion of the DSEIS. Intervenors argue that “‘reasonable consideration of alternatives’ should mean that an accurate economic costing of the replacement of the Shield Building . . . along with other remedial steps, such as replacement of portions of the reinforced concrete walls.”¹⁵⁸ The Commission has clearly stated though that such “[g]eneralized ‘economic cost’ arguments, unsupported by asserted facts or expert opinion, are insufficient to show a genuine dispute with the application.”¹⁵⁹ Intervenors fail to specify what other alternatives to the Davis-Besse LRA should be discussed in the DSEIS, much less show that any “proposed alternative would satisfy the purpose of the applicant’s proposed action.”¹⁶⁰

¹⁵⁵ Oconee, CLI-99-11, 49 NRC at 334.

¹⁵⁶ Id. at 341. Likewise, Intervenors’ concerns about rebar corrosion do not raise a genuine dispute on a safety issue. Although Intervenors disagree with FENOC’s opportunistic inspection strategy for managing rebar corrosion, they merely assert, and do not plausibly explain, how FENOC’s approach will lead to a material safety impact. Private Fuel Storage, CLI-04-22, 60 NRC at 138.

¹⁵⁷ Motion to Amend Contention 7 at 24.

¹⁵⁸ Id. at 22.

¹⁵⁹ Seabrook, CLI-12-5, 75 NRC at 335 n.199.

¹⁶⁰ Id. at 342–43.

Intervenors' request for a more thorough SAMA analysis also is unsupported by alleged facts, and the pleadings do not reference the documents they are challenging as inadequate. We decline to entertain contentions "based on little more than speculation," which represent "negligible knowledge" of the issues being challenged.¹⁶¹ Moreover, in their motions to admit Contention 5, 6, and 7, Intervenors have repeatedly claimed that the cracking in the shield building warrants a modification to the FENOC SAMA analysis.¹⁶² However, such claims cannot present material issues in this case because the Davis-Besse SAMA analysis does not account for the presence of the shield building when analyzing the consequences of a severe accident.¹⁶³

As explained by counsel for FENOC at oral argument, "the vast majority of the SAMA the [sic] analysis assumes that there is no shield building in the release path."¹⁶⁴ FENOC's counsel indicated one caveat, which would not be altered by the presence of small cracks in the shield building walls:

There are some SAMA for interfacing system loss of coolant accidents where you have penetrations through. And so in small-break LOCA [loss of coolant accident] analysis there are some that consider the flow path there, the flow path up through the shield building vent, a very small consideration in the SAMA analysis. But that is the existence of a vent path, not the exterior laminar coating.^[165]

¹⁶¹ Dominion Nuclear Conn., Inc. (Millstone Nuclear Power Station, Unit 3), CLI-08-17, 68 NRC 231, 233 (2008) (quoting Dominion Nuclear Conn., Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358-59 (2001)).

¹⁶² See, e.g., Intervenors' Fifth Motion to Amend or Supplement Proposed Contention No. 5 at 32 (Aug. 16, 2012); Motion to Admit Contention 6 at 9; Motion to Admit Contention 7 at 6.

¹⁶³ See DSEIS § 5.3.

¹⁶⁴ Tr. at 802.

¹⁶⁵ Id.

A review of the DSEIS supports FENOC's statements.¹⁶⁶ For their part, Intervenors fail to reference any specific part of the SAMA analysis, much less demonstrate that it otherwise considers the presence of the shield building during a severe accident. Since the current SAMA analysis assumes no shield building is present for all relevant purposes, analyzing the cracking of the shield building would not materially change the results of the SAMA analysis.

V. Further Analysis of the Long-Term Impacts of Concrete Cracking at the Davis-Besse Shield Building May Be Warranted

This is the third acknowledgement by FENOC of cracking or damage to the Davis-Besse shield building: on October 20, 2011, FENOC reported laminar cracking resulting from the Blizzard of 1978;¹⁶⁷ on September 20, 2013 FENOC reported additional cracking, due to ice-wedging along with microcracking;¹⁶⁸ and on February 19, 2014, FENOC reported the presence of a concrete void and broken rebar in the shield building.¹⁶⁹ Thus, while Intervenors have to date failed to proffer an admissible contention regarding shield building cracking, the Board is concerned that FENOC and the NRC Staff do not fully grasp either the nature of the cracking issues plaguing the shield building, or how the presence of retained water in the building will influence crack propagation in the long term.

For example, at oral argument, the NRC Staff appeared to claim that freeze-thaw and ice-wedging are similar cracking concerns.¹⁷⁰ However, the FACE Report, as well as FENOC's

¹⁶⁶ See DSEIS § 5.3.

¹⁶⁷ Preliminary Notification of Event or Unusual Occurrence (Oct. 20. 2011) (ADAMS Accession No. ML11293A092); see also generally NRC 2012 Inspection Report.

¹⁶⁸ 2013 Preliminary Notification of Occurrence; FACE Report at 15–17.

¹⁶⁹ 2014 Preliminary Notification of Occurrence.

¹⁷⁰ See Tr. at 870–72 (“I look at that as freeze/thaw is a much bigger description that includes the ice wedging phenomena.”).

statements at oral argument, indicate that the two phenomena are distinct.¹⁷¹ Of equal concern to the Board, the NRC Staff also claimed that the ice-wedging cracking phenomenon was addressed pre-2014.¹⁷² The Board, however, could not find any support for that statement. In fact, the FACE Report repeatedly asserts that ice-wedging is a newly discovered cracking phenomenon.¹⁷³ The Board is also concerned that the NRC Staff asserted that the shield building AMP is “agnostic” to different types of cracking phenomena.¹⁷⁴ This seems to be in direct conflict with the fact that the LRA has been specifically amended to focus primarily on crack-propagation due to ice-wedging.¹⁷⁵ It appears to the Board that this potentially leaves large parts of the shield building unchecked based purely on the “presumption” that cracking will not occur elsewhere.¹⁷⁶

Regarding the concern that water trapped in the shield building will dissipate over time, FENOC downplayed this concern by stating that the water will eventually disperse towards the inside unsealed edge and dissipate.¹⁷⁷ However, the FACE Report indicates just the opposite:

The presence of thermal gradient across the concrete ([inner diameter] hotter than [outer diameter]), will tend to drive the moisture to the outer most layer and saturating it in that area. The presence of sealant coating will prevent the driven moisture from leaving the structure and saturate the moisture in the laminar crack zone (within the outer most layer).^[178]

¹⁷¹ FACE Report at 41, 69–71; Tr. at 875 (FENOC counsel indicating that ice-wedging is “a different mechanism” from freeze-thaw, even though both originate from water freezing in concrete).

¹⁷² See Tr. at 784–85, 794 (The NRC Staff asserted that “multiple submittals from 2012 and through these years have indicated that ice wedging aging effects may be identified, including ice wedging, and that ice wedging could affect rebar and coating effectiveness.”).

¹⁷³ See, e.g., FACE Report at 44, 59, 61, 66.

¹⁷⁴ Tr. at 870.

¹⁷⁵ See LRA Amendment No. 51 at 2–3.

¹⁷⁶ Tr. at 863–864, 874.

¹⁷⁷ Id. at 765–66.

¹⁷⁸ FACE Report at 69, 71.

Counsel for FENOC indicated at oral argument that the presence of moisture and freezing temperatures in the outer layer of the shield building can contribute both to microcracking from freeze-thaw and to laminar crack propagation due to ice-wedging.¹⁷⁹ Without hearing evidence, the Board cannot conclude if either presents a significant danger to the shield building—but it certainly appears to be a matter deserving of attention from the NRC Staff and FENOC.

Although Intervenors have not pled the requisite elements to support an admissible contention, the Commission is respectfully encouraged to direct the NRC Staff to investigate¹⁸⁰ the variety of concrete cracking issues currently affecting the Davis-Besse shield building, and report on what effect these issues may or may not have on shield building integrity and function over the term of the renewed license.¹⁸¹ Such an investigation may “put the Commission in [a] position, after receiving the views of the [applicant] if it desired, to assure itself about the significance, or lack thereof,” of the shield building cracking issues raised by Intervenors, “and to direct such follow up proceedings, if any, as it might deem appropriate.”¹⁸² This undertaking can provide a greater assurance of public health and safety than what is currently in the public record, without substantially delaying the license renewal proceeding.

¹⁷⁹ See Tr. at 776–78; see also FACE Report at 43, 69.

¹⁸⁰ Previously, the NRC Staff performed an inspection of the shield building and prepared an inspection report following the initial discovery of laminar cracking in 2012. See NRC 2012 Inspection Report.

¹⁸¹ See Private Fuel Storage, LLC (Independent Spent Fuel Storage Installation), LBP-05-12, 61 NRC 319, 330–31 (2005) (a Licensing Board suggesting to the Commission that it direct the NRC Staff to investigate a safety issue that the Board itself could not reach through the adjudicatory process); see also Fla. Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-91-13, 34 NRC 185, 188 (the Commission commenting that Licensing Boards can refer potentially significant safety issues that cannot be addressed through the adjudicatory process to the NRC Staff for review).

¹⁸² Private Fuel Storage, LBP-05-12, 61 NRC at 331.

VI. Conclusion

For the reasons stated above, Intervenor's Motion to Admit Contention 7 is denied, as it fails to present a genuine dispute, supported by alleged facts, with the Davis-Besse LRA and the NRC Staff DSEIS. At the same time, the Board encourages the Commission to direct the NRC Staff to investigate the long-term effects of the discussed shield building cracking phenomena as it proceeds with the Davis-Besse license renewal.

Intervenor's motion concerning the continued storage of spent nuclear fuel is still outstanding,¹⁸³ although the Commission has indicated it will review the petition and motions.¹⁸⁴ Section 2.311 of the Commission's rules of practice permits an appeal as of right from a Licensing Board's ruling on an intervention petition only in two limited circumstances: (1) upon the denial of a petition to intervene and/or request for hearing, on the question as to whether it should have been granted; and (2) upon the granting of a petition to intervene and/or request for a hearing, on the question as to whether it should have been wholly denied.¹⁸⁵ Recently, in CLI-14-03, the Commission stated that "[t]his limited interlocutory appeal right attaches only when the Board has fully ruled on the initial intervention petition — that is, when it has admitted or rejected all proposed contentions."¹⁸⁶ As the Board has not ruled on all proposed contentions, awaiting further action by the Commission on the remaining continued storage contention, the adjudicatory process remains open. This Memorandum and Order is therefore not ripe for appeal.¹⁸⁷

¹⁸³ See Motion to Admit Contention on Waste Confidence Safety Findings.

¹⁸⁴ Fermi, CLI-14-9, 80 NRC at __ (slip op. at 3).

¹⁸⁵ 10 C.F.R. § 2.311(c), (d)(1).

¹⁸⁶ Tenn. Valley Auth. (Sequoyah Nuclear Plants, Units 1 and 2), CLI-14-03, 79 NRC 31, 36 (2014).

¹⁸⁷ In the Commission's decision in Sequoyah, the Commission concluded that because the Licensing Board had not yet "admitted nor denied [the intervenor's] waste confidence contention," the intervenor's appeal was not ripe for review. Id.

The parties may consider whether significant and novel legal or policy issues exist which would warrant a petition to the Commission for interlocutory review pursuant to 10 C.F.R. § 2.341(f).

It is so ORDERED.

THE ATOMIC SAFETY
AND LICENSING BOARD
/RA/

William J. Froehlich, Chairman
ADMINISTRATIVE JUDGE
/RA/

Nicholas G. Trikouros
ADMINISTRATIVE JUDGE
/RA/

Dr. William E. Kastenber
ADMINISTRATIVE JUDGE

Rockville, Maryland
January 15, 2015

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
)
FIRST ENERGY NUCLEAR OPERATING)
COMPANY) Docket No. 50-346-LR
)
(Davis-Besse Nuclear Power Station, Unit 1))
)

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing **MEMORANDUM AND ORDER LBP-15-1 (Denying Intervenor's Motion to Admit Contention No. 7)** have been served upon the following persons by Electronic Information Exchange.

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Davis-Besse Nuclear Power Station, Docket No. 50-346-LR
**MEMORANDUM AND ORDER LBP-15-1 (Denying Intervenors' Motion
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Dated at Rockville, Maryland
this 15th day of January, 2015