UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of:	)	Docket No. 50-255-LA-4
HOLTEC PALISADES, LLC	)	ASLBP No. 25-988-01-LA-BD01
Palisades Nuclear Plant	)	July 11, 2025

APPLICANT'S ANSWER OPPOSING BEYOND NUCLEAR ET AL.'S PETITION TO INTERVENE AND REQUEST FOR HEARING

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I. Introduction

Pursuant to 10 CFR 2.309(i)(1), Holtec Palisades, LLC ("Applicant" or "Holtec") submits this answer to the Petition to Intervene and Request for Adjudicatory Hearing ("Petition") filed by Beyond Nuclear, Don't Waste Michigan, Michigan Safe Energy Future, Three Mile Island Alert, and Nuclear Energy Information Service ("Petitioners") on June 16, 2025 in the above-captioned proceeding.[1] The Petition seeks a hearing on Applicant's license amendment request to modify the Palisades Nuclear Plant ("Palisades") operating license to authorize the use of sleeving to repair steam generator tubes.[2] The Petition includes one contention asserting that NRC should deny the LAR and instead require Applicant to replace the steam generators. The Petition should be dismissed because Petitioners have not demonstrated standing and have not submitted an admissible contention.

[1] Petition to Intervene and Request for Adjudicatory Hearing by Beyond Nuclear, Don't Waste Michigan, Michigan Safe Energy Future, Three Mile Island Alert and Nuclear Energy Information Service (Jun. 16, 2025) (ML25178C909) (public version).

[2] *See* PNP 2025-003, Letter from Holtec Palisades, LLC to NRC, "License Amendment Request to Revise Selected Permanently Defueled Technical Specifications to Support Repairing of Steam Generator Tubes by Sleeving," (Feb. 11, 2025) (public: ML25043A348; proprietary: ML25042A691, ML25042A692) ("LAR"). The Federal Register publication providing receipt of the LAR and presenting an opportunity to request a hearing on the LAR contained an order imposing procedures to access "Sensitive Unclassified Non-Safeguards Information" ("SUNSI"). Opportunity to comment, request a hearing, and petition for leave to intervene, order imposing procedures, 90 Fed. Reg. 15,722 (Apr. 15, 2025) ("Federal Register Notice"). The LAR contains SUNSI in the form of a proprietary Enclosure 5a that was withheld from public disclosure pursuant to 10 CFR 2.390. Consistent with the order in the Federal Register Notice, Petitioners timely submitted a letter requesting access to the withheld information. Letter Requesting Access to Sensitive Unclassified Non-Safeguards Information regarding the February 11, 2025, Application for License Amendment for the Palisades Nuclear Plant (Apr. 15, 2025) (ML25112A343). On May 19, 2025, the Chief Administrative Judge for the Atomic Safety and Licensing Board Panel issued a protective order that governs Petitioners' access to and use of Enclosure 5a in this proceeding. Memorandum and Order (Protective Order Governing Specific Sensitive Unclassified Non-Safeguards Information) (May 19, 2025) (unpublished) (ML25139A535) ("Protective Order"). The Protective Order requires that any document that contains SUNSI be specially filed on the NRC's E-Filing system. Protective Order at ¶ 11. Consistent with this requirement, Petitioners originally filed their Petition as a non-public submission. As confirmed by the parties' July 9, 2025 Joint Status Report, nothing in the Petition or its supporting information references the non-public information in Enclosure 5a. Joint Status Report in Response to Board's Direction During July 2, 2025 Telephonic Conference at 3 (July 9, 2025) (ML25190A645). This Answer principally refers to the public version of the LAR, although in certain places it references the proprietary Enclosure 5a, without including any of the underlying SUNSI. Thus, this Answer is being filed in the public docket.

II. Procedural History

A. The Palisades Restart

Applicant is pursuing a first-of-a-kind effort to restart Palisades following its shutdown and transition into decommissioning in 2022.[3] Petitioners oppose the restart and have filed petitions to that effect in other proceedings involving various approvals submitted by Applicant.[4] These other restart approvals are not the subject of this proceeding; however, it is useful to briefly recount a few of the salient details to provide context for the current Palisades licensing basis, the change being requested by the LAR, and arguments in the Petition.

At shutdown, Entergy Nuclear Operations, Inc. ("ENOI"), the former licensee, implemented the Permanently Defueled Technical Specifications to reflect the reduced operational requirements for a defueled reactor.[5] Among other changes, this removed the portion of the Technical Specifications that governed steam generator tube integrity during power operations because that program was not needed for a defueled reactor.[6]

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[3] *See generally Holtec Decommissioning International, LLC* (Palisades Nuclear Plant), LBP-25-04, 101 NRC __ (slip op. at 3–5) (Mar. 31, 2025) (ML25090A164).

[4] *See* Petition to Intervene and Request for Adjudicatory Hearing by Beyond Nuclear, Don't Waste Michigan, Michigan Safe Energy Future, Three Mile Island Alert and Nuclear Energy Information Service (Oct. 10, 2024) (ML24284A364) ("Restart LARs Petition"); Petition to Intervene and Request for Adjudicatory Hearing by Beyond Nuclear, Don't Waste Michigan, and Michigan Safe Energy Future, at 26 (Aug. 27, 2024) (ML24240A210) ("LTA Petition"); Petition to Intervene and Request for Adjudicatory Hearing by Beyond Nuclear, Don't Waste Michigan, and Michigan Safe Energy Future at 19 (Dec. 5, 2023) (ML23339A192) ("Exemption Petition").

[5] *See* Issuance of Amendment No. 272 Re: Permanently Defueled Technical Specifications, Amendment No. 272 to Renewed Facility Operating License No. DPR-20 (May 13, 2022) (ML22039A198).

[6] *See* PNP 2021-005, Letter from ENOI to NRC, "License Amendment Request to Revise Renewed Facility Operating License and Technical Specifications for Permanently Defueled Condition," Encl. 1, "Proposed Changes (mark-up) to Palisades Nuclear Plant Renewed facility Operating License DPR-20, App'x A Technical Specifications, and App'x B Environmental Protection Plan Pages," at 5.0-15 (June 1, 2021) (ML21152A111); Safety Evaluation by the Office of Nuclear Reactor Regulation Related to Amendment No. 272 to Renewed Facility Operating License No. DPR-20, Section 4.3.7.6 (May 13, 2022) (ML22039A198) ("TS 5.5.8 [governing the steam generator program] will not be applicable to a reactor in a permanently defueled condition."); *see also* HDI PNP 2023-002, Final Safety Analysis Report Update Revision 36, Att. 2 at 16, 42, 53 (Mar. 31, 2023) (ML23107A064) (explaining removal or modification of steam generator FSAR sections in light of shutdown condition) ("Defueled Safety Analysis Report").

As part of the restart, Applicant is proposing to transition from those Permanently Defueled Technical Specifications back to the former Power Operations Technical Specifications. Applicant submitted a license amendment request to unwind the changes implemented by ENOI at shutdown, which would reinstate the portions of the Technical Specifications that govern steam generator tube integrity during operations.[7] Those Technical Specifications include tube performance criteria, monitoring, and requirements for addressing damaged or defective tubes.[8] Specifically, the Power Operations Technical Specifications only authorize tube plugging to address defective tubes (i.e., removing those tubes from service) but not tube repair.[9] The license amendment request to reinstate the Power Operations Technical Specifications is still under review by NRC, but, if approved, the Power Operations Technical Specifications will be implemented alongside Palisades's transition back into operational status. If NRC approves the return to operational status, Palisades would only be authorized to operate through March 2031. Applicant has separately filed a notice of its intention to seek license renewal to extend the operating term past 2031.[10]

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[7] HDI PNP 2023-030, Letter from Holtec Decommissioning International, LLC to NRC, "License Amendment Request to Revise Renewed Facility Operating License and Permanently Defueled Technical Specifications to Support Resumption of Power Operations," at 55, 78, 84 (Dec. 14, 2023) (ML23348A148) ("Tech Spec LAR") (proposing to reinstate in their entirety the power operations technical specifications that govern steam generator tube integrity and related inspections). Holtec is also reinstating the power operations Final Safety Analysis Report ("FSAR") under the change process in 10 CFR 50.59. *See* Tech Spec LAR, Encl. at 4. For ease of reference, this pleading cites revision 35 of the Palisades FSAR, which was the most recent version of the FSAR filed under 10 CFR 50.71 prior to shutdown, as the power operations FSAR. *See* PNP 2021-008, Letter from Entergy Nuclear Operations, Inc. to NRC, "Final Safety Analysis Report Update – Revision 35" (Apr. 14, 2021) (ML21125A344) ("Power Operations FSAR"). Note that Holtec expects to process departures from certain sections of revision 35 under 10 CFR 50.59 to reflect the availability of repair (in addition to plugging) if NRC approves the LAR. *See* HDI PNP 2024-049, Letter from Holtec Palisades, LLC to NRC, "Response to Request for Additional Information Regarding the License Amendment Request to Reinstate Operating Technical Specifications," Encl., Att. 3, at 4 (Dec. 19, 2024) (ML24354A111).

[8] *See, e.g.*, Tech Spec LAR, Encl. at 55 (Tech Spec 3.4.17, Steam Generator (SG) Tube Integrity); *id.*, Encl Attachs. 1 and 2 at Tech Spec 5.5.8 (reinstating Steam Generator Program, including inspections and repair criteria).

[9] *Id.*, Encl. 1, Att. 1 at 5.0-4 to -5 ("flaws with a depth equal to or exceeding 40% of the nominal tube wall thickness shall be plugged").

[10] Notice of Intent to Pursue Subsequent License Renewal (Jun. 26, 2025) (ML25177C201).

In response to Applicant's and others' proposals to restart reactors that have transitioned into decommissioning, the NRC published Inspection Manual Chapter 2562 (Light-Water Reactor Inspection Program for Restart of Reactor Facilities Following Permanent Cessation of Power Operations) ("IMC 2562") in May 2024 (and has revised it at least once since issuance), which established the inspection and approval framework governing the NRC's determination of whether there is reasonable assurance of safe operations to restart Palisades or similarly situated plants.[11] The process culminates in a final recommendation from an empaneled group of cross-functional staff (a "Restart Panel") to the Director of the Office of Nuclear Reactor Regulation ("NRR") and the applicable Regional Administrator, who ultimately approve the licensee's request to return to operational status and transition the facility back into the Reactor Oversight Process ("ROP").[12] On August 20, 2024, NRC published the restart inspection plan and has already begun inspection of various Palisades's systems and programs against the power operations licensing basis.[13]

B. Steam Generator Tube Defects and Repair Method Proposed by the LAR

Reinstating the power operations licensing basis is only one aspect of the restart project. Both Applicant and NRC have conducted extensive inspections of Palisades systems and equipment to ensure that, among other things, the plant will conform to the reinstated licensing

[11] IMC 2562, Light-Water Reactor Inspection Program for Restart of Reactor Facilities Following Permanent Cessation of Power Operations (Apr. 24, 2025) (ML25017A231) ("IMC 2562").

[12] *Id.* at 2–3; When inspection and licensing activities for the restart are complete, the IMC contemplates that the licensee will submit an operational readiness letter to NRC verifying completion of activities and readiness to implement the operational licensing bases. *Id.* at 9–10; The Restart Panel then provides an assessment of the plant's readiness to return to power operations to the NRR Director and Region Administrator, who ultimately approve the return to operational status. *Id.* at 5.

[13] *See* NRC, Palisades Nuclear Plant Restart Inspection Plan, Light-water Reactor Inspection Program for Restart of Reactor Facilities Following Permanent Cessation of Power Operations, Inspection Manual Chapter 2562 (Aug. 20, 2024) (ML24228A195) ("Restart Inspection Plan"); *e.g.*, Palisades Nuclear Plant - Restart Inspection Report 05000255/2025001 And 07200007/2024001 (Mar. 26, 2025) (ML25083A268); Palisades Nuclear Plant - Restart Inspection Report 05000255/2025002 (May 21, 2025) (ML25140A945).

basis.[14] In August 2024, Applicant conducted initial steam generator inspections that identified a large number of steam generator tubes with degradation that required further analysis or repair.[15] Over the following months, Applicant and NRC conducted additional inspections and analyses to assess tube condition.[16] These activities confirmed that a large number of tubes meet the criteria for plugging under the Power Operations Technical Specifications, which require tubes to be removed from service via plugging if they contain flaws with a depth equal to or exceeding 40 percent of the nominal wall thickness.[17]

Applicant, in consultation with Framatome, developed a plan to repair defective tubes using Framatome Alloy 690 sleeves.[18] To support that plan, in February 2025, Applicant submitted the LAR to amend the Power Operations Technical Specifications to authorize that tube repair method, in addition to plugging.[19] The LAR does not discuss the reasons for the steam generator tube degradation identified by the restart inspections. The LAR only proposes to add an allowable method to repair tubes that would otherwise have to be plugged under the existing criteria (*i.e.*,

[14] *See* note 13 *supra*.

[15] PNO-III-24-002: Preliminary Results of Steam Generator Inspections at Palisades Nuclear Plant (Sep. 18, 2024) (ML24262A092) ("Preliminary Notice").

[16] *See, e.g.*, Palisades Nuclear Plant, Restart Inspection Report 05000255/2024012 (Nov. 12, 2024) (ML24317A041); Palisades Nuclear Plant - NRC Inspection Report 05000255/2024003; 07200007/2023001 (Nov. 14, 2024) (ML24317A199).

[17] *See* Palisades Nuclear Plant - Summary of Conference Call Regarding Steam Generator Tube Inspections (EPID L-2024-NFO-0008), Encl. at 4 (Oct. 1, 2024) (ML24267A296) ("Steam Generator Call Summary"); LAR, Encl. 2, Technical Specifications Page Markups, at 5.0-11 (showing in redline the proposed changes to the Power Operations Technical Specifications and in black text the portions of the Power Operations Technical Specifications that are unaltered).

[18] LAR, Encl. 1 at 11.

[19] *Id.*, Encl. 1 at 3, 4–5.

those that contain flaws with depth equal to or greater than 40%).[20] Applicant has filed one supplement in response to NRC's request for additional information on the LAR.[21]

C. Portions of the Power Operations Licensing Basis the LAR is not Changing

Because Petitioners largely ignore the LAR and challenge the general safety of the Palisades steam generators, it bears briefly explaining the portions of Palisades's power operations licensing basis that are not proposed to be changed by the LAR and that provide multiple layers of assurance that the Palisades steam generators are operated in a manner that does not jeopardize the integrity of the reactor coolant pressure boundary, regardless of whether the LAR is approved or not (which is the principal concern raised by Petitioners).

Among the sections of the power operations licensing basis that govern steam generator integrity during operations and remain unchanged by the LAR are:

(1) performance criteria that "[a]ll in-service SG tubes shall retain structural integrity over the full range of normal operating conditions (including startup, operation in the power range, hot standby, and cool down and all anticipated transients included in the design specification) and design basis accidents;"[22]

(2) tube inspection requirements that mandate "inspection scope, inspection methods, and inspection intervals shall be such as to ensure that SG tube integrity is maintained until the next SG inspection;"[23]

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[20] LAR, Encl. 2, Technical Specifications Page Markups, at 5.0-11.

[21] Palisades Nuclear Plant - Response to Request for Additional Information Regarding License Amendment Request to Revise Selected Permanently Defueled Technical Specifications to Support Repairing of Steam Generator Tubes by Sleeving (May 29, 2025) (ML25149A013) ("RAI Response").

[22] LAR, Encl. 2, Technical Specifications Page Markups, at 5.0-10.

[23] *Id.* at 5.0-11.

(3) a bounding limit of 15% on the total number of tubes that can be plugged (1,232 per generator) for purposes of the plant's accident analyses;[24]

(4) limits on operational primary-to-secondary leakage in the steam generators, beyond which the plant must be promptly shut down;[25]

(5) radiation detectors to monitor effluents that could indicate steam generator tube leakage;[26]

(6) parameters of the steam generator tube integrity program that are implemented in accordance with NEI 97-06;[27]

(7) Technical Specifications governing the secondary water chemistry program to inhibit steam generator tube degradation;[28] and

(8) FSAR parameters for the plant water chemistry program to manage, among other things, steam generator chemistry based on guidelines in Electric Power Research Institute ("EPRI") topical reports governing PWR primary and secondary water chemistry.[29]

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[24] Power Operations FSAR, Ch. 14, Sec. 14.3.2.3.2(A)(3), 14.3.2.3.3(A)(3) & (B)(3), 14.3.2.3.4(3), 14.17.2.2.2, 14.17.2.4 (Ch. 14: ML21125A341); *id.* Table 14.17.1-2 (Ch. 14 tables: ML21125A338); *see also* Transcript of the 719th Meeting of the Advisory Committee on Reactor Safeguards, at 84–85 (Oct. 3, 2024) (ML24319A182) ("ACRS Transcript").

[25] The Power Operations Tech Specs set a primary-to-secondary leakage limiting condition of operation ("LCO") of 150 gallons per day ("gpd") from one steam generator. Tech Spec LAR, Encl. Att. 2, App'x A Technical Specifications, TS LCO 3.4.13. Holtec has imposed a stricter administrative limit of 72 gpd. *See* LAR, Enc. 1 at 13; Steam Generator Call Summary, Encl. at 1.

[26] Power Operations FSAR, Ch. 4, Sec. 4.7.1, ¶5 (Ch 4: ML21125A327). As noted above, Holtec expects to make conforming changes to the Power Operations FSAR to reflect the availability of sleeving (in addition to plugging) if NRC approves the LAR, but Holtec does not expect to make any other changes to these sections of the FSAR or to the operation of the programs these sections govern. *See* note 7 *supra*.

[27] Power Operations FSAR, Ch. 1, Sec. 1.9.1.18 (Ch. 1: ML21125A332).

[28] LAR, Encl. 3, Retyped Technical Specification Pages, at 5.0-13.

[29] Power Operations FSAR, Ch. 1, Sec. 1.9.1.21 (Ch. 1: ML21125A332).

D. Petitioners' Objections to Operation of the Steam Generators

As noted above, Petitioners have filed petitions opposing the Palisades restart in other proceedings. In response to the Tech Spec LAR, Petitioners filed a petition, accompanied by a declaration from Mr. Arnold Gundersen, asserting, among other arguments, that the Palisades steam generators are unsafe and must be replaced.[30] Petitioners did not challenge the reimposition of the portions of the Power Operations Technical Specifications that govern operation of the steam generators (which are summarized immediately above); instead, they merely argued that the steam generators need to be replaced.[31] The licensing board in that proceeding found that those arguments did not support admission of Petitioners' contentions challenging the Tech Spec LAR, but noted that Petitioners would have a chance to raise concerns regarding the proposed repair of Palisades's steam generator tubes in response to the present LAR.[32]

Toward that end, in April 2025, NRC published a Federal Register notice providing an opportunity to request a hearing on the LAR,[33] in response to which Petitioners filed the Petition that is now before the Board. The Petition includes one contention asserting that NRC should require Holtec to replace the steam generators instead of allowing them to be repaired. The contention is stated as follows:

> The steam generators at Palisades are defective and damaged because the tubes are corroded or otherwise defective and damaged. Holtec proposes to repair the defective and damaged tubes by installing metal sleeves, instead of plugging the tubes or replacing the generators entirely. Installing sleeves will make the tubes more likely to crack, than installing plugs. However, due to Holtec not properly maintaining the steam generators for the past 2-3 years, the only solution to the

[30] Restart LARs Petition at 61–63; *id.* at Attachment A, Declaration of Arnold Gundersen in Support of Petition to Intervene and Request for Adjudicatory Hearing by Michigan Safe Energy Future, Don't Waste Michigan, Nuclear Energy Information Services, Three Mile Island Alert, and Beyond Nuclear at 37-45 ("Gundersen Restart LARs Declaration").

[31] Restart LARs Petition at 6–8, 10–11, 13, 15, 18, and 20.

[32] *Palisades*, LBP-25-04, 101 NRC at __ (slip op. at 60).

[33] Federal Register Notice.

> defective and damaged steam generators is to replace the generators. Therefore, the LAR to allow sleeving should not be granted and Holtec should be required to replace the steam generators.[34]

The arguments Petitioners make under this heading fall into five general categories: (i) Holtec mismanaged the steam generators because they did not put them into proper layup following shutdown, (ii) sleeving will put additional stress on the tubes, (iii) the steam generators are fatally compromised by the "hideout" of chemical contaminants, (iv) Holtec's main steam line break testing does not accurately model the current condition of the steam generators, and (v) NRC's experience with a similar license amendment approved for the Watts Bar Unit 2 steam generators counsels in favor of replacement instead of repair.[35] Petitioners attached a new declaration from Mr. Arnold Gundersen, which they cite in support of the five arguments above and also incorporate by reference into their legal pleading in its entirety.[36] Significantly, Petitioners, through their expert Mr. Gunderson, "have no opinion on the acceptability of Alloy 690" as a tube sleeving solution, which is the principal request of the subject LAR.[37]

III. Legal Standards

A. Standard Governing NRC's Review of the LAR

The NRC's review of a license amendment request is guided by the same legal standards that govern the initial issuance of the license. Broadly, 10 CFR 50.92(a) establishes the applicable scope of review: "[i]n determining whether an amendment to a license, construction permit, or early site permit will be issued to the applicant, the Commission will be guided by the considerations which govern the issuance of initial licenses, construction permits, or early site

[34] Petition at 19.

[35] *Id.* at 19–24.

[36] *Id.* at 24.

[37] Gunderson Decl. at 30.

permits to the extent applicable and appropriate."[38] Pursuant to that review, the applicant "must satisfy the requirements of 10 [CFR] 50.90 and demonstrate that the requested amendment meets all applicable regulatory requirements and acceptance criteria and does not otherwise harm the public health and safety or the common defense and security."[39] In this case, 10 CFR 50.36, 10 CFR Part 50, Appendix A, General Design Criteria ("GDC") 14, 15, 19, 30, 31, and 32, 10 CFR Part 50, Appendix B, Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants, and 10 CFR 50.55a, Codes and Standards, dictate the NRC's review of the LAR.

B. Contention Admissibility Standard

The NRC's contention admissibility standard is set forth in 10 CFR 2.309(f) of its Rules of Practice. Specifically, to be admissible, a contention must meet all of the criteria set forth in 10 CFR 2.309(f)(1):

(i) provide a specific statement of the legal or factual issue sought to be raised;

(ii) provide a brief explanation of the basis for the contention;

(iii) demonstrate that the issue raised is within the scope of the proceeding;

(iv) demonstrate that the issue raised is material to the findings the NRC must make to support the action that is involved in the proceeding;

(v) provide a concise statement of the alleged facts or expert opinions, including references to specific sources and documents that support the petitioner's position and upon which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the petitioner intends to rely to support its position on the issue; and

(vi) provide sufficient information to show that a genuine dispute exists with regard to a material issue of law or fact.[40]

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[38] 10 CFR 50.92(a).

[39] *Tenn. Valley Auth.* (Sequoyah Nuclear Plant, Units 1 & 2; Watts Bar Nuclear Plant, Unit 1), LBP-02-14, 56 NRC 15, 35 (2002)).

[40] *See* 10 CFR 2.309(f)(1)(i)-(vi).

Failure to comply with any one of the six admissibility requirements is grounds for rejecting a proposed contention.[41]

"The Commission should not have to expend resources to support the hearing process unless there is an issue that is appropriate for, and susceptible to, resolution in an NRC hearing."[42] To that end, contentions must have "reasonably specific factual or legal basis."[43] They must be accompanied by expert or documentary support.[44] And they must dispute specific portions of an application or an environmental document and provide "supporting reasons for each dispute," including identifying factual or legal deficiencies.[45]

The Commission's contention admissibility requirements are "strict by design."[46] To be admissible, a contention must "raise issues within the scope of the proceeding and material to the findings the Commission must make."[47] "In a license amendment proceeding, the petitioner's contentions must focus on the issues identified in the hearing notice, the license amendment

[41] *See, e.g.*, *FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-08, 75 NRC 393, 395–96 (2012); *Private Fuel Storage, L.L.C.* (Indep. Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 325 (1999); *see also* Final Rule, Changes to Adjudicatory Process; 69 Fed. Reg. 2182, 2221 (Jan. 14, 2004) ("2004 Amendments").

[42] *Id.* at 2202.

[43] *PPL Susquehanna LLC* (Susquehanna Steam Elec. Station, Units 1 and 2), CLI-15-8, 81 NRC 500, 504 (2015) (quoting *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-03-14, 58 NRC 207, 213 (2003)).

[44] *Susquehanna Nuclear, LLC* (Susquehanna Steam Elec. Station, Units 1 and 2), CLI-23-1, 97 NRC 81, 86 (2023); *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-14, 75 NRC 704, 714 (2012) (quoting *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-08-28, 68 NRC 658, 674 (2008)) ("Bare assertions and speculation, even by an expert, are insufficient to trigger a full adjudicatory proceeding.").

[45] *Susquehanna Nuclear, LLC* (Susquehanna Steam Electric Station, Units 1 & 2), CLI-17-4, 85 NRC 59, 74 (2017) (quoting 10 CR 2.309(f)(1)(vi)).

[46] *Susquehanna,* CLI-15-8, 81 NRC at 504; *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001).

[47] *Susquehanna*, CLI-23-1, 97 NRC at 84.

application, and the Staff's environmental responsibilities relating to the application."[48] If an argument is outside the specified scope of the proceeding, it must be rejected.[49]

NRC's contention admissibility rules also require proposed contentions to have "some reasonably specific factual or legal basis."[50] "To be admissible, a contention must provide support for its claims."[51] Under 10 CFR 2.390(f)(1), a petitioner must explain the basis for each proffered contention by stating alleged facts or expert opinions that support the petitioner's position and on which the petitioner intends to rely in litigating the contention at the hearing.[52] "Bare assertions and speculation, even by an expert, are insufficient to trigger a full adjudicatory proceeding."[53] "[C]ontentions admitted for litigation must point to a deficiency in the application, and not merely 'suggestions' of other ways an analysis could have been done."[54]

The petitioner has the burden of proof to meet the standards of contention admissibility.[55] The presiding officer may not overlook material deficiencies in the pleadings by providing missing information or making factual inferences on behalf of a petitioner.[56] This means a petitioner must

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[48] *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), LBP-17-7, 86 NRC 59, 97 (2017); *see also Holtec Decommissioning International, LLC* (Palisades Nuclear Plant), CLI-25-03, 101 NRC ___, __, *slip op.* at 9 (2025) ("The *Federal Register* notice of opportunity to request a hearing describes the scope of the proceeding."); *Fansteel, Inc.* (Muskogee, Oklahoma Facility), LBP-03-13, 58 NRC 96, 100 (2003); *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-825, 22 NRC 785, 790 (1985).

[49] *Portland Gen. Elec. Co.* (Trojan Nuclear Plant), ALAB-534, 9 NRC 287, 289-90 n.6 (1979) (citing *Pub. Serv. Co. of Ind.* (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-316, 3 NRC 167, 170-71 (1976)).

[50] *Susquehanna*, CLI-15-8, 81 NRC at 504 (quoting *Millstone*, CLI-03-14, 58 NRC at 213).

[51] *Susquehanna*, CLI-23-1, 97 NRC at 86.

[52] 10 CFR 2.390(f)(1)(ii), (v).

[53] *Pilgrim*, CLI-12-14, 75 NRC at 714 (quoting *Oyster Creek*, CLI-08-28, 68 NRC at 674).

[54] *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 323 (2012).

[55] *Entergy Nuclear Operations, Inc.* (Palisades Nuclear Plant), CLI-15-23, 82 NRC 321, 329 (2015); *Statement of Policy on Conduct of Adjudicatory Proceedings*, CLI-98-12, 48 NRC 18, 22 (1998).

[56] *See, e.g.*, *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 260 (2009) (noting that the contention admissibility rules "require the petitioner (not the board) to supply all of the required elements for a valid intervention petition" (footnote omitted)); *Ariz. Pub. Serv. Co.*, (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155 (1991).

"provide the [technical] analyses and expert opinion showing why its bases support its contention."[57] With respect to the factual information or expert opinions offered by a petitioner, "the Board is not to accept uncritically the assertion that a document or other factual information or an expert opinion supplies the basis for a contention."[58] "[A]n expert opinion that merely states a conclusion (*e.g.*, the application is 'deficient,' 'inadequate,' or 'wrong') without providing a reasoned basis or explanation for that conclusion is inadequate because it deprives the Board of the ability to make the necessary, reflective assessment of the opinion" and whether it provides a basis for the contention.[59] A "bald assertion that a matter ought to be considered or that a factual dispute exists . . . is not sufficient," rather "a petitioner must provide documents or other factual information or expert opinion" "to show why the proffered bases support [a] contention."[60] Moreover, any supporting material provided by a petitioner "is subject to scrutiny both for what it does and does not show."[61]

Furthermore, in addressing the standard of admissibility of contentions, Petitioners mischaracterize the NRC's 1989 rule revising the agency's hearing procedures by erroneously suggesting that the contention admissibility standards were intended to parallel the standard for dismissing a claim under Rule 12(b)(6) of the Federal Rules of Civil Procedure,[62] mirroring the

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[57] *Georgia Inst. of Tech.* (Georgia Tech Research Reactor, Atlanta, Ga.), LBP-95-6, 41 NRC 281, 305, *aff'd*, CLI-95-10, 42 NRC 111 (1995).

[58] *Private Fuel Storage, L.L.C.* (Indep. Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 181 (1998), *aff'd*, CLI-98-13, 48 NRC 26 (1998).

[59] *USEC Inc.* (Am. Centrifuge Plant), CLI-06-10, 63 NRC 451, 472 (2006) (quoting *Private Fuel Storage,* LBP-98-7, 47 NRC at 181).

[60] *Private Fuel Storage*, LBP-98-7, 47 NRC at 180.

[61] *Yankee Atomic Elec. Co.* (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 90 (1996), *rev'd in part on other grounds*, CLI-96-7, 43 NRC 235 (1996).

[62] Petition at 18–19.

same argument made by Petitioners in prior proceedings regarding the Palisades restart.[63] However, Petitioners' conflation of the admissibility standard with the standard that applied to motions to dismiss under Federal Rule of Civil Procedure 12(b)(6) has been explicitly rejected by the Commission. Petitioners cite the following block quote from the Commission's 1989 amendments to its procedural rules:

> **The rule** was intended to parallel the standard for dismissing a claim under Rule 12(b)(6) of the Federal Rules of Civil Procedure. The intent of Rule 12(b)(6) is to permit dismissal of a claim where the plaintiff would be entitled to no relief under any set of facts which could be proved in support of his claim.[64]

In actuality, the redaction mischaracterizes the quoted passage and the limited nature of the Commission's Rule 12(b)(6) reference. The language quoted by Petitioners actually provides:

> The proposed rule also provided in § 2.714(d)(2) that the presiding officer would refuse to admit a contention where:
> ….
> (iii) The contention, if proven, would be of no consequence in the proceeding because it would not entitle petitioner to relief.
>
> **The requirement in (iii) above** was intended to parallel the standard for dismissing a claim under Rule 12(b)(6) of the Federal Rules of Civil Procedure. The intent of Rule 12(b)(6) is to permit dismissal of a claim where the plaintiff would be entitled to no relief under any set of facts which could be proved in support of his claim.[65]

In other words, instead of grafting the Rule 12(b)(6) standard onto its rule governing the admissibility of contentions, the Commission simply noted that one subpart of its former admissibility standard "parallels" the Rule 12(b)(6) standard (which subpart was deleted in the

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[63] *See* Notice of Appeal of ASLB Decision LBP-25-04, By Beyond Nuclear, Don't Wasted Michigan, Michigan Clean Energy Future, Three Mile Island Alert and Nuclear Energy Information Service, and Brief in Support of Appeal (Apr. 25, 2025) (ML25115A265).

[64] Petition at 18–19.

[65] Rules of Practice for Domestic Licensing Proceedings—Procedural Changes in the Hearing Process, 54 Fed. Reg. 33,168, 33,171 (Aug. 11, 1989) (emphasis added) ("1989 Amendments").

2004 amendments to the Commission's adjudicatory procedures).[66] Precedent following the 1989 Amendments makes clear that the Commission has not adopted the Rule 12(b)(6) standard. Under Rule 12(b)(6), courts accept the plaintiff's factual allegations as true and construe all reasonable inferences in the plaintiff's favor.[67] The Commission has expressly rejected this approach for determining the admissibility of contentions:

> [The petitioner] argues that at the contention admissibility stage the Board should construe the *facts* in favor of the petitioner, as a court does when considering motions to dismiss. This argument ignores our very explicit rules on contention admissibility. While a board may view supporting information in a light favorable to a petition, a board may not simply infer the bases for a contention. Failing to provide information required under 10 C.F.R. § 2.309(f)(1) bars admission of the contention.[68]

Indeed, the Commission *expects* its licensing boards to examine the factual underpinnings of contentions at the admissibility stage.[69] Petitioners' wishes to the contrary do not amend the Commission's "strict by design" admissibility requirements.

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[66] Section 2.714 was moved to 10 CFR § 2.309 as part of amendments to Part 2 in 2004. 2004 Amendments, 69 Fed. Reg. at 2217.

[67] *See, e.g.*, *Valambhia v. United Republic of Tanz.*, 964 F.3d 1135, 1137 (D.C. Cir. 2020) ("Because this case was resolved on a motion to dismiss, we accept the amended complaint's factual allegations as true and construe all reasonable inferences in the plaintiff's favor.").

[68] *Oyster Creek*, CLI-09-7, 69 NRC at 275 (emphasis in original).

[69] *See, e.g.*, *Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-10-09, 71 NRC 245, 261 (2010) ("The decision consists of the Board's determination that the contention was insufficiently supported and failed to show that a genuine dispute exists . . . . The Board—appropriately—reviewed the materials in support of the contention . . . ."); *USEC*, CLI-06-10, 63 NRC at 457 ("We expect our licensing boards to examine cited materials to verify that they do, in fact, support a contention.").

Arguments that collaterally attacks the NRC regulatory structure or processes are outside the scope of the proceeding.[70] Moreover, petitioners may not "attack generic NRC requirements or regulations, or to express generalized grievances about NRC policies."[71]

IV. Petitioners' Contention is Inadmissible

While the contention itself asserts that "[i]nstalling sleeves will make the tubes more likely to crack," the vast majority of Petitioners' and their declarant's arguments are aimed at the general safety of the steam generators. Indeed, the principal argument underlying the Petition is that the steam generators are so suffuse with chemically induced corrosion that it would be unsafe to restart the plant, whether the LAR is approved or not. That is not a dispute with the LAR. Petitioners' dispute is instead with the resumption of power operations of the facility, the adequacy of the portions of the power operations licensing basis that address steam generator integrity in general (which are not proposed to be changed by this LAR), and NRC's inspection program that is meant to ensure plant equipment can safely be returned to service. None of that is within the scope of this proceeding. This proceeding is focused on whether the proposed repair methodology for sleeving degraded tubes can be safely implemented at Palisades in accordance with applicable NRC safety standards.

The handful of arguments in the Petition and declaration that actually relate to that topic, including the claim stated in the contention that sleeving will increase stress on the existing tubes, do not raise a material dispute with the LAR. The LAR specifically addresses potential stress caused by sleeving and explains why the tubes can operate within the relevant facility Tech Specs

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[70] *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Unit 1), LBP-07-11, 66 NRC 41, 57–58 (2007) (citing *Phila. Electric Co.* (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20 (1974)).

[71] *Shaw AREVA MOX Services, LLC* (Mixed Oxide Fuel Fabrication Facility), CLI-15-9, 81 NRC 512, 527-28 n.98 (2015) (quoting *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334 (1999)).

and other pertinent design requirements notwithstanding the effects of sleeving. Petitioners do not acknowledge or dispute that analysis in the LAR. Simply pointing out a general issue that is acknowledged and addressed in the LAR does not present a dispute on a material issue of law or fact.

The rest of the Petition and declaration address a variety of topics that Petitioners never re-ground in their own contention or explain why they call into question the conclusions in the LAR. Those disparate claims are addressed below, none which present a material dispute with the LAR.

Finally, the only support offered by Petitioners is a declaration from Mr. Arnold Gundersen. Mr. Gundersen left the nuclear industry decades ago yet continues to hold himself out as expert in nuclear power plant operations. In his present declaration, he cites supervisory experience involving steam generators in the 1970s, with no intervening industry or academic experience since that time, as equipping him with contemporary expertise to opine on the present-day metallurgy and chemistry of Palisades's steam generator components. Mr. Gundersen's resume and declaration do not establish his expertise to offer those opinions, but even if they did, he provides no relevant citations or analysis to support his conclusory claims. In fact, when the handful of citations he does provide are examined, they contradict, rather than support, his declaration. While the declaration offers many conclusions about the safety of the steam generators, it provides no analysis to support those conclusions. These kinds of unsupported assertions do not satisfy the NRC's pleading standards.

Accordingly, the contention proffered by Petitioners should be dismissed.

A. Petitioners' Allegations Regarding Mismanagement of the Steam Generators after Shutdown Do Not Present a Material Dispute with the LAR

The Petition claims that the steam generators were not properly maintained because they were not put into a normal operating layup condition immediately after shutdown. Mr. Gundersen

devotes at least half of his declaration to this point, and he devoted a substantial portion of his previous declaration, submitted in support of Petitioners' challenge to the Tech Spec LAR, to the same argument.[72] There is no dispute that, immediately after the plant was shut down, Holtec did not manage the plant as if it were in a normal refueling outage by, among other things, maintaining operational layup conditions in the steam generators.[73] The defueled licensing basis that went into effect at shutdown, and remains in place today, did not require such action.[74] And, as Mr. Gundersen appears to recognize in parts of his declaration, there was no reason to maintain layup conditions for an operating plant given the expectation that the steam generators would be decommissioned along with the rest of the plant.[75]

Other than simply rehashing their previous arguments that Holtec always planned to restart Palisades and is unfit to operate the plant—both of which the Commission and another licensing

[72] Gundersen Restart LARs Decl. at 37–46.

[73] *See generally* Steam Generator Call Summary, Encl. at 6; ACRS Transcript at 85–86.

[74] *See* note 6 *supra*.

[75] *See* Gundersen Decl. at 13–14. Portions of Mr. Gundersen's declaration claim that Holtec violated the facility licensing basis, while other portions appear to recognize that the Permanently Defueled Technical Specifications did not require the same ongoing maintenance and management of the steam generators. *Compare id.* at 10 ("Holtec violated previous license conditions by allowing improper steam generator water chemistry after it acquired the Palisades plant . . . .") *to id.* at 13 n.21 ("NRC gave permission to Entergy to cease maintenance of the steam generators as operating components as part of plant shutdown." (citation omitted)).

board have rejected[76]—Petitioners do not connect any of this back to the LAR.[77] In focusing so much argumentative runway on claiming the steam generator tube degradation was caused by Holtec, Petitioners fail to explain why their arguments related to the cause of tube degradation are relevant to whether degraded tubes, which Holtec does not dispute are degraded, can be repaired with Alloy 690 sleeves in a manner that satisfies applicable NRC regulations. That is because their arguments are not material to the LAR.[78] To underscore this, Mr. Gundersen concedes that he "has no opinion on the acceptability of Alloy 690" within the context of steam generator tube sleeving.[79]

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[76] Petitioners and Mr. Gundersen have claimed in their various pleadings and declarations that Holtec always planned to restart Palisades. *See, e.g.*, Exemption Petition at 35–36 ("Holtec was secretly pursuing its restart scheme from July 5, 2022 until it deigned to inform the public that in fact, it no longer planned to decommission Palisades, which had been the public plan since at least December 23, 2022 . . . . Instead, Holtec now intended to restart the plant with the help of billions of dollars of federal and state taxpayer bailout money." (internal footnote omitted)); LTA Petition at 26 ("Holtec's deliberate nondisclosure of its true intentions has caused regulatory and engineering problems . . . [including] expenditure of millions of dollars to rehabilitate the plant as a consequence of failure to properly mothball the plant."); Restart LARs Petition at 35–36; Gundersen Decl. at 6. They have also attacked Holtec as incompetent and inexperienced. *See* LTA Petition at 26; Restart LARs Petition at 32-33. While neither of these claims is material to the LAR, the Commission and the prior licensing board have rejected both. *See Palisades*, CLI-25-03, 101 NRC ___, *slip op.* at 8, 10–11; *Palisades*, LBP-25-04, 101 NRC at ____, *slip op.* at 50.

[77] Mr. Gundersen asks NRC to deny the LAR "[d]ue to Holtec's lack of prudence," (Gundersen Decl. at 7), but neither he nor Petitioners provide any legal authority that suggests the NRC independently considers the reasons for a LAR in deciding if the proposed amendment meets the applicable safety standards. Because no such requirement exists. *See generally Southern Nuclear Operating Co., Inc.* (Vogtle Elec. Generating Plant, Units 3 and 4), LBP-16-5, 83 NRC 259, 282 (2016) (rejecting contention challenging the reduction of wall thickness tolerances, where the as-built structures did not meet the required licensing tolerances due to construction deviations, because the petitioners did not show that the reduced tolerances requested by the licensee failed to meet NRC requirements); *Southern Nuclear Operating Co., Inc*. (Vogtle Elec. Generating Plant, Unit 3), LBP-20-8, 92 NRC 23, 50–52 (2020) (rejecting contentions that challenged a reduction in the seismic gap between as-built structures because petitioners did not demonstrate that the smaller gap failed to meet NRC requirements), *aff'd* CLI-20-18, 92 NRC 530 (2020); *Nuclear Fuel Servs., Inc.* (License Amendment Application), CLI-23-3, 98 NRC 33, 43–44 (2023) (rejecting contention relating to historical contamination that were not tied to the current license amendment request). Petitioners' fixation on the potential causes for steam generator tube degradation, as opposed to addressing the sleeving repair proposed by the LAR, does not raise a dispute with the LAR.

[78] As noted above, the LAR does not discuss or attempt to explain the reason for steam generator tube degradation (of which there are several types). *See generally* Steam Generator Call Summary, Encl. at 3. The LAR merely proposed to add a repair method to the Tech Specs, in addition to plugging. Petitioners do not allege that the LAR was required to address the drivers for tube degradation; i.e., they have not submitted a contention of omission or alleged that the LAR is missing information that is required or otherwise material to NRC's review of the proposed repair methodology. Holtec also addresses Mr. Gundersen's more generalized point, that Holtec's management of the steam generators after shutdown created or exacerbated hideout of corrosive chemicals, in Section IV.C. below. As that section explains, Mr. Gundersen's arguments regarding hideout do not raise a dispute with the LAR, but rather with the adequacy of the portions of Palisades's power operations licensing basis that are unchanged by the LAR and with NRC's inspection process.

[79] Gundersen Decl. at 30.

Accordingly, the (undisputed) point that Holtec did not maintain operational layup conditions for the steam generators for a period following shutdown fails to present a material dispute with the LAR. The question before NRC is whether the proposed method of repairing degraded tubes meets applicable NRC requirements. Scolding Holtec for not prophylactically maintaining operational layup conditions, which were neither required nor reasonable for a plant that was slated for decommissioning, is immaterial to that question.

It also bears noting that Mr. Gundersen offers no evidence or analysis to support his claim that "a toxic cold soup of corrosive chemicals" caused degradation of the steam generator tubes and tubesheet.[80] He does not explain the steam generator secondary water chemistry that was maintained during operations, what chemicals he believes persisted in the steam generators after shutdown, or why he believes those chemicals led to stress corrosion cracking at ambient temperature in the tubes and tubesheet. He just repeats the claim that "stress corrosion cracking from chemical deposition in cold water" damaged the tube and tubesheet.[81] In fact, at several points in his declaration, Mr. Gundersen refers to a publicly-available document summarizing the increase in outside diameter stress corrosion cracking ("ODSCC") identified during restart

[80] *Id.* at 22.

[81] *Id.* at 18; *id.* at 16 ("Because Holtec did not place the system in a proper wet layup, extensive corrosion exists from cold water on the outside diameter of the steam generator tubes and between the tubes and tube sheet."); *id.* at 18 ("the tube damage is due to stress corrosion cracking from chemical deposition in cold water . . . ."); *id.* at 19 ("At least 700 tubes developed significant defects in only 26 short months from chemical attack in cold water."); *id.* ("Palisades experienced stress corrosion cracking from chemicals in cold water while it was shut down for two years.") *id.* at 22 ("Palisades experienced 50 times more SCC after two years of exposure to a toxic cold soup of corrosive chemicals during its pre-planned termination."); *id.* at 30 ("These tubes were damaged by a chemical attack due to exposure of contaminated cold water while Holtec was preparing to dismantle the steam generators during the decommissioning of Palisades."); *id.* at 33 ("The focus of Holtec is to repair the stress corrosion cracking caused by their own improper wet layup under cold conditions, *ie*, all the tube cracks that they now want to sleeve appeared in cold metal."); *id.* ("[T]he tubes were cold when the SCC occurred."); *id.* at 38 ("The extensive damage identified in the September 2024 inspection . . . was caused when the unit was in cold shutdown condition."); *id.* ("There is no historical precedent for the extensive spread of SCC at Palisades under cold conditions while the unit was not operating.").

inspections.[82] Following one such reference, he states that "extensive corrosion exists from cold water on the outside diameter of the steam generator tubes and between the tubes and tube sheet."[83] But the document he cites includes a table identifying the location and type of indications in the steam generators[84] and the section Mr. Gundersen quotes specifically explains that the significant increase in ODSCC occurred at the tube support plates ("TSP"), not the tubesheet.[85] Yet, inexplicably, Mr. Gundersen insists, without any support, that "[t]he layup damage is at the tube sheet, not the tube support plates."[86] Repeating an unsupported claim, particularly a factual claim that is contradicted by the inspection data he cites, does not satisfy the requirement for petitioners to offer more than bare assertions, even from purported experts,[87] in order to obtain a hearing.

In this case, the conclusory claim is immaterial. But, even if the Board is inclined to entertain Mr. Gundersen's diagnosis that toxic chemicals in the steam generator led to stress corrosion cracking at ambient temperature that degraded the tubes and tubesheet, he does not provide any explanation, analysis, or citation to support that assertion. So, in addition to being immaterial to the LAR, Mr. Gundersen's claim that Holtec's mismanagement of the steam generators led to pervasive cold-water, chemical-induced stress corrosion cracking is also unsupported.

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[82] *See id.* at 16, 17, 27, and 31 (citing the Steam Generator Call Summary).

[83] Gundersen Decl. at 16.

[84] Steam Generator Call Summary, Encl. at 3.

[85] *Id.* ("For both SGs the quantity of tubes with Axial ODSCC at [tube support plates] far exceeded estimates based on previous operating history . . . .").

[86] Gundersen Decl. at 38.

[87] As explained immediately below, Mr. Gundersen has not established his expertise in steam generator chemistry or metallurgy.

B. Petitioners' Claim that Sleeving Will Increase Stress Corrosion Cracking Is Unsupported and Does Not Raise a Material Dispute with the LAR

The only claim that addresses the subject matter of the LAR is Petitioners' assertion that sleeving damaged tubes will increase stress corrosion cracking and decrease safety margins.[88] Indeed, this is the actual contention Petitioners submitted: "[i]nstalling sleeves will make the tubes more likely to crack, than installing plugs."[89] As support for this claim, Petitioners point to Mr. Gundersen, whose declaration just repeats the contention.[90] Mr. Gundersen cites himself and a news article summarizing an EPRI report that he selectively quotes.[91] Mr. Gundersen's bare opinion, which, despite admitting he has no opinion on Alloy 690 sleeves, claims that sleeving will further degraded the steam generator, does not provide the requisite support required by NRC admissibility requirements. And the news article he cites does not disprove any fact stated in the LAR. More importantly, even if Mr. Gundersen's arguments are credited, Petitioners only assert that sleeving will increase stress in the tubes and decrease margin, but they do not tie that claim back to the relevant NRC standards to show that the repair method does not satisfy the applicable safety criteria, and they ignore the portions of the LAR that specifically address the point.

First, Mr. Gundersen has not established his qualifications to opine on Palisades steam generator metallurgy and chemistry. In recent years, well after he left the nuclear industry, Mr. Gundersen has shown his willingness to opine on nearly any topic involving nuclear power and has claimed to be an expert in virtually every aspect of plant operations, including hydrogen

[88] Petition at 23; Gundersen Decl. at 38.

[89] Petition at 19.

[90] Gundersen Decl. at 18 ("*sleeving increases stress in the tube*" (emphasis in original)); *id.* at 38 ("sleeving the tubes in the Palisades steam generator will reduce critical safety margins").

[91] *Id.* at 18–20.

combustion,[92] groundwater contamination,[93] steam generator design,[94] quality assurance,[95] containment coatings,[96] and geological settlement.[97] In the present case, Mr. Gundersen now holds himself out as a metallurgical and plant chemistry expert. To establish his qualifications to offer those opinions, his declaration and curriculum vitae describe managerial experience involving nuclear steam systems decades ago (which has no obvious relevance to the present-day condition of Palisades),[98] as well as his familiar role as a declarant for anti-nuclear groups in various proceedings. But neither Mr. Gundersen nor Petitioners explain why his supervisory experience involving steam generators during his career in the nuclear industry in the 1970s, with no relevant

[92] *See Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), Declaration of Arnold Gundersen to Support the Petition for Leave to Intervene and Request for Hearing by the Blue Ridge Environmental Defense League (May 2, 2016) (ML16124B064).

[93] *See Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units 2 and 3), Prefiled Direct Testimony of Arnold Gundersen Regarding Consolidated Contention RK-EC3/CW-EC-1 (Spent Fuel Pool Leaks) (Dec. 22, 2011) (ML11356A519).

[94] *See FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station), Expert Witness Report of Arnold Gundersen to Support the Petition for Leave to Intervene and Request for Hearing by Beyond Nuclear (May 20, 2013) (ML13141A243).

[95] *See Detroit Edison Co.* (Fermi Nuclear Power Plant Unit 3), Testimony of Arnold Gundersen Supporting [] Intervenors Contention 15: DTE COLA Lacks Statutorily Required Cohesive QA Program (Apr. 30, 2013) (ML13120A785).

[96] *See Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), Proposed New Contention by Joint Intervenors Regarding Inadequacy of Applicant's Containment/Coating Inspection Program, Ex. 1, Declaration of Arnold Gundersen (Aug. 12, 2020) (ML102240697).

[97] *See Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant Unit 3), Declaration of Arnold Gundersen to Support the Petition for Leave to Intervene and Request for Hearing by the Blue Ridge Environmental Defense League (May 11, 2020) (ML20132D314).

[98] Mr. Gundersen points to his work as an engineer at Northeast Utilities where he worked to prevent metallic contaminants from entering the steam generator during start-up testing. Gundersen Decl. at 1–2. But Mr. Gundersen's claim in the present case is that the damage to the Palisades steam generators was caused by Holtec's failure to place them into wet layup and the interaction of "a toxic cold soup of corrosive chemicals" on the secondary side of the steam generator. *Id.* at 22. He does not claim that metallic contamination had anything to do with the present condition of the Palisades steam generators and does not explain how his experience keeping foreign materials out of a steam generator equipped him with expertise to opine on chemically-induced degradation of plant components. Similarly, Mr. Gundersen does not explain how his experience supervising the design of the steam generator nozzle dam while he was Vice President of Engineering at Nuclear Energy Services (*id.* at 2–3) gave him any personal insight into steam generator design, much less plant chemistry and metallurgical properties of Palisades's steam generator components. Mr. Gundersen's recitation of his evaluations and testimony regarding the San Onofre Nuclear Generating Station ("SONGS") steam generator issues similarly provides no tie to the issues at Palisades. *Id.* at 3–4. Mr. Gundersen says that steam generator degradation at SONGS was caused by vibration, whereas he believes that, unlike SONGS, "Palisades experienced stress corrosion cracking from chemicals in cold water while it was shutdown." *Id.* at 19.

experience since that time, establishes Mr. Gundersen's qualifications to offer the opinions he has on the present-day metallurgical and chemical state of the Palisades steam generators.[99] And the fact that he has shown his willingness to opine on many nuclear power topics is not the same as demonstrating that he is qualified to offer those opinions, particularly given that Mr. Gundersen's expertise has been called into question in NRC proceedings,[100] and adjudicatory bodies have consistently found his opinions to be conclusory and unsupported.[101] Indeed, Mr. Gundersen's declaration itself illustrates his lack of expertise on the matters he discusses in that declaration—containing several clearly-incorrect statements that are contradicted by the sources he relies on to support his conclusions,[102] including the textbook chapter he cites to support his primary argument that hideout has fatally compromised the steam generators.[103]

Where petitioners rely on an expert to support their hearing request, they must "set[] out the credentials showing that its author is an expert" on the relevant technical issues.[104] Petitioners

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[99] *See also* note 153153 *infra*.

[100] *Southern Nuclear Operating Co., Inc.* (Vogtle Electric Generating Plant, Units 3 and 4), LBP-16-10, 84 NRC 17, 50 (2016) (Arnold, J., concurring) (noting that Mr. Gundersen's credentials indicate he may be qualified to provide expert testimony on the "general topic of nuclear engineering," but not the topic of evolution, transport and combustion of hydrogen); *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), LBP-12-01, 75 NRC 1, 17 (2012) ("We also note that both [licensee] and the Staff have raised sound challenges to Mr. Gundersen's credentials as an expert . . . .").

[101] *See, e.g.*, *Palisades*, CLI-15-23, 82 NRC at 328–29 (reversing an ASLB panel's admission of a contention because the declaration of Mr. Gundersen "provide[d] no explanation for his claim" and failed to provide "concrete and specific support" for the contention (quotations omitted)); *Entergy Nuclear Operations Inc.* (Palisades Nuclear Plant), LBP-15-17, 81 NRC 753, 783-84 (2015) (rejecting a contention because Mr. Gundersen provided no "basis or explanation for his belief"); *Vogtle*, LBP-20-8, 92 NRC at 51 (rejecting a proposed contention because "Mr. Gundersen makes bare assertions"); *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Unit 3), LBP-08-9, 67 NRC 421, 441–42 (2008) (rejecting a contention based on Mr. Gundersen's affidavit as making "only vague and general statements"), *aff'd*, CLI-08-17, 68 NRC 231, 238 (2008) ("The commission reviewed Mr. Gundersen's declaration, but discerns no specific challenge to any relevant analysis in Dominion's amendment application."); *Lawson v. General Elec. Co.*, 2018 U.S. Dist. LEXIS 149627, *22 (N.D. Ill. May 7, 2018) ("Although Mr. Gundersen's qualifications to give his opinions in this case are questionable, the Court is most concerned with the lack of reliable foundation or scientific methodology underlying his opinions.").

[102] *E.g.*, note 75 *supra*; notes 85–86 *supra*; note 107 *infra*; note 153 *infra*; note 167 *infra*; note 207 *infra*; notes 222–225 *infra*.

[103] *See* notes 167–168 *infra*.

[104] *Entergy Nuclear Generation Co*. (Pilgrim Nuclear Power Station), LBP-11-23, 74 NRC 287, 306 (2011).

have failed to meet their burden to demonstrate Mr. Gundersen's expertise to opine on Palisades chemistry and metallurgy, and for that reason alone, the Board should dismiss the Petition.

But, even if Mr. Gundersen were qualified to opine on these topics, the NRC's pleading standard requires even experts to show their work. "'Bare assertions and speculation,' even by an expert, are insufficient to trigger a full adjudicatory proceeding."[105] Despite this long-standing and well-established precedent, Mr. Gundersen's declaration is full of conclusory assertions that lack any analysis or supporting citations. For the present argument, which is the only argument Petitioners offer that is within the scope of this proceeding, the only material Mr. Gundersen cites is a news article published in the Nuclear Engineering International magazine in 1998 summarizing the report of an ad-hoc Steam Generator Sleeving Review Committee convened by EPRI. Mr. Gundersen quotes the article for the proposition that, "the process of forming a sleeve joint places an additional stress on both the sleeve and the parent tube material . . . that increases the parent tube susceptibility to environmentally induced cracking."[106]

What Mr. Gundersen disregards, and the article explains, is that EPRI concluded sleeving is an acceptable repair method for degraded tubes *notwithstanding* the additional stresses created by the process.[107] Of course, supporting materials provided by a petitioner are "subject to scrutiny both what it does and does not show."[108] In this case, the 27 year old article noted that, as of 1996, approximately 100,000 sleeves had been repaired, and 34,000 remained in service, and "[t]he vast

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[105] *Entergy Nuclear Generation Co.*, (Pilgrim Nuclear Power Station), CLI-12-15, 75 NRC 704, 714 (2012) (*quoting Oyster Creek*, CLI-08-28, 68 NRC at 674; *see also Palisades*, CLI-25-03, 101 NRC at ___, *slip op.* at 11 (same).

[106] Gundersen Decl. at 18 (quoting "SG Repair has something up its sleeve," *Nuclear Engineering International* (Feb. 28, 1998) *(available at* https://www.neimagazine.com/analysis/sg-repair-has-something-up-its-sleeve/ (last visited July 7, 2025) ("SG Sleeving Repair Article").

[107] SG Sleeving Repair Article.

[108] *Yankee Nuclear Power Station*, LBP-96-2, 43 NRC at 90.

majority of installed sleeves have performed as designed without any evidence of sleeve or parent tube degradation."[109] Indeed, as the LAR explains, EPRI, the American Society of Mechanical Engineers ("ASME"), and NRC have all found that sleeving is an acceptable repair method for degraded tubes.[110] Mr. Gundersen does not dispute this. Of course, and not surprisingly, the article cited by Mr. Gundersen explains that successful installation and performance of steam generator tubing requires "integration of a number of factors,"[111] and admits that "there have been a few cases" of sleeve or parent tube degradation, but these were "related to either difficulties encountered during the sleeve installation process or in-service degradation."[112] It then goes on to explain how "[r]ecent improvements in the sleeving process," *i.e.*, those being developed and deployed more than twenty-five years ago, were aimed at minimizing additional stress caused by the sleeving process.[113] The article also discusses ways to manage the sleeving process.[114]

Mr. Gundersen does not acknowledge any of this. But he also does not allege that additional stress on the tube means the tube cannot meet applicable NRC safety requirements. Instead, he merely claims that, in general, sleeving increases stress on the parent tube material, while admitting he has no opinion about the performance of Alloy 690 sleeves.[115] Even giving him the benefit of

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[109] SG Sleeving Repair Article.

[110] *See* LAR, Encl. 1 at 5–6 (noting that ASME Code Section XI, IWA-4721, subsection IWA-4725 set in-service Inspection and Repair requirements, and the calculations of allowable stresses are based on strength properties listed in the ASME Boiler and Pressure Vessel Code, Section II). Holtec also prepared SG tube stress and fatigue calculations based on the NRC's Regulatory Guide 1.121, *Bases for Plugging Degraded PWR Steam Generator Tubes*. LAR, Encl. 1 at 6.

[111] SG Sleeving Repair Article.

[112] *Id.*

[113] *Id.*

[114] *Id.*

[115] In the LAR, Holtec explained that it decided to use Alloy 690 because it has "excellent corrosion resistance in both the primary and secondary side" reactor environments, "is virtually impervious" to stress corrosion cracking on the primary side water chemistry, "and has demonstrated greatly improved resistance to outside diameter stress corrosion cracking" in nuclear power plants. LAR, Encl. 1 at 11. Mr. Gundersen does not dispute this, since he has no opinion on Alloy 690. Gundersen Decl. at 30.

the doubt, merely claiming that a license amendment "reduce[s] the margin of safety . . . fails to establish a genuine dispute of material fact, given the absence of any requirement to exceed" the regulatory requirement.[116] At most, that is all Mr. Gundersen has done.[117]

If Mr. Gundersen had engaged with the LAR itself, he would have found ample discussion of how the sleeving process proposed to be used at Palisades addresses the potential for additional stress. As summarized in the LAR:

> There are three distinct advantages associated with the Alloy 690 repair sleeves. First, no welding, brazing, or heat treatment is required during sleeve installation. Second, the strain within the tube is low, thereby reducing the likelihood of future degradation due to stress-influenced mechanisms. Third, the sleeve is fabricated from thermally treated Alloy 690 material, which provides enhanced corrosion resistance compared to the SG tubing.[118]

And Holtec's "primary criterion" in selecting Alloy 690 "was it its excellent corrosion resistance" when used on the primary and secondary side of a PWR such as Palisades.[119] On this last point, Mr. Gundersen explicitly claims "no opinion on the acceptability of Alloy 690 compared to Alloy 600."[120] And Section 3.5 of the LAR provides a summary of the sleeve design calculation, fatigue test loadings, and establishment of sleeve plugging criteria for stress analysis, seismic, flow induced vibration, fatigue loadings, NRC Regulatory Guide 1.121 criteria, and thermal-hydraulic impacts in accordance with the EPRI, ASME, and NRC criteria, with additional details provided in the Framatome report in Enclosure 5, and the proprietary version provided in Enclosure 5a.[121]

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[116] *Vogtle*, LBP-16-5, 83 NRC at 282.

[117] Gundersen Decl. at 38 ("sleeving the tubes in the Palisades steam generator will reduce critical safety margins . . . .").

[118] LAR, Encl. 1 at 4.

[119] *Id.* at 5.

[120] Gundersen Decl. at 30.

[121] LAR, Encl. 1 at 12–15; *id.* at 19–21; *Id.*, Encls. 5 and 5a.

Ultimately, these analyses determined the "sleeves meet the pertinent design requirements with margins"[122]—a point neither Petitioners nor Mr. Gundersen dispute. The LAR also explains that reactor coolant pressure boundary integrity will not be adversely affected because the ASME inspection criteria require that sleeved tubes be inspected and any defects that could challenge the integrity of the reactor coolant pressure boundary are required to be plugged instead of repaired.[123]

Moreover, Section 6 of Enclosure 5 to the LAR provides a detailed discussion of stress corrosion cracking, including the susceptibility of the sleeve material to stress corrosion cracking and the potential impact of sleeve installation on further tube degradation.[124] And Section 6.5 of Enclosure 5 to the LAR provides a detailed discussion of the acceptability of the stresses after sleeving on degraded tubes.[125]

Mr. Gundersen acknowledges none of this detail in the LAR, much less challenges it. The closest he comes is a discussion of the flow induced vibration ("FIV") conclusions in the LAR.[126] Mr. Gundersen claims that there is no basis to assume that FIV will occur in random turbulence and that any FIV that occurs will likely not be located randomly.[127] But Mr. Gundersen himself provides no support for his claim, offers no alternative analysis that Framatome should have used instead, and does not explain why his criticism has any bearing on his assertion (and the

[122] *Id.*, Encl. 1 at 15.

[123] *Id.* at 25–26.

[124] *Id.*, Encl. 5 at 19.

[125] *Id.* at 21–25.

[126] Gundersen Decl. at 32.

[127] *Id.* at 32.

contention) that sleeving the tubes will increase stress corrosion cracking. And even the portion of the LAR that he cites acknowledges that there are other fluid-elastic stability margins.[128]

In short, Mr. Gundersen makes a generalized claim that sleeving increases stress corrosion cracking, but he provides no relevant support for that claim, he does not attempt to quantify that effect of sleeving to demonstrate that the proposed repair methodology in the LAR will increase stress on the tubes in a manner that does not meet NRC safety requirements, and he ignores the portions of the LAR that specifically address this very issue. Accordingly, Petitioners' claim that sleeving will increase stress on the tubes is unsupported and fails to raise a genuine dispute on a material issue of fact with the LAR.

C. Petitioners' Claim that the Steam Generators Are Fatally Compromised by "Hideout" Fails to Raise a Material Dispute with the LAR and Is Unsupported

Petitioners assert that the hideout of corrosive chemicals in the steam generator has fatally damaged the steam generators. The gist of the argument is that Holtec's failure to put the steam generators into wet layup immediately after shutdown allegedly resulted in a "a toxic cold soup of corrosive chemicals"[129] that have made their way into "small crevices next to the tubes and are impossible to eradicate."[130] The consequence of this, Mr. Gundersen opines, is that these contaminants will "continue their chemical attack on the tube and tube sheet" even though the

[128] Gundersen Decl. at 32 (citing LAR, Encl. 5 at 35 ("The flow-induced vibration (FIV) analyses evaluated *fluid elastic stability margins (FSM) and* random turbulence vibration responses . . . . (emphasis added and internal citation omitted)).

[129] Gundersen Decl. at 22.

[130] *Id.* at 20.

steam generators have been placed in wet layup,[131] and, when the steam generators are returned to operational temperature, it "will accelerate any interior chemical reactions" such that "[a]dditional tubes are in jeopardy of destruction and failure, and the stainless-steel tube sheet inside the steam generator is also subject to cracking."[132] As explained below, all of this is unrelated to the LAR and unsupported by anything other than Mr. Gundersen's speculation.

Apart from claiming that "Holtec's focus on repairing the tubes by sleeving ignores the more significant issue of hideout,"[133] Petitioners do not connect any of their arguments about hideout back to the LAR. Petitioners' argument is, rather, that the steam generators are compromised and will degrade whether the LAR is approved or not,[134] so NRC should ignore the LAR and focus on hideout instead. But that is not the purpose of this hearing opportunity. "In a license amendment proceeding, the petitioner's contentions must focus on the issues identified in the hearing notice, the license amendment application, and the Staff's environmental responsibilities relating to the application."[135]

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[131] *Id.* at 22–23. While Mr. Gundersen criticizes Holtec for not putting the generators into operational layup following shutdown, he does not appear to dispute the fact that the generators are now in wet layup and he does not offer any critique of the secondary water conditions that have been restored. *See* Steam Generator Call Summary, Encl. at 6 ("The site stated they have a plan to return the secondary system to normal layup conditions according to EPRI guidelines for secondary water chemistry and wet layup after the SG inspections. The NRC staff confirmed that the SGs were returned to wet layup conditions after the call.") (document cited by Mr. Gundersen multiple times in his declaration).

[132] Gundersen Decl. at 20.

[133] Petition at 23; *see also* Gundersen Decl. at 30 ("Holtec refuses to address the broader issue of ongoing damage to both the sleeved and unsleeved tubes due to chemical hideout . . . .").

[134] *See* Petition at 23 ("Not only the tubes that Holtec proposes to sleeve, but all tubes inside the steam generators, will be under continuing chemical attack and will be further weakened if the NRC allows these old steam generators to be restarted."); *id.* ("Even if plugging the tubes on the Palisades steam generators would be preferable to installing sleeves, . . . the Palisades generators are so degraded that they must be replaced."); Gundersen Decl. at 23 ("Sleeving will not prevent the continuation of corrosive chemical reaction on the outside diameter of the tube due to the continuing hideout of chemicals . . . .").

[135] *Seabrook*, LBP-17-7, 86 NRC at 97; *see also Palisades*, CLI-25-03, 101 NRC at __, *slip op.* at 9 ("The *Federal Register* notice of opportunity to request a hearing describes the scope of the proceeding.").

Similarly situated licensing boards have rejected similar types of opinions from Petitioners' declarant in other proceedings, and this Board should dispose of the current arguments in the same manner. In response to a license amendment request submitted during construction of Vogtle Unit 3 to reduce the "seismic gap" between two buildings—because a portion of the wall of one building was encroaching on the minimum required distance between the walls—Mr. Gundersen submitted a declaration claiming that the licensee and NRC were ignoring the real problem, which was that the whole Vogtle site was sinking into the ground and pushing the buildings together.[136] The licensing board in that proceeding dismissed Mr. Gundersen's assertions because (among other reasons) they did not raise a material dispute with the license amendment request that was actually before the board.[137]

So too here. The LAR does not propose to make any changes to the Power Operations Technical Specifications that include limiting conditions of operation for the steam generators, other than to allow the use of Alloy 690 sleeves to repair degraded tubes. The LAR does not propose changes to any of the other portions of the power operations licensing basis that govern plant chemistry or steam generator integrity during power operations that provide multiple layers of assurance that degradation in the steam generators are promptly identified and addressed.[138] Mr. Gundersen concedes that he has no opinion regarding the suitability of Alloy 690 and does not acknowledge any applicable licensing requirements or the steam generator inspections required to

[136] *See Vogtle*, LBP-20-8, 92 NRC at 49–50.

[137] *Id.* at 50–51.

[138] *See* Section II.C *supra*.

be satisfactorily completed prior to resuming power operations.[139] Mr. Gundersen also does not acknowledge or contest the portions of the LAR that explain how GDC 14, 15, 31, and 32 (all addressing the integrity of the reactor coolant pressure boundary) will be met, including, in part, through application of inservice inspection and ASME code requirements that are not being modified by the LAR.[140] Mr. Gundersen asserts at various points in his declaration that Palisades is "unique," because of the extended "cold" condition of the plant,[141] but he does not explain *why*

[139] *See* Restart Inspection Plan, Att. A at 2 (requiring completion of steam generator inservice inspections); NRC Inspection Manual, Inspection Procedure 71111, Att. 08, Inservice Inspection Activities, Sec. 03.08 (Jan. 1, 2024) (ML23226A223) (describing steam generator inspections); IMC 2562 at 1 (explaining that the purpose of the restart inspection process is "[t]o detail the process for NRC inspection activities to verify before restart that reactor operation will be safe and secure in accordance with NRC requirements following reauthorization of operation under an operating license."); Preliminary Notice at 1 ("The NRC has assembled a team of subject matter experts who are evaluating the data and assessing Holtec's plans to correct the conditions. The NRC will ensure appropriate actions are taken prior to the potential restart of Palisades. The NRC will document the status and results of its inspection activities for this issue in publicly available inspection reports."). NRC has already published more than one inspection report addressing its inspections of Holtec's activities under the reinstated steam generator program required by the Power Operations Technical Specifications. *See* Palisades Nuclear Plant, Restart Inspection Report 05000255/2024012 (Nov. 12, 2024) (ML24317A041):

> [I]nspectors observed and verified Holtec Palisades' Steam Generator (SG) inspection activities conducted as described in the operating plant Technical Specification Requirements and EPRI Steam Generator Management Program guidance. . . . The purpose of these inspections is to verify that the SG tube integrity is appropriately monitored and any potential mechanisms that could lead to primary-to-secondary tube leakages are addressed. The NRC inspectors verified that the inspections were properly conducted per the regulatory requirements and guidance documents, that the inspection results were thoroughly reviewed and appropriately evaluated, and that required corrective actions to address identified indications were appropriately implemented. . . . During this quarter, Holtec Palisades completed the inspection activities and were in the process of evaluating the data. Further NRC inspections will review the data analysis and any corrective actions as they are implemented.

Id., Encl. at 4; *see also* Palisades Nuclear Plant, Restart Inspection Report 05000255/2025002 (May 21, 2025) (ML25149A013) (summarizing inspection of inservice inspection activities, including steam generator tube testing and noting that "[f]urther NRC inspections will monitor repair/replacement activities as they are conducted."). The effectiveness of NRC's inspection and oversight of Holtec's implementation of the steam generator program, both prior to and after resumed operations, is not subject to adjudication on an individual licensing action. *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-08-23, 68 NRC 461, 476 (2008) (citing 2004 Amendments, 69 Fed. Reg. at 2202); *Baltimore Gas and Elec. Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-25, 48 NRC 325, 349–50 (1998).

[140] LAR, Encl. 1 at 22, 24–26.

[141] *E.g.*, Gundersen Decl. at 22, 33.

Palisades's extended shutdown renders all of the normal chemistry controls and steam generator monitoring and inspection requirements, as well as NRC's restart inspection plan, ineffective.[142]

Even if Mr. Gundersen had discussed any of these relevant requirements, collateral attacks on NRC regulations, the ASME code, portions of Palisades's licensing basis that are not proposed to be modified by the LAR, the EPRI chemistry guidelines incorporated therein, and NRC inspections are all beyond the scope of this proceeding.[143] So too are Mr. Gundersen's claims that the Palisades steam generators may require repair or even replacement in the future.[144] In short, simply claiming that hideout is a problem and it may cause stress corrosion cracking in the future does not raise a material dispute with the LAR, which does not propose to modify any portions of the plant licensing basis that addresses this issue.

Even if these claims were within the scope of this proceeding, they are unsupported and unexplained, and, again, amount to no more than speculation. Despite hideout being the principal objection Mr. Gundersen has to returning the Palisades steam generators to operations, he provides no analysis, calculations, or relevant citations to support his claims that the Palisades steam generators are riddled with "a toxic cold soup of corrosive chemicals"[145] that "are impossible to

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[142] Mr. Gundersen asserts that the problems created by hideout are "as yet undetected," (*id.* at 33) but he does not explain why these problems he says will materialize when the steam generators are heated up would not be identified by the steam generator inspection and monitoring programs required by the power operations licensing basis and NRC's restart inspection program. *See* note 139 *supra*. Nor does he explain why the chemistry controls that he appears to accept are in place today have no effect on the "toxic cold soup of corrosive chemicals" he asserts sat in the steam generators prior to Holtec placing them in wet layup. *See* note 131 *supra*.

[143] *See Seabrook,* LBP-17-7, 86 NRC at 97; *see also Palisades*, CLI-25-03, 101 NRC at __, *slip op.* at 9.

[144] *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2, Catawba Nuclear Station, Units 1 and 2), CLI-02-14, 55 NRC 278, 293–94 (2002) (a contention based on a potential future license amendment request but that is not currently before the NRC is not admissible); *see also Turkey Point*, CLI-01-17, 54 NRC 3, 25 (2001) ("Our contention-pleading rule bars 'anticipatory' contentions" where a petitioner seeks to have a placeholder contention pending future developments. (citing *Oconee*, CLI-99-11, 49 NRC at 338)). As explained in Section IV.E. below, the economics of the Palisades restart are also not within the scope of this proceeding.

[145] Gundersen Decl. at 22.

eradicate"[146] and "continue to . . . savage[]"[147] the steam generators, and "heated steam . . . will accelerate any interior chemical reactions,"[148] such that "[a]dditional tubes are in jeopardy of destruction and failure, and the . . . tube sheet . . . is also subject to cracking."[149] Mr. Gundersen cites his personal experience with hideout during his prior career in the nuclear industry, which ended decades ago, and the abstract from a chapter of a steam generator textbook.[150] Neither provide the support required by 10 CFR 2.309(f)(1)(v).

First, Mr. Gundersen cites his managerial and consultant experience during his career in the nuclear industry in the 1970s, during which he conducted diligence on the then-new System 80 design and participated in the investigation of a saltwater intrusion event in Millstone Unit 1.[151] He does not explain why his review of steam generator components decades ago, with no intervening industry or academic experience since that time, equip him with present-day expertise to opine on current metallurgy and chemistry conditions inside the Palisades steam generators.[152] Nor does he explain why the effect of saltwater on stainless steel components in a boiling water reactor is relevant to the present metallurgical and chemistry conditions of Palisades's steam

[146] *Id.* at 20.

[147] *Id.* at 24.

[148] *Id.* at 20.

[149] *Id.*

[150] *Id.* at 2–3.

[151] *Id.* at 2, 4.

[152] As Mr. Gundersen explained, the Palisades steam generators were replaced in 1990. *Id.* at 5. As explained in the FSAR, this was primarily attributed to the phosphate secondary water chemistry used in the plant at the time. *See* Power Operations FSAR, Ch. 4, Sec. 4.3.4.1 (Ch 4: ML21125A327). Palisades switched to all-volatile treatment ("AVT") chemistry to reduce degradation and eventually replaced the steam generators in 1990. *Id.*; *see also* NEI 97-06, Rev. 3, Steam Generator Program Guidelines (Jan. 2011) (ML111310708) ("By the mid-1970s, licensees were plugging tubes at a rate that would exceed steam generator 40-year-life design margins. The dominant damage form at that time was tube wastage. The industry corrected this by changing to an all-volatile water chemistry control.").

generator components.[153] But, even if Mr. Gundersen's experience established his expertise to opine on hideout in the Palisades steam generators, experts are still required to show their work—providing analysis and citations to back up their positions[154]—if they want NRC licensing boards to credit their opinion. Mr. Gundersen provides neither.

First, Petitioners, through Mr. Gundersen, make no attempt to quantify the extent of the problem hideout has created or offer any analysis to demonstrate that hideout is impossible to manage and will result in Holtec's inability to operate the plant within the power operations licensing basis. To be sure, Petitioners and Mr. Gundersen offer many generalized assertions that Palisades's steam generators are fatally compromised.[155] But Petitioners and Mr. Gundersen give no explanation of the types of corrosive agents they believe are present, no analysis of their actual concentrations or corrosive effect on steam generator components, no discussion of how hideout is affected or managed by the chemistry controls in place today, no validation or citation for his claim that contaminants are "impossible to eradicate," and no analysis of the extent or cause of

[153] Mr. Gundersen states, without offering a citation, that the Millstone Unit 1 saltwater intrusion incident introduced "corrosive chemicals found in salt water," that the licensee "was unable to ever completely eradicate . . . within the plant's Isolation Condenser," which "led to frequent tube failures after the reactor was restarted." Gundersen Decl. at 4. But lab analysis of the 1976 isolation condenser tube failure (which is, presumably, what Mr. Gundersen is referring to) concluded that (1) chloride induced stress corrosion cracking was concentrated in the u-bend (not the tube-tubesheet juncture where Mr. Gundersen claims hideout occurs), and (2) the 1972 saltwater intrusion was not believed to be the source of chloride that led to the stress corrosion cracking. *See* Battelle Columbus Laboratories Report, Millstone Unit 1 Isolation Condenser Tube Failure Analysis, at 1–2 (Sept. 28, 1976) (ML20084N718). And the same analysis notes that Millstone Unit 1 replaced the Type 304 stainless steel tubing with the "more corrosive resistant" Alloy 600 to avoid the problem going forward. *Id.* at 2.

[154] *Private Fuel Storage*, LBP-98-7, 47 NRC at 180.

[155] *E.g.*, Petition at 23 ("Not only the tubes that Holtec proposes to sleeve, but all tubes inside the steam generators, will be under continuing chemical attack and will be further weakened if the NRC allows these old steam generators to be restarted."); Gundersen Decl. at 4-5 ("The Achilles heel of all Pressurized Water Nuclear Reactor (PWR) designs, like the Palisades reactor, has always been the integrity of Steam Generators (SG) and their uncontrolled releases of radioactivity due to Steam Generator tube failures."); *id.* at 9 ("If cracking is severe, the reactor coolant pressure boundary is breached and a nuclear meltdown can ensue."); *id.* at 20 ("[H]armful chemicals are concentrated deep in small crevasses next to the tubes and are impossible to eradicate."); *id.* ("[T]ubes are in jeopardy of destruction and failure, and the stainless-steel tube sheet inside the steam generator is also subject to cracking."); *id.* at 38 ("THE DAMAGE HAS METASTASIZED").

stress corrosion cracking he says will occur in the steam generator tubes and tubesheet.[156] Mr. Gunderson does not claim to have physically inspected the Palisades steam generators nor does he cite to any data regarding the steam generators to support his conclusory allegations about hideout. He does not engage with any of the relevant limits in the Power Operations Technical Specifications,[157] much less provide any evidence that they will be exceeded.

Mr. Gundersen's only citation in support of his theory that hideout is unmanageable and has fatally compromised the Palisades steam generators is the abstract of a chapter of a steam generator textbook.[158] The portion of the online abstract Mr. Gundersen quotes states that the accumulation of highly concentrated solutions on steam generator tubing is a major source of historical steam generator incapability, and these solutions tend to accumulate in flow-restricted regions such as the intersections between the tubes and the tubesheet.[159] This general principle is unobjectionable and appears from the text to be true of every steam generator in operation. As the full textbook chapter explains, and as longstanding EPRI chemistry guidelines referenced in the Palisades licensing basis evidence,[160] studying and managing hideout in steam generators is a routine part of normal plant operations and one of the sources of steam generator degradation over

[156] *See also* Section IV.A. *supra*.

[157] LAR, Encl. 2 Technical Specifications Page Markups, at 5.0-11 (requiring plugging (or repair, if the LAR is approved) for tubes with flaws exceeding 40% of the nominal tube wall thickness); Tech Spec LAR, Encl. Att. 2, App'x A Technical Specifications, TS LCO 3.4.13 (establishing the operational primary-to-secondary leak rate of 150 gpd).

[158] Gundersen Decl. at 2–3.

[159] *Id.* (quoting the abstract available at https://www.sciencedirect.com/science/article/abs/pii/B9780081008942000121).

[160] *See* note 29 *supra*; note 171 *supra*.

time.[161] That said, given the rest of Mr. Gundersen's declaration, it is clear that either Mr. Gundersen did not read the entire textbook chapter (and does not understand what hideout is or how plants manage it) or he so selectively quoted from it that he mischaracterized it.

NRC precedent is clear that supporting materials provided by a petitioner are "subject to scrutiny both what it does and does not show."[162] The full chapter comprising the abstract relied upon by Mr. Gundersen, which is included as Attachment 1, explains that the term "hideout" refers to the accumulation of impurities in areas of restricted flow on the secondary side of the steam generator as a result of "*boiling at the tube surface* [that] results in local concentrations of nonvolatile impurities that are orders of magnitude higher than in the bulk water."[163] The textbook explains that steam moves more easily than water out of flow-restricted regions, resulting in higher concentrations of impurities in the water left behind, which does not move as easily to dilute concentrations of impurities with the bulk water in more free-flowing areas.[164] I.e., hideout is created by the production of steam. There is nothing in the chapter that supports Mr. Gundersen's conclusory assertion that the "cold" condition of the steam generators since 2022 created or exacerbated hideout.[165] In fact, the chapter extensively discusses the countervailing effect of

[161] Steam Generators for Nuclear Power Plants, Chapter 10, Hideout, Hideout Return and Crevice Chemistry in Nuclear Steam Generators, at 273–274 (2017) (retrieved from https://www.sciencedirect.com/science/article/abs/pii/B9780081008942000121, which is cited in footnote 1 of Mr. Gundersen's Declaration) ("Attachment 1"). While Attachment 1 is not proprietary to Holtec or its contractors, Holtec is filing it separately in the non-public docket given that this linked reference provided by Mr. Gundersen is behind a paywall and Petitioners did not attach a version of the reference to their Petition.

[162] *Yankee*, LBP-96-2, 43 NRC at 90.

[163] Att. 1 at 273 (emphasis added).

[164] *Id.* at 274 ("The accumulation of high concentrations of nonvolatile impurities in crevices and deposits on the tube sheet and the surface of the tubes is ultimately a result of the high resistance to the transport of water into these regions compared to the relatively low resistance to the transport of steam out of these locations during SG operation.").

[165] *Cf.* Gundersen Decl. at 30 ("These tubes were damaged by a chemical attack due to exposure of contaminated cold water while Holtec was preparing to dismantle the steam generators during the decommissioning of Palisades. Those intrusive chemicals remain in the tube to tubesheet junction due to the phenomenon called hideout.")

"hideout return," which occurs when the steam generators cool down and concentrations of impurities in flow-restricted regions diffuse back to rest of the steam generator bulk water.[166] Mr. Gundersen's own (and only) citation actually says, "[w]hen a plant has shut down to zero power, the heat flux and consequently the driving force for hideout is zero."[167] This does not support—in fact, it directly contradicts—his claim that steam generator degradation was caused by "exposure to a toxic cold soup of corrosive chemicals . . . [t]he SG phenomenon called hideout . . . causes corrosive contamination to enter the gap between the tube and tube sheet . . . [that is] impossible to remove."[168]

The chapter also discusses the efforts of the nuclear industry over the past several decades (after Mr. Gundersen exited the industry) to predict and manage local chemistry in flow-restricted regions. It explains that EPRI has developed guidance for addressing localized chemistry in steam generators and that "[m]ost nuclear utilities have developed in-house procedures consistent with the EPRI guidelines."[169] The Palisades power operations licensing basis references the EPRI guidelines for maintaining secondary water chemistry in the steam generators.[170] Those guidelines

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[166] Att. 1 at 303 ("[S]pecies that concentrate or hide out in crevices and deposits during operation, when there is heat flux and boiling at the surface of the SG tubes, *will diffuse from those regions when the heat flux is reduced or removed altogether*." (emphasis added)).

[167] *Id.*

[168] Gundersen Decl. at 22; *see also id.* at 30 ("These tubes were damaged by a chemical attack due to exposure of contaminated cold water while Holtec was preparing to dismantle the steam generators during the decommissioning of Palisades. Those intrusive chemicals remain in the tube to tubesheet junction due to the phenomenon called hideout.").

[169] Att. 1 at 304.

[170] *See* Power Operations FSAR, Ch. 1, Sec. 1.9.1.21 (Ch. 1: ML21125A332); *see also* Steam Generator Call Summary, Encl. at 6 ("The site stated they have a plan to return the secondary system to normal layup conditions according to EPRI guidelines for secondary water chemistry and wet layup after the SG inspections. The NRC staff confirmed that the SGs were returned to wet layup conditions after the call.").

include requirements to evaluate hideout return when the plant shuts down,[171] which Palisades has done for decades, as evidenced by some of the very documents Mr. Gundersen cites as "[t]he best source of information regarding the Palisades Steam generators."[172]

In other words, the only citation Mr. Gundersen provides for his claim that the improper layup of Palisades led to the hideout of chemicals that are impossible to manage and have fatally compromised the Palisades steam generators actually says that (1) hideout does not occur in cold shutdown conditions, (2) shutting the plant down reduces concentrations of contaminants in flow-restricted regions, and (3) the industry (including Palisades) evaluates and manages hideout during operations as a normal part of plant chemistry programs. Mr. Gundersen has plucked a real topic out of the air, claimed it is an existential threat to Palisades, without the benefit of any quantification or analysis, and made no attempt to support this claim with anything other than a cite to a document that contradicts everything he says. This is more-or-less the same thing Mr. Gundersen did in the Vogtle proceeding referenced above, when he latched onto the real phenomenon of nuclear island settlement, which is extensively addressed in the Vogtle licensing basis, only to exaggerate the issue into a frivolous claim that the Vogtle nuclear island is sinking

[171] *See generally* EPRI, Pressurized Water Reactor Secondary Water Chemistry Guidelines, Revision 7, Non-Proprietary, at 3-17 (Feb. 28, 2009) (ML11220A116) ("The effectiveness of power reductions at causing hideout return is expected to increase as the power level decreases. . . . Experience indicates that power reductions and low power soaks can promote hideout return at some plants."); *id.* at 4-16 ("During a unit shutdown, steam voids collapse, crevices are rewetted, and impurities diffuse into the bulk water."); *id.* at 7-15 ("evaluation tools that may provide valuable information [for maintaining plant chemistry] include . . . steam generator hideout return studies").

[172] Gundersen Decl. at 11 (citing Letter from Nuclear Management Company, LLC to NRC, "Steam Generator Tube Integrity Assessment from the 2003 Refueling Outage," at 39 (Apr. 13, 2004) (ML041100667), which explains the application of EPRI guidelines to address crevice flushing following sodium intrusion and concentrations of sodium hydroxide at the tubesheet crevice based on hideout return analysis and recommended steps to address it in future outages); *see also* NRC, Palisades Inspection Report 50-255/2000001 (DRP) (Apr. 4, 2000) (ML010660201) ("the plant was shut down to reduce the elevated sodium concentrations that were present in the secondary system and to allow for sodium chemical 'hideout return' in the steam generators."); Palisades Nuclear Plant, Chemistry Operating Procedure, Secondary System Chemistry, at 7 (Jan. 17, 1988) (ML18052B458) (summarizing plant procedures for hideout and hideout return).

into the ground and will lead to catastrophic failure of plant structures.[173] The Board should dismiss Mr. Gundersen's claims in this proceeding for the same reason the Vogtle licensing board rejected his claims about the differential settlement of the Vogtle nuclear island: "these claims are nothing more than mere speculation."[174]

In sum, Petitioners' claims regarding the hideout of chemicals in the steam generators during Palisades's extended shutdown are out of scope, fail to raise a material dispute with the LAR, and are unsupported.

D. Petitioners' Claim that Holtec's "MSLB Testing" Does Not Accurately Model the Steam Generators Is Unsupported and Does Not Raise a Material Dispute with the LAR

Petitioners criticize Holtec's Main Steam Line Break ("MSLB") analysis because it allegedly does not model the actual condition of the Palisades steam generators.[175] This claim is unsupported and fails to raise a material dispute with the LAR. If anything, it is a challenge to the ASME code and/or plant accident analyses addressed in portions of the power operations licensing basis that are unrelated to the LAR, both of which are beyond the scope of this proceeding.

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[173] *Compare* Declaration of Arnold Gundersen to Support the Petition for Leave to Intervene and Request for Hearing by the Blue Ridge Environmental Defense League Regarding Southern Nuclear Operating Company's Request for License Amendment Vogtle Unit 3 Auxiliary Building Wall 11 Seismic Gap Requirement, at 7 (May 11, 2020) (ML20132D309) ("Southern Nuclear Corp (SNC) is attempting to obfuscate the true facts"); *id.* at 9 ("The dishing being exhibited at Vogtle was never anticipated"); *id.* at 11 ("SNC does not discuss or address the root cause of the sinking of the foundation, nor does it discuss how the public will be protected from the increased safety risks"); *id*. ("the bedrock of the entire Vogtle AP1000 Unit 3 is ominously sinking and dishing"); *id.* at 13 ("Given the alarming condition of the sinking nuclear island (NI) foundation, it is obvious that none of the current engineering design, schematics, and actual build on site fits the original licensing permit") *to* Gundersen Decl. at 23 ("by focusing on repairing the steam generator tubes, Holtec and Framatome ignore the more significant issue of hideout"); *id.* at 30 ("Holtec refuses to address the broader issue of ongoing damage to both the sleeved and unsleeved tubes due to chemical hideout"); *id*. at 28 ("Holtec purposely misrepresents or technically misunderstands the unique engineering specifications of plugging Steam Generator (SG) tubes."); *id*. at 24 ("Nothing in Framatome's experience or Holtec's analysis of tube repair addresses the potential for a chemical attack on the tube sheet itself . . . [which] will continue to be savaged by Stress Corrosion Cracking from chemicals hiding out in the tube to the tubesheet junction caused by Holtec's negligence.").

[174] *See Vogtle*, LBP-20-8, 92 NRC at 52.

[175] Petition at 23.

As the LAR explains, Holtec engaged Framatome to perform mechanical testing on sleeved tubes to meet the requirements of ASME Code Section XI, which requires fatigue testing in a laboratory setting to demonstrate that the sleeve attachment can withstand design loadings specified in ASME Code Section III.[176] This testing included evaluating the initial leak rates as well as axial cycling, thermal cycling, and pressure cycling.[177] Framatome performed a MSLB test (in addition to several other tests) to represent the maximum pressure expected from a MSLB accident.[178] Framatome analyzed all of the ASME test results and concluded that the mechanical tests "of the sleeve samples demonstrate[d] that they provide an adequate safety factor for normal operating and postulated accident conditions. The mechanical testing also determined that the installed sleeve would withstand the cyclical loading resulting from power changes and other transients."[179]

Petitioners engage with none of this detail. They cite Mr. Gundersen's declaration, and, again, Mr. Gunderson cites himself. His principal argument is just an outgrowth from his speculative hideout claim addressed above—he says "all tubes inside the steam generators" are compromised, so the MSLB analysis is wrong because it does not assume widespread degradation and/or failure of steam generator tubes.[180] This is not a dispute with the mechanical testing Framatome performed on sleeved tubes. Like his hideout claim, this is a broader dispute with the overall plant accident analyses. Mr. Gundersen does not cite any relevant portion of the licensing basis that addresses these analyses or explain why they are relevant to Petitioners contention or

[176] LAR, Encl. 1 at 15.

[177] *Id.* at 16–17. More details on these portions of the testing program were provided in Enclosure 5, Section 8.2.3.

[178] *Id.* at 17. More details on the MSLB testing program were provided in Enclosure 5, Section 8.2.4.

[179] *Id.* at 17–18.

[180] Gundersen Decl. at 31.

the LAR. As explained in the preceding section, his starting premise—that the steam generator tubes are all fatally compromised by hideout of cold chemicals—is unsupported and out of scope. So too is any argument that plant accident analyses—with no connection to the LAR or sleeved tubes—are deficient.

Mr. Gundersen also asserts that Holtec should have done more and/or different testing,[181] but he does not say what testing Holtec should have done, does not dispute that Framatome performed the fatigue testing in accordance with the ASME code requirements,[182] does not cite any authority that the ASME-required testing was insufficient, and does not engage with or dispute any of the testing data or analysis that concluded that the expected primary-to-secondary leak rate from sleeved tubes will remain within the relevant operational and accident Power Operations Technical Specifications limits.[183] "[C]ontentions admitted for litigation must point to a deficiency in the application, and not merely 'suggestions' of other ways an analysis could have been done."[184]

[181] Mr. Gundersen claims that Holtec's testing was "statistically insignificant" and suggests that it should have been conducted at full operating temperature. *Id.* He only discusses the MSLB test but does not acknowledge that Framatome conducted multiple tests, per the ASME code, including tests at operational temperatures. *See* LAR, Encl. 5 at 43–44.

[182] *See* LAR, Encl. 5 at 37.

[183] *See Id.*, Sec. 8 (describing all of the ASME Section XI mechanical tests performed, including the MSLB test, and describing the data analysis Framatome performed to demonstrate that the sleeves will operate well within the relevant Tech Spec limits).

[184] *Seabrook*, CLI-12-5, 75 NRC at 323 (citing *USEC*, CLI-06-10, 63 NRC at 477).

Finally, Mr. Gundersen claims that Holtec is trying to fix their deficient MSLB analysis with a separate license amendment request.[185] But Petitioners did not challenge that license amendment request.[186]

Petitioners do not tie Mr. Gundersen's opinion back to the contention or make any attempt to quantify how the alleged deficiencies in the MSLB analysis are material to the safety standards governing the LAR. Petitioners provide only the most conclusory of challenges to this MSLB testing. Mr. Gundersen claims that the "MSLB testing does not accurately model the actual conditions that now exist inside the damaged Palisades steam generator."[187] But he does not engage in any way with the testing program and certainly does not identify any deficiencies in the tests or challenges to the conclusions. Mr. Gundersen had ample time to review the proprietary version of the Framatome report, which contained details on the testing program.[188] Petitioners' and their expert's failure to provide more than conclusory allegations of insufficiency of the testing program are not sufficient to demonstrate a genuine dispute on a material issue of fact with the LAR.

Petitioners' dispute with the MSLB tests performed on sleeved tubes is unsupported and fails to raise a material dispute with the LAR.

E. The Economics of the Steam Generator Repairs Are Not Relevant to NRC's Approval of the LAR

Mr. Gundersen claims that the Tennessee Valley Authority's ("TVA's") experience at Watts Bar Unit 2 illustrates why NRC should require Holtec to replace the Palisades steam

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[185] Gundersen Decl. at 31–32 (referring to PNP 2025-002, License Amendment Request to Include Leak Before Break Methodology for Primary Coolant System Hot and Cold Leg Piping in Palisades Licensing Basis (Feb. 5, 2025) (ML25035A216) ("Leak-Before-Break LAR")).

[186] *Cf.* Monthly Notice; Applications and Amendments to Facility Operating Licenses and Combined Licenses Involving No Significant Hazards Considerations, 90 Fed. Reg. 15,727, 15,730 (Apr. 15, 2025) (establishing the deadline to file petitions on the Leak-Before-Break LAR as June 16, 2025).

[187] Gundersen Decl. at 31.

[188] *See* Notice of Provision of SUNSI Pursuant to the Protective Order (May 22, 2025) (ML25142A390).

generators. This is an economic argument not a technical one. As the LAR explains, the most recent precedent for steam generator tube sleeving is a similar license amendment NRC approved for Watts Bar.[189] Mr. Gundersen asserts that Watts Bar was a "historical failure" because TVA replaced the steam generators a few years after the license amendment was issued.[190]

But Mr. Gundersen claim is not that the NRC-approved repair methodology was unsafe. He does not claim that sleeving tubes exacerbated stress corrosion cracking at Watts Bar, accelerated retirement of the Watts Bar generators, or created a tube rupture leading to a radiological release.[191] Nor does he claim that the Watts Bar steam generators suffered from the same degradation forces he says Palisades has been subjected to, or that the Watts Bar generators failed in the manner he predicts the Palisades steam generators will.[192] In other words, Mr. Gundersen's argument, at least as it relates to Watts Bar, is entirely one of economics—he believes it is imprudent to repair Palisades's steam generators because TVA replaced the Watts Bar 2 generators notwithstanding the approved repair methodology.

But, in reviewing the LAR, the NRC is not approving whether the steam generators should be replaced, nor or they evaluating the costs of performing repairs vs. replacement, or even the

[189] LAR, Encl. 1 at 27; Watts Bar Nuclear Plant, Unit 2 – Issuance of Amendment No. 40 Regarding Technical Specifications for Steam Generator Tube Repair Sleeve (EPID L-2019-LLA-0209) (Aug. 10, 2020) (ML20156A018) ("Watts Bar RSG Approval").

[190] Gundersen Decl. at 21.

[191] Mr. Gundersen cites a 2020 incident report that indicated stress corrosion cracking was "greater than projected." *Id.* at 24 (citing TVA letter to NRC, "Licensee Event Report 391/2020-004-00, Steam Generators Degraded Due to Axial Outside Diameter Stress Corrosion Cracking (Jan. 7, 2021) (ML21007A022) ("TVA Report")). The report identified higher than projected degradation in tubing at the tube support plate intersections. TVA Report at 4. The degradation was identified by TVA's normal evaluation of steam generator inspection data gathered during an outage. *Id.* at 2. TVA conducted tube plugging (not sleeving) as a corrective action and identified the cause of the event as stress corrosion cracking in localized crevice chemistry at the tube support plates. *Id.* at 3. There is no mention of tube sleeving in the report, much less any suggestion that it exacerbated stress corrosion cracking.

[192] In fact, Mr. Gundersen distinguishes Watts Bar from Palisades. *Id.* at 22 ("Unlike Watts Bar Unit 2, whose steam generators were dry for 45 years, Palisades experienced Palisades experienced extensive Stress Corrosion Cracking because water containing corrosive contaminants hid out in the tube-to-tube sheet junction once Palisades was permanently closed and scheduled to be dismantled.").

possibility of future replacement. This LAR does not even seek NRC approval to operate the plant. The only relevant question is whether Holtec's proposed methodology to repair tubes via sleeving meets the applicable safety standards. The scope of this proceeding is limited to that, and only that,[193] for which Watts Bar serves as a useful datapoint as the most-recent NRC precedent. As already discussed at length, NRC's separate determination of whether Holtec may resume power operations of the plant will take into account the overall state of plant equipment (including the steam generators) based on NRC inspections that are ongoing and are not subject to adjudication in this proceeding.[194] But even NRC's authorization of power operations does not hinge on the cost effectiveness of Holtec's endeavor. The question of whether Holtec can economically restart Palisades, or the most cost-effective way to operate it in the future, including managing the repair or replacement of aging components, is left entirely to Holtec's business judgment, subject to its ongoing compliance with the facility licensing basis. Such considerations are beyond the scope of NRC review in general and are certainly beyond the scope of matters that may be adjudicated in response to this LAR.[195]

Mr. Gundersen also claims that the Holtec will not be able to operate the steam generators for another 30 years.[196] But that too is beyond the scope of this proceeding. The LAR does not request approval to operate the plant (and steam generators). And if NRC reinstates Holtec's

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[193] *Seabrook*, LBP-17-7, 86 NRC at 97; *see also Palisades,* CLI-25-03, 101 NRC at ___, *slip op.* at 9; *Catawba,* ALAB-825, 22 NRC at 790; *Fansteel*, LBP-03-13, 58 NRC at 100.

[194] *Oyster Creek*, CLI-08-23, 68 NRC at 476.

[195] *See Holtec Int'l* (HI-STORE Consolidated Interim Storage Facility), CLI-20-04, 91 NRC 167, 193 (2020) ("[T]he business decision of whether to use a license has no bearing on a licensee's ability to safely conduct the activities the license authorizes. . . . [T]he material issue in this license proceeding is whether Holtec has shown it can safely operate the facility, not its future political activity or business intentions."); *Phila. Elec. Co.* (Limerick Generating Station, Units 1 and 2), ALAB-789, 20 NRC 1443, 1447 (1984) ("economic concerns . . . are not within the proper scope of issues litigated in NRC proceedings."); *Fla. Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 & 4), DD-93-13, 37 NRC 493, 513 (1993) ("[T]he Petitioner's contention regarding economics of [proposed repairs to a facility] is not within the scope of the NRC's responsibilities.").

[196] Gundersen Decl. at 20.

authority to operate Palisades under the Renewed Facility Operating License, Holtec will only have authority to operate the reactor (and steam generators) through 2031. To operate beyond that, Holtec will have to satisfy all of the aging management requirements associated with subsequent license renewal, which include aging management criteria for the steam generators,[197] none of which is currently before the NRC.

Mr. Gundersen's arguments related to the economics of steam generator repair vs. replacement are outside the scope of this proceeding and do not raise a genuine dispute with the application, and so should be rejected for failure to satisfy 10 CFR 2.309(f)(1)(iii) and (vi).

F. Petitioners Cannot Wholesale Incorporate Mr. Gundersen's Declaration into their Legal Pleading

The NRC's regulations in 10 CFR 2.309(f)(1) requires petitioners to "set forth with particularity the contentions sought to be raised," 10 CFR 2.309(f)(1)(i) requires "a specific statement of the issue of law or fact to be raised or controverted," and 10 CFR 2.3019(f)(1)(ii) specifies that petitioners seeking to intervene must "[p]rovide a brief explanation of the basis for the contention." Commission case law is clear that "it is Petitioners' responsibility, not the Board's, to formulate contentions and to provide the necessary information to satisfy the basis for admission."[198] And "the Commission 'expects parties to bear their burden and to clearly identify

[197] *E.g.*, NUREG-2191, Vol. 1, Rev. 1, Generic Aging Lessons Learned for Subsequent License Renewal Report (Draft Report for Comment), Ch. IV.D (July 2023) (ML23180A182) (listing aging management requirements for steam generators for subsequent license renewal period, including the impact on tubes and sleeves of cracking due to outer diameter stress corrosion cracking); NUREG-2192, Rev. 1, Standard Review Plan for Review of Subsequent License Renewal Applications for Nuclear Power Plants (Draft Report for Comment), at pp.3.1-30, 3.1-58 (July 2023) (ML23180A191) (listing aging management programs for tubes and sleeves).

[198] *Palisades*, CLI-15-23, 82 NRC at 329 (internal citation omitted).

the matters on which they intend to rely with reference to a specific point' rather than forcing the Board itself to search for a needle that may be in a haystack."[199]

Petitioners do not meet this standard by just pointing to a lengthy declaration that makes a wide variety of claims on many topics that have no relationship to the contention Petitioners have submitted, which is that "[i]nstalling sleeves will make the tubes more likely to crack, than installing plugs."[200] If actually given effect, incorporating Mr. Gundersen's declaration "as if set out verbatim" into their legal pleading[201] has the potential to expand Petitioners' single contention into dozens of contentions. This does not satisfy the requirement of 2.309(f)(1)(i) and (ii). Declarants *support* a contention,[202] but petitioners cannot delegate to their declarant the obligation to articulate the specific issue of law or fact they actually wish to litigate in a hearing.

> Such a wholesale incorporation by reference does not serve the purposes of a pleading. . . . The Commission expects parties to bear their burden and to clearly identify the matters on which they intend to rely with reference *to a specific point*.[203]

Mr. Gundersen's declaration is far afield from making a specific point. The declaration makes several arguments that are unrelated to the contention, revisits topics from prior proceedings, rehashes issues that have been rejected by NRC adjudicatory bodies, and raises issues that are

[199] *Virginia Elec. and Power Co.* (North Anna Power Station, Units 1 and 2), LBP-24-7, 100 NRC 52, 66–67 (2024) (quoting *Pub. Serv. Co. of New Hampshire* (Seabrook Stations, Units 1 and 2), CLI-89-3, 29 NRC 234, 241 (1989)).

[200] Petition at 19.

[201] *Id.* at 24.

[202] 10 CFR 2.309(f)(1)(v) ("Provide a concise statement of the alleged facts or expert opinions which support *the requestor's/petitioner's position* . . . ." (emphasis added)).

[203] *Seabrook*, CLI-89-03, 29 NRC at 241 (citations omitted) (emphasis added).

clearly beyond the scope of matters for adjudication in this proceeding.[204] Neither he nor Petitioners tie any of these back to the contention or explain why they are material to the LAR or call into dispute its conclusions. As such, Petitioners have failed to carry their burden of clearly identifying the specific issues they wish to litigate. Incorporating Mr. Gundersen's declaration verbatim is just shotgun pleading in violation of 10 CFR 2.309(f)(1) and longstanding Commission precedent.

Nevertheless, for sake of completeness, Petitioners will briefly respond to at least some of the claims in Mr. Gundersen's declaration that are not mentioned by Petitioners and do not relate to the contention. The vast majority of these claims are one-off statements of conclusion, without explanation, citation, or support. Holtec will, accordingly, provide brief responses.

- Mr. Gundersen claims that Holtec cannot unplug tubes that were previously plugged and that doing so would be unsafe and require changes to the Palisades licensing basis.[205] He does not explain how unplugging tubes has any relationship to Petitioners' contention or the LAR. The LAR does not request NRC approval to unplug tubes, does not mention unplugging tubes, and does not propose any changes to the Power Operations Technical Specifications to address unplugging tubes. While Mr. Gundersen claims that plugged tubes are subject to NRC license conditions that must be changed in order to accommodate unplugging,[206] he does not cite any such license

[204] *See, e.g.*, Gundersen Decl. at 6 ("when Holtec acquired Palisades on June 28, 2022, it never stated its intention to restart the shuttered reactor") (rejected by CLI-25-03); Gundersen Decl. at 8 ("Holtec has never operated a nuclear power facility. . . . Holtec's lack of nuclear or atomic operating experience created significant damage that could be considered a rookie blunder.") (rejected by LBP-25-04); Gundersen Decl. at 26 ("there is no need for the excess power that Palisades might produce") (rejected by LBP-25-05); Gundersen Decl. at 29 (criticizing NRC's docketing of the LAR).

[205] Gundersen Decl. at 10, 17–18, 39.

[206] Gundersen Decl. at 10, 39.

condition or any other regulatory or licensing requirement that prevents Holtec from unplugging tubes.[207] Regardless, this does not present a dispute with the LAR.[208] Mr. Gundersen also makes no attempt to quantify or offer any analysis to support his claim that unplugging tubes "will create more unforeseen engineering and safety predicaments,"[209] and will "be a real danger to the safe operation of Palisades."[210] So, in addition to being irrelevant to Petitioners' contention and the LAR, the claim is unsupported.

- Mr. Gundersen criticizes phrasing in the LAR, including the characterization of tubes as "defective" and the explanation that plugging tubes reduces flow for core cooling.[211] He does not explain how these objections to the LAR's phrasing relate to Petitioners' contention or whether they are material to the question of whether the LAR satisfies the applicable safety criteria.[212]
- Mr. Gundersen claims Holtec should plug all the defective tubes rather than sleeving them.[213] Claiming that an alternative is available does not present a genuine dispute

[207] Mr. Gundersen cites a 1998 inservice inspection report filed by Consumers Energy as support for his claim that there is a license condition preventing Holtec from unplugging tubes. *Id.* at 10 (citing Palisades Nuclear Plant, Steam Generator Tube Inservice Inspection (June 18, 1998) (ML18066A306) ("ISI Report")). The report lists the tubes plugged as of the inspection date, including those that were plugged prior to installation of the steam generators. ISI Report at 11. Of course, the report is not a license condition.

[208] *See* note 144 *supra*.

[209] Gundersen Decl. at 18.

[210] *Id.* at 19.

[211] Gundersen Decl. at 27–28.

[212] *Cf.* Power Operations Licensing Basis, Ch. 4, Sec. 4.1 (Ch. 4: ML21125A327) ("The Primary Coolant System is designed to remove heat from the reactor core . . ."); LAR, Encl. 2, Technical Specifications Page Markups, at 3.4.1-2 (SR 3.4.1.3, requiring verification of primary coolant system flow rate after plugging (or repair, if the LAR is approved) of 10 or more tubes); Reg. Guide 1.121, Bases for Plugging Degraded PWR Steam Generator Tubes, at 1.121-2 (Aug. 1976) (ML003739366) ("defective tubes (i.e., tubes with wall thickness less than the minimum acceptable thickness)").

[213] Gundersen Decl. at 28.

with whether the LAR meets NRC safety standards.[214] Mr. Gundersen does not acknowledge the 15% plugging limit in the power operations licensing basis[215]or explain why, given that limit, plugging all defective tubes would be safer than sleeving them. The claim fails to present a material dispute with the LAR and is unsupported.

- Mr. Gundersen criticizes the LAR for failure to identify the tubes Holtec intends to sleeve.[216] He provides no citation to any requirement that Holtec must do so, and he does not explain why that information is relevant to whether the LAR, which establishes a repair method to be applied to currently-defective tubes or any qualifying defective tubes in the future, meets NRC safety standards.
- Mr. Gundersen cites a 2024 date that appears in the top right corner of a few pages of the Framatome report accompanying the LAR and claims that the report is out of date and does not reflect actual conditions found by Palisades steam generator inspections,[217] but he ignores the fact that the signature date on the first page of the Framatome report is February 2025 (the same time the LAR was submitted) and Framatome's report references several other documents prepared in early 2025.[218]
- Mr. Gundersen criticizes Framatome's executive summary for failing to address the differences between Westinghouse and Combustion Engineering designs,[219] but he

[214] *See USEC*, CLI-06-10, 63 NRC at 472; *Seabrook*, CLI-12-5, 75 NRC at 323.

[215] *See* note 25 *supra*.

[216] Gundersen Decl. at 30.

[217] *See id.* at 34–36, 37, 38.

[218] LAR, Encl. 5a at 2, 58. Note that these references appear in the proprietary version of the Framatome report, which Mr. Gundersen had access to. *See* Notice of Provision of Sensitive Unclassified Non-Safeguards Information Pursuant to the Protective Order (May 22, 2025) (ML25142A390).

[219] Gundersen Decl. at 34–35.

ignores the specific sections in Framatome's report that do precisely that,[220] and he fails to explain why any of the alleged differences in design affect Framatome's analysis or whether the LAR meets NRC safety standards.

- Mr. Gundersen claims that Holtec is lengthening the tube inspection frequency from 18 months to 2 years, which he asserts undermines Framatome's analysis.[221] To support this, Mr. Gundersen quotes a news article as saying, "[t]he proposed revisions to the technical specifications, the company said, would 'include a repaired tube (sleeve and tube) inspection interval that shall not exceed 24 effective full power months or one refueling outage (*whichever is less*).'"[222] Mr. Gundersen ignores the "whichever is less" qualifier,[223] and the fact that the inspection periodicity is verbatim from the Power Operations Technical Specifications, which is not being modified by the LAR[224] or the Tech Spec LAR (which is merely reinstating the same inspection periodicity that was in effect prior to shutdown).[225]
- Mr. Gundersen claims Framatome's seismic analysis improperly used design basis earthquake ground accelerations but should have used "the amplified response spectra acceleration" instead.[226] He does not engage with the ground acceleration values Framatome actually used,[227] he does not explain why Framatome was required to use

[220] LAR, Encl. 5, at 12–13.

[221] Gundersen Decl. at 35–37.

[222] *Id.* at 25 (quoting INSIDE NRC, PLATTS/S&P GLOBAL, Commodity Insights, Volume 47 / Issue 2 / January 24, 2025) (emphasis added).

[223] Palisades is on an 18-month refueling cycle. *See* Tech Spec LAR, Encl. Attach. 1, SR 3.4.14.1.

[224] LAR, Encl. 2, Technical Specifications Page Markups at 5.0-12 (TS 5.5.8d).

[225] Tech Spec LAR, Encl. Attach. 1 at 5.0-12 (TS 5.5.8d).

[226] Gundersen Decl. at 36.

[227] The proprietary version of the report, which Mr. Gundersen had access to, includes the specific seismic acceleration values Framatome used and describes the seismic analysis in detail. *See* LAR, Encl. 5a at 34–35.

different values, he does not explain why he is qualified to opine on Framatome's seismic analysis, and he does not explain how using different values would affect Framatome's analysis or show that the LAR fails to meet the applicable safety standards. And, of course, he does not explain how this relates to the contention that sleeving stresses the tubes.

- Mr. Gundersen criticizes Framatome's repair methodology because he says it only addresses sleeving at the tube support plates, but he claims that all the damage has occurred at the tube-tubesheet connection, not the tube support plates.[228] Holtec addressed this point in Section IV.A. above. Mr. Gundersen has provided no basis for his factual assertion that tube damage has occurred at the tube-tubesheet connection and not at the tube support plate.[229]
- Relatedly, Mr. Gundersen claims that Holtec intends to sleeve tubes at the tubesheet.[230] Mr. Gundersen does not offer a citation to any portion of the LAR or any other document that indicates that Holtec plans to sleeve tubes at the tubesheet. In fact, the LAR says that "tube repair" (as used in the LAR and the markup to the Power Operations Technical Specifications) does *not* refer to the "alternate repair criteria" (C* or C-star repair) for plugging tubes in the tubesheet, but instead refers to "sleeving

[228] Gundersen Decl. at 37–38.

[229] *See* notes 85–86 *supra*.

[230] Gundersen Decl. at 38.

tubes with tube defects in the [tube support plate] area."[231] Mr. Gundersen does not mention or dispute this portion of the LAR.

- Mr. Gundersen claims that tubes that do not meet repair or plugging criteria will nevertheless catastrophically fail due to rapid crack propagation when the steam generators are heated up.[232] This is the same conclusory assertion he presents in connection with his hideout theory, which is supported by no analysis to show that this is true.[233] As explained above, Mr. Gundersen's claim that the steam generators will fail (whether the LAR is approved or not) is an out-of-scope challenge to NRC's inspection process and portions of the power operations licensing basis that are not proposed to be changed by the LAR.[234]

* * *

For all of the foregoing reasons, Petitioners' contention is inadmissible. They have failed to provide a concise statement of the issues they wish to litigate, they have not provided the requisite expert and documentary support, they have not demonstrated that there is a material dispute with the LAR on any issue of law or fact, and they (and their declarant) have raised issues that are beyond the scope of this hearing process. Accordingly, the Petition should be dismissed.

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[231] LAR, Encl. 1 at 13; *id.* Encl. 2, Technical Specifications Page Markups, at 5.0-11 (5.8.8c1 and c2 still require that flaws in the indicated locations "shall be plugged" (i.e., the new "repair" language added elsewhere by the LAR does not affect these sections)); *see also* RAI Response, Encl. 1 at 6 (explaining that the proposed revisions to the alternate repair criteria in TS 5.8.8c1 and c2 is just clarification and "is not intended to change the locations where service induced flaws in the SG hot-leg and cold-leg tubesheet regions require plugging").

[232] Gundersen Decl. at 38.

[233] Mr. Gundersen cites an online article for the general proposition that stress corrosion cracking is exacerbated by higher temperatures. *See id.* at 33 (citing Technical Causes of Stress Corrosion Cracking (SCC), retrieved from https://inspenet.com/en/articulo/stress-corrosion-cracking-prevention/). Citing basic principles for a common aging mechanisms of steam generators does not support Mr. Gundersen's claims regarding the Palisades steam generators, much less present a material dispute with the LAR.

[234] *See* Section IV.C. *supra.*

V. Petitioners Have Not Established Standing

Because Petitioners have not posed an admissible contention, the Board need not address the question of standing to intervene in this proceeding.[235] All the same, Petitioners have not established their standing to intervene in this proceeding on this LAR.[236]

A. Legal Standard for Standing

In evaluating whether a petitioner has established standing, the Commission uses contemporaneous judicial concepts of standing.[237] Accordingly, the petitioner must demonstrate a "concrete and particularized injury that is fairly traceable to the challenged action and is likely to be redressed by a favorable decision, where the injury is to an interest arguably within the zone of interests protected by the governing statute."[238] "The burden on setting forth a clear and coherent argument for standing and intervention is on the petitioner."[239]

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[235] *See Susquehanna*, CLI-15-8, 81 NRC at 503 n.19.

[236] Applicant recognizes that the prior licensing board determined these Petitioners had standing in a proceeding involving several license amendment requests (including the Tech Spec LAR) to reinstate various portions of the power operations licensing basis; however, the board found that the fifty-mile proximity presumption "logically extend[ed]" to those licensing actions because of how closely related they were to the Palisades restart. *Palisades*, LBP-25-04, 101 NRC at __ (slip op. at 19). The same is not true of the LAR that is before this Board, and it is certainly possible that the same group of organizations who had standing to oppose Palisades's restart have not demonstrated their standing to challenge a discrete LAR involving the same facility. *See Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), CLI-99-4, 49 NRC 185, 188 (1999) ("A petitioner seeking to intervene in a license amendment proceeding must assert an injury-in-fact associated with *the challenged license amendment*, not simply a general objection to the facility." (emphasis in original)).

[237] *Fla. Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-15-25, 82 NRC 389, 394 (2015). An organization may show standing in its own right, based on its organizational purposes (organizational standing), or through representing the interests of its members (representational standing). *FirstEnergy Nuclear Operating Co.* (Beaver Valley Power Station, Units 1 and 2), CLI-20-5, 91 NRC 214, 219–20 (2020). To show organizational standing, the organization "must satisfy the same standing requirements as an individual seeking to intervene." *Id.* at 219. An organization may establish representational standing by demonstrating, typically via affidavit, that "at least one of its members may be affected by the Commission's approval of the [licensing action at issue] (such as by the member's domicile, work, or activities on or near the site)," and that these members have authorized the organization to represent them and to request a hearing on their behalf. *Id.* at 220-21. Further, the "member seeking representation must qualify for standing in his or her own right; the interests that the representative organization seeks to protect must be germane to its purpose; and neither the asserted claim nor the requested relief must require an individual member to participate in the organization's legal action." *Id.* at 220.

[238] *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911, 915 (2009) (internal quotation marks omitted).

[239] *Commonwealth Edison Co.* (*Zion*, CLI-99-4, 49 NRC at 194.

In certain proceedings, such as construction permit and operating license proceedings for power reactors, the Commission employs a "proximity presumption" in which the Commission "presume[s] that a petitioner has standing to intervene if the petitioner lives within, or otherwise has frequent contacts with, the zone of possible harm from the nuclear reactor."[240] But in proceedings challenging license amendment requests such as this one, petitioners must establish an "obvious potential for offsite consequences."[241]

B. Petitioners Have Not Established Standing

Each of the Petitioners seek representational standing and have submitted declarations from members citing their proximity to the plant as their basis for standing.[242] However, Petitioners have not alleged, much less demonstrated, that *the LAR*, which only requests approval to sleeve steam generator tubes, presents an obvious potential for offsite consequences. In fact, they specifically claim that it is "the restoration of Palisades to power generation," that grants them access to the proximity presumption.[243] Harms resulting from the restart and operations of the plant as a whole are not redressable in this proceeding and do not grant Petitioners standing to intervene on *this LAR*. "A petitioner seeking to intervene in a license amendment proceeding must assert an

[240] *El Paso Elec. Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-20-7, 92 NRC 225, 231 (2020).

[241] *Exelon Generation Co., LLC* (Peach Bottom Atomic Power Station, Units 2 and 3), CLI-05-26, 62 NRC 577, 580–81; *Zion*, CLI-99-04, 49 NRC at 191.

[242] *E.g.*, Petition at 13 ("Five of the 8 members are residents of Palisades Park, Michigan, all of whom live within two miles or less from the Palisades plant. The remaining three live within 50 miles.").

[243] Petition at 14; *see also* Petition at 13–14 ("The petitioning organizations base their claims to standing on the facts that the restoration of Palisades power generation is analogous to licensing a new power plant . . . ."). Petitioners explain that the declarations will suffer "concrete and particularized injuries from *the restored operations* of Palisades if the exemption sought by Holtec is granted. If *the exemption* is denied, the potential threats or actual harms from Palisades will not occur." Petition at 14 (emphasis added). This proceeding has nothing to do with any exemption, and Petitioners do not allege any harm related to sleeving steam generator tubes in support of their standing.

injury-in-fact associated with *the challenged license amendment*, not simply a general objection to the facility."[244]

Even if the Board were to dig through their pleadings to find a basis for standing (which the Board should not do—these are not *pro se* petitioners; they are represented by counsel with decades of experience litigating in NRC proceedings),[245] the only arguments Petitioners make regarding offsite consequences are based on their claims that the steam generators are so degraded that they cannot be safely operated *regardless whether the LAR is approved*.[246] These claims are not redressable in this proceeding and do not demonstrate that *the LAR* presents an obvious potential for offsite consequences.[247]

Accordingly, by basing their standing on the restart and operations of Palisades, and alleged dangers with the steam generators that are not related to the LAR (and, according to them, will manifest whether the LAR is approved or denied), the Petitioners have failed to establish their standing to participate in this proceeding, which is exclusively focused on the LAR.

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[244] *See Zion*, CLI-99-04, 49 NRC at 188 (emphasis in original); Petitioners have also failed to construct a "plausible chain of causation" explaining how the sleeving of steam generator tubes would result in a "distinct new harm or threat" to its members, as required for a traditional standing analysis. *See id.* at 192 (quoting *Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), LBP-98-27, 48 NRC 271, 277 (1998)).

[245] *Palisades*, LBP-25-04, 101 NRC at __, *slip op.* at 14-15.

[246] *See* Petition at 23 ("Not only the tubes that Holtec proposes to sleeve, but *all tubes inside the steam generators*, will be under continuing chemical attack and will be further weakened if the NRC allows these old steam generators to be restarted." (emphasis added)); *id.* ("Even if plugging the tubes on the Palisades steam generators would be preferable to installing sleeves, . . . the Palisades generators are so degraded that they must be replaced.").

[247] *Zion*, CLI-99-04, 49 NRC at 192 ("A petitioner cannot seek to obtain standing in a license amendment proceeding simply by enumerating the proposed license changes and alleging without substantiation that the changes will lead to offsite radiological consequences.").

VI. Conclusion

For the foregoing reasons, the Petition should be dismissed by the Board.

Respectfully submitted,

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of:	)	Docket No. 50-255-LA-4
HOLTEC PALISADES, LLC	)	ASLBP No. 25-988-01-LA-BD01
Palisades Nuclear Plant	)	July 11, 2025

CERTIFICATE OF SERVICE

Pursuant to 10 CFR § 2.305, I certify that on this date copies of the foregoing pleading were served upon the Electronic Information Exchange (the NRC's E-Filing System) in the above captioned matter.

Signed electronically by

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