UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Christopher T. Hanson, Chairman
Jeff Baran
David A. Wright

In the Matter of ENTERGY NUCLEAR OPERATIONS, INC., ENTERGY NUCLEAR PALISADES, LLC, HOLTEC INTERNATIONAL, and HOLTEC DECOMMISSIONING INTERNATIONAL, LLC (Palisades Nuclear Plant and Big Rock Point Site)	Docket Nos. 50-255-LT-2 50-155-LT-2 72-007-LT 72-043-LT-2

CLI-22-08

MEMORANDUM AND ORDER

TABLE OF CONTENTS

I. INTRODUCTION

This proceeding concerns a license transfer application involving (1) the renewed facility operating license for the Palisades Nuclear Plant (Palisades) and the general license for the Palisades Independent Spent Fuel Storage Installation (ISFSI); and (2) the facility operating license for Big Rock Point and the general license for the Big Rock Point ISFSI. Entergy Nuclear Operations, Inc. (ENOI), Entergy Nuclear Palisades, LLC (ENP), Holtec International, and Holtec Decommissioning International, LLC (HDI) (collectively, the applicants) seek NRC consent to the indirect transfer of control of the licenses to Holtec International and to the transfer of operating authority to HDI to conduct licensed activities at the sites.[1] They also seek NRC approval of conforming administrative license amendments to reflect the requested transfers.[2]

In December 2021, the NRC staff issued an order approving both the transfer of the licenses and draft conforming license amendments.[3] Concurrently, the staff also approved a related regulatory exemption requested by HDI in support of the license transfer application; the approved execmption "would only apply to HDI if and when the proposed license transfer transaction is consummated."[4] NRC regulations anticipate that the staff may complete its

---

[1] *See* Palisades Nuclear Plant and Big Rock Point Plant Consideration of Approval of Transfer of Control of Licenses and Conforming Amendments, 86 Fed. Reg. 8225 (Feb. 4, 2021) (Hearing Opportunity Notice); Application for Order Consenting to Transfers of Control of Licenses and Approving Conforming License Amendments, at 1 (Application), attached (Encl. 1) to Letter from A. Christopher Bakken III, President and Chief Executive Officer, Entergy, to NRC Document Control Desk (Dec. 23, 2020) (Application Cover Letter). The cover letter, application, and associated enclosures are available together at ADAMS accession no. ML20358A075.

[2] *See* Application at 1, and Attachments A and B to the Application (identifying proposed changes to the Palisades and Big Rock Point licenses, respectively); Application Cover Letter at 1-2.

[3] Order Approving Transfer of Licenses and Draft Conforming Administrative Amendments (Dec. 13, 2021) (ML21292A146) (Order). The license amendments would be "issued and made effective at the time the proposed transfer actions are completed." *Id*. at 6.

[4] Exemption (Dec. 13, 2021) (ML21286A506), at 2.

review of a license transfer application before an adjudicatory proceeding (if applicable) has concluded. The staff is expected, consistent with its findings in its Safety Evaluation Report (SER), "to promptly issue approval or denial of license transfer requests"—notwithstanding a pending adjudicatory hearing.[5] But while the staff's review and the Commission's adjudicatory review may overlap, they are separate reviews, and both must be completed and satisfied before a license transfer approval can be considered final. The application "will lack the agency's final approval until and unless the Commission concludes the adjudication in the Applicant's favor."[6] While license transfer applicants may act in reliance on a staff order approving an application, we long have emphasized that applicants do so at their own risk should the "Commission later determine[] that the intervenors have raised valid objections to the license transfer application."[7] The staff's order approving the license transfer therefore explicitly remains subject to our authority "to rescind, modify, or condition the approved transfer" based on the outcome of this adjudicatory proceeding.[8]

We received a petition for leave to intervene and request for a hearing from the following petitioners: (1) the Michigan Attorney General; (2) Beyond Nuclear, Michigan Safe Energy Future, and Don't Waste Michigan (collectively, Joint Petitioners); (3) the Environmental Law &

---

[5] *See* 10 C.F.R. § 2.1316(a).

[6] *See Entergy Nuclear Operations*, *Inc.* (Pilgrim Nuclear Power Station), CLI-19-11, 90 NRC 258, 262 (2019) (quoting *Vermont Yankee Nuclear Power Corp. and AmerGen Vermont, LLC* (Vermont Yankee Nuclear Power Station), CLI-00-17, 52 NRC 79, 83 (2000)).

[7] *See id*. (quoting Vermont Yankee, CLI-00-17, 52 NRC at 83; *see also Power Authority of the State of New York* (James A. FitzPatrick Nuclear Power Plant; Indian Point, Unit 3), CLI-00-22, 52 NRC 266, 286 n.1 (2000) (noting that notwithstanding the staff's orders approving the license transfers and the applicants' completion of the sale, the Commission could modify the license or "disapprove the transfers and require the Applicants to return the plant ownership to the *status quo ante"*). The license transfer transaction closed on June 29, 2022. *See Notification* (June 29, 2022).

[8] *See* Order at 6.

Policy Center (ELPC); and (4) Mr. Mark Muhich.[9] For the reasons outlined below, we grant the Michigan Attorney General's request for an adjudicatory hearing and admit limited issues pertaining to the Attorney General's challenge to the proposed transferees' financial qualifications. We deny Joint Petitioners', ELPC's, and Mr. Muhich's petitions for hearing.

II. BACKGROUND

A. The Proposed License Transfer

Palisades Nuclear Plant is a single unit pressurized water reactor located in Covert, Michigan.[10] An ISFSI licensed generally under 10 C.F.R. Part 50 is located on the Palisades site.[11] Big Rock Point is located in Charlevoix County, Michigan, about 11 miles west of Petoskey. The Big Rock Point nuclear power plant was a boiling water reactor that permanently shut down power operations on August 29, 1997, and has since been dismantled and decommissioned. All spent nuclear fuel at Big Rock Point has been transferred to a generally licensed ISFSI that remains on the site. Except for the land associated with the ISFSI installation and a surrounding parcel of non-impacted land of approximately 75 acres, the NRC in 2007 released the Big Rock Point site for unrestricted use and removed the released portions of the site from the Part 50 license.[12]

---

[9] *See Petition of the Michigan Attorney General for Leave to Intervene and for a Hearing* (Feb. 24, 2021) (AG Petition); *Petition of Beyond Nuclear, Michigan Safe Energy Future and Don't Waste Michigan for Leave to Intervene, and Request for an Adjudicatory Hearing* (Feb. 24, 2021) (Joint Petitioners Petition); *The Environmental Law & Policy Center Petition to Intervene and Hearing Request* (Feb. 24, 2021) (ELPC Petition); *Petition of Mark Muhich for Leave to Intervene and for a Hearing Regarding Transfer of NRC Operating License and Decommissioning of Palisades Nuclear Plant, Covert MI* (Feb. 7, 2021) (Muhich Petition).

[10] Palisades permanently ceased operations in May 2022.

[11] *See* 10 C.F.R. § 72.210 (general license authorizing the storage of spent fuel at an ISFSI located at a power reactor site licensed under part 50 or part 52).

[12] *See* Letter from Keith I. McConnell, NRC, to Kurt M. Haas, Big Rock Restoration Project (Jan. 8, 2007), at 1 (ML063410361).

ENP is the licensed owner of both Palisades and Big Rock Point.[13] Under the proposed license transfers, the indirect control of Palisades and Big Rock Point would transfer to Holtec International under the terms of a Membership Interest Purchase and Sale Agreement. Just prior to the proposed transaction, Entergy would transfer all of the assets and liabilities of ENP to a new entity that would become Holtec Palisades, LLC (Holtec Palisades).[14] Upon the closing of the proposed license transfers, Holtec Palisades would be the new licensed owner of Palisades and Big Rock Point. Except for a few excluded assets, Holtec Palisades would own all assets and real estate associated with Palisades and Big Rock Point, including the Palisades nuclear decommissioning trust, and it would hold title to the spent nuclear fuel at both sites.[15]

Holtec Palisades would have the rights and obligations under the Standard Contract for Disposal of Spent Nuclear Fuel and/or High Level Radioactive Waste (Standard Contract); the previous owners of Palisades and Big Rock Point in 1983 entered into the Standard Contract with the United States of America, as represented by the U.S. Department of Energy (DOE). [16] Through litigation or settlement, Holtec Palisades expects to recover from DOE the spent nuclear fuel management costs that it would incur due to DOE's breach of its contractual obligation to accept and dispose of the Palisades and Big Rock Point spent nuclear fuel. Under the proposed transfer, Holtec Palisades would be responsible for the costs of possessing, maintaining, and decommissioning the two sites, including all spent fuel management costs.

---

[13] Because the license transfers lack final approval, we refer in this decision to the license transfers as they were described and proposed in the application.

[14] *See* Application Cover Letter at 2. As detailed further in the application, Nuclear Asset Management Company, LLC (NAMCo), a wholly owned subsidiary of Holtec International, would acquire the equity interests in either the new entity Holtec Palisades or in the parent company owner of Holtec Palisades; in either case, NAMCo ultimately would become the direct parent company of Holtec Palisades. *See id.*; Application at 1. A redacted version of the purchase and sale agreement is included in the application in Attachment C.

[15] *See* Application at 2 & n.1.

[16] *Id.* at 20.

ENOI is the licensed operator of Palisades and Big Rock Point. Pursuant to the proposed transfer, operating authority to conduct licensed activities at Palisades and Big Rock Point would transfer from ENOI to HDI, an indirect wholly owned subsidiary of Holtec International. Holtec International created HDI to assume the licensed operator responsibilities and to decommission Holtec-owned nuclear power plants.[17] In its application, HDI stated that it intended to contract with Comprehensive Decommissioning International, LLC (CDI) to perform the day-to-day activities at Palisades and Big Rock Point, including spent fuel management and decommissioning activities.[18] In a supplement to the application submitted in January 2022, HDI informed the NRC that HDI no longer plans to contract with CDI to serve as the decommissioning general contractor for Palisades.[19] In lieu of this arrangement, HDI "is absorbing CDI's resources and will directly employ site personnel to perform the scope of work previously planned to be executed by CDI."[20]

Under the terms of the purchase and sale agreement, the proposed transfer would not close until after ENOI has docketed its certifications of permanent cessation of operations and of permanent removal of fuel from the Palisades reactor vessel.[21] Because the proposed transfers would only occur after the Palisades reactor has permanently ceased operations, the transferred licenses would not authorize power reactor operations. Authorized activities would

---

[17] *Id.* at 1

[18] *Id.* at 2. Holtec International (through its subsidiary HDI), and SNC-Lavalin Group (through its subsidiary Kentz USA, Inc.), formed CDI to serve as the decommissioning general contractor for Holtec-owned nuclear power plants. *Id*.; Application Cover Letter at 2-3.

[19] *Notice to the Commission* (Jan. 21, 2022), Attach., "Supplement to Application for Order Consenting to Transfers of Control of Licenses and Approving Conforming License Amendments," at 1-4 (ML22021B670) (Application Supplement).

[20] Application Supplement at 2.

[21] Application Cover Letter at 2.

include possessing, maintaining, decontaminating, and decommissioning the sites, including managing the spent fuel until all fuel has been transported offsite for disposal.

In parallel with the license transfer application, HDI separately submitted to the NRC a Post-Shutdown Decommissioning Activities Report (PSDAR) outlining the planned activities and schedule for decommissioning the Palisades Nuclear Plant.[22] The PSDAR includes a site-specific decommissioning cost estimate for Palisades.[23] HDI also indicates a project goal to complete decommissioning and final license termination within approximately 20 years following the license transfers and sale closure.[24]

After sale closure, HDI expects within three years to complete the transfer of all Palisades spent nuclear fuel into long-term dry fuel storage at the ISFSI.[25] Once all spent fuel has been placed in dry storage, HDI plans to place the plant into a safe dormant condition from 2025 through November 2035, after which HDI would begin to dismantle and decontaminate the reactor plant structures and systems.[26] Following all radiological decommissioning and

---

[22] "Palisades Nuclear Plant Post-Shutdown Decommissioning Activities Report," attached to Letter from Andrea L. Sterdis, HDI, to NRC Document Control Desk (Dec. 23, 2020) (ML20358A232) (PSDAR). Prior to or within 2 years following permanent cessation of operations, a licensee must submit a PSDAR to the NRC, with a copy to the affected state(s). *See* 10 C.F.R. § 50.82(a)(4)(i). HDI's PSDAR for Palisades would become effective only upon sale closure and transfer of the licenses. *See* Application Cover Letter at 3. To the extent that information in the PSDAR bears on the staff"'s review of the license transfer application (e.g., cost estimates and related decommissioning schedule relevant to HDI's financial qualifications), the NRC staff considers the PSDAR a supplement to the application. *See* Hearing Opportunity Notice, 86 Fed. Reg. at 8226.

[23] *See* "Palisades Nuclear Plant Site-Specific Decommissioning Cost Estimate" (DCE), attached (Encl. 1) to PSDAR. NRC regulations require a licensee to include in the PSDAR a site-specific decommissioning cost estimate. 10 C.F.R. § 50.82(a)(4)(i).

[24] PSDAR at 1.

[25] *Id.* at 2.

[26] *See id.* at 2, 15; Application, Attach. E, "Schedule & Financial Information for Decommissioning," at 2.

non-radiological site restoration (including of the ISFSI), HDI expects final license termination and release of the Palisades site for unrestricted use by the end of 2041.[27]

B. Financial Qualifications for License Transfer and the License Transfer Application

No license granted under the Atomic Energy Act (AEA) may be transferred unless the NRC consents in writing.[28] The NRC will approve a license transfer application if it determines that the proposed transferee is qualified to hold the license and that the transfer of the license is otherwise consistent with applicable law, regulations, and orders.[29] The NRC review of a license transfer application is limited to specific matters and is largely focused on the proposed transferee's financial and technical qualifications.[30]

The application must contain sufficient information to demonstrate that the applicant has the financial qualifications to carry out the activities for which the license is sought.[31] The application also must provide reasonable assurance that funds will be available to decommission the facility, including any ISFSI.[32] NRC regulations outline various acceptable methods of providing financial assurance of decommissioning funding.[33]

HDI, the proposed new operator, bases its financial qualifications on that of the proposed new owner, Holtec Palisades. The application states that Holtec Palisades will commit, under a

---

[27] *See* PSDAR at 3, 14-15; Application Cover Letter at 3.

[28] *See* AEA § 184, 42 U.S.C. § 2234; *see also* 10 C.F.R. §§ 50.80(a), 72.50(a) (implementing the AEA requirement as to power reactor and ISFSI licenses, respectively).

[29] 10 C.F.R. § 50.80(c).

[30] *See id.* § 50.80(b)(1)(i) (referencing 10 C.F.R. §§ 50.33, 50.34).

[31] *See id.* § 50.33(f). Because the proposed transfer would not occur prior to permanent cessation of reactor operations at Palisades, the applicants need not demonstrate reasonable assurance of obtaining the funds necessary to cover estimated power reactor operations. *See id.* § 50.33(f)(2).

[32] *See id.* §§ 50.33(k)(1), 50.80(b)(1)(i), 72.30(b).

[33] *See id.* §§ 50.75(e)(1) (reactor decommissioning), 72.30(e) (ISFSI decommissioning).

Decommissioning Operator Services Agreement with HDI, to fund without limit all of HDI's costs to conduct activities under the Palisades and Big Rock Point licenses, including all decommissioning and spent fuel management costs. [34]

Holtec Palisades in turn bases its financial assurance of adequate decommissioning funding on the prepayment method.[35] Prepayment refers to prepaid funds deposited in a segregated account outside of the licensee's administrative control in an amount "sufficient to pay decommissioning costs at the time permanent termination of operations is expected."[36] Holtec Palisades would own the assets in the Palisades nuclear decommissioning trust upon closure of the sale and transfer of the licenses. The application states that the Palisades nuclear decommissioning trust will be sufficient to pay for all Palisades site radiological decommissioning costs, including ISFSI decommissioning.

HDI estimates that the cost of radiological decommissioning for Palisades (including the ISFSI) will be $443,215,000.[37] The application states that the decommissioning trust fund contained approximately $552 million as of December 2, 2020, and that at least this amount would remain in the trust fund at closing.[38] The application therefore states that Holtec Palisades satisfies the requirement to show financial assurance of decommissioning funding

[34] *See* Application at 19. A copy of the form of the operator services agreement is enclosed in Attachment F of the application. We refer to the proposed transferees, Holtec Palisades (name of the owner following the proposed transfer) and HDI, together as Holtec.

[35] *Id.* at 18.

[36] *See* 10 C.F.R. § 50.75(e)(1)(i).

[37] *See* Application, Attach. E at 2-3. HDI's cost estimates referenced in this decision are in 2020 dollars.

[38] *See* Application at 18.

based on the decommissioning trust and use of the prepayment method of financial assurance.[39]

NRC regulations allow a licensee that has prepaid decommissioning funds based on a site-specific decommissioning cost estimate to take credit for projected earnings on the prepaid account's funds—up to a 2% annual real rate of return, through the decommissioning period, including periods of safe storage, final dismantlement, and license termination.[40] Taking credit for a 2% annual real rate of earnings on the trust fund, HDI projects that the decommissioning trust fund will be sufficient to cover not only decommissioning but also spent fuel management and non-radiological site restoration expenses at Palisades.

For spent fuel management, HDI estimates total costs at Palisades will be about $166 million, and it plans "to fund all spent fuel management costs following license transfer" with the decommissioning trust.[41] The application states that the projected sufficiency of the Palisades trust provides funding assurance for spent fuel management.[42] In support, the application includes a cash flow analysis for the years 2022 through 2041, the year Holtec expects final license termination to occur.[43]

The cash flow analysis begins with the December 2, 2020 trust fund value of approximately $552 million, which Holtec states is a conservative assumption for the fund's opening value at post-sale closure. The analysis also assumes HDI's estimated costs for decommissioning ($443,215,000), spent fuel management ($166,122,000), and site restoration

---

[39] *Id.* at 17-18.

[40] *See* 10 C.F.R. §§ 50.75(e)(1)(i), 50.82(a)(8)(vi).

[41] *See* Application at 19 and Attach. E at 2.

[42] *See id*. at 19.

[43] *See id.*, Attach. E at 5, "Palisades Nuclear Generating Station Decommissioning Cash Flow Analysis" (Cash Flow Analysis).

($34,679,000). For each year, the analysis identifies the projected (1) trust fund withdrawals for radiological decommissioning, spent fuel management, and site restoration costs; (2) trust fund interest earnings based on a 2% annual real rate of return; and (3) year-end trust fund balance. The analysis projects a trust fund balance of $19,799,000 remaining at license termination in 2041.

The application states that this projected adequacy of the Palisades trust fund provides reasonable assurance of decommissioning and spent fuel management funding. The application moreover states that if additional funding were to be necessary to cover the decommissioning and spent fuel management costs, "[r]eimbursement of spent fuel management expenses by DOE, which is not credited in the cash flow analysis . . . would provide a substantial source of additional funds that could be used" to adjust funding.[44]

Based on the cash flow analysis projections, Holtec also expects to use the trust fund to pay for the approximately $35 million in estimated site restoration costs.[45] Site restoration involves the non-radiological clean up of sites; it also would include any radiological decontamination beyond NRC-mandated standards. Activities that "do not involve the removal of residual radioactivity necessary to terminate the NRC license are outside the scope of NRC regulation."[46] Site restoration is a state-regulated activity, governed by non-NRC federal standards. The NRC's license transfer regulations do not require an applicant to demonstrate financial qualifications to cover site restoration costs. Site restoration costs nonetheless are relevant to this proceeding because Holtec intends to pay for those costs with the Palisades decommissioning trust, on which Holtec relies for its showing of financial qualifications.

---

[44] *See* Application at 18.

[45] *See id.*

[46] *See* "Standard Format and Content of Decommissioning Cost Estimates for Nuclear Power Reactors," Regulatory Guide 1.202 (Feb. 2005), at 2 (ML050230008) (Reg. Guide 1.202).

1. *Exemption Request*

The applicants acknowledge that to use the decommissioning trust for purposes other than radiological decommissioning would require an exemption from 10 C.F.R. § 50.82(a)(8)(i)(A). Section 50.82(a)(8)(i)(A) allows withdrawals from the trust fund to pay expenses for "legitimate decommissioning activities," consistent with the NRC's definition of decommissioning.[47] Spent fuel management and non-radiological site restoration activities do not fall within the NRC's definition of decommissioning.[48]

Therefore, concurrent with the application, HDI submitted a request for exemptions to allow it to use the trust fund for spent fuel management and site restoration expenses at Palisades.[49] The request includes and relies on the same cash flow analysis provided in the license transfer application.[50] HDI states that the analysis demonstrates that the trust fund "contains more than adequate funds to cover the estimated radiological decommissioning costs, as well as spent fuel management and site restoration costs for Palisades."[51]

---

[47] *See* 10 C.F.R. § 50.82(a)(8)(i)(A) (referencing the NRC's definition of decommissioning in § 50.2).

[48] As defined in 10 C.F.R. § 50.2, to decommission means "to remove a facility or site safely from service and reduce residual radioactivity to a level that permits – (1) Release of the property for unrestricted use and termination of the license; or (2) Release of the property under restricted conditions and termination of the license."

[49] *See* "Palisades Nuclear Plant HDI Request for Exemptions from 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv)" (Exemption Request), enclosed with Letter from Andrea Sterdis, HDI, to NRC Document Control Desk (Dec. 23, 2020) (Exemption Request Cover Letter). The exemption request and cover letter are available together at ML20358A239.

[50] *See* Exemption Request at 13, tbl.1.

[51] *Id.* at 2. In its request, HDI also seeks an exemption from 10 C.F.R. § 50.75(h)(1)(iv), which, with a few exceptions, similarly limits withdrawals from the decommissioning trust fund to decommissioning expenses.

A request for an exemption is not among the listed actions subject to a hearing opportunity under section 189 of the AEA.[52] But when a requested exemption raises questions that are material to a proposed licensing action—directly bears on whether the proposed action should be granted—a petitioner in an adjudicatory proceeding on the licensing action may raise arguments relating to the exemption request.[53] Holtec relies on the requested exemption from section 50.82(a)(8)(i)(A) for its demonstration of financial qualifications; therefore the exemption request and license transfer application are intertwined. To the extent that the proposed exemptions bear on Holtec's showing of financial qualifications for the license transfer, arguments relating to the requested exemptions fall within the scope of this proceeding.[54]

2. *Big Rock Point*

The application also addresses Holtec's financial qualifications to fund activities at Big Rock Point. The estimated cost to decommission the Big Rock Point ISFSI is $2,659,000.[55] Holtec states that it will provide financial assurance for decommissioning by the prepayment method and will meet the Part 72 requirements for decommissioning funding.[56]

---

[52] *See* AEA § 189(a)(1)(A), 42 U.S.C. § 2239(a)(1)(A).

[53] *See Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), CLI-16-12, 83 NRC 542, 549 (2016) (citing *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-01-12, 53 NRC 459, 467 (2001)).

[54] In two other recent proceedings involving similar exemptions, we likewise found that arguments addressing the potential impact of the exemption on the applicants' financial qualifications fell within the scope of the license transfer proceeding. *See Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Station, Units 1, 2, and 3 and ISFSI), CLI-21-1, 93 NRC 1, 16 (2021); *Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-20-12, 92 NRC 351, 362 (2020).

[55] *See* Application, Attach. E at 7.

[56] Application at 19 (referencing 10 C.F.R. § 72.30(b), (c), (e)).

Based on ENOI's actual current operating costs, Holtec estimates the annual cost of operating the Big Rock Point ISFSI to be $2,681,000 (in 2020 dollars).[57] Holtec intends to provide a dedicated fund that will continually contain one year's worth of estimated operating costs for the ISFSI. The application further states that Holtec will provide a parent support agreement to continually maintain the dedicated fund with one year's worth of estimated operating costs. The dedicated fund and associated parent support agreement would be established at or before closing and provided to the NRC.[58] Based on these assurances, which are described as a regulatory commitment, the application states that Holtec Palisades will be financially qualified to be the owner of Big Rock Point.[59] The application states that HDI will be financially qualified to be the licensed operator at Big Rock Point because Holtec Palisades—under the terms of its operating agreement with HDI—"will be required to pay for" HDI's costs of operation at Palisades and Big Rock Point.[60]

C. NRC's Oversight of the Financial Capability of Licensees in Decommissioning

The license transfer proceeding provides a threshold screening of applicants' overall technical and financial qualifications to become the holders of specific licenses. The review helps ensure that a license is not transferred to an entity lacking the financial capability to carry out the necessary activities under the license. But the NRC's oversight of financial capability to decommission and manage spent fuel does not end with the license transfer review. All licensees in decommissioning must show annually that they continue to have adequate funding for decommissioning and spent fuel management. As we stated recently in *Pilgrim*, the NRC assesses license transfer applicants' financial qualifications in light of the multiple regulatory

---

[57] Application, Attach. E at 8.

[58] Application at 19.

[59] *Id.*

[60] *Id.*

requirements designed to ensure that funding remains sufficient until no longer needed.[61] The NRC will continue to verify annually that licensees in decommissioning maintain adequate funding to cover both spent fuel management and decommissioning.

For instance, a licensee that has submitted a site-specific decommissioning cost estimate must annually provide a decommissioning funding status report. The report must include information current through the end of the previous calendar year, covering (1) the amount spent on decommissioning, both cumulatively and over the previous calendar year; (2) the difference between the predicted and actual costs for the work performed the previous year; (3) the remaining balance in the trust fund; and (4) an estimate of the costs projected to complete the decommissioning.[62] If the remaining decommissioning funds, together with the projected earnings on those funds (calculated at no greater than a 2% real rate of return), and any additional amount provided by another financial assurance method, are not sufficient to cover the estimated cost to complete decommissioning, the licensee must include in the status report additional financial assurance to cover the estimated remaining costs.[63]

Similar status reports monitor licensees' spent fuel management funding.[64] If the available spent fuel management funding is insufficient to cover the projected costs, the report must include a plan to obtain the additional funds to cover the costs.[65] In sum, while the license transfer financial qualification review constitutes an important screening review of an applicant's

---

[61] *See Pilgrim*, CLI-20-12, 92 NRC at 360.

[62] *See* 10 C.F.R. § 50.82(a)(8)(v).

[63] *Id.* § 50.82(a)(8)(vi).

[64] *See id.* § 50.82(a)(8)(vii)(A) - (B).

[65] *See id.* § 50.82(a)(8)(vii)(C). Beyond the annual status reports, other NRC requirements also help to ensure that decommissioning funding remains adequate. For example, before it can perform any decommissioning activity that would significantly increase the decommissioning cost beyond that estimated in its site-specific decommissioning estimate, a licensee must first notify the NRC, with a copy to the affected state(s). *See id.* § 50.82(a)(7).

qualifications to hold an NRC license, a licensee in decommissioning must continue to show every year that adequate funding for decommissioning and spent fuel management activities remains. This NRC monitoring of financial capability continues until all spent fuel has been removed from the site and the license has been terminated.

III. DISCUSSION

D. Intervention Requirements

To gain admission as a party in an NRC licensing proceeding, a petitioner must show standing and propose at least one admissible contention.[66] For standing, the request for hearing must address (1) the nature of the petitioner's right under the AEA to be made a party to the proceeding; (2) the nature and extent of the petitioner's property, financial, or other interest in the proceeding; and (3) the possible effect that any decision or order issued in the proceeding may have on the petitioner's interest.[67] In evaluating whether a petitioner has established standing, the Commission has long looked for guidance to judicial concepts of standing, which require a party to claim a concrete and particularized injury (actual or threatened) that is fairly traceable to the challenged action and is likely to be redressed by a favorable decision in the proceeding.[68]

An organization that seeks to establish representational standing must demonstrate how at least one of its members may be affected by the challenged licensing action and would have standing in his or her own right.[69] The organization must identify that member by name and

---

[66] *Id.* § 2.309(a), (d), (f).

[67] *See id.* § 2.309(d)(1)(ii)-(iv); *see also* Hearing Opportunity Notice, 86 Fed. Reg. at 8227.

[68] *See, e.g.*, *USEC, Inc.* (American Centrifuge Plant), CLI-05-11, 61 NRC 309, 311 (2005); *Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), CLI-99-4, 49 NRC 185, 188 (1999); *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995).

[69] *See, e.g.*, *Vermont Yankee Nuclear Power Corp. and AmerGen Vermont, LLC* (Vermont Yankee Nuclear Power Station), CLI-00-20, 52 NRC 151, 163 (2000).

address, and must demonstrate, preferably by affidavit, that the organization is authorized to request a hearing on behalf of that member.[70]

NRC regulations in 10 C.F.R. § 2.309(f) specify the contention admissibility requirements. For each contention, a petitioner must explain the contention's basis and provide supporting facts or expert opinion on which the petitioner intends to rely in litigating the contention. To be admissible, a contention must fall within the scope of the proceeding and be material to the findings that the NRC must make for the proposed licensing action. The petitioner must identify the specific portions of the application that the petitioner disputes along with the supporting reasons for each dispute; or, if a petitioner claims that an application fails altogether to contain information required by law, the petitioner must identify each failure and provide supporting reasons for the petitioner's belief. These requirements help ensure that the NRC institutes adjudicatory hearings only for issues that are supported by facts or expert opinion and that identify a dispute with the application on a question material to the NRC's decision.

E. Accuracy of Cost Estimates

Petitioners in this proceeding raise numerous challenges to the applicants' site-specific cost estimates for Palisades. Several factors guide our consideration of these challenges. First, as we recently stated, at this early stage in the decommissioning process cost estimates are necessarily uncertain.[71] And for Palisades, not only has decommissioning not yet begun, but Holtec plans to begin major decommissioning activities in November 2035, following a decade of dormancy. We anticipate that some of the current itemized costs for decommissioning work projected for the years 2036 and beyond may be updated. NRC guidance on site-specific decommissioning cost estimates indeed instructs licensees to update

[70] *See, e.g.*, *id.*

[71] *See Pilgrim*, CLI-20-12, 92 NRC at 367.

their site-specific decommissioning estimates at least every five years, and more frequently if new information warrants.[72]

Further, in license transfer adjudications we long have found financial assurance to be acceptable if it is based on plausible assumptions and forecasts, even if "'the possibility is not insignificant that things will turn out less favorably than expected.'"[73] We recognize that where much uncertainty still exists for financial predictions, a range of potential differing estimates and outcomes may be plausible, although some may be notably more or less conservative than others. For a demonstration of reasonable assurance of financial qualification, we do not demand the most conservative forecasts but will accept plausible forecasts.

We also have emphasized that the cash flow analysis in a license transfer application reflects a "snapshot in time."[74] Actual rates of return on the decommissioning trust fund are going to fluctuate above or below the projected, regulation-based annual real rate of 2%. Cost expectations may need to be refined as spent fuel management and decommissioning activities progress and actual costs, site conditions, and effectiveness of decommissioning strategies become better known. The funding picture may change, but that is why the NRC continues to oversee the status of licensees' funding until license termination.

Given the uncertainty of long-term cost predictions, the expectation that some estimated costs and gains may be under or overestimated, and the NRC's continued monitoring of the financial status of licensees in decommissioning, it is not the purpose of the license transfer proceeding to investigate and approve each of the numerous line-items of a site-specific

---

[72] *See* "Assuring the Availability of Funds for Decommissioning Nuclear Reactors," Regulatory Guide 1.159, rev. 2 (Oct. 2011), at 12 (ML112160012) (Reg. Guide 1.159) (the site-specific decommissioning cost estimate should be periodically reviewed and adjusted during both operation and storage periods, no less frequently than once every five years).

[73] *See Pilgrim*, CLI-20-12, 92 NRC at 368 (quoting *North Atlantic Energy Service Corp.* (Seabrook Station, Unit 1), CLI-99-6, 49 NRC 201, 222 (1999)).

[74] *See id.* at 367.

decommissioning cost estimate. And it will always be possible to suggest additional reasonable costs that could have been included in these estimates. The question is not whether cost estimates can be refined to be more accurate and comprehensive, but whether a material question has been raised about the overall financial qualification of the applicant. We therefore will admit for hearing only those "adequately supported assertions that a transfer applicant's financial assumptions and forecasts are implausible or unrealistic in a way that is material to our assessment of reasonable assurance."[75]

F. Michigan Attorney General Petition to Intervene and Request for a Hearing

Both Palisades and Big Rock Point are located within the boundaries of the state of Michigan. Under our regulations, therefore, the Attorney General of Michigan need not make any further demonstration of standing to intervene, which is uncontested.[76] The Attorney General proffers two contentions challenging the application. In the first contention, the Attorney General challenges cost estimates and other assumptions underlying the applicants' financial qualifications. In the second contention, the Attorney General claims that Holtec impermissibly assumes that it will receive an exemption. We admit four issues raised in Contention MI-1. We admit the Attorney General's challenge to (1) the applicants' estimated 11-year timeframe for the removal by DOE of all of the spent fuel at Palisades; (2) the reasonableness of the site-specific decommissioning cost estimate falling well below the minimum formula amount; (3) the 12% contingency allowance allocated to the radiological decommissioning, spent fuel management, and site restoration cost estimates; and (4) the applicants' description of their planned means to adjust funding if necessary to complete decommissioning and terminate the license.

---

[75] *Id.* at 368.

[76] *See* 10 C.F.R. § 2.309(h); *Applicants' Answer Opposing the Michigan Attorney General's Petition for Leave to Intervene and Request for a Hearing* (Mar. 22, 2021), at 4 (Applicants Answer to AG); AG Petition at 4-8.

1. Michigan Attorney General's Contention MI-1

In Contention MI-1, the Attorney General argues that Holtec failed to show financial qualification for the license transfers because it did not provide adequate decommissioning financial assurance and adequate funding for spent fuel management.[77] The Attorney General asserts that implausible assumptions underlie Holtec's cost estimates, and therefore that the "estimated costs understate what will be the actual decommissioning costs"; the decommissioning cost estimate is "unreasonably low"; and Holtec failed to demonstrate that it has sufficient funding to use the trust fund for purposes other than decommissioning.[78]

As a core concern, the Attorney General questions whether HDI and Holtec Palisades, "limited liability entities . . . with no outside source of revenue," would be able cover a potential funding shortfall.[79] More specifically, the Attorney General claims that the application fails to demonstrate that Holtec and its associated limited liability companies are "corporate entities with access to the financial resources necessary to procure additional financial assurance, if needed"—a demonstration that the Attorney General asserts must be made "*now*—not at some indeterminate point in the future when exemptions have been granted and the trusts run short of funds."[80]

The Attorney General states that because Holtec's decommissioning financial assurance representations rely on Holtec's site-specific cost estimates for decommissioning, spent fuel management, and site restoration, the accuracy of these cost estimates directly bears on whether Holtec Palisades and HDI are financially qualified to decommission Palisades. The Attorney General in Contention MI-1 challenges these cost estimates.

---

[77] *See* AG Petition at 9.

[78] *See id.* at 11-12.

[79] *See id.* at 10.

[80] *See id.* at 11.

a. Earlier Site-Specific Decommissioning Cost Analysis for Palisades

To support the claim that HDI's overall cost estimates are implausible and therefore unreasonable, the Attorney General offers a cost comparison to a previous site-specific decommissioning cost analysis for Palisades. TLG Services, Inc., a company that provides financial decommissioning services, prepared the earlier cost study dated March 2004 for previous Palisades licensees Nuclear Management Company, LLC, and Consumers Energy Company. Consumers Energy submitted the 2004 cost study to the Michigan Public Service Commission to support an application for an adjustment of ratepayer surcharges for decommissioning costs.[81] The Attorney General notes that Nuclear Management Company also provided the 2004 cost estimate conclusions to the NRC in 2006 as the preliminary decommissioning cost estimate for Palisades.[82] The Attorney General states that the HDI estimates assume a 10-year dormancy period while the TLG estimates assume a SAFSTOR decommissioning method using a 12.5-year storage period. The 2004 study provides cost estimates in 2003 dollars.

---

[81] *See* AG Petition at 13 n.32 (citing In the Matter of the Application of Consumers Energy Company for Adjustment of Its Surcharges for Nuclear Power Plant Decommissioning for the Palisades Nuclear Plant, Michigan Public Service Commission, Case No. U-14150, Hearing Date Mar. 15, 2005, Ex. A-1, Settlement Agreement, available at https://mi-psc.force.com/sfc/servlet.shepherd/version/download/068t0000000w61yAAA, with the following cited attachments: (1) Ex. A-2, Consumers Energy Company 2004 Report on the Adequacy of the Existing Provision for Nuclear Plant Decommissioning (Mar. 2004) (MPSC Case, Ex. A-2, Consumers Energy Company 2004 Report to MPSC); and (2) App. B to Consumers Energy Company 2004 Report to MPSC, TLG's Site-Specific Decommissioning Cost Study Executive Summary and Table 3 (Mar. 2004) (MPSC Case, TLG Services 2004 Cost Study Excerpts)).

[82] *See* AG Petition at 14 n.36 (citing Letter from Edward J. Weinkam, Nuclear Management Company, LLC, to NRC Document Control Desk, "Irradiated Fuel Management Plan and Preliminary Decommissioning Cost Estimates for Palisades Nuclear Plant" (Apr. 21, 2006) (Palisades IFMP and PDCE) (ML061140185)). The NRC requires power reactor licensees to submit a preliminary decommissioning cost estimate about five years prior to permanent cessation of operations. *See* 10 C.F.R. § 50.75(f)(3). Following NRC approval of the Palisades operating license renewal application, Nuclear Management Company withdrew the preliminary decommissioning cost estimate as no longer required. *See* Letter from Edward J. Weinkam, Nuclear Management Company, LLC, to NRC Document Control Desk (Feb. 7, 2007) (ML070390046).

The Attorney General contrasts the earlier-projected costs (in 2003 dollars) of approximately $584.1 million for license termination, $297.9 million for spent fuel management, and $78.3 million for site restoration, with HDI's lower projected costs (in 2020 dollars) of approximately $443.2 million for license termination, $166.1 million for spent fuel management, and $34.6 million for site restoration. If escalated to 2020 dollars, the Attorney General claims that the TLG Services 2004 estimates would be about $821.6 million for license termination, $419.0 million for spent fuel management, and $110.1 million for site restoration.[83] Compared to the earlier cost estimates, the Attorney General claims that HDI's estimates reflect a 52% reduction in the projected overall costs for Palisades.

Further, the Attorney General claims that no explanation has been provided to support this cost reduction, and that HDI's cost estimate lacks "sufficient detail . . . for an independent analysis of any factors that could support this 52% reduction in estimated costs."[84] The Attorney General acknowledges one obvious difference between the two cost analyses: HDI estimates $34.6 million for low-level radioactive waste disposal, while the 2004 study estimated $61.3 million in 2003 dollars ($86.2 million in 2020 dollars) for low-level waste disposal.[85] But the Attorney General states that this $54.6 million difference (in 2020 dollars) in the low-level waste burial costs does not explain the $378 million total decrease in estimated license termination costs (in 2020 dollars) between the two cost studies.

The applicants respond that new methodologies developed since the earlier 2004 study have improved efficiencies, reduced labor, and reduced the volume of low-level waste requiring disposal. They state that such changes "would undermine a direct comparison between new

---

[83] *See* AG Petition at 13 & n.32 (using the Consumers Price Index for All Urban Consumers, which the Attorney General states averaged just over 2% a year from 2003 to 2020).

[84] *See id.* at 13.

[85] *See* AG Petition, Attach., "Declaration of Nicholas J. Capik," at 5 n.4 (Capik Decl.).

and old decommissioning cost estimates and render it a long and ultimately fruitless effort."[86] They also state that the storage period in the 2004 estimate is slightly longer, and "assumed that spent fuel would remain in the pools for an eight-year cooling period, resulting in considerably greater cost during the dormancy period."[87] The applicants further state that that the low-level waste disposal market has changed, and further, that HDI entered into a fleetwide contract with Waste Control Specialists, LLC, for disposal of low-level radioactive waste at the WCS facility in Andrews County, Texas, which started operating in 2012. They also state that they incorporated subcontractor estimates for reactor segmentation and waste removal. And they state that their cost estimates are based on a "fleet model providing greater efficiency, shared experience, and shared corporate support."[88]

Although not recent, the 2004 study is a decommissioning cost study for Palisades, and we are not aware of a more recent site-specific cost estimate that was provided to the NRC. We also note that HDI in its cost estimate states that for reactor structures, small components, and equipment such as piping, pumps, and tanks, it calculated the decommissioning work durations and cost based on a "review of previous Palisades decommissioning cost analyses" together with other factors.[89] The 2004 study therefore at a minimum provides a Palisades-based data point for comparison on costs and provides facility-specific information.

But while we find the 2004 study relevant, the Attorney General's focus on the two studies' different bottom-line cost conclusions does not by itself raise a genuine dispute with the application. First, HDI had no obligation in the application or the cost estimate to compare its results with the 2004 study or to address differences. And how the Michigan Public Service

---

[86] *See* Applicants Answer to AG at 22.

[87] *Id.*

[88] *Id.*

[89] *See* DCE at 38. HDI does not identify the earlier cost estimate that it used.

Commission may have considered or used the 2004 study results is a state matter that does not bear on this license transfer. Second, the Attorney General provides us with no basis to assume that the earlier study, although seventeen years old, reflects a more reliable decommissioning estimate for today than HDI's current estimate. And with one exception addressed further below, the Attorney General does not use the specific cost information in the 2004 study to challenge the reasonableness of specific underlying costs in the HDI decommissioning cost estimate. It was the Attorney General's burden as a petitioner to review the earlier study to identify any items that may support a factual and material dispute with HDI's cost estimates.

We also are not persuaded that information in the two studies is insufficient to allow for some understanding of how the cost estimates differ. The Attorney General already identified the differences between the studies in the low-level waste disposal costs. But other notable differences also are apparent. For example, a higher contingency allowance included in the 2004 study accounts for some of that study's higher overall decommissioning costs.[90] And estimated labor costs for radiological decommissioning also differ markedly; the Attorney General does not challenge HDI's estimated labor requirements and estimated labor costs.[91] Further, the projected spent fuel management expenses in the earlier study extended over an approximately 37-year period following cessation of operations, while HDI's cash flow analysis

[90] The 2004 study allocated 20.37% for contingency. *See* Palisades IFMP and PDCE, Encl. 2 at 2. This percentage reflects approximately $118 million of the $584 million radiological decommissioning cost estimate in 2003 dollars (about $167 million out of $822 million in 2020 dollars), compared to HDI's 12% contingency allowance, which reflects about $53 million out of HDI's decommissioning cost estimate of $443 million (in 2020 dollars).

[91] *Compare* DCE at 34-35 (projected decommissioning labor cost of about $182 million in 2020 dollars) *with* MPSC Case, TLG Services 2004 Cost Study Excerpts, Section 3 at 2, tbl. 3.2 (projected radiological decommissioning labor cost of $294 million, in 2003 dollars). The 2004 study also identified additional labor costs of $121 million for spent fuel management and of $39 million for site restoration. *See* MPSC Case, TLG Services 2004 Cost Study Excerpts, Section 3 at 3-4, tbls. 3.3 & 3.4, respectively.

covers about twenty years of spent fuel management costs, with all fuel removed by 2041.[92] These are all evident cost-related differences between the studies.[93]

To the extent that HDI's cost estimate may be missing details necessary for the Attorney General to meaningfully assess the HDI estimate, it was the Attorney General's burden to identify any necessary missing information. And the pertinent question ultimately is not why HDI's cost estimate is less but whether the estimate is reasonable. The Attorney General's comparison of the two studies' respective overall cost conclusions does not, without more, raise a supported, genuine material dispute with the Palisades application.

ISFSI Operating Costs

The Attorney General raises one particularized cost comparison from the 2004 study to challenge HDI's estimated annual spent fuel management operating costs for the years 2027-29. The Attorney General notes that the 2004 study described an approximately $6 million a year average annual cost for post-decommissioning ISFSI operations; according to the Attorney General, this annual amount in 2020 dollars would be $8.44 million. The Attorney General goes on to argue that an $8.44 million annual ISFSI operating cost is significantly greater than HDI's estimated annual spent fuel management cost of $1.7 million for the years 2027-29. The Attorney General questions only HDI's estimated spent fuel management costs for those three years, which the Attorney General claims are "comparable" to the 2004 study's post-ISFSI decommissioning period; HDI's schedule and cash flow analysis project no major

[92] *Compare* DCE at 46 *with* MPSC Case, TLG Services 2004 Cost Study Excerpts, Section 3 at 3, tbl. 3.3.

[93] We note also that the full 2004 TLG cost study is available on our public ADAMS electronic database. *See* Letter from Edward J. Weinkam, Nuclear Management Company, LLC, to NRC Document Control Desk (Oct. 10, 2006), Encl. 2, "Decommissioning Cost Study for the Palisades Nuclear Plant," Prepared by TLG Services, Inc. (Mar. 2004) (Full TLG Services 2004 Cost Study) (ML062840446).

additional spent fuel management activities (such as transferring fuel from wet-to-dry storage or transferring fuel from dry storage to DOE) to occur during the years 2027-29.[94]

The Attorney General argues that HDI's estimated $1.7 million spent fuel management cost for each of the three years during 2027-29 is 80% less than the annual post-decommissioning ISFSI operating costs identified in the 2004 study, and that no explanation is provided for this difference. Additionally, the Attorney General compares HDI's $1.7 million estimated cost to the actual annual cost for maintaining the Big Rock ISFSI, which the application notes was $2.63 million in 2019.[95] The Attorney General argues that HDI provided no explanation for why its estimated cost for maintaining the Palisades ISFSI during the years 2027-29 would be "35% less than the actual [Big Rock Point] cost" for ISFSI maintenance.[96]

This comparison of spent fuel management costs also lacks adequate support and does not raise a material dispute for hearing. First, HDI had no obligation in the application to compare its estimates to the 2004 cost study and provide an analysis or explanation of cost differences. Second, the applicants provide an unchallenged explanation for why their estimated spent fuel management costs during the dormancy years 2027-29 are not directly comparable to post-decommissioning ISFSI operating costs and the current operating costs at Big Rock.

The applicants state that both the Big Rock ISFSI current operating costs and the 2004 cost study's estimated $6 million post-decommissioning ISFSI operating costs address *total* operating costs for a "standalone ISFSI."[97] In contrast, during the years 2027-29 of HDI's

---

[94] *See* AG Petition at 14-15 (citing DCE at 46).

[95] *See* Capik Decl. at 6 (citing LTA, Attach. E at 8).

[96] *See* AG Petition at 15.

[97] *See* Applicants Answer to AG at 23-24.

projected dormancy period, the Palisades ISFSI will not be a standalone ISFSI because the reactor will not have been decommissioned. The applicants state that for the years 2027-29 HDI allocated the Palisades site infrastructure costs (e.g., security, site upkeep, insurance, taxes) proportionately between the license termination cost category and the spent fuel management category. They state that the referenced 2004 study's spent fuel management costs reflect a *post-decommissioning* period in which *all* infrastructure costs are assigned to a standalone ISFSI facility, and that likewise, at Big Rock all infrastructure costs are assigned to the standalone ISFSI.[98]

On reply, the Attorney General neither addressed this explanation, nor provided any other ground to question the adequacy of $1.7 million for the annual spent fuel management cost for the years 2027-29. The Attorney General did not provide sufficient factual basis for its claim that HDI's estimated spent fuel management costs for the dormancy years 2027-29 are directly comparable to the post-decommissioning costs in the 2004 study or to the current Big Rock standalone ISFSI operating costs. Further, the Attorney General does not describe why the asserted underestimated spent fuel management costs for those three years in the dormancy period would materially call into question Holtec's overall financial qualification. Based on the information before us, the Attorney General has not established a supported, material dispute with the application on the adequacy of the $1.7 million estimate.

b. *Spent Fuel Management Assumptions for Transfer of All Spent Fuel Off of the Site*

(1) ASSUMED START DATE

The Attorney General challenges spent fuel management assumptions on which HDI's cost estimates are based. The Attorney General first contests HDI's assumption that DOE will begin to pick up spent fuel from Palisades in 2030. Specifically, the Attorney General states that

[98] *See id.* at 24 & n.103 (addressing Table 5-1 in the cost estimate, which estimates overall facility annual costs (reactor and ISFSI costs together) of about $6.3 million for each of the dormancy years 2027-29).

DOE is not currently working on a pilot interim storage facility and that DOE operation of such an interim facility is linked under the Nuclear Waste Policy Act to construction of a repository.[99] While there still is uncertainty regarding when DOE might begin to pick up spent fuel from nuclear power reactor sites, in two recent decisions we have accepted a 2030 start date as plausible.[100] As we stated in the *Pilgrim* proceeding, "there have been corporate and legislative initiatives aimed at providing interim storage options," and the NRC has received two separate applications for privately owned interim storage facilities.[101] Recently, the NRC completed its review and issued a license for one of these facilities.[102] While the other application is still under review, we accept as plausible that by 2030 a storage facility will be available to receive the Palisades spent fuel.

---

[99] *See* AG Petition at 16 & nn.45-46.

[100] *See Indian Point*, CLI-21-1, 93 NRC at 29.

[101] *See Pilgrim*, CLI-20-12, 92 NRC at 374 (citing 2018 Congressional Research Service report on civilian nuclear waste disposal); s*ee also* Congressional Research Service, "Civilian Nuclear Waste Disposal" (Sept. 14, 2020), at 3 (noting latest legislative initiatives to "authorize DOE to enter into contracts with nonfederal interim storage facilities").

[102] *See* Interim Storage Partners, LLC; WCS Consolidated Interim Storage Facility; Issuance of Materials License and Record of Decision, 86 Fed. Reg. 51,926 (Sept. 17, 2021). The SER acknowledges, "Before commencing construction, operation, and receipt of licensed material at the WCS [facility], the applicant stated that it expects to enter into a contract(s) with the DOE or other entities that may hold title to the spent fuel and that will provide the funding for facility construction, operation, and decommissioning, including any fees paid to hosting public entities." *See* "Final Safety Evaluation Report for the WCS Consolidated Interim Storage Facility" (Sept. 13, 2021), at 11-2 to 11-3 (ML21188A101); *see also* Applicants' Answer to AG at 25 (arguing that, even if necessary legislative changes to allow DOE to take title to the spent fuel were not enacted, DOE could pay for the interim storage or Holtec Palisades could seek to recover the costs of the interim storage from DOE); *Holtec International* (HI-STORE Consolidated Interim Storage Facility), CLI-20-4, 91 NRC 167, 176 (2020) (the "NWPA does not prohibit a nuclear power plant licensee from transferring spent nuclear fuel to another private entity").

(2) PROJECTED LENGTH OF TIME FOR TRANSFERRING ALL SPENT FUEL OFF-SITE

The Attorney General also challenges the application's projected timeframe of approximately eleven years for DOE to remove all spent fuel from the Palisades site.[103] We conclude that the Attorney General raises an admissible issue for hearing.

HDI assumes that DOE will begin accepting the Palisades spent fuel in 2030 and will complete the transfer of all fuel off the Palisades site by the end of 2040. HDI states that for planning purposes, "the fuel removal assumed in this estimate is based upon DOE acceptance of fuel according to the 'Oldest Fuel First' priority ranking."[104] HDI also states that Holtec Palisades will seek the most expeditious means of removing fuel from the site "based on shutdown reactor priority and other contract provisions."[105]

The DOE Standard Contract for spent fuel disposal establishes fuel acceptance procedures, including a spent fuel acceptance priority ranking, or queue. Except as otherwise provided for under the contract, the Standard Contract bases the priority of fuel acceptance on the age of the spent nuclear fuel, as calculated from the date of permanent discharge from the nuclear power reactor.[106] This priority ranking is commonly called "Oldest Fuel First."

The Attorney General disputes as unreasonably short HDI's projected 11-year spent fuel removal period and claims that this acceptance period results in significantly understated spent fuel management costs. The Attorney General bases this argument on the Standard Contract's oldest fuel first acceptance priority, together with a spent fuel acceptance rate or schedule that has been upheld by courts in litigation relating to DOE's partial breach of the Standard

---

[103] *See* AG Petition at 15-18; Capik Decl. at 6-8.

[104] *See* DCE at 22.

[105] *See id.*

[106] *See* Standard Contract for Disposal of Spent Nuclear Fuel and/or High-Level Radioactive Waste, 10 C.F.R. § 961.11 (text of the contract) (Standard Contract), art. VI.B.1 (Acceptance Priority Ranking).

Contract.[107] The Attorney General claims that the DOE acceptance schedule provides for 18,600 metric tons of uranium to be accepted in the first ten years of repository operation, followed by a DOE annual acceptance rate of 3,000 metric tons of uranium. Based on these rates, and given the total spent fuel amount projected to be covered by the Standard Contract, the Attorney General argues that "the last of Palisades spent fuel will not be removed for about 34 years after DOE acceptance commences."[108]

Using HDI's spent fuel transfer start date of 2030, the Attorney General argues that DOE would not accept the last of the Palisades fuel until about 2064, reflecting a 34-year fuel transfer period, ending decades after HDI predicts. As further support, the Attorney General states that the prior Palisades licensee, Consumers Energy Company, supported its 2003 ratemaking submittals before the Michigan Public Service Commission with a "nearly identical acceptance period of 35 years."[109] The Preliminary Decommissioning Cost Estimate for Palisades that Consumers Energy Company filed with the NRC in 2006 likewise projected the same 35-year

---

[107] *See* AG Petition at 17 & n.47 (citing U.S. Department of Energy, Office of Civilian Radioactive Waste Management, DOE/RW-0146, "Annual Capacity Report," (June 1987)). While the Standard Contract specifies the priority for ranking the order of spent fuel acceptance, it does not specify a particular *rate* of spent nuclear fuel acceptance. The Standard Contract instead required DOE to issue annual reports on acceptance priority rankings for receipt of fuel and annual reports on receiving capacity, including capacity information for the first ten years following projected commencement of operations of the initial DOE facility. *See* Standard Contract, art. IV.B.5. In litigation to assess damages for DOE's partial breach of contract, courts have used DOE's 1987 Annual Capacity Report to determine how quickly the plaintiff utility or owner would have been able to have had all spent fuel removed but for DOE's partial breach of contract. *See, e.g.*, *Pac. Gas and Elec. Co. v. United States*, 536 F.3d 1282, 1291-92 (Fed. Cir. 2008).

[108] *See* AG Petition at 17 & n.48; Capik Decl. at 7 n.18 (specifying underlying assumptions).

[109] *See* AG Petition at 17 (citing MPSC Case, Ex. A-2, Consumers Energy Company 2004 Report to MPSC at 18 (projecting a fuel transfer period spanning years 2013-2048)); *see also* Palisades IFMP and PDCE, Encl. 1 at 1-2.

fuel transfer period (2013-48), given both "DOE's generator/allocation/receipt schedules" based on the oldest fuel first priority ranking and "an anticipated rate of transfer."[110]

The Attorney General acknowledges that the Standard Contract has two provisions that potentially could be used to accelerate the acceptance of spent fuel by changing a specific site's position in the queue, but claims that there is no basis to assume that these alternative provisions can be utilized, or that these provisions would be available without a significant cost.[111] The Attorney General claims, therefore, that HDI failed to address or otherwise account for the substantial uncertainty associated with HDI's accelerated fuel acceptance schedule of 11 years.

Based on HDI's projected timeframe for DOE removing all Palisades spent fuel by the end of 2040, HDI's cash flow analysis depicts no additional spent fuel management costs following the year 2040. The analysis projects ISFSI decommissioning and license termination to occur in 2041. HDI's estimated total spent fuel management costs of $166,122,000 relies on the assumed spent fuel acceptance schedule. By not accounting for many additional years of spent fuel management costs until DOE is able to remove all of the fuel, the Attorney General claims that HDI significantly underestimates spent fuel management costs.

In their answer, the applicants argue that the two Standard Contract provisions potentially could be used to accelerate the fuel acceptance rate. Citing several court decisions, the applicants state that the Federal Circuit has upheld the use of the Standard Contract's

---

[110] *See* Full TLG Services 2004 Cost Study, Section 1 at 5; *see also id.*, Section 2 at 10 and Section 3 at 10; Palisades IFMP and PDCE, Encl. 1 at 1-2. Both the Consumers Energy Company ratemaking submittals and the Preliminary Decommissioning Cost Estimate for Palisades used the 2004 TLG Services cost analysis.

[111] *See* Capik Decl. at 7-8 & n. 20. One, under Article VI.B.1(b) ("Acceptance Procedures"), DOE could accord acceptance priority to permanently shutdown reactors. Two, under Article V.E ("Exchanges"), a party to a Standard Contract could exchange approved delivery commitment schedules with other parties to other contracts with DOE for spent fuel disposal (provided that DOE has the right in its sole discretion to approve or disapprove any such exchanges).

provision allowing potential exchanges of fuel acceptance schedules.[112] These decisions held that it could be assumed that, absent DOE's partial breach of contract, there would have been a market for exchanges, wherein utilities/owners would have negotiated and paid for an exchange of fuel acceptance schedules to move up in line and accelerate the transfer of their spent fuel.

But the applicants leave unaddressed the Attorney General's argument that such exchanges, should they be an option in the future, likely would entail a significant price. And the applicants' own cited case supports the Attorney General's position that potential exchanges of delivery schedules would entail a cost—"[b]uyers would only have induced sellers to part with their allocations by offering to share the benefits of such a bargain."[113] The applicants also note the Standard Contract's provision that DOE could choose to accord priority to shutdown reactors.[114] But the applicants' general references to these two Standard Contract provisions do not by themselves answer the Attorney General's challenge to the plausibility of the specific 11-year schedule on which the applicants rely. The applicants have not described how they applied their assumptions to reach their 11-year schedule.

The Attorney General's claim raises a supported, genuine dispute with the application on a material issue. Relying on alleged facts and supported by expert opinion, the Attorney General challenges what it calls a "shortened 11-year acceptance period."[115] As the Attorney General noted, based on both the oldest fuel first priority ranking and an anticipated rate of fuel

---

[112] Applicants Answer to AG at 26 & n.117 (citing court decisions relating to damages for DOE breach).

[113] *See Dairyland Power Coop. v. United States*, 645 F.3d 1363, 1372 (Fed. Cir. 2011) (citation omitted). The circuit court affirmed the lower court's discounting of $16.5 million from the plaintiffs' damages award, to account for what plaintiff Dairyland, a shutdown reactor with a small amount of spent nuclear fuel, would have paid in bargaining for acceptance allocation exchanges to move its 38 tons of spent nuclear fuel to the front of the DOE queue.

[114] *See* Applicants Answer to AG at 26.

[115] *See* AG Petition at 18.

transfer, Consumers Energy projected that it would take about 35 years to complete the transfer of all fuel from the site.[116] The Attorney General's expert also calculated a similar 34-year schedule based on HDI's 2030 start date, DOE's oldest fuel first priority ranking, and a specified spent fuel acceptance rate. And we note that current licensee ENOI similarly projects that it will take about 34 years to complete the transfer of fuel off of the site based on DOE's oldest fuel first priority ranking and assuming "a maximum rate of transfer of 3,000 metric tons of uranium/year."[117] Yet beyond general references to possibilities under the Standard Contract for accelerating fuel acceptance dates, neither the Palisades site-specific decommissioning cost estimate nor the applicants' answer clearly explains how HDI determined that 11 years constitutes a plausible schedule for removal of all of the Palisades spent fuel.

At the hearing, Holtec should clarify how it determined that 11 years constitutes a plausible transfer schedule. If HDI's schedule departs from the commonly applied maximum transfer rate of 3,000 metric tons of uranium/year, then Holtec should describe the spent fuel transfer rate that it used, and why it determined that a faster rate is plausible.[118] If Holtec bases

---

[116] *See id.* at 17 & n.49 (citing MPSC Case, Ex-A2, Consumers Energy Company 2004 Report to MPSC at 18); *see also* Full TLG Services 2004 Cost Study, Section 1 at 5.

[117] *See* Letter from Philip L. Couture, ENOI, to NRC Document Control Desk (Dec. 17, 2018) (ML18351A478), Encl. 2, "10 CFR 72.30 ISFSI Decommissioning Funding Plan, Palisades Nuclear Plant," at 2-4 (citing "Acceptance Priority Ranking & Annual Capacity Report," DOE/RW-0567 (July 2004)). ENOI bases its schedule on the same HDI expectation that Palisades will permanently cease operations in spring 2022, and on spent fuel transfers beginning in 2032 (only two years later than HDI), but it projects that the spent fuel will be fully removed from the Palisades site only in 2066. *See id*.

[118] The applicants claim that it is "also plausible (*though not assumed in HDI's analysis*) that DOE will accept fuel more rapidly than contemplated in litigation over the Standard Contract." *See* Applicants Answer to AG at 26 (emphasis added). The statement suggests that HDI based its 11-year transfer schedule on a rate of spent fuel transfer similar to that used by the Attorney General and by ENOI (e.g., assuming a maximum rate of 3,000 metric tons of uranium/year). If HDI used the same rate of transfer, it should clarify the specific underlying assumptions relied on for projecting the faster 11-year schedule.

The applicants also argue that the fuel transfer rate assumed in the Standard Contract is outdated. They argue that the allocation rate adopted by the Federal Circuit that is based on

its schedule on the commonly applied spent fuel transfer rate, then it should nonetheless explain how it reached the 11-year transfer accelerated schedule.

As a final matter, the applicants argue that even if they were to incur spent fuel management costs beyond 2040, the impact on their "overall cost estimate would be minimal" because if they incur more spent fuel management costs than they are currently projecting then "those costs would be recovered from DOE."[119] The applicants therefore argue that the Attorney General has not set forth with particularity any reason why the applicants' "overall . . . spent fuel cost analysis" is implausible in any material way.[120]

But the Attorney General argues that there is a genuine issue regarding whether "the impact on overall cost estimates would be minimal," and also that "there is no commitment by Holtec to use any costs recovered from DOE."[121] We agree. Based on the application, the NRC must be able to find adequate financial qualifications and reasonable assurance of decommissioning funding. If cost estimates on which the application relies for necessary findings are implausible, or if further inquiry is necessary to assess their adequacy, that is a matter warranting resolution in this license transfer proceeding.

Here, the Attorney General provides a supported claim challenging HDI's projected spent fuel transfer schedule. Whether HDI's projected transfer schedule appears plausible directly bears on whether the estimated costs for spent fuel management are reasonable or understated. If the latter, then the financial assurance specified in the application may be

---

DOE's 1987 Annual Capacity Report "does not necessarily represent a likely DOE acceptance rate in today's world, with consolidated interim storage facilities on the horizon and advancements in technology." *See id.* To the extent that HDI either applied a faster spent fuel transfer rate or claims a faster rate to be plausible, HDI can provide further support for use of a faster transfer rate in the hearing.

[119] *See* Applicants Answer to AG at 27.

[120] *See id.*

[121] *See* AG Reply at 14.

insufficient to support the application. In that event, some commitment regarding the DOE recoveries or other form of additional financial assurance may be warranted for this proposed license transfer. The Attorney General's dispute with the application on this point is therefore admissible.

c. Comparison of the Radiological Decommissioning Cost to the NRC's Minimum Formula

The Attorney General also claims that the HDI decommissioning cost estimate is unreasonable because the estimate falls below the NRC's decommissioning cost minimum formula amount calculated for the Palisades site. The comparison is relevant. As we outline further below, current NRC guidance calls for comparing the site-specific decommissioning cost estimate provided in a PSDAR to the minimum formula amount. Where the cost estimate falls below the minimum formula amount, the guidance calls for an explanation or further inquiry. We conclude that the Attorney General sufficiently raises a material dispute over the overall adequacy and acceptability of HDI's site-specific cost estimate because it falls significantly below the minimum formula amount.

(1) THE MINIMUM FORMULA REGULATIONS IN 10 C.F.R. § 50.75(B)-(C)

One of the NRC's key requirements to ensure that adequate funds are accumulated for decommissioning is the requirement in 10 C.F.R. § 50.75(b)(1) that an applicant for, or a holder of, an operating license under Part 50 provide a certification of decommissioning funding "in an amount which may be more, but not less, than the amount" stated in the NRC's table of minimum amounts in section 50.75(c)(1), as further adjusted using a rate at least equal to that provided by the adjustment factors in section 50.75(c)(2). In establishing the minimum formula requirement, the NRC sought a method with clear criteria that would both provide reasonable assurance of decommissioning funding while also minimizing licensee and NRC administrative

effort.[122] The prescribed amount calculated with the minimum formula was never intended to "represent the actual cost of decommissioning for specific reactors but rather is a reference level established to assure that licensees demonstrate adequate financial responsibility that the bulk of the funds necessary for a safe decommissioning are being considered and planned for early in facility life."[123] In issuing the regulation, the NRC made clear that licensees alternatively could certify their decommissioning funding to an amount based on a site-specific cost estimate, but only "if it exceeded the prescribed amount, which would be acting as a threshold review level."[124]

About a decade ago, the NRC staff re-evaluated the adequacy of the minimum formula, based in part on a 2011 draft study by Pacific Northwest National Laboratory (PNNL) that re-assessed the formula and its technical basis.[125] The staff concluded that the prescribed formula level continued to ensure that the "bulk of the funds" necessary for decommissioning were considered and planned for early in facility life.[126] The staff further stated that "[a]pplying

---

[122] *See* General Requirements for Decommissioning Nuclear Reactors, Final Rule, 53 Fed. Reg. 24,018, 24,030-31 (June 27, 1988).

[123] *Id.*

[124] *See id.* In later years, the Commission declined to revise section 50.75(b) to permit licensees of operating reactors to certify the decommissioning funding amount to a site-specific decommissioning cost estimate that was lower than the minimum formula amount. *See, e.g.*, Financial Assurance Requirements for Decommissioning Nuclear Power Reactors, Final Rule, 63 Fed. Reg. 50,465, 50,468-69 (Sept. 22, 1998) ("[T]he Commission has decided to defer allowing site-specific estimates that are lower than the amounts specified in 10 CFR 50.75(c) until additional decommissioning data are obtained."); Decommissioning Trust Provisions, Final Rule, 67 Fed. Reg. 78,333, 78,443 (Dec. 24, 2002) ("The Commission's position remains that the site-specific estimates may be used a basis for a funding plan if the amount to be provided is . . . at least equal to that stated in paragraph (c)(2) of … [§ 50.75]. The Commission does not intend to allow use of site-specific amounts lower than the formula values.").

[125] *See* "Assessment of the Adequacy of the 10 CFR 50.75(c) Minimum Decommissioning Fund Formula," Draft (Nov. 2011) (ML13063A190) (PNNL Draft Report).

[126] *See* "Staff Findings on the Table of Minimum Amounts Required to Demonstrate Decommissioning Funding Assurance," Commission Paper SECY-13-0066 (June 20, 2013), at 6 (ML13127A234) (SECY-13-0066). As described in the staff's paper, PNNL proposed a revised

the results of the PNNL study, the minimum formula represents the low end of the range of decommissioning costs," which the staff found "acceptable because raising the minimum could result in requiring some licensees to provide financial assurance greater than the funds needed to decommission."[127] The staff chose not to revise the formula in 2013, concluding that it "successfully establishes a common minimum standard measurement, or reference level, to which each licensee must accumulate committed financial resources during the life of the operating license."[128]

(2) ATTORNEY GENERAL'S COMPARISON OF HDI ESTIMATE TO MINIMUM FORMULA

HDI's estimated site-specific radiological decommissioning cost of $443 million is lower than the calculated minimum formula amount for Palisades. The application states that the minimum formula amount is $484.7 million, as calculated by ENOI in its 2020 decommissioning funding status report; ENOI has since updated the formula amount for Palisades to $503.75 million in its 2022 status report.[129]

In Contention MI-1, the Attorney General claims that the decommissioning cost estimate is unreasonable because it falls under the minimum formula amount—specifically, that HDI's estimate is "substantially smaller" than the minimum formula standard, which in turn the Attorney General argues historically "has understated actual license termination costs by 16% to 42%."[130] The Attorney General states that there have been multiple completed decommissioning projects

---

minimum formula with new weighting of the adjustment factors and a new base year (2010 instead of 1986). However, the staff concluded that revising the formula was unnecessary. *See id.* at 5-7.

[127] *See id.* at 6-7.

[128] *See id.* at 7.

[129] Application at 18 n.1; Letter from Phil Couture, ENOI, to NRC Document Control Desk, Decommissioning Funding Status Report (Mar. 28, 2022), Encl. 2, "ENOI Calculation of Minimum Amount – Palisades" (ML22087A500) (ENOI 2022 Status Report).

[130] *See* AG Petition at 18-19.

(e.g., Yankee Rowe, Haddam Neck, and Maine Yankee) where the actual decommissioning cost proved to be up to 42% more than minimum formula amount, and the formula is only intended to capture the bulk of costs. The Attorney General also cites to a 2012 report by the United States Government Accountability Office that compared the minimum formula amount for twelve reactors and concluded that the NRC formula "captured 57 to 91 percent of estimated site-specific cost for nine reactors," and that site-specific estimates were as much as $362 million more than the formula amount.[131] The Attorney General additionally argues that HDI has not "yet completed, nor made substantial progress towards completing" any of its planned decommissioning projects, and that therefore while HDI's intended fleetwide approach "could offer efficiencies, any such cost savings has yet to be realized."[132] The Attorney General therefore argues that "[a]bsent additional support," HDI's projected radiological decommissioning cost estimate is unreasonable because it "not only understates the generic formula but also actual historical experience" given that the minimum formula has understated actual license termination costs.[133]

The applicants dismiss the Attorney General's use of the minimum formula as a benchmark for assessing the overall plausibility of the HDI decommissioning cost estimate. They argue that the Attorney General provided "no reason to believe that a general estimate" is "objectively better than HDI's estimate."[134] They also state that the Attorney General neither

---

[131] *See id.* at 19 n.55 (citing GAO-12-258, Report to the Honorable Edward J. Markey, House of Representatives, "NRC's Oversight of Nuclear Power Reactors' Decommissioning Funding Could Be Further Strengthened" (Apr. 2012), at 13-14), available at https://www.gao.gov/products/gao-12-258. For 3 of the 12 reactors analyzed, the GAO report found that the minimum formula captured from 101 to 103% of the site-specific estimated cost. *See* GAO-12-258, at 13-14.

[132] *See* AG Petition at 20.

[133] *See id.* at 20.

[134] *See* Applicants Answer to AG at 29.

addressed nor disputed their explanation in the application for why the cost estimate is below the minimum formula amount, including their explanation that the formula amount, "developed nearly forty years ago[,] is a general level of adequate financial responsibility early in life."[135]

The application states that the section 50.75(b) requirement that decommissioning financial assurance at least meet the minimum formula will not apply to Holtec by the time of the planned transfer transaction's closing. It further states that by that time decommissioning trust funds will have been expended for "certain decommissioning planning and initial decommissioning activities," and that "at that juncture" decommissioning funding will be governed by section 50.82.[136] It goes on to state that section 50.82 will require annual decommissioning funding reports describing the "the declining site-specific decommissioning cost to complete decommissioning as decommissioning work is completed," but "includes no provision requiring the site-specific cost estimate to equal or exceed the generic formula amount."[137]

(3) ANALYSIS OF ARGUMENTS

First, contrary to the applicants' suggestion, the minimum formula has relevance beyond merely establishing a decommissioning funding floor early in reactor life. Although Palisades permanently ceased operations in May 2022, ENOI relies today on the minimum formula amount as its required minimum decommissioning funding assurance amount.[138] Under the proposed transfer, therefore, the minimum amount of funding required for radiological decommissioning would decline to the amount of HDI's decommissioning cost estimate, which is approximately $60 million lower than the most recent minimum formula calculation for

---

[135] *See id.* at 28.

[136] *See* Application at 18-19 n.1.

[137] *See id*.

[138] *See* ENOI 2021 Status Report at Encls. 5, 6.

Palisades. This is a material consideration given that the applicants are relying on this decommissioning cost estimate for their related exemption request to use the trust fund amounts in excess of the estimate to fund spent fuel management costs and non-radiological site restoration costs, and HDI's projected remaining funding at license termination is about $19 million.[139]

Further, current NRC guidance on site-specific decommissioning cost estimates calls for a comparison of the estimate to the minimum formula, and this guidance expressly applies to the site-specific cost estimates submitted under the decommissioning regulations in section 50.82 (e.g., with a PSDAR under section 50.82(a)(4)(i), or within two years of cessation of operations under section 50.82(a)(8)(iii)). For example, the staff's standard review plan for decommissioning cost estimates for nuclear power reactors specifies that if the site-specific estimate is less than the minimum formula amount and "adequate justification is not provided," then the staff is to seek additional information from the licensee "to resolve the deficiency."[140] The guidance goes on to state that if "adequate justification is not provided" then the site-specific cost estimate "shall be considered deficient."[141]

While NRC guidance documents do not impose requirements, the minimum formula amount remains a benchmark to assess the acceptability of a site-specific decommissioning cost estimate that is submitted with a PSDAR or within two years of permanent cessation of operations. And while the guidance does not state that the cost estimate provided under section

---

[139] *See* Application, Attach. E at 5 (Cash Flow Analysis).

[140] *See* "Standard Review Plan for Decommissioning Cost Estimates for Nuclear Power Reactors" (Final Report), NUREG-1713 (Dec. 2004), at 21 (SRP for Decommissioning Cost Estimates, NUREG-1713) (ML043510113); *see also id.* at 37; "Procedures for NRC's Independent Analysis of Decommissioning Funding Assurance for Operating Nuclear Power Reactors and Power Reactors in Decommissioning," NRR Office Instruction, LIC-205, rev. 6 (Apr. 3, 2017), § 4.4.4 at 14 (ML17075A095).

[141] *See* SRP for Decommissioning Cost Estimates, NUREG-1713 at 37.

50.82 cannot fall below the minimum formula, it indicates that a cost estimate falling below the formula amount warrants explanation. Whether a site-specific cost estimate meets the minimum formula amount therefore bears on whether a site-specific estimate is acceptable. Here, as the Attorney General argues, HDI's estimated radiological decommissioning cost estimate is at least 9% lower than the minimum formula amount.[142]

The applicants state that the application provides a discussion explaining why the site-specific decommissioning cost estimate falls below the formula amount. The referenced discussion states that HDI's cost estimate is significantly more reliable and more precise because it "reflects an actual, detailed estimate of decommissioning costs," as opposed to the minimum formula amount, which is based on generic inputs.[143] The discussion also states that HDI's cost estimate is based on "Palisades-specific plant data and historical information, actual site conditions, regulatory requirements applicable to Palisades, basis of estimate assumptions, low-level radioactive waste disposal standards, and available pricing data."[144] The applicants therefore argue that although the estimate is lower than the formula, HDI's reliance on the site-specific estimate in the license transfer application is justified.

---

[142] *See* AG Petition at 19. The difference between the estimated cost of $443 million and the 2022 minimum formula amount of $503.75 million is approximately $60 million, which is almost 12% of the minimum formula amount. The Attorney General additionally suggests that for a proper comparison of a site-specific decommissioning cost estimate to the minimum formula any costs allocated strictly to ISFSI decommissioning need to be subtracted first from the overall cost estimate. *See* AG Petition at 19 n. 54. We need not and do not reach the Attorney General's suggestions regarding whether any costs ought to be subtracted from HDI's radiological decommissioning cost estimate before comparing the estimate to the minimum formula amount.

[143] *See* LTA at 18 n.1.

[144] *See id*.

However, a site-specific decommissioning cost estimate should by definition always be based on site-specific conditions and factors.[145] Moreover, the NRC expects every site-specific decommissioning cost estimate to be a detailed and significantly more accurate and more reliable estimate than the minimum formula amount. Any licensee or applicant therefore could make a similar broad assertion regarding the factors on which their site-specific cost estimate is based. Yet, the referenced discussion in the application does not contain a substantive summary or explanation of how these identified factors (e.g., Palisades-specific plant data, historical information, actual site conditions, regulatory requirements applicable to Palisades) may have contributed to the HDI estimate falling below the minimum formula amount or any citation or link to portions of the cost estimate that might elaborate more substantively on these factors.

In short, the stated explanation is that the site-specific estimate is more reliable than the minimum formula because it is a site-specific estimate. Such an explanation effectively renders meaningless the NRC guidance on site-specific decommissioning cost estimates, which calls for an "adequate justification" if a site-specific cost estimate falls below the formula. While, as the applicants claim, the Attorney General did not specifically contest these particular statements said to justify HDI's lower decommissioning cost amount, on their face the referenced statements do not provided substantive information.[146] The explanation provided does not directly address and describe why the cost estimate falls approximately $60 million lower than the minimum formula amount which, as the Attorney General claims, is intended as a tool to

---

[145] The purpose of the cost estimate is to "provide the NRC with a detailed assessment that incorporates the cost impact of site specific factors." *See* Standard Review Plan for Decommissioning Reactors at 21; *see also id.* at 20.

[146] The Attorney General's reply calls the applicants' justification for its lower cost estimate "hardly a sufficient explanation." *See* AG Reply at 16.

help ensure that a licensee's financial assurance will capture the "bulk," not the entirety, of the funding that will be necessary to complete decommissioning.[147]

This issue also raises an underlying threshold legal question: does the minimum formula regulation in section 50.75(b) require the application to provide decommissioning financial assurance at least to the level of the minimum formula amount. The application states that, by the time of the projected license transfer closing, decommissioning funding will be governed by section 50.82, which does not contain a requirement that decommissioning funding meet or exceed the minimum formula level.[148] The regulations themselves leave unclear exactly when the section 50.75(b)-(c) minimum formula amount floor for decommissioning funding assurance may cease to apply. Further, the NRC staff in an inter-office Working Group final report acknowledged that the regulations are unclear regarding the applicability of the decommissioning financial assurance floor to licenses of reactors transitioning into decommissioning or that have permanently ceased operations.[149] While the Attorney General does not argue that under the regulations the decommissioning funding assurance must meet the minimum formula level, the issue is closely related to the Attorney General's cost comparison. The applicability of the regulation therefore may bear on our resolution of the Attorney General's minimum formula-based claims. We therefore also direct the parties and invite the staff to address in their submissions to the Presiding Officer, as part of the hearing record, their views on the applicability of the section 50.75(b) minimum funding requirement to this application.[150]

---

[147] *See id.*

[148] *See* Application at 18 n.1.

[149] *See* "Reactor Decommissioning Financial Assurance Working Group Final Report" (Apr. 29, 2020), at 20-21 (ML20121A188).

[150] Although the staff typically is a non-party in license transfer adjudications, NRC case precedent has included inviting the staff as a non-party to submit a brief with its views on

We conclude that the Attorney General has raised a sufficient dispute over whether a site-specific decommissioning cost estimate that falls well below the minimum formula amount reflects a plausible decommissioning cost estimate. For the hearing, the applicants should provide a more detailed or substantive explanation of the primary reasons that the cost estimate falls significantly below the formula amount.[151]

d. Contingency Funding

The Attorney General additionally challenges the 12% level of contingency allowance incorporated into the Palisades decommissioning, spent fuel management, and site restoration cost estimates. The claims are sufficiently supported and raise a genuine material dispute with the application. We therefore admit the contingency allowance dispute for hearing.

As HDI describes in its cost estimate, any project has "inherent uncertainty in the estimated quantities, unit rates, productivity, pricing, and schedule durations."[152] Site-specific decommissioning cost estimates submitted to the NRC therefore include an amount added under the title of "contingency" to cover unknown costs. The identified contingency value, expressed as a percentage, reflects the percentage of the overall final cost estimate that was added as a margin to cover unknown costs.

---

particular questions pertaining to a license transfer application. *See Power Authority of the State of New York* (James A. FitzPatrick Nuclear Power Plant, Indian Point, Unit 3), CLI-01-14, 53 NRC 488, 559-60 (2001).

[151] While not in the applicants' referenced justification for the lower cost estimate, in their answer the applicants provide as an example HDI's fleet-wide waste disposal contract with Waste Control Specialists. The applicants therefore can address the significance of the cost savings associated with the contract.

We note additionally that elsewhere in the application the applicants state they benchmarked their cost estimate against "similar estimates of dismantlement, demolition and waste management activities for other HDI decommissioning projects." *See* LTA, Attach. E at 2. Additional information regarding this benchmarking may be helpful to determine the plausibility of the applicants' site-specific decommissioning cost estimate.

[152] DCE at 40.

Based on NRC guidance regarding ISFSI decommissioning cost estimates, Holtec applied a contingency factor of 25% to its decommissioning cost estimates for the Palisades and Big Rock ISFSIs.[153] But for its other estimated costs for Palisades—radiological decommissioning (other than ISFSI), spent fuel management, and site restoration—Holtec applied a 12% contingency factor. The application states that the 12% level of contingency for Palisades will "reasonably bound the universe of risks that are appropriate to be taken into account at the estimate phase (considering industry practice, accepted NRC methodology, and the information that is available today)."[154]

Supported by a declarant, the Attorney General challenges the 12% level of contingency as inadequate. The Attorney General first argues that no support is provided for the conclusion that a 12% level of contingency will "reasonably *bound* the universe of risks that *should* be taken into account."[155] The Attorney General also argues that the 12% level is unprecedented and inconsistent with industry norms. As examples of industry norms, the Attorney General notes contingency allowances applied in other site-specific decommissioning cost estimates that have been submitted to the NRC; the cited allowances ranged from 16.33% to 18.2%.[156] The Attorney General additionally notes HDI's own site-specific decommissioning cost estimates for the *Oyster Creek*, *Pilgrim*, and *Indian Point* license transfer applications, which included contingency allowances of 15%, 17%, and 18%, respectively. The Attorney General

---

[153] *See* DCE at 23 (Palisades ISFSI) (citing "Consolidated Decommissioning Guidance, Financial Assurance, Recordkeeping, and Timeliness" (Final Report), NUREG-1757, vol. 3, rev. 1 (Feb. 2012) (ML12048A683) (Consolidated Decommissioning Guidance)); *see also* Application, Attach. E at 7 ("Big Rock ISFSI").

[154] *See* DCE at 41.

[155] *See* Capik Decl. at 9.

[156] *See* AG Petition at 21 n.60 (citing site-specific cost estimates for Crystal River Nuclear Generating Station Unit 2 (May 2018) (18.2% contingency); Fort Calhoun Station (Feb. 2017) (16.33% contingency); Monticello Nuclear Generating Plant (Oct. 2014) (16.94% contingency)).

acknowledges, but describes as an "outlier," one other relatively lower contingency allowance of 12.9%, applied to a decommissioning cost estimate for Three Mile Island.[157] Further, the Attorney General claims that if HDI's contingency allowance were increased to be "consistent with recent industry norms," the increased overall costs would exceed the projected available funding for decommissioning, resulting in a shortfall.[158]

NRC regulations do not address the content of the power reactor site-specific decommissioning cost estimate.[159] The NRC therefore does not mandate the use of a particular level of contingency allowance for the site-specific decommissioning cost estimate. NRC guidance provides that a cost category of contingency should be separately identified in the decommissioning cost estimate as an "allowance for unexpected costs."[160] Guidance further provides that the cost estimate should describe "how the contingency costs are calculated."[161] We expect that a reasonable estimate for decommissioning costs will include a percentage or other allowance that is allocated for contingency. But while the evaluation criteria applicable to the ISFSI decommissioning cost estimate specifies that a contingency factor of at least 25% be applied to the sum of all estimated decommissioning costs, for reactor decommissioning cost

---

[157] *See id.*

[158] *See* AG Petition at 21; Capik Decl. at 10. Specifically, Mr. Capik claims, as an example, that if a 17.15% value (the average of the contingency values applied in the Crystal River, Fort Calhoun, and Monticello estimates) were used as the contingency value for Palisades, the cost estimate would increase by $29 million. He states that if an 18% contingency level (such as that applied in the Indian Point estimate) were applied to the Palisades estimates, the overall estimated costs would increase by $34 million.

[159] For ISFSI decommissioning, NRC regulations require an "adequate contingency factor," and further require that the decommissioning cost estimate reflect the cost of an "independent contractor" performing all decommissioning activities. *See* 10 C.F.R. § 72.30(b)(2).

[160] *See* Reg. Guide 1.202 at 10; Reg Guide 1.159 at 11.

[161] *See* SRP for Decommissioning Cost Estimates, NUREG-1713, at 27.

estimates the NRC has not provided any guidance on calculating or assessing a contingency allowance.[162]

We have in recent adjudications rejected other challenges to contingency levels where petitioners had not identified a material supported dispute with the reasonableness of the levels applied, and the levels on their face did not appear disproportionately low.[163] Here, the Attorney General, supported by a declarant, claims that the challenged level is both unsupported and inconsistent with industry norms for such analyses, and that if the level were increased to be consistent with industry norms the projected available funding for decommissioning would be exceeded.[164]

The applicants state that the 12% contingency allowance is "within less than a percent of the 12.9% allowance used" for the Three Mile Island Unit 1 cost estimate.[165] They otherwise do not identify any similar examples of contingency allowances added to reactor decommissioning cost estimates, whether submitted to the NRC or used elsewhere. They also do not discuss any

---

[162] *See* Consolidated Decommissioning Guidance at 4-11.

[163] *See Pilgrim*, CLI-20-12, 92 NRC at 369-70.

[164] *See* Capik Decl. at 9. The professional experience summary for the declarant states that Mr. Capik's work has included evaluating decommissioning cost estimates for a state utility commission, performing cost estimates for commercial and governmental nuclear facilities, and developing a technical and financial model for estimating the costs for decommissioning nuclear reactors.

[165] *See* Applicants Answer to AG at 29 (citing *Indian Point*, CLI-21-1, 93 NRC at 22). The applicants rely on a statement in our *Indian Point* decision, which referred to a "range" of allowances commonly added to site-specific decommissioning cost estimates. We did not mean, however, that the lowest contingency allowance cited, the 12.9% allowance for TMI Unit 1, represents an industry standard level. We note, moreover, that the TMI Unit 1 site-specific decommissioning cost estimate explains how the 12.9% contingency allowance was derived. *See* Three Mile Island Unit 1 Site Specific Decommissioning Cost Estimate (April 2019), at 6-7 (ML19095A010). The applicants' reliance on the single allowance example of 12.9% does not dispute the Attorney General's argument regarding whether the Palisades analysis is consistent with industry norms.

of the specific assumptions underlying the 12% level or otherwise explain how they concluded that this level is adequate for the Palisades project.

The applicants instead argue that HDI justified the 12% level in the cost estimate, and that the Attorney General failed to challenge HDI's analysis. In support, the applicants quote the cost estimate: "Based on an evaluation of estimate uncertainty and discrete risk events, combined with experience gained through decommissioning efforts at Oyster Creek and Pilgrim, newly formed waste contracts, and contingency allowances used for other decommissioning projects, a Contingency Allowance of 12 percent was determined to reasonably bound the universe of risks that are appropriate to be taken into account."[166]

However, these generalities do not clarify how HDI derived its specific contingency level. The Attorney General specifically challenges as unsupported the conclusion that the allowance of 12% will reasonably bound the universe of risks that should be taken into account. We agree with the Attorney General that neither the applicants' answer nor the contingency analysis identifies support for the 12% level. The applicants' general references, for example, to HDI's evaluation of estimate uncertainty neither identify any of the uncertainties considered nor any uncertainty values or allowances assigned. HDI's analysis does not describe "how contingency costs are calculated"—an expectation set out in NRC guidance.[167] While these are not NRC requirements, the conclusions in the analysis are subject to challenge. And here the Attorney General disputes the 12% level as inadequate, asserting that it is both comparatively lower than industry norms and unsupported.

---

[166] *See* Applicants Answer to AG at 29-30 (citing DCE at 41).

[167] NRC guidance also states that a site-specific decommissioning cost estimate may summarize the results of cost analyses "with the underlying detail submitted as supplementary information." *See* SRP for Decommissioning Cost Estimates at 20. HDI did not provide underlying detail either in the analysis or separately.

The challenged conclusion also states that the 12% level was determined to be reasonably bounding "considering industry practice, accepted NRC methodology, and the information that is available today."[168] Yet, the Attorney General argues that the 12% allocated is not consistent with industry norms, and the analysis does not describe what industry practice or NRC methodology was used in reaching the 12% result. In short, there is no way to meaningfully assess why HDI concluded that the 12% level is appropriate for Palisades.

Nevertheless, the precise question—in a license transfer proceeding—ultimately is not whether HDI's contingency allowance for Palisades is relatively lower than those of other analyses. The material issue is whether the 12% contingency level is unreasonably low or inadequate for the Palisades project and could jeopardize the overall available funding for decommissioning and spent fuel management. We will not admit for hearing an issue that is not material to a decision on the application.

The applicants state that the Attorney General did not explain how it reached its estimate that using an average 17.15% contingency level instead of 12% would add about $29 million to the Palisades cost estimate. The applicants also argue that the Attorney General failed to address why additional funding assurance is needed or material "or whether accounting for additional contingency expenditures at various points in the project would jeopardize the $20 million surplus projected at license termination."[169] They note that they will need to submit annual financial assurance status reports to the NRC, and state that the estimated $160 million in spent fuel management costs will provide a "revenue stream from DOE recoveries [that] would easily allow a $29 million adjustment in funding assurance if it were necessary."[170]

---

[168] *See* DCE at 41.

[169] *See* Applicants Answer to AG at 30.

[170] *See id.*

We conclude that the disputed contingency analysis level is material. The application and associated exemption request rely on the decommissioning and spent fuel management estimates. A contingency factor is a "nearly universal element in all large-scale construction and demolition projects."[171] And we expect that a plausible decommissioning cost estimate will include an adequate contingency allowance. The contingency allowance is intended to cover "unforeseeable events that are almost certain to occur in decommissioning, based on industry experience."[172] Funds allocated for contingency typically have been "expected to be fully expended."[173] These are funds to cover costs considered inevitable in a large project (e.g., weather delays, equipment breakage). Contingency funds therefore are "an integral part of the total cost to complete the decommissioning process."[174] They have not been intended as surplus funds for possible but speculative events but instead funding necessary to cover

---

[171] *See, e.g.*, ENOI Site-Specific Decommissioning Cost Estimate for Pilgrim Nuclear Station, at xii (ENOI 2018 Site-Specific DCE for Pilgrim Nuclear Station), attached to ENOI Post-Shutdown Decommissioning Activities Report for Pilgrim Nuclear Station (Nov. 2018) (ML18320A034).

[172] *See id.*; *see also id.*, § 3.3.1 at 3.

[173] *See id.* at xii.

[174] *See id.*, § 3.3.1 at 4. HDI's contingency analysis may be different than those the NRC typically receives because it encompasses risk events that "may or may not occur," including not only potential events that may increase costs but also potential events or opportunities that may offset costs. *See* DCE at 41. The 12% allowance is said to account for both additional costs "expected to be incurred" and potential discrete risk events that may or may not occur and which would either "negatively" or "positively" impact the project objectives. *See id.*

The dispute we admit centers on whether the 12% contingency level reflects an adequate contingency level for the Palisades project. At the hearing stage for the merits inquiry, the applicants should provide a substantive description in their briefing materials of how they arrived at the 12% allowance level, including if appropriate, their estimate uncertainty evaluation model and discrete risk analysis, and as appropriate any other main factors and values underlying the allowance level. The applicants may also address relevant norms and standards for contingency allowances applied to reactor decommissioning cost estimates prepared at a similar decommissioning project stage. The Attorney General will be permitted to file an answer to the applicants' brief. We note, additionally, that the NRC has not required site-specific decommissioning cost estimates to encompass funding for highly uncertain costs. An acceptable contingency allowance therefore would not need to include highly uncertain costs.

expected costs.[175] Applying an adequate contingency allowance to baseline costs therefore helps both to minimize the risk of a funding shortfall and to mitigate the severity of any potential funding shortfalls.

The Attorney General argues that HDI provided no support for its conclusion that 12% reflects an adequate contingency level. The Attorney General showed that the total available funding as projected in the cash flow analysis—on which this application relies—could fall short of the projected costs if certain higher levels of contingency were applied.[176] And the Attorney General's petition also argues that HDI has not provided adequate support for its assertion that DOE recoveries or other additional funding will still be available in sufficient amounts to allow HDI to adjust funding if necessary.[177] The 12% contingency level bears on all of the estimates relied on in the application because it is applied across the board to the decommissioning, spent fuel management, and site restoration cost estimates. And the purpose of the contingency allowance is to help offset the risk of funding shortfalls—a purpose wholly in line with that of the the financial qualifications review. On estimated project costs of $644 million, the current projected available funding remaining in 2041 is less than $20 million; therefore, even a small

---

[175] There are, in addition, potential but highly uncertain events or circumstances that may occur and increase costs. For such highly uncertain potential costs, we rely on the licensees' annual funding status reports to identify unanticipated additional costs and if necessary to adjust funding. Similarly, cost judgments that may have been reasonable earlier may need to be readjusted later with real-time information. The annual review process serves to monitor such expenditures and funding adequacy. The annual funding review process, however, is not intended as a substitute for providing reasonable estimates of *expected* project costs in the site-specific decommissioning cost estimate. An adequate contingency analysis should encompass costs considered historically inevitable and therefore expected.

[176] To show that the contingency allowance dispute is material, the Attorney General's declarant provided examples of what he asserted would be the increase in estimated costs if the 12% contingency level were replaced with higher levels consistent with what he argues are "industry norms." *See* Capik Decl. at 10. While the applicants argue that his calculations should have been better explained, we conclude that for contention admissibility purposes he provided sufficient support to show, based on the cash flow analysis, that the relatively higher contingency levels could result in a funding shortfall.

[177] *See* AG Petition 34-35.

increase in the percentage of contingency expenditures could exceed the available funding. We find that the Attorney General raised a material dispute with the application regarding the adequacy of the allowance level and we admit the dispute for hearing.

e. Radioactive Waste Volumes and Waste Shipments

(1) WASTE VOLUMES

HDI estimates that the total amount of low-level radioactive waste (Classes A, B, and C) will be about 92 million pounds.[178] The Attorney General contends that this is a significantly smaller amount than that associated with "actual decommissioning projects."[179] The Attorney General identifies two completed decommissioning projects, Maine Yankee and Haddam Neck, which the Attorney General states generated 246 and 265 million pounds, respectively, of low-level radioactive waste. The Attorney General states that both projects involved pressurized water reactors of the same type as Palisades, and that Maine Yankee had about the same generating capacity as Palisades, while Haddam Neck was smaller.

The Attorney General claims that understating the low-level radioactive waste volumes could lead to substantially higher costs than those currently estimated in the site-specific cost estimate. Based on what the Attorney General claims is HDI's average disposal cost, the Attorney General argues that if the current estimated waste volume were increased from HDI's estimated 92 million pounds to the 246 million pounds of low-level waste removed from Maine Yankee, the estimated disposal costs would increase by $57.0 million, which is a greater value than the amount added to the HDI cost estimate for contingency. Additionally, the Attorney General claims that the cost estimate contains no detail to allow for an evaluation of the

[178] *See* DCE at 36. The projected waste volume in cubic feet is about 1.129 million.

[179] AG Petition at 22.

assumptions underlying the total waste volume "or why the total waste volume would deviate so significantly from past decommissioning projects."[180]

The Attorney General's comparison to two different decommissioning projects does not raise a genuine dispute with the application. First, the decommissioning of Both Haddam Neck and Maine Yankee are known for having involved unusually large amounts of low-level waste.[181] That the Maine Yankee and Haddam Neck reactors were pressurized reactors of similar capacity does not suggest that the low-level waste volumes generated during their decommissioning (completed in 2005 and 2007, respectively) would be representative of the amount of low-level radioactive waste at Palisades or at any other facility. The Attorney General provided no basis to suggest that these two examples reflect a norm for decommissioning projects, or that these unusually large low-level waste amounts or anything approaching them should be expected at Palisades. Nor is a license transfer applicant or licensee required to

---

[180] *See id.* at 22.

[181] *See* PNNL Draft Report at 5-6, Figure 5.2 (in comparison with several actual and estimated low-level waste volumes for various plants, the Haddam Neck and Maine Yankee waste volumes are "off the scale"); *see also* Applicants Answer to AG at 31-32. As highlighted by PNNL's draft study reassessing the adequacy of the minimum formula, the Haddam Neck and Maine Yankee decommissionings generated notably large quantities of waste. *See* PNNL Draft Report at 4-16; 4-54, 4-122. The Haddam Neck licensee committed to meet the state's more restrictive radiological standards, and because the groundwater beneath the site was classified for residential use, the licensee also committed to meet the Environmental Protection Agency's (EPA) maximum contaminant levels for drinking water of 4 mrem/yr groundwater dose; soils not meeting the applicable requirements were removed as radioactive waste. *See id.* at 4-13 to 4-14; *see also id.* at 4-20. Consequently, "the volume of LLW generated at [Haddam Neck] included a significant quantity of contaminated soil that had to be removed to meet the EPA" drinking water standards. *See id.* at 4-122. Even so, the "majority of the [low-level waste] was demolition debris having very low activity, much of which was shipped to waste processors for treatment and/or disposal at controlled landfills near Memphis and Oak Ridge, Tennessee, at lower cost than shipment to and disposal at the Clive, Utah, disposal facility." *See id.* at 4-21.

Also relevant, the subsurface monitoring and records requirements that the NRC established in 10 C.F.R. § 20.1501(a)-(b), as part of the Decommissioning Planning Rule issued in 2011, renders much less likely that a licensee today would discover a significant amount of previously unknown soil contamination. *See* Decommissioning Planning, Final Rule, 76 Fed. Reg. 35,512, 35,514 (June 17, 2011). In any event, the Attorney General does not provide an adequate link between Palisades and the low-level waste volumes from these two decommissioning projects.

compare its own site-specific estimated low-level waste volumes to those of other projects. The Attorney General also did not identify what nature of detail she claims should have been provided.

Further, none of the claims that the Attorney General raises suggests that 92 million pounds is either a relatively small volume of low-level waste for a nuclear power reactor generally, or, more significantly, an implausibly small amount for Palisades. The application states that HDI "used ENOI estimates of the type and quantity of waste as a reference condition and increased specific waste streams to reflect the HDI decommissioning approach."[182] The Attorney General does not claim that HDI's estimated low-level waste quantities are uncharacteristically low projections.[183]

While the Attorney General is correct that a petitioner need not prove their case at this stage, it is the petitioner's burden to provide the information necessary to satisfy the contention admissibility requirements and to demonstrate a genuine dispute with the application.[184] The Attorney General's arguments challenging the estimated volume of low-level waste do not establish a supported genuine dispute with the application.

(2) TRANSPORTATION OF RADIOACTIVE WASTE

The Attorney General also raises a transportation-related claim regarding radioactive waste. Citing to the PSDAR, the Attorney General notes HDI's intent to transport Class A

---

[182] *See* Application, Attach. E at 2.

[183] Site-specific decommissioning cost estimates submitted to the NRC routinely provide projected low-level radioactive waste quantities. *See, e.g.*, ENOI 2018 Site-Specific DCE for Pilgrim Nuclear Station, Section 5, at 5 (tbl.5.1, Decommissioning Waste Summary).

[184] *See, e.g., Baltimore Gas & Electric Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-14, 48 NRC 39, 41 (1999); *see also Interim Storage Partners, LLC* (WCS Consolidated Interim Storage Facility), CLI-20-14, 92 NRC 463, 486 (2020) ("[I]t is the petitioner's burden to explain why a contention should be admitted.").

low-level radioactive waste and certain other waste using a combination of truck and rail.[185] Because there is no active rail at Palisades, the PSDAR also states that a truck will be used to deliver the waste to a transload facility. HDI further states that it might elect to ship large plant components by barge.

The Attorney General argues that if trucks are used to transport the decommissioning waste, Michigan residents are likely to be harmed by noise, dust, traffic, pollution emissions, damaged infrastructure, and an increased potential for accidents. The Attorney General observes that the NRC's Generic Environmental Impact Statement for Decommissioning evaluated the environmental impacts of truck shipments. The Attorney General argues, however, that the GEIS describes the expected number of truck shipments during decommissioning to average "much less than one per day," while the Attorney General concludes that, based on the HDI's estimated low-level waste volumes, the Palisades waste volume "could result in over 1.8 shipments per day on average."[186] Noting that 10 C.F.R. § 50.82(a)(6)(ii) prohibits licensees from performing decommissioning activities that result in significant environmental impacts that have not been previously reviewed, the Attorney General argues that the PSDAR does not explain how the truck shipments of waste "will not result in changes to local traffic or damage local infrastructure" and that the license transfer application does not address how the planned Palisades activities will conform to the GEIS.[187]

The Attorney General's claims fall beyond the scope of this proceeding. The proceeding is focused on the transfer of the Palisades and Big Rock licenses: whether the proposed

---

[185] *See* AG Petition at 22-23 (citing PSDAR at 11).

[186] *See id.* at 23 & n.65 (citing "Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities, Supplement 1 Regarding the Decommissioning of Nuclear Power Reactors" (Final Report), NUREG-0586, Supplement 1, vols. 1-2 (Nov. 2002) (ML023470304) (Decommissioning GEIS).

[187] *See* AG Petition at 23.

transferees have shown that they are qualified technically and financially to hold the Palisades and Big Rock licenses.[188] The proceeding's limited scope does not encompass a review of the potential environmental impacts of HDI's planned decommissioning activities. While select parts of a PSDAR are necessarily relevant to license transfer because they directly relate to financial and technical qualifications, most topics addressed in a PSDAR do not fall within the license transfer review.[189] The environmental impacts of decommissioning do not fall within the scope of a license transfer proceeding.

In addition, the NRC has determined by rule that certain categories of licensing actions do not individually or collectively have a significant effect on the environment. Except in the case of special circumstances as determined by the Commission, no environmental assessment or environmental impact statement is required for these categories of licensing actions, which are categorically excluded from the need to prepare an NRC analysis under the National Environmental Policy Act (NEPA). License transfer actions are among the categories of action that the NRC has categorically excluded from the need to perform additional environmental analysis.[190] Consequently, unless we determine that special circumstances are present, an

---

[188] *See* 10 C.F.R. § 50.80(b) (addressing what information a license transfer application must contain).

[189] The PSDAR provides a general overview for the public and for the NRC of the licensee's proposed decommissioning activities. *See* Decommissioning of Nuclear Power Reactors, Final Rule, 61 Fed. Reg. 39,278, 39,281 (July 29, 1996) (Decommissioning Rule). It also informs the NRC staff of the licensee's decommissioning schedule, enabling the staff to plan for inspections and decommissioning oversight activities. The NRC will provide public notice of a PSDAR and an opportunity for public comment, and it will hold a public meeting on a PSDAR. But a PSDAR does not require NRC approval. This is because a PSDAR does not authorize a licensee to perform any decommissioning activity that is not already permitted under the license or any activity that would result in significant environmental impacts not already reviewed. A licensee that has submitted certifications of permanent cessation of operations and permanent removal of fuel therefore may begin to perform major decommissioning activities consistent with its PSDAR ninety days after the NRC has received the PSDAR. *See* 10 C.F.R. § 50.82(a)(5).

[190] *See* 10 C.F.R. § 51.22(c)(21). A categorical exclusion reflects that the NRC has established a sufficient administrative record to show that the subject actions do not have a significant effect

environmental assessment or environmental impact statement is not required for an NRC approval of direct or indirect license transfers.

The Palisades license transfer application states that the proposed transfer falls within the categorical exclusion regulation.[191] The Attorney General's petition does not address the categorical exclusion for license transfers. To the extent that the Attorney General is claiming that additional environmental analysis of the potential impacts of truck shipments of waste is necessary for approval of this license transfer application, such a claim impermissibly challenges the categorical exclusion regulation.

The Attorney General on reply seeks to recast the radioactive waste shipment claims as within the scope of this proceeding by describing them as relating to adequate financial assurance to conduct decommissioning in a safe and timely manner.[192] But it is "well established in NRC proceedings that a reply cannot expand the scope of the arguments set forth in the original hearing request."[193] The transportation arguments raised in the petition expressly challenged the adequacy of environmental analyses, not any financial assurance information. Nor do the reply's new general statements about financial assurance raise a genuine and material dispute for hearing.

---

on the environment, either individually or cumulatively. *See* Categorical Exclusions from Environmental Review, Final Rule, 75 Fed. Reg. 20,248, 20,251 (Apr. 19, 2010).

[191] *See* Application at 21.

[192] *See* AG Reply at 22 (claiming that petition's arguments on waste shipments are factual disputes that could "significantly impact the decommissioning cost estimates").

[193] *See Nuclear Management Co., LLC* (Palisades Nuclear Plant), CLI-06-17, 63 NRC 727, 731-32 (2006).

f. Unaddressed Risks

(1) DELAY

The Attorney General argues that there are at least seven ways that HDI may encounter significant, unaccounted for, cost overruns that could lead to a shortfall in funding. The Attorney General first argues that there likely will be delays in the Palisades work schedule, leading to increased costs for overhead and project management. The Attorney General claims that the "risk of delay in the decommissioning schedule exists in all decommissioning projects for reasons including identifying unknown conditions requiring expanding the scope of planned activities or creating the need for additional activities."[194] Such delays, the Attorney General claims, would both directly increase decommissioning costs and increase the costs of overhead and project management. The Attorney General additionally states that HDI identified a delay in the Pilgrim decommissioning schedule, which lengthened the schedule by 2.5 to 3 years.

These arguments regarding delay essentially fall within two categories: delays of a nature common to all decommissioning projects and that therefore are expected to occur and delays due to unanticipated circumstances that significantly expand or change the scope of the project. As to the former, the contingency allowance that is customarily added to the site-specific decommissioning cost estimates is intended to account for those additional costs considered "historically inevitable over the duration of a job of this magnitude," such as from weather delays and tool breakages, among others.[195] The allowance added to the Palisades site-specific decommissioning cost estimate therefore should reasonably encompass such events, which although they cannot be predicted individually are common eventualities expected to occur. And we have admitted for hearing the Attorney General's challenge to the

---

[194] *See* AG Petition at 24; *see also* Capik Decl. at 11-12.

[195] *See, e.g.*, ENOI 2018 Site-Specific DCE for Pilgrim Nuclear Station, Section 3.3.1 at 3; Full TLG Services 2004 Cost Study, Section 3 at 3.

sufficiency of the Palisades contingency allowance. This proceeding therefore will include taking a closer look at the overall adequacy of the 12% contingency allowance level to cover generally the typical and expected occurrences that add to project costs.

As to potential delays due to HDI "identifying unknown conditions" that will require "expanding the scope of planned activities," it has been neither required nor customary for NRC site-specific decommissioning cost estimates to provide additional margins for uncertain events that would significantly expand or change the planned scope of the decommissioning project.[196] Rather than require cost estimates to provide for numerous potential but uncertain events, we rely on our monitoring of each licensee's decommissioning and spent fuel management funding to require adjustments to funding if and when needed. Once a licensee has submitted to the NRC a site-specific decommissioning cost estimate, it must annually provide both a decommissioning funding and a spent fuel management funding status report. The decommissioning report includes specific information on how much money was spent the previous calendar year on decommissioning, whether and to what degree the previously estimated costs deviated from the actual costs spent on work performed, and the estimated remaining costs to complete the decommissioning.

Any circumstance—whether delay-related or not—that results in a significant, unanticipated cost would need to be reported in the yearly decommissioning funding and financial assurance status reports, which are publicly available. NRC guidance on adjusting cost estimates also directs licensees to update decommissioning cost estimates annually for inflation, and "as appropriate" for status changes, including "updated information about the

---

[196] *See, e.g.*, ENOI 2018 Site-Specific DCE for Pilgrim Nuclear Station, Section 3 at 5-6 (where contingency analysis states that "revisions or updates" of the cost estimate will be made to account for changes in project work scope due to events such as the discovery of unexpected levels of contaminants, contamination in places not previously expected, variations in plant inventory or configuration not indicated by as-built drawings, changes in site release criteria, policy decisions altering national commitments including the start and rate of acceptance of spent fuel by the DOE).

facility conditions, such as larger levels of contamination than anticipated; updated waste disposal conditions; updated residual radioactivity limits."[197]

To date licensees typically have included an allowance in the site-specific cost estimates to cover the uncertainties associated with common, expected contingencies given the project's scope; additional significant costs, if any, for activities that significantly alter or expand the project's scope would need to be reported in the annual financial assurance status reports, with any associated adjustment to financial assurance, if necessary, provided accordingly in the report.[198] Licensees also must notify the NRC and the affected State in writing before making any significant schedule change from those schedules and actions described in the PSDAR, including changes that significantly increase cost.[199]

That HDI changed its decommissioning schedule for Pilgrim does not mean the same will occur at Palisades, and in any event, the two last decommissioning funding status reports for Pilgrim do not indicate a projected shortfall in funding.[200] The Attorney General's claim that the schedule delay at Pilgrim resulted in overhead and project management cost increases that "can be estimated to be as much as $100 million" is unsupported and does not raise a genuine dispute with the Palisades application.[201]

---

[197] *See* Regulatory Guide 1.159 at 12.

[198] *See* 10 C.F.R. § 50.82(a)(8)(v) (if financial assurance methods being relied on will not cover the estimated cost of decommissioning completion, the financial assurance status report "must include additional financial assurance to cover" the cost).

[199] *Id.* § 50.82(a)(7).

[200] *See e.g.*, Letter from Andrea L. Sterdis, HDI, to NRC Document Control Desk (Mar. 31, 2021) (ML21090A336), Encl. 2, "Annual Decommissioning Funding Spent Fuel Management and Financial Assurance and Spent Fuel Management Status and Financial Assurance Report," tbl.2 at 7. HDI's last two status reports cover both the Pilgrim and Oyster Creek decommissioning projects and the associated trust funds.

[201] *See* AG Petition at 25.

The Attorney General's various claims of potential delays in work schedule leading to increased costs do not identify a material deficiency in the application. That there can be delays in any decommissioning project does not raise a supported and genuine material dispute with this application. As we noted, the contingency allowance customarily has covered the sort of delays inevitable in decommissioning projects, and the Attorney General will have the opportunity to litigate whether the contingency allowance is adequate. To the extent that the Attorney General claims that there may be substantial unanticipated cost increases from substantial delays, the claims are speculative or otherwise unsupported, or they demand a level of conservatism of these estimates that we do not require or expect. The Attorney General's arguments regarding potential delays do not raise a genuine material dispute for hearing.

(2) POSSIBILITY OF DISCOVERING UNKNOWN CONTAMINATION; RISK OF RADIOLOGICAL INCIDENT

We similarly find that the Attorney General's argument that "there is the possibility of discovering previously unknown radiological or non-radiological contamination" does not raise a supported material issue.[202] As the Attorney General recognizes, "the common application of contingency in [NRC] cost estimates is for uncertainty associated with known scope," not "changes in work scope such as additional work required to deal with unexpected contamination."[203] If previously unknown radiological contamination is discovered and the newly-discovered contamination would result in significant additional expenditures to clean up, the estimated additional costs would need to be included in the annual decommissioning status funding report and the site-specific decommissioning cost estimate adjusted as appropriate.

The Attorney General also does not identify any reason to expect that significant unknown contamination likely would be discovered at the Palisades site. HDI states that it

---

[202] *See id.* at 26.

[203] *See id.* at 27.

reviewed the Palisades records of spills and other unusual occurrences involving the spread of contamination, which are records that licensees must maintain under 10 C.F.R. § 50.75(g). It states that the events involving the spread of contamination in and around the facility are well documented and "the fate and transport of contaminants are generally understood."[204] And we expect that the likelihood of a licensee in decommissioning discovering significant amounts of previously unknown contamination has decreased substantially due to the requirements of the Decommissioning Planning rule. The rule requires licensees to conduct subsurface radiological surveys to evaluate concentrations or quantities of residual radioactivity, and it requires them to maintain the survey results as records important to decommissioning.[205]

The Attorney General also claims that the application and PSDAR do not identify "specific plans" for performing site characterization activities to identify, categorize, and quantify radiological and non-radiological contamination.[206] But by rule the NRC only requires a full site characterization to be submitted with a license termination plan, which must be submitted at least two years before the date of license termination and which also must include an updated site-specific decommissioning cost estimate. For Palisades, the current schedule projects the license termination plan to be submitted in early 2037.[207] Approval of the license termination plan requires a license amendment and therefore would be subject to an opportunity for hearing. And while the PSDAR and the application need not describe specific plans for a site

---

[204] *See* DCE at 21.

[205] *See* 10 C.F.R. § 20.1501(a)-(b).

[206] *See* AG Petition at 26.

[207] *See* DCE at 45; *see also* 10 C.F.R. § 50.82(a)(9)(ii)(A), (F).

characterization, the PSDAR and cost estimate nevertheless indicate the general project stages or timetables in which HDI intends to perform site characterization activities.[208]

The Attorney General next argues that there is a risk of a radiological incident at the site, such as during the transfer of spent fuel into dry casks. The Attorney General claims that such an incident "could greatly increase the costs of decommissioning," as well as cause delay that would impact project management and overhead costs.[209] For the reasons already described, we do not require the site-specific cost estimate to include estimated costs or allowances to cover highly uncertain contingencies such as substantial delay caused by a potential significant accident event. Such events, if they were to occur and if they added significantly to costs, would need to be reflected in revised cost estimates and the annual decommissioning funding status report.[210]

(3) STATE STANDARDS FOR SITE RESTORATION

The Attorney General additionally challenges HDI's estimated cost of site restoration, which is $34,679,000. The NRC does not regulate site restoration. Site restoration also does not fall within the NRC's definition of decommissioning in 10 C.F.R. § 50.2, and therefore under NRC regulations the decommissioning trust fund cannot be used to pay for site restoration

---

[208] For example, the PSDAR states that site-wide characterization activities to identify, categorize, and quantify radiological, regulated, and hazardous waste will begin in Period 1 (Pre-Decommissioning Planning and Preparation Activities) with surveys to establish contamination and radiation levels, but will not be completed until Period 4 (Dismantlement). *See* PSDAR at 8-9. As the Attorney General notes, "some characterization cannot be completed until some amount of dismantlement is performed." *See* AG Petition at 27. The Palisades master summary schedule projects site characterization to be performed during the demolition/dismantlement period and completed in 2036, the first year following the end of the dormancy period. *See* DCE at 45.

[209] AG Petition at 27.

[210] Further, to the extent that a radiological incident event might cause damage to onsite property, the application specifies that Holtec Palisades, as a regulatory commitment, will obtain onsite property damage insurance, and will provide proof that the coverage will be in place on the effective date of the license transfers. *See* Application at 20.

expenses. The estimated cost of site restoration falls within the scope of this proceeding, however, because HDI also seeks an exemption allowing it to use the decommissioning trust fund for site restoration activities. HDI intends to begin site restoration activities only after the dormancy period. Site restoration would be performed concurrently with radiological decommissioning activities, starting in late 2035 and extending through 2041, the year HDI expects the license to be terminated.[211]

The Attorney General argues that either state requirements "beyond those assumed by HDI" or unanticipated site conditions "could require greater expenditures" for site restoration.[212] Because site restoration will be performed in parallel with license termination, the Attorney General argues that Michigan site restoration requirements beyond those assumed in the estimated costs would reduce the funds available for radiological decontamination and license termination. The Attorney General further argues that the application and PSDAR do not identify the requirements for site restoration that were assumed to apply, and that there is no provision for contingency or allowances to account for any state requirements beyond those assumed for the estimates. And the Attorney General notes that in the 2004 cost study for Palisades the site restoration costs were estimated to be $78.3 million in 2003 dollars (an amount which the Attorney General claims in 2020 dollars would be $110.1 million).

In short, the Attorney General argues that increased site restoration costs due to state requirements could impact whether funding remains adequate to cover all license termination and spent fuel management activities. But to litigate a claim about potential additional costs due to state standards, it was incumbent upon the Attorney General to identify the state standards of concern. The PSDAR identifies the categories of wastes and some of the specific contaminants to be removed during the site restoration process, including asbestos, lead in paint, hazardous

---

[211] *See* DCE at 46, tbl.5-1 (Cash Flow Analysis).

[212] *See* AG Petition at 25.

waste, and universal waste.[213] The cost estimate also states that approximately $9 million of estimated costs are for cleaning up asbestos.[214] Mixed wastes also are noted, and HDI states that they are to be managed according to "applicable federal and state regulations," and identifies three potential vendors that may be utilized.[215]

But the Attorney General does not address any specific part of the application, the PSDAR, or the cost estimate. Nor does the Attorney General identify any contaminant or waste category that the Attorney General claims may be especially difficult and costly to remediate to applicable state standards. The petition therefore has no discussion of any contaminants or state standards that the Attorney General claims may materially drive up site restoration costs. Consequently, we find insufficient the Attorney General's suggestion that more detail was necessary to formulate an argument on state standards that may impact site restoration costs.

The Attorney General also refers to the 2004 Palisades cost estimate, which estimated a notably larger cost for site restoration ($78.3 million in 2003 dollars). But while the full 2004 study is available publicly and provides a detailed, line-item cost breakdown of costs, including costs allocated to site restoration, the Attorney General neither addresses any contents of the study to challenge HDI's site restoration estimate nor otherwise links the 2004 study to her argument that state law standards beyond those assumed in the current estimate could

---

[213] *See* PSDAR at 9 (citing Environmental Protection Agency's definition of universal waste at 40 C.F.R. § 273.9). Universal wastes addressed by Environmental Protection Agency regulations include batteries, pesticides, mercury-containing equipment, and lamps, and the PSDAR notes that states may have "corollary regulations" governing these materials, as well as corollary regulations for "additional materials." *See id.* at n.1; *see also*, *e.g.*, DCE at 14, 21, 29-30.

[214] *See* DCE at 26, tbl. 3-1. HDI lists the asbestos removal cost under license termination costs. There often is some overlap between the site restoration and license termination cost categories. If it is necessary, for instance, to remove asbestos or lead to access radiological contamination, or vice versa, removal costs might be allocated to one or the other category or divided between the two as appropriate.

[215] *See id.* at 24.

increase costs.[216] HDI had no obligation in the application to compare its estimate to another licensee's estimate.

The Attorney General's claims of unspecified state requirements that could require greater expenditures for site restoration do not raise a supported genuine dispute with the application and we therefore find them inadmissible.

(4) REPACKAGING OF SPENT NUCLEAR FUEL AND OTHER DOE-RELATED CLAIMS

The Attorney General raises the potential for additional costs relating to spent nuclear fuel repackaging for transportation by DOE. First, the Attorney General argues that while HDI's decommissioning costs appear based on an assumption that DOE will accept the current, "as-packaged canisters for dry storage and will not require repackaging for transportation," absent a change to the Standard Contract HDI would need to repackage the spent nuclear fuel into non-canistered DOE casks prior to transportation.[217] The Attorney General states that in litigation to recover damages for DOE's partial breach of contract, Entergy and other licensees have argued that DOE has the authority to mandate licensees to repackage their spent fuel into DOE-approved transportation casks, and that DOE has stated that without an amendment to the Standard Contract it will not accept canistered fuel for transportation.

The Attorney General also claims that repackaging costs could be significant, particularly because the repackaging would occur "after the spent fuel pool has been decommissioned."[218] The Attorney General states that without the spent fuel pool, repackaging might first involve transporting the fuel to another plant site, or building an onsite dry transfer station—actions that could lead to cost overruns on the order of hundreds of millions of dollars, as indicated by a Government Accountability Office estimate of $150 to $450 million for construction of a fuel

---

[216] *See* Full TLG Services 2004 Cost Study, Appendix C ("Detailed Cost Analysis") at 1-16.

[217] *See* AG Petition at 28.

[218] *See id.* at 29.

transfer station.[219] In short, the Attorney General claims that there is no indication that the cost estimate accounts for the "operating costs to remove the fuel from the current casks and then to package that fuel into DOE provided transportation casks."[220]

The applicants, however, identify nearly $39 million allocated for the "transfer of fuel and/or nuclear material away from the ISFSI," which they state includes the estimated costs to "repackage in transportation casks."[221] In her reply, the Attorney General does not specifically address the line-item estimate for spent fuel transfer or its adequacy. Instead, the Attorney General maintains that HDI has not accounted for the cost of removing spent fuel from the existing "as-packaged canisters for dry storage," and that the application and decommissioning cost estimate "assume that DOE will not require repackaging for transportation."[222]

While the precise scope of actions covered by HDI's line-item cost are not clear, the Attorney General's repackaging claims are insufficient to show a material dispute with the application. First, except for raising the possibility of a need to build a fuel transfer station, the Attorney General never suggested how much it may cost to remove fuel from existing canisters and repackage it into DOE-provided transportation casks. The applicants highlighted that the cost estimate includes an estimated $39 million for fuel transfer costs, including the repackaging or loading of fuel into transportation casks. But while the Attorney General states that canister removal costs are not considered, the Attorney General does not suggest how much such costs might be. The Attorney General does not address the adequacy of the allocated $39 million to cover transferring fuel from the ISFSI to DOE-supplied transportation.

---

[219] *See id.* at 29 & n.70 (citing November 2009 GAO report on nuclear waste management challenges and costs for Yucca Mountain Repository).

[220] *See id.* at 29.

[221] Applicants Answer to AG at 40.

[222] *See* AG Reply at 28.

A license transfer proceeding is not intended to be a line-item by line-item refinement of a decommissioning cost estimate. If a petitioner claims that a specific cost was overlooked, its materiality must be supported. The Attorney General does not provide us a basis for concluding that the potential additional costs of first removing the current spent fuel canisters prior to loading the spent fuel into DOE casks may be a material additional expense that may call into question the applicants' financial qualifications to hold the licenses.

The only argument contained in the petition and reply related to the asserted cost of repackaging fuel is that there could be cost overruns "on the order of hundreds of millions of dollars."[223] But this claim rests on an estimated cost to construct an onsite dry transfer station, which in turn is based on the Attorney General's assumption that "repackaging . . . would occur after the Palisades spent fuel pool has been decommissioned."[224] Yet dismantlement of the spent fuel pool is not planned until after the dormancy period when major decommissioning activities begin.[225]

Second, whether DOE ultimately will only accept bare, uncanistered spent nuclear fuel in DOE transportation casks, or will also accept fuel packaged in some types of canisters is not yet known.[226] The Attorney General states that its fuel repackaging claim is not a technical

---

[223] *See* AG Petition at 29; Capik Decl. at 16; AG Reply at 28.

[224] *See* Capik Decl. at 16.

[225] *See* PSDAR at 10 (fuel pool drainage, decontamination, liner removal, and dismantlement to occur "[f]ollowing the dormancy period"); DCE at 10, 45 (dormancy period ends at end of 2035); DCE at 22 (DOE scheduled to begin removing fuel in 2030).

[226] Canisters are steel containers for the spent nuclear fuel assemblies. Some canisters are designed only for storage, and others, such as dual-purpose canisters, are designed for storage and transportation. Regardless of design, the NRC must approve canisters for transportation (or grant an exemption from NRC transportation regulations). *See* 10 C.F.R. pt. 71 (requirements for packaging and transportation of radioactive material). Canisters may be used in combination with storage casks and transportation casks, and the Attorney General's issue goes to whether DOE will ultimately accept already-canistered spent nuclear fuel for loading into DOE transportation casks.

argument over whether a transportation "cask can physically accept the loaded canisters," but is instead based on interpretations of contractual obligations under the Standard Contract reached in decisions awarding damages for spent fuel management expenses due to DOE's contract breach. But these decisions do not establish how DOE ultimately will perform in transporting the fuel, and the Attorney General recognizes that DOE has not determined how it will transport the fuel (e.g., "*if* . . . DOE were to mandate fuel repackaging").[227]

We have stated, moreover, that because future spent fuel packaging requirements for DOE transportation remain highly uncertain we find it premature at this time to assume, for purposes of decommissioning funding requirements, what types of canisters that DOE may or may not accept for transportation.[228] In NRC practice we have not required site-specific decommissioning cost estimates to include specified funding for removal of current canisters and "will not presume, as a reason to deny a license transfer, that DOE will likely succeed in requiring licensees to bear additional fuel-packaging expenses."[229] What DOE ultimately determines will have broad application to many licensees. If additional financial needs relating to spent fuel transportation become clearer, the NRC can to the extent necessary require adjustments to decommissioning funding.

---

[227] *See* Capik Decl. at 16 (emphasis added). In the case cited by the Attorney General, the court assessed damages for a licensee's costs to load fuel into storage canisters and storage casks. Except for the partial breach of contract, the licensee would have loaded the spent fuel directly into DOE transportation casks and would not have needed to load fuel into storage canisters and casks. Although the government represented that the Standard Contract could be modified and therefore "these storage casks may be deemed suitable for transportation," the court would not preclude awarding damages on "a set of facts that may come into being in the future." *See System Fuels, Inc. v. United States*, 818 F.3d 1302, 1307 (Fed. Cir. 2016).

[228] *See Indian Point*, CLI-21-1, 93 NRC at 31.

[229] *See Pilgrim*, CLI-20-12, 92 NRC at 373.

(a) Transportation of Storage-Only Fuel Canisters

Relatedly, the Attorney General raises as an additional potential cost the need to reload the spent fuel in 18 VSC-24 storage casks that are licensed to store but not licensed to transport spent fuel. The Attorney General notes that work has been performed to pursue NRC approval of the casks for transportation but that the licensing effort was not completed. The Attorney General therefore argues that either the spent fuel from these 18 canisters "must be reloaded into licensed transportable canisters or additional work must be performed to license these canisters for transportation (assuming that this licensing is even feasible)."[230]

The applicants do not dispute that these canisters are not currently licensed for transportation but they state that the costs of repackaging the VSC-24 casks in transportation casks are addressed by the $39 million line-item cost estimate allocated to transfer of fuel away from the ISFSI.[231] The Attorney General argues that this estimate addresses only the "costs . . . to move those as-loaded canisters to a DOE cask," and not the costs to first unload the fuel from existing canisters and move the fuel to a DOE cask.[232] The Attorney General disputes whether applicants provided evidence that they have sufficient funds to cover all the costs involved with repackaging the VSC-24 casks.[233]

But again, the Attorney General provides no supporting information on whether and to what extent the highlighted $39 million allocated for fuel transfer away from the ISFSI may be insufficient. In neither the petition nor the reply is there any estimated cost for the reloading of the spent fuel from the VSC-24 canisters into transportable canisters. And even after the applicants highlighted the line-item cost intended to cover repackaging into DOE casks, a cost

---

[230] *See* AG Petition at 31-32.

[231] *See* Applicants Answer to AG at 42.

[232] *See* AG Reply at 30.

[233] *See id.*

category intended to cover "transfers of fuel assemblies" into the DOE transfer casks, the Attorney General did not address the adequacy of the $39 million fuel transfer estimate regarding what potential amount of *additional* costs (e.g., for the unloading of fuel) that the Attorney General claims is not accounted for in that estimate. Challenges to the site-specific cost estimate must be supported and identify a material cost omission or material understatement that may impact the overall financial qualifications of the applicants; these claims do not. [234]

(b) DOE Seeking to Recover Earlier Packaging Costs

We also find inadmissible the Attorney General's additional argument that if DOE accepts and removes spent fuel without requiring prior repackaging it might seek to recover all or some of its past payments for the original packaging of the fuel into storage canisters and storage casks.[235] We have no basis to presume that DOE would be likely either to assert or to prevail on a claim to recover damages previously awarded to licensees due to DOE's partial breach of contract. The Attorney General replies that "this issue ties in" with its repackaging claim and is "related to the inherent uncertainty created by the process."[236]

---

[234] In addition, as the Attorney General notes, whether repackaging will be required is yet uncertain; there remains the potential that the canisters may ultimately be licensed for transportation or an exemption under Part 71 obtained. *See* AG Petition at 31. Further, the Attorney General acknowledges that DOE would be liable for reimbursing Holtec for the costs to repackage the VSC-24 casks. While the Attorney General argues that DOE reimbursements would not "completely" mitigate the potential additional expense because there are cashflow and timing issues and the applicants have not committed to use DOE recoveries, the hearing granted in this decision at any rate will address Holtec's means to adjust funding, as addressed further below. *See id.* at 30-31.

[235] *See* Capik Decl. at 16-17.

[236] AG Reply Brief at 29.

Again, we do not expect license transfer applicants to commit funding to cover the costs of speculative scenarios.[237] For such highly uncertain contingencies we have the ability to address any major new exigencies through the annual respective financial status reviews of decommissioning and spent fuel management funding. These are national policy questions with broad application to NRC nuclear power reactor licensees. And for the license transfer proceeding, we have said that we "see no reason to require that a transfer applicant's cost estimate be more detailed, more certain, or more conservative than the site-specific estimate submitted by a current licensee."[238] The Attorney General's uncertain scenarios do not call into material question the adequacy of the applicants' financial qualifications demonstration for this license transfer.

(c) Indefinite Storage

As an additional DOE-related potential cost overrun, the Attorney General argues that DOE may fail to remove all spent fuel by the end of 2040, and therefore Holtec may need to repackage the spent fuel one or more times as a required maintenance activity. The Attorney General claims that if DOE does not pick up the fuel by the end of 2040, Holtec will begin to incur significant and ongoing cost overruns that "could go on for many decades if not indefinitely."[239] In such an indefinite storage scenario, the Attorney General also claims that with no spent fuel pool remaining onsite there would need to be a new dry fuel transfer station to transfer spent fuel into new dry casks every 100 years. The Attorney General argues that it is

---

[237] *See* AG Petition at 30 (emphasis added) ("*If* DOE pursues such recovery *and* is successful, this *could* lead to significant [costs]"); *see also Indian Point*, CLI-21-1, 93 NRC at 32 (finding no reason to presume that "DOE will identify a valid contractual claim, pursue that claim, and succeed in requiring licensees to bear additional packaging-related costs," and further noting that such an issue is not appropriate for resolution in an NRC adjudicatory hearing).

[238] *Pilgrim*, CLI-20-12, 92 NRC at 367; *see also Indian Point*, CLI-21-1, 93 NRC at 9-10.

[239] *See* Capik Decl. at 17.

unknown how Holtec would provide for the possible contingency of indefinite onsite storage, including transferring fuel into new dry casks every 100 years.

There will be uncertainties until we know more about actual DOE timetables and requirements. But that indefinite storage is possible does not make it likely, and the NRC's GEIS for the Continued Storage Rule also supports as a reasonable conclusion that a geological repository will become available.[240] Interim storage options also plausibly may become available in the shorter term, particularly given that the NRC has recently approved an application for an interim storage facility and is actively reviewing another.

In issuing the Continued Storage Rule, the NRC stated that the agency will "continue to monitor changes in national policy and developments in spent fuel storage and disposal technology."[241] If future developments warrant, licensees could be required to "amend their licenses, which would be accompanied by site-specific safety and environmental reviews."[242] At this time, however, we decline to require license transfer applicants (or current licensees) to predict how the cost of an indefinite storage of spent fuel would be borne if indefinite storage were to be necessary.[243] For all these reasons the Attorney General's assertions of "no certainty" that DOE will have removed all fuel by 2040 and of "the possible contingency" of

---

[240] *See Pilgrim,* CLI-20-12, 92 NRC at 373 (citing the Continued Storage GEIS and describing GEIS's conclusion that safe storage of spent fuel in a geologic repository is technically feasible using currently available technology, with no major breakthrough in science or technology needed, and that "25 to 35 years [is] a reasonable period for repository development"); Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel (Final Report), NUREG-2157, vol. 1 (Sept. 2014), app. B, at B-2, B-8 to B-9 (ML14196A105).

[241] *See* Continued Storage of Spent Nuclear Fuel, Final Rule, 79 Fed. Reg. 56,238, 56,246 (Sept. 19, 2014).

[242] *See id.*

[243] Additional costs for any additional years of spent fuel management handling beyond a licensee's original projections would need to be managed through changes to the spent fuel management plan and associated funding and would be monitored through our annual oversight of the status of spent fuel management funding. The year-to-year expenses for spent fuel management are relatively stable and predictable.

indefinite onsite storage are not sufficient to raise a material question with the application.[244] That HDI's decommissioning cost estimate (like all others) does not include additional funding for the still uncertain prospect of indefinite storage does not present a material issue in this license transfer proceeding.

g. Trust Fund Growth Rate Assumptions

The Attorney General challenges HDI's assumption of a 2% real rate of growth (actual return minus inflation) on the decommissioning trust fund. The Attorney General claims that during reactor operation decommissioning trust funds often are invested in a manner that would make "the two percent real growth assumption permitted by the NRC reasonable," but that "continued growth on a year-by-year basis is not a certainty."[245] The Attorney General states that the Palisades trust fund during certain periods of operation grew at a smaller rate than 2% or experienced losses. A 2% real rate of return assumption "is even less reasonable" after permanent shutdown, the Attorney General claims, because decommissioning trust funds then are invested more conservatively than during operation.[246]

The Attorney General does not argue that the NRC's regulations allowing for a 2% real rate of growth do not apply to the applicants or were improperly applied by them. On the contrary, the Attorney General states that HDI assumed the 2% real rate of growth "consistent with the upper limit allowed by NRC regulations."[247] The Attorney General argues that given how decommissioning trust funds have been invested following permanent shutdown, the 2% real rate of return is an unrealistic assumption for HDI to make in its analysis.[248]

---

[244] AG Petition at 30-31.

[245] *Id.* at 32.

[246] *Id.* at 33.

[247] *See id.* at 32; *see also* 10 C.F.R. §§ 50.75(e)(1)(i), 50.82(a)(8)(vi).

[248] *See* AG Reply at 32.

But these claims effectively—and impermissibly—challenge our regulations allowing licensees to take credit for up to a 2% real rate of return; the regulations do not exclude or otherwise limit licensees of permanently shutdown reactors. Absent a waiver, NRC regulations cannot be challenged in an adjudicatory proceeding.[249] In allowing licensees to assume the 2% real rate of return, the NRC considered various factors and eventualities, including that actual rates could prove to be lower. The NRC stated that if "rates turn out to be lower . . . 10 C.F.R. 50.82 already provides that licensees are to adjust decommissioning funds during safe storage to reflect changes in cost estimates," and that "reporting requirements will allow the licensees' decommissioning funds to be monitored by the Commission."[250] Similarly, here if during the dormancy period the levels of funding do not adhere to HDI's projections, whether due to underestimated costs or lower rates of returns, HDI would need to adjust its funding.

h. *Inability to Provide Additional Financial Assurance*

As the last issue in Contention MI-1, the Attorney General challenges the adequacy of Holtec's assertion in the application that it has the means to adjust both cost estimates and associated funding levels over the dormancy period to ensure that the necessary funding will be available at the time of decommissioning. We admit this claim for hearing.

HDI projects major decommissioning activities to begin in December 2035, following the dormancy period, with final license termination scheduled to occur at the end of 2041.[251] Under NRC regulations, for decommissioning activities that "delay completion of decommissioning by including a period of storage or surveillance," the licensee must provide a means of adjusting cost estimates and of adjusting the "associated funding levels over the storage or surveillance

---

[249] *See* 10 C.F.R. § 2.335(a) (prohibiting challenges to regulations in adjudicatory proceedings unless a rule waiver was sought and granted). The Attorney General did not seek a waiver.

[250] *See* Financial Assurance Requirements for Decommissioning Nuclear Reactors, Proposed Rule, 62 Fed. Reg. 47,588, 47,600 (Sept. 10, 1997).

[251] *See* DCE at 45.

period."[252] To address this requirement, the application states that should there be a need to adjust the available funding then "[r]eimbursement of spent fuel management expenses by DOE, which is not credited in the cash flow analysis . . . would provide a substantial source of additional funds that could be used to provide such adjustment if necessary."[253] The Attorney General challenges this assertion as insufficiently supported.

The Attorney General claims that no analysis supports the statement that DOE reimbursements would be available as a substantial source of additional funds if such funding were needed to offset a substantial cost overrun in decommissioning, and that no commitment has been made to retain any potential DOE reimbursement for this purpose.[254] The Attorney General further argues that following the dormancy period, "the expected DOE recovery would largely be limited to the on-going costs of spent fuel management," and that consequently, even if these later recoveries from DOE were retained to buttress the trust fund they "would not offset any substantial overrun in decommissioning costs."[255] The Attorney General does not question

---

[252] *See* 10 C.F.R. § 50.82(a)(8)(iv).

[253] *See* Application at 18.

[254] The Attorney General challenges both (1) the cost estimate's general statement that an "alternate funding mechanism allowed by 10 CFR 50.75(e)" will be put into place if the trust fund proves insufficient, and (2) the application's more specific assertion that DOE reimbursements "would provide a substantial source of additional funds" that could be used to adjust funding if needed. *See* AG Petition at 34-35 (citing DCE at 44 and also directly challenging the application's assertion that DOE reimbursements will provide the means to adjust funding); *see also id.* at 37-38 (citing Application at 18).

[255] *See id.* at 35. Specifically, the Attorney General claims that the total DOE recovery during license termination activities from 2036 through 2040 would only be about $8.5 million, which the Attorney General argues would only "offset continuing ISFSI operating and maintenance costs." *See* AG Petition at 35 (describing reasoning behind calculation). The Applicants contest the $8.5 million estimate as a "fanciful claim," lacking "reasonable support." *See* Applicants' Answer to AG at 46. They claim that between the years 2036 through 2040 approximately $25 million in spent fuel management costs will be incurred, about $17 million more than the Attorney General suggests; the additional amount over $8.5 million would account for the costs of loading the DOE-supplied transportation casks—the recovery of which the Attorney General views as uncertain but the applicants call "plausible." *See id.*

that Holtec will be able to recover from DOE "the bulk of" the spent fuel management costs incurred.[256] Rather, the Attorney General calls "[t]iming" the "big issue with regard to this item"—whether "funds recovered from DOE in years past" would still be available to adjust funding later in the event of a shortfall.[257] The Attorney General argues that reliance on the DOE recoveries to adjust funding "only makes sense if those funds are escrowed for such a purpose," and that the "[a]pplication repeatedly wants to rely on those funds to demonstrate assurance but steadfastly refuses to commit to retain those funds for this purpose."[258] The Attorney General further argues that to accept without more "Holtec's often repeated statement in its Answer that it will have the funds, if necessary, . . . would eviscerate the need for any detail in a license transfer application."[259]

The applicants state that they have provided their cash flow analysis reflecting the annual spent fuel management costs that Holtec Palisades may seek to recover from DOE,

---

The applicants also note that Holtec Palisades can seek DOE recovery for spent fuel management claims incurred over "a considerably longer time period," amounting to a total of about $160 million. *See id.* In admitting the Attorney General's issue regarding the ability to provide additional funding, we do not rely on the estimated amount of $8.5 million as the amount that might be recovered from DOE during the decommissioning years 2036-40. We make no assumptions about the specific timing and associated specific amounts of potential DOE recoveries.

[256] *See* AG Petition at 39.

[257] *See* AG Reply at 34.

[258] *Id.* Noting that one option in the event of a funding shortfall is to stop decommissioning and return the facility to a long-term storage condition to allow trust funds to grow, the Attorney General additionally argues that the projected growth rate (which the Attorney General claims would be about $600,000 a year) would not provide any certainty that there would be sufficient time within the NRC's 60-year time limit for decommissioning for the fund to grow sufficiently to offset potential cost overruns. *See* AG Petition at 35. The applicants answer that if the dormancy period were extended by 40 years, allowing decommissioning to be completed in 60 years, the net added growth in the trust fund would be over $36 million. *See* Applicants Answer to AG at 46. This is a separate issue, however, than whether reimbursements from DOE would provide the means to adjust decommissioning funding, and neither the application nor the cost estimate discuss or rely on extending the dormancy period.

[259] *See* AG Reply at 36-37.

which total up to $160 million. They argue that the Attorney General ignores "the approximately $140 million in spent fuel management costs incurred" before decommissioning begins in 2036, including "$94 million incurred prior to the dormancy period."[260] They claim the Attorney General provides no explanation why this amount would not be recoverable. Further, they note that in NRC status reports they will need to specify how much was spent the previous year on decommissioning activities and the difference between the estimated and actual costs for the prior year, and therefore the NRC can track whether decommissioning costs are exceeding predictions.

We admit this issue. First, as the applicants correctly note, the NRC has no requirement that prevents an applicant from relying on a single funding source. And for its cash flow analysis, HDI relies only on the projected sufficiency of the Palisades decommissioning trust fund to cover decommissioning, spent fuel management, and site restoration costs.

But the applicants also state that while the cash flow analysis conservatively only credits the trust fund, any suggestion by the Attorney General that the application relies on only the trust fund "mischaracterizes" the application.[261] The applicants highlight that the Palisades application "explicitly states" that DOE reimbursements of spent fuel management expenses "would provide a substantial source of additional funds" in case an adjustment to funding were needed.[262] And the Attorney General is challenging whether the application sufficiently explains or supports this explicit assertion that DOE recoveries would be available as a substantial source of funding if needed to adjust the funding in the trust fund.[263]

---

[260] *See* Applicants Answer to AG at 46.

[261] *See* Applicants Answer to AG at 19-20.

[262] *See id.* at 44.

[263] *See* AG Petition at 34-35.

The applicants leave unaddressed the Attorney General's core concern, which relates to timing. Although the petition questions whether some projected spent fuel management costs are recoverable (e.g., the costs of loading DOE-supplied casks), the Attorney General does not question that substantial funds may be recovered from DOE. The Attorney General questions whether funds obtained "from DOE in years past"—in the earlier project stages—will still be available at the time of decommissioning if substantial cost overruns occur.[264] Because most of the recoveries from DOE might be obtained well before the decommissioning stage, the Attorney General challenges the application's assertion that DOE recoveries will be available as a substantial source of additional funding if needed for decommissioning.

Decommissioning is projected to occur primarily between the years 2036 and 2041. Yet as the applicants themselves emphasize, HDI projects most spent fuel management costs will be incurred before the dormancy period even begins, during a three-year period beginning soon after the proposed license transfer. From 2023 through 2025, HDI projects to incur nearly $94 million in spent fuel management costs.[265] The next few years, 2026 through 2029, reflect relatively low annual projected spent fuel management costs ($1.7 to $2.1 million) during the early dormancy period. Based on DOE beginning to pick up spent fuel in 2030, the projected spent fuel management costs increase somewhat in the latter dormancy years of 2030 through 2035 ($7.4 million in 2030, then $6.5 million annually between 2031 and 2035) because the costs would then include additional projected costs of loading DOE-supplied transportation casks.

To what extent potential DOE recoveries that Holtec Palisades may receive for the bulk of the expected spent fuel management expenses may still be available at the time of decommissioning, if needed to buttress funding, is unclear from the application and cost

---

[264] *See* AG Reply at 34.

[265] *See* DCE at 36, tbl.5-1.

estimate. While the applicants repeatedly stress that a total of up to $160 million may be sought from DOE, the Attorney General questions how much of this amount would remain available if needed for decommissioning. The Attorney General further argues that potential DOE recoveries that may be obtained during the later stages of the Palisades project, such as after the dormancy period, may be insufficient in overall amounts to offset a significant shortfall in decommissioning funding.

Moreover, while the applicants emphasize that they must file annual status reports on decommissioning funding, these status reports will not address the recoveries. They will not indicate how much funding Holtec Palisades may have recovered nor whether some, all, or none of the funds recovered remain available to adjust funding. And if there are unanticipated decommissioning costs that will not be known until decommissioning is underway, status reports submitted in the years prior to the start of the major decommissioning activities may not capture such costs either.

Recent license transfer adjudications involved a decommissioning schedule without a dormancy period.[266] Where decommissioning is projected to begin soon, and to be completed within several years, actual decommissioning costs also will be known relatively soon. And once decommissioning is completed, there no longer remains uncertainty over potential unexpected decommissioning costs, unanticipated investment downturns, or other factors that can affect the adequacy of the trust fund for completing decommissioning. For decommissioning that includes a period of storage or surveillance, section 51.82(a)(8)(iv) requires licensees to provide a means of adjusting the decommissioning funding over the storage or surveillance period. NRC guidance instructs the staff to determine “whether the

[266] These concerned the Vermont Yankee Nuclear Power Station, Oyster Creek Nuclear Generating Station, Pilgrim Nuclear Power Station, and Indian Point Nuclear Generating Station.

means described by the licensee provides adequate assurance that funds will be available for decommissioning activities *at the time they are needed*."[267]

The applicants claim that "perhaps . . . [the] Michigan AG is demanding an analysis of whether spent fuel management costs will be recovered through litigation against DOE."[268] But that is not the analysis or explanation sought. The Attorney General seeks further information on whether and to what extent recoveries that may be obtained through litigation against DOE will remain available to provide the means of adjusting funding. The applicants also claim that the Commission "has made it clear" that whether spent fuel management costs will be recovered is not appropriate for resolution in an adjudicatory proceeding.[269] But what we stated is that we cannot in an adjudicatory proceeding resolve the factual question whether DOE will mandate fuel repackaging and how such costs might be borne.

The applicants state that the application provides "multiple layers of financial assurance," including: (1) "the ability of Holtec Palisades to provide additional funding assurance through recoveries from DOE of spent fuel management expenses estimated at $160 million" and (2) the related "commitment by Holtec Palisades to adjust funding, including providing an alternative funding mechanism if necessary, if annual review of funding assurances indicates a shortfall."[270] Here, the Attorney General challenges the support provided to demonstrate the ability to provide sufficient additional funding through DOE recoveries or other alternate funding mechanism.

---

[267] SRP for Decommissioning Cost Estimates, NUREG-1713 at 15 (emphasis added); *see also id.* at 20; "Decommissioning of Nuclear Power Reactors," Regulatory Guide 1.184, rev. 1 (Oct. 2013) at 13; "Standard Format and Content for Post-Shutdown Decommissioning Activities Report," Regulatory Guide 1.185, rev. 1 (June 2013), at 8 (Reg. Guide 1.185).

[268] Applicants Answer to AG at 45.

[269] *See id.* (citing *Indian Point*, CLI-21-1, 93 NRC at 32; *Pilgrim*, CLI-20-12, 92 NRC at 372).

[270] Applicants Answer to AG at 18.

Based on the reasons described, we find that this claim raises an admissible dispute with the application regarding a material fact.

For the hearing, the applicants should describe how they will ensure that sufficient additional funding will be available to use at the time of decommissioning if additional funding proves necessary to complete decommissioning. To the extent that the applicants intend to rely on DOE-related recoveries as a primary source of additional funding, the applicants should, as appropriate, describe (1) whether any applicable DOE-related settlement agreement is in place; (2) the timetable on which the applicants would expect to file its DOE-related claims (including the respective estimated amounts in damages reasonably expected to be obtained); and (3) and approximately when and in what estimated amounts the DOE recoveries can reasonably be expected to be paid. The applicants should outline how they will ensure that sufficient DOE-related recoveries or other funding (if applicable) will be available as a means to augment funding if necessary to complete decommissioning. The Attorney General will be able to provide a response. The parties should also address whether any license conditions are warranted.

2. Michigan Attorney General's Contention MI-2

Contention MI-2 focuses on the requested exemption from 10 C.F.R. § 50.82(a)(8)(i)(A) to permit Holtec to make withdrawals from the decommissioning trust fund to pay for spent fuel management and site restoration activities. The Attorney General argues that because Holtec's financial qualifications demonstration and associated cash flow analysis rely on the requested exemption being granted, unless and until the exemption is granted: (1) Holtec's cost analysis is speculative and unreliable, and (2) Holtec must establish that it is financially qualified by "independent means," apart from the decommissioning trust fund, to pay for its "non-decommissioning commitments."[271] The Attorney General claims that Holtec failed to

[271] AG Petition at 36, 38.

show that it is financially qualified to hold the Palisades license under 10 C.F.R. § 50.33(f), and failed to show that it has adequate funding to satisfy the applicable requirements because neither the application nor the cost estimate indicate how Holtec would fund "these non-decommissioning commitments without recourse" to the trust fund.[272]

The contention is inadmissible. Where a license transfer application relies on an exemption, the NRC reviews the license transfer application and exemption request in tandem. If issued, an exemption would not be effective until issuance of a conforming license amendment reflecting the proposed new licensees. Likewise, an order approving the proposed license transfer would not be issued unless the requested exemption were approved, either prior to or simultaneously with, the license transfer approval. The two separate requests must be considered together because of their intertwined nature. If the financial qualifications showing—which relies on the exemption—is found deficient, either the license transfer application and related exemption request will both be denied, or one or both will be conditioned as necessary to allow for approval of both.

Just as the NRC in reviewing the license transfer review will assume that the plant will be shut down permanently by the time of the license transfer approval, the NRC will consider the requested exemption as part of the financial qualifications review. There also is no prohibition on considering two interdependent requests together. To the extent that the Attorney General argues that the HDI cost analyses for the license transfer are speculative or unreliable because they rely on an exemption that at the time of the application had not yet been issued, the claim does not identify a genuine dispute with the application and is not admissible.

We similarly find inadmissible the Attorney General's claim that insofar as Holtec proposes to spend decommissioning trust fund monies on costs that are not decommissioning costs Holtec violates the NRC's requirement in section 50.82(a)(8)(i)(A) that withdrawals be only

[272] *See id.* at 38 (citing regulations).

for legitimate decommissioning activities.[273] The application nowhere proposes unauthorized trust fund withdrawals. If the NRC finds that the exemption should not be issued, then Holtec cannot make the withdrawals. It is undisputed that Holtec may not withdraw decommissioning trust funds for non-decommissioning purposes without an exemption.

Finally, the Attorney General claims that if the NRC grants the requested exemption allowing withdrawals for spent fuel management but does not require Holtec to replenish the trust fund, then DOE recoveries would be a "profit windfall realized by HDI before it has satisfied the entirety of its decommissioning and site restoration obligations."[274] The Attorney General seeks the NRC, if it approves the license transfer application, to require Holtec either to return DOE recoveries to the trust fund or to a supplemental trust that could be used in what the Attorney General calls "the likely event of an unanticipated cost overrun."[275] The Attorney General argues that such a condition placed on the requested exemption or license transfer is necessary given the Attorney General's arguments indicating the "significantly underestimated cost estimates and below industry standard contingencies in its application."[276]

Here, the proposed transferees must demonstrate adequate financial qualifications and reasonable assurance of decommissioning funding. If the application does not show that they are financially qualified to be the holders of the licenses, then the transfers and exemption will not be upheld unless appropriately conditioned, or unless the licensee supplements the application with additional financial assurance that the NRC finds acceptable to demonstrate financial qualification and reasonable assurance of decommissioning funding. Whether and to

---

[273] *See id.* at 39.

[274] *See id.*

[275] *See id.* at 40.

[276] *See* AG Reply at 36.

what extent the transfer transaction may be profitable is not a matter that the NRC regulates. Contention MI-2 does not raise an admissible issue for hearing.

G. Joint Petitioners Petition to Intervene and Request for a Hearing

Joint Petitioners proffer three contentions. In Contention 1, Joint Petitioners raise various environmental concerns stemming from changes in environmental conditions affecting the Palisades site, the consequences of historical events associated with Palisades operations, and challenges relating to spent fuel storage and repackaging.[277] In Contention 2, Joint Petitioners claim that Holtec International, SNC-Lavalin, HDI, and CDI lack the requisite corporate character, corporate culture, and corporate ethics to conduct licensed activities at Palisades.[278] In Contention 3, Joint Petitioners challenge Holtec's exemption request and raise concerns about HDI's site-specific decommissioning cost estimate, in particular the costs associated with storing and repackaging spent fuel.[279] Because we find that none of Joint Petitioners' contentions are admissible, we need not reach the question of whether they have demonstrated standing to intervene in this proceeding.

1. Joint Petitioners' Contention 1

Joint Petitioners claim that changes in land use, the effects of historical site events, and inadequacies in the 2006 supplemental environmental impact statement for Palisades comprise new information which requires additional supplementation under NEPA.[280] As part of this contention, Joint Petitioners raise concerns about changes in Lake Michigan's water levels; the

---

[277] Joint Petitioners Petition at 19-41.

[278] *Id.* at 41-44.

[279] *Id.* at 44-52. The applicants oppose the petition. *Applicants' Answer Opposing Beyond Nuclear et al.'s Petition to Intervene and Hearing Request* (Mar. 22, 2021) (Applicants Answer to Joint Petitioners); *see Reply of Beyond Nuclear, Michigan Safe Energy Future and Don't Waste Michigan in Support of Petition for Leave to Intervene, and Request for an Adjudicatory Hearing* (Mar. 29, 2021) (Joint Petitioners Reply).

[280] Joint Petitioners Petition at 19.

disposal of the four Palisades steam generators; historical overflows of the Palisades cooling towers; the scope of potential tritium contamination at the Palisades site; the seismic qualifications of the existing dry cask storage pads; “greater than Class C” (GTCC) waste; repackaging of waste for disposal by DOE, including challenges posed by VSC-24 casks in general and a specific faulty VSC-24 cask; and high-burnup fuel.[281] Joint Petitioners state that these concerns, as well as “insufficiencies” in the 2006 Palisades Supplemental Environmental Impact Statements (SEIS), warrant a supplemental NEPA analysis for Palisades. They argue that their environmental claims are brought within the scope of this proceeding by HDI’s inclusion of a discussion of environmental impacts in its PSDAR.[282] We find that none of Joint Petitioners’ environmental concerns presents an admissible issue in this proceeding.

a. NEPA Supplementation Claims and Challenge to Categorical Exclusion

As we stated above, the NRC has determined that license transfer applications as a general rule do not significantly affect the environment.[283] This is because a license transfer does not permit the new licensee to operate the facility in a different manner than was previously authorized under the existing license. Therefore, the NRC has found that absent special circumstances, a license transfer will not present environmental impacts different from those already considered in relevant generic or site-specific NEPA analyses. Accordingly, under 10 C.F.R. § 51.22(c)(21), the NRC has categorically excluded license transfer actions from the need for further environmental analysis.[284]

---

[281] *Id.* at 19-41.

[282] *Id.* at 20-21.

[283] *See* Streamlined Hearing Process for NRC Approval of License Transfers; Final Rule, 63 Fed. Reg. 66,721, 66,728 (Dec. 3, 1998) (License Transfer Rule).

[284] *Pilgrim*, CLI-20-12, 92 NRC at 387-88.

In their reply brief, Joint Petitioners acknowledge for the first time that the NRC has determined that license transfer applications are categorically excluded from an environmental review but challenge the application of the categorical exclusion. They argue that the categorical exclusion cannot be deemed to apply to this license transfer proceeding until the NRC "addresses [Joint] Petitioners' assertions of special circumstances making the exclusion inapplicable here."[285] In effect, Joint Petitioners argue that, because they have identified various environmental concerns that they argue are not bounded by prior generic or site-specific environmental impact statements and unanalyzed in the PSDAR, these concerns are "special circumstances" that call into question the applicability of the categorical exclusion, and the NRC must address each of these environmental concerns in its decision on the license transfer application before making a determination that the categorical exclusion applies.[286]

This argument—raised for the first time on reply—is untimely. While a reply brief may appropriately expand upon the arguments raised in the original petition to address arguments raised in an applicant's answer, it is not an opportunity for a petitioner to recast or "reinvigorate" their contention with new arguments that expand the scope of the contention as originally pled.[287] Allowing new claims to be added to a reply "not only would defeat the contention-filing deadline but would unfairly deprive the other participants of an opportunity to rebut the new claims."[288] Joint Petitioners did not acknowledge or challenge the categorical exclusion in their petition or argue that the environmental concerns they raise in Contention 1 amount to "special circumstances" precluding the application of the categorical exclusion in this proceeding. While

---

[285] Joint Petitioners Reply at 12 (citing 10 C.F.R. § 51.22(b)).

[286] *See id.* at 10-13.

[287] *See DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 2), CLI-15-18, 82 NRC 135, 146 (2015); *Palisades*, CLI-06-17, 63 NRC at 732; *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-25, 60 NRC 223, 224-25 (2004).

[288] *Palisades*, CLI-06-17, 63 NRC at 731-32.

Joint Petitioners argue that they were not placed on notice that a categorical exclusion may be applicable to this licensing action because the staff "did not use the words 'categorical exclusion'" in the hearing opportunity notice, the license transfer application identifies the categorical exclusion and explains why it is applicable to this licensing action.[289] Although the NRC is ultimately responsible for satisfying the requirements of NEPA, our rules of practice require petitioners to base their contentions on the application or other information available at the time of the petition.[290]

Nevertheless, even if this argument were timely, we do not find it persuasive. Section 51.22(b) simply allows an interested person to request that the Commission make the determination that special circumstances exist that warrant an exception to the categorical exclusion. This provision does not mean that at the request of a petitioner, the NRC must consider the categorical exclusion inapplicable until it has addressed the merits of the petitioner's environmental concerns and determined whether each of them amounts to "special circumstances." Such an interpretation would circumvent the purpose of the regulation.[291] The "reasoned explanation" for the categorical exclusion's applicability to this license transfer proceeding is the codified regulatory presumption of its applicability to license transfer actions in general, which is based upon an administrative record supporting the NRC's determination that

---

[289] Joint Petitioners Reply at 13 (citing Hearing Opportunity Notice); *see* Application at 21. To the extent that Joint Petitioners also claim that the staff has not made findings necessary to foreclose consideration of significant hazards, we note that our rules preclude any petition or other request challenging the staff's no significant hazards consideration determination in an adjudicatory proceeding. 10 C.F.R. § 50.58(b)(6); *see also* Joint Petitioners Reply at 13 (citing Hearing Opportunity Notice, 86 Fed. Reg. at 8226); *DTE Electric Co.* (Fermi 2), CLI-21-5, 93 NRC 131, 135 (2021).

[290] *See* 10 C.F.R. § 2.309(f)(1)(vi), (f)(2).

[291] *See Pilgrim*, CLI-20-12, 92 NRC at 391.

this class of licensing actions does not have a significant effect on the environment, either individually or cumulatively.[292]

Further, largely because Joint Petitioners did not address the categorical exclusion in their petition, they have not explained how any of the environmental concerns that they raise constitute special circumstances that should render the categorical exclusion inapplicable for this license transfer proceeding. Their petition focuses on the NEPA supplementation standards in 10 C.F.R. §§ 51.72(a) and 51.92(a), which provide that the NRC must prepare a supplemental environmental impact statement if there are "substantial changes in the proposed action that are relevant to environmental concerns" or "new and significant circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts."[293] While Joint Petitioners emphasize the "new and significant" information aspect of this provision, they overlook the regulations' essential requirement that any new and significant information must be directly related to the proposed action or its impacts.[294]

We see no basis warranting departure from the categorical exclusion for license transfers in this proceeding. Joint Petitioners have not pointed to information in the license

---

[292] *See* Joint Petitioners' Reply at 12-13; Categorical Exclusions from Environmental Review, Final Rule, 75 Fed. Reg. 20,248, 20,251 (Apr. 19, 2010); License Transfer Rule at 66,728. Joint Petitioners' reliance on *Pai'ina Hawaii* does not support a different outcome. *See* Joint Petitioners Reply at 12 (citing *Pai'ina Hawaii, LLC*, LBP-06-4, 63 NRC 99, 108-112 & n.36 (2006)). In *Pai'ina Hawaii*, the licensing board found that the petitioners raised a timely legal contention that satisfied the NRC's contention admissibility requirements. Here, Joint Petitioners did not raise a timely legal argument challenging the categorical exclusion and, as we discuss below, have not otherwise raised an admissible issue in Contention 1. In addition, the legal dispute found admissible by the licensing board in *Pai'ina Hawaii* was centered on the specific categorical exclusion for irradiators, and the board's determination was informed by the regulatory history of that specific provision and of section 51.22(b) as it concerned alternative siting locations for irradiators. *See Pai'ina Hawaii*, LBP-06-4, 63 NRC at 108-12. Joint Petitioners have not explained how the considerations underpinning the licensing board's findings in that case are present here.

[293] 10 C.F.R. §§ 51.72(a)(1)-(2), 51.92(a)(1)-(2); *see* Joint Petitioners Petition at 21; Joint Petitioners Reply at 9.

[294] *See* Joint Petitioners Petition at 21; Joint Petitioners Reply at 9.

transfer application that suggests its approval by the NRC would authorize a substantive change in any licensed activities that have been previously subjected to NEPA review.[295] Further, under our regulations, a licensee may not perform any decommissioning activity that would result in significant environmental impacts not previously reviewed.[296] Therefore, we find inadmissible Joint Petitioners' claim that NEPA supplementation is required to address environmental changes and unevaluated environmental impacts from operational and planned decommissioning activities at Palisades.[297]

b. Claims Relating to the PSDAR

Several of Joint Petitioners' environmental concerns challenge the adequacy of the environmental impacts discussion in the PSDAR. Specifically, Joint Petitioners argue that the PSDAR does not adequately address the environmental impacts of transporting steam generators by barge during the decommissioning process; the scope of potential contamination from historic tritium leaks; the potential effects of earthquakes on the Palisades ISFSI concrete pads; and the "environmental effects from the unrealistic [spent nuclear fuel] transport dates, . . . the harsh realities that high burnup fuel . . . may not be movable until near the end of the century[,] . . . [or] repackaging of all [spent nuclear fuel] at Palisades . . . for purposes of transport to a permanent repository."[298]

---

[295] *See Indian Point*, CLI-21-1, 93 NRC at 46 (license transfers are categorically excluded because they generally do not permit transferees to operate facility in different manner than previously permitted and therefore do not present environmental impacts different from those already considered in relevant NEPA analyses).

[296] 10 C.F.R. § 50.82(a)(6)(ii).

[297] Joint Petitioners have not sought or obtained a waiver of 10 C.F.R. § 51.22(c)(21). *See* 10 C.F.R. § 2.335(a), (b); *Curators of the University of Missouri* (TRUMP-S Project), CLI-95-1, 41 NRC 71, 125 n.70 (1995).

[298] *See* Joint Petitioners Petition at 23, 25, 29-32, 36, 39, 41.

Joint Petitioners assert that their concerns fall within the scope of this proceeding because the PSDAR must include "a discussion that provides the reasons for concluding that the environmental impacts associated with site-specific decommissioning activities will be bounded by appropriate previously issued environmental impact statements."[299] As clarified in their reply brief, Joint Petitioners' arguments concerning the PSDAR appear to be based on an understanding that the PSDAR is a binding plan approved by the NRC in connection with the federal action approving the license transfer application and that formal NRC approval will be required should the proposed transferees wish to engage in any decommissioning activity that is inconsistent with the actions and schedules described in the PSDAR.[300] However, this view misstates the scope of this proceeding and the role of the PSDAR in the staff's review of the license transfer application.

The NRC requires a licensee to submit a PSDAR before or within two years following permanent cessation of operations. However, the PSDAR does not amend the license. While the staff reviews the PSDAR, it does not formally approve the PSDAR, even when the PSDAR contains information in support of a license transfer application.[301] This is because the PSDAR itself does not authorize a licensee to perform any decommissioning activity that is not already permitted under the license or that would result in significant environmental impacts not already

---

[299] *Id.* at 20-21 (quoting 10 C.F.R. § 50.82(a)(4)(i)).

[300] *See* Joint Petitioners Reply at 1-5.

[301] *See Pilgrim*, CLI-20-12, 92 NRC at 383-84, 390; *see also Indian Point*, CLI-21-1, 93 NRC at 48; *Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), CLI-16-17, 84 NRC 99, 126 n.130 (2016). Although Joint Petitioners are correct that section 50.82(a)(7) requires a licensee to notify the NRC before performing any decommissioning activity or making any significant schedule change inconsistent with those described in the PSDAR, this notice requirement does not mean that the PSDAR is a "binding plan . . . require[ing] formal action [from the NRC] in order for Holtec to deviate from it." Joint Petitioners Reply at 3-4. The licensee can still perform these activities if they are otherwise permissible under section 50.59. *See* 10 C.F.R. § 50.82(a)(7).

reviewed.[302] Instead, the purpose of the PSDAR is to provide "a general overview for the public and the NRC of the licensee's proposed decommissioning activities."[303] The PSDAR consists of a description of the licensee's planned decommissioning activities, a schedule for their accomplishment, a site-specific decommissioning cost estimate, and "the reasons for concluding that the environmental impacts associated with site-specific decommissioning activities will be bounded by appropriate previously issued environmental impact statements."[304]

The NRC does not require a license transfer applicant for a reactor entering decommissioning to submit a complete PSDAR as part of the license transfer application. However, as explained above, a license transfer application must demonstrate that the proposed transferee is financially and technically qualified to undertake the activities authorized by the existing license. In cases such as this one, where the transfer is contingent upon the permanent shutdown of reactor operations, the activities authorized under the license are principally those related to decommissioning and spent fuel management. And ultimately, the license holder for such a reactor must comply with our regulatory requirement to submit a PSDAR before or within two years following cessation of operations. Therefore, it is not

---

[302] *See* 10 C.F.R. § 50.82(a)(6)(ii). Similarly, the license transfer, if approved, would not authorize the proposed transferees to perform any activity not already authorized under the licenses. *See* License Transfer Rule at 66,728; *see also Indian Point*, CLI-21-1, 93 NRC at 46; *Pilgrim*, CLI-20-12, 92 NRC at 387.

[303] Decommissioning Rule at 39,281. The NRC provides notice and an opportunity to comment and holds a public meeting upon receipt of the PSDAR, but our regulations do not provide a hearing opportunity on it. 10 C.F.R. § 50.82(a)(4)(ii).

[304] 10 C.F.R. § 50.82(a)(4)(i). If the licensee contemplates performing decommissioning activities that are expected to result in environmental impacts that are not bounded by relevant generic or site-specific environmental impact statements, the licensee would need to submit a license amendment request along with a supplemental environmental report that describes and evaluates the additional environmental impacts. *See* Decommissioning Rule at 39,286; Decommissioning GEIS at 1-11, 2-3. In evaluating such a license amendment request, the staff would prepare an environmental assessment or environmental impact statement, as appropriate. *See id.* at 2-3; *see also Vermont Yankee*, CLI-16-17, 84 NRC at 123-24. In addition, such a request would be subject to an opportunity for a hearing. *See Pilgrim*, CLI-20-12, 92 NRC at 385.

uncommon for the license transfer applicant to submit a PSDAR in conjunction with the application to inform the findings the NRC must make with respect to the applicant's technical and financial qualifications.

The submission of a PSDAR in conjunction with a license transfer application does not, however, transform the staff's review of that PSDAR into a major federal action requiring independent NEPA review.[305] As we have emphasized recently in similar proceedings, only certain information contained in the PSDAR falls within the scope of a license transfer proceeding.[306] In a license transfer proceeding, the staff reviews the PSDAR only to determine whether the proposed transferees are financially and technically qualified to hold the license and conduct the activities authorized under the license; accordingly, the information that is material to the staff's review principally consists of the site-specific decommissioning cost estimate and the associated decommissioning schedule. In contrast, the environmental impacts discussion in the PSDAR is not material to the staff's review because the environmental impacts of planned decommissioning activities do not bear directly on the financial or technical qualifications findings of the proposed transferees.[307] Thus, we have previously found that purely

---

[305] *See Vermont Yankee*, CLI-16-17, 84 NRC at 125-27.

[306] *See Indian Point*, CLI-21-1, 93 NRC at 50; *Pilgrim*, CLI-20-12, 92 NRC at 390-91.

[307] *See Pilgrim*, CLI-20-12, 92 NRC at 390-91; *see also Indian Point*, CLI-21-1, 93 NRC at 57. The NRC evaluated the potential environmental impacts of decommissioning nuclear power reactors in the Decommissioning GEIS. The Decommissioning GEIS, which evaluates the potential impacts associated with the SAFSTOR, DECON, and a combination of those decommissioning approaches, "reflects the NRC's determination that decommissioning is not itself a major federal action" and "serves 'to establish an envelope of environmental impacts associated with decommissioning activities.'" *See Vermont Yankee*, CLI-16-17, 84 NRC at 123 (quoting Decommissioning GEIS at 1-1).

environmental claims challenging the adequacy of the PSDAR fall outside the scope of the license transfer proceeding.[308]

We find no basis in Contention 1 to depart from this approach. Joint Petitioners' arguments concerning the adequacy of the PSDAR's evaluation of certain environmental impacts do not raise a justiciable issue within the scope of this proceeding because they have not shown that these environmental matters are material to the staff's evaluation of the proposed transferees' financial or technical qualifications. In addition, Joint Petitioners have not shown how their concerns regarding the environmental impacts of spent fuel storage, repackaging, and disposal are relevant to the PSDAR, which is required to address only the environmental impacts associated with "site-specific decommissioning activities."[309]

Consistent with the approach prescribed in our regulations, the Palisades PSDAR describes the anticipated environmental impacts associated with planned site-specific decommissioning activities and concludes that these impacts fall within the analyses performed in relevant prior generic and site-specific environmental impact statements.[310] By rule, the PSDAR cannot authorize any decommissioning activities that would result in environmental

---

[308] *See, e.g.*, *Indian Point*, CLI-21-1, 93 NRC at 50, 57; *Pilgrim*, CLI-20-12, 92 NRC at 385-86, 391; *Exelon Generation Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-19-6, 89 NRC 465, 480 (2019).

[309] 10 C.F.R. § 50.82(a)(4)(i); *see* Joint Petitioners Petition at 32-41; Joint Petitioners Reply at 7-8; *see also Pilgrim*, CLI-20-12, 92 NRC at 386 n.180. Some of Joint Petitioners' spent fuel management claims in this contention provide support for the issues they raise in Contention 3, which challenges HDI's exemption request. *See* Joint Petitioners Petition at 49-50. To the extent that these concerns provide support for Joint Petitioners' within-scope challenges to the exemption request, we address them in our discussion of Contention 3. However, their claims that the PSDAR fails to adequately consider the environmental impacts of these issues are beyond the scope of this license transfer proceeding.

[310] *See* PSDAR §§ 5.1 to 5.5 (concluding that environmental impacts are bounded by the Decommissioning GEIS, the 2006 Palisades SEIS, and other site-specific environmental impact statements previously prepared in relation to the licensing of Palisades).

impacts in excess of those previously determined.[311] Although the environmental impacts discussion in the PSDAR is not within the scope of this license transfer proceeding, it is subject to the staff's oversight.[312] Therefore, to the extent that Joint Petitioners have grounds to believe that the environmental impacts of planned decommissioning and spent fuel management activities would exceed those previously reviewed, their recourse is a petition for enforcement action under 10 C.F.R. § 2.206 to address a potential violation of our rules in connection with the representations made in the PSDAR.[313]

c. Remaining Environmental Claims

Joint Petitioners' remaining claims in Contention 1 are also not admissible. First, to the extent that Joint Petitioners suggest that the ISFSI decommissioning funding plan submitted by ENOI in 2018 and the 2006 Palisades SEIS do not adequately describe certain environmental information, they have not raised a concern within the scope of this proceeding.[314] Second, Joint Petitioners' claim that a site characterization is required to evaluate groundwater contamination from cooling tower overflows and tritium leaks does not raise an issue within the scope of this proceeding or identify a material dispute with the application, because a full site characterization is not required at this stage.[315] Joint Petitioners also claim that there is a discrepancy between the PSDAR and ENOI's ISFSI decommissioning funding report regarding

---

[311] *See* 10 C.F.R. § 50.82(a)(6)(ii).

[312] *See id.* § 50.82(a)(4)(i) (requiring a licensee to submit a PSDAR to the NRC prior to or within two years following permanent cessation of operations); Reg. Guide 1.185 at 10 (stating that the staff may find a PSDAR deficient if it proposes activities "that would result in a significant detrimental impact to the environment that is not bounded by the current environmental impact statements").

[313] *See* 10 C.F.R. § 2.206; *see also Indian Point*, CLI-21-1, 93 NRC at 49; *Pilgrim*, CLI-20-12, 92 NRC at 390.

[314] *See* Joint Petitioners Petition at 19-20, 23, 25, 29, 32, 35-36, 39, 41; 10 C.F.R. § 2.309(f)(1)(iii) (contention must raise issues within the scope of the proceeding).

[315] *See* 10 C.F.R. § 50.82(a)(9)(ii)(A); Joint Petitioners Petition at 24-29.

the number of canisters required for the storage of GTCC, and that this discrepancy would have financial implications for the transport and disposal of GTCC waste.[316] However, Joint Petitioners neither address the decommissioning cost estimate in this claim, nor explain the "major cost differences" they anticipate would have a material impact on the overall financial qualifications of the applicants.[317] Finally, Joint Petitioners' claim that the 2030 date for commencement of nuclear fuel removal is "fantastical, based on laws . . . and facilities that don't exist or will not be brought online within the timeline [HDI] postulate[s]," does not establish a genuine dispute with the application.[318] For the reasons we have explained above, we accept as plausible HDI's expectation that by 2030 a storage facility will be available to receive the Palisades spent fuel.[319]

In conclusion, we find that the categorical exclusion applies to this license transfer and its conforming amendments and accordingly that no independent NEPA analysis is required for the license transfer. We note, however, that the environmental effects of the exemptions requested in conjunction with the license transfer application was fully considered in an

---

[316] *See* Joint Petitioners Petition at 32.

[317] *Id*. In addition, the ENOI decommissioning information on which Joint Petitioners rely pertains to ENOI's plans for decommissioning Indian Point, not Palisades. *See* Joint Petitioners Petition at 32 (citing Letter from Philip L. Couture, Entergy Nuclear Operations, Inc., to NRC Document Control Desk (Dec. 17, 2018) (ML18351A478)). Joint Petitioners cite the 39th page of 70 pages in the combined PDF, which is Encl. 3B, "10 CFR 72.30 ISFSI Decommissioning Funding Plan – Indian Point Nuclear Generating Station, Unit 3," at 4. ENOI's decommissioning funding plan for Palisades projected an estimated five GTCC canisters on the ISFSI storage pads after shutdown, not six. *See id.,* Encl. 2, "10 CFR 72.30 ISFSI Decommissioning Funding Plan – Palisades Nuclear Plant, at 4."

[318] *See* Joint Petitioners Petition at 37; *see also id*. at 3.

[319] Joint Petitioners suggest that the application inconsistently represents the date for commencement of spent fuel removal as 2030 or 2041. *See id.* at 33, 37. The application states that NRC license termination is expected to occur in 2041, and therefore 2041 represents the date by which spent fuel would need to be removed from the site, not the date of initiation of spent fuel removal. *See, e.g.*, PSDAR at 3.

environmental assessment prepared by the staff.[320] This environmental review considered the information in the environmental assessment provided by HDI in support of its exemption request, an analysis that Joint Petitioners have not challenged.[321] Because Joint Petitioners' environmental claims do not identify a deficiency in the application on a matter material to the staff's license transfer decision, we find Contention 1 inadmissible.

2. Joint Petitioners' Contention 2

In Contention 2, Joint Petitioners express concerns about the corporate character, culture, and ethics of Holtec International, SNC-Lavalin, HDI, and CDI. Based on these concerns, Joint Petitioners question the qualifications of these companies to undertake activities relating to the decommissioning of Palisades and the storage, transportation, and disposal of spent nuclear fuel from Palisades and Big Rock Point.[322] In support of this contention, Joint Petitioners rely upon Exhibit A, attached to their petition, which catalogues "numerous civil and criminal wrongs" that Joint Petitioners urge the NRC consider in its review of the license transfer application.[323]

We will consider claims of deficient character or integrity admissible in an adjudicatory proceeding in special circumstances, but we have imposed strict limits on such claims to ensure that the "hearing process does not become a forum to litigate historical events that have no direct bearing on the challenged licensing action."[324] To be admissible, the alleged deficiency or misconduct "must have some direct and obvious relationship between the character issues and

---

[320] *See* Holtec Decommissioning International, LLC, Palisades Nuclear Plant; Environmental Assessment and Finding of No Significant Impact; Issuance, 86 Fed. Reg. 67,503 (Nov. 26, 2021).

[321] *See* Exemption Request at 8-10.

[322] Joint Petitioners Petition at 41-42, 44.

[323] *Id.* at 44.

[324] *Indian Point*, CLI-21-1, 93 NRC at 50.

the licensing action in dispute."[325] To that end, claims regarding prior violations or past events raised in an adjudicatory proceeding should be "directly germane to the challenged licensing action."[326] We have historically found that contentions based upon the past activities of a licensee's parent corporation do not rise to this standard because such activities generally do not bear directly upon the character or conduct of those responsible for conducting licensed activities in compliance with NRC requirements.[327]

As noted above, HDI is an indirect wholly owned subsidiary of Holtec International, created to assume the licensed operator responsibilities and decommission Holtec-owned nuclear power plants. CDI is jointly owned by Holtec and SNC-Lavalin through their subsidiaries HDI and Kentz USA, Inc., respectively, but as stated in a supplement to the application, CDI will no longer be contracted by HDI to serve as decommissioning general contractor for Palisades.[328] Joint Petitioners claim that over two decades Holtec International and SNC-Lavalin "have been debarred, seen their officers and employees convicted of bribery for contracts in multiple countries, generated illegal campaign contributions, and other civil and criminal wrongdoing, such as suspected money laundering, financial manipulation and human trafficking . . . ."[329] In Exhibit A to their petition, Joint Petitioners expound upon this claim by listing several examples of past incidents involving Holtec and SNC-Lavalin.[330]

---

[325] *Oyster Creek*, CLI-19-6, 89 NRC at 477.

[326] *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 366-67 (2001).

[327] *See Indian Point*, CLI-21-1, 93 NRC at 50-51; *Power Authority of the State of New York* (James A. FitzPatrick Nuclear Power Plant), CLI-00-22, 52 NRC 266, 311-12 (2000).

[328] *See* Application Supplement at 1-2.

[329] Joint Petitioners Petition at 42.

[330] *See id.*, Ex. A, at 1-6.

However, Joint Petitioners have not linked their concerns about the character and integrity of Holtec International and SNC-Lavalin to a material issue within the scope of the licensing action at issue in this proceeding. While Holtec International is an applicant, SNC-Lavalin is not. Joint Petitioners provide us with no basis to conclude that SNC-Lavalin personnel associated with any past wrongdoing in other projects in other countries will play a role in the management and decommissioning of either Palisades or Big Rock Point. In addition, if the license transfer is granted, neither Holtec International nor SNC-Lavalin would have any responsibility for the direct oversight and control of licensed activities at Palisades or Big Rock Point. Joint Petitioners have not pointed to a connection between the individuals involved in the incidents they cite and the companies that would become the licensed owner or operator of the Palisades and Big Rock Point facilities—Holtec Palisades and HDI, respectively.[331] Nor have Joint Petitioners otherwise identified wrongdoing on the part of any officers or directors of Entergy Nuclear Palisades (which would become Holtec Palisades) or HDI. In short, Joint Petitioners have not established a "direct and obvious" relationship between their claims of wrongdoing on the part of Holtec International and SNC-Lavalin and this license transfer proceeding.

Joint Petitioners also suggest that Holtec International is unqualified to hold the Palisades license because of prior NRC enforcement history. Joint Petitioners identify two prior NRC enforcement actions, only one of which cited a violation against Holtec International.[332] That case arose from Holtec's incorrect determination that it could change the design of one of

---

[331] *See Millstone*, CLI-01-24, 54 NRC at 366 (citing *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111 (1995)) ("[W]e found character allegations directly pertinent when . . . the allegations specifically concerned the current director of the facility, and the current organizational structure of the facility, and were supported by expert witnesses alleged to have knowledge of the current management.").

[332] *See* Joint Petitioners Petition, Ex. A at 7.

its spent fuel canisters under 10 C.F.R. § 72.48(c) without first obtaining NRC approval.[333] The staff identified the violation during a routine inspection in 2018. The staff gave credit to Holtec for "the absence of recent escalated enforcement action" against it, as well as for "Holtec's prompt and comprehensive correction of the violation," and did not assess any monetary penalty against the company.[334] In the second case, the staff issued a notice of violation to Southern California Edison Company for failing to timely report a spent fuel canister-loading problem at San Onofre Nuclear Generating Station (SONGS).[335] Joint Petitioners do not draw a connection between the events involved in this enforcement action and Holtec International, other than noting that Holtec is contracted to transfer spent fuel into dry storage at SONGS and a Holtec canister was involved in the cited incident.[336] We find no basis in the record of these enforcement actions to conclude that either Holtec International or the proposed license holders lack the requisite corporate character, culture, or ethics to undertake the decommissioning of Palisades or hold the Palisades license.[337]

In addition, we find that Joint Petitioners have not established a "direct and obvious" relationship between their remaining concerns and the character or qualifications of the proposed transferees. Much of Joint Petitioners' support for this contention draws upon examples of issues specific to the *Indian Point* license transfer application and proceeding, and Joint Petitioners do not draw a direct link between those matters and the qualifications of the

---

[333] *See* Letter from George Wilson, NRC, to K.P. Singh, Holtec International (Apr. 24, 2019), at 2-3 (ML19072A128); *see also Indian Point*, CLI-21-1, 93 NRC at 51-52.

[334] *Id.*

[335] *See* Letter from Troy W. Pruett, NRC, to Doug Bauder, Southern California Edison Company (Dec. 19, 2018), Encl. 2 at 16-17 (ML18341A172).

[336] *See* Joint Petitioners Petition, Ex. A at 7.

[337] *See id.* at 41-42; *cf. Indian Point*, CLI-21-1, 93 NRC at 51-53 (finding that the same cited enforcement actions did not establish that Holtec International or proposed license transferees "lacked candor or willingness to comply with NRC requirements").

proposed transferees in this proceeding.[338] Joint Petitioners also seek to support their contention by citing concerns that Holtec and HDI have sought exemptions in other proceedings, listing examples of exemptions sought by Holtec or HDI from emergency planning requirements and insurance requirements, and to allow the use of decommissioning trust fund money for spent fuel management costs, among others.[339] But Joint Petitioners do not explain how requesting an exemption from a regulatory requirement—an option expressly provided for under our regulations—indicates a deficit of character or qualifications on the part of Holtec or the proposed license transferees in this case.

Likewise, Joint Petitioners' allusions to criticism of Holtec's nuclear industry reputation and other lines of business, "elusive" corporate organizational structures, and workforce issues, do not directly challenge the application and offer insufficient factual evidence to establish that the proposed transferees lack the requisite qualifications to undertake decommissioning of Palisades.[340] As we have stated before, "[a]bsent strong support for a claim that difficulties at other plants run by a corporate parent will affect the plant(s) at issue before the Commission, we are unwilling to use our hearing process as a forum for a wide-ranging inquiry into the corporate parent's general activities across the country."[341] Finally, Joint Petitioners express concern that Holtec lacks experience decommissioning reactors and plans to engage in a "cookie cutter" approach to decommissioning multiple reactors, stating that "[i]t is very unclear that Holtec has the required resources to take on such a task," leading to significantly increased

---

[338] *See* Joint Petitioners' Petition, Ex. A, at 13-14, 17, 18-21, 24.

[339] *See id.*, Ex. A, at 7, 13, 14-17.

[340] *See id.*, Ex. A, at 8, 10-14, 17-18, 21-25.

[341] *FitzPatrick*, CLI-00-22, 52 NRC at 312.

decommissioning costs.[342] However, these statements do not directly call into question the character or qualifications of the proposed license transferees in this proceeding.

In summary, we do not find that the examples Joint Petitioners raise indicate that the proposed transferees lack the requisite character or qualifications to receive the Palisades license or safely decommission the Palisades site. Therefore, we find Joint Petitioners' Contention 2 inadmissible.

3. Joint Petitioners' Contention 3

In Contention 3, Joint Petitioners assert that HDI's request for an exemption from 10 C.F.R. § 50.82(a)(8)(i)(A) should be denied, arguing that the exemption is both legally and factually unsupportable and that HDI has not demonstrated that special circumstances are present.[343] Allowing HDI to withdraw nearly $200 million from the decommissioning trust fund for spent fuel management and site restoration costs could jeopardize public health and safety, Joint Petitioners claim, by "leav[ing] fewer resources to accomplish a possibly dangerous decommissioning campaign," and would furthermore not be beneficial to the public or the environment.[344] Supported by a declarant, Joint Petitioners' core challenge to the exemption request is that HDI has underestimated the costs of spent fuel management, particularly the costs of repackaging the spent nuclear fuel contained in VSC-24 storage casks and the costs associated with potential delays in transferring high-burnup fuel from the spent fuel pool to the Palisades ISFSI and from the ISFSI to DOE for disposal.[345]

---

[342] Joint Petitioners Petition, Ex. A, at 8, 18.

[343] *Id.* at 44-45, 50-51 (citing 10 C.F.R. § 50.12(a)(2)).

[344] *Id.* at 51.

[345] *See id.* at 49-51. As noted above, these casks are licensed to store, but not transport, spent nuclear fuel.

An exemption request is not among the listed actions subject to a hearing opportunity under section 189 of the AEA, but where, as here, the exemption request is intertwined with and integral to a license transfer application, arguments relating to the exemption request fall within the scope of this proceeding.[346] Accordingly, in this proceeding and in similar recent decisions, we have found arguments raising concerns about how a requested exemption from section 50.82(a)(8)(i)(A) may materially affect a license transfer applicant's showing of financial qualifications to be within the scope of the proceeding.[347] Here, however, Joint Petitioners go further, challenging the substance of the exemption request and arguing that the exemption itself should be denied.[348]

The substance of an exemption request may be challenged if the exemption request and the related licensing action "overlap to the point that they are, in essence, two parts of the same action," a determination that we make on a case-by-case basis, taking into account the unique facts and circumstances of each case.[349] In this case, as discussed above, HDI's exemption request is sufficiently interrelated with the license transfer application that a challenge to the substance of the exemption request falls within the scope of this proceeding. However, we find

---

[346] *See Private Fuel Storage*, CLI-01-12, 53 NRC at 465-67, 476; *see also Vermont Yankee*, CLI-16-12, 83 NRC at 549, 553.

[347] *See, e.g.*, *Indian Point*, CLI-21-1, 93 NRC at 15-16; *Pilgrim*, CLI-20-12, 92 NRC at 362.

[348] *See* Joint Petitioners Petition at 44-45, 50-51.

[349] *See Vermont Yankee*, CLI-16-12, 83 NRC at 553; *see also Honeywell International, Inc.* (Metropolis Works Uranium Conversion Facility), CLI-13-1, 77 NRC 1, 10 (2013) (stating that "[a]n exemption standing alone does not give rise to an opportunity for hearing, . . . [b]ut when a licensee requests an exemption in a related license amendment application, we consider the hearing rights on the amendment application to encompass the exemption request as well"); *Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), CLI-00-5, 51 NRC 90, 96 (2000) (inquiring whether an exemption, "regardless of its label," could "constitute[ ] an action for which a hearing is required . . . [because it] is in effect" an action covered by hearing rights under the AEA); *United States Department of Energy* (Clinch River Breeder Reactor Plant), CLI-82-23, 16 NRC 412, 421 (1982) (recognizing a "statutory right to a hearing on the granting of an exemption" where the exemption is "part of a proceeding" for an action covered by hearing rights under the AEA).

that Joint Petitioners have not raised a supported dispute on a material issue with the exemption request.

a. Repackaging of Storage-Only Fuel Canisters

Joint Petitioners claim that the cost to repackage the eighteen VSC-24 casks at Palisades would range from $17.3 to $37.6 million, adding "as much as another 30% to the spent nuclear fuel management costs estimated by Holtec."[350] In response, the applicants assert that the costs of repackaging the VSC-24 casks for transport are encompassed by the $39 million line-item cost estimate allocated to transfer of fuel away from the ISFSI, and they argue that Joint Petitioners have not addressed this cost estimate or called into question its sufficiency.[351] In their reply, Joint Petitioners do not address the applicants' claims regarding the $39 million line-item cost estimate but maintain that repackaging of spent fuel is not mentioned in the PSDAR.[352] They assert that the repackaging of the 432 assemblies in the eighteen VSC-24 casks "is on a scale that has yet to be undertaken in the United States" and, given the lack of industry experience with such an effort, "cost projections contain elements of speculation that cannot be penciled [a]way."[353]

These claims are insufficient to show a material dispute with the exemption request. While Joint Petitioners claim that the costs of repackaging the VSC-24 casks would exceed HDI's estimated spent fuel management costs by as much as 30%, they do not explain how

---

[350] Joint Petitioners Petition at 49; *id.*, Ex. B, at 3.

[351] *See* Applicants Answer to Joint Petitioners at 19; *see also* Applicants Answer to AG at 42. The applicants state that the line item described as "Transfer of fuel and/or other nuclear material away from the ISFSI" covers the transfer of fuel assemblies into transfer casks. *See* Applicants Answer to Joint Petitioners at 19 & n.76.

[352] Joint Petitioners Reply at 14.

[353] Joint Petitioners Reply, Ex. B, Response of Robert Alvarez (Mar. 29, 2021), at 4 (unnumbered) (Alvarez Decl.); *see* Joint Petitioners Reply at 16-17.

they arrived at this conclusion.[354] HDI estimated that the total spent fuel management costs for Palisades would amount to approximately $166 million; a 30% increase over this amount would reflect an additional $50 million in spent fuel management costs, an amount that is not supported by the information in Joint Petitioners' pleadings or their expert's declarations, which specifies additional costs between $17.3 and $37.6 million.[355] Moreover, Joint Petitioners have not challenged the applicants' statement that the cost of repackaging VSC-24 casks for transport are accounted for in their $39 million line-item cost estimate for fuel transfer. Nor have they addressed how, in light of the wide range of their own cost estimate, $39 million would be insufficient to cover the repackaging of VSC-24 casks. Therefore, we find that Joint Petitioners have not raised a material dispute with the exemption request.[356]

Finally, we find that Joint Petitioners' suggestion that there may be additional costs associated with safely repackaging "defective Cask No. 4," a VSC-24 cask with weld defects detected in 1994, does not present an admissible issue.[357] Joint Petitioners claim that they do

---

[354] *See* Joint Petitioners Petition at 49; *id.*, Ex. B, Report of Robert Alvarez, at 3 (Alvarez Report).

[355] In their reply, Joint Petitioners raise an additional potential cost, stating that "the estimated cost of managing low-level radioactive waste from removing spent fuel to new canisters is estimated by the DOE at $9,500 per assembly and could be more than the cost to load the assembly in any canister." Alvarez Decl. at 4 (unnumbered) (citing U.S. Department of Energy, Office of Nuclear Energy, "Standardized Transportation, Aging, and Disposal (STAD) Canister Design, Presentation to the Nuclear Waste Technical Review Board" (Jun. 24, 2015), https://www.nwtrb.gov/docs/default-source/meetings/2015/june/jarrell.pdf). Because this claim was not raised in Joint Petitioners' initial filings, it is untimely. Even if we were to find it timely, we do not find that it establishes the admissibility of this contention, because Joint Petitioners do not explain whether and to what extent the decommissioning cost estimate fails to account for these costs. For example, they do not challenge the adequacy of the $39 million line item in this regard, nor do they point to any other deficiency in the decommissioning cost estimate to account for such costs.

[356] For the same reasons, we find inadmissible Joint Petitioners' related claim in Contention 1 that the PSDAR does not account for the possibility that repackaging will be required. *See* Joint Petitioners Petition at 35. In addition, as we noted above, it remains uncertain whether DOE will require repackaging of these canisters.

[357] *See* Joint Petitioners Petition at 37-39, 50.

not know whether Cask No. 4 has been unloaded, but they state that "there is the troubling conundrum of unloading and repackaging the [spent nuclear fuel]" from the cask "without causing a serious radiological accident."[358] Joint Petitioners do not point to information suggesting that the costs of repackaging this cask would have a material impact on a matter related to the exemption. For example, they do not suggest that the costs of repacking Cask No. 4 are not accounted for in HDI's spent fuel management cost estimate or that any additional costs required for repackaging the cask would reduce the decommissioning trust fund to a level that could adversely impact the proposed transferees' ability to safely decommission Palisades. Accordingly, this concern does not raise a genuine dispute with the exemption request.

b. Spent Fuel Management Costs

Joint Petitioners argue that HDI understates the cost of spent fuel management at Palisades and Big Rock Point by as much as 25%. Specifically, drawing upon industry data in a GAO report, Joint Petitioners estimate that the costs of Holtec canisters for the remaining spent fuel, the activities and equipment necessary to transfer the spent fuel from the spent fuel pool to dry cask storage, the ISFSI storage pad, and fifteen years of annual maintenance and operation costs, could total $176.8 million.[359] They conclude, "the potential costs for repackaging the VSC-24 and Holtec cask emplacement and storage for 40% of the total number of [spent nuclear fuel] assemblies at Palisade[s] and Big Rock Point come to as much as $206.8 million."[360]

First, Joint Petitioners address the expenses of transferring the remaining Palisades fuel assemblies from the spent fuel pool and storing them in the ISFSI, arguing that these expenses

---

[358] *Id.* at 39, 50; *see also* Joint Petitioners Reply at 17.

[359] Joint Petitioners Petition at 50; *id.*, Ex. B, Alvarez Report, at 4.

[360] Joint Petitioners Petition at 50; *see id.*, Ex. B, Alvarez Report, at 4.

"may be significant" and higher than estimated by HDI.[361] They assert that the cost of the planned 20 Holtec HI-STORM FW casks needed to receive the remaining Palisades spent fuel could be as high as $30 million for the casks alone, based on GAO data reflecting the typical cost of a transfer cask as ranging between $1.5 million and $3 million per cask.[362] The applicants respond that the decommissioning cost estimate includes approximately $35 million for these casks in the line item for "Containers."[363] Joint Petitioners do not directly address this cost estimate or the applicants' statement that the cost estimate includes more funding for these casks than Joint Petitioners claim could be required. Therefore, we find that this concern does not identify a material dispute with the exemption request.

Second, Joint Petitioners assert that the costs associated with "activities and equipment necessary to transfer [spent nuclear fuel] from wet to dry storage" may be as high as $42.8 million, based on the GAO information.[364] Joint Petitioners do not explain how this figure was derived from the information in the GAO report. The GAO table describes a range of typical costs for "[d]esign, licensing, and construction" of $5.5 million to $42 million.[365] Excluding the costs of transfer casks and annual maintenance and operation costs, which Joint Petitioners break out into distinct estimates and we address elsewhere in our evaluation of this contention, other relevant costs in the GAO table include labor costs of $150,000 to $550,000, a description of $1 million to $1.5 million for a "[c]rawler-type transporter," and various ranges of expenses for

---

[361] Joint Petitioners Petition at 49-50; *see also id*., Ex. B, Alvarez Report, at 3.

[362] *See* Joint Petitioners Petition, Ex. B, Alvarez Report, at 4 (citing U.S. Government Accountability Office, GAO-15-141, "Spent Fuel Management: Outreach Needed to Help Gain Public Acceptance for Federal Activities that Address Liability" (Oct. 2014), 17 tbl.2, "Typical Costs Associated with Transferring Spent Nuclear Fuel in Canisters from Wet to Dry Storage") (GAO Report).

[363] Applicants Answer to Joint Petitioners at 21 & n.86.

[364] Joint Petitioners Petition at 50; *id.*, Ex. B, Alvarez Report, at 4.

[365] GAO Report at 17 tbl.2; Joint Petitioners Petition, Ex. B, Alvarez Report, at 4.

vertical storage casks and horizontal storage modules.[366] While the GAO table is broadly cited as support for Joint Petitioners' ultimate estimate for activities and equipment related to transfer of spent fuel from wet-to-dry storage, none of these categories are specifically identified as forming the basis for the $42.8 million estimate developed by Joint Petitioners.[367]

The applicants contend that in order to reach such a high estimate of these costs, Joint Petitioners must have drawn from the high end of the ranges described in the GAO table and included in the estimate the initial costs of designing, licensing, and constructing the ISFSI.[368] They argue that Joint Petitioners' estimate is not a true reflection of the costs associated with spent fuel management because the Palisades ISFSI is already constructed and paid for, and the proposed transferees would not bear those costs after closing on the purchase and sale agreement.[369] Acknowledging that the potential expansion of the eastern ISFSI pad at Palisades would involve additional expenditures, the applicants state that the decommissioning cost estimate allocates $14.5 million for that expansion, which falls within the GAO's range of typical costs for ISFSI design, licensing, and construction.[370] They also argue that Joint Petitioners have not justified including in their estimate the one-time costs of loading and transport equipment that are already in use at Palisades. Further, the applicants note that the decommissioning cost estimate includes $57 million for spent fuel management between 2022-2025, the period that includes the activities of preparing for and conducting fuel movement

---

[366] GAO Report at 17 tbl.2; Joint Petitioners Petition, Ex. B, Alvarez Report, at 4.

[367] *See* Joint Petitioners Petition at 50; *id.*, Ex. B, Alvarez Report, at 4.

[368] *See* Applicants Answer to Joint Petitioners at 21-22.

[369] *See id.* at 22. For example, $6.5 million of Joint Petitioners' $176.8 million cost estimate appears to be allocated to the need for a "storage pad." *See* Joint Petitioners Petition, Ex. B, Alvarez Report, at 4.

[370] *See id.*; GAO Report at 17 tbl.2 (describing typical costs as ranging from $5.5 million to $42 million).

from the spent fuel pool to an onsite dry storage facility.[371] Because Joint Petitioners do not dispute that the funds in this category cover the "activities and equipment necessary to transfer [spent nuclear fuel] from went to dry storage" or explain why the specific estimate provided by the applicants is insufficient, particularly given Joint Petitioners' lower estimate of $42.8 million for such activities, this claim does not identify a supported material dispute with the exemption request.[372]

Finally, Joint Petitioners claim that operation and maintenance costs for the Palisades ISFSI could be as high as $6.5 million per year, based on the high end estimate in the GAO table's range of potential costs for operating a permanently shutdown reactor site.[373] Arguing that Joint Petitioners have not explained why $6.5 million is representative of the Palisades site configuration, where HDI plans to maintain site infrastructure including "the main plant protected area that encompasses one of the ISFSI pads," the applicants counter that site-wide operating and maintenance costs at Palisades—best illustrated in the years 2027 to 2029, the dormancy period in which no other major cost drivers are reflected in the annualized cash flows—are estimated in the decommissioning cost estimate to amount to $6.3 million. This amount falls within the $2.5 million to $6.5 million range described in the GAO table as typical costs for "[a]nnual operations."[374] The portion of this sum allocated specifically to spent fuel management

---

[371] Applicants Answer to Joint Petitioners at 22-23; DCE at 13-14 & 46 tbl.5-1. This figure does not include the funds apportioned to the cost of the Holtec HI-STORM FW containers that will receive the spent fuel from the spent fuel pool. The applicants state that "$57 million comes from the sum of spent fuel costs shown for 2023-2025 ($92.8 million), less the cost of Holtec containers ($35.6 million)." Applicants Answer to Joint Petitioners at 23 & n.92 (citing DCE at 46 tbl.5-1).

[372] Joint Petitioners Petition, Ex. B, Alvarez Report, at 4.

[373] *See id.* at 50; *id.*, Ex. B, Alvarez Report, at 4; GAO Report at 17 tbl.2.

[374] *See* Applicants Answer to Joint Petitioners at 24; Joint Petitioners Petition, Ex. B, Alvarez Report, at 4; GAO Report at 17 tbl.2. The applicants derived the $6.3 million figure by adding the $4.6 million allocated to radiological decommissioning and $1.7 million allocated to spent fuel management for these three years. *Id.* at 24 n.95 (citing DCE at 45 tbl.5-1). The applicants

during this period is $1.7 million, which falls below the range in the GAO table.[375] However, in their reply, Joint Petitioners do not address the applicants' explanation for their allocation of operating and maintenance costs or provide any other ground to question HDI's estimate. Therefore, this claim does not raise a material dispute with the exemption request.

Because we find that Joint Petitioners have not established that any element of their proposed alternative cost estimate raises a supported, material dispute with HDI's cost estimate for spent fuel management, we find that Joint Petitioners' overall conclusion that the total costs of spent fuel management could amount to $176.8 million does not raise a genuine dispute with HDI's estimate for spent fuel management costs. Likewise, having previously found that their claim regarding the cost of repackaging VSC-24 casks similarly does not raise a genuine supported dispute with the exemption request, we find their claim that the total potential costs of repackaging VSC-24 casks and spent fuel management for 40% of the assemblies at Palisades and Big Rock Point could amount to $206.8 million is insufficiently supported to call into question the plausibility of HDI's estimate of spent fuel management costs. Joint Petitioners do not explain how they arrive at the $206.8 million figure or to what extent costs relating to Big Rock Point factor into this estimate. HDI's exemption request pertains only to Palisades. Therefore, we find that Joint Petitioners' challenges to the exemption based on the cost of spent fuel management are inadmissible.

---

state that maintenance and operations costs during this period "primarily fall in the Program Management category (e.g., security, taxes, insurance, site upkeep, regulatory compliance programs, and licensing/engineering/home office costs)," and are incurred on a site-wide basis and allocated to spent fuel management and radiological decommissioning proportionately. *Id.* at 24-25 (citing DCE at 31 tbl.3-2; PSDAR at 13).

[375] *See* DCE at 45 fig.5-1; Joint Petitioners Petition, Ex. B, Alvarez Report, at 4; GAO Report at 17 tbl.2.

c. Cooling Time Implications of High-Burnup Fuel

Joint Petitioners also claim that the presence of high-burnup fuel at Palisades raises questions about HDI's assumed cooling time for spent nuclear fuel in the spent fuel pool and HDI's assumptions about the timeframe for transferring all spent fuel from the Palisades site. Joint Petitioners estimate that approximately 20% of spent nuclear fuel at Palisades was high-burnup by 2013, and they assert that the remaining fuel discharged since then is mostly high-burnup.[376] The applicants argue that Joint Petitioners provide no citation for their estimate of the amount of high-burnup fuel present in the Palisades spent fuel pool or ISFSI.[377] The applicants do not themselves offer any clarification regarding the actual amount of high-burnup fuel present at Palisades, nor do they assert that Joint Petitioners' estimate of the amount of high-burnup fuel at Palisades is incorrect. While there appears to be a legitimate dispute regarding the amount of high-burnup fuel present in the Palisades spent fuel pool and ISFSI, ultimately, this dispute is not material to our decision on the admissibility of Joint Petitioners' contention. Even taking as true Joint Petitioners' assumption that the majority of fuel in the spent fuel pool is high-burnup and the amount of high-burnup fuel in the ISFSI is greater than 20%, we find that Joint Petitioners still have not shown that this concern raises a supported genuine dispute on a material issue associated with the exemption request.

---

[376] Joint Petitioners Petition, Ex. B, Alvarez Report, at 4.

[377] *See* Applicants Answer to Joint Petitioners at 25 n.101. On reply, Joint Petitioners provide the references for the data on which they relied for their estimate of the amount of high-burnup fuel at Palisades. Alvarez Decl. at 2-3 (unnumbered). The applicants move to strike this information as untimely, a characterization Joint Petitioners dispute. *See Applicants' Motion to Strike Portions of Beyond Nuclear et al.'s Reply and Second Declaration of Robert Alvarez* (Apr. 5, 2021), at 5 (Applicants Motion to Strike Reply); *Reply of Beyond Nuclear, Michigan Safe Energy Future and Don't Waste Michigan in Opposition to Applicants' 'Motion to Strike Portions of Beyond Nuclear et al.'s Reply and Second Declaration of Robert Alvarez'* (Apr. 14, 2021), at 10-15 (Joint Petitioners Response to Motion to Strike Reply). Because our decision does not rely on the additional information provided in Joint Petitioners' reply, we need not resolve this dispute.

(1) TIMEFRAME FOR TRANSFER OF HIGH-BURNUP FUEL INTO DRY CASK STORAGE

Joint Petitioners raise the potential for significant costs relating to the transfer of high-burnup spent nuclear fuel from the Palisades spent fuel pool to the ISFSI.[378] The decommissioning cost estimate projects that the remaining Palisades spent fuel will be removed from the spent fuel pool to a dedicated ISFSI by 2025, or over a period of three years, assuming a 2022 start date.[379] Relying exclusively on a 2013 Sandia National Laboratories presentation on cooling times for the storage and transportation of spent nuclear fuel, Joint Petitioners claim that the minimum cooling time required before high-burnup fuel at Palisades can be transferred from the spent fuel pool into dry cask storage is twenty-five to thirty years, suggesting that they view the application's estimated completion date of 2025 as speculative.[380]

Addressing this claim in their answer, the applicants note that Joint Petitioners' twenty-five to thirty-year minimum cooling presumption is taken from a chart in the presentation under the heading "Cooling Times Derived from Cask Certificates of Compliance," which plots the upper and lower ranges for minimum cooling times before storage or transport based on fuel burnup.[381] The applicants point out that this chart does not appear to support Joint Petitioners' proposition, as it actually reflects that the minimum cooling time required for high-burnup fuel could be as low as approximately three to five years.[382] The Sandia Laboratories presentation

---

[378] *See* Joint Petitioners Petition, Ex. B, Alvarez Report, at 3-4.

[379] DCE at 29 tbl.3-1, 45 fig.5-1.

[380] *See* Joint Petitioners Petition at 40; *id.*, Ex. B, Alvarez Report, at 4-5 (citing U.S. Department of Energy, Sandia National Laboratories, "Cooling Times for Storage and Transportation of Spent Nuclear Fuel" (Feb. 25, 2013), https://www.osti.gov/servlets/purl/1145261) (Sandia Presentation).

[381] *See* Applicants Answer to Joint Petitioners at 24-25 (citing Sandia Presentation at 4).

[382] *See id.* at 25; Sandia Presentation at 4. Assemblies with burnup of 45,000 MWd/MTU (45 GWd/MTU) or greater are considered high-burnup fuel. *See* Applicants Answer to Joint Petitioners at 25 (citing "Backgrounder on High Burnup Spent Nuclear Fuel" (Sept. 2018) (ML18270A110)); *see also* Continued Storage GEIS, Appendix I, at I-1. The applicants also note

derives this data from cask certificates of compliance.[383] The applicants explain that Holtec's HI-STORM FW dry cask system will be used to store the remaining Palisades fuel, a fact reflected in the decommissioning cost estimate.[384] Within these casks, the fuel will be placed in MPC-37 canisters.[385] The applicants claim that in accordance with the formula in the HI-STORM FW certificate of compliance for calculating burnup and cooling time limits for fuel assemblies, fuel assemblies loaded into the MPC-37 canister with a burnup of 45 GWd/MTU would have a minimum cooling time of 1.88 years.[386]

On reply, Joint Petitioners do not dispute the applicants' characterization of the information in the Sandia Laboratories presentation, and they acknowledge that the Sandia Laboratories presentation states that minimum cooling times under five years for high-burnup fuels is possible for smaller cask sizes.[387] Appearing to abandon their claim that the cooling times for high-burnup fuel before emplacement range between a minimum of twenty-five and thirty years, Joint Petitioners argue more broadly that cooling times for high-burnup fuel will increase with increasing burnup and that high-burnup fuels loaded into very large sized casks "may require decades of aging in pools."[388] Joint Petitioners further state that high-burnup fuel that is preferentially loaded into multi-purpose canister casks "can be far greater than [five]

---

that other slides in the presentation state that transfer from pool to cask within five years is possible under certain conditions, such as with smaller cask sizes. *See* Applicants Answer to Joint Petitioners at 24-25 (citing Sandia Presentation at 2).

[383] *See* Sandia Presentation at 3-4.

[384] Applicants Answer to Joint Petitioners at 25 (citing DCE at 22).

[385] *See id.*; DCE at 22.

[386] Applicants Answer to Joint Petitioners at 25 (citing Certificate of Compliance No. 1032, Amend. No. 5 (Jun. 11, 2020), app. B, at 2-26 to 2-34, 2-43 (ML20163A705)).

[387] *See* Alvarez Decl. at 1 (unnumbered).

[388] *Id.* at 1 (unnumbered) (quoting Sandia Presentation at 2).

years."[389] By themselves, these statements do not raise a material dispute with the exemption request because their claims are consistent with the information in the presentation that describes a range of minimum cooling times of between approximately three and thirty years for high-burnup fuels.[390]

Joint Petitioners' support for this concern lacks a connection between the cooling time possibilities they raise and the assumptions underlying HDI's planned schedule for wet-to-dry fuel transfer in this proceeding; and, ultimately, the cost implications that any change in this would have on the decision whether to grant the exemption request. Joint Petitioners have not directly challenged the applicants' explanation that the minimum cooling time for spent fuel with a burnup of 45 GWd/MTU loaded into the HI-STORM FW casks and MPC-37 canisters falls within the three-year period projected by HDI.[391] In their reply, Joint Petitioners assert that the HI-STORM 100 cask is not considered a small cask, implying that the minimum cooling time for the remaining Palisades spent fuel may be on the order of decades.[392] Leaving aside the question of whether this argument was properly raised in the first instance on reply, it does not identify a dispute with the application or the applicants' explanation because the remaining

[389] *Id.* at 2 (unnumbered) (citing Sandia Presentation at 6).

[390] *See* Sandia Presentation at 4.

[391] *See* Applicants Answer to Joint Petitioners at 25 & nn.102-03; Alvarez Decl. at 2-3 (unnumbered). Joint Petitioners' statement that the cooling times for high-burnup fuel "can be far greater than [five] years" for fuel placed preferentially into multi-purpose canisters does relate to the application, considering that the MPC-37 canisters loaded in the HI-STORM FW system are multi-purpose canisters. However, their argument that these cooling times could be far greater than five years brings us no closer to an understanding of where in the range of minimum cooling time possibilities the Palisades spent fuel is more likely to fall; it neither excludes a cooling time of less than five years, nor provides evidence that the cooling time would be closer to their high end estimate of thirty years.

[392] *See* Alvarez Decl. at 1 (unnumbered).

Palisades fuel will be loaded into a different cask—the HI-STORM FW.[393] Joint Petitioners do not explain how their claims regarding the HI-STORM 100 cask are relevant to the HI-STORM FW cask in use at Palisades.

Given that Joint Petitioners have not raised a specific dispute with the relevant information provided by the applicants, we find that Joint Petitioners have not provided sufficient information to suggest that HDI's projected timeframe for transferring the remaining spent fuel at Palisades into dry cask storage is implausible. Moreover, because they have not addressed how the impacts of high-burnup fuel on HDI's assumed timeframe for wet-to-dry fuel transfer would affect the cost estimate for spent fuel management, they have not established the materiality of this concern to the considerations involved in the decision to grant or deny the exemption request. Therefore, we find that this concern does not identify a supported material dispute with the exemption request.

(2) TIMEFRAME FOR TRANSFER OF HIGH-BURNUP FUEL AWAY FROM SITE

Joint Petitioners next suggest that the application's projection for removal of spent nuclear fuel from the Palisades ISFSI may be speculative because of the presence of high-burnup fuel.[394] Quoting a Nuclear Waste Technical Review Board report, Joint Petitioners observe that the nuclear industry is trending toward storing higher-burnup fuel in larger dry storage casks and canisters, and DOE has estimated that "if no repackaging occurs, some of the largest [spent nuclear fuel] canisters storing the hottest [spent nuclear fuel] would not be cool enough to meet the transportation requirements until approximately 2100."[395] If, on the

---

[393] *See* Applicants Answer to Joint Petitioners at 25; DCE at 22. In their petition, Joint Petitioners did not relate their argument about high-burnup fuel cooling times to a specific cask system. *See generally* Joint Petitioners Petition, Ex. B, Alvarez Report.

[394] *See* Joint Petitioners Petition, Ex. B, Alvarez Report at 4-5.

[395] *Id.*, Ex. B, Alvarez Report, at 5 (quoting U.S. Nuclear Waste Technical Review Board, "Preparing for Nuclear Waste Transportation: Technical Issues That Need to Be Addressed in Preparing for a Nationwide Effort to Transport Spent Nuclear Fuel and High-Level Radioactive

other hand, the spent fuel is repackaged from these large casks and canisters into smaller standardized canisters, Joint Petitioners note that DOE has estimated that it "could remove [spent nuclear fuel] from all nuclear power plant sites by approximately 2070."[396] In response, the applicants state that HDI's decommissioning cost estimate assumes that repackaging for transportation will occur.[397] They further assert that neither Joint Petitioners, nor the report on which they rely, suggest that the "Palisades fuel assemblies cannot be repackaged into transportation casks or otherwise approved for transport in time to remove all fuel by the end of 2040."[398]

This concern does not raise a supported dispute with the exemption request. In their petition, Joint Petitioners do not address the decommissioning cost estimate's assumptions about spent fuel repackaging or explain why HDI's projected timeframe for removal of spent fuel from the Palisades ISFSI is implausible. As the applicants point out, the decommissioning cost estimate assumes that repackaging could be required in order to transport spent fuel from the ISFSI for disposal. The estimated 2070 date by which DOE projects it could remove repackaged spent fuel from all nuclear reactor sites in the country is not clearly incompatible with HDI's estimated 2040 date for removal of all spent fuel from only the Palisades site.[399] Moreover, the DOE estimate relies on an assumption that all spent nuclear fuel would be

---

Waste" (Sept. 2019), at 77, https://www.nwtrb.gov/docs/default-source/reports/nwtrb_nuclearwastetransport_508.pdf?sfvrsn=6) (NWTRB Report). The NWTRB Report quoted by Joint Petitioners states that DOE examined industry trends between 2004 and 2013.

[396] *Id.*, Ex. B, Alvarez Report, at 5 (quoting NWTRB Report at 77).

[397] *See* Applicants Answer to Joint Petitioners at 26.

[398] *Id.*

[399] *See* DCE at 3 ("The HDI schedule assumes that spent fuel . . . [is] removed from the site by 2040.").

repackaged from large casks and canisters into smaller standardized canisters.[400] As we have previously noted, future spent fuel packaging requirements for DOE transportation remain highly uncertain; therefore, the DOE estimate does not clearly support a direct challenge to the decommissioning cost estimate's projected date for completion of spent fuel removal.[401]

Further, Joint Petitioners have not explained how this concern is material to the findings the NRC must make on the exemption request. In their petition, Joint Petitioners do not connect their concern about the impacts of high-burnup fuel on the timeframe for spent fuel removal to the costs of spent fuel management described in the decommissioning cost estimate or cash flow analysis. In their reply, Joint Petitioners assert that HDI will incur additional specified expenses for maintaining and operating the Palisades ISFSI if all spent fuel is not removed by 2041.[402] Because they have not raised an adequately supported challenge to the plausibility of HDI's projected date, however, this argument does not support admission of this contention.[403]

---

[400] *See* NWTRB Report at 77.

[401] *See Indian Point*, CLI-21-1, 93 NRC at 31. Joint Petitioners appear to acknowledge this uncertainty, pointing to ENOI's explanation in the 2018 ISFSI decommissioning funding plan that its assumed start date for DOE's acceptance of fuel from Palisades "are for budgeting purposes only, and do not represent any conclusion by the licensee about how the DOE will actually perform in the future." *See* Joint Petitioners Petition, Ex. B, Alvarez Report, at 4 (quoting "10 CFR 72.30 ISFSI Decommissioning Funding Plan – Palisades Nuclear Plant," attached (Encl. 2) to Letter from Philip L. Couture, Manager, Fleet Licensing Programs, Entergy Nuclear Operations, Inc., to NRC Document Control Desk (Dec. 17, 2018) (ML18351A478)). Although Joint Petitioners cite ENOI's explanation to support their case that the projected date for removal for spent fuel from Palisades "has strong elements of speculation," it is undisputed that many aspects of DOE's future performance of its obligations under the Standard Contract are uncertain, particularly as to whether and how DOE will require repackaging of canistered fuel. Therefore, we decline to find that a decommissioning cost estimate is implausible because it makes reasonable assumptions about DOE's future expectations for receiving spent nuclear fuel. For the same reason, we find that Joint Petitioners have not raised an admissible issue concerning the PSDAR's assumptions about future DOE repackaging requirements. *See id.* at 32-37.

[402] *See* Alvarez Decl. at 4 (unnumbered).

[403] This argument is also untimely, as it was raised for the first time on reply. Joint Petitioners did not identify these costs in their petition or specify how a delay in the spent fuel transfer schedule would affect HDI's estimate of spent fuel management costs. The report from which

While we do not find Joint Petitioners' concern admissible, we note that in this decision we separately admit for hearing an issue related to the plausibility of HDI's projected eleven-year timeframe for the transfer of all spent fuel from the Palisades site. Further, as we have explained above, the NRC's review of the adequacy of decommissioning and spent fuel management funding is not a one-time look, but part of an ongoing oversight process that spans the decommissioning process and continues through license termination. If any significant unanticipated decommissioning or spent fuel management costs arise, whether resulting from a schedule delay or otherwise, the licensee will be required to report these costs in its annual status reports, as well as provide any necessary adjustments to cover the shortfall.[404]

d. Remaining Miscellaneous Claims

In Contention 3, Joint Petitioners also express generalized concerns about a previous licensee's withdrawal of funds from the Palisades decommissioning trust fund in 2006, as well as the potential radiological impacts of unloading and repackaging fuel from Cask No. 4, transporting steam generators by barge, and the seismic qualifications of the dry cask storage pads.[405] These claims do not directly address the information in the exemption request or decommissioning cost estimate. Therefore, we find them inadmissible. We also find inadmissible various arguments raised at the beginning of their petition about HDI's waste volume and cost estimates, project delays attributable to HDI's other decommissioning

---

Joint Petitioners derived its cost estimate information was also not referenced in Joint Petitioners' petition. *See Louisiana Energy Services* (National Enrichment Facility), CLI-04-35, 60 NRC 619, 623 (2004) (our rules "do not allow [the use of] reply briefs to provide, for the first time, the necessary threshold support for contentions").

[404] *See* 10 C.F.R. § 50.82(a)(8)(vi) (licensee must include in report additional financial assurance to cover any shortfall in estimated cost to complete decommissioning); *id.* § 50.82(a)(8)(vii)(C) (licensee must include in report a plan to obtain additional funds to cover any shortfall in projected cost to manage irradiated fuel until fuel is transferred to DOE).

[405] *See* Joint Petitioners Petition at 49-50; *see also* Joint Petitioners Reply at 14.

obligations, and HDI's reliance on the nuclear decommissioning trust fund.[406] These arguments are not further developed in a contention and do not identify a supported dispute on an issue materal to the application.

4. Applicants' Motions to Strike Portions of Joint Petitioners Reply and to Strike Subsequent Responses to Applicants' Motion

Following submission of Joint Petitioners' reply, the applicants moved to strike portions of the reply for impermissibly adding new arguments and evidentiary materials not raised in their initial petition.[407] The applicants request that if we decline to strike these portions of Joint Petitioners' reply, they be granted an opportunity to respond to arguments and materials identified in their motion.[408] Joint Petitioners, supported by Mr. Muhich, filed a response opposing the applicants' motion, arguing that the information the applicants seek to have stricken was timely and properly responsive to arguments raised by the applicants in their answer.[409] In response, the applicants filed a further motion requesting that we strike Joint Petitioners' and Mr. Muhich's responses to the applicants' initial motion, arguing that both responses were filed late. The applicants argue that Joint Petitioners' and Mr. Muhich's responses, filed nine and ten days after the applicants' motion, respectively, were filed outside the five-day timeframe provided for such responses under our subpart M procedures in 10 C.F.R. § 2.1325(b).[410] Joint Petitioners and Mr. Muhich each filed a response in opposition to

---

[406] *See* Joint Petitioners Petition at 3-4.

[407] Applicants Motion to Strike Reply.

[408] *Id.* at 8.

[409] Joint Petitioners Response to Motion to Strike Reply at 3-16; *M. Muhich Submission Opposing Holtec Motion to Strike* (Apr. 15, 2021).

[410] *Applicants' Motion to Strike Late Responses* (Apr. 16, 2021), at 1-2 (citing 10 C.F.R. § 2.1325(b)). Because the fifth day after April 5, 2021—the date applicants filed their motion—fell on a Saturday, the applicants assert that the petitioners' responses were due no later than April 12, 2021. *Id.* at 1 (citing 10 C.F.R. § 2.306(a)).

the applicants' subsequent motion.[411] Joint Petitioners argue that the procedures of subpart M do not apply at the intervention stage of the proceeding, when we have not yet determined whether to grant a hearing request, and accordingly section 2.323(c) governs the timeframe for filing motions and responses.[412]

Because we find that Joint Petitioners have not submitted an admissible contention, we deny the applicants' motion to strike portions of Joint Petitioners' reply. Further, because we find that the record provides a sufficient basis to support our decision, we deny the applicants' request for additional briefing to respond to the specified arguments and materials raised by Joint Petitioners in their reply. Having denied the applicants' motion to strike, we also deny as moot the applicants' further motion to strike Joint Petitioners' and Mr. Muhich's responses to their initial motion. Accordingly, in denying the applicants' motions, we need not—and do not—reach a determination on the competing arguments concerning the timeliness of the petitioners' responses to the applicants' first motion to strike.

H. ELPC Petition to Intervene and Request for a Hearing

ELPC proffers four contentions. In Contention 1, ELPC challenges HDI's reliance in its demonstration of financial qualifications on obtaining exemptions to allow it to use the decommissioning trust fund for spent fuel management and site restoration expenses at Palisades.[413] In Contention 2, ELPC asserts that HDI improperly takes credit for a 2% annual real rate of return on the decommissioning trust funds in its site-specific decommissioning cost

---

[411] *Memorandum of Beyond Nuclear, Michigan Safe Energy Future and Don't Waste Michigan in Opposition to Applicant's Motion to Strike Late Responses* (Apr. 16, 2021) (Joint Petitioners Response to Motion to Strike Late Responses); *[Mr. Muhich's] Memorandum to Oppose Applicants' Motion to Strike Late Responses* (filed Apr. 19, 2021).

[412] Joint Petitioners Response to Motion to Strike Late Responses at 2-4. Section 2.323(c) provides that answers to motions may be filed within ten days after service of the motion.

[413] *See* ELPC Petition at 8-11.

estimate.[414] In Contention 3, ELPC claims that the license transfer application is deficient because HDI relies solely on the decommissioning trust fund to demonstrate its financial qualifications to hold the Palisades license. ELPC also requests that certain information redacted from the purchase and sale agreement between Entergy and Holtec be made publicly available.[415] Finally, in Contention 4, ELPC moves to adopt and incorporate by reference the contentions proffered by Joint Petitioners.

We find that none of ELPC's contentions are admissible. Accordingly, we need not decide whether ELPC has established standing to participate in this proceeding.

1. ELPC's Contention 1

As explained above, the NRC's rules allow a licensee to withdraw funds from a decommissioning trust only for decommissioning activities, and HDI seeks an exemption from these rules that would allow it to use approximately $166 million of the trust fund for spent fuel management costs and approximately $35 million for site restoration costs.[416] Raising similar arguments to those in the Attorney General's Contention MI-2, ELPC challenges the sufficiency of HDI's financial qualifications, arguing that the application's decommissioning financial assurance showing is deficient under 10 C.F.R. §§ 50.54(bb) and 72.30(b) because it improperly relies on an assumption that the NRC will grant the requested exemption. ELPC states that while Holtec and HDI may be able to demonstrate after initiation of the decommissioning process that withdrawals from the trust fund for spent fuel management and site restoration costs are appropriate, "they should not be allowed to use that assumption as a basis for demonstrating that they can meet Commission financial assurance requirements now, when

---

[414] *See id.* at 11-14.

[415] *See id.* at 14-18.

[416] Exemption Request at 2, 13 tbl.1 (requesting exemptions from 10 C.F.R. §§ 50.82(a)(8)(i)(A), 50.75(h)(1)(iv)).

decommissioning has not even begun."[417] Further, ELPC argues, "[w]ithout the exemption, the Holtec Companies have not offered assurances that they can meet their financial responsibilities under the permit."[418]

HDI's demonstration of financial qualifications for the license transfer relies on the requested exemption. As explained above, we find that arguments relating to the exemption request's bearing on Holtec's demonstration of qualifications to hold the Palisades and Big Rock Point licenses fall within the scope of this proceeding. Nevertheless, as we found with respect to the Attorney General's Contention MI-2, ELPC's argument that HDI cannot rely on a prospective exemption to demonstrate its financial qualifications for the license transfer does not raise a genuine dispute with the license transfer application or the exemption request. We have explained above our determination that "financial assurance will be acceptable 'if it is based on plausible assumptions and forecasts.'"[419] As ELPC observes in its petition, the staff has authorized exemptions under similar circumstances as presented here.[420] Therefore, we do not find that HDI's reliance on obtaining an exemption to support its financial assurance calculations is an implausible assumption.

ELPC asserts that Holtec, the parent company of HDI, has relied on similar exemptions in license transfer applications for other facilities but does not explain how this information is material to the present license transfer application or exemption request.[421] For example, ELPC does not describe how Holtec's reliance on such exemptions in other license transfer

---

[417] ELPC Petition at 10.

[418] *Id.*

[419] *Indian Point*, CLI-21-1, 93 NRC at 16 (quoting *Seabrook*, CLI-99-6, 49 NRC at 222).

[420] *See* ELPC Petition at 10; *see also* Exemption Request at 8 (referencing similar exemptions granted by the NRC); *Indian Point*, CLI-21-1, 93 NRC at 16-17 & n.82 (noting that the NRC has previously granted five similar exemption requests).

[421] *See* ELPC Petition at 10.

proceedings renders implausible HDI's expectation that an exemption will be granted in this case, or how Holtec's ability to draw from the decommissioning trust fund for other authorized purposes in its other decommissioning projects calls into question the financial qualifications of the proposed transferees to perform licensed activities at Palisades or Big Rock Point. Nor are we persuaded by ELPC's argument that the existence of two federal court cases regarding Holtec's reliance on such exemptions calls into question the plausibility of the applicants' reliance on obtaining the exemption in its financial qualifications demonstration.[422] The existence of an unresolved legal dispute is not predictive of a specific outcome and, moreover, the two petitions cited by ELPC in support of this premise have been withdrawn.[423]

We also find that ELPC does not raise a genuine dispute with HDI's decommissioning cost estimate, which ELPC does not directly challenge. Rather, ELPC broadly asserts that the NRC should be wary of granting the requested exemption because unforeseen costs could occur early in the decommissioning process that could significantly impact the availability of funds for later decommissioning activities. For example, ELPC argues, if the estimated costs of license termination in 2024 were to double, and HDI was using the decommissioning trust fund to also pay for spent fuel management and site restoration costs, the trust fund balance would

---

[422] *See id.* at 10 & n.40 (citing two petitions for review in the U.S. Court of Appeals for the District of Columbia Circuit concerning similar exemptions granted by the NRC in the *Indian Point* and *Pilgrim* license transfer proceedings).

[423] *See* Applicants Reply to ELPC Petition at 8 n.29; Press Release, New York State Office of the Attorney General, Attorney General Games Applauds Finalization of Plan to Dismantle and Cleanup Indian Point (May 19, 2021), https://ag.ny.gov/press-release/2021/attorney-general-james-applauds-finalization-plan-dismantle-and-cleanup-indian. We also decline ELPC's suggestion that the existence of such disputes should cause the NRC to reconsider granting such exemption requests or that the NRC should impose requirements comparable to those included in a settlement agreement between the State of Massachusetts and Holtec in the *Pilgrim* proceeding. The financial qualifications of a prospective transferee is a fact-specific determination. The NRC considers each application for a license transfer and exemption request on a case-by-case basis and reviews such requests in accordance with applicable regulations and guidance.

be depleted in 2040.[424] However, ELPC does not provide support for its supposition that decommissioning costs could double in 2024 or any other year.[425] Moreover, as discussed above, our regulatory framework requires a licensee in decommissioning to demonstrate adequate funding for decommissioning and spent fuel management activities. For example, HDI would be required provide to the NRC an annual decommissioning financial assurance status report, which the NRC would use to monitor withdrawals from the trust fund.[426] On a yearly basis, HDI would be required to update the decommissioning cost estimate in its annual status report to reflect the difference between the estimated and actual costs for activities performed using decommissioning trust funds.[427] If unforeseen events threatened HDI's ability to complete decommissioning, HDI would be required in its annual status report to provide additional financial assurance to cover the remaining costs.[428] In addition, HDI would be prohibited from making any trust fund withdrawals that would inhibit its ability to complete funding of any shortfalls in the decommissioning trust needed to ensure the availability of funds to fully decommission the site.[429]

ELPC does not raise a supported, genuine material dispute with the applicants' reliance on a prospective exemption in its demonstration of financial qualifications. Therefore, we find this contention inadmissible.

---

[424] ELPC Petition at 9-10.

[425] *See* 10 C.F.R. § 2.309(f)(i)(v) (petitioner must provide a concise statement of facts or expert opinion which support petitioner's position). Moreover, HDI does not propose to withdraw funds for site restoration activities until 2035. *See* DCE at 46 tbl.5-1.

[426] *See* 10 C.F.R. § 50.82(a)(8)(v).

[427] *See id.* § 50.82(a)(8)(v)(B).

[428] *See id.* § 50.82(a)(8)(vi).

[429] *See id.* § 50.82(a)(8)(i)(C).

2. ELPC's Contention 2

ELPC claims that the application and PSDAR are deficient because HDI improperly takes credit for a 2% annual real rate of return on the decommissioning trust funds.[430] Our regulations allow a licensee that has prepaid decommissioning funds based on a site-specific decommissioning cost estimate to take credit for projected earnings on the prepaid account's funds up to a 2% annual real rate of return through the decommissioning period.[431] HDI's projection, based on a 2% annual real rate of return on the decommissioning trust fund, is that the fund will be sufficient to cover not only decommissioning but also spent fuel management and non-radiological site restoration expenses at Palisades.

While ELPC accepts that our regulations permit licensees using the prepayment method based on site-specific estimates to assume an annual real rate of return of up to 2% on the projected trust fund earnings, ELPC asserts that this regulation is inapplicable in this case because HDI "is not proposing the SAFSTOR method" of decommissioning.[432] In short, ELPC's position is that 10 C.F.R. § 50.75(e)(1)(i) is properly read as permitting only licensees proposing a SAFSTOR method of decommissioning to take advantage of the 2% annual real rate of return assumption in its cash flow analysis.[433]

On the basis of this interpretation, ELPC requests that we revisit our finding in *Indian Point* that section 50.75(e)(1) does not limit the use of the 2% real rate of return rate to licensees proposing a method, such as SAFSTOR, involving an extended storage period.[434] In the *Indian*

---

[430] ELPC Petition at 11.

[431] *See* 10 C.F.R. §§ 50.75(e)(1)(i), 50.82(a)(8)(vi).

[432] ELPC Petition at 12.

[433] *Id.* at 14; *The Environmental Law & Policy Center's Reply to Applicants' Answer* (Mar. 29, 2021), at 9-10 (ELPC Reply).

[434] *See* ELPC Petition at 12-14; *Indian Point*, CLI-21-1, 93 NRC at 12-14.

Point proceeding, the applicant provided a site-specific estimate of decommissioning costs based on a DECON model which included a period of deferred dismantlement, which we found sufficient to satisfy the requirement of section 50.75(e)(1) that the site-specific estimate be "based on a period of safe storage that is specifically described in the estimate."[435]

For the reasons described in detail in our evaluation of New York's similar concern in *Indian Point*, we decline to revisit our prior decision and adopt ELPC's interpretation of section 50.75(e)(1).[436] Here, HDI's site-specific decommissioning cost estimate specifically identifies and accounts for a ten-year dormancy period, beginning in 2025 and ending in 2035, in which "the plant will be maintained in a compliant and safe state" and during which no decommissioning activities will take place.[437] This comports with the plain language of section 50.75(e)(1)(i), which provides that the 2% real rate of return credit is available for a site-specific estimate based on "a period of safe storage." The regulation does not require any particular period of safe storage, only that the cost estimate be based on a period of safe storage specifically described in the decommissioning cost estimate.[438] While HDI does not specifically identify its decommissioning approach as either the DECON or SAFSTOR method, ELPC has not pointed to any requirement that it do so.[439]

---

[435] *See Indian Point*, CLI-21-1, 93 NRC at 14.

[436] *See id.* at 12-14. ELPC argues that HDI's cash flow analysis "appears to design the rate of decommissioning around the amount of time necessary for trust fund earnings to supplement the beginning trust fund balance," which ELPC concludes "raises significant red flags" about our decision in *Indian Point*. ELPC Petition at 13. However, ELPC does not point to evidence that HDI violated any regulatory requirement in developing its projected decommissioning timeframe and cash flow analysis.

[437] PSDAR at 12; DCE at 45 fig.5-1, 46 tbl.5-1.

[438] *FirstEnergy Companies and TMI-2 Solutions, Inc.* (Three Mile Island Nuclear Station, Unit 2), CLI-21-2, 93 NRC 70, 79 (2021).

[439] *See* ELPC Reply at 10; *Three Mile Island*, CLI-21-2, 93 NRC at 79. Although the License Renewal GEIS discusses decommissioning models that are generally acceptable to the NRC, the GEIS does not foreclose the proposed use of variants of these models, or different models

We find this contention inadmissible because it does not raise a genuine dispute with the application and, to the extent that it challenges our settled interpretation of section 50.75(e)(1), does not raise a concern within the scope of this proceeding.[440]

3. ELPC's Contention 3

ELPC asserts that Holtec Palisades has not shown that it is financially qualified to hold the Palisades license because its showing of financial qualifications is based solely on the strength of Holtec's financial projections for the funds in the decommissioning trust fund.[441] Referring to arguments raised in its Contentions 1 and 2, ELPC claims that Holtec Palisades cannot assume a 2% real rate of return on the projected trust fund earnings or rely on a prospective exemption allowing use of the trust funds for spent fuel management and site restoration.[442] Consequently, ELPC argues, the decommissioning trust fund alone is insufficient to show that Holtec currently possesses or has reasonable assurance of obtaining the funding necessary to carry out decommissioning at Palisades.

These arguments do not support admission of this contention. As we found above, ELPC has not identified sufficient grounds for calling into question HDI's reliance on a prospective exemption as part of the proposed transferees' financial qualifications showing or its assumption of a 2% real rate of return on the projected earnings in the decommissioning trust fund. ELPC has not identified an NRC requirement that prevents an applicant from relying on a single source of funding in order to establish its financial qualifications to conduct the activities

---

entirely. *Indian Point*, CLI-21-1, 93 NRC at 14; *see* ELPC Reply at 9 (citing "Generic Environmental Impact Statement for License Renewal of Nuclear Plants: Main Report," NUREG-1437, vol. 1 at § 7.2.2 (May 1996), available at https://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1437/index.html).

[440] *See* 10 C.F.R. § 2.309(f)(1)(iii),(vi). ELPC did not seek a waiver to challenge sections 50.75(e)(1)(i) and 50.82(a)(8)(vi) in this proceeding. *See id.* § 2.335(a), (b).

[441] ELPC Petition at 14-18.

[442] *Id.* at 17.

authorized by the license.[443] Likewise, ELPC has not identified a requirement that prohibits the use of the decommissioning trust fund as that source of funding where, as here, power reactor operations will have permanently ceased prior to the proposed license transfer, and the activities authorized under the transferred license will be limited to those related to decommissioning the site and managing the spent fuel.

ELPC also argues that Holtec Palisades's reliance on the decommissioning trust fund alone—without parent company financing, revenue from electric generation, or ratepayer funding—is inadequate evidence of its financial qualifications because decommissioning financial assurance is "not meant to be the primary means of showing financial viability," but rather, "a *second line* of defense, if the financial operations of the licensee are insufficient . . . to ensure that sufficient funds are available to carry out decommissioning."[444] The language ELPC relies upon is not relevant in this case, however, because it concerns "licensees with ongoing operations that might provide funding for, or divert funding from, decommissioning activities."[445] Here, the license transfer will not be effectuated until after the Palisades reactor has permanently ceased operations.[446] As we explained recently in *Indian Point*, 10 C.F.R. § 50.75 specifies the methods acceptable to the NRC for providing financial assurance for decommissioning activities, and neither this nor any other of our regulations requires a licensee

---

[443] *See Indian Point*, CLI-21-1, 93 NRC at 38, 44.

[444] ELPC Petition at 16 (citing "Options to Evaluate Requests to Use Discounted Parent Company Guarantees to Assure Funding of Decommissioning Costs for Power Reactors," Commission Paper SECY-11-0133 (Sept. 28, 2011), at 1 (ML111940011 (package)) (emphasis added by ELPC) (internal quotations omitted)). The quoted language actually appears on the first page of Enclosure 5 to SECY-11-0133, "Questions and Answers on Decommissioning Financial Assurance," which itself quotes "Financial Assurance Requirements for Decommissioning Nuclear Power Reactors; Final Rule," 63 Fed. Reg. 50,465, 50,474 (Sept. 22, 1998).

[445] *Indian Point*, CLI-21-1, 93 NRC at 39.

[446] Application Cover Letter at 2; Applicants Answer to ELPC at 11-12.

at the decommissioning stage to supplement its financial assurance method with a showing that its operations will generate additional funding.[447]

Next, ELPC argues that "[t]he structure of the license transfer creates a shield for the corporate parent, Holtec, to avoid financial risk and legal liability from the proposed decommissioning liability."[448] "Because the Commission cannot shift unmet decommissioning liabilities to a corporate parent," ELPC asserts, "the decommissioning fund must cover all costs related to the Palisades Nuclear Plant, predicted or unforeseen."[449] This argument does not raise a genuine dispute with the application. First, in recognition of the limitations in the NRC's authority to compel a parent company to pay for the decommissioning costs of its subsidiary, the NRC requires that the proposed licensee itself provide reasonable assurance that funds will be available to decommission the facility using a method acceptable to the NRC.[450] The application explains that Holtec Palisades, as the proposed licensed owner of the Palisades site, would be responsible for funding the costs of decommissioning, spent fuel management, and site restoration, and that HDI, as the proposed licensed operator, would base its financial qualifications on that of Holtec Palisades.[451] ELPC does not identify how the corporate structure of the proposed transferees fails to meet NRC requirements. While ELPC claims that the applicants have not offered sufficient financial data on Holtec Palisades to enable an assessment of whether Holtec Palisades would be able to address cost overruns or meet its

---

[447] *See Indian Point*, CLI-21-1, 93 NRC at 39; 10 C.F.R. § 50.75; *see also Three Mile Island*, CLI-21-2, 93 NRC at 87 (petitioner did not identify a legal requirement that the license holder of a decommissioning reactor "have some other, ongoing business concern that would generate income independent of the decommissioning trust fund").

[448] ELPC Petition at 16.

[449] *Id.*

[450] *See* 10 C.F.R. § 50.75(a), (e)(1); *id.* § 72.30(e).

[451] Application at 4, 7, 19.

obligations toward HDI, ELPC has not explained how the information presented in the application is insufficient for this purpose.

Second, the application acknowledges that, because Holtec Palisades expects to rely on the decommissioning trust fund to cover the costs of all decommissioning and spent fuel management activities at Palisades, the funds in the trust account must be sufficient to provide for those costs. While ELPC asserts that the trust fund must cover all "predicted or unforeseen" costs, ELPC does not explain in what regard HDI's site-specific decommissioning cost estimate fails to account for either predicted or unforeseen costs.[452] ELPC broadly asserts that Holtec has understated the costs of decommissioning, pointing to "other parties' contentions" as the sole support for this claim.[453] However, ELPC does not specify the costs that have been understated or identify the specific expert or evidentiary support presented by other petitioners that supports this claim. Moreover, our rules and practice make clear that we will not accept the wholesale incorporation by reference of large documents as the basis for a contention.[454] In addition, we will not credit as evidentiary support a petitioner's reliance on the arguments and evidence of another party without first finding that the petitioner has submitted an admissible contention of its own.[455] Therefore, we do not find that ELPC's broad reliance on the substance of other petitioners' contentions sufficient to support its claim. For a similar reason, we do not find that ELPC's argument that the existence of contentions regarding the adequacy of Holtec's

---

[452] *See* ELPC Petition at 16.

[453] *Id.* at 17.

[454] *See* 10 C.F.R. § 2.309(f)(v) (petitioner must provide a concise statement of the facts or expert opinion supporting its argument along with references to the specific sources and documents on which it relies); *see, e.g.*, *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-89-3, 29 NRC 234, 240-41 (1989) ("[W]holesale 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 intended to rely with reference to a specific point.").

[455] *See Pilgrim*, CLI-20-12, 92 NRC at 366.

site characterization and contingency allowance in the *Indian Point* proceeding supports admission of this contention.[456]

ELPC also argues that it cannot conduct any further analysis of Holtec's financial qualifications because Holtec has not provided a disclosure schedule related to the purchase and sale agreement between Entergy and Holtec. ELPC also requests that certain information redacted from the purchase and sale agreement be made publicly available.[457] However, ELPC has not explained how the disclosure agreement it seeks is material to the review of the applicants' financial qualifications. Further, ELPC could have used the process provided in the hearing opportunity notice to request access to the redacted information it seeks, but it did not do so.[458]

Because ELPC has not identified any requirement that prohibits the use of the decommissioning trust fund as the sole source of decommissioning funding or raised a supported, material dispute with the application's reliance on the decommissioning trust fund alone to demonstrate the proposed transferees' financial qualifications, we do not find this contention admissible. Nevertheless, we note that we are admitting for hearing portions of the Attorney General's Contention MI-1 that raise questions about the proposed transferees' contingency allowance and reliance on DOE recoveries as a source of additional funding if needed for decommissioning.[459]

---

[456] *See* ELPC Petition at 17-18 (citing petitions to intervene filed by the State of New York and the Town of Cortlandt, Village of Buchanan, and Hendrick Hudson School District in the *Indian Point* proceeding). The contentions to which ELPC alludes were not admitted in that proceeding. *See Indian Point*, CLI-21-1, 93 NRC at 18-23.

[457] ELPC Petition at 18.

[458] *See* Hearing Opportunity Notice, 86 Fed. Reg. at 8228.

[459] Joint Petitioners and ELPC each move to adopt and incorporate by reference all contentions filed by the other petitioner, claiming that both petitioners "share many of the same issues and concerns about the proposed license transfers under consideration in this proceeding." Joint Petitioners Petition at 52; ELPC Petition at 18-19. However, in *Pilgrim*, we held that in order for a

I. Mr. Mark Muhich's Petition to Intervene and Request for a Hearing

Mr. Mulhich filed a petition to intervene and request for hearing along with several claims. While Mr. Muhich did not follow the NRC's electronic filing regulations and originally filed his petition on www.regulations.gov, the NRC placed his submittal on the adjudicatory docket of this proceeding and we review his petition below.[460]

Mr. Muhich's claims do not address any specific part of the application or the contention admissibility standards so we find that none meet our contention admissibility requirements. For instance, Mr. Muhich argues that the NRC must prepare a supplemental environmental impact statement prior to a decision on the license transfer, and he raises numerous environmental claims under NEPA. But he does not acknowledge or address the NRC's categorical exclusion regulation for license transfers, which the application notes and relies on. His NEPA arguments therefore fall beyond the scope of this proceeding. Mr. Muhich also claims that Holtec and its associates have "involvement in questionable or even criminal business practices."[461] He does not link these claims to this license transfer action.[462] Mr. Muhich also argues that under

---

petitioner to adopt the contention, argument, or evidentiary support of another petitioner, the petitioner must first be admitted to the proceeding as a party by demonstrating standing and submitting at least one admissible contention of its own. CLI-20-12, 92 NRC at 365-66. Because we find that neither Joint Petitioners nor ELPC have submitted an admissible contention, we deny each petitioner's request to incorporate by reference and adopt the other's contentions. Finally, ELPC characterized its motion as Contention 4 of its petition to intervene. *See* ELPC Petition at 18-19. Because Contention 4 does not otherwise identify a supported, material dispute with the license transfer application, we find it inadmissible.

[460] *See* Order of the Secretary (Mar. 29, 2021) (unpublished). Mr. Muhich also did not demonstrate his standing to intervene. He does not state how close he resides to Palisades; how frequently he may visit the area; how the harms he fears will occur due to the proposed transfer; and how he might suffer harm from the proposed action. In short, he did not describe how he would suffer concrete and particularized injury that is fairly traceable to, and redressable by, this license transfer action.

[461] *See* Muhich Petition. at 5-6 (unnumbered).

[462] *See, e.g.*, *Indian Point*, CLI-21-1, 93 NRC at 50-53; *Pilgrim*, CLI-20-12, 92 NRC at 394-97.

10 C.F.R. § 72.30(b)(2)(ii), HDI must submit "[c]ontingency [f]actor calculations."[463] This regulation requires an adequate contingency factor to be applied to the estimated ISFSI decommissioning cost. HDI has allotted a 25% contingency allowance to the ISFSI decommissioning costs. Mr. Muhich does not address the application's discussion of contingency, and therefore does not raise a genuine dispute with the application about the contingency allowance.

Mr. Muhich's petition additionally raises numerous other claims and requests, which we do not address individually here, but we note that none address the application and its discussion of financial qualifications. Because none raise a supported, genuine material dispute with the application on a matter material to the license transfer decision, the petition does not present an admissible contention for hearing.[464]

J. Procedural Issues Associated with Subpart M Proceeding

We designate the Chief Administrative Judge to appoint, within the next five business days, a single administrative judge to serve as the Presiding Officer for this proceeding, for the purposes of compiling the hearing record, ruling on motions related to developing the factual

---

[463] *See* Muhich Petition at 5.

[464] *See also Rebuttal to Holtec et al (Applicants) Answer to Mark Muhich's Request for Public Hearing* (Apr. 26, 2021). After the NRC placed Mr. Muhich's petition on the adjudicatory docket and granted Mr. Muhich access to electronic hearing docket, Mr. Muhich filed numerous articles and other items on the docket. He did not address the NRC regulations under 10 C.F.R. § 2.309(c) for submissions filed after the petition deadline. We consider all these submissions improperly filed. Nevertheless, these materials do not give rise to an admissible contention; Mr. Muhich did not address the contention admissibility standards. *See, e.g.*, "Pilgrim Nuclear Waste to be Moved to Higher Ground," Cape Cod Times (ML21090A341); Figure 2, from "Increases in Great Lake Winds and Extreme Events Facilitate Interbasin Coupling and Reduce Water Quality in Lake Erie" (ML21090A092); Settlement Agreement Between Commonwealth of Massachusetts and Holtec (ML21096A083); Memorandum of Understanding (Re: Proposed Sale of Vermont Yankee) (ML21098A256).

record, presiding at any oral hearing, and certifying the completed hearing record to us.[465] Should questions on the scope of the delegated authorities or other matter arise, the Presiding Officer may certify questions or refer rulings to us.[466] The jurisdiction of the Presiding Officer will end on the certification of the hearing record to us. Thereafter, we will issue a decision on the certified record.[467]

Under our rules, the staff is not required to participate as a party in a license transfer adjudication. Nonetheless, the staff will offer into evidence its safety evaluation of the license transfer application and will provide one or more sponsoring witnesses.[468]

Section 2.308 specifies an oral hearing for license transfer proceedings, unless, within fifteen days from the order granting the hearing, the parties unanimously move for a hearing consisting of written comments.[469] Once the nature of the hearing is established, Subpart M and our Model Milestones provide a default schedule for the remainder of the proceeding, subject to modification by the Presiding Officer; we encourage the Presiding Officer to adhere to these milestones to the extent practicable.[470] Pursuant to the Model Milestones, we direct the Presiding Officer to certify the hearing record to us within twenty-five days of the conclusion of the hearing. If circumstances warrant expanding this period, we direct the Presiding Officer to

---

[465] *See* 10 C.F.R. §§ 2.1319(a) (the Commission may designate "one or more Commissioners, or any other person permitted by law" to preside at a hearing); 2.1320 (responsibilities and authority of Presiding Officer in the oral hearing).

[466] *See id.* § 2.1320(b)(1).

[467] *See id.* § 2.1320(b)(3).

[468] *See id.* § 2.1316(b).

[469] *See id.* § 2.1308.

[470] *Id.* pt. 2, app. B, pt. III (Model Milestones for a Hearing on a Transfer of a License Conducted Under 10 C.F.R. Part 2, Subpart M).

notify us promptly of the reasons for the delay and to provide us with the Presiding Officer's anticipated new schedule.

IV. CONCLUSION

For the reasons outlined, we

(1) *grant* the Michigan Attorney General's request for hearing and petition to intervene;

(2) *admit for hearing* the specified portions of Michigan Attorney General's Contention MI-1

Scope of Hearing

The hearing will be limited to the following four challenges to the application, as summarized below and as addressed in more detail in the applicable sections of this decision:

(a) The projected length of time for transfer of all spent fuel off of the Palisades site:[471]

The applicants should address how they determined that the estimated 11-year spent fuel transfer period constitutes a plausible timeframe for removal of all Palisades spent fuel. In their description, the applicants should clarify the assumptions on which they relied, including what fuel acceptance priority and fuel allocation or transfer rate they assumed for their schedule.

In assessing financial qualifications for a license transfer we accept plausible forecasts. The parties' arguments therefore should address whether the estimated 11-year period reflects a plausible timeframe to complete the fuel transfer.

(b) Reasonableness of the site-specific decommissioning cost estimate falling below the minimum formula amount:

The applicants should provide a detailed explanation of the primary reasons that the cost estimate falls significantly below the minimum formula amount. We also direct the parties and invite the staff to address whether the minimum formula regulation in section 50.75(b) applies to this application.

(c) Adequacy of contingency funding:[472]

The applicants should explain how they calculated and derived the 12% level applied for contingency and concluded that this amount for contingency is reasonably adequate for Palisades. The parties should address relevant industry norms, practices, and standards for the contingency amount added to reactor decommissioning cost estimates at a similar project stage.

---

[471] *See supra* Section III.C.1.b.(2).

[472] *See supra* Section III.C.1.d.

The parties should address whether the 12% level of funding added reflects a plausible amount of funding for covering the contingency costs reasonably expected to be incurred at Palisades.

(d) Ability to provide additional financial assurance as a means to adjust funding:[473]

The applicants should describe how they will ensure that sufficient additional funding will be available as a means to adjust funding if needed. As part of their description, the applicants should address the issues described at the end of Section III.C.1.h. The parties additionally should address whether license conditions or other forms of assurances are warranted.

(3) *deny* Joint Petitioners' request for hearing and petition to intervene;

(4) *deny* ELPC's request for hearing and petition to intervene;

(5) *deny* Mr. Mark Muhich's request for hearing and petition to intervene;

(6) *dismiss* as moot the Applicants' motion to strike portions of Joint Petitioners' reply;

(7) *dismiss* as moot the Applicants' motion to strike Joint Petitioners' and Mr. Muhich's answers to the Applicants' motion to strike;

(8) *direct* the Chief Administrative Judge of the Atomic Safety and Licensing Board Panel to Appoint a single administrative judge within the next five (5) business days to serve as the Presiding Officer to take all necessary actions to compile, complete, and certify the hearing record, including presiding over any oral hearing.

[473] *See supra* Section III.C.1.h.

(9) *direct* each party to state, within the next fifteen (15) days, whether it prefers an oral hearing or a hearing consisting of written comments.

(10) *direct* the Presiding Officer to certify the hearing record to us within twenty-five (25) days of the conclusion of a hearing.

IT IS SO ORDERED.

For the Commission

Brooke P. Clark

Digitally signed by Brooke P. Clark
Date: 2022.07.15 13:11:12 -04'00'

Brooke P. Clark
Secretary of the Commission

Dated at Rockville, Maryland,
this 15th day of July 2022.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
Entergy Nuclear Operations, Inc., Entergy	)	Docket Nos. 50-255-LT-2
Nuclear Palisades, LLC, Holtec	)	50-155-LT-2
International, and Holtec Decommissioning	)	72-007-LT
International, LLC	)	72-043-LT-2
(Palisades Nuclear Plant & Big Rock Point)	)	
	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing **COMMISSION MEMORANDUM AND ORDER (CLI-22-08)** have been served upon the following persons by Electronic Information Exchange.

U.S. Nuclear Regulatory Commission
Office of Commission Appellate Adjudication
Mail Stop: O-16B33
Washington, DC 20555-0001
ocaamail@nrc.gov

U.S. Nuclear Regulatory Commission
Office of the Secretary of the Commission
Mail Stop: O-16B33
Washington, DC 20555-0001
hearingdocket@nrc.gov

U.S. Nuclear Regulatory Commission
Office of the General Counsel
Mail Stop: O-14A44
Washington, DC 20555-0001
Tison A. Campbell, Esq.
David E. Roth, Esq.
Anita G. Naber, Esq.
Jeremy L. Watchutka, Esq.
Mary F. Woods, Esq.
Brian Newell, Senior Paralegal
Georgia Hampton, Paralegal
Amanda Black, Paralegal
tison.campbell@nrc.gov
david.roth@nrc.gov
anita.goshnaber@nrc.gov
jeremy.watchutka@nrc.gov
mary.woods@nrc.gov
brian.newell@nrc.gov
georgia.hampton@nrc.gov
amand.black@nrc.gov

Environmental Law & Policy Center
35 E. Wacker Dr. Suite 1600
Chicago, IL 60601
Caroline Cox, Esq.
Margrethe Kearney, Esq.
ccox@elpc.org
mkearney@elpc.org

Michigan Department of Attorney General
525 W. Ottawa St.
Lansing, MI 48906
Michael Moody, Esq.
Amanda Churchill, Esq.
Joel King, Esq.
moodym2@michigan.gov
churchilla1@michigan.gov
kingj38@michigan.gov

Mark Muhich
2466 Emmons Rd
Jackson, MI 49201
markmuhich0@gmail.com

Counsel for Don't Waste Michigan, et al

Terry Lodge, Esq.
316 N. Michigan Street
Suite 520
Toledo, OH 43604
E-mail: tjlodge50@yahoo.com

Counsel for Entergy Nuclear Operations, Inc

Pillsbury Winthrop Shaw Pittman LLP
1200 Seventeenth Street, NW
Washington, DC 20036
Anne R. Leidich, Esq.
David R. Lewis, Esq.
anne.leidich@pillsburylaw.com
david.lewis@pillsburylaw.com

Susan H. Raimo, Esq.
Entergy Services, LLC
101 Constitution Avenue, N.W.
Washington, D.C. 20001
sraimo@entergy.com

Counsel for Holtec International

Balch &Bingham LLP
1710 Sixth Avenue North
Birmingham, AL 35203-2015
Alan D. Lovett, Esq.
Nick Theodore, Esq.
alovett@balch.com
ntheodore@balch.com

Clara I. Sola

Digitally signed by Clara I. Sola
Date: 2022.07.15 13:19:20 -04'00'

Office of the Secretary of the Commission

Dated at Rockville, Maryland
this 15th day of July 2021