

**BEFORE THE UNITED STATES
NUCLEAR REGULATORY COMMISSION**

In the Matter of)	Docket No. 50-255
Holtec Palisades LLC and Holtec Decommissioning International)	
(Palisades Nuclear Plant Request for Exemption))	December 5, 2023

**PETITION TO INTERVENE AND REQUEST FOR ADJUDICATORY HEARING
BY BEYOND NUCLEAR, DON'T WASTE MICHIGAN, AND MICHIGAN
SAFE ENERGY FUTURE**

INTRODUCTION

Holtec Palisades LLC and Holtec Decommissioning International (collectively, “Holtec”), on September 28, 2023, submitted to the NRC a “Request for Exemption From Certain Termination of License Requirements of 10 C.F.R. § 50.82”¹ (“Request for Exemption”) respecting the Palisades Nuclear Plant (“Palisades”) located in Covert Township, Michigan. The Request for Exemption did not appear in the ADAMS document archive until October 6, 2023. Palisades was placed on a path to decommissioning status beginning in 2017, and permanently ended power generation activities on May 20, 2022. Holtec purchased Palisades from Entergy Nuclear Operations (“Entergy”) on June 28, 2022. Holtec is now trying to remove Palisades from decommissioning status and return Palisades to active power operations.

Palisades went on line, producing electricity, in 1971. Its operating license was renewed in 2006 to authorize operation through 2031. In 2016, Entergy, then-owner of Palisades at the time, decided to cease operations by 2018, which it later moved back to May 2022. On May 20, 2022, Entergy finally closed Palisades and placed the plant into decommissioning status. As a

¹ Palisades Nuclear Plant - Request for Exemption from Certain Termination of License Requirements of 10 CFR 50.82
<https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML23271A140>

part of the decommissioning process, Entergy certified, pursuant to 10 C.F.R. § 50.82(a)(1)(i), that power operations ceased at Palisades on May 20, 2022, and that pursuant to 10 C.F.R. § 50.82 (1)(a)(ii), the fuel was permanently removed from the Palisades reactor vessel and placed in the spent fuel pool on June 10, 2022.² Those certifications in connection with decommissioning prohibit operation of the Palisades reactor or placement of fuel into the Palisades reactor vessel.³ Holtec’s position is that absent an exemption from the requirements of § 50.82, Holtec’s plan to restart Palisades fails.

The exemption Holtec seeks, pursuant to 10 C.F.R. § 50.12, contains explicit requirements. The District of Columbia Circuit has limited the granting of exemptions to “exigent circumstances”:

Section 50.12 provides a mechanism for obtaining an exemption from the procedures incorporated in section 50.10, but one that may be invoked only in extraordinary circumstances. The Commission has made clear that section 50.12 is available “only in the presence of exigent circumstances, such as emergency situations in which time is of the essence and relief from the Licensing Board is impossible or highly unlikely.” [citing *Washington Public Power Supply System*, 5 NRC 719, 723 (1977)].

NRDC v. NRC, 695 F.2d 623 (D.C. Cir. 1982). The Commission has similarly emphasized that § 50.12 exemptions are to be granted sparingly and only in cases of undue hardship. 39 Fed. Reg. 14,506, 14,507 (1974). So Holtec bears an extremely heavy burden to justify its request for an exemption.

To help finance Holtec’s scheme to restart Palisades, Holtec has misdirected the Palisades decommissioning trust fund in violation of NRC regulations. In addition, the license transfer from Entergy to Holtec violated NRC regulations, and Holtec should not be allowed to satisfy its NEPA obligations with a categorical exclusion.

² “Certifications of Permanent Cessation of Power Operations and Permanent Removal of Fuel from the Reactor Vessel.” Letter, June 13, 2022, <https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML22164A067>

³ Request for Exemption, p. 3.

Three petitioning organizations, Beyond Nuclear, Michigan Safe Energy Future, and Don't Waste Michigan, demonstrate below that they have standing to pursue contentions against Holtec's request for an exemption and the legitimacy of the Palisades business plan. Petitioners object to Holtec's Request for Exemption, allege misuse of the Palisades decommissioning trust fund, challenge the legitimacy of Holtec's intentions in accepting license transfer from Entergy, and dissect the legality of the proposed invocation of a categorical exclusion, all as violative of the Atomic Energy Act, the National Environmental Policy Act, and NRC regulations. Petitioners set forth why Holtec's proposal must be rejected by the NRC.

PETITIONING PARTIES AND THE BASIS FOR LEGAL STANDING

Beyond Nuclear

Beyond Nuclear is a not-for-profit public policy, research, education organization based in Takoma Park, Maryland that advocates the immediate expansion of renewable energy sources to replace commercial nuclear power generation. Beyond Nuclear has over 12,000 members of whom a number reside, work and recreate near the Palisades Nuclear Plant. Beyond Nuclear herewith provides its declaration, agreeing to represent two of its members, W. Dillon Reed and Caroline Ferry in this proceeding. (Apx. 1). Both have designated Beyond Nuclear to intervene to protect their interests in physical health and safety, the health and safety of their family members, their real property, and the health and stability of the physical environment proximate to Palisades. (Apxs. 2 and 3).

Beyond Nuclear's address is 7304 Carroll Ave., #182, Takoma Park, MD 20912, phone (301) 270-2209, www.beyondnuclear.org.

W. Dillon Reed is an adult Michigan citizen who lives at 80015 Ramblewood Drive, Covert, MI 49043, which is located 0.75 straight-line miles from the Palisades Nuclear Plant

("Palisades"). His home is near Lake Michigan and in the warm season he walks on the beach and wades in the Lake within a few hundred yards of Palisades and goes boating with friends or relatives. He opposes the granting of an exemption by the NRC to Holtec Decommissioning International LLC and Holtec Palisades LLC because of concerns over safety, the potential for significant damage to public health and the environment, Holtec's lack of nuclear power generation experience and controversial historical performance of the parent company, Holtec International ("Holtec"), as a corporation.

Mr. Reed is concerned that before Palisades could be restored to operation, there would have to be resolution of its half-century-long plague of control rod drive mechanism (CRDM) seal leakage problems. The root cause(s) of the problem have never been established, but CRDM seals are a key safety feature to protect the radioactive fuel core from damage.

He further knows that the Palisades reactor vessel is severely embrittled and that Palisades has perennially been ranked by the NRC as having one of the most embrittled reactor vessels in the industry, one which could critically fail in the event of too-rapid heating or cooling. According to Mr. Reed, there has been no meaningful physical scientific assessment of the Palisades reactor vessel for more than 20 years.

Mr. Reed also states that restoration of Palisades to operation would also require replacement of the reactor pressure vessel head and replacement of the steam generators for the second time in Palisades' history. He recounts the 1994 reports by Dr. Ross Landsman, an NRC safety inspector, who identified violations of the Palisades Safe Shutdown Earthquake Evaluation in the form of subsurface stability beneath the concrete pads for the loaded nuclear waste casks that are perched on the Lake Michigan shoreline. Rossman has stated that both cask pads at Palisades violate NRC earthquake safety regulations. Mr. Reed also cites concerns with

Cask No. 4, the fourth dry storage cask (DSC) to be loaded with spent nuclear fuel at Palisades, which has weld defects and possible damage to its spent fuel contents. Cask No. 4 poses a serious danger to workers and the physical environment and must at some point be remediated.

Mr. Reed points out that no U.S. commercial nuclear power plant has ever been restored to operations after being permanently shut down and he lacks confidence that necessary quality assurance record keeping and ongoing maintenance have been performed of key systems and components since power operations were permanently ended in May 2022. He is afraid that if Palisades is restored to operability there could be one or more operations incidents or accidents that will result in radiation release and that his family and he might suffer irreparable damage to their health as well as to real and personal property located at his residence. Mr. Reed has designated Beyond Nuclear to represent his interests in this proceeding and states that they will not be adequately represented unless Beyond Nuclear is allowed to participate as a party on his behalf.

Caroline Ferry is an adult citizen of Michigan who lives at 79964 Fernwood Drive, Covert, MI 49043, which is located 0.75 straight-line miles from the Palisades Nuclear Plant (“Palisades”). Her home is near Lake Michigan and in the warm season she walks on the beach and wades in the Lake within a few hundred yards of Palisades and goes boating with friends or relatives. She opposes the granting of an exemption by the NRC to Holtec Decommissioning International LLC and Holtec Palisades LLC because of concerns over safety, the potential for significant damage to public health and the environment, Holtec’s lack of nuclear power generation experience and controversial historical performance of the parent company, Holtec International (“Holtec”), as a corporation.

Ms. Ferry is concerned that before Palisades could be restored to operation, there would have to be resolution of its half-century-long plague of control rod drive mechanism (CRDM) seal leakage problems. The root cause(s) of the problem have never been established, but CRDM seals are a key safety feature to protect the radioactive fuel core from damage.

She further knows that the Palisades reactor vessel is severely embrittled and that Palisades has perennially been ranked by the NRC as having one of the most embrittled reactor vessels in the industry, one which could critically fail in the event of too-rapid heating or cooling. According to Ms. Ferry, there has been no meaningful physical scientific assessment of the Palisades reactor vessel for more than 20 years.

Ms. Ferry also states that restoration of Palisades to operation would also require replacement of the reactor pressure vessel head and replacement of the steam generators for the second time in Palisades' history. She recounts the 1994 reports by Dr. Ross Landsman, an NRC safety inspector, who identified violations of the Palisades Safe Shutdown Earthquake Evaluation in the form of subsurface stability beneath the concrete pads for the loaded nuclear waste casks that are perched on the Lake Michigan shoreline. Rossman has stated that both cask pads at Palisades violate NRC earthquake safety regulations. Ms. Ferry also cites concerns with Cask No. 4, the fourth dry storage cask (DSC) to be loaded with spent nuclear fuel at Palisades, which has weld defects and possible damage to its spent fuel contents. Cask No. 4 poses a serious danger to workers and the physical environment and must at some point be remediated.

Ms. Ferry points out that no U.S. commercial nuclear power plant has ever been restored to operations after being permanently shut down and she lacks confidence that necessary quality assurance record keeping and ongoing maintenance have been performed of key systems and components since power operations were permanently ended in May 2022. She is afraid that if

Palisades is restored to operability there could be one or more operations incidents or accidents that will result in radiation release and that her family and she might suffer irreparable damage to their health as well as to real and personal property located at her residence. Ms. Ferry has designated Beyond Nuclear to represent her interests in this proceeding and states that they will not be adequately represented unless Beyond Nuclear is allowed to participate as a party on her behalf.

Michigan Safe Energy Future

Michigan Safe Energy Future (“MSEF”) is a grassroots association of people in western and southwestern Michigan which since 2013 has advocated for the permanent shutdown of Palisades Nuclear Plant and replacement of nuclear and natural gas power generation with safe and renewable nonnuclear energy technologies. MSEF has a dozen members and does not have a fixed office address.

MSEF herewith provides its declaration, agreeing to represent two of its members, James Scott and Ann Scott in this proceeding. (Apx. 4). Both Scotts designated MSEF to intervene to protect their interests in physical health and safety, the health and safety of their family members, their real property, and the health and stability of the physical environment proximate to Palisades. (Apxs. 5 and 6).

James Scott is an adult citizen of Michigan who lives at 80014 Ramblewood Hill, Covert, MI 49043, which is located 1.2 straight-line miles from the Palisades Nuclear Plant. His home is near Lake Michigan and in the warm season he walks on the beach and wades in the Lake within a few hundred yards of Palisades and goes boating with friends or relatives. He opposes the granting of an exemption by the NRC to Holtec Decommissioning International LLC and Holtec Palisades LLC because of concerns over safety, the potential for significant damage to public

health and the environment, Holtec's lack of nuclear power generation experience and controversial historical performance of the parent company, Holtec International ("Holtec"), as a corporation.

Mr. Scott is concerned that before Palisades could be restored to operation, there would have to be resolution of its half-century-long plague of control rod drive mechanism (CRDM) seal leakage problems. The root cause(s) of the problem have never been established, but CRDM seals are a key safety feature to protect the radioactive fuel core from damage.

He further knows that the Palisades reactor vessel is severely embrittled and that Palisades has perennially been ranked by the NRC as having one of the most embrittled reactor vessels in the industry, one which could critically fail in the event of too-rapid heating or cooling. According to Mr. Scott, there has been no meaningful physical scientific assessment of the Palisades reactor vessel for more than 20 years.

Mr. Scott also states that restoration of Palisades to operation would also require replacement of the reactor pressure vessel head and replacement of the steam generators for the second time in Palisades' history. He recounts the 1994 reports by Dr. Ross Landsman, an NRC safety inspector, who identified violations of the Palisades Safe Shutdown Earthquake Evaluation in the form of subsurface stability beneath the concrete pads for the loaded nuclear waste casks that are perched on the Lake Michigan shoreline. Rossman has stated that both cask pads at Palisades violate NRC earthquake safety regulations. Mr. Scott also cites concerns with Cask No. 4, the fourth dry storage cask (DSC) to be loaded with spent nuclear fuel at Palisades, which has weld defects and possible damage to its spent fuel contents. Cask No. 4 poses a serious danger to workers and the physical environment and must at some point be remediated.

Mr. Scott points out that no U.S. commercial nuclear power plant has ever been restored to operations after being permanently shut down and he lacks confidence that necessary quality assurance record keeping and ongoing maintenance have been performed of key systems and components since power operations were permanently ended in May 2022. He is afraid that if Palisades is restored to operability there could be one or more operations incidents or accidents that will result in radiation release and that his family and he might suffer irreparable damage to their health as well as to real and personal property located at his residence. Mr. Scott has designated Michigan Safe Energy Future to represent his interests in this proceeding and states that they will not be adequately represented unless MSEF is allowed to participate as a party on his behalf.

Ann Scott is an adult citizen of Michigan who lives at 80014 Ramblewood Hill, Covert, MI 49043, which is located 1.2 straight-line miles from the Palisades Nuclear Plant. Her home is near Lake Michigan and in the warm season she walks on the beach and wades in the Lake within a few hundred yards of Palisades and goes boating with friends or relatives. She opposes the granting of an exemption by the NRC to Holtec Decommissioning International LLC and Holtec Palisades LLC because of concerns over safety, the potential for significant damage to public health and the environment, Holtec's lack of nuclear power generation experience and controversial historical performance of the parent company, Holtec International ("Holtec"), as a corporation.

Ms. Scott is concerned that before Palisades could be restored to operation, there would have to be resolution of its half-century-long plague of control rod drive mechanism (CRDM) seal leakage problems. The root cause(s) of the problem have never been established, but CRDM seals are a key safety feature to protect the radioactive fuel core from damage.

She further knows that the Palisades reactor vessel is severely embrittled and that Palisades has perennially been ranked by the NRC as having one of the most embrittled reactor vessels in the industry, one which could critically fail in the event of too-rapid heating or cooling. According to Ms. Scott, there has been no meaningful physical scientific assessment of the Palisades reactor vessel for more than 20 years.

Ms. Scott also states that restoration of Palisades to operation would also require replacement of the reactor pressure vessel head and replacement of the steam generators for the second time in Palisades' history. She recounts the 1994 reports by Dr. Ross Landsman, an NRC safety inspector, who identified violations of the Palisades Safe Shutdown Earthquake Evaluation in the form of subsurface stability beneath the concrete pads for the loaded nuclear waste casks that are perched on the Lake Michigan shoreline. Rossman has stated that both cask pads at Palisades violate NRC earthquake safety regulations. Ms. Scott also cites concerns with Cask No. 4, the fourth dry storage cask (DSC) to be loaded with spent nuclear fuel at Palisades, which has weld defects and possible damage to its spent fuel contents. Cask No. 4 poses a serious danger to workers and the physical environment and must at some point be remediated.

Ms. Scott points out that no U.S. commercial nuclear power plant has ever been restored to operations after being permanently shut down and she lacks confidence that necessary quality assurance record keeping and ongoing maintenance have been performed of key systems and components since power operations were permanently ended in May 2022. She is afraid that if Palisades is restored to operability there could be one or more operations incidents or accidents that will result in radiation release and that her family and she might suffer irreparable damage to their health as well as to real and personal property located at her residence. Ms. Scott has designated Michigan Safe Energy Future to represent her interests in this proceeding and states

that they will not be adequately represented unless MSEF is allowed to participate as a party on her behalf.

Don't Waste Michigan

Don't Waste Michigan ("DWM") is a 32-year-old grassroots association with over 50 members in southern, western and central Michigan. DWM is located at 811 Harrison St., Monroe, MI 48161. DWM works to shut down aging, dangerous nuclear power plants in the Great Lakes Basin; to halt or block the construction of new nuclear power plants; to educate the public about the dangers of nuclear power and nuclear waste, its deadly by-product; and to block the practice of landfilling nuclear waste.

DWM herewith provides its declaration, agreeing to represent two of its members, Alice Hirt and Joseph Kirk in this proceeding. (Apx. 7). Ms. Hirt and Mr. Kirk both have designated DWM to intervene to protect their interests in physical health and safety, the health and safety of their family members, their real property, and the health and stability of the physical environment proximate to Palisades. (Apxs. 8 and 9).

Alice Hirt is an adult citizen of Michigan who lives at 6677 Summit View, Holland, MI 49024, which is located 36.5 straight-line miles from the Palisades Nuclear Plant. Her home is near Lake Michigan and in the warm season she walks on the beach and wades in the Lake and goes boating with friends or relatives. She opposes the granting of an exemption by the NRC to Holtec Decommissioning International LLC and Holtec Palisades LLC because of concerns over safety, the potential for significant damage to public health and the environment, Holtec's lack of nuclear power generation experience and controversial historical performance of the parent company, Holtec International ("Holtec"), as a corporation.

Ms. Hirt is concerned that before Palisades could be restored to operation, there would have to be resolution of its half-century-long plague of control rod drive mechanism (CRDM) seal leakage problems. The root cause(s) of the problem have never been established, but CRDM seals are a key safety feature to protect the radioactive fuel core from damage.

She further knows that the Palisades reactor vessel is severely embrittled and that Palisades has perennially been ranked by the NRC as having one of the most embrittled reactor vessels in the industry, one which could critically fail in the event of too-rapid heating or cooling. According to Ms. Hirt, there has been no meaningful physical scientific assessment of the Palisades reactor vessel for more than 20 years.

Ms. Hirt also states that restoration of Palisades to operation would also require replacement of the reactor pressure vessel head and replacement of the steam generators for the second time in Palisades' history. She recounts the 1994 reports by Dr. Ross Landsman, an NRC safety inspector, who identified violations of the Palisades Safe Shutdown Earthquake Evaluation in the form of subsurface stability beneath the concrete pads for the loaded nuclear waste casks that are perched on the Lake Michigan shoreline. Rossman has stated that both cask pads at Palisades violate NRC earthquake safety regulations. Ms. Hirt also cites concerns with Cask No. 4, the fourth dry storage cask (DSC) to be loaded with spent nuclear fuel at Palisades, which has weld defects and possible damage to its spent fuel contents. Cask No. 4 poses a serious danger to workers and the physical environment and must at some point be remediated.

Ms. Hirt points out that no U.S. commercial nuclear power plant has ever been restored to operations after being permanently shut down and she lacks confidence that necessary quality assurance record keeping and ongoing maintenance have been performed of key systems and components since power operations were permanently ended in May 2022. She is afraid that if

Palisades is restored to operability there could be one or more operations incidents or accidents that will result in radiation release and that her family and she might suffer irreparable damage to their health as well as to real and personal property located at her residence. Ms. Hirt has designated Don't Waste Michigan to represent her interests in this proceeding and states that they will not be adequately represented unless DWM is allowed to participate as a party on her behalf.

Joseph C. Kirk is an adult citizen of Michigan who lives at 29794 Lake Bluff, Palisades Park, MI 49043, which is 0.8 straight-line miles from the Palisades Nuclear Plant. His home is near Lake Michigan and in the warm season he walks on the beach and wades in the Lake within a few hundred yards of Palisades and goes boating with friends or relatives. He opposes the granting of an exemption by the NRC to Holtec Decommissioning International LLC and Holtec Palisades LLC because of concerns over safety, the potential for significant damage to public health and the environment, Holtec's lack of nuclear power generation experience and controversial historical performance of the parent company, Holtec International ("Holtec"), as a corporation.

Mr. Kirk is concerned that before Palisades could be restored to operation, there would have to be resolution of its half-century-long plague of control rod drive mechanism (CRDM) seal leakage problems. The root cause(s) of the problem have never been established, but CRDM seals are a key safety feature to protect the radioactive fuel core from damage.

He further knows that the Palisades reactor vessel is severely embrittled and that Palisades has perennially been ranked by the NRC as having one of the most embrittled reactor vessels in the industry, one which could critically fail in the event of too-rapid heating or cooling. According to Mr. Kirk, there has been no meaningful physical scientific assessment of the Palisades reactor vessel for more than 20 years.

Mr. Kirk also states that restoration of Palisades to operation would also require replacement of the reactor pressure vessel head and replacement of the steam generators for the second time in Palisades' history. He recounts the 1994 reports by Dr. Ross Landsman, an NRC safety inspector, who identified violations of the Palisades Safe Shutdown Earthquake Evaluation in the form of subsurface stability beneath the concrete pads for the loaded nuclear waste casks that are perched on the Lake Michigan shoreline. Rossman has stated that both cask pads at Palisades violate NRC earthquake safety regulations. Mr. Kirk also cites concerns with Cask No. 4, the fourth dry storage cask (DSC) to be loaded with spent nuclear fuel at Palisades, which has weld defects and possible damage to its spent fuel contents. Cask No. 4 poses a serious danger to workers and the physical environment and must at some point be remediated.

Mr. Kirk points out that no U.S. commercial nuclear power plant has ever been restored to operations after being permanently shut down and he lacks confidence that necessary quality assurance record keeping and ongoing maintenance have been performed of key systems and components since power operations were permanently ended in May 2022. He is afraid that if Palisades is restored to operability there could be one or more operations incidents or accidents that will result in radiation release and that his family and he might suffer irreparable damage to their health as well as to real and personal property located at his residence. Mr. Kirk has designated Don't Waste Michigan to represent his interests in this proceeding and states that they will not be adequately represented unless DWM is allowed to participate as a party on his behalf.

LEGAL BASIS FOR STANDING

Pursuant to the Atomic Energy Act, the Commission must grant a hearing in a licensing proceeding "upon the request of any person whose interest may be affected by the proceeding, and shall admit any such person as a party to such proceeding." 42 U.S.C. § 2239(a)(1)(A). To

support the request, a petitioner must provide the Commission with information regarding “(1) the nature of the petitioner’s right under the governing statutes to be made a party; (2) the nature of the petitioner’s property, financial, or other interest in the proceeding; (3) the possible effect of any decision or order on the petitioner’s interest.” *Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc. (Vermont Yankee Nuclear Power Station)*, 60 N.R.C. 548, 552 (2004)(citing 10 C.F.R. § 2.309(d)(1). “The NRC generally uses judicial concepts of standing in interpreting this regulation.” *Entergy Nuclear Vermont Yankee*, 60 N.R.C. at 552. Thus, a petitioner may intervene if it can specify facts showing “that (1) it has suffered or will suffer a distinct and palpable harm constituting injury-in-fact within the zone of interests arguably protected by the governing statutes, (2) the injury is fairly traceable to the action being challenged, and (3) the injury will likely be redressed by a favorable determination.” *Id.* at 552-553. In determining whether a petitioner has met the requirements for establishing standing, the Commission “construe[s] the petition in favor of the petitioner.” *Id.* at 553.

A petitioner for leave to intervene must, of course, show the potential for injury-in-fact to its interests before intervention can be granted. *Nuclear Eng’g Co., Inc. (Sheffield, Ill. Low-Level Radioactive Waste Disposal Site)*, 7 NRC 737, 743 (1978). A petitioner need not establish that injury will inevitably result from the proposed action to show an injury-in-fact, but only that it may be injured in fact by the proposed action. *Gulf States Utils. Co., et al. (River Bend Station, Unit 1)*, 40 NRC 43 (1994).

An organization that wishes to intervene in a proceeding may do so either in its own right by demonstrating harm to its organizational interests, or in a representational capacity by demonstrating harm to its members. *See Hydro Resources, Inc. (2929 Coors Road, Suite 101, Albuquerque, NM 87120)*, LBP-98-9, 47 NRC 261, 271 (1998). Both incorporated entities, such

as BN and DWM, and unincorporated associations such as Michigan Safe Energy Future, may act as representational entities by demonstrating harm to their members..

An organization seeking representational standing must demonstrate how at least one of its members may be affected by the licensing action (such as by activities on or near the site), must identify that member by name and address, and must show (preferably by affidavit) that the organization is authorized to request a hearing on behalf of that member. *Warth v. Seldin*, 422 U.S. 490, 511, 95 S.Ct. 2197, 45 L.Ed.2d 343 (1975) (“There is no question that an association may have standing in its own right to seek judicial relief from injury to itself and to vindicate whatever rights and immunities the association itself may enjoy. Moreover, in attempting to secure relief from injury to itself the association may assert the rights of its members, at least so long as the challenged infractions adversely affect its members' associational ties. *E.g.*, *NAACP v. Alabama, supra*, at 458-460); *Anti-Fascist Committee v. McGrath*, 341 U.S. 123, 183-187 (1951) (Jackson, J., concurring). . . . Even in the absence of injury to itself, an association may have standing solely as the representative of its members. *E.g.*, *National Motor Freight Assn. v. United States*, 372 U.S. 246 (1963).” *Also, see Sperry Products v. Ass’n of Am. Railroads*, 132 F.2d 408, 410–11 (2d Cir. 1942) (noting that unincorporated associations can be treated as singular entities for “procedural incidents” such as “service of process” and “venue,” but that “for most purposes,” including “jurisdiction over [] subject matter,” the law “looks at such associations as mere aggregations of individuals”).

An organization seeking representational standing must demonstrate how at least one of its members may be affected by the licensing action (such as by activities on or near the site), must identify that member by name and address, and must show (preferably by affidavit) that the organization is authorized to request a hearing on behalf of that member. *See, e.g., Georgia*

Institute of Technology (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995); *Houston Lighting and Power Co.* (South Texas Project, Units 1 and 2), ALAB-549, 9 NRC 644, 646-48 (1979); *Houston Lighting and Power Co.* (Allens Creek Nuclear Generating Station, Unit 1), ALAB-535, 9 NRC 377, 390-97 (1979). Regarding the preference for an affidavit, see *Shieldalloy Metallurgical Corp.* (Cambridge, Ohio Facility), CLI-99-12, 49 NRC 347, 354 & n.4 (1999); *Northeast Nuclear Energy Co.* (Millstone Nuclear Power Station, Unit 1), LBP-96-1, 43 NRC 19, 23 (1996).

In this case, three organizations – Beyond Nuclear, Don't Waste Michigan, and Michigan Safe Energy Future – are each petitioning on behalf of two of their members, all of whom herewith have submitted declarations. Five of the six members are residents of Palisades Park, Michigan, who live within two miles or less miles of the Palisades plant, and the sixth lives within 37 miles. The petitioning organizations base their claims to standing on the facts that the restoration of Palisades to power generation is analogous to licensing a new nuclear power plant, and that the longstanding NRC policy is to readily recognize the legal standing of persons who live, work and/or recreate within 50 miles of a power plant in the present generation of light water reactors based on the inherent dangerousness of commercial nuclear power. *Amergen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), LBP-06-7, 63 NRC 188, 195 (2006). *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 146, *aff'd*, CLI-01-17, 54 NRC 3 (2001).

In an analogous operating license proceeding, a petitioner can base his or her standing upon a combination of residence or visits near the plant and a showing that the proposed action entails an increased potential for offsite consequences. *Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 & 2), CLI-99-4, 49 NRC 185, 191 (1999); *Florida Power & Light Co.*

(Turkey Point Nuclear Generating Plant, Units 3 & 4), LBP-08-18, 68 NRC 533, 541 (2008).

Petitioners' members may be accorded standing if they reside close enough to a planned project so that there is reasonable apprehension of injury. *Hydro Resources, Inc., supra*. As each of the member declarants explains, they will suffer (or will be under threat of suffering) concrete and particularized injuries from the restored operations of Palisades if the exemption sought by Holtec is granted. If the exemption is denied, the potential threats or actual harms from Palisades will not occur. Palisades may not resume operations without a license from the Commission, which by statute also has the power to order mitigation arrangements. 42 U.S.C. § 2133(a). In addition, the member-declarants have expressed bases for standing that fall within the zone of interests protected by the Atomic Energy Act and the National Environmental Policy Act and their respective implementing regulations, which are pertinent to this proceeding, even if the Commission decides to grant the requested categorical exclusion. *See, e.g., Ouachita Watch League v. Jacobs*, 463 F.3d 1163, 1173 (11th Cir. 2006) (“[S]ince the injury alleged is environmental, it falls within the zone of interests protected by NEPA”); *Sabine River Auth. v. U.S. Dep't of Interior*, 951 F.2d 669, 675 (5th Cir. 1992) (plaintiffs' concerns about impacts on water quality and quantity fell within NEPA's zone of interests).

The member-declarants have standing to intervene in their own right, having met the requirements for injury-in-fact, causation, and redressability. *See Lujan v. Defenders of Wildlife*, 504 U.S. 555, 572 n.7 (1992) (“[P]rocedural rights are special: The person who has been accorded a procedural right to protect his concrete interests can assert that right without meeting all the normal standards for redressability and immediacy.”) (internal quotations omitted); *see also Duke Energy Corp.* (McGuire, Units 1 and 2; Catawba, Units 1 and 2) CLI-02-17, 56 NRC

1, 10 (2002) (emphasizing NEPA's goal to "ensure that the agency does not act upon incomplete information, only to regret its decision after it is too late to correct.").

STANDARD FOR ADMISSIBILITY OF CONTENTIONS

Section 189(a) of the Atomic Energy Act, 42 U.S.C. § 2239, provides:

In any proceeding under this Act, for the granting, suspending, revoking, or amending of any license or construction permit, or application to transfer control, and in any proceeding for the issuance or modification of rules and regulations dealing with the activities of licensees, and in any proceeding for the payment of compensation, an award, or royalties under section 153, 157, 186c., or 188, the Commission shall grant a hearing upon the request of any person whose interest may be affected by the proceeding,

To carry out the provisions of that statute, the NRC has adopted a regulation, 10 C.F.R. § 2.309, regarding hearing requests and petitions to intervene. The regulation authorizes any person whose interest may be affected by a proceeding to intervene in the proceeding. That is the basis on which this petition is presented. However, the Commission has held that § 189(a) does not apply to proceedings involving a request for an exemption. *Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 & 2), 51 NRC 90 (2000). The Petitioners herein, so as not to waive any procedural requirement, are submitting this Petition pursuant to 10 C.F.R. § 2.309, because the NRC's consideration of Holtec's Request for Exemption in their estimation comprises a licensing-related act that comprises a proceeding pursuant to § 2.309.

Pursuant to 10 C.F.R. § 2.309(f), a petitioner's contentions must: (1) provide a specific statement of the issue of law or fact to be raised or controverted; (2) provide a brief explanation of the basis for the contention; (3) demonstrate that the issue raised in the contention is within the scope of the proceeding; (4) demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding; (5) provide a concise statement of the alleged facts or expert opinions which support the petitioner's position on the issue and on which the petitioner intends to rely at hearing, together with

reference to specific sources and documents on which the petitioner intends to rely; (6) provide sufficient information to show that a genuine dispute exists with the licensee on a material issue of law or fact.

The NRC has made clear that the burden on a petitioner in stating its contentions is not heavy. In *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 & 3), CLI-01-24, 54 NRC 349, the NRC described the contention admissibility standards as “insist[ing] upon some ‘reasonably specific factual and legal basis’ for the contention.” *Id.*, 54 349,359. The NRC further explained in *Millstone* that the standards for contention admissibility were meant to prevent contentions based on “little more than speculation” and intervenors who had “negligible knowledge of nuclear power issues and, in fact, no direct case to present.” *Id.* at 358. Rather, petitioners are required only to ‘articulate at the outset the specific issues they wish to litigate.’ *Id.* at 359.

The NRC and the courts have also made clear that the burden of persuasion is on the licensee, not the petitioner. The petitioner only needs to “com[e] forward with factual issues, not merely conclusory statements and vague allegations.” *Northeast Nuclear Energy Company*, 53 NRC 22, 27 (2001). The NRC described the threshold burden in stating a contention as requiring a petitioner to “raise any specific, germane, substantial, and material factual issues that are relevant to the . . . request for a license . . . and that create a basis for calling on the [licensee] to satisfy the ultimate burden of proof.” *Id.*

Courts have found, however, that this threshold burden may not be appropriate where the information was in the hands of the licensee or NRC staff and was not made available to the petitioner. See, e.g., *York Comm. for a Safe Env't. v. NRC*, 527 F.2d 812, 815 n. 12 (D.C. Cir. 1975) (where the information necessary to make the relevant assessment is “readily accessible

and comprehensible to the license applicant and the Commission staff but not to petitioners, placing the burden of going forward on petitioners appears inappropriate.”).

Also, in *Vermont Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. 519, 554 (1978), the U.S. Supreme Court affirmed the NRC in finding that the proper standard to apply required intervenors to simply make a “showing sufficient to require reasonable minds to inquire further,” a burden the NRC found to be significantly less than that of making a *prima facie* case.

The ASLB in the Yucca Mountain case observed:

The Commission therefore amended its rules to require that contentions have “at least some minimal factual and legal foundation in support.” That is all. That is what DOE agreed at oral argument is the standard. As the Commission emphasized in *Oconee*, the contention requirements were never intended to be turned into a “fortress to deny intervention.”

U.S. Dept. of Energy (High Level Waste Repository, LBP-09-06 (May 11, 2009)).

PETITIONERS’ CONTENTIONS AND SUPPORTING INFORMATION

CONTENTION 1

Holtec seeks an exemption from the requirements of 10 C.F.R. § 50.82, pursuant to 10 C.F.R. § 50.12. The proposed exemption would remove the 10 C.F.R. § 50.82(a)(2) restriction that prohibits reactor power operations and retention of fuel in the reactor vessel when the reactor is in the process of decommissioning. Holtec’s proposed exemption does not comply with the requirements for an exemption set forth in 10 C.F.R. § 50.12. Therefore, the NRC must not allow Holtec to use this exemption.

Basis for the Contention

The Palisades Nuclear Plant (Palisades) was placed on the path to decommissioning status beginning in 2016, and permanently ended power generation activities on May 20, 2022. Holtec purchased Palisades from Entergy Nuclear Operations on June 28, 2022. Holtec is now trying to remove Palisades from decommissioning status and return Palisades to active power operations. Holtec admits that “current regulations do not specify a particular mechanism for reauthorizing operation of a nuclear power plant after both certifications [regarding

decommissioning] are submitted on the docket and before operating license expiration.”⁴ To remedy this supposed void, Holtec proposes a multifaceted scheme to attempt to accomplish this goal.

The linchpin of this scheme is an exemption pursuant to 10 C.F.R. § 50.12. But as Petitioners explain below, § 50.12 is very explicit as to the requirements for an exemption. Holtec cannot meet those requirements, so the NRC must not grant Holtec’s requested exemption.

Facts Upon Which Petitioners Intend to Rely In Support of This Contention

Palisades first went online to produce electricity in 1971. Its operating license was renewed in 2006, authorizing operation through 2031. In 2016, Entergy Nuclear Operations, then-owner of the plant, decided to cease operations at Palisades and place the plant into decommissioning status in 2018. Entergy changed that date later to 2022. As a part of the decommissioning process, Entergy certified, pursuant to 10 C.F.R. § 50.82(a)(1)(i), that power operations ceased at Palisades on May 20, 2022, and pursuant to 10 C.F.R. § 50.82 (1)(a)(ii), the fuel was permanently removed from the Palisades reactor vessel and placed in the spent fuel pool on June 10, 2022.⁵ When those certifications are provided in connection with decommissioning of a reactor, they legally prohibit operation of the Palisades reactor or replacement of the fuel into the Palisades reactor vessel.⁶ Thus, without an exemption from the requirements of § 50.82, Holtec’s plan to restart Palisades fails.

The exemption Holtec seeks, pursuant to 10 C.F.R. § 50.12, contains explicit requirements. As the D.C. Circuit has said:

⁴ Request for Exemption, p. 12.

⁵ “Certifications of Permanent Cessation of Power Operations and Permanent Removal of Fuel from the Reactor Vessel.” Letter, June 13, 2022, <https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML22164A067>

⁶ *Id.* at 3.

Section 50.12 provides a mechanism for obtaining an exemption from the procedures incorporated in section 50.10, but one that may be invoked only in extraordinary circumstances. The Commission has made clear that section 50.12 is available “only in the presence of exigent circumstances, such as emergency situations in which time is of the essence and relief from the Licensing Board is impossible or highly unlikely.” [citing *Washington Public Power Supply System*, 5 NRC 719, 723 (1977)].

NRDC v. NRC, 695 F.2d 623 (D.C. Cir. 1982). There are no “exigent circumstances” presented here by Holtec. The Commission has also emphasized that § 50.12 exemptions are to be granted sparingly and only in cases of undue hardship. 39 Fed. Reg. 14,506, 14,507 (1974). Use of the exemption authority under 10 C.F.R. § 50.12 has been made available by the Commission only in the presence of exceptional circumstances. A finding of exceptional circumstances is a discretionary administrative finding which governs the availability of an exemption. A reasoned exercise of such discretion should take into account the equities of each situation. These equities include the stage of the facility’s life, any financial or economic hardships, any internal inconsistencies in the regulation, the applicant’s good faith effort to comply with the regulation from which the exemption is sought, the public interest in adherence to the Commission’s regulations, and the safety significance of the issues involved. These equities do not, however, apply to the requisite findings on public health and safety and common defense and security. *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-84-8, 19 NRC 1154, 1156 n.3¹ (1984); *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), LBP-84-45, 20 NRC 1343, 1376-1377 (1984). In short, Holtec bears an extremely heavy burden to justify its request for an exemption. Given the unprecedented nature of this restart, the risks of up to \$4.5 billion in federal and state bailouts associated with the restart, as well as the extreme risks to health, safety, security, and the environment, no exemptions should be granted by NRC.

10 C.F.R. § 50.12(a)(1) first requires that the exemption be authorized by law. In its Request for Exemption,⁷ Holtec does not cite any law that authorizes the exemption. It just says that the Atomic Energy Act does not prohibit it. Holtec also refers to a decision by the NRC that denied a request for a rule that would allow retired nuclear reactors to return to operation. The NRC decision simply found that a rule was not justified at that time. The NRC specifically emphasized that no request for restarting a closed reactor had ever been made and that reactor operators expressed no interest in adopting the requested rule. The NRC mentioned in passing that existing regulations might be available, through an exemption, to accomplish the purpose, but § 50.12 was not mentioned. Given the strict application to be accorded to a § 50.12 exemption, more is required to show that the exemption is authorized by law. Indeed, the inference in § 50.12 is that affirmative legal authorization must be demonstrated.

A request for a § 50.12 exemption must also show that the exemption will not present an undue risk to the public health and safety and common defense and security. In an attempt to satisfy this requirement, Holtec simply states that Palisades will be returned to the condition it was in prior to decommissioning. The problem with that assertion, however, is that there were significant safety problems with the plant that militate against such a conclusion. In fact, risks to the public health and safety prompted Palisades to be shut down earlier than anticipated. The attached declaration of Arnold Gundersen establishes the undue risks to public health and safety and common defense and security if Palisades is reopened.

Pointing out that “[t]he overall design of the Palisades reactor is not licensable to the 21st century standards,”⁸ Mr. Gundersen asserts that “Palisades is one of the world's most decrepit and flawed atomic reactors. The Palisades nuclear reactor was operating with poorly maintained

⁷ *Id.* at 9.

⁸ Declaration of Arnold Gundersen, Appendix (“Apx.”) 10, p. 19.

parts, woefully inadequate safety equipment, and outdated and outmoded components when Entergy sold it to Holtec less than 2-years ago.”⁹ In discussing Holtec’s void of corporate nuclear power plant construction and operating experience, he observes that “Relicensing and resuscitating a shuttered aging atomic reactor by a corporation with no nuclear operations, engineering, or licensed reactor personnel is a recipe for an atomic disaster.”¹⁰ He sees several reasons prompting “genuine danger and risk from Holtec attempting to bring Palisades back to life.” These include that “[t]he long-standing equipment problems at Palisades are substantial and extensive. Additionally, the expense for these repairs is completely underestimated in Holtec’s entire proposal. Furthermore, the duration for making said repairs is laughably minimized.”¹¹

Besides the foregoing requirements for an exemption, § 50.12(a)(2) lists several special circumstances, at least one of which must be present. They are cited and discussed as follows:

(i) Application of the regulation in the particular circumstances conflicts with other rules or requirements of the Commission.

This requirement asks whether § 50.82 conflicts with other NRC rules or requirements. Section 50.82 governs reactor shutdown and decommissioning. This is certainly an authorized procedure which does not conflict with any other rule as applied to Palisades. In fact, Holtec’s Request for Exemption does not even cite a § 50.12(a)(2)(i) special circumstance. Holtec knows there is none.

(ii) Application of the regulation in the particular circumstance would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule.

This requirement means that application of § 50.82 in this case would not serve the purpose of § 50.82. The purpose of § 50.82 is to ensure that the reactor is certified to be in

⁹ *Id.* p. 7.

¹⁰ *Id.* at 10.

¹¹ *Id.* at 18.

decommissioning status in order to facilitate decommissioning. Palisades has been in the process of decommissioning since June 2022. It is absurd to think that § 50.82 is not serving its purpose in this case.

Holtec's attempted justification for reliance on this factor is twofold. First, Holtec claims that application of § 50.82 in this case would not serve its purpose because that would prevent Holtec from reopening Palisades. The fallacy of that argument is self-evident. It is not the purpose of § 50.82 to allow a reactor in decommissioning status to restart. On the contrary, as explained above, the purpose of the rule is to facilitate decommissioning.

Second, Holtec claims that the purpose of § 50.82 is simply to notify the NRC of Entergy's intent to place Palisades into decommissioning status. If that is so, why does Holtec need an exemption? It could just rescind the certification. Furthermore, Holtec has not shown that application of § 50.82 in this case would not serve that rule's purpose. If the rule's purpose, as Holtec alleges, is just to notify the NRC of the intent to decommission, that purpose is accomplished without an exemption.

What Holtec is tacitly admitting is that the actual purpose of § 50.82 is to formally undertake the decommissioning process. That application of the rule is clearly served in this case by continuing the decommissioning process, not by attempting to restart Palisades.

(iii) Compliance would result in undue hardship or other costs that are significantly in excess of those contemplated when the regulation was adopted, or that are significantly in excess of those incurred by others similarly situated.

In its attempt to support this factor, Holtec relies on support it has received from the State of Michigan. It is not at all clear how there will be an undue hardship on Holtec if the requested exemption is not granted. Even if, as Holtec contends, reopening Palisades would benefit the people of Michigan (a concept with which Petitioners vehemently disagree), that does not show an undue hardship on Holtec. Holtec merely finds itself in a difficult situation of its own making.

To the contrary, Holtec knew Palisades was going to be in decommissioning status when it bought the plant. This is certainly not an exigent circumstance or undue hardship, except for Holtec's profit motive. See, *NRDC v. NRC*, *supra*. Holtec's argument brings to mind the quip about the boy who kills his parents and then begs for mercy because he is an orphan.

It is also worth noting that § 50.82 was promulgated in such a way as to make the shutdown determination final after weighty, formal steps are taken, in part because there are economic considerations for a host of players when a large baseload plant goes out of service permanently. Holtec itself, in its secret request to DOE on July 5, 2022 for billions in bailouts, acknowledged Entergy's "certification of permanent cessation of power represents a substantial licensing action."¹² Regional grid planners, other utilities, business forecasters and their clients all have had to adjust to the decision. The class of those whose economic interests must be taken into consideration along with those of Holtec is quite extensive.

(iv) The exemption would result in benefit to the public health and safety that compensates for any decrease in safety that may result from the grant of the exemption.

As established by the declaration of Arnold Gundersen, referred to above, restarting Palisades would actually harm public health and safety. This conclusion is reinforced by Kevin Kamps, Beyond Nuclear's Radioactive Waste Specialist, who in his declaration explores the secretive billion-dollar bailout application Holtec made to the U.S. Department of Energy in July 2022. Referring to Palisades' embrittled reactor vessel, Kamps states

. . . NRC has repeatedly weakened pressurized thermal shock (PTS) regulations, over decades, in order to accommodate ever more risky continued operations at the worst neutron-embrittled reactor pressure vessel in the country, namely Palisades. For State of Michigan officials to incuriously accept NRC's flippant assurances of safety is inviting disaster.¹³

¹² Holtec Application to DOE for CNC Funds, p. 6/42 of .pdf.
<https://beyondnuclear.org/wp-content/uploads/2023/10/7-5-22-42-page-Holtec-application-to-DOE-for-CNC-funds-to-restart-Palisades.pdf>

¹³ Declaration of Kevin Kamps, Appendix 12, p. 4.

(v) The exemption would provide only temporary relief from the applicable regulation and the licensee or applicant has made good faith efforts to comply with the regulation.

It is clear that Holtec is not asking for temporary relief, nor has it made a good faith attempt to comply with § 50.82. Rather, Holtec is asking for a license amendment – *i.e.*, permanent relief. And, instead of making a good faith effort to comply with § 50.82, Holtec is asking to rescind the § 50.82 certifications. Again, Holtec is not even arguing this factor in support of its request for an exemption.

(vi) There is present any other material circumstance not considered when the regulation was adopted for which it would be in the public interest to grant an exemption.

The public interest criterion for granting an exemption under 10 C.F.R. § 50.12(b) is a stringent one: exemptions of this sort are to be granted sparingly and only in extraordinary circumstances. *United States Dep't of Energy, et al.* (Clinch River Breeder Reactor Plant), CLI-82-23, 16 NRC 412, 426 (1982), citing *Washington Public Power Supply System (WPPSS Nuclear Power Projects Nos. 3 & 5)*, CLI-77-11, 5 NRC 719 (1977).

Here, Holtec contends that NRC regulations for decommissioning, including § 50.82, were adopted for reactors intended to be permanently shut down, not reactors that are proposed to be restarted. But that does not mean that NRC did not consider the possibility of restarting a reactor in decommissioning status when it promulgated the decommissioning rules. On the other hand, if the NRC had considered the possibility of restarting a decommissioning reactor, it would have provided for that possibility in the rules. Beyond that, however, Holtec must establish that restarting Palisades is in the public interest.

Holtec insists that its scheme to restart is just a simple matter of getting the requested exemption and then a few license amendments. But in a February 9, 2023, interview with NRC

Commissioner Bradley Crowell by the *ExchangeMonitor*, as set out below, Commissioner

Crowell acknowledges that a Palisades restart would be a difficult and complicated process:

Q: Let's shift gears and talk about the current fleet of reactors. I want to ask about Holtec's proposal to restart Palisades Nuclear Generating Station. Does NRC have the authority to issue a license to a nuclear power plant to restart after it has ceased operations?

Crowell: Does it have the authority? If the plant goes through and reapplies for a license, sure, but it's a different context. It's not something like a license renewal, given the context that the plant is shut down.

Q: There's precedent to be set here, it seems. What would it look like for a plant applying for a brand new operating license to restart, from a technical standpoint as well as a regulatory one?

Crowell: When you have a reactor that has ceased operations, and you've offloaded the fuel, that's a major milestone. To reverse course triggers almost the entire licensing process again — maybe not site selection, but certainly the entire operation of the plant needs to be reassessed.

Once you've offloaded fuel, to restart the plant you would need to reload it with fuel and repower it. It's not the same as a refueling outage, and it's not the same as license renewal, if the reactor is still running but coming up towards the end of its lifetime.

Q: It sounds like a pretty heavy lift from the regulatory side of things.

Crowell: Yeah, and from the applicant side of things.

Q: Is NRC, to your knowledge, thinking about the possible regulatory pathways for Holtec or someone else to restart Palisades? Are you starting to get your ducks in a row for that possibility?

Crowell: I feel like it's difficult to get our ducks in a row for that, because it changes almost on a monthly basis. They can't even keep track of whether they've decided to restart it, or try to sell it and have someone else restart it, or apply for the DOE funding support.

Right now I understand they are in a posture of wanting to find a buyer to do it and, and that they will apply for the support, but I think at this stage of the game, you're going to have to start from scratch. It's unfortunate, for those who are proponents of the plant, that they didn't move on it earlier. Emphasis added.)

From www.exchangemonitor.com/nuclear-renaissance-now-or-never-30-minutes-with-bradley-crowell-commissioner-nuclear-regulatory-commission/.

Holtec relies on the fact of having monetary support appropriated by the Michigan legislature to support its argument that restarting Palisades is in the public interest. But political support of Holtec does not equate to a scientific or technical basis for the restart scheme.

Petitioners have attached the declaration of Mark Z. Jacobson, recognized as a premier expert in the country on renewable energy and future energy policy.. He makes it clear that nuclear power is not the energy source of the future, and consequently restarting Palisades is not in the public interest:

Nuclear power contributes to global warming and air pollution in the following ways: (1) emissions of air pollutants and global warming agents from the background grid due to its long planning-to-operation and refurbishment times (Section 3.2.2.1); (2) lifecycle emissions of air pollutants and global warming agents during construction, operation, and decommissioning of a nuclear plant; (3) heat and water vapor emissions during the operation of a nuclear plant (Sections 3.2.2.2 and 3.2.2.3); (4) carbon dioxide emissions due to covering soil or clearing vegetation during the construction of a nuclear plant, uranium mine, and waste site (Section 3.2.2.5); and (5) the emissions risk of air pollutants and global warming agents due to nuclear weapons proliferation (Section 3.3.2.1).

Every one of these categories represents an actual emission or emission risk, yet most of these emissions, except for lifecycle emissions, are incorrectly ignored in virtually all studies of nuclear energy impacts on climate. Virtually no study considers the impact of nuclear energy on air pollution mortality. By ignoring these factors, studies distort the impacts on climate and air pollution health associated with some technologies over others.

(Emphasis added). Declaration of Mark Z. Jacobson, Petitioners' Appendix 11, p. 9/137 of .pdf.

The declaration of Kevin Kamps further demonstrates that public support from the State of Michigan and Federal Government does not mean Holtec's scheme is in the public interest because Holtec is driven by whatever public funding it can garner, not by an established history of starting up and operating nuclear power plants. Besides some \$3.3 billion in state and federal largesse, Holtec insists on a locked-in power purchase agreement ("PPA") guaranteeing electrical

sales at a fixed price that may be well above comparable market prices.¹⁴ As Kamps notes, “Holtec’s scheme would protect it from free market competition at the Palisades zombie reactor via \$3.3 billion in government subsidies, and \$412.5 million per year in new PPA revenues, yet another form of subsidization.”¹⁵

Petitioners’ expert nuclear engineer, Arnold Gundersen, explains what the previous fixed-price PPA meant for Palisades when Entergy was the owner and operator:

Entergy’s corporate laser-like focus on minimizing costs became apparent as Palisades approached 2022. Because Entergy couldn’t make a profit at Palisades without the Michigan ratepayer-funded subsidy created by the Power Purchase Agreement, Entergy stopped investing in essential nuclear power plant repairs and upgrades made at other nuclear electrical generators during the years leading up to 2022. Simply put, Entergy risked the safety of the Palisades community and the atomic reactor’s capacity to operate again in order to make a profit. By not making essential repairs and upgrades, Entergy drove Palisades into the ground before its 2022 closing.¹⁶

Of significance here, Vogtle Units 3 and 4 in Georgia were the first nuclear reactors to be licensed in over 30 years. Also, 16 reactors have been permanently shut down since the 1990s. It is clear, therefore, that even the nuclear industry knows enough to quit when faced with reality. In this case, if it were not for the billions of DOE dollars on the table, and hundreds of millions of State of Michigan dollars as well, Holtec would not be proposing to restart Palisades, either. The NRC must not fall for this scheme. Granting the requested exemption would violate NRC regulations.

CONTENTION 2

10 C.F.R. § 50.82(8) dictates the parameters for use of the decommissioning trust fund by the owner of a nuclear reactor which is undergoing decommissioning. Pursuant to that regulation, withdrawals from the trust fund by Holtec are limited to legitimate decommissioning activities as defined in 10 CFR § 50.2. Also, expenditures from the trust fund must not reduce the value of the trust fund below the amount necessary to place and maintain the reactor in safe storage. Finally, withdrawals from the trust fund must not inhibit the ability of the licensee to complete

¹⁴ Declaration of Kevin Kamps, Appendix 12, p. 3.

¹⁵ *Id.*

¹⁶ Gundersen Declaration, Apx. 10, p. 11.

funding of any shortfalls needed to release the reactor site and terminate the license. In violation of NRC requirements, Holtec has misused the decommissioning trust fund to keep Palisades in a status to restart the reactor, rather than to decommission the plant.

Basis for the Contention

Requirements for decommissioning trust funds are found at 10 C.F.R. § 50.75. Basically, the reactor licensee must show that the fund has sufficient resources to undertake a program of decommissioning. Once the decommissioning trust fund (“DTF”) is established, 10 C.F.R. § 50.82(8) dictates the parameters for use of the DTF by the owner of a nuclear reactor which is undergoing decommissioning. Pursuant to that regulation, withdrawals from the Palisades DTF by Holtec are limited to legitimate decommissioning activities as defined in 10 C.F.R. § 50.2. Also, expenditures from the trust fund must not reduce the value of the trust fund below the amount necessary to place and maintain the reactor in safe storage. Finally, withdrawals from the DTF must not inhibit the ability of the licensee to complete funding of any shortfalls needed to release the reactor site and terminate the license.

In this case, Holtec inconsistently admits that it is drawing money from the DTF and that it is nonetheless deferring decommissioning activity, in anticipation of restarting Palisades for power generation. That violates NRC regulations. An overriding question is, how did Holtec spend \$44 million from the DTF in just five months (June 28 to December 31, 2022), while conceding that little to no decommissioning work was performed? Although the NRC had granted permission to spend decommissioning trust funds on such non-decommissioning activities as irradiated nuclear fuel management and site restoration, there is no evidence that much, if any, irradiated nuclear fuel management or site restoration work has been done. For example, irradiated nuclear fuel remains in the indoor wet storage pool and has not been transferred to dry cask storage. Any site restoration work would be very wasteful, as Holtec’s plan is not to decommission Palisades, but rather to restart it – as well as to construct and operate

two Small Modular Nuclear Reactors (“SMNRs”) on the site.¹⁷ As Holtec spokespeople have admitted on a number of occasions, the Palisades site is not being decommissioned, which will make it more readily returnable to full power operations.

This begs the question of how much of the \$44 million in DTF resources were improperly spent on the restart scheme in 2022? And if it was not spent on the restart scheme, what was it spent on? It was not spent on any significant irradiated nuclear fuel management activities, should not have been spent on site restoration activities and should not have been spent on the restart scheme. So what was it spent on?

Facts Upon Which Petitioners Intend to Rely In Support of This Contention

Palisades permanently ended power generation activities on May 20, 2022. Its entire inventory of nuclear fuel was unloaded from the reactor core on June 10, 2022 by Entergy. Permission to operate the reactor was formally terminated by the NRC. On June 13, 2022, Entergy sent the NRC its “Certifications of Permanent Cessation of Power Operations and Permanent Removal of Fuel from the Reactor Vessel.”¹⁸ Upon the docketing of these certifications, Palisades’ 10 CFR Part 50 operating license no longer authorized operation of the reactor, nor placement or retention of fuel in the reactor vessel.

While Palisades was already into the decommissioning phase when Holtec took over the plant site on June 28, 2022, there is little evidence of decommissioning Palisades despite large expenditures from the Palisades Decommissioning Trust Fund. No decommissioning work has

¹⁷ <https://holtecinternational.com/2023/12/04/first-two-smr-300-units-slated-to-be-built-at-michigans-palisades-site-for-commissioning-by-mid-2030/>

¹⁸“Certifications of Permanent Cessation of Power Operations and Permanent Removal of Fuel from the Reactor Vessel.” Letter, June 13, 2022, <https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML22164A067>

been performed, other than minor modifications to the mechanical draft cooling towers, and all of it is easily reversible, according to statements by Holtec's own spokespeople.

On June 28, 2022, Entergy Nuclear Operations transferred ownership of the plant to Holtec Palisades LLC. A few months before that transfer, on March 28, 2022, Entergy had submitted its Decommissioning Status Report to the NRC.¹⁹ In it, Entergy stated that the total amount in the decommissioning trust fund as of December 31, 2021, was \$576.26 million. The amount in the trust fund was estimated to be \$487 million by the end of 2022. In one year, the fund was depleted by \$88.26 million. More specifically to Holtec, the Report on Status of Decommissioning Funding submitted on March 31, 2023 states that Holtec had spent \$44 million from the trust fund between June 28, 2022 and December 31, 2022. Yet Holtec told the NRC at a meeting between Holtec and the NRC on March 20, 2023, that no major decommissioning activities have occurred.²⁰ This admission was repeated by Holtec at a meeting with the NRC on October 3, 2023.²¹

While many tens of millions of dollars have been expended from the decommissioning trust fund, very little by way of actual decommissioning activities has occurred. Holtec wants to maintain Palisades as close to operational status as possible in anticipation of restarting the reactor. Thus Holtec has illegally misused decommissioning trust funds in the approximate amount of \$44 million just between June 28 and December 31, 2022 to keep Palisades in

¹⁹ <https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML22087A500>

²⁰ <https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML23107A121>

²¹ Slide 5 of presentation,
<https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML23271A120>

condition for restart and not for decommissioning. Petitioners do not know how much additional decommissioning trust fund money has been expended from January 1, 2023 to the present, nor how much more Holtec will expend in the future. But they certainly did not stop spending decommissioning trust fund money on December 31, 2022. Petitioners reasonably suspect that Holtec's high rate of spending of the DTF has continued from December 31, 2022 down to the present.

It seems clear that when Holtec closed on the Palisades purchase, it never intended to complete the decommissioning, nor even to start it, but rather aimed to restart the reactor. *Only five days after purchasing Palisades, Holtec submitted to the U.S. Department of Energy, on July 5, 2022, an application entitled "Palisades Resurrection Grant Request"²² for federal funding to restart Palisades.* The level of technical detail and calculation in the 42-page application compellingly suggests that even as Holtec was closing on the June 28, 2022 purchase of Palisades, the company had no intention of following through with decommissioning the plant. The pending application would not become public knowledge until September 9, 2022, when Holtec issued a media statement to the press. But Holtec was secretly pursuing its restart scheme from July 5, 2022 until it deigned to inform the public that in fact, it no longer planned to decommission Palisades, which had been the public plan since at least December 23, 2020 (the

²²<https://beyondnuclear.org/wp-content/uploads/2023/10/7-5-22-42-page-Holtec-application-to-DOE-for-CNC-funds-to-restart-Palisades.pdf>

publication date of the PSDAR).²³ Instead, Holtec now intended to restart the plant with the help of billions of dollars of federal and state taxpayer bailout money.

To restart the plant, Holtec misrepresented its intentions and has misused the decommissioning trust fund in violation of NRC regulations. The representations made by Entergy and Holtec in the jointly published PSDAR and subsequently adopted by Holtec, as well as the formal, June 2022 certifications of fuel unloading arguably are “material false statements” within the purview of 18 U.S.C. § 1001, which says, pertinently:

[W]hoever, in any matter within the jurisdiction of the executive, legislative, or judicial branch of the Government of the United States, knowingly and willfully—

- (1) falsifies, conceals, or covers up by any trick, scheme, or device a material fact;
- (2) makes any materially false, fictitious, or fraudulent statement or representation; or
- (3) makes or uses any false writing or document knowing the same to contain any materially false, fictitious, or fraudulent statement or entry;

shall be fined under this title, imprisoned not more than 5 years or, if the offense involves international or domestic terrorism (as defined in section 2331), imprisoned not more than 8 years, or both.

CONTENTION 3

The NRC staff approved a transfer of the operating license for Palisades from Entergy to Holtec on December 13, 2021. The application for license transfer submitted by Entergy and Holtec, and the approval decision issued by the NRC staff, made clear that the basis for the license transfer was to authorize Holtec to undertake the decommissioning of Palisades. Consistent with the requirements for license transfer, in June 2022 Entergy submitted the 10 C.F.R. § 50.82 decommissioning certifications. But Holtec knew its intent was to restart Palisades, not to continue decommissioning. Section 184 of the Atomic Energy Act, 42 U.S.C. § 2234, requires that a license transfer must be based on full disclosure to the NRC. The license transfer in this case violated that requirement.

²³ <https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML20358A239>

Basis for the Contention

The application for the transfer of the operating license for Palisades filed by Holtec was based on the assertion that Holtec would continue the decommissioning of Palisades begun by Entergy. The facts set out below demonstrate that the application for license transfer of Palisades was conclusively based on the assertion and understanding that Holtec would continue the decommissioning of Palisades. The facts also show that at the time of the license transfer, Holtec's intention was to attempt to restore Palisades to full operation. The NRC was denied "full information" as required by AEA § 184 (42 U.S.C. § 2234), which states:

No license granted hereunder . . . shall be transferred, assigned or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of any license to any person, unless the Commission shall, *after securing full information, find that the transfer is in accordance with the provisions of this chapter,* and shall give its consent in writing. (Emphasis added)

Facts Upon Which Petitioners Intend to Rely In Support of This Contention

Review of the timeline of pertinent events reveals Holtec's pretense of acquiring Palisades to undertake decommissioning while actually intending to restart it:

- Early December 2016 – Entergy announced it would close Palisades for good by October 2018 (in 2017, Entergy changed its mind, and announced it would close Palisades for good by May 31, 2022.)
- 1-4-17 – Entergy submitted a plan to the NRC to close Palisades
- 12-23-20 – Entergy and Holtec jointly filed a PSDAR (Post-Shutdown Decommissioning Activities Report)²⁴ and DCE (Decommissioning Cost Estimate) for Palisades with NRC
- 2-24-21 – Beyond Nuclear, Don't Waste Michigan, and Michigan Safe Energy Future, the Michigan Attorney-General and the Environmental Law and Policy Center all filed intervention petitions and requests for hearing to challenge the license transfer of

²⁴ <https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML20358A239>

Palisades from Entergy to Holtec, introducing numerous technical and legal contentions. The interventions were submitted by the deadline, 20 days after NRC's hearing notice publication at 86 Fed. Reg. 8226 (February 4, 2021)

- 12-13-21 – Despite the still-pending intervention petitions and hearing requests, immediately above, NRC staff approved the transfer of the operating license for Palisades from Entergy to Holtec, predicated on Palisades being decommissioned, and the operating license being converted into a decommissioning phase possession-only (non-operating) license

- 5-20-22 – Entergy permanently closed Palisades

- 6-10-22 – Entergy de-fueled the Palisades reactor core for the final time

- 6-13-22 – Entergy submitted the decommissioning certifications to the NRC (Final De-Fueling of the Reactor Core, and Permanent Cessation of Power Operations)

- 6-28-22 – The sale of Palisades from Entergy to Holtec was completed

- 7-5-22 – Holtec secretly submitted an application to the Department of Energy for \$2 to 3 billion in funding to restart Palisades

- July 2023 – The NRC Commissioners approved a hearing for the merits of the State of Michigan's challenge regarding Holtec's takeover of Palisades, but rejects all environmental group intervenors' intervention petitions and hearing requests

- 3-31-23 – Holtec submitted a decommissioning trust fund expenditure report to the NRC, even as it proceed with its plan was to restart Palisades; the published report revealed that Holtec had spent down \$44 million from Palisades' Decommissioning Trust Fund, while at the same time admitting that very little to no decommissioning work had actually been done

- 9-28-23 – Holtec submitted an application for an exemption from the decommissioning certifications filed by Entergy on 6-13-22

What this timeline shows is that when the Palisades license transfer from Entergy to Holtec was approved by NRC staff on December 13, 2021, Holtec indisputably knew that the transfer was contingent on the closing and decommissioning of Palisades. Nonetheless, on July

5, 2022, Holtec applied for federal funding to restart Palisades without telling either the NRC or the public until on or about September 9, 2022.

On March 31, 2023, Holtec submitted a DTF expenditure report²⁵ saying that it was still undertaking to decommission Palisades, even though it is obvious that Holtec's plan was simultaneously to restart Palisades.

The application for license transfer filed jointly by Entergy and Holtec states that the license transfer would occur only after removal of fuel from Palisades' reactor core, as required by the sale agreement between Entergy and Holtec.²⁶ And the license transfer would not occur until after Entergy submitted the certifications required by 10 C.F.R. § 50.82. Also, the application stated that HDI, a Holtec subsidiary, would assume license responsibility for Palisades for the purpose of decommissioning, that is, a possession-only license.²⁷

The license transfer application also states at page 3, the "[t]he transfers are desirable and of considerable benefit to the citizens of Michigan, because the transfers will result in the decommissioning of the Palisades Site on an accelerated schedule."²⁸ Likewise, the application, at pp. 3 and 5-13, describes in detail the qualifications of the parties related to decommissioning. Finally, the application, at p. 17-19, presents assurances that Holtec had the financial funding sufficient to complete decommissioning of Palisades.

Holtec's stated intention to continue decommissioning could not be more clear. But the truth is, Holtec did not provide the NRC full and accurate information about the license transfer, and so the transfer should be rescinded and invalidated.

²⁵ <https://www.mass.gov/doc/holtecs-annual-decommissioning-fund-report-to-the-nrc/download>

²⁶ "Palisades Nuclear Plant and Big Rock Point Application for Order Consenting to Transfers of Control of Licenses and Approving Conforming License Amendments," p. 2/274 of .pdf, <https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML20358A075>

²⁷ *Id.*

²⁸ *Id.* at p. 3/274 of .pdf.

CONTENTION 4

Holtec improperly invokes a categorical exclusion, pursuant to 10 C.F.R § 51.22(c)(25), to satisfy its NEPA obligations related to this exemption request. But Holtec cannot satisfy the requirements of § 51.22(c)(25), and so must prepare an Environmental Report as the basis for an NRC-prepared Environmental Assessment or an Environmental Impact Statement.

Basis for the Contention

In its Request for Exemption Holtec admits that it must satisfy the requirements of NEPA. It proposes to do this by asserting that the exemption it requests is a categorical exclusion, pursuant to 10 C.F.R. § 51.22(c)(25). That section provides that an exemption request is a categorical exclusion only if certain conditions are present. In this case, those conditions are not met. Therefore, pursuant to 10 C.F.R. §§ 51.20 and 51.21, the NRC must prepare either an Environmental Impact Statement or an Environmental Assessment, as appropriate, prior to consideration of whether or not to treat the exemption request as a categorical exclusion.

Facts Upon Which Petitioners Intend to Rely In Support of This Contention

Generally, any action related to a licensing decision requires compliance with NEPA, in the form of either an Environmental Impact Statement or an Environmental Assessment. 10 C.F.R. §§ 51.20 and 51.21. Here, Holtec's plan is to restore or reactivate the Palisades operating license, and the requested exemption is a precursor to that licensing action. But Holtec, in its exemption request, proposes to evade the requirement of an EIS or EA by claiming that the requested exemption is a categorical exclusion, pursuant to 10 C.F.R. § 51.22(c)(25).

Notably, the regulatory history of 10 C.F.R. § 51.22(c)(25) reveals that the NRC intended the categorical exclusion to apply only to truly minor actions of an administrative nature, *i.e.*,

those with no arguably significant environmental impacts. Examples of appropriate exemptions given by the NRC in promulgating the rule included:

- (1) Revising the schedule for the biennial exercise requirements for nuclear reactors in 10 CFR Part 50, Appendix E, Sections IV.F 2.b and c;
- (2) Revising the schedule for the biennial exercise requirements for nuclear reactors in 10 CFR Part 50, Appendix E, Sections IV.F 2.b and c;
- (3) Applying updated NRC-approved ASME Codes; and
- (4) Training and experience requirements in 10 CFR Part 35, 'Medical Use of Byproduct Material.

Proposed Rule, "Categorical Exclusions from Environmental Review," 73 Fed. Reg. 59,540, 59,545 (Oct. 9, 2008). The NRC further demonstrated its intention that the exclusion should not apply to actions with substantive significance by removing the term "procedural" from the category of actions subject to the exclusion. Final Rule, "Categorical Exclusions From Environmental Review," 74 Fed. Reg. 20,248, 20,252 (April 19, 2010) (noting that "the term 'procedural' could be misconstrued in this context to include the requirement for licensees to implement procedures for substantive requirements.").

Minor changes to schedules for exercises and training programs, and updates to industry codes, cannot reasonably be compared to a decision on whether a formally shutdown nuclear reactor, with fuel removed from the core, should be allowed to reopen for an undetermined number of additional years, including beyond its 60-year license term.

The categorical exclusion rule at § 51.22(c)(25) establishes an exclusion only if certain conditions are met, to-wit: (i) There is no significant hazards consideration; (ii) There is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite; (iii) There is no significant increase in individual or cumulative public or occupational radiation exposure; (iv) There is no significant construction impact; (v) There is no

significant increase in the potential for or consequences from radiological accidents; and (vi) The requirements from which an exemption is sought involve:

- (A) Recordkeeping requirements;
- (B) Reporting requirements;
- (C) Inspection or surveillance requirements;
- (D) Equipment servicing or maintenance scheduling requirements;
- (E) Education, training, experience, qualification, requalification or other employment suitability requirements;
- (F) Safeguard plans, and materials control and accounting inventory scheduling requirements;
- (G) Scheduling requirements;
- (H) Surety, insurance or indemnity requirements; or
- (I) Other requirements of an administrative, managerial, or organizational nature.

It is clear from the use of the word “and” between condition v and vi that all six of the conditions must be present in order for an exemption to be a categorical exclusion.

There is an illogical core fallacy in Holtec’s exemption request. Holtec seeks an exemption from 10 CFR § 50.82(a)(2), which states that “[u]pon docketing of the certifications for permanent cessation of operations and permanent removal of fuel from the reactor vessel, . . . the 10 CFR part 50 license no longer authorizes operation of the reactor or emplacement or retention of fuel into the reactor vessel.” Were the Commission to grant an exemption from that regulation, it merely means that Palisades’ 10 CFR Part 50 license authorizes “operation of the reactor or emplacement or retention of fuel into the reactor vessel.” That is, Palisades would be eligible, prospectively, to be operated and to have fuel installed in the reactor vessel. But at present it is not operable and there is no fuel installed in the reactor and hasn’t been since June 2022. Palisades is, of course, closed and shut down.

The pertinent regulation, 10 CFR § 51.22(c)(25) allows a categorical exclusion only (“provided that”) if the requesting party can show at the moment the exemption is applied for that the six factors are present. Holtec’s problem is that it cannot show presently -- with the reactor core void of fuel and the plant in a shutdown condition that was meant to be permanent and a prerequisite to dismantling the reactor – that there is “no significant hazards consideration” as a result of granting the exemption which allows operations to restart and fuel to once again be put in the reactor core. Also, if, as explained in Contention 1 above, the requested exemption cannot be granted in any event, then § 51.22(c)(25) does not apply and NEPA analysis is irrelevant. And if the exemption is somehow granted, making some sort of NEPA analysis appropriate, it remains that Holtec’s exemption request does not qualify as a categorical exclusion.

Holtec’s conclusory NEPA analysis starts from a flawed premise, *e.g.*, that the appropriate inquiry as to whether restarting Palisades would pose any significant changes begins with the conditions present before the plant was placed into decommissioning status. The foregoing discussion shows that the proper perspective obliges an assessment of the conditions that would change as a result of moving from decommissioning status to resumed operation of the plant for generating power. An actively operating nuclear reactor poses safety and environmental risks that a reactor undergoing decommissioning does not. Holtec’s assertion that Palisades would qualify under the § 51.22(c)(25) conditions for a categorical exclusion is

disingenuous. Below, Petitioners explore why Holtec's arguments regarding the conditions for a categorical exclusion fail to justify its invocation.

(i) There is no significant hazards consideration.

In articulating its justification for this condition, Holtec improperly likens the transitioning of Palisades from decommissioning status to power generating status as similar to a license amendment. That is clearly facetious. A license amendment essentially just extends the *status quo*. The transition here would be from a relatively benign decommissioning project to a highly radioactive, functioning reactor.

Beyond the improper license amendment comparison, Holtec incorrectly relies on the assertion that going back to the previous active reactor status presents no significant hazards. As explained above in Contention 1, there were significant hazards with the condition and operation of Palisades before it was shut down. In fact, Entergy shut Palisades down early because of its unwillingness to spend vast sums of money in order to address long-neglected safety considerations associated with control rod drive mechanisms (CRDMs), after the end of the lucrative Power Purchase Agreement with Consumers Energy from 2007 to 2022.

(ii) There is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite

Holtec, in support of this condition, incorrectly argues that returning Palisades to its pre-decommissioning status poses no change or increase in effluents that may be released. In doing so, Holtec ignores the fact that the change in effluents is a change from decommissioning

status to active reactor status. Holtec wants to pretend that the transition is from active reactor status back to active reactor status. This argument ignores the whole point of the requested exemption: the exemption must be considered in determining a categorical exclusion. If fuel is installed in the empty core, there will be a “significant change . . . or significant increase in the amounts of any effluents that may be released offsite,” compared to right now.

(iii) There is no significant increase in individual or cumulative public or occupational radiation exposure

Holtec again misses the point. The appropriate consideration is not that returning Palisades to active reactor status results in no increase in radiation exposure compared to its previous active reactor status. The appropriate consideration is the increase in radiation exposure from that pertaining during the decommissioning status to radiation that would emanate from the plant once it is returned to active reactor status. Installing fuel will quickly increase the possibilities and the realities of radiation exposure compared to the situation at this moment. It is beyond debate that active reactor status poses a greater risk of radiation exposure than does a decommissioning nuclear power plant.

(iv) There is no significant construction impact

In its secret July 5, 2022 application to DOE for Civil Nuclear Credit funds, Holtec admitted that full replacement of the steam generators at Palisades may well be required,²⁹ at a cost of \$510 million. Replacing steam generators is a significant construction impact.³⁰ A large

²⁹ Holtec DOE Application, pp. 4, 7, <https://beyondnuclear.org/wp-content/uploads/2023/10/7-5-22-42-page-Holtec-application-to-DOE-for-CNC-funds-to-restart-Palisades.pdf>

³⁰ Gundersen Declaration p. 16.

breach of the containment building must be made, in order to transfer out the school bus-sized old steam generators, and transfer in the similarly sized new replacement steam generators.

Although Holtec seems to ignore the need to also replace Palisades' reactor vessel closure head, previous owner Consumers Energy acknowledged the need to do this as long ago as May 2006.³¹ Replacement of the reactor vessel closure head also represents another significant construction impact.

Yet another significant construction impact is the need to yet again address control rod drive mechanism seals. A CRDM seal leak forced Entergy to close Palisades 11 days earlier than planned, on May 20, 2022.

Palisades has suffered CRDM seal leaks since 1972, a uniquely bad operating experience, as documented by David Lochbaum, retired Nuclear Safety Project director at Union of Concerned Scientists.³² As Lochbaum concluded, little more than band-aid fixes have been applied to this chronic problem at Palisades. The root cause and a comprehensive solution – that is, preventative corrective action – has never been achieved at Palisades, not in more than a half-century.

Around a decade ago, Entergy chose to entirely replace its CRDM infrastructure. Unfortunately, 192 workers were exposed to high radiation doses during this near-core job, including young women of child-bearing age.³³ Despite this complete replacement of CRDM infrastructure, Palisades continued to experience CRDM seal leaks during its last several years of operations.

³¹ <http://archives.nirs.us/reactorwatch/licensing/kampsconsbrifeinf051806.htm>

³² Lochbaum, "Headaches at Palisades: Broken Seals and Failed Heals,"

<https://www.nrc.gov/docs/ML1035/ML103540571.pdf>

³³ <https://archive.beyondnuclear.org/safety/2014/12/11/nrc-cites-palisades-for-worker-radiological-safety-violation.html>; NRC White Finding,

<https://adamswebsearch2.nrc.gov/webSearch2/view?AccessionNumber=ML15056A072>

Petitioners' expert witness, Arnold , has delineated a great deal of physical construction or reconstruction of portions of the Palisades Nuclear Plant that reveal there will be “a significant construction impact:”

The list of construction problems that Holtec identifies is extraordinary and shows that the physical condition of the Palisades Plant deteriorated terribly while Entergy was the owner. There are many examples of this degradation, including but not limited to:

- The steam generators must be manufactured and constructed for the second time.
- The reactor is dangerously embrittled because the wrong welding material was used in 1969 during manufacture.
- The reactor head has needed replacement since at least 2009, which may account for continuing Control Rod Drive failures, which Palisades is infamous for.
- The interior piping has become excessively radioactive and needs to be cleaned with caustic chemicals to reduce radiation exposure. (Item #6, \$25 Million
- Physical improvements to the switchyard are also identified (Table 3, Item #2) and require new construction.
- Incredibly, Entergy appears to have sold its inventory of safety-related replacement parts, forcing Holtec to spend at least \$18 Million to find NOS (New Old Stock) replacement parts on eBay!
- The Flow Accelerated Corrosion Program, similar to the failed program at the Surry reactor in Virginia that caused the death of four staff members at the Surry reactor when a pipe ruptured, must be recreated (Item# 5b Table 2, \$ 4 million).
- The safety-related wires operating the Control Rod Drives and Incore instrumentation have degraded and require construction (Item# 8, \$16 Million).

Gundersen Declaration, Apx. 10, pp. 16-17.

(v) There is no significant increase in the potential for or consequences from radiological accidents

Holtec relies here on the same erroneous argument it made regarding condition (iii) above. The relevant question is the increase in radiation exposure from decommissioning status to active reactor status, not reliance on the previous active reactor status to claim there is no increase.

That said, restarting Palisades would indeed significantly increase the potential for consequences from radiological accidents. As mentioned above, the steam generators and the reactor vessel closure head have needed to be replaced for two decades. Each neglected major safety repair involves age-related degradation, that is, increasing risk over time of initiating a reactor core meltdown.

In addition, in April 2013, NRC staff acknowledged that Palisades has the worst or second worst most embrittled reactor pressure vessel in the U.S.³⁴ Point Beach Unit 2 in Wisconsin will achieve that dubious distinction the longer it continues operating while Palisades remains closed. But if Palisades restarts, it will quickly regain its worst-embrittled status. Reactor pressure vessel embrittlement, and the risk of pressurized thermal shock causing a core meltdown, would be an increasing risk if Palisades restarts, and would grow worse over time.

In addition to all of the above long known problems, there is a new element of risk at Palisades. It appears from publicly-available records that Holtec has not performed active maintenance of safety-significant systems, structures, and components since taking over on June 28, 2022. Holtec has not put the steam generators into wet layup, so significant degradation may have already occurred.³⁵ Respecting the huge turbine shaft that turns the generator, Arnold Gundersen states:

The main plant turbine generator weighs well in excess of one million pounds and is about 100 feet long. If left idle for extended periods, the weight of the turbine will cause the main shaft to bend and the bearings will develop flat spots. Hence, if Entergy

³⁴ NRC letter 4/18/2013, <http://pbadupws.nrc.gov/docs/ML1310/ML13108A336.pdf>

³⁵ Gundersen Declaration, Apx. 10, p. 11.

had planned to restart Palisades, it would have placed the turbine on a turning gear to keep it slowly rotating while it was shut down. Since Palisades was sold as scrap, no such precautions would have been taken. When a plant is decommissioned, no such wet layup and preventive maintenance would be required as the reactor has become non-functioning scrap. Holtec knew it bought a non-functioning scrap reactor from Entergy that was meant to be entirely dismantled.³⁶

Holtec has not operated pumps and valves, so these may not function properly if called upon during full power operations.³⁷

The NRC-commissioned, Sandia National Lab-carried out, 1982 CRAC-2 report has documented the shocking number of casualties and property damage that would result from a core meltdown at Palisades. CRAC is short for Calculation of Reactor Accident Consequences. The report is also referred to as the Sandia Siting Report, as well as NUREG/CR-2239.³⁸ For Palisades, CRAC-2 reported that a reactor core meltdown would cause 1,000 peak early fatalities (acute radiation poisoning deaths), 7,000 radiation injuries, and 10,000 latent cancer fatalities. CRAC-2 reported property damage would be more than \$52 billion.

But adjusting for inflation alone, those property damage figures from 1982 would surmount \$163 billion in present day dollar figures. And as Associated Press investigative journalist Jeff Donn reported in his post-Fukushima four-part series “Aging Nukes,” populations have soared since 1982 around reactors like Palisades, so today expected casualties would be significantly worse.

Yet another risk to consider is Holtec’s publicly stated intention to build two so-called SMR-300s (Small Modular Nuclear Reactors of 300-Megawatts-electric capacity each) at the

³⁶ Gundersen Declaration, pp. 12-13, Apx. 10.

³⁷ *Id.*

³⁸ <https://www.nrc.gov/docs/ML0723/ML072320420.pdf>

Palisades site.³⁹ SMR-300 new builds would co-locate breakdown phase risks at the age-degraded restarted reactor near break-in phase risks. Three Mile Island Unit 2 in 1979, and Chernobyl Unit 4 in 1986, were break-in phase disasters, at brand new reactors. But so too was Fermi Unit 1's partial core meltdown in Monroe County, Michigan, on October 5, 1966, documented in We Almost Lost Detroit.⁴⁰

Exacerbating these extremes of the risk spectrum is the fact that Palisades, with three or more operating reactors, could become the largest nuclear power plant in the U.S., by number of reactors. This would create the potential for a domino-effect series of multiple reactor meltdowns, as happened at Fukushima Daiichi in Japan in March 2011.

(vi) The requirements from which an exemption is sought involve other requirements of an administrative, managerial, or organizational nature.

Holtec argues that the exemption is simply a matter of reversing some administrative paperwork. But it is far from that. Re-opening the plant involves a significant change in the operational status of Palisades. Even Holtec admitted this – albeit secretly – in its July 5, 2022 application to DOE for Civil Nuclear Credit bailouts.

NRC Commissioner Bradley R. Crowell has stated that restarting Palisades by restoring its operating license should require a full blown operating license proceeding. In an “ExchangeMonitor” article published in February 2023, Commissioner Crowell stated that Holtec must “start from scratch” if it wants to restore Palisades’ relinquished operating license.⁴¹

³⁹ <https://holtecinternational.com/2023/12/04/first-two-smr-300-units-slated-to-be-built-at-michigans-palisades-site-for-commissioning-by-mid-2030/>

⁴⁰ Fuller, John, We Almost Lost Detroit, <https://www.amazon.com/Almost-Lost-Detroit-John-Fuller/dp/0345252667>

⁴¹

<https://www.exchangemonitor.com/nrc-commissioner-says-holtec-must-start-from-scratch-to-power-up-pa>

He also wondered why proponents of restarting Palisades waited so long to even announce their intent, let alone pursue it.

Holtec now admits, in its attempt to justify this condition for a categorical exclusion, that the exemption request is being made in conjunction with a necessary license amendment. But as explained above, transitioning Palisades from decommissioning status to active reactor status is more than just administrative, managerial or organizational action. A critical series of steps was implemented by Entergy, with Holtec's knowledge and acquiescence. These included the removal of fuel from the reactor core and shutdown of power generation operations at Palisades. The NRC's exemption-granting discretion is confined to minor administrative events. It does not countenance large physical changes to a safely shutdown nuclear reactor. Implementing the operations and placement of fuel authorized by the exemption will require taking significant, even dramatic steps to reverse the permanent shutdown state of the reactor. These steps will change the physical environment of, the safety measures required of and the functional characteristics of Palisades. Those achievements are prospective. They mean that, even if the NRC grants an exemption from 10 CFR § 50.82(a)(2)'s cancellation of the operating aspects of Palisades' license, and allows prospective operation of the reactor and placement of fuel in the reactor vessel, the NRC still must evaluate Palisades' characteristics today, in its fuel-free and shutdown state, against the categorical exclusion factors. There are significant differences between Palisades today and the Palisades envisioned by Holtec for 2025.

Holtec cannot show right now any of the factors that would qualify Palisades for a categorical exclusion. "Categorical exclusion" is defined by 10 CFR § 51.14(a) as "a category of actions which do not individually or cumulatively have a significant effect on the human environment and which the Commission has found to have no such effect in accordance with

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procedures set out in § 51.22, and for which, therefore, neither an environmental assessment nor an environmental impact statement is required.” Reloading fuel into a reactor core, replacing major components, performing startup testing and increasing nuclear criticality to the point that commercial volumes of electrical power are being generated are actions which “cumulatively have a significant effect on the human environment.” There can be no categorical exclusion of the Palisades restart from NRC regulations and NEPA.

CONCLUSION

Holtec has not met its extremely heavy burden to justify the request for an exemption.

Holtec has misdirected the Palisades decommissioning trust fund in violation of NRC regulations.

The license transfer from Entergy to Holtec violated NRC regulations.

Holtec should not be allowed to satisfy its NEPA obligations with a categorical exclusion.

WHEREFORE, Holtec’s request for exemption should be wholly denied and the matter of re-operationalizing Palisades Nuclear Plant should be subjected to the entirety of the NRC operating license regulatory framework.

December 5, 2023

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CERTIFICATE OF SERVICE

Pursuant to 10 CFR § 2.305, I hereby certify that copies of the foregoing “Petition for Leave to Intervene and Request for Hearing” and its accompanying Appendices 1 through 12 were served upon the Electronic Information Exchange (NRC Filing System) in the captioned proceeding this 5th day of December, 2023 and that according to the protocols of the EIE they were served upon all parties registered with the system..

Respectfully submitted,

/s/ Terry J. Lodge

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