UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE COMMISSION

In the Matter of	)	
	)	
Northern States Power Company	)	Docket No. 72-10-ISFSI-2
	)	
Prairie Island Nuclear Generating Plant	)	
	)	
(Independent Spent Fuel Storage)	)	

Prairie Island Indian Community's Request for Hearing and Petition to Intervene in License Renewal Proceeding for the Prairie Island Independent Spent Fuel Storage Installation

Filed on August 24, 2012

I. INTRODUCTION

The Prairie Island Indian Community in the State of Minnesota("PIIC"), by and through attorney Philip R. Mahowald, PIIC's General Counsel, provides notice of its intent to participate and hereby petitions to intervene and requests the U.S. Nuclear Regulatory Commission ("NRC" or "Commission") to grant an adjudicatory hearing on Northern State Power Company, a Minnesota Corporation, d/b/a Xcel Energy's ("NSPM") application for renewal of its license to operate the Prairie Island Independent Spent Fuel Storage Installation ("PI ISFSI"), which is located within the site boundaries of the Prairie Island Nuclear Generating Plant ("PINGP"). PIIC files this petition pursuant to the notice of opportunity for a hearing published at 77 Fed. Reg. 37937 (June 25, 2012), Section 189a of the Atomic Energy Act ("AEA") [42 U.S.C. § 2239(a)], and

10 C.F.R. § 2.309. PIIC is concerned that the renewal of the PI ISFSI license may result in a detrimental effect to the health and safety of community members and pose a risk to visitors to the reservation. In addition, the renewal of the license may have a detrimental effect on PIIC's lands and environment. Consequently, PIIC asserts the following contentions to ensure that the PI ISFSI license renewal conforms to NRC safety and environmental regulations and other applicable law.

II. BACKGROUND

A. Prairie Island Indian Community and Reservation

The Prairie Island Indian Community is a federally-recognized Indian Tribe organized under The Indian Reorganization Act,[1] and is governed under the terms of a Constitution and Bylaws adopted by tribal members on May 23, 1936, and approved by the Secretary of the Interior on June 20, 1936, as amended (the "Constitution and Bylaws"). Article IV, Section 1 of the Constitution provides that the Community Council (sometimes referred to as the Tribal Council) shall be the governing body for the Tribe. The Tribal Council is comprised of five elected tribal members, and is the duly elected body and the only entity authorized to act or speak on behalf of the Prairie Island Indian Community. Four of the five members of the Tribal Council reside within approximately five (5) miles of the PI ISFSI, with three residing less than three-quarters (3/4) of a mile from the PI ISFSI. The Tribal Council has the authority under the Constitution and Bylaws to promote the general welfare of the Community by regulating the conduct of trade and the use and disposition of property upon the Reservation. On August 22, 2012,

[1] 25 U.S.C. § 476.

the Tribal Council authorized the filing of this Petition to Intervene on behalf of the Prairie Island Indian Community.[2]

The Prairie Island Indian Reservation is located on the ancestral homeland of the Mdewakanton Dakota (Sioux) approximately 35 miles southeast of the Twin Cities of Minneapolis - Saint Paul and near the cities of Red Wing and Hastings, Minnesota. The Reservation is located on Prairie Island at the confluence of the Vermillion and Mississippi rivers. The Reservation currently includes approximately 1,800 acres of land held in trust by the United States for the benefit of the Community.[3] An additional 1,290 acres of land, known as Parcel D, is in the final process of being transferred by the United States Army Corps of Engineers to the Bureau of Indian Affairs in trust for the benefit of the PIIC and inclusion within the Reservation.[4]

There are currently 882 enrolled members of the Tribe; approximately 250 reside on or near the Reservation.[5] The Community owns and operates Treasure Island Resort and Casino, and is the largest employer in Goodhue County with approximately1,700 employees. Treasure Island includes a 480-room hotel and convention center, and offers gaming, dining, live entertainment, a 95-space RV park, and a 137-slip marina to accommodate visitors arriving by the Mississippi River. On any given day during the year, there may be more than 8,000 visitors to the reservation.[6]

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[2] *See* Declaration of Philip R. Mahowald ("Mahowald Declaration"), Para. 2.
[3] *Id.*, Exhibit A.
[4] *Id.*
[5] *Id.*, Para. 4.
[6] Id.

Unci Maka, which translates as "Grandmother Earth," is the Dakota term for earth that also expresses the kinship relationship between the Dakota and the earth. Likewise, the expression often used to end Dakota prayers and ceremonies, *Mitakuye Oyasin*, translates as "we are all related." *Mitakuye Oyasin* encapsulates a way of life and a cultural identity based on the interconnection and unity of all forms of life. This philosophy and way of life help explain how the identity of the Mdewakanton is inextricably linked to Prairie Island. The air, soil, rainwater, groundwater, rivers, lakes, sloughs, trees, prairies, plants, and all forms of wildlife on Prairie Island are the natural and cultural resources of the Mdewakanton – resources that have been used for countless generations for subsistence, medicine, religious ceremonies, recreation, and all aspects of daily living.[7] Unfortunately, PIIC's cultural identity and traditional way of life have been and continue to be adversely affected by the PINGP and PI ISFSI. Many Community members, especially the children, have expressed their fears about nuclear reactor safety, radioactive emissions, spent nuclear fuel, and high voltage power lines. PIIC members worry about whether it is safe to breathe the air, drink the water, swim and fish in the rivers and lakes, or eat the plants and animals traditionally harvested and hunted for medicine and food. It is not an overstatement to say that adverse impacts and threats to Prairie Island's natural and cultural resources jeopardize the Tribe's way of life. The

[7] In recent years, the tree used in the Sun Dance ceremony on Prairie Island – which is one of the most sacred Dakota rituals and a vivid and real expression of the connection between the Mdewakanton and all forms of life on Prairie Island – has been harvested from PINGP grounds.

long-term damage to the natural and cultural resources of Prairie Island is a very real and significant concern for the PIIC.

The Mdewakanton residency in the upper Mississippi river watershed near what is now Hastings, Red Wing, Lake City and points south can be traced back in the written historical records for over 350 years. The ancestors of the members of the Prairie Island Indian Community were present to greet the first French explorers and traders who penetrated the Upper Mississippi watershed.[8] The Mdewakanton occupied the west bank of the Mississippi from Northern Iowa to St. Anthony Falls,[9] and by the time Zebulon Pike reached the Upper Mississippi in 1805-06, the Mdewakanton already had villages on both the Mississippi and the Minnesota Rivers.[10]

The Mdewakanton's use of its ancestral lands was constrained by successive land cession treaties in 1825[11] and 1837.[12] Ultimately, by the 1851 Treaty of Traverse des Sioux,[13] the lands of the Dakota, the Mdewakanton at Prairie Island included, were ceded. Although the Dakota were to receive reservations along the Minnesota River, the Senate amended the treaties to eliminate the two described reservations and substituted undefined reservations to be selected by the President outside of the ceded territory.[14]

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[8]Antoine Denis Raudot, Memoir Concerning the Different Indian Nations of North America, Letter 51, published in Indian of the Western Great Lakes, 1615-1760, W. Vernon Kinietz, ed. (Ann Arbor: University of Michigan Press, 1996 Ed.), at 377.
[9]Collections of the Michigan Pioneer and Historical Society, vol. 11, at 487.
[10]Rev. Samuel W. Pond, The Dakotas in Minnesota as They Were in 1834, Minn. His. Soc. Col. (1908), vol. XII, at 320.
[11]Treaty of August 19, 1825, Proclamation of Feb. 6, 1826, 7 Stat. 272.
[12]Treaty of September 29, 1837, Proclaimed June 15, 1838, 7 Stat. 538.
[13]Treaty of July 23, 1851, 10 Stat. 949; Treaty of August 5, 1851, 10 Stat. 954.
[14] *Medawakanton v. U.S.* 57 Ct.Cl. 357, 361 (1922).

Successive generations continued to occupy the region until the mid-Nineteenth Century, despite the Federal Government's repeated attempts to remove them following the Treaty of 1851, the so-called "Reservation Period" for the Minnesota Sioux from 1853-1862, and again after the Dakota Conflict of 1862.

Federal retribution for the Dakota Conflict posed further significant challenges to the Mdewakanton's occupation of their ancestral homelands. In addition to the execution of 38 Dakota at Mankato on December 26, 1862,[15] remaining prisoners, and 1,700 or more Dakota prisoners who had not been convicted of anything, were marched from Lower Sioux, in Redwood County, Minnesota, to Fort Snelling and were later shipped to Crow Creek in southeastern South Dakota were they were held in a concentration camp. While the Dakota were confined, Congress passed the so-called "Abrogation and Forfeiture Act,"[16] which purported to invalidate all treaties with the Mdewakanton, the Sisseton, Wahpaton and Wahpakoota and forfeiting their right to the payment of any annuities due them under those treaties. In addition the Congress passed another Act directing the "removal of the Sisseton, Wahpaton, Mdewakanton and Wahpakoota Bands of Sioux or Dakota Indians and for the disposition of their lands in Minnesota and Dakota."[17] Many Sioux avoided detention and transportation to Crow Creek and fled west and some, followed Sitting Bull north into Canada, where they received land reserves and protection from the Crown.

[15]The largest mass execution in United States history.
[16]Act of February 16, 1863, 12 Stat. 652.
[17]Act of March 3, 1863, 12 Stat. 819.

A small group of Dakota maintained a presence in Minnesota during the dark years following the 1862 Conflict.[18] Despite the deprivations at Crow Creek, the distance from home and a renewed effort in 1867 to remove remaining Dakota Bands to reservations outside of the state of Minnesota,[19] Dakota people continued to return home to Minnesota, with villages scattered in at least 14 locations, including at Red Wing and Wabasha. By 1883, the Mdewakanton at Prairie Island were a growing community. In 1884, Congress appropriated funds for the purchase of stock and the distribution of agricultural implements and lands for the Mdewakanton Band of Sioux in the State of Minnesota.[20] Subsequent Acts of Congress appropriated additional funds for the acquisition of lands at Prairie Island.[21] Populations increased at Prairie Island in the 1890s, and in 1899 Congress authorized the last appropriation for the Mdewakanton in Minnesota until the 1930s.

Following enactment of the Indian Reorganization Act of 1934, the Mdewakanton at Prairie Island approved a Constitution and Bylaws on May 23, 1936, which in turn were approved by the Secretary of the Interior on June 20, 1937. The reacquisition of the Community's homelands began with the purchase of 414 acres of land by the federal

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[18]S.P. Adams to D.N. Cooley, August 10, 1866, NARS, RG 75, LR (Minn. His. Soc. Microfilm M175, Roll 765).

[19] Meyer, History of the Santee Sioux: United States Indian Policy on Trial (St. Paul: Minn. His. Soc. Press: rev. ed., 1993) p. 268.

[20] Act of July 4, 1884, 48th Cong., 1st Sess., ch. 180, 23 Stat. 76, 87; Act of March 3, 1885, 48th Cong., 2nd Sess., ch. 341, 23 Stat 362, 375.

[21] Act of May 15, 1886, 49th Cong., 1st Sess., ch 333, 24 Stat. 29, 39; Act of June 29, 1888, 50th Cong., 1st Sess., ch. 503, 125 Stat. 217, 228-229; Act of March 2, 1889, 50th Cong., 2nd Sess., ch. 412, 25 Stat. 980, 992-993; Act of August 19, 1890, 51 Cong., 1st Sess., 26 Stat. 336, 349-350.

government for the benefit of the newly reorganized Community between 1936 and 1939. This acreage constitutes the central core of the Community. While much of that land is not suitable for development because it falls within the 100 year flood plain, the Community, nevertheless, was able to develop a central residential development that provided homes for a number of Community members.[22]

The establishment of a nuclear generating facility at Prairie Island and, subsequently, the storage of SNF and continuing expansion of that storage threaten the ancestral lands that the Community has fought for centuries to maintain. The PIIC's land base is limited, as is the number of available land assignments.[23] Some members, especially younger tribal members, have moved away from or refuse to move back to the PIIC Reservation because of their fears and concerns of living so close to the spent nuclear fuel piling up at the PI ISFSI.

B. Prairie Island Nuclear Generating Plant Independent Spent Fuel Storage Installation

The PINGP site is also located on the ancestral homeland of the Mdewakanton Dakota immediately adjacent to the PIIC Reservation.[24] The nearest tribal member

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[22] *See* Mahowald Declaration, Ex. B.

[23] *Id*.

[24] The PINGP site is actually in Welch Township. However, the area encompassing the PINGP site was annexed by the City of Red Wing. The City of Red Wing is named after a succession of Mdewakanton Dakota chieftains who were named Hoopaahoosha, which translates in English as "Red Wing." The Mdewakanton Dakota had a village in the vicinity of what is now downtown Red Wing was established when Zebulon Pike arrived in the area. Three villages on the Mississippi were encountered – near the mouth of the Upper Iowa River, near the mouth of the Cannon River, and just upstream from the mouth of the Saint Croix. Coues, Elliot, ed., Expeditions of Zebulon Montgomery Pike (New York: Francis P. Harper, 1895), vol. 1, at 342-44. *See also* Sisseton v. U.S., 10

residences are approximately 600 yards from the PI ISFSI. The PINGP Unit 1 reactor started operating on December 16, 1973, pursuant to an initial, 20-year operating license. PINGP Unit 2 reactor started operating on December 21, 1974. On June 27, 2011, the NRC renewed the operating licenses for PINGP Unit 1 and Unit 2 reactors for an additional 20 years, approving their continued operation until 2033 and 2034, respectively.

C. Nuclear Fuel and Spent Nuclear Fuel

A reactor's core contains zirconium-clad rods filled with enriched uranium pellets. Over time, the fuel produces a less efficient nuclear reaction and must be replaced. Because spent-fuel rods "generate enormous heat and contain highly radioactive uranium, actinides and plutonium," the rods are placed on racks in a pool adjacent to the reactor to cool down.[25]The fuel pellets and fuel assembly materials are together referred to as "spent nuclear fuel" (SNF). Even though it is no longer useful for nuclear power, SNF poses a dangerous, long–term health and environmental risk.[26] It will remain dangerous

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Ind. Cl. Comm. 137, 142-43 (1962). These were the homes of the Kyuska under Wabasha, the Hemnican under Red Wing and the Kaposia under Little Crow. Gary Clayton Anderson, Kinsman of a Different Kind – Dakota-White Relations in the Upper Mississippi 1650-1862 (Minn. His. Soc. Press, 1997 ed.) at 80. Red Wing's Village was readily identifiable by the bluffs surrounding it, now referred to by the City of Red Wing and locals as "Barn Bluff." See Henry Lewis, Red Wing's Village 1855 (Minnesota Historical Society).

[25]*See Minnesota v. NRC*, 602 F.2d 412, 413 (D.C. Cir. 1979).

[26] "At massive levels, radiation exposure can cause sudden death." *Nuclear Energy Inst. v. EPA*, 373 F. 3d 1251, 1258 (D.C. Cir. 2004) (internal citations omitted). Even "[a]t lower doses, radiation can have devastating health effects, including increased cancer risks and serious birth defects such as mental retardation, eye malformations, and small brain or head size." *Id.* at 1258.

"for time spans seemingly beyond human comprehension."[27] Despite years of "blue ribbon" commissions, congressional hearings, agency reports, and site investigations, the United States has not yet developed a permanent solution for storing SNF envisioned and required by the Nuclear Waste Policy Act.[28] That failure, declared the Blue Ribbon Commission on America's Nuclear Future (BRC), is the "central flaw of the U.S. nuclear waste management program to date."[29]

While experts appear in consensus that the ultimate SNF disposal solution will be a "geologic repository," twenty years of work on establishing just such a repository at Yucca Mountain in Nevada was abandoned by Department of Energy when it withdrew its license application for the facility.[30] At this time, there is not even a prospective site for a repository, let alone progress toward the actual construction of one.

SNF is currently stored on site at the PI ISFSI and other nuclear plants because of the government's failure to establish a permanent repository for spent fuel.In the meantime, as the DC Circuit recently observed, "[t]his type of storage, optimistically labeled 'temporary storage,' has been used for decades longer than originally anticipated. The delay has required plants to expand storage pools and to pack SNF more densely within them. The lack of progress on a permanent repository has caused considerable

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[27] *New York v. NRC*, 681 F.3d 471, 474 (D.C.Cir. 2012) citing *Nuclear Energy Inst., Inc. v. Envtl.Prot.Agency*, 373 F.3d 1251, 1258 (D.C.Cir 2004) (per curiam). Spent nuclear fuel must be contained from the environment for tens of thousands of years. .

[28] 681 F.3d 474.

[29] *Id.*, citing Blue Ribbon Commission on America's Nuclear Future, Report to the Secretary of Energy 10-11 (2012) at 27.

[30] *Id.* at 3.

uncertainty regarding the environmental effects of temporary SNF storage and the reasonableness of continuing to license and relicense nuclear reactors."[31]

D. Prairie Island Independent Spent Fuel Storage Installation

On October 19, 1993, the NRC issued a 20-year license for the PI ISFSI. The license authorizes NSPM to store up to 48 dry casks. There are two cask designs currently approved for use on the PI ISFSI – the TN-40 (for casks 1-29) and the TN-40HT (to accommodate the higher burn-up fuel in use at the PINGP since 1990**)**. Each of these casks has the capacity to store 40 fuel assemblies. The current license for the PI ISFSI expires on October 19, 2013. NSPM seeks to renew its license for the PI ISFSI for another 40 years, through 2034. At present, NSPM does not seek to increase the capacity in its license renewal application. Instead, its application is based on a maximum capacity of 48 casks. NSPM also assumes that the Department of Energy begins accepting used fuel from nuclear utilities in 2025 resulting in all fuel being removed from Prairie Island by 2065.[32]

From 1970-1990, PINGP Units 1 and 2 used a total number of 1160 fuel assemblies.[33] Those assemblies are all considered to be low burn-up fuel, which has an initial enrichment of less than or equal to 3.85 percent weight U-235, average burn-up of

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[31] *Id*.

[32] *See, e.g.*, NSPM's Response to Requests for Supplemental Information date February 29, 2012, NSPM's Response to R-7 at p.9 and R-10 at p.10.

[33] *See* NSPM's Annual Nuclear Waste Management Report filed with the Minnesota Public Utilities Commission dated August 10, 2012, Docket No. E002/CN-0936, available at: https://www.edockets.state.mn.us/EFiling/edockets/searchDocuments.do?method=showPoup&documentId=%7BE881FA96-6C04-4528-B701-0034B4D90315%7D&documentTitle=20128-77746-01.

less than or equal to 45,000 Megawatt days per metric ton uranium (MWD/MTU) and require a minimum cooling time of ten years. In 1990, the NRC approved a license amendment for the PINGP which allowed for the use of high burn-up fuel, which has an enrichment of less than or equal to 5.00 percent weight U-235, an average burn-up of less than or equal to 60,000 MWD/MTU, and requires a minimum cooling time of 12 years. Since 1990, high burn up fuel has been used at the PINGP.

Twenty-nine (29) dry casks currently sit on the PI ISFSI. Each of the 29 dry casks currently placed on the PI ISFSI contain low burn up fuel.

The licensed capacity of the PINGP spent fuel pool is 1,386 assemblies.[34] There are currently 1,189 fuel assemblies stored in the PINGP spent fuel pool, all of which contain high burn-up fuel. The 1,189 fuel assemblies in the spent fuel pool are enough to fill 30 additional casks, which combined with the spent fuel already placed in dry casks would total 59 casks to be placed on the PI ISFSI.

Based on current operations, approximately 100 fuel assemblies are used and removed from the PINGP's two reactors and place into the spent fuel pool every 2 years, which results in the need for approximately 10 casks every 8 years. The high burn-up fuel assemblies must be stored for a minimum of 12 years in the spent fuel pool to allow the high burn-up fuel to cool to a suitable temperature (and the radioactivity to decrease to a suitable level) before the spent fuel is placed into a dry cask. Based on NSPM's current schedule, NSPM projects that 64 casks will be placed at the PI ISFSI by 2034, with another 34 casks needed after the plant is decommissioned.

[34] *Id.*

Both types of casks at the PI ISFSI are designed for both storage and transportation. NSPM has applied to the NRC to license the TN-40 cask for transportation, but its application is still pending. The TN-40HT is also not currently licensed for transportation. There are considerable risks associated with opening and reloading dry casks. It is a complicated, time-consuming and costly endeavor. Both industry and regulator prefer a one-time loading, with the same cask used for storage and transportation.

E. Nuclear Waste Policy and NRC Regulations

Most of the nuclear plants currently operating in the United States were designed with limited spent-fuel-pool capacity because it was anticipated that fuel would remain in pools only long enough to cool down. When the plants were initially licensed, the AEC assured the public that the spent fuel would quickly be transported to reprocessing facilities,[35] but reprocessing was abandoned when the facilities developed problems.[36] As a result, spent fuel began to accumulate in pools, leading NRC to authorize "dense packing" of pools so that they could hold much larger amounts of fuel than initially contemplated.[37]

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[35] *See e.g.,Vermont Yankee Final EIS*, ML061880207:93-94 (July 1972); *Prairie Island Final EIS*, ML081840311:192 (May 1973); *Indian Point Unit 2 Final EIS* ML072390276:257 (Sept. 1972); *Indian Point Unit 3 Final EIS*, ML072390284:412 (Feb. 1975) [note: page numbers refer to PDF document on ADAMS]; *see also Minnesota*, 602 F.2d at 418.

[36] *Id*. at 414; 40 Fed. Reg. 42,801 (Sept. 16, 1975).

[37] *Minnesota*, 602 F.2d at 414.

With reprocessing no longer an option, the federal government decided to establish a permanent common repository. NRC initially predicted that a repository would be operational by 1985.[38] While awaiting establishment of a permanent common repository, the NRC turned to a system of decentralized, on-site storage of SNF.

The NRC first issued the temporary-storage rule in 1984, in response to the Court's ruling in *Minnesota* that NRC's policy declaration that it had "reasonable confidence that [nuclear] wastes can and will in due course be disposed of safely" should have been made through a rulemaking proceeding.[39] On remand, the NRC issued its initial "waste-confidence decision"—including five "waste-confidence findings"—and temporary-storage rule. The first two waste-confidence findings found "reasonable assurance" that (1) it was technically feasible to dispose of radioactive waste in a mined geologic repository, and (2) one or more such repositories would be available between 2007 and 2009. The last three findings found that, in the time period before a repository was available, there was reasonable assurance that (3) spent fuel could be managed safely; (4) spent fuel could be stored safely and without environmental impacts in either pools or "independent spent fuel storage installations" (primarily dry-cask storage) for thirty years beyond the expiration of any reactor's license; and (5) if needed, dry-cask storage would be available.[40] The temporary-storage rule implemented the fourth finding.[41]

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[38] *NRDC v. NRC*, 582 F.2d 166, 173 (2d Cir. 1978).
[39] 602 F.2d at 417-19.
[40] 49 Fed. Reg. 34,658, 34,659-60 (Aug. 31, 1984).
[41] 10 C.F.R. § 51.23(a) (1984); 49 Fed. Reg. 34,688, 34,694 (Aug. 31, 1984).

In 1987, Congress designated Yucca Mountain in Nevada as a potential site for a permanent repository and directed that, for cost reasons, no other sites be considered until a decision was made about that site.[42] In 1990, in light of the delays in opening a repository, NRC revised the second finding to estimate that a repository would be available in "the first quarter of the twenty-first century."[43] And, in anticipation that plants would start seeking to renew their licenses, NRC also revised the fourth finding to apply thirty years beyond the expiration of a renewed license as well as an initial license.[44] NRC amended the temporary-storage rule to reflect those changes.[45]

In 2010, NRC again revised the waste-confidence decision and the temporary-storage rule, with one very important change: for the first time NRC found that it could not say with confidence when spent fuel could be moved from each reactor site. Instead, it revised its second waste-confidence finding to provide that a common repository will be available "when necessary." In light of that change, it revised the fourth finding and the temporary-storage rule to provide that spent fuel can be stored on site without environmental impacts for sixty years. The revised rule states:

> [I]f necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 60 years beyond the licensed life for operation (which may include the term of a revised or renewed license) of that reactor in a combination of storage in its spent fuel storage basin and at either onsite or offsite independent spent fuel storage installations. Further, the Commission believes there is reasonable assurance that sufficient mined geologic

[42] 42 U.S.C. 10134.
[43] 55 Fed. Reg. 38,472, 38,472 (Sep. 18, 1990).
[44] *Id*.
[45] *Id*. at 38,474; 10 C.F.R. § 51.23(a) (1990).

> repository capacity will be available to dispose of the commercial high-level radioactive waste and spent fuel generated in any reactor when necessary.[46]

The proposed revised rule and the waste confidence decision underlying it were challenged by the Prairie Island Indian Community and the States of New York, Connecticut, Vermont and New Jersey.[47] The Circuit Court of Appeals for the District of Columbia struck down the revised Waste Confidence Decision and revised Temporary Storage Rule, concluding that the NRC did not conduct a sufficient analysis of the environmental risks,[48] failed to evaluate the probability and consequences of failing to establish a permanent common repository, and appeared to have no plan other than "hoping for a geologic repository" despite what the Court described as "societal and political barriers to selecting a site."[49]

Almost twenty-five years after Yucca Mountain was identified as the preferred site to be singularly pursued as a permanent repository, it is a dead letter, the Department of Energy having withdrawn its application for a facility license.[50]

In the meantime, reactors continue to generate spent fuel, and most pools already contain more radioactive material than their associated reactors.

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[46] 10 C.F.R. § 51.23(a); *see also* CI-1:81,033.
[47] *New York v. NRC*, 681 F.3d 471 (D.C. Cir. 2012).
[48] *New York*, 681 F.3d at 483.
[49] *Id*. at 478-79.
[50] *See In re Aiken County et al.*, No. 10-1050, (D.C. Cir. August 3, 2012), available at http://www.cadc.uscourts.gov/internet/opinions.nsf/0163D8DE4194448E85257A4F004FC9E8/$file/11-1271-1387350.pdf.

III. ARGUMENT

A. The Community's Petition Is Timely.

The notice of opportunity of hearing was published on June 25, 2012 (77 Fed. Reg. 37937). The notice specified that the written request for hearing or petition for leave to intervene must be filed within 60 days after the date of publication of the Federal Register Notice, by August 24, 2012. Under the Commission's regulations regarding the computation of time in 10 C.F.R. § 2.306, PIIC timely filed this petition within 60 days of the notice of opportunity of hearing.

B. Petitioner Has Standing to Request an Adjudicatory Hearing and to Intervene.

PIIC has standing to request an adjudicatory hearing and to intervene in these proceedings. PIIC is a federally-recognized, sovereign, self-governing Indian tribe, organized under the Indian Reorganization Act of 1934. It is governed by a Constitution and Bylaws adopted by the resident members of the community on May 23, 1936 and approved by the Secretary of the United States Department of the Interior on June 20, 1936. PIIC has a government-to-government relationship with the federal government. The federal government has a trust obligation in its dealings with federally-recognized Indian tribes, characterized by a fiduciary obligation of the highest solemnity.

The PIIC Reservation is located immediately adjacent to the PINGP, literally across the street, and the PI ISFSI is less than one-half mile from the nearest residences on the Reservation. Although PIIC can meet the traditional criteria in 10 C.F.R. Section 2.309(d)(1)(ii)-(iv) for determining standing, PIIC also has standing based on the

proximity preemption. The "proximity presumption," whereby a petitioner is presumed to have standing to intervene without the need to specifically plead injury, causation, and redressability, applies if the petitioner lives within fifty miles of the nuclear reactor. The presumption for reactors applies to other types of facilities as well, including ISFSIs, based on the fact that the petitioners are within the geographical zone that might be affected by an accidental release of fission products. For example, residence or activities within 10 to 17 miles of a facility have been found sufficient to establish standing in a case involving the proposed expansion in capacity of a spent fuel pool.[51] The Community's proximity immediately adjacent to the PINGP should be determinative of the Community's standing to participate in this proceeding.[52] The Nuclear Regulatory Commission Atomic Safety and Licensing Board ("ASLB") found the Community had standing in the PINGP relicensing proceeding.[53] The identical conclusion is appropriate here.

[51] *See* Vermont Yankee Nuclear Power Corp. (Vermont Yankee Nuclear Power Station), LBP-87-7, 25 NRC 116, 118 (1987).

[52] See, e.g., *Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating, Units 2 and 3), LBP-08-13, at 5 (2008); *Florida Power and Light Co.*(Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 146-50 (2001) (applying the presumption in an operating license renewal proceeding).

[53] See *In the Matter of Northern States Power Company (Formerly Nuclear Management Company, LLC)*, (Prairie Island Nuclear Generating Plant, Units 1 and 2), Docket Nos. 50-282-LR, 50-306-LR (ASLBP No. 08-871-01-LR), 68 N.R.C. 905 (Dec. 5, 2008).

C. STANDARDS GOVERNING CONTENTION ADMISSABILITY

In addition to demonstrating standing, a petitioner must also proffer at least one admissible contention to be admitted as a party to a proceeding.[54] For license renewal proceedings, the NRC's contention pleading requirements are found at 10 C.F.R. § 2.309(f)(1)(i)-(vi) and incorporate the prior contention pleading requirements of old 10 C.F.R. § 2.714 (2004).[55] Specifically, Section 2.309(f)(1) of the NRC's regulations sets out the requirements that must be met if a contention is to be admitted. An admissible contention must (1) provide a specific statement of the legal or factual issue sought to be raised; (2) provide a brief explanation of the basis for the contention; (3) demonstrate that the issue raised is within the scope of the proceeding; (4) demonstrate that the issue raised 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, including references to specific sources and documents, that support the petitioner's position and upon which the petitioner intends to rely at the hearing; and (6) provide sufficient information to show that a genuine dispute exists in regard to a material issue of law or fact, including references to specific portions of the application that the petitioner disputes, or in the case when the application is alleged to be deficient, the identification of such deficiencies and supporting reasons for this belief.[56] The

[54] 10 C.F.R. § 2.309(a).

[55] The pleading requirements of former 10 C.F.R. § 2.714(b) now appear in the regulations at 10 C.F.R. § 2.309(f)(1)(i), (ii), (v), and (vi). Section 2.309(f)(1)(iii)-(iv) additionally requires that a contention be within the scope of the proceeding and material to the findings the NRC must make.

[56] 10 C.F.R. § 2.309(f)(1)(i)-(vi).

purpose of the contention rule is to "focus litigation on concrete issues and result in a clearer and more focused record for decision."[57] The NRC has emphasized that the rules on contention admissibility are "strict by design."[58] Further, contentions challenging the NRC's regulations are not admissible in agency adjudications.[59] Failure to comply with any of these requirements is grounds to reject a contention.[60] However, the petitioner is not required to provide an exhaustive discussion in its proffered contention, so long as the contention meets the NRC's admissibility requirements.

An admissible contention must include not only a "specific statement of the issue of law or fact to be raised or controverted,"[61] but also a "brief explanation of the basis for the contention."[62] When the contention admissibility standards were revised in 1989, the Commission commented that "a petitioner must provide some sort of minimal basis indicating the potential validity of the contention."[63] This "brief explanation" of the logical underpinnings of a contention does not require a petitioner "to provide an

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[57]69 Fed. Reg. 2182, 2202 (Jan. 14, 2004); See also *Vermont Yankee Nuclear Power Corp. v. Natural Res. Def. Council*, 435 U.S. 519, 553-54 (1978); *BPI v. AEC*, 502 F.2d 424, 428 (D.C. Cir. 1974); *Philadelphia Elec. Co.* (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20 (1974).

[58]*Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001), reconsideration denied, CLI-02-1, 55 NRC 1 (2002).

[59]10 C.F.R. § 2.335(a).

[60]69 Fed.Reg. at 2221; *Private Fuel Storage, LLC* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 325 (1999); *Arizona Pub.Serv. Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155 (1991).

[61] 10 C.F.R. § 2.309(f)(1)(i).

[62] Id. § 2.309(f)(1)(ii).

[63]54 Fed. Reg. 33,168, 33,170 (Aug. 11, 1989).

exhaustive list of possible bases, but simply to provide sufficient alleged factual or legal bases to support the contention."[64]

A petitioner must demonstrate that the "issue raised in the contention is within the scope of the proceeding."[65] The scope of the proceeding is defined by the Commission in its initial hearing notice and order referring the proceeding to the licensing board.[66] Any contention that falls outside the specified scope of the proceeding must be rejected.[67]

An admissible contention must assert an issue of law or fact that is "material to the findings the NRC must make to support the action that is involved in the proceeding."[68] In otherwords, the subject matter of the contention must impact the grant or denial of a pending license application.[69] "Materiality" requires the petitioner to show why the alleged error or omission is of significance to the result of the proceeding.[70] This means that there must be some link between the claimed deficiency and the agency's ultimate determination regarding whether or not thelicense applicant will adequately protect the health and safety of the public and theenvironment.[71]

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[64] *Louisiana Energy Serv., L.P.* (National Enrichment Facility), CLI-04-35, 60 NRC 619, 623 (2004).
[65] 10 C.F.R. § 2.309(f)(1)(iii).
[66] *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-825, 22 NRC 785, 790-91 (1985).
[67] See *Portland Gen. Elec. Co.* (Trojan Nuclear Plant), ALAB-534, 9 NRC 287, 289-90 n.6
(1979).
[68] 10 C.F.R. § 2.309(f)(1)(iv).
[69] *Private Fuel Storage, LLC* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 179-80 (1998).
[70] Id. at 179.
[71] Id. at 180.

A petitioner asserting a contention of omission, however, alleging that an applicant has failed to include or address required information or analysis, is not required to provide supporting facts or expert opinion at this stage.[72]

D. CONTENTIONS

PIIC is concerned that the renewal of the PI ISFSI license may result in a detrimental effect to the health and safety of community members, its lands and environment, and pose an unreasonable risk to its members and to visitors to the reservation. As set forth more fully below, the PIIC believes that NSPM's license renewal application is deficient in several critical respects and should be denied by the NRC. The ER has no discussion of reasonably foreseeable cumulative impacts as provided in the guidance to applicants in NUREG 1748. It is reasonably foreseeable that SNF will be stored at Prairie Island for more than 40 years. And given that the PINGP has already been issued 20-year license renewals for its two reactors, it is reasonably foreseeable that at least 98 casks of SNF – 2500 tons of spent nuclear waste – will eventually be stored at the PI ISFSI. The 29 casks currently placed on the PI ISFSI are filled with low burnup fuel. Each cask going forward, 69 of the 98 total casks that will be placed on the PI ISFSI, will be used to store high burnup fuel for which the efficacy of long-term cask storage has not been proven. Those casks, consequently, have no science

[72] Id. at n.183 ("The Pa'ina Licensing Board laid out a modified standard for raising a contention of omission, noting that 'the pleading requirements of 10 C.F.R. § 2.309(f)(1)(v), calling for a recitation of facts or expert opinion supporting the issue raised, are inapplicable to a contention of omission beyond identifying the regulatively required missing information.'") *Pa'ina Hawaii LLC* (Material License Application), LBP-06-12, 63 NRC 403, 414 (2006).

proving their viable performance indefinitely into the future. PIIC asserts the following contentions to ensure that the PI ISFSI license renewal conforms to NRC safety and environmental regulations and other applicable law.

CONTENTION 1. NSPM'S ENVIRONMENTAL REPORT IMPROPERLY MINIMIZES WASTE STORAGE IMPACTS.[73]

As part of the NEPA process, the NRC is required to take a "hard look" at the environmental consequences of a proposed action.[74] The discussion of environmental impacts is designed to provide a "scientific and analytical basis" for comparing the various alternatives for achieving the project's goals.[75] A proper analysis of the alternatives, therefore, can be carried out only if the ER provides sufficient information to allow the NRC to identify a complete and accurate compilation of the environmental consequences of all reasonable alternatives, especially its recommended action.

NSPM's conclusion that the impacts of continuing and expanding the storage of spent nuclear fuel at the PI ISFSI would be "small" relies on the NRC's Waste Confidence Decision ("WCD") and Temporary Storage Rule ("TSR").[76] The ER's discussion of this issue improperly relies on the draft proposed revised rule that was recently struck down by the Court of Appeals for the District of Columbia Circuit,

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[73] Although PIIC believes that this contention is admissible on its own, it has also petitioned the NRC to challenge the Waste Confidence Decision and Temporary Storage Rule in accordance with 10 CFR 2.335 because of special circumstances with respect to the subject matter of the proceeding (as described herein), application of the regulation would not serve the purposes for which the regulation was adopted.

[74] *Robertson v. Methow Valley Citizens Council,* 490 U.S. 332, 350 (1989).

[75] See40 C.F.R. 1502.16; *DuBois v. U.S. Dep't of Agriculture,* 102 F.3d 1273, 1286 (1st Cir. 1996).

[76] *See* 75 Fed. Re. 80132 (Dec. 23, 2010); 75 Fed. Reg. 80137 (Dec. 23, 2010).

precisely because that proposed rule's reliance on the existence of a common repository was nothing more than "hoping" and the environmental assessment supporting the revised rule failed to evaluate the potential adverse impacts if, more likely when, a common repository does not come to pass. The ER here is similarly flawed because of its reliance on a rule deemed legally deficient and because the ER engages in no forward-looking analysis of potential harms that the District of Columbia Circuit found necessary.

The WCR is based on the assumption that sufficient repository capacity will exist to store all waste created by nuclear plants. However, there appears to be no serious expectation that a high level waste repository will be available within 40 years, if at all. Development of the only proposed federal repository site, Yucca Mountain, Nevada, is no longer even the subject of a license application, despite 20 years of work on the site. As the District of Columbia Circuit recently noted in *New York v. NRC*:

> Twenty years of work on establishing such a repository at Yucca Mountain was recently abandoned when the Department of Energy decided to withdraw its license application for the facility.[] At this time, there is not even a prospective site for a repository, let alone progress toward the actual construction of one.… The lack of progress on a permanent repository has caused considerable uncertainty regarding the environmental effects of temporary SNF storage and the reasonableness of continuing to license and relicense nuclear reactors.[77]

The Circuit Court struck down the NRC's Waste Confidence Decision and Temporary Storage Rule because the NRC's environmental review improperly presumed that a permanent mined geologic repository would be available "when necessary" and "failed to

[77] *New York v. NRC*, 681 F.3d 471, 475 (D.C. Cir. 2012)(internal citations omitted)

examine the environmental consequences of failing to establish a repository when one is needed"[78] The Court specifically observed that the NRC –

> …presumes the existence of a geologic repository. Therefore, it cannot explain the environmental effects of a failure to secure a permanent facility. The Commission also complains that conducting a full analysis regarding permanent storage would be an "abstract exercise". Perhaps the Commission thinks so because it perceives the required analysis to be of the effects of the permanent repository itself. But we are focused on the effects of a *failure* to secure permanent storage. The Commission apparently has no long-term plan other than hoping for a geologic repository. If the government continues to fail in its quest to establish one, then SNF will seemingly be stored on site at nuclear plants on a permanent basis. The Commission can and must assess the potential environmental effect of such a failure.[79]

NSPM's ER does not identify or address the impacts from long-term, on-site storage spent nuclear fuel at the PI ISFSI.

Because of this misplaced reliance on an imminent permanent storage solution, NSPM's conclusion regarding the impact of SNF storage also fails to meet the requirements of NEPA with respect to probability and consequences of possible harms. The ER must consider both the probability of a given harm occurring and the consequences. Only if a harm is determined to be "remote and speculative" so as to reduce the probability of its occurrence effectively to zero, can an entity proposing major federal action avoid a meaningful consequences analysis.[80] NSPM's analysis suffers from the same "snapshot in time" assessment that was rejected in *New York v. NRC*. There the Court concluded that the NRC's assessment of the risks of SNF cooling pool

[78] *New York*, 681 F.3d at 479.
[79] *Id.* (emphasis in original).
[80] *Id.* citing *Limerick Ecology Action, Inc.*, 869 F.2d 719, 739 (3rd Cir. 1989).

leaks was deficient because it failed to "look forward to examine the effects of the additional time in storage. The Court noted that "a study of the impact of thirty additional years of SNF storage must actually concern itself with the extra years of storage."[81] So too must it account for the possibility that no permanent mined repository will be available in 40 years necessitating additional, if not indefinite or permanent storage at the present location.[82]

CONTENTION 2. NSPM'S ENVIRONMENTAL REPORT FAILS TO ADDRESS CUMULATIVE IMPACTS OF RELATED PROJECTS ON THE PIIC, ITS MEMBERS AND ITS LANDS.

Section 6.2.3 of the NRC's "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs" (NUREG-1748) directs the applicant to:

> "Discuss any past, present or reasonably foreseeable future actions which could result in cumulative impacts when combined with the proposed action."

NEPA requires that environmental review analyze the impact of a proposed project in light of that projects interaction with the effects of "past, current, and reasonably foreseeable future actions."[83]Although not explicitly required in the original 1969 NEPA, an evaluation of the cumulative environmental effects of a proposed action is an essential

[81] *Id.* at 481.
[82] Id. At 479 ("If the government continues to fail in its quest to establish [a geologic repository], then SNF will seemingly be stored on site at nuclear plants on a permanent basis. The Commission can and must assess the potential environmental effects of such a failure.")
[83] 40 C.F.R. §1508.7. See *Inland Empire Public Lands Council v. U.S. Forest Serv.*, 88 F.3d 754 (9th Cir. 1996); *Coalition on Sensible Transp., Inc. v. Dole*, 826 F.2d 60 (D.C. Cir. 1987).

part of the environmental review process,"[84] and is clearly required by the Council for Environmental Quality's ("CEQ") 1979 NEPA Regulations.[85] Otherwise, the potential combined environmental impact of related actions will evade appropriate review and discussion. "Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time."[86] While the CEQ regulations apply only to environmental impact statements, courts have applied the regulatory requirements to environmental assessments and those cases discuss cumulative impact problems.

Section 102(2)(C) of NEPA requires an EIS for "major Federal actions significantly affecting the quality of the human environment,"[87] and there are situations in which an agency is required to consider several related actions in a single EIS.[88] Not to

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[84] Canter, Cumulative Effects and other Analytical Challenges of NEPA in Environmental Policy and NEPA, ch 8 (Clark & Canter eds. 1997); Contant& Wiggins, Toward Defining and Assessing Cumulative Impacts: Practical and Theoretical Considerations in Environmental Analysis: The NEPA Experience 336 (Hildebrand & Cannon eds. 1993); Rimrill & Canter, "Addressing Future Actions in Cumulative Effects Assessment," 12 Project Appraisal 207 (1997); Cooper & Canter "Documentation of Cumulative Impacts in Environmental Impact Statements," 17 Envtl. Impact Assess Rev. 385 (1997); Burris & Canter, "A Practitioner's Survey of Cumulative Impact Assessment," 15 Impact Assessment 97 (1997); Cooper & Canter, "Substantive Issues in Cumulative Impact Assessment: A State-of-Practice Survey," 15 Impact Assessment 15 (1997); McCoid & Clark, "Cumulative Effects Assessment: A Tool for Sustainable Development Impact Assessment," 12 Impact Assessment 319 (1994).

[85] 40 C.F.R. 1508.7. In 1997 the CEQ published a comprehensive handbook, *Considering Cumulative Effects under the National Environmental Policy Act*, which provides detailed information on how to conduct a cumulative impact analysis. While not legally binding (SEQ, 1997, p. iii) it has often been used by agencies to direct their cumulative impact analysis.

[86] *Id*.

[87] 42 U.S.C. § 4332(2)(C) (1982).

[88] *Kleppe v. Sierra Club*, 427 U.S. 390, 409-410, 96 S.Ct. 2718, 2729-2730 (1976).

require this would permit dividing a project into multiple "actions," each of which individually has an insignificant environmental impact, but which collectively have a substantial impact.[89] The legislative history of NEPA and the CEQ's regulations make clear that the cumulative impact of federal agency actions must be considered, and scoping out of review impacts from other related federal actions is "an example of the isolated decision-making sought to be eliminated by NEPA."[90]

The CEQ regulations, for example, "require a scoping process in which agencies are to identify the scope and "significant issues" to be addressed in the impact statement.[91] This provision defines "scope" to include both "connected," "cumulative" and "similar" actions.[92] "Connected actions" are partly defined as "actions that trigger other actions,"[93] and cumulative actions are in turn defined as "actions, which, when viewed with other proposed actions, have cumulatively significant impacts."[94] Cumulative impact is defined as –

> The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions.… Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.[95]

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[89] *NRDC v. Hodel*, 865 F.2d 288, 298-299 (D.C. Cir 1988); *Thomas v. Peterson*, 753 F.2d 754, 758 (9th Cir. 1985); *NRDC v. Callaway*, 524 F.2d 79, 87-90 (2d Cir. 1975); *Alpine Lakes Protection Society v. Schlapfer*, 518 F.2d 1089, 1090 (9th Cir. 1975).
[90] *NRDC v. Callaway*, 524 F.2d 79 (2d Cir. 1975); *accord*, *Town of Huntington v. Marsh*, 859 F.2d 1134 (2d Cir. 1988).
[91] 40 C.F.R. 1501.7(a)(2).
[92] 40 C.F.R. 1508.25(a).
[93] 40 C.F.R. 1508.25(a)(1)(i).
[94] 40 C.F.R. 1508.25(a)(2).
[95] 40 C.F.R. 1508.7. See *Inland Empire Public Lands Council v. U.S. Forest Serv.*, 88 F.3d 754 (9th Cir. 1996); *Coalition on Sensible Transp., Inc. v. Dole*, 826 F.2d 60 (D.C.Cir. 1987).

Innumerable Courts have invalidated NEPA compliance documents for failure to address or to adequately address cumulative impacts.[96] In *Cady v. Morton*,[97]the Court found an EIS for coal extraction on the Crow Reservation inadequate because it accounted for just the first 770 acre project on a nearly 31,000 acre lease, avoiding the assessment of the cumulative environmental impacts of coal extraction that were reasonably foreseeable on the leased premises.[98] The Defendant's asserted that an EIS relative to the 770 acre tract was an appropriate scope, because the project was a discreet phase that could be segmented from any remaining projects. The Court rejected the argument:

> We disagree. While it is true that each mining plan prepared for tracts within the leased area is to a significant degree an independent project which requires a separate EIS with respect to each, it is no less true that the breadth and scope of the possible projects made possible by the Secretary's approval of the leases require the type of comprehensive study that NEPA mandates adequately to inform the Secretary of the possible environmental consequences of his approval. Westmoreland's massive capital investment and extended contractual commitments present a situation in which "it would be irrational, or at least unwise, to undertake the first phase if subsequent phases were not also undertaken."[]However, even were this not

[96] See, e.g., *Cady v. Morton*, 527 F.2d 786 (9th Cir. 1975); *Thomas v. Peterson*, 753 F.2d 7545 (9th Cir. 1985); *Klamath-Siskiyou Wildlands v. BLM*, 387 F.3d 968 (9th Cir 2004); *Northwest Environmental Defense Center v. BPAs*, 117 F.3d 1520 (9th Cir. 1997); *Idaho Sporting Congress v. Thomas*, 137 F.3d 1146 (9th Cir 1998); *Muckleshoot Indian Tribe v. USFS*, 177 F.3d 800 (9th Cir. 1999); *Native Ecosystems Council v. Dombeck*, 304 F.3d 886 (9th Cir. 2002).

[97]527 F.2d 786 (9th Cir. 1975).

[98] The lease was part of a program to develop coal reserves in the Crow Ceded Area. The Tribe granted two prospecting permits, including options to lease, to Westmoreland, which exercised options on 30,876.45 acres for a term of ten years. As part of the lease approval process, the BIA was obligated to prepare an EIS or other environmental analysis, which it did not, later contending that the lease approval was not a major federal action. 527 F.2d 786, 789.

> true, it cannot be denied that the environmental consequences of several strip mining projects extending over twenty years or more within a tract of 30,876.45 acres will be significantly different from those which will accompany Westmoreland's activities on a single tract of 770 acres.[99]

Cady and myriad other cumulative impacts cases are in harmony with the D.C. Circuit's recent decision in *New York v. NRC*.[100] There, the Court determined that the NRC's environmental assessment supporting its proposed revised Temporary Storage Rule was inadequate for the fundamental reason that it failed to assess the possibility of that a common mined geologic repository may not come into existence:

> …we are focused on the effects of a failure to secure permanent storage. The Commission apparently has no long-term plan other than hoping for a geologic repository. If the government continues to fail in its quest to establish one, then SNF will seemingly be stored on the site at nuclear plants on a permanent basis. The Commission can and must assess the potential environmental effects of such a failure.[101]

The Court clearly required the NRC to consider the potential future impacts of related federal actions – including the siting, licensing and operation of a mined geologic repository and the continued operation of nuclear generating facilities throughout the United States.

Here, NSPM's ER fails to assess the cumulative effects of related actions on the PIIC, its people and its lands. For example, the ER fails to assess the application in light of the federal process for establishing a common mined geologic repository. The ER functions on the basis of a 40-year license term and 48 dry casks. But that scope is

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[99]527 F.2d 786, 795 quoting *Trout Unlimited v. Morton*, 509 F.2d 1276, 1285 (9th Cir. 1974).
[100]681 F.3d 471, 475 (D.C. Cir. 2012).
[101]681 F.3d at 479.

appropriate only if NSPM assumes the viability of a common mined geologic repository. Even if that scope is an appropriate starting point – which the D.C. Circuit decision would indicate that it is not – the ER cannot stop at the starting point, but must assume that a common repository *will not* be available by the conclusion of the license period, and assess the potential consequences of that eventuality.[102]

Second, and similarly, the ER fails to assess the effects of the application in light of the NRC's future actions on the Waste Confidence Decision and revised Temporary Storage Rule, which are currently being rewritten by the NRC following the D.C. Circuit's decision discussed above. In light of the direction given by the Court, the NRC will assess the potential impacts resulting from storage of SNF on site at nuclear plants on a permanent basis. That decision, and the rule relying on it, constitutes a related federal proceeding that will have a direct impact on the ER in this case. Ultimately, the question is whether the 40-year, 48-cask scope serves any legitimate purpose in planning for the realities of SNF storage in the absence of a common mined geologic repository and the continued operation of nuclear generating plants.

The law and regulatory framework upon which NSPM's application relies, and upon which the NRC must review it, are in a state of flux, to put it mildly. The Waste Confidence Decision has been overruled by the Court of Appeals for the District of

[102]*New York*, 681 F.3d at 478 ("the EA is insufficient because a finding that "reasonable assurance exists that sufficient mined geologic repository capacity will be available when necessary [] does not describe a probability of failure so low as to dismiss the potential consequences of such a failure. Under NEPA, an agency must look at both the probabilities of potentially harmful events and the consequences if those events come to pass.[]")

Columbia,[103] and the Court has directed the NRC to assess the potential environmental effects of a failure to establish a permanent common geologic repository for SNF.[104] Key provisions of key regulations are being written or re-written by the NRC as it attempts to catch up with reality. Until the NRC completes the task of re-writing its regulations to conform to the requirements established by the Circuit Court, it is difficult to imagine how NSPM can meaningfully assess the future potential impacts of the expansion of SNF storage at Prairie Island and how can the NRC be expected to review the application "with adherence to the law."

Third, the ER fails to assess the cumulative impacts of the foregoing in the context of the fact that the PINGP was just granted a license renewal for an additional 20 years of operation – through 2034. This fact ensures that, in addition to a lack of a common repository and the failure to establish a viable rule for temporary storage of SNF, it is certain that the PIINGP will continue to operate, resulting in the certain generation of additional SNF and the potential environmental impacts of that plant operation and the additional storage.

Fourth, on May 16, 2008, the NSPM submitted an application to the Minnesota Public Utilities (MPUC) for a Certificate of Need (CON) to use additional dry casks in support of the-then anticipated reactor license renewal (the CON asked for an additional 35 casks, as NSPM was limited, at that time, by State Law to 29 casks; the total authorized by the State of Minnesota is 64). The CON application noted that the ISFSI

[103] *New York v. NRC*, 681 F.3d 471 (D.C. Cir. 2012).
[104] 681 F.3d at 480.

would have to be expanded to accommodate the additional casks (the additional casks (16) would be placed on new 18 foot pads, located south of existing pads). The State of Minnesota (through the Department of Commerce) published a Final Environmental Impact Statement on July 31, 2009. The MN PUC approved the CON on December 18, 2009. According to the CON application, it is expected that two additional pads (for the additional casks), adjoining the ISFSI, will be constructed in 2020. The pads will be 216 feet long, 18 feet wide and 3 feet thick. The project will involve excavating the pad area and digging trenches for concrete ductbanks and associated electrical conduits and replacing the structural fill. Site preparation activities will involve earthmoving equipment such as bulldozers, scrapers, backhoes and graders to excavate and level the pad and ductbank areas. Following the leveling of the area, reinforced steel, conduit and forms will be put in place and concrete will be poured forming the storage pads and ductbanks. Concrete trucks will deliver concrete to the site and pumping trucks will place it in the pad area. The area around the pad and trench over the ductbank will be back-filled and returned to the 2% grade when complete.

The need for additional casks and the related expansion of the ISFSI are reasonably foreseeable actions that should have been discussed in the ER because the Applicant has already secured State of Minnesota approval. We believe that the additional casks and expansion of the ISFSI will result in cumulative impacts, when combined with the proposed action (ISFSI license renewal). Cumulative impacts would cut across many aspects of the license renewal—archaeological (constructing the additional pads), traffic from construction activities, health impacts from additional

casks. The Environmental Report (ER) submitted by NSPM is deficient in that it doesn't discuss the cumulative impacts of reasonably foreseeable events such as the additional casks.

Although, as noted, there would be many types of cumulative impacts from the additional casks, we are particularly concerned about the ER providing a cumulative impact analysis of how the ground-disturbing activities related to the ISFSI expansion have the potential to impact archaeological resources. Prairie Island is rich in archaeological resources. These archaeological resources are an important part of the Prairie Island Indian Community's history and culture. Over the years there have been many archaeological surveys documenting and recording hundreds of prehistoric archaeological sites over the entire length of Prairie Island. These sites include burial mounds, habitation sites, and lithic scatters.

In recent years there have been a number of archaeological surveys conducted within the boundaries of the PINGP. We are concerned, however, that very little archaeological survey work was conducted in the immediate vicinity of the ISFSI *prior* to the construction of the ISFSI. The archaeological survey work used in the 1992 NRC ISFSI licensing proceedings was conducted in 1967 and has been found to be an unreliable source of information. Furthermore, the recent archeological surveys, upon which NSPM relies to show no impacts, were very limited in nature, especially in the area of the ISFSI. These concerns are especially relevant when considering the cumulative effects from the proposed action and the reasonably foreseeable expansion of the ISFSI.

Finally, the ER fails to assess how more than 40 years of extended storage will affect the fuel assemblies and internal casks components and specifically their transportability – which it the ultimate goal of SNF stored in dry casks.[105] By the time the NRC evaluates the safety and environmental impact of transporting the spent fuel that has been stored onsite in dry casks for several decades, the conclusion could be that the risks of continued onsite storage are less than the risks of transport to a permanent repository. But the ER makes no assessment of the long-term viability of cask storage that may well be required by very long term on site storage – the impact of which is the possible permanent storage of SNF at Prairie Island. And this is precisely the kind of sober assessment that the D.C. Circuit concluded in *New York v. NRC* must be made, in light of the failure to establish a common permanent repository.

NSPM's ER is inadequate because it fails to assess the cumulative impacts of multiple, related federal actions all of which potentially impact the Community, its people and its lands. The approach adopted in the ER is a classic, and improper, attempt at compartmentalization and segmentation of license review the apparent result of which will be permanent, decentralized storage of SNF in unknown quantities at Prairie Island. And the end result will have a disproportionate impact on the PIIC - NSPM will

[105] The long-term impacts of high burnup fuel on the spent fuel assemblies, cladding and internal cask components are neither fully understood nor easily monitored, but include, among other things, cladding corrosion, degradation and embrittlement, creep, stress corrosion cracking, hydride cracking, hydride reorientation, and other types of degradation. Current monitoring technology and regulations do not allow for or require active monitoring inside the casks themselves as part of the aging management program. The twenty-nine (29) TN-40 casks currently loaded and placed at the PINGP ISFSI contain low burnup fuel. Going forward, however, TN-40HT casks will be used to store the high burnup fuel.

decommission the plant, transfer ownership of the casks to the federal government, and leave Prairie Island, and the PIIC will be stuck with 98 casks storing 2500 tons of spent nuclear fuel.[106]

CONTENTION 3. NSPM'S ENVIRONMENTAL REPORT FAILS TO ACCOUNT FOR THE FEDERAL TRUST RESPONSIBILITY THAT INFORMS ITS REVIEW OF POTENTIAL IMPACTS ON THE COMMUNITY, ITS PEOPLE AND ITS LAND.

The federal government has a trust responsibility to Indian tribes. This doctrine has its origin in *Cherokee Nation v. Georgia*, where Chief Justice John Marshall described Indian tribes as being "in a state of pupilage," with "[t]heir relation to the United States resemble[ing] that of a ward to his guardian."[107] The trust responsibility is a common law doctrine, although Congress has supplemented the doctrine from time-to-time via legislation. It imposes certain substantive duties on the federal government, including the duty to provide services to tribal members (e.g., health care, education), the duty to protect tribal sovereignty, and the duty to protect tribal resources.[108] The trust

[106] Unlike host communities that have benefited from the tax revenues associated with a nuclear power plant, or the host communities for the proposed storage facilities at Yucca Mountain and on the Skull Valley Goshute Band's reservation in Utah who consent to hosting those sites, the PIIC has never consented to the location of the a spent fuel storage installation less than one-half mile from its nearest residences.

[107] 30 U.S. 1, 17 (1831).

[108] Reid Peyton Chamber, Judicial Enforcement of the Federal Trust Responsibility to Indians, 27 Stan. L. Rev. 1213 (1975).

responsibility also includes a procedural component – the duty to consult with Indian tribes – which is necessary to effectuate these substantive components.[109]

When it comes to tribal resources, the trust responsibility is at its apex. The Supreme Court has noted that the conduct of federal officials must "be judged by the most exacting fiduciary standards."[110] General principles of trust law are frequently incorporated by courts into the federal trust responsibility. Consequently, just as private trust law is about serving the best interests of the beneficiary, "[a]t the core of the Indian trust doctrine is the federal government's duty to serve the 'best interests' of the tribe and its members."[111]

Through the trust responsibility, the federal government has a general mandate to ensure the preservation of a usable land base for future generations of tribal members.[112] Thus, the federal government is obligated to protect Indian trust lands from alienation, confiscation, environmental degradation, or the risk of environmental degradation.[113]

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[109] Gabriel S. Galanda, "The Federal Indian Consultation Right: A Frontline Defense Against Tribal Sovereignty Incursion, Federal Lawyer (Fall 2010).

[110] *Seminole Nation v. United States*, 316 U.S. 286, 297 (1942).

[111] Mary Christina Wood, "Protecting the Attributes of Native Sovereignty: A New Trust Paradigm for Federal Actions Affecting Tribal Lands and Resources," 1995 Utah L. Rev. 109, 112 (1995).

[112] 1995 Utah L. Rev. at 138.

[113] *Lane v. Pueblo of Santa Rosa,* 249 U.S. 110 (1919) (enjoining the Secretary of the Interior from disposing of tribal lands under general public land laws because it would be a violation of the trust responsibility); *Cramer v. United* States, 261 U.S. 219 (1923) (placing heavy emphasis on the trust responsibility while voiding a federal land patent that had conveyed lands occupied by Indians to a railroad nearly 20 years earlier); *Pyramid Lake Paiute Tribe v. Morton*, 354 F.Supp. 252, 256 (D.D.C. 1972) (holding that the trust responsibility required enjoining diversions of water by a federal reclamation project which reduced the level of Pyramid Lake on a downstream Indian reservation and otherwise impaired the lake's fishery). *See also Fort Mojave Indian Tribe v. United*

It is precisely this trust responsibility that led federal officials to refuse to approve the construction of an ISFSI on reservation lands of the Skull Valley Band of Goshute Indians, even though the tribe *wanted* to host that facility. In its Record of Decision, the Bureau of Indian Affairs noted that it was acting as a "fiduciary" with respect to reservation lands, which were held in trust for the Skull Valley Band.[114] "As trustee-delegate, the Secretary has the complex task of weighing the long-term viability of the Skull Valley Goshute reservation as a homeland for the Band (and the implications for preservation of Tribal culture and life) against the benefits and risks from economic development activities proposed for property held in trust by the United States for the benefit of the Band."[115] Because of the delay in constructing a permanent repository to store nuclear waste, the Secretary was concerned that even though the reservation lease was only for a 25-year storage term, in fact, the nuclear waste might end up staying much longer.[116]

States, 23 Cl. Ct. 417, 426 (1991)(where the trust relationship exists, the trustee "has a duty to protect the trust property against damage or destruction. He is obligated to the beneficiary to do all acts necessary for the preservation of the trust res which would be performed by a reasonably prudent man employing his own like property for purposes similar to those of the trust").

[114]Record of Decision (ROD) at 17. The RODs are available at: (http://www.deq.utah.gov/Issues/topics/highlevelwaste/docs/2006/Sep/ROD%20PFS%2009072006.pdf).

[115]ROD at 18.

[116]ROD at 19.The Secretary's decision was ultimately vacated and remanded by the U.S. District Court for the District of Utah, because the Secretary's ROD did not even mention 25 C.F.R. § 162.107(a). That provision requires the Secretary to defer, "to the maximum extent possible," to the tribe's determination that the lease was in its best interests. 728 F.Supp.2d 1287 (D. Utah 2010). Since the Skull Valley Band was in favor of storing nuclear waste on its reservation, the Secretary needed to at least explain why it was not

Over the past 30 years, the Supreme Court has heard several cases brought by Indian tribes against the federal government for *money damages* due to mismanagement of Indian trust property. Suits for money damages are permitted only through the Indian Tucker Act, which provides a waiver of the federal government's sovereign immunity, provided that the tribal claims are based on the U.S. Constitution, federal statutes, or Executive Orders.[117] Because of these restrictions on the United States' waiver of sovereign immunity, the Supreme Court has denied tribal claims for breach of the trust responsibility when those claims rely exclusively on the federal government's common law duties and do not possess any additional statutory support.[118]

These cases, however, have no impact on tribal claims for declaratory or injunctive relief. Pursuant to the Supreme Court's longstanding decision in *Ex Parte Young*,[119] no waiver of sovereign immunity is required if the plaintiff claims that a federal officials has violated federal law (including federal common law), and seeks a declaratory judgment. Additionally, the Administrative Procedures Act would provide

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possible to defer to this determination. This decision is irrelevant here, because the PIIC has consistently opposed the storage of nuclear waste near its Reservation.

The Secretary's concerns about the impact of long term SNF storage and the federal government's trust responsibility seems prescient in light of the withdrawal of the Yucca Mountain license application and the invalidation of the NRC Waste Confidence Decision and the Temporary Storage Rule. To date, the Secretary has not taken further action on the subject lease or right of way.

[117] 28 U.S.C. § 1505.

[118] *United States v. Navajo Nation*, 537 U.S. 488, 502 (2003) ("To state a litigable claim, a tribal plaintiff must invoke a . . . rights-creating statute or regulation").

[119] 209 U.S. 123 (1908).

any needed waiver of immunity for such suits.[120]The trust responsibility is a common law doctrine. Unless it has been explicitly preempted by a federal statute, the government's fiduciary duties to protect Indian resources remain, and they can be enforced through declaratory or injunctive relief.[121]

Even if statutory compliance were the measure of the fulfillment of the trust responsibility – and as indicated above, it is not – it must be considered in light of the ongoing violation of the Nuclear Waste Policy Act by the two federal agencies tasked with comply with that Act. In fact, the reconsideration of the Waste Confidence Decision and the Temporary Storage Rule – and indeed, the reason for the instant license renewal application – is the failure of the federal government to secure the national repository required by the Act.

Two of the three circuit court judges sitting in the *In re Aiken County* case pending before the U.S. Court of Appeals for the District of Columbia recently stated that the NRC is violating the Nuclear Waste Policy Act.[122] The District Court nevertheless ordered that petitioners' request for a writ of mandamus to compel the NRC to comply with the NWPA would be held in abeyance until December 14, 2012, pending potential Congressional appropriations for Fiscal Year 2013. Concurring with the Order, Circuit Judge Kavanaugh states that the NRC "a*ppears to have no legal authority to defy the*

[120]5 U.S.C. § 702.
[121]*See*, *e.g.*, *Nance v. EPA*, 645 F.2d 701, 711 (9th Cir. 1981); *Pyramid Lake*, 354 F. Supp.at 256.
[122]*See In re Aiken County et al.*, Order (D.C. Cir. August 3, 2012) (emphasis added), at http://www.cadc.uscourts.gov/internet/opinions.nsf/0163D8DE4194448E85257A4F004FC9E8/$file/11-1271-1387350.pdf.

[NWPA's mandate]" to act on the Department of Energy's long-pending license application to store nuclear waste at Yucca Mountain.[123] Senior Circuit Judge Randolph, dissenting from the Circuit Court's order, stated "[t]here is no reason to delay issuing a writ of mandamus to correct [the NRC's] transparent violation of the law."[124]

The impact of storing spent nuclear fuel indefinitely a mere 600 yards from the nearest residences on the PIIC and 600 yards from the Mississippi River cannot be "small" when – without any technical or scientific justification – the Department of Energy (DOE) unilaterally ignores federal law and withdraws the Yucca Mountain license application to ensure that spent nuclear fuel will not be stored more than 100 miles away from Las Vegas in the middle of the Nevada desert on a federal military reservation already contaminated by the detonation of thousands of nuclear bombs. The impacts on the PIIC cannot be "small" when the NRC refuses to act on the DOE's license application for Yucca Mountain in clear violation of the NWPA.[125]

The impacts on the PIIC cannot be "small" when the President of the United States can direct the Blue Ribbon Commission on America's Nuclear Future to develop recommendations without *any* consideration of the one and only federal geologic

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[123][123]*Id.* at 2-3 (Circuit Judge Kavanaugh, concurring) ("[T]he [NWPA] mandates that the Nuclear Regulatory Commission act on the license application, and the agency still has a significant amount of appropriated money available to at least begin that task. In those circumstances, an agency appears to have no legal authority to defy the law in the manner suggested by the Nuclear Regulatory Commission in this case.")
In re Aiken County et al., Order dated August 3, 2012 at 2-3.

[124]*Id.* (Senior Circuit Judge Randolph dissenting).

[125]Actions that Senior Circuit Judge Randolph characterized in *Aiken County* as the NRC's disregard of a clear statutory mandate and "a systematic campaign of noncompliance."

repository already designated [Yucca Mountain] under controlling federal law [Nuclear Waste Policy Act].

Nobody wants spent nuclear fuel within 100 miles of them, and our Federal Government can violate federal law with impunity to block the storage of spent nuclear fuel at the Yucca Mountain Repository, yet the impact of spent nuclear fuel stranded less than one-half mile away from the PIIC is "small"? If the impact were small, one would think communities all across the country would be lining up to host repositories or storage facilities. Because that has not happened, the only viable solution appears to be stranding the waste indefinitely on Prairie Island and condemning a federally-recognized Indian tribe as a *de facto* host of a long-term nuclear waste storage facility without any mitigation required to alleviate the adverse impacts on the Tribe.

CONTENTION 4. NSPM'S ENVIRONMENTAL REPORT DOES NOT ADEQUATELY ASSESS THE IMPACTS OF THE PI ISFSI ON THE ADJACENT MINORITY POPULATION.

Under NEPA, the purpose of an environmental justice review is to insure that the Commission "considers and publicly discloses environmental factors peculiar to minority or low-income populations that may cause them to suffer harm disproportionate to that suffered by the general population.[126] The goals of NEPA are to inform federal agencies and the public about the environmental effects of proposed projects.[127]

[126]*See System Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), CLI-05-4, 61 NRC 10, 13 (2005).
[127]*Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 339 (1989).

The NRC has articulated the following standard for environmental justice contentions:

> [A]dmissible contentions in this area allege, with the requisite documentary basis and support as required by 10 CFR Part 2, that the proposed action will have significant adverse impacts on the physical or human environment that were not considered because the impacts to the community were not adequately evaluated.[128]

NEPA is a procedural statute, requiring that federal agencies take a "hard look" at the environmental consequences of their actions.[129] It compels agencies to identify environmental impacts and to consider possible mitigation strategies.

The ER fails to consider the disparate impacts of the PINGP on the adjacent minority population. NSPM's License Renewal Application raises significant environmental justice issues because relicensing the PI ISFSI will have a disparate impact on the PIIC, its members and its land and environment.[130] As such NSPM's ER fails to provide the information and analysis needed for the NRC to "take care to mitigate or avoid special impacts" on the PIIC.[131] NSPM's ER is deficient because it fails to

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[128] *Id*.

[129] *See, e.g*., *Baltimore Gas & Elec. Co. v. NRDC*, 462 U.S. 87, 97 (1983) (quoting *Kleppe v. Sierra Club*, 427 U.S. 390, 410 n.21 (1976)).

[130] Environmental justice is an overarching site specific issue that must be evaluated in the ER. "While true that, under NEPA, the Commission is ultimately responsible for evaluating impacts on minority groups, nonetheless, 10 C.F.R. § 51.45(c) requires Applicant to assist the Commission with that evaluation. Section 51.45(c) instructs that an "environmental report should contain sufficient data to aid the Commission in its development of an independent analysis." Undoubtedly, this "data" includes information that might aid the Commission in its analysis of environmental justice. *Id*. n. 179.

[131] *See* Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions, 69 Fed. Reg. 52,040, 52,041 (Aug. 24, 2004) (quoting Private Fuel Storage (Independent Spent Fuel Storage Installation), CLI-02-20, 56 NRC 147, 156 (2002)).

consider the impacts on the PIIC not just during the 40-year renewal term it requests, but beyond 2034 if the spent nuclear fuel is stranded at the PI ISFSI. Without identifying or analyzing the reasonably foreseeable impacts, the NRC cannot fulfill its obligation to "determine and discuss whether there are any mitigative measures that could be taken to reduce the impact."[132]

NSPM's environmental impact analysis concludes that the PINGP ISFSI license renewal "would involve no significant environmental impact." Appendix E Environmental Report Supplement at Page E-69. With regard to environmental justice, the Applicant states that the environmental justice impacts of the PINGP ISFSI license renewal are:

> SMALL. The PIIC is located directly adjacent to the PINGP site boundary; however, impacts on all other resources are small.

Table 7-1, Appendix E Environmental Report Supplement at Page E-69.

PIIC disputes NSPM's analysis and conclusion. The adverse impacts of the PI ISFSI's continued operation on the PIIC – past, present, and future – are individually and cumulatively significant. NSPM's ER's conclusion that the impacts of the license renewal on PIIC will be "small" is deficient and erroneous because it does not adequately assess the impact of the PI ISFSI on the minority community nearby. There are significant adverse environmental impacts that will result from the relicensing of the PI ISFSI that will fall disproportionately on the minority population of the PIIC.

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[132] *Id*. at 52,042 (quoting Division of Waste Management, Office of Nuclear Material Safety and Safeguards, Environmental Review Guidance for Licensing Actions Associated with NMSS Programs, NUREG-1748, at C-6 (Aug. 2003) (ADAMS Accession No. ML032450279)).

Because of its immediate proximity to the PINGP and PI ISFSI, the PIIC has borne a disproportionate share of the risks and costs associated with the PINGP's and PI ISFSI's continued operation, including:

- *The destruction and desecration of sacred burial mounds and other culturally and historically significant sites*. The archaeologist tasked with the "salvage" operation to remove any historically significant artifacts on the plant site used a trench digger and a bull dozer. Burial mounds in the path of construction were knowingly bull dozed or buried with fill. NSPM's archaeologist also raided two sacred burial mound sites *welloutside of the construction area*, removing the human remains and funerary objects of the PIIC's ancestors, and then abandoning the site.

- *An unfulfilled promise of jobs and opportunities for our Community members*. Although constructed at a time when PIIC was devastated by poverty and unemployment, few of the promised jobs were offered to the PIIC's members.

- *No infrastructure improvements*. Although constructed at a time when many of the homes on the reservation lacked electricity or running water, and all of the roads unpaved, NSPM ran the highest capacity power lines out to the PIIC's reservation boundary, taking a sharp turn away from and off the reservation across the road from established homes. Instead of providing PIIC members with reliable, affordable power, NSPM instead provided a softball diamond and erected a playground *underneath the 345 kilovolt power lines!*

- *Radiological pollution in the air, surface water and groundwater*. The plant is allowed to discharge radiation into the air and surface waters. Both planned and unplanned discharges result in the release of radioactive effluent into the air, surface water and groundwater in and around the plant. Sturgeon Lake and the groundwater below Prairie Island are contaminated with tritium.

- *Thermal pollutionraising water temperatures and causing heat shocks in the Mississippi River and Sturgeon Lake*. The PINGP is permitted to discharge thermal effluent into a pool *above* Lock and Dam No. 3, while its compliance with its thermal discharge permit is measured *below* Lock and Dam No. 3. In addition to sudden thermal shock that can be fatal to wildlife, the higher water temperatures can also contribute to an oxygen-deprived biological dead zone.

- *Adverse Environmental, Health and Safety Risks*. For the past 40 years, one of the greatest threats to PIIC residents and workers, health, safety, well-being and way of life has been NSPM's nuclear power plant and the tons of toxic nuclear waste

that sit just 600 yards away from the nearest homes, children's playgrounds, health facility, businesses, cultural and customary gathering places, church and community center. Two radiological leaks have occurred during the plant's history, and its continuing radioactive and thermal emissions, ongoing tritium leaks, additional nuclear waste, and high-voltage power lines represent some of the most serious environmental, health, genetic damage, and safety risks that disproportionately impact the present and future generations of our PIIC members.

- *Spent Fuel Pool Risks.* Spent fuel pools provide the initial cooling of SNF at the PINGP's two reactors. They are of particular concern because of their close proximity to nearest residences, community center, elder center, government office and other facilities. Pools are susceptible to radiological release as a result of fires and leaks. Because spent fuel is hot and radioactive when placed in spent fuel pools, cooler water must be continuously added to pools to prevent the water from boiling off and to buffer the radiation. As the NRC found in a study called NUREG-1738 and other studies have also found, the zirconium cladding that forms the spent-fuel rods may melt or catch on fire if the water boils or drains away, potentially causing a major release of radiation. NUREG-1738 and other studies also found that a fire could have consequences comparable to those of a major core accident by generating a radioactive plume causing thousands of deaths from cancer. NRC has observed "that the possibility of a zirconium fire cannot be dismissed even many years after final reactor shutdown. The risk of pool fires is exacerbated by the dense packing of SNF, which is occurring at the PINGP.

  Spent-fuel pools also present leak risks, which have a well-documented history of causing intense radionuclide-contamination of groundwater.

- *High Level Nuclear Waste Storage on Prairie Island*. Originally promoted as "temporary" on site storage for no more than 17 casks, the PI ISFSI currently stores 29 casks of spent nuclear fuel. NSPM maintains that the spent fuel will only be stored at the plant for between 15 and 30 additional years. This is pure fiction. The only reasonable assumption is that the nuclear waste will be stranded on Prairie Island and under the constant threat of Mississippi River floods forever. Granting NSPM's 40-year license renewal application will result in 98 casks (once the PINCP is decommissioned in 2034) indefinitely stored roughly 600 yards away from our members' homes and the Mississippi River. The expanded nuclear waste storage will increase the cumulative radiation "skyshine" exposure beyond acceptable lifetime cancer limits.

- *Inadequate environmental and health monitoring data and technology.* Existing environmental monitoring of Prairie Island provided by NSPM is inadequate to protect public health-safety and the environment.

- *Increased need for emergency preparedness and emergency response capabilities*. The Community has incurred significant financial burdens due to the operation of the PINGP and what for all practical purposes is the permanent, long-term storage of spent nuclear fuel at the PI ISFSI. And the Community will continue to incur significant costs to ensure the safe operation of the PINGP and PI ISFIS, and the ongoing protection of the environmental health and safety of the PIIC, its members, and its lands. The PIIC now has a 7-member Police Department, whose officers are State-Licensed Peace Officers. Accordingly, for Emergency Management and Emergency Preparedness purposes, PIIC must also be considered as a first responder to any incident at the PINGP.

Because of the long history and ongoing nature of the problems, issues and concerns at the PINGP and PI ISFSI, PIIC tribal members, especially the children, have also expressed their fears and anxieties about their health and safety, and the health and safety of future generations. The operation of the plant, tritium leaks, radiological emissions, reports of safety violations, the high-voltage power lines running alongside our reservation, and the storage of spent nuclear fuel in such close proximity to tribal members' homes has caused and will continue to cause anxiety, fear, stress and other mental health damages to the PIIC's current members and future generations.

Under normal operations, PIIC members will receive slightly higher exposure levels and doses than communities at a greater distance. Community members are disproportionately exposed to long-term low-level skyshine radiation from the Prairie Island ISFSI. Skyshine radiation is gamma and neutron radiation that travels upward from the casks and is reflected off the atmosphere back to the ground. While the shielding on the storage casks and the earthen berm reduce direct radiation to Community members, skyshine radiation is left as a primary means of exposure. The estimated annual dose to the nearest resident from the skyshine radiation from 98 casks should have

been evaluated in the ER.These doses will create a small incremental risk that the PIIC will bear differently from other communities. Considering that the PIIC's long-term exposure will likely span 100 years or more (depending on when or if the spent nuclear fuel is ever removed from Prairie Island) across multiple generations, the likelihood of cancers and other diseases caused by long-term exposure to low doses of radiation is a very real and significant concern for PIIC.

Because of the reliance on out-of-date and deficient studies, the potential long-term adverse health impacts on the closest residents to the PINGP and PI ISFSI are not fully known.[133] Despite these deficiencies (and over PIIC's objections), NSMP has already cleared both Minnesota PUC (CONs issued for additional dry cask storage) and NRC (PINCP license renewed for 20 years). Now that the NAS has acknowledged the shortcomings in the health impact studies relied upon by NSP and NRC, the NRC should delay final action (or else grant only conditional approval) of the ISFSI license pending the results of the NAS' study of potential long-term adverse health impacts.

The likely larger uncertainty and incremental risk borne by the PIIC also includes the uncertainty related to an incident at the PINGP or PI ISFSI. The probabilities associated with such incidents are expected to be very low. Nonetheless, there is uncertainty. While this uncertainty is borne by all communities surrounding Prairie Island, it is most directly felt by PIIC given the proximity of lands, residences and other

[133] *See, e.g.,* National Academy of Sciences, *Analysis of Cancer Risks in Populations Near Nuclear Facilities (Phase 1)* (2012), Findings 1-3, p. 1-6. The NAS Phase 1 Report is available at: http://dels.nas.edu/Report/Analysis-Cancer-Risks-Populations/13388.

facilities immediately adjacent to the PI ISFSI. This uncertainty may be associated with socio-psychological impacts that will also disproportionately impact PIIC members.

Moreover, in addition to the fact that these impacts and risks will disproportionately impact the PIIC and its members, the PIIC risks the loss of its reservation and ancestral homeland.

CONTENTION 5: THE NSPM LICENSE APPLICATION IS DEFICIENT BECAUSE IT DOES NOT INCLUDE THE ISFSI PRESSURE MONITORING SYSTEM AS A SSC WITHIN THE AGING MANAGEMENT PROGRAM.

NSPM license renewal application does not include the ISFSI pressure monitoring systems as a Systems, Structures and Components ("SSC") within the scope of license renewal. However, the pressure monitoring system is needed to provide the capability to determine when corrective action needs to be taken to maintain safe storage conditions. The pressure monitoring system should be within the scope of license renewal and should be addressed in the aging management program.[134] This is a significant omission and must be corrected before the license is renewed for 40 (or less) years of additional operation.[135] 10 CFR Section 72.122 (h) (4) requires that storage confinement systems must have the capability for continuous monitoring in a manner such that the licensee will be able to determine when corrective action needs to be taken to maintain safe storage conditions.

[134] Declaration of John T. Greeves ("Greeves Declaration") at para. 14.
[135] *Id*.

The components and supporting materials that are incorporated into the container designs for the purpose of monitoring cask systems should be classified as "important to safety" or at the very least, as not Important to Safety but its failure could prevent fulfillment of a function that is important to safety, or its failure as a support SSC could prevent fulfillment of a function that is important to safety.[136] Monitoring of casks, and stored fuel, during the long-term storage proposed by the applicant is extremely important to determine the condition and the possible need for corrective action for stored fuel and casks. The monitoring system for TN-40 and TN-40HT casks supports maintaining a critical pressure boundary system including seals needed to confine radioactive releases.

NUREG 1927, the Standard Review plan for the renewal of dry cask storage system licenses, provides a citation to NUREG/CR-6407 "Classification of Transportation packaging and Dry Spent Fuel Storage System Components According to Importance to Safety" as containing guidance on SSCs that may be included within the scope of license renewal.[137] NUREG/CR-6407 defines items which have a major impact on safety. Such items include systems whose failure or malfunction could indirectly result in a condition adversely affecting public health and safety. The failure of such a system in conjunction with the failure of an additional item could result in an unsafe condition. The pressure monitoring system should fall directly within that definition, and therefore should be an SSC that is within the scope of license renewal. Table 3 of the

[136] *Id*., Para. 15.
[137] *Id*., Para. 16.

NUREG includes "operations support, e.g., monitoring, as a primary function. Section 2.4.3 of NUREG 1927 further identifies examples of items that are not important to safety and may be eliminated from the scope of license renewal. None of the examples given would encompass the pressure monitoring system.

There are at least two significant examples, at two different sites, where the pressure monitoring system was critical for identifying a seal leak. These leaks turned out to be an industry-wide problem. On July 8, 2011, the NRC Region I office issued NRC ISFSl (INSPECTION REPORT No. 05000277/2010*)* for Peach Bottom Atomic Power Station, Unit 2. This inspection report (on page 4) included a review of activities during a routine spent fuel storage campaign and the troubleshooting, unloading, root cause evaluation, and corrective action development of a loaded spent fuel storage cask that had developed a helium leak in the main lid seal. On July 12, 2000, the NRC completed an inspection (INSPECTION REPORT NO. 72-002/2000-06) at the Surry Power Station Independent Spent Fuel Storage Installation (ISFSI). On page 4 of this report NRC noted that a low pressure alarm was received at the Surry ISFSI for the Transnuclear (TN-32) cask number TN-32-01 at ISFSI pad location 2-3. The cask was returned to the station, it was determined that a seal leak did exist and the licensee made a four-hour notification. Upon lid removal, corrosion was found on the cask lid and body extending to the point of the secondary seal. An examination of the cask seal found that a preliminary cause of the secondary seal failure was corrosion.

Neither of these two leaks would have been discovered if the management of the aging of the pressure monitoring system was outside the scope of license renewal.[138] As noted earlier, the monitoring of the pressure system is required by Section 72.122 (h) (4), which requires that storage confinement systems must have the capability for continuous monitoring to store the spent fuel safely. This monitoring system should be included within the scope of the NSPM ISFSI Aging Management Program.

CONTENTION 6: NSPM'S LICENSE RENEWAL APPLICATION IS DEFICIENT BECAUSE IT DID NOT ADEQUATELY ADDRESS THE POTENTIAL DEGRADATION OF HIGH BURNUP FUEL DUE TO AGING DURING STORAGE, SUBSEQUENT HANDLING, AND TRANSPORATION. 10 CFR 72.122 REQUIRES CONFINEMENT BARRIERS AND SYSTEMS TO PROTECT DEGRADATION OF FUEL AND TO NOT POSE OPERATIONAL SAFETY PROBLEMS.[139]

NRC,[140] DOE,[141] and the Nuclear Waste Technical Review Board ("NWTRB")[142] have identified a number of mechanisms that will lead to degradation of containment systems used for storage of spent fuel. Containment relies on the components and

[138] *Id*., Paras. 17-18.
[139] Although PIIC believes that this contention is admissible on its own, it has also petitioned the NRC to challenge the Waste Confidence Decision and Temporary Storage Rule in accordance with 10 CFR 2.335 because of special circumstances with respect to the subject matter of the proceeding (as described herein), application of the regulation would not serve the purposes for which the regulation was adopted. The same analysis applies here.
[140] U.S. Nuclear Regulatory Commission, Draft Report for Comment, Identification and Prioritization of the Technical Information Needs Affecting Potential Regulation of Extended Storage and Transportation of Spent Nuclear Fuel (May 2012).
[141]U.S. Department of Energy, Gap Analysis to Support Extended Storage of Used Nuclear Fuel, Rev. 0 (January 31, 2012).
[142]U.S. Nuclear Waste Technical Review Board, Evaluation of the Technical Basis for Extended Dry Storage and Transportation of Used Nuclear Fuel (December 2010).

supporting materials that are incorporated into the container design for the purpose of retaining the radioactive material during normal and accident conditions.

The NWTRB notes that the most significant potential degradation mechanisms affecting the fuel cladding during extended storage are expected to be those related to hydriding effects, creep, and stress corrosion cracking. These mechanisms and their interactions are not well understood. Insufficient information is available on high burnup fuels to allow reliable predictions of degradation processes during extended dry storage, and no information was found on inspections conducted on high burnup fuels to confirm the predictions that have been made. If the helium leaks and air is allowed to enter the canister or cask, this, together with the moisture in the air, can result in corrosion of the fuel cladding, the canister, and the cask.

Little data are publicly available on the behavior of high burnup fuel during dry storage and on its subsequent handling and transportation. No information is available on the behavior during dry storage of the more advanced materials now being used for fuel cladding and fabrication of fuel-assembly structural components.

DOE has recognized significant gaps in information regarding storage and transportation of used nuclear fuel**.** Because limited information is available on the properties of high burnup fuel and because much of the fuel currently discharged from today's reactors exceeds this burnup threshold, a particular emphasis of the DOE program is on high burnup fuels. DOE identified embrittlement, hydride cracking, oxidation, creep and stress corrosion cracking as significant mechanism that could impact the performance of SSCs.

NRC has recognized the need to address gaps in technical information needs regarding storage of spent fuel. In this report NRC recognized the need for more information on stress corrosion cracking, embrittlement, creep and galvanic corrosion.

NSPM has not adequately addressed any of these potential deficiencies, problems, and uncertainties, or any of the pertinent studies, in its license application. These many uncertainties and identified gaps in knowledge of material performance and potential degradation, particularly for the conditions of storage of high burnup fuel, over the extended periods of storage involved in this application compel the implementation of efforts and development of a rigorous plan to address the gaps and uncertainties before an additional 40 years of storage is finally authorized.

NSPM has failed to demonstrate that the requirements of 10 CFR § 72.122 to protect spent fuel from significant degradation during the proposed extended storage period will be satisfied.[143] NSPM has not shown that criticality will be prevented under all storage conditions and has not provided adequate justification and support for use of full burnup credit in the criticality analysis. In addition, the Applicant has not adequately addressed potential fuel cladding degradation from hydriding effects, oxidation, clad creep, embrittlement, and thermal-driven cracking and leakage.

[143] Greeves Declaration, Paragraph 21.

CONTENTION 7: THE NSPM LICENSE RENEWAL APPLICATION DOES NOT ADDRESS THE POTENTIAL FOR OPERATIONAL RADIOLOGICAL EFFLUENT RELEASES IN EXCESS OF THE LIMITS IN NRC REGULATIONS FROM THE FUEL CASK CONFINEMENT SYSTEM DUE TO AGING OF THE SYSTEM.

Based on the history of defects that have caused leaks to occur in TN casks used for spent fuel storage and transportation it can reasonably be anticipated that over a 60-year license period one or more TN casks will experience confinement failure, which can lead to offsite dose to members of the public.[144] However, NSPM in its license renewal application only addresses gamma and neutron doses, which are direct radiation doses. It concludes, at page E-50, that there will be no effluent releases. Thus, the applicant essentially dismisses, without any basis for doing so, the possibility of effluents resulting from degraded materials and seals from normal operation of the ISFSI over the extended period of storage that is proposed here.

The Final Safety Analysis for the ISFSI, Rev. 13, at page 8.2-13, Rev 11 recognizes that the maximum individual whole body dose for loss on fuel cask confinement is determined to be 0.15 rem. The applicant refers to the 5 rem limit in 10 CFR Section 72.106(b). Section 72.106 (b) refers to a design basis accident. Leaking casks are not a design basis accident. There is no initiating event. This loss of confinement occurs as a result of degradation and wear of engineering materials over a long period of time, and can be reasonably anticipated during the term of the license. We contend that this design basis accident limit does not apply to reasonably anticipated,

[144] Greeves Declaration, Para. 19-21.

operational releases. This dose exceeds the limits in 10 CFR part 20 and 10 CFR Part 72 for operational releases. Given the extensive history of leaking seals for TN casks, well documented by the nuclear industry,[145] it is reasonable to anticipate loss of confinement occurrences over a 60 year period for multiple casks and degradation of the barriers to effluent leakage that will occur over the extended period of this license application.

NSPM has failed to adequately address and provide for the safe performance of spent fuel, particularly the high burn-up spent fuel, under the longer term (up to 60 years) dry storage conditions that are proposed in this license renewal application. The potential effects of longer term storage on spent fuel storage performance is uncertain and must be better understood and predicted before storage for a total of 60 years is authorized.

E. PETITION FOR A WAIVER TO 10 CFR SECTION 51.23 (a) TEMPORARY STORAGE OF SPENT FUEL AFTER CESSATION OF REACTOR OPERATION – GENERIC DETERMINATION OF NO SIGNIFICANT ENVIRONMENTAL IMPACT.[146]

PIIC is mindful that a longstanding principle of NRC practice is that NRC regulations are not subject to challenge in an NRC adjudicatory proceeding, and that with limited exceptions, "no rule or regulation of the Commission . . . is subject to attack . . . in any adjudicatory proceeding."[147] Additionally, PIIC understands that the adjudicatory process is not the proper venue to hear any contention that merely addresses petitioner's

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[145] *See* NWTRB report page 69 item d.

[146] A more comprehensive recitation of the factual background regarding the PI ISFSI and the Waste Confidence Decision and Onsite Storage Rule is set forth above in Section II, Subsections C, D and E, starting on page 9. *See also* Mahowald Declaration, Paras. 6 and 7. PIIC petitions for this waiver herein, but reserves its ability to petition for a waiver in a separate petition if that is the preference of the Commission.

[147] 10 C.F.R. § 2.335(a); See also *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 218 (2003).

own views on regulatory policy,[148] and that any contention that amounts to an attack on applicable regulatory requirements must be rejected.[149]

Nevertheless, 10 CFR 2.335 (formerly Section 2.758) provides for a challenge to a regulation by way of a petition requesting a "waiver" or exception to the regulation on the sole ground of "special circumstances", i.e., because of special circumstances with respect to the subject matter of the proceeding, application of the regulation would not serve the purposes for which the regulation was adopted. PIIC is petitioning for a waiver of 10 CFR Section 51.23(a) based on the special circumstances discussed below. Section 51.23(a) provides:

> The Commission has made a generic determination that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 30 years beyond the licensed life for operation (which may include the term of a revised or renewed license) of that reactor at its spent fuel storage basin or at either onsite or offsite independent spent fuel storage installations. Further, the Commission believes that there is reasonable assurance that at least one mined geologic repository will be available within the first quarter of the twenty first century, and sufficient repository capacity will be available within 30 years beyond the licensed life for operation of any reactor to dispose of the commercial high-level waste and spent fuel originating in such reactor and generated up to that time.

The motivation for the waiver is to allow the Aging Management Review and Aging Management Program in the NSPM license renewal application for the PINGP ISFSI to be applied and evaluated for a longer period of time than the 40-year license extension request from NSPM. The PIIC believes this is imperative because special circumstances have superseded the rationale for the provisions in 10 CFR Section

[148] *Peach Bottom*, ALAB-216, 8 AEC at 21 n.33.
[149] *Pub.Serv. Co. of New Hampshire* (Seabrook Station, Units 1 and 2), LBP-82-76, 16 NRC 1029, 1035 (1982) (citing *Peach Bottom*, ALAB-216, 8 AEC at 20-21).

51.23(a). Application of Section 51.23(a) to the first site-specific ISFSI license renewal request to be considered after the many special circumstances discussed below would artificially limit the NRC staff review and leave unaddressed many long term aging management issues associated with the license renewal. There are several studies that indicate the many uncertainties with the storage of spent fuel after a period of 120 years.[150] These long-term uncertainties must be evaluated in the review of the NSPM license renewal application because potential storage and transportation hazards to workers and the public would go unaddressed because of what is now an artificial and meaningless limiting time frame. Reality has overtaken the NRC regulatory framework on the regulation of spent fuel. Continuing to artificially limit the needed safety and environmental analyses for spent fuel storage license applications is simple ignoring the needed evaluation and hoping that someone else solves the existing technical uncertainties with the storage of spent fuel.

The special circumstances that have exposed the bankruptcy of this regulation center on the D.C. Circuit remand of the successor regulation to the version of Section 51.23(a) cited above, the NRC's 2010 Waste Confidence Decision, and the actions taken by the Commission in response to that decision. The Circuit Court of Appeals for the District of Columbia struck down the revised Waste Confidence Decision and revised

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[150] *See* U.S. Nuclear Regulatory Commission, Draft Report for Comment, Identification and Prioritization of the Technical Information Needs Affecting Potential Regulation of Extended Storage and Transportation of Spent Nuclear Fuel (May 2012).
[150]U.S. Department of Energy, Gap Analysis to Support Extended Storage of Used Nuclear Fuel, Rev. 0 (January 31, 2012).
[150]U.S. Nuclear Waste Technical Review Board, Evaluation of the Technical Basis for Extended Dry Storage and Transportation of Used Nuclear Fuel (December 2010).

Temporary Storage Rule, concluding that the NRC did not conduct a sufficient analysis of the environmental risks,[151] failed to evaluate the probability and consequences of failing to establish a permanent common repository, and appeared to have no plan other than "hoping for a geologic repository" despite what the Court described as "societal and political barriers to selecting a site."[152]

The NRC has recently suspended any final decision on reactor licensing until an EIS is developed to respond to the Court's decision. The EIS process is optimistically scheduled to be completed in a two year period. This would include the scoping process required by CEQ and NRC regulations for the preparation of an EIS, the development of the impact analysis, publication and comment on a draft EIS, and preparation of a final EIS that responds to public comment. It is a massive undertaking and almost certainly result in more litigation. In the meantime, the necessary safety and environmental review for an ISFSI license renewal is artificially truncated. Furthermore, there is no hope on the horizon for the siting, licensing, construction, and operation of either an interim centralized storage facility for spent fuel or a repository to dispose of the fuel. Although the Blue Ribbon Commission has made a number of recommendations relative to the development of storage and disposal facilities, there has been no action by the responsible government agencies or the Congress to move forward with implementing the BRC recommendations. Furthermore, even if a storage or disposal facility was on the horizon, the DOE has no reasoned scheme on how priorities will be set for moving spent fuel from

[151] *New York*, 681 F.3d at 483.
[152] *Id*. at 478-79.

operating reactors like PINGP. For all of these reasons, PIIC petitions the Commission to allow the safety and environmental review of the NSPM license renewal application to fully consider the requisite time frame in which deficiencies in the storage of spent fuel may be revealed.

IV. CONCLUSION

For the foregoing reasons, PIIC should be granted intervenor status and its contentions should be admitted.

Respectfully submitted,

Signed (electronically) by Philip R. Mahowald

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